DEIS Public Comment Matrix

Date Received	Name	Category	Subcategories	Comment
12/17/2023	Kelly Roberts	DEIS	Transportation	Regarding Appendix D and the inevitable adoption of replacement vehicles for the transit fleet, it seems (based on what information I have studied so far) that biofuel vehicles will be the best type in which to invest. Given the various types of organic matter, including the various types of waste, that can be used for biofuel production, this sounds the most cost-efficient and environmentally friendly pathway to take for our transportation system. Plus, with all of the waste that is released by the Navy in our waters, can we partner with them to reroute it to a more honorable processing system so that our marine life can be healthy/er?
12/25/2023	Thomas Garrett	DEIS	Land Use, DEIS Plan Edits	See pages 20-21
12/25/2023	Thomas Garrett	DEIS	Land Use, Environmental	Zoning Changes Map - Alternative 3 Zoning Changes - All Parcel Owners that border or are adjacent to the Kitsap County Port Gamble Heritage Park (Park) shall have no legal access to the Park from their private property. This would prevent unnecessary damage to the Park. Only Kitsap County designated access roads/trails will be used for all park visitors.
12/27/2023	Jess Chandler	DEIS	DEIS Plan Edits	On p. 3-20 of the Environmental Impact Statement, it is acknowledged that Kingston is intended to become an incorporated city but not Silverdale. In other places (not that I have found in this document), Silverdale is also intended to become an incorporated city. Is this an oversight?
12/29/2023	Jess Chandler	DEIS	Transportation, DEIS Plan Edits	In the Draft Comprehensive Plan EIS p. 3-140 [referring to pedestrians] says, "The roadway inventory (linked on the county website at www.kcowa.us/compplan) identifies the sidewalks and shoulders currently present along county roads. There is a Roadway Inventory by Alternative linked as a Reference Document on the Comprehensive Plan site here: (https://www.kitsapgov.com/dcd/PEP%20Documents/121423_Roadway%20Inventory%20Data%20By%20Alternative.pdf). However, this is a PDF of a table that does not contain any Road Names or Road Log Ids that match to the county's public road data. It also has column names that are not explained. This inventory is not something that we can consume to identify sidewalks and shoulders currently present along county roads in a meaningful way never mind how they would be changed in each alternative. I am looking for a version of this that can be somehow related to our roads. Please advise how I can obtain that data with Road Log Ids and Segment Ids or geometry. Thank you..
1/5/2024	John Willett	DEIS	Raydient Reclassification, Land Use, Environmental	Comment/request on rezone request by Jon Rose for Raydient 400 acres off Bond and Stottlemeyer Roads in North Kitsap. I see that Jon Rose has applied for a rezone in the new proposed Kitsap comp plan on the 20/ 20 acre lots (rezone Rose says would mean 80+ residual lots) in that 400 acres from rural wooded to rural residential and one 24 acre piece off Stottlemeyer from rural wooded to rural commercial (YMCA). I personally would be against these rezones, as it does not comply with the GMA and I believe it would be more beneficial for the citizens of Kitsap to keep this 400 acres rural wooded. Also, I see the YMCA need in the North, but the location should be in Poulsbo City limits where access and population are best suited for such a development, There does not need to be a rezone for ball fields, from what Rose said, so that would not preclude making the ball fields on these 400 acres, which the North badly needs. I have suggested before at two meetings and some emails to officials, so far, that for this YMCA here in the North, officials should develop a partnership with the City of Poulsbo, WWU/OCC and the YMCA to build said needed YMCA/Rec Center in College Market Place where Poulsbo is already moving on a Rec Center there, not on Raydient/Raynior land on Stottlemeyer. My suggestion is to buy this 400 acres from Raydient, like the KFBC/P did for the Port Gamble Heritage Park a few years ago, and put this 400 acres in the PGHP and owned by Kitsap Parks, who then partner with Kingston Rotary and the North's citizen groups to build and maintain the needed ball fields and also restore the forest in these 400 acres. As what happened with the PGHP purchase, Jon Rose (Raydient) made money on that deal without all the expenses and hassles of residential development and citizens who will fight what they see as unwise development, In closing; and the community got a very special place for recreation and conservation, and Raydient comes out smelling like a ROSE! Win Win!
1/8/2024	Thomas Garrett	DEIS	Environmental, Infrastructure	Many of our aquifers are being rapidly depleted by over-pumping. As the over-pumping occurs, the land can settle as water is pumped out leaving less space for the new water to refill the aquifer. Over-pumping can also cause saltwater intrusion also which can damage the entire aquifer beyond use. Kitsap County should facilitate a contingency fund to cover the cost of rural parcel owners for the loss of their private wells due to over-pumping and saltwater intrusion of the aquifers due to the rural growth forecast. A plan should also be developed to install new water pipelines in existing rights-of-way to facilitate new water connections to the rural parcel owners losing their wells due to over-pumping and salt water intrusion. Kitsap County should also fund the research for other solutions with existing and new technologies to solve this problem. Kitsap County should take into consideration all private wells when determining total water usage forecast for the CAO Hydrology Plan and EIS

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1/11/2024	Nan Mader	DEIS	Housing, Transportation	Thank you for the informative zoom session 1/11/2924 In our break up session with Eric I posed a couple couple questions one of them being good. The comp plan gives very specific information on housing unit numbers and people unit numbers and employment numbers however, there's a little data regarding available land units to put all these people that are planned to be moved into Kitsap county other than Silverdale. And while I see, there is open space, particularly in what was the Silverdale mall becoming more residential there's little area otherwise open space for growth in the county. My other question was with respect to our water, quality and availability with this increased gross and also air quality with increased traffic. I posed a question to Eric About vehicle usage in increased density. Specifically is there any evidence in the country where density has been forcibly increased greatly that people actually move to mass transit rather than continuing with single use automobiles. And finally in that, I am responsible as trustee for 30 acres of Forrest and farm area, I'm concerned about losing the tax break on the portion of his property that fits the designation. Eric responded that was not in the plan to be changed for the near future. I hope that remains true. Thanks again for the zoom meeting. I'm looking forward to the next one. Thanks Nan Mader
1/12/2024	Mayor Rebecca Erickson	DEIS	Land Use, Environmental	See pages 22-24
1/13/2024	Jess Chandler	DEIS	Transportation, Economy	The transportation section of the Comprehensive Plan Draft EIS mentions multi-modal transportation but does not show any analysis of how non-vehicle transportation impact the LOS and community development. This comment is focused on the lack of real analysis of the public transit options in the draft EIS and Appendix D. -Appendix D of the Comprehensive Plan Draft EIS: Kitsap Transit Planning Context and Trends Analysis does not provide any trends analysis or planning context. This shows the service that exists on routed busses and ferries. -On p. 3-33 of the EIS - under discussion of the Regional Transportation Plan - says 'Expanding transit and travel choices' as one of the key challenges and opportunities -On p. 3-45 of the EIS we have 'Increased transit service in the locations mentioned above is intended to help areas meet PSRC's centers criteria and is consistent with policies looking to increase transit-oriented communities.' - In definitions of kinds of communities for VISION 2050 on p. 3-30 and 3-31, Bainbridge Island, Port Orchard and its UGA, Poulsbo and Its UGA, and Kingston are called out as High-Capacity Transit Communities. - Quite a bit of the current context for transit is provided in the transit section of chapter 3, pp. 3-132:137. Which describes the routes that exist and shows a map. However, in no part of the Transportation Chapter of the draft EIS nor in Appendix D is any attention given to what would have to change about Kitsap Transit operation in order to support Alternative 2 or to achieve significant VMT reduction. There is no policy shown that will achieve these things. We have words that say that we will have transit oriented development and that we will need to rely on transit more, but we do not acknowledge what a lift that might be. How much will it cost? How do we choose to quantify the costs and benefits? If we continue to do what we've always done, we will keep what we have had before - and that is not consistent with the stated goals of this comprehensive plan. As such, for transit, I think that we need to provide better clarity on the following points: 1. What is the current access to transit? The route map is not the same thing as considering access - some of those routes only run as commuters (as shown in the table in appendix d) going past areas where they don't have stops. 2. What is the current ridership and trends in ridership for certain routes? (And associate causal analysis, if possible) 3. What are alternative transit access routes that can be considered that would achieve our transit and VMT goals? 4 and so on will be identifying how to get from 1 and 2 to a preferred alternative transit plan from 3 - capital facilities/Human Resources/ etc.
1/13/2024	Jess Chandler	DEIS	Transportation, DEIS Plan Edits	The details of the travel demand model referenced on p. 3-144 of the Draft EIS are not readily available - I have tried to find the referenced 'Kitsap County 2020 Travel Demand Model Update' and failed to find more than a summary. It is also not listed as a reference document or in the related links. Can you point me to this file? Thank you.

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1/13/2024	Jess Chandler	DEIS	DEIS Plan Edits	This comment is on p. 3-149 of the Draft Comprehensive Plan Environmental Impact Statement EIS. The Exhibit 3.2.6.2-2 Summary of Countywide Travel Statistics has Countywide Employment numbers that are not consistent with the Countywide Planning Policies [CPP 2021](https://www.kitsapgov.com/dcd/PEP%20Documents/121423_Final%20Ratified%20Kitsap%20Countywide%20Planning%20Policies%20with%20Corrected%20Appendix.pdf) In this exhibit, the Countywide Population in 2044, under all alternatives, is set to 346,358 - which is the population defined in the CPP 2021, Appendix B-1. However, in this exhibit, the Countywide Employment in 2020 is set to 195,754 under all alternatives and in 2044 is set at 347,368 under Alt 1, 353,244 under Alt 2, and 352,428 under Alt 3. In the CPP 2021, Appendix B-2, the Employment Distribution through 2044 shows The employment in 2020 as 114,860 and the target in 2044 is given as 160,883. It is not clear to me what kinds of errors having the employment numbers incorrect will do to the model, but it would probably indicate more driving. This is a huge difference. The employment assumptions are highly correlated to the vehicle miles travel demanded. Please correct and rerun.
1/15/2024	Jodee and Barry Strickland	DEIS	Land Use	To Whom It May Concern: I am in support of the land use changes in Alternative 3 and request that if Alternative 2 is chosen, the rezone requests in Alternative 3 be granted. Those rezones will add to the inventory of housing options in areas of the county that already have infrastructure in place, therefore it will not add additional tax burden to the taxpayers to extend utilities. Existing regulations will adequately protect any natural resources that the properties have near them. Thank-you for the opportunity to comment on the changes being proposed for the future of Kitsap County and its taxpayers. Respectfully, Jodee Strickland Barry Strickland
1/17/2024	Coleen Shoudy	DEIS	Land Use, Environmental	I am writing in opposition of Alt 3 to support keeping the 95 acres of the old Crista Camp and Courter's property from being zoned Urban low and included in the Silverdale UGA for the following reasons: 1. There is enough capacity for homes in Alt 2 without rezoning the 95 acres currently Rural to Urban Low. The GMA states that it should not rezone Rural lands if adequate housing needs are met in the existing UGA. 2. The 95 acres is heavily wooded, on steep terrain, adjacent to Island Lake and Barker Creek and over Critical 1 Aquifer. If rezoned, the forest would be clearcut, steep slopes denuded and runoff would clearly be unavoidable into the creek and lake, causing damage to the ecosystem. 3. It is difficult to separate the 55 acre Meadowview development from the 75 acres of rural land as the development of Meadowview with 329 homes, has proposed plans to cross Barker Creek, with a narrow road exit to Lakeview Rd to Central Valley. The country roads to exit these properties are inadequate per the fire Marshall to adequately handle the traffic exiting to the East. Crossing the Creek with a road should not be allowed. 4. An Environmental Impact Study should be required on this entire 145 acres of heavily wooded, sloped property with a fish creek, lake, seasonal creek and abundant wildlife. The property should not be allowed to be clearcut nor reduced setbacks from code to the creek and lake. Tree retention should be included as well as green belts. 5. Concerns with the sewer pump station and retention ponds next to the creek and lake for inevitable spills and runoff. 6. The critical 1 Island Lake Aquifer needs to be protected from contamination and overuse. At the minimum Silverdale Water's study should be completed and reviewed before any approvals are made to increase zoning and EIS should be required. 7. Precedence for continued Urban sprawl in Central Valley if the 95 proposed rezone is allowed is a real concern, losing the rural feel of the valley along with loss of farmland and animal corridors. 8. Climate change is offset by trees and reduced carbon emissions from cars. Keeping growth in the proposed Alt 2 Silverdale UGA seems to be the best for the environment, affordable housing and transportation needs. In closing, my hope is to keep the aquifer, lake and creek healthy and available for all to enjoy for years to come. Once damage is done it cannot be undone so I am hoping the County Commissioners will vote to keep the 95 acre parcel rural. Thank you, Coleen and Mike Shoudy

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1/18/2024	Dave Shorett	DEIS	Land Use, Environmental	See pages 25-27
1/18/2024	Beth Berglund	DEIS	DEIS Plan Edits	On page 3-74 there is a typo "West Sound Partners for Ecosystem Recover" is missing the "y". On page 3-212 the name of the PG heritage park needs to be corrected. Instead of "Port Gamble Heritage Park" it should be "Port Gamble Forest Heritage Park" in the reference to the framework document. I wasn't able to find the framework document itself and that should be available to the public.
1/18/2024	City of Poulsbo - Heather Wright	DEIS	Land Use	I am commenting as the Planning and Economic Director for the City of Poulsbo. This comment is limited to the proposed expansion of the City of Poulsbo's UGA in proposed Alternative 3. The City of Poulsbo has capacity within our existing city limits and UGA to support our population growth target. We are also seeking to increase capacity within our current boundaries to meet expected population growth based on our historical growth rate. With this, we do not support the expansion of our UGA as proposed in Alternative III.
1/21/2024	Stephen Growdon	DEIS	Transportation	Kitsap County Planning Commission, As you are seeking input on the 2024 Comprehensive Plan, I am writing to express my strong support for funding for Projects #80 and #90 of the DEIS Transportation Plan (Appendix C). Specifically, I hope the county will move forward with the long-delayed plans to design and build shoulders along Miller Bay Road NE. The 5-mile stretch of this major arterial, running from Suquamish to Hansville Road, presently lacks shoulders (paved or unpaved) on either side of the road. In addition to being used extensively by vehicles, Miller Bay Road NE is the site of numerous Kitsap County and North Kitsap School District bus stops, and is widely used by bicyclists, pedestrians, joggers, dog-walkers and others. The absence of a shoulder along this arterial (with a posted 45 mph speed limit) represents a major public safety hazard to school children, neighbors and cyclists who have no choice but to walk or ride along this road. For those on foot or on bike, Miller Bay Road NE is dangerous and terrifying. Furthermore, the construction of shoulders along Miller Bay Road NE has been under the planning stage by Kitsap County for more than 15 years. (See the attached article from the 4/24/2009 edition of the North Kitsap Herald entitled “Wider Shoulders Coming to Miller Bay?.) It is high time that Kitsap County addressed this widely-known public safety issue by making it a priority in the 2024 Comprehensive Plan. I welcome you questions and feedback, and I appreciate your consideration. - Stephen Growdon
1/21/2024	Stephen Growdon	DEIS	Transportation	Kitsap County Planning Commission, I have previously written to express my personal strong support for funding for Projects #80 and #90 of the DEIS Transportation Plan of the 2024 Comprehensive Plan. In that email message, I explained some of the reasons why the county needs to move forward with the long-delayed plans to design and build shoulders along Miller Bay Road NE. I want you to be aware that the obvious dangers posed by the absence of shoulders along this arterial, and the compelling need to address this glaring public safety issue, are shared by many residents of north Kitsap. Attached for your consideration is a petition requesting that the county “pursue all necessary planning and funding requirements needed to pave the shoulders of Miller Bay Road.” This petition is signed by 33 residents of the community. On behalf of many residents of north Kitsap, I welcome your questions and feedback, and I appreciate your consideration. - Stephen Growdon
1/22/2024	Port Gamble S'Klallam Tribe	DEIS	Environmental, CAO, Land Use, DEIS Plan Edits	See pages 28-32
1/22/2024	Marc Rimbault	DEIS	Transportation, Housing	See pages 33-34
1/23/2024	Doug Hayman	DEIS	Environmental, CAO, Land Use	See pages 35-40

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1/23/2024	Robin Shoemaker	DEIS	Land Use	In scanning DEIS comments on Alternates 2 and 3, both alternates have impacts. I would like to reiterate my earlier comments already logged regarding a preference for the zoning for Alternate 3 as it allows more meaningful environmental sensitivity and consistency with surrounding properties related to my property. That alternate remains my preference and recommendation as a result. But, in either scenario, and should Alternate 2 be recommended to the Planning Commission,I would like to suggest that both of our West Kingston Road properties - and in particular our undeveloped parcel - be allowed to connect to sewer through a waiver or whatever means necessary, for the reasons already noted in earlier comments. Thank you. -Robin Shoemaker
1/23/2024	Jake Coutlee	DEIS	Land Use, Transportation	To Whom It May Concern, I strongly oppose the zoning changes of alternative 3. This alternative does not support limiting urban sprawl and I feel that it does not align with the intent of Washington State's Growth Management Act. I prefer alternative 2 as it focuses more on urban development and limits the impact on Kitsap County's rural environments and natural habitats. My most specific problem with alternative 3 is the rezone of the Raydient property near Bond, Stottlemeyer, and Port Gamble Roads. While the rezone is for 1DU/5 Ac, I know the intention is to turn this set of parcels into an 80 unit housing development with a YMCA adjacent to it. The addition of this housing development at this location would create numerous problems. First, this would reduce the rural land/habitat in Kitsap County as this land is currently working forest. Environmentally speaking, this land should be left alone. Second, a housing development at this location would be a traffic nightmare. Not only would this create another busy intersection on an already busy road, but the added vehicles traveling on Bond Road would significantly contribute to traffic on an already overloaded thoroughfare. This would lead to a number of different problems, including longer commutes and increases in traffic accidents. I believe that Kitsap County's Comprehensive Plan should be "Focused Growth" to help preserve Kitsap County's rural beauty, promote more efficient transportation, and maintain Kitsap County as a wonderful place to live. Thank you, Jake Coutlee
1/24/2024	Leslie Newman	DEIS	Land Use	I would like to see Manchester take a pro active approach to planning and future development. I vote for Level 3 plan. Thank you Leslie Newman
1/25/2024	Jack Stanfill	DEIS	DEIS Plan Edits	To Whom t May Concern. The 2024 DRAFT ENVIRONMENTAL IMPACT STATEMENT, Kitsap County, is a travesty: RCW 40.16.030 Offering false instrument for filing or record. RCW 40.16.020 Injury to and misappropriation of record. WAC 197-11-080 Incomplete or unavailable information. Many laws have been broken by Kitsap County and the City of Bremerton. With this email, I inform you that I strongly oppose the 2024 Draft Environmental Impact Statement, Kitsap County. On January 24, 2024, I answered the Washington Attorney General's Motion to dismiss my Environmental Complaint, PCHB No. 23-019. I intend to file my report with the with the GMA folks at the Pollution Control Board. Please contact me If you have questions. Respectfully, Jackie W. Stanfill

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1/25/2024	James Heytvelt	DEIS	Transportation	Dear DEIS administrators. I have reviewed the DEIS , and approve. I did participate in the PROS plan with Kitsap County Parks and gave my input. One item I would like to note. For a walk on ferry person getting a late morning or early afternoon ferry from Southworth to Fauntleroy in West Seattle I have found the Southworth ferry lot to be full to park my vehicle . While there is plenty of space at the Harper Park and ride at those time where a person could park there appears to me not to be transportation from the Southworth ferry dock back to the Harper Park and Ride in the late evening hours. Thus I have elected to drive around in stead of taking a ferry as a walk on. Thank you for the opportunity to comment. James Heytvelt
1/26/2024	Anonymous	DEIS	Transportation, Infrastructure	Walk, Bike and Roll Facilities - "Kitsap County has been retrofitting existing roads with wider shoulders or sidewalks as funding allows..." Providing some defined minimum width of paved shoulders where not present and where right-of-way allows on classified roadways should be a requirement (if feasible) with any pavement preservation project and not as funding allows. Recent preservation on Fairgrounds Rd left shoulders unpaved and unsafe with active transit stops sitting in the uneven dirt 4 feet from the edge of pavement. The county saved minimal dollars at the expense of pedestrian safety and ADA accessibility. Wastewater - "Several capacity improvements to existing pump stations and sewer mains would also be needed to ensure the existing system could handle additional flows from development within the UGAs." The County should be assessing impact fees to support wastewater capital improvements similar to transportation. Growth (new development) should pay for growth (system capacity needs) and not just for the extension to serve the development. Future development should not overly burden existing rate payers to finanace develop-driven capcaity capital improvements.
1/26/2024	Susan Digby	DEIS	Environmental, Land Use	Greetings, I live on Marine Drive. It is a dead end street with no turn around. I have several concerns about high density housing. I expect you have these thoughts already but here they are: Safety: Marine Drive is on the one road along a finger of land. This means that if there is a wild fire on the south end, a tsunami that destroys the low elevation portion of the road by Kelly Road, or downed electrical wires, access to this area is not possible. High density housing puts more people at risk. Environmental impact on Dyes Inlet: More houses on Marine Drive will increase chemicals from lawn treatments. Wastewater handling system : A bigger issue for Bremerton as a whole (not Marine Drive because we are on septic systems) is that our current wastewater handling system is undersized with the result that there are almost routine overflows of sewage into Dyes Inlet. The wastewater system needs to be sized to accomodate more houses. Climate change and forest cover: We need all the trees that we can possibly save. I urge you to build in ways through requirements to ensure that forest cover is saved wherever possible and that new trees be planted when trees have to be removed. It's important for our health and that of salmon survival. Water entering the Sound needs to be as cool as possible. Sincerely, Susan Digby
1/27/2024	Mark Vigna	DEIS	Transportation, Land Use	Regarding the proposed revisions to zoning along Lindvog in Kingston to accommodate medium density dwelling units, I find this to be irresponsible and completely contrary to the spirt of the environment of that area. It is a violation against all home and land owners in the surrounding area that made their real estate purchase based on the existing environment and is nothing more than an opportunity for the county to increase the tax base. Infrastructure in this area is already burdened by the existing traffic and significant infrastructure changes would be necessary to accommodate additional population. The submission for approval argues that the buyers of these units will be comprised mostly of East side people commuting to Seattle and further, that these people will WALK to the ferry. This argument is nothing short of ludicrous! Anybody that has lived in this area for any amount of time knows that the romance of walking that distance of 1.3 miles and 28 minutes in the rain and cold will fade after one or two experiences. They will drive. Traffic will be a mess. Risk of road runoff into water sources is increased. This is simply a very bad idea , fueled by developers that want to make money and the county that wants to collect more taxes. Restrict this type of development to existing high population density areas as they have in Edmonds, Redmond, Ballard, etc. Sincerely, Mark Vigna

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1/29/2024	Kirsten Dahlquist	DEIS	Land Use, Environmental, Economy	This comment is in reference to the Draft Environmental Impact Statement (DEIS) studies three land use alternatives. Option 2 Compact Growth/Growth Near Urban Centers adequately supports the following issues and Options 1 and 3 do not. Options 1 and 3 should not be selected. 1 - Access to Basic Services: - Affordable housing and efficient public transportation. - Adequate planning and distribution of utilities and infrastructure. 2 - Social Inclusion: - Concentration of cultural opportunities in central areas. - Fostering a sense of community and increased social interaction. 3- Environmental Sustainability: - Reduced environmental impact - Preservation of green spaces. 4- Equitable Access to Opportunities: - Diverse employment and industry - Educational opportunity placement 5 -Reduced Inequalities: - Concentrated resources promoting economic equality.
1/29/2024	Anita Orban Banks	DEIS	Land Use	My name is Anita Orban Banks, I am writing on behalf of the Angeline Orban Estate. The estate owns the Subject Property 172501-1-016-2007 which currently holds the Comprehensive Plan Designation of Urban Industrial. The Estate submitted Reclassification #12 to request a Comprehensive Plan change for the Subject Property from Industrial to Commercial. The Estate supports the County's Recommended Zoning of Commercial that was proposed for Alternatives 2 & 3 regarding Subject Property's account. Thank you.
1/30/2024	Gail Sullivan-Bertran	DEIS	Environmental	I am not sure that I understand what is going on in Kingston, Wa. I am told they want to make it morelivable by cutting down all the trees! What!!!!! That is one of the things that made kingston what it is now!!!
1/31/2024	Connie Lander	DEIS	Land Use, Environmental, Transportation	I live near Island Lake and would like to share my input about the Environmental Impact Statement for the Comprehensive Plan. Option #2 is a much better option for the County, as it addresses growth needs but also protects precious rural areas. As a teacher, I am seeing huge issues with children and teens not spending time in nature, which directly impacts mental health. Island Lake is a gem for community members, as it's easily accessible and provides outdoor options for people who can't travel far. Please protect this for generations to come. The Island Lake and Central Valley areas contain vibrant ecosystems. Disturbing these through excessive development has a huge environmental impact on fish, birds, land, and water. Again, please protect this for generations to come. Once an area is disturbed, it is difficult to return it to its original, pristine condition. I am also concerned about the lack of roads leading to this area. Huge amounts of traffic are not feasible for this residential area. I know growth is inevitable, but please consider the option #2 that is least disruptive to people, wildlife, and the environment. Future generations will thank you for making the right decision.
2/1/2024	City of Poulsbo - Heather Wright	DEIS	Land Use, DEIS Plan Edits	I am writing to request that alternatives 2 and 3 no longer include Snyder Park being added to the City of Poulsbo's UGA since the County is retaining the park and is no longer interested in transferring it to the City. Additionally, and as provided in an earlier comment, the City is not in support of any additional land into our UGA, including the almost 10 acres to the northwest of our city limits as proposed in Alternative 3. The City has enough capacity in our city limits to provide for our population allocation and housing targets. Thank you.

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2/3/2024	Rob Salthouse	DEIS	Land Use, Housing, Environmental, Transportation	Hi, I'm writing to restate my opposition to the county adopting the Alternative 3 to the 2024 Comprehensive Plan for the following reasons: 1.It opens the rural areas of Kitsap County to sprawling development and damages the environment, recreational opportunities and wildlife habitat including the vital salmon habitats. 2.It does nothing to address the need for affordable housing in the North Kitsap area, instead it allows development of expensive housing that exceeds the areas projected growth requirements (the areas growth is not exclusively in the high income demographic that can afford houses on 2 - 5 acres). 3.The proposed "Bond Road" re-zone will adversely affect traffic and public safety. Jon Rose from Raydient admitted that traffic was a problem that needed to be solved at a recent public meeting. 1.None of the various road junctions - Stottlemeyer/Bond, Minder/Bond and Port Gamble NE/Bond and and the proposed entrance to the re-zoned area, lend themselves to safe entry to Bond Road and this cannot be solved without major re-work - a single traffic light or rotary will not work. 2.Bond Road is State Road 307. Any re-work would need to be approved by the State and come out of the State budget. 3.Addition of the proposed Regional Sports Complex (Kingston Rotary), The YMCA and a restaurant that are muted would only serve to increase the traffic problems. By the time these projects are realized (if ever) and the traffic safety issues become critical the developers will be long gone and all the burden will fall on tax payers. Note the rotary in Poulsbo on the SR305 cost around $20M! As a side note regarding the sports complex/YMCA; the Kingston Village Green took around 15 years from concept to opening and was probably a much easier and less costly enterprise than turning 20 acres of hills into flat sports fields with lights and player facilities. The Silverdale YMCA cost $11M in 2011$. It is hard to see how either project will go forward in the next decade. These projects are being used as "emotional support" by Raydient to gain public support for their re-zoning request. Comp Plan Alternative 2 is the one that should be supported. It allows retention of the rural areas and encourages appropriate growth in the current UGAs. Thank you Robert Salthouse
2/3/2024	Beth Nichols	DEIS	Environmental, CAO, Land Use, Housing,	See letter on pages 41-44
2/14/2024	Beverly Parsons	DEIS	Land Use	As you work on the EIS draft, please carefully read the recent article from the Kitsap Daily News to look at the implications of the EIS work: https://www.kitsapdailynews.com/news/group-tribes-opposed-to-proposed-nk-sports-complex/
2/12/2024	David Pederson	DEIS	Land Use, Environmental, Transportation, Raydient Reclassification	See pages 45-94
2/14/2024	Betsy Cooper	DEIS	DEIS, DEIS Plan Edits, Enivronmentral, Land Use	See pages 95-100
2/15/2024	Joe Crell	DEIS	Raydient Reclassification, Land Use	I'm writing to express my opposition to the Stottlemeyer Raydient rezone effort. I support the Comprehensive Plan goal of concentrating development in the Urban Growth areas while limiting growth in Rural areas.

DEIS Public Comment Matrix

Date Received	Name	Category	Subcategories	Comment
2/16/2024	Emily Froula	DEIS	Land Use, Raydient Reclassification	Dear Commissioners: I am writing regarding the draft EIS on the 2024 Comp Plan. I support Alternative 3, for the reasons I will discuss. I speak not only as a resident of Kingston, but also as a Rotarian working hard to bring much-needed sports fields to our community. Active recreation facilities have been consistently overlooked in North Kitsap and, while my family enjoys and regularly uses the wonderful parks and trails that have been created, the need for active recreation has consistently failed to be addressed. Although some projects, such as Poulsbo Events and Recreation Complex (PERC), address small aspects of the need, no other proposed project sufficiently addresses the need for such facilities in North Kitsap, nor do they cumulatively address the need for the current population, let alone the future growth. North Kitsap, and especially Kingston, has extremely limited land within or adjacent to any proposed UGA boundaries. There is likely not enough land to fulfil the housing needs, let alone address the need for active recreation facilities. Additionally, it is my opinion that the limited land is better suited to providing housing, and especially affordable housing, for families and commercial space for small businesses closer to town centers and public transportation. Using the limited land for active recreation, which requires significant acreage, would further put pressure on our ability to provide enough housing and commercial support for the predicted growth. With land within the Kingston UGA so limited, it is my opinion that alternative 3 of the Comp Plan can best provide the space for all necessary housing, while allowing affordable housing to be concentrated around urban growth areas. Additionally, allowing for small clustered housing developments in rural North Kitsap, such as the Raydient rezone, the county can better address environmental concerns by coordinating things such as stormwater retention and septic design for a neighborhood rather than each dispersed house being responsible for their own. It is my opinion that this can also be done in a way that maintains the rural feel of non-urban North Kitsap. Setting these neighborhoods back and obscured from major roads, requiring wildlife corridors and green belts, etc. can minimize the urban feel of such communities and help them blend in with rural North Kitsap, yet still provide additional housing to meet the growth targets. Although I'm aware that this is not the topic of the Comp Plan itself, our proposed sports complex project is highly dependent on Alternative 3 being chosen or the rezone at the Raydient site off of Bond Road being addressed separately. Simply put, there is no other flat, dry land that we are aware of that is adequate for such a project in North Kitsap. We have done significant research and continue to look (unsuccessfully) for alternative sites should this rezone fail. If we let this opportunity pass, North Kitsap may never be able to deliver the facilities that can provide the space for our youth to play sports, our seniors to stay active, and all community members to enjoy active recreation within North Kitsap. Thank you for your time and consideration. Sincerely, Emily Froula
2/19/2024	Donald Fenton	DEIS	Environmental, Land Use, Island Lake Reclassification	See pages 101-104
2/19/2024	Leslie Ashby	DEIS	Land Use, Environmental, Site Specific	To Whom it May Concern: As residents in these zones, we are opposed to option #3. It is detrimental to the environment in these areas. Development does not equal progress in this case for all. In fact, it is the opposite: destruction and demise. We have a responsibility to respect the land, all creatures, and nonliving beings that inhabit our town. In this zone, we strive to live With the land, not against it. That is why we DO NOT want you to allow Reclassification Request #49 along Phillips Rd, but to see option 2 as the most balanced option for everyone involved (land, animals, people). Option 3 would have a negative impact from 200 homes would have on the local environment: Cool Creek is a salmon bearing stream that flows through this property and will be negatively affected, if not completely destroyed. In our south kitsap school district as a 5th grade teacher, I'm teaching our district's agreed upon standards of human impact. And yet, every year, I have to explain why right here in town, we put people before the environment and nonhuman creatures time and time again. You took this office for the opportunity to help or for the power. Love and empathy can accomplish everything, power over the land is only intended to control money or inflate the ego. Our grandparents rehabilitated the creek years ago after salmon were suffering from developmental effects nearby. Don't undo the decades of care our family and this area has put into preserving and respecting the land. Are you making choices your 7 year old self would be proud of? Why 7? Because that is when you know enough about how important the world is and you still believe in the magic of hope and the future. Be the superhero in your story. You have the chance to play a real life super hero right now. Will you help or hurt our land? Will you be the superhero that this town needs to make mindful choices setting an example of conscious development while upholding ethical standards for the land on which we rely on and now relies on us. With Gratitude, Leslie Ashby
2/20/2024	Christie Schultz	DEIS	Land Use, Site Specific, Environmental	Attached find zone change input (request) for property designated Fisher-Cheney plat in Enetai. Full hard copy with attachments in route via US Mail See attachment on pages 105-109

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2/20/2024	Dale Zittle	DEIS	Land Use, Site Specific, Environmental	It is time to consider that South Kitsap needs less urban sprawl and less expansion of the UGA. Especially along the Phillips Road corridor. The expansion of housing projects and the two traffic lights at the Sedgwick Road and Mullenix Road accesses to Phillips Road have created both excessive amounts of traffic and environmental (Lake Emelia) damage. Lake Emelia has been polluted due to contaminated run-off from the major housing development at the corner of Phillips Road and Baker Road. Wildlife (Eagles, bear, deer, waterfowl) not to mention trees that have been lost due to the urban growth in the area. Now, more homes are being considered. More loss of trees and wildlife and eco-friendly environments. The proposal of a housing development on land encompassing Cool Creek, a fish spawning waterway. More traffic put on a road that was not built for it. More speeders and more reckless drivers who have no regard for those families that live along Phillips Road. Maybe it's time for South Kitsap to think more about the environmental impacts these developments have on areas in South Kitsap than the collection of revenue from those developments that are causing the type of damage witnessed along Phillips Road. I would urge. .. No More expansion of the UGA along Phillips Road. YES, to Alternative 2 for South Kitsap. NO to Reclassification Request #49. Please, consider the impact 40 acres of homes would have on Cool Creek and its surroundings, the added traffic along Phillips Road (which is already becoming over crowded with vehicles of all sizes) and the loss of wildlife along with the environmental damage that has already been caused by developments along Phillips Road and Baker Road. Thank you Dale Zittle Emelia Lane resident.
2/20/2024	Linda Paralez	DEIS	Land Use, Raydient Reclassification	In all the alternatives, there is a persistent expansion of LAMRID zoning and construction at the intersection of Gunderson and Bond Road at Stottlemeyer. Over the years, local residents have continued to complain about the violation of view (tree) buffers, setbacks, and use of signage (on roadways and building walls) that do not conform to code with no response from the county. Increasing traffic on Bond Road and the necessity to install turn lanes and traffic lights have limited the required tree buffers, and thus increased the "eye-sore" quality of these commercial uses in rural areas. Please ensure that expansion of LAMRIDs replant (or ideally, do not remove existing trees), controls signage per existing code, manages traffic appropriately, and does proper code enforcement. Thanks.
2/21/2024	Lisa Hurt	DEIS	Land Use, Environmental	My name is Lisa Hurt and I have been a Kitsap County resident for 60 years. I believe it is the rural lands that provide the beauty, nature and quality of life that draw people to this area. Growing up here, I have watched growth and urban sprawl happening at an alarming rate. Comprehensive plans come and go in which zoning changes happen again and again. One concerning trend is changing Rural residential to LAMRID. Limited Areas of more intense development. Once that door is open, there is no going back. The rural lands start getting nibbled away at and before you know it, Bond Road will look like Aurora Ave in Seattle. I am concerned that we are allowing far too much rezoning of the rural, farm and forested lands in our county. The fact that there are no incentives to keep these spaces whole and intact is of great concern. I live in one of the last rural areas left in the county. I pay a lot of taxes to keep my property that way. With al of the development and clearcutting around me, my property has become an animal highway. There are so few spaces for wildlife left! We need corridors and wetlands for animals. If we want to keep the flavor of this area, we should really consider some kind of incentives for people to keep these spaces open and natural. I suggest putting a moratorium on all rezoning of rural, farm and forested lands until a more wholistic vision is created in which these important areas that provide for the quality of life that people seek are taken care of in perpetuity. We all want clean air to breathe, clean water to drink, fresh local food to eat and not feel overcrowded. Please, I implore you to think about keeping the rural areas of Kitsap rural and not letting developers bully everybody to their will.
2/21/2024	Walt Elliot	DEIS	Land Use, Environmental, Housing	Please accept the attached comments on the Draft Kitsap Comprehensive Plan Environmental Impact Statement. Note this is being sent in by email instead of using the online from as I do not have it in a pdf format. Walt Elliott See attachment on pages 110-111
2/23/2024	Wendy Arness	DEIS	Housing, Land Use, Infrastructure	See pages 112-115
2/23/2024	City of Port Orchard - Nick Bond	DEIS	Land Use, Transportation, Site Specific	See pages 116-117

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2/23/2024	Puget Sound Energy (PSE) - Robert Bergquist	DEIS	Infrastructure, Environmental, DEIS Plan Edits	See pages 118-122
2/23/2024	Futurewise - Tim Trohimovich	DEIS	Land Use, Environmental, DEIS Plan Edits	See pages 123-137
2/23/2024	Robin Salthouse	DEIS	Transportation, Raydient Reclassification, Environmental	Alternative 2 land use is the best choice for meeting Kitsap County's future growth needs and from preventing sprawl in rural areas.Reclassifying rural wooded property like #27 (Jon Rose) on the Reclassification Request will not allow Kitsap County to meet the proposed goals, policies and strategies found in the Draft Comprehensive Plan. Focusing on UGAs will effectively meet the strategies in the Transportation goal of multi-modal transportation and moving people not vehicles. Public transit systems that serve a concentrated population makes sense. Future budgets and strategies to provide safe non-motorized transit for moving people to jobs, schools healthcare, businesses, and our ferries is more sustainable than funding trails that could damage existing heritage park habitat, and serve fewer people. Safe non-motorized trails will take pressure off our roads, provide health benefits, and not contribute to added Greenhouse Gas Emissions Reclassifying land along a Washington state routes or county roads could further worsen Levels of Service (LOS). Any improvements or expansion along state roads in Kitsap County will require our state legislators to approve funding for feasibility studies, design and construction which will take years to complete. The current Kitsap County transportation budget does not support road improvements due to increases in traffic created by sprawl. The Draft Capital Facilities Plan states the future average Level of Service for County roads is at a C or D grade (p.109/140). Deteriorating traffic flow will only worsen the strategies to reduce Greenhouse Gas Emissions stated in the Climate goal. People live in Kitsap County to enjoy the natural open spaces, the biodiversity in our heritage parks, a healthy lifestyle, and roads that are not snarled in gridlock.
2/24/2024	Beverly Parsons	DEIS	Environmental	I have read through the “Public Comments Received through February 9, 2024 on the DEIS” posted on the county website. Rather than repeat what has been said, I want to add my voice in support of what has been posted by Mayor Rebecca Erickson, Coleen Shoudy, Dave Shorett, Port Gamble S’Klallam Tribe, Doug Hayman, Rob Salthouse, and Beth Nichols. Additionally, In preparing to making comments, I realized that I’m not clear on a fundamental issue about how the DEIS is conducted. What do you consider the baseline for the EIS of each alternative? We need a baseline that goes back much further than the current situation or even 2016 (the most recent Comp Plan). We are experiencing the degradation of the environment by a thousand cuts over time. Can an EIS be done using a baseline of the late 1990’s or even 2000? This is probably not something you can do; if not, please call attention to this issue when presenting the EIS to the Commissioners and to the public.
2/24/2024	Emilee Ashby	DEIS	Land Use, Environmental	I appreciate the County's due diligence when creating the draft environmental impact statement for the 2024 Comprehensive Plan for Kitsap County. I would like to bring attention to the devastating environmental consequences that the expansion of the UGA along Phillips Rd in Port Orchard would result in. Specifically, reclassification request #49, which would rezone 20 acres of forest, wetlands and other critical habitat from 1 home per 5acres, to 5-9homes per acre. The owners of this land would then have a total of 40 acres in the UGA, to be sold to the highest bidder, with the potential of 360 homes on the banks of critical areas including a large section of Cool Creek, a fish bearing stream. Please consider the following prior to making your decision: •This 20 acres of land was left out of the UGA in 2016, largely due to a community effort that shed light on the environmental concerns that development of this land will bring. The environmental concerns that we had in 2016 have only been amplified today, between the threat of climate change and urban sprawl. •According to our state government, (stateofsalmon.wa.gov), our coho salmon population in WA state remains unstable and is particularly susceptible to changes in conditions. Coho salmon have historically spawned in Cool Creek and the numbers, although are not what they once were, have shown promise in the past years. My family has spent years working with local conservation efforts to make our property, (which is located upstream from the land in request #49), an optimal habitat for this unique species of salmon. If reclassification request #49 is considered, it would allow many homes to be built on the banks of critical wetland and salmon habitat, that will absolutely put the native Coho salmon population in real danger of non-existence. And all of our family’s efforts over the past decades will have been for nothing. •Although I appreciate the need for more housing opportunities in Port Orchard, reducing forested land and expanding the UGA in order to increase the number of single family residences does nothing to contribute to affordable housing, and it reduces the rural feel of our community. Housing diversity and limiting urban sprawl is not attained in Port Orchard with Alternative 3, specifically Request #49. I urge the County and our Commissioners to adopt Alternative 2 in Port Orchard and to not adopt Reclassification Request #49 as part of our Comprehensive Plan Update. Thank you for your time and efforts.

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2/24/2024	Ken Rice	DEIS	Land Use, Environmental, Housing	I am formally requesting that Option 2 be adopted. The area is ripe with old growth forests and a fish bearing stream. The Phillips Road corridor cannot handle any more high density development. Let's keep the rural areas as they are, we are quickly running out of natural, pristine land for the sake of "affordable housing", there is no way to develop the land that is in question without spending millions of dollars to build on slopes, near wetlands and streams, and somehow mitigate the effects of traffic on our environment. The cost to develop would eliminate any possibility of "affordable housing ". Maybe look at transforming some of the industrial/commercial that no one is allowed develop into areas where the infrastructure is already in place.
2/25/2024	Kitsap Community Advisory Council (KCAC)	DEIS	Land Use, Economic	See pages 177-182
2/25/2024	Suquamish Citizens Advisory Council (SCAC)	DEIS	Environmental, Infrastructure, Transportation,	See pages 144-147
2/25/2024	Beverly Parsons	DEIS	Land Use, Environmental	Neither the draft EIS nor the draft Comp Plan adequately addresses or evaluates the so-called "Framework" for the Port Gamble Heritage Park as required under GMA as the County said would be done. The park plan is effectively a proposed revision to the Comprehensive Plan, so it needs to be included in this EIS. It is not sufficient to vaguely say it is incorporated by "reference" especially since there remains significant environmental impacts that are not described nor addressed. The EIS and plan should acknowledge that significant issues remain with this proposed park plan related to such things as priority given to conservation and preservation of critical natural resources, delineation of critical areas such as wetlands and streams, landscape delineations, trail design and standards, usage, etc. Further, all environmental impacts of the park plan need to be expressly identified, studied, and analyzed in this EIS. If impacts caused by the park plan will be identified and analyzed under SEPA in the future then it should be clearly stated that the park plan (the "Framework") will not be adopted nor projects in it funded or completed until that happens. If the County does not evaluate all environmental impacts of the park plan in the FEIS, then it will be opening itself to potential legal challenges regarding the scope and adequacy of the County's SEPA review. Regarding Section 3.2 on Land Use: The Plan needs to protect farmland in Kitsap County. This needs to be added to the land use section. Protection of local farmland helps climate resilience, habitat, and local food production. Protection of farmland is paramount to a healthy community.
2/25/2024	Anonymous	DEIS	Transportation	Future transportation project funding will not have the impact to reduce vehicle use and increase safe non-motorized trails. Specifically along SR 307 and 104, and S. Kingston RD NE along the Arborwood housing development. More public transit and multi-use trails will need to be funded. Focused non-motorized projects are needed to move users to schools, jobs, healthcare, businesses and ferries. The trail system needs to be addressed from rural to UGA areas. The STO trails will serve a relatively small number of users with funding for those projects appropriated for trails to improve transportation along routes that reduce vehicle miles, greenhouse gas emissions, tire particle pollution, improve the climate, and provide safe, heathy recreation. Projected LOS will further degrade, especially when Arborwood builds out, Port Gamble development begins, and additional housing and businesses come online in UGAs.
2/25/2024	Marion Allen	DEIS	Emvironmental, Transportation	See page 148
2/25/2024	David Pederson	DEIS	Land Use, Environmental	To Kitsap County SEPA Responsible Officials. Attached are a set of 10 photos showing a quadrant of Radiant property's proposed North Kitsap United Property development on Bond Rd. It's N.E. portion indicates poor forest management practices as indicated by photo's #2-#10. Remaining photos will likely require additional Email. Photo #1 indicates entry gate to this area. Jon Rose stated at the Dec.12th 2023,at the North Kitsap United meeting he has two choices to maintain this property with herbicides, or not as requested by the community. According to WAC Ch.222-30, Timber harvesting "10) Future productivity. Harvesting shall leave the land in a condition conducive to future timber production". In the DEIS there should be a section dedicated to management of Rural Wooded (RW) zoned property that no longer is under DNR enforcement but is still natural resource land. IE Tree farm's. To the best of my knowledge Raydient has timber rights until 2042, therefore it is Kitsap County DCD Code Enforcement responsibility to ensure that forest stands develop into healthy productive forest's. As a multi million dollar capitol investment company, they can have this issue resolved by hiring landscape contractors, yet this property no longer follows under DNR jurisdiction. David Pedersen. See attachments on pages 149-160

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2/25/2024	Anthony Augello	DEIS	Land Use, Environmental, Housing	Kitsap County is being destroyed. My family and I left Port Orchard in 2010, and we returned just a couple of years ago. The deterioration of Kitsap County is painfully evident. The Visit Kitsap Peninsula website states, “The Kitsap Peninsula is blessed with an abundance of natural beauty and many opportunities to enjoy safe and healthy outdoor recreational activities all year round. Whether visiting or living in the region, when out touring the town or hiking the trails, please follow official health guidelines as you Discover the Treasures Around the Kitsap Peninsula.” It’s only a matter of time before these statements will need to be changed on the website, because how Kitsap County is defined is becoming obsolete. Reckless promoting of apartment complex developments and smaller lots that have mushroomed everywhere from Port Orchard up to Poulsbo without even having a demand for them are more than just ruining the landscape. Eric Baker presented a persuasive speech about how even more multifamily and smaller house development is needed and a necessity. Furthermore, he is trying to pigeonhole such development according to income levels. This is not how economies successfully work, and only guarantees eventual slums (hence the word “projects”) that will only contribute more to the overall demise and decay of Kitsap. He is even promoting high rise buildings (on the verge of skyscrapers) in areas such as Kingston and Silverdale, which is in complete contradiction to the culture of the Peninsula. History across America has shown that prosperous economies thrive only when the natural laws of supply and demand are permitted to work without government interference, and in this case the magnitude of the proposed interference is phenomenal. Kitsap County needs to be much more responsible of what we are funding. Very recently Port Orchard (and truly all of Kitsap County) made headlines in USA Today with the Mexican drug cartel (CJNG) now firmly entrenched here. This happened due Kitsap County “leaders” slashing police funding, which is another very apparent observation we have seen since returning to Kitsap County. The increase in crime (including criminals having no fear of committing it), anarchy on the roadways, and garbage scattered everywhere on roadsides highlight the surreal changes we have observed since our return. Taxpayer funds should be more dedicated to fixing real problems such as protection that government funding is meant to fix, not trying “put the cart before the horse” committed to a population increase and excessive development. Eric Baker used phrases like “we need to do this” for population growth and “we must do that”. He has asserted a “necessity” for population growth without even supporting what the residents of Kitsap County truly desire, and the reasons (as was also echoed in the meeting) that people relocated to Kitsap County in the first place. On the contrary, Eric Baker promotes urbanizing Kitsap County to look more like Seattle/King County as a mission, even though he does so in complete opposition to what the overwhelming majority of Kitsap County residents desire based on the outpour of the community in the latest meeting. He should be trying to lead Kitsap County in line with the culture and fabric that make Kitsap County a unique place to live. There are SEPA regulations, wildlife corridors, and potential historic preservation areas abound throughout the entire county. However, he failed to truly mention these as viable alternatives, even though the overwhelming majority of taxpayer residents prefer these alternatives for the comprehensive growth plan. I pray for our leaders, and hope they will focus on what they should be focusing on. Supposedly Kitsap County leaders are committed to “climate change”. If this is true, Kitsap County leaders should be presenting to the governor the significant natural habitats and biodiversity that Kitsap offers and that must be protected (according to law). However, Eric Baker is trying to promote urban growth areas (UGAs) in such areas as Enetai without even considering that more than 90% of the Entetai residents do not want this (for obvious reasons). Enetai has aquifers and steep/unbuildable slopes and is home to wildlife such as bald eagles and lynx, yet it is being proposed to tear down this old growth forest area so that one developer can build 189 homes on 37 acres. This is beyond comprehension! He should be arguing for Kitsap County’s behalf that dense tree canopies, especially next to urban areas are an important tool for combating climate changes. Preserving old growth forests with significant biodiversity should be a PRIORITY. Trees can regrow, but the natural habitats and biodiversity can NEVER be replaced. Once it is gone, it is gone forever. Enetai is one of the primary areas that visitors and tourists see when they come to the Kitsap Peninsula on the ferry. What is being proposed is a true eyesore on the shoreline. Also, who even authorized the zoning exception for this to potentially occur? This itself warrants more investigation and research. I am not against development. In fact, I’ve had my own development company and assisted with the Manchester Community Plan in 2008. However, development should be done responsibly and without government purposefully attempting to destroy the natural process of supply and demand by violating laws and zoning. See attachments on page 161-176

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2/25/2024	Dana Sweany-Schumacher	DEIS	Environmental	I am concerned about the seeming lack of room made in the various proposals for retention of stands of mature urban trees. While urban density and preservation of rural lands is important to help our communities weather both the influx of population projected and the impacts of climate change, focusing solely on density to the detriment of preserving the remnants of urban forests is foolhardy given the crucial role that mature trees play in urban settings. A single grove of mature Douglas firs in an urban setting can shade dozens of homes and businesses. They act as air scrubbers, and they mitigate stormwater headaches. They also act as small oases to protect pockets of urban wildlife. While tree replacement is a good start in urban planning and zoning, it will take a hundred years or more for current stands of native mature trees to truly be replaced. That is 100 years of their benefit being lost to our communities in the name of density when heat indexes are climbing, air scrubbing is ever-more important, and our area is projected to see more storms, wetter weather, and additional flooding. While density is crucial, the need for balance is important. At a time when our state is offering communities millions in grants to preserve stands of mature urban trees due to recognition of their unique and vital importance, I fear that Kitsap is about to adopt a Comprehensive Plan without a tree retention provision in urban settings. In 2024, the idea that this would not be included is worrying to say the least. Our neighborhood in downtown Kingston recently appealed a DCD decision to allow the destruction of the tallest and oldest stand of native firs in the Kingston UVC. Those trees, which are going to be cut down to make way for four single family homes, currently shade more than fifty households including the homes of dozens of vulnerable seniors and disabled residents at the Martha and Mary complex at the Village Green. Some of those trees stand over 160 feet and are used daily by both Osprey and Eagles. The impending destruction of this resource to our community and to local wildlife will be a huge loss, and while these particular trees are slated to be victims of density over all else, I'm hoping that we can do better in the future for other mature stands of urban trees, recognizing their vital importance for helping urban communities weather what is coming,
2/26/2024	Jackie Kelly	DEIS	Land Use, Environmental	See pages 177-181
2/26/2024	Beth Berglund	DEIS	Land Use, Environmental	Re: the DEIS, I second the substantive comments submitted by Betsy Cooper, David Shorett, the Port Gamble S'Klallam Tribe, Doug Hammond, and Beth Nichols. Re: the Alt 3 proposed re-zone and proposed future use of the 400+ acres owned by Raydient North Kitsap LLC adjacent to the Port Gamble Forest Heritage Park, I share the concerns expressed by Poulsbo Mayor Becky Erickson / Poulsbo City Council, the Port Gamble S'Klallam Tribe, and Rob Salthouse. Per the goals of the Growth Management Act, this level of investment belongs inside urban growth areas (UGAs) or existing LAMIRDS where it can be served effectively by public transit, where it can support the economy of the UGA, and where it doesn't create a new investment hub and driver of sprawl. The plan for meeting club sport field needs should focus on (1) supporting Poulsbo's PERC project while also investing in improvements to existing fields at (2) our NKSD schools, (3) private schools, and (4) our community parks (i.e., Kingston Kola Kole). The Port Gamble Redevelopment and the PGFHP include plans that will dramatically increase traffic in this rural section of NK. We shouldn't voluntarily allow development so misaligned with smart growth planning principles.
2/26/2024	Berni Kenworthy	DEIS	Land Use, Environmental, DEIS Plan Edits	See pages 182-183
2/26/2024	Nancy Langwith and Kingston Stakeholders	DEIS	Land Use, Economic Development	See pages 184-188
2/26/2024	Joseph Lubischer	DEIS	Land Use, Environmental	§3.3.4. Forestry plans and master plans for County heritage parks exist. They may or may not have been approved by the BOC and may or may not have gone through a SEPA process. It is fair to say that the County and Parks Department processes for reviewing, adjusting, and implementing these plans is unclear. These plans are within the purview of the GMA. None of these 'land use policy plans' are mentioned in the current EIS and it is unlikely they have been addressed previously. The current EIS should (1) acknowledge, explain, and address these plans and (2) identify adverse environmental impacts.
2/26/2024	Joseph Lubischer	DEIS	Land Use, Environmental	§3.2.6.1 specifically addresses the Sound to Olympics STO Trail. This project previously received DNS status under the String of Pearls and Non-Motorized plans. The SEPA determinations were based on route alignments that have been largely abandoned. On the order of 90% of alignments, outside of SR305, have been changed. In addition, County failed to identify adverse impacts that offer little possibility for mitigation.Therefore, the previous Determinations are invalid and a new SEPA process is required. A specific Determination of Significance for this project is required. In addition, because this project is linear, phasing is not appropriate.

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2/26/2024	Joseph Lubischer	DEIS	Land Use, Environmental	3.3.4.2. The master plan for Port Gamble Forest Heritage Park, aka Framework, received a Determination of Non-Significance. When challenged, the County said 'ok', we'll include it under the Comp Plan EIS. Under SEPA, the process requires, equentitally, a determination of significance, then EIS if applicable, and if not applicable then non-project and project determinations. A fair question is what is the County's process with this land use policy? The process must be clarified and an environmental review be performed following SEPA rules.
2/26/2024	Carol Price	DEIS	Land Use, Environmental, CAO	I am in support of many of the comments already made by Coleen Shoudy, Dave Shorett, Doug Hayman, Beth Nichols, and others. Comments submitted in the letter from the Port Gamble S'Klallam Tribe are particularly significant. They make the case for adoption of Net Ecological Gain as a County standard. Critical Area Ordinance regulations need enforcing, especially in reference to wetlands, streams, and the shoreline. Buffers around these water ways need to be honored and enforced, and variances for buffers are not appropriate. Property owners must be held to a higher standard in their responsibilities towards the environment.
2/26/2024	Bobbie Moore	DEIS	Land Use, Health	Parks and Recreation: Regarding 3.3.4.2, The EIS emphasizes access to passive recreation at the expense of active recreation, particularly sports fields. I acknowledge that for me and my demographic (retired Baby-Boomer, no children living with us), passive recreation opportunities are one of the great draws to Kitsap County living. Nevertheless, the county's growth will have to consist of a diversity of demographics; most of the growth won't resemble me and my situation. Families already have a shortage of places for youth and adults to engage in sports activities. The present allocation of active sports facilities leaves North Kitsap out almost entirely. So I reason that the stated impacts of any of the alternatives must include the present sports facilities deficits as well as what will surely be increased deficits owing to projected growth. Because the PROS plan is not yet ready, there's an absence of data to support any of the three alternatives and their associated Levels of Service. Intuitively, it seems the best alternative for accommodating more active sports facilities is Number 3. The As-is condition is clearly not sufficient; Alternative 2 makes reference to increased parks but we know from observation in Kingston that there is no location for increased parks. The existing (2012) PROS plan reports that School Districts provide most of the active athletic facilities. Reports from parents of primary and secondary school kids confirm what my own family has observed over the years: School District facilities are in poor shape, are overbooked, and are nearly always primarily devoted to use by the schools themselves. This facilities gap will not be addressed before the next Comp Plan and its impacts should be mitigated with this Plan. The North Kitsap United project would be accommodated by Alternative 3 and would be a viable approach to addressing the facilities gap. Recommendations: First, keep the Draft EIS comment period open until the PROS plan data have been gathered and summarized. Second, prioritize active recreation in the EIS. It deserves to be considered on a par with passive recreation. Third, Alternative 3 makes the most sense to me. Respectfully, Bobbie Moore, Kingston
2/26/2024	Washington Department of Fish and Wildlife (WDFW) - Jessica Bryant	DEIS	Land Use, Environmental	See pages 189-191
2/26/2024	Kitsap Environmental Coalition (KEC)	DEIS	Land Use Environmental, Infrastructure, Housing	See pages 192-203
2/26/2024	Puget Sound Regional Council (PSRC) - Liz Underwood-Bultmann	DEIS	Transportation, Plan Edits, Infrastructure, Housing	See pages 204-208
2/26/2024	Lisa Pederson	DEIS	DEIS Plan Edits, Land Use, Environmental,Housing, Raydient Reclassification	See pages 209-217
2/26/2024	Farmland Preservation Working Group - Diane Fish	DEIS	Land Use, Environmental, Economic Development	See pages 218-240

DEIS Public Comment Matrix

Date Received	Name	Category	Subcategories	Comment
2/26/2024	David Pederson	DEIS	Raydient Reclassification, Transportation, Economic	Revised Dave's 2 minute comment to Kitsap County Commissioners on 2-26-24 Good evening Commissioners, My name is David Pedersen and I would like to comment on the Comp. Plan and DEIS document. During a meeting at the Village Green, as I understand it, Jon Rose stated, in general most resources are located around urban areas to prevent sprawl, yet he is asking DCD to accept his request for application ID#72 to be granted, which in fact, per the Kitsap United North Feasibility study will create urban sprawl in an area that is currently zoned Rural Wooded (RW) to Rural Residential (RR). The DEIS, the GMA, and the Puget Sound Regional Council rejects urban sprawl in rural environments and how this type of activity incorporates too much mitigation. In my opinion to keep our natural resources safe, as these mitigated measures fail from time to time, I would submit that DCD adopt a resolution to allow Commissioners to review any rezoning request over 20 acres that involve the county's aquifer recharge areas, timber lands, and lands containing minerals to preserve what's left of our natural resources. This will also keep taxes lower for the community. In regards to the Preliminary Transportation Assessment in the NKU's Feasibility Study, page 11, there have been 2 deaths in our area from accidents that have occurred less than 6 months ago. One on Bond Hwy 307 and one in front of Heritage Park Hwy104. I have submitted a more recent accident report to the Commissioners from North Kitsap Fire and Rescue, indicating 415 accidents up to October 15th.
2/26/2024	David Pederson	DEIS	Environmental, Infrastructure	This particular article written by former Kitsap County Commissioner Steven Bauer, was published September 4th, 2009 and submitted to the Kitsap Daily News for circulation throughout Kitsap County. I have lived here for well over 30 years and seen the changes the county has gone through and find this article is extremely accurate in it's facts and findings as my neighborhood was flooded at it's lower end because of a retaining pond overflow across the street during a rain storm, which then flowed into the adjacent ditch which had a very large culvert that lead directly underneath HY104 to our storm water ditches and created a massive influx of water, our 2.5 foot by 3 feet wide ditches could not handle. Water overflowed on to Bond road and headed due north to the lower established homes across the street and through our culverts which could not handle the flow as well! So I ended up having to due a lot of photographic work to show the DOE after arriving. Just one of our culverts could fill a fire truck in less than 5 minutes! The water finally slowed after several homes had water up to their front porches above steps. It is my understanding the business that refused to follow their own approved blueprint in its inception clearly stated the ground was to be left with at least 60% gravel to assist in our Category1aquafer recharge area. Instead it was completely paved over with blacktop and a piping system leading directly to the retaining pond. The DOE was very upset about this issue and I still to this day have no idea if DCD Code Enforcement was ever involved with repair work. I am under the impression that culvert under HY104 may now be plugged, which allows thousands of gallons of water to flow straight down the hill to Gamble Bay under same conditions. Mitigation is nothing more than a means to slow down the destruction of a particular resource, and as I have said before, KPUD will "simply" walk away if any of these actions occur! I hope to live another 30 years, and pray those who make decisions for our next generation are long term and solid. On page 48 of the Puget sound Regional Council vision 2050, " the amount of impervious surface as a key metric related to the health of the region's water resources. Increasing the amount of impervious surface may have numerous impacts... degraded water quality, decreased aquafer recharge, and increased water temperature." " King and Kitsap Counties have the highest percentage of impervious surfaces at 9.4% and 9.1%." Kitsap County has reached the mark of it's resiliency in my and many others belief that leads to that same thread where I have now endured the smell of chlorine in my drinking water for over four year's, but have not been medically affected to the best of my knowledge at this time. My community has expressed their concerns as well on our web page. Health advisory issued for Dyes Inlet due to sewage spill. For information, go to: https://lnks.gd/2/nNdxx7 See attachment on pages 241-245
2/26/2024	Suquamish Tribe - Rod Malcom	DEIS	DEIS Plan Edits, Land Use, Environmental, Housing, CAO	See pages 246-287
2/26/2024	City of Bremerton - Garrett Jackson	DEIS	Land Use, Environmental, Site Specific, Infrastructure	See pages 288-291
2/26/2024	Kitsap Building Association (KBA) - Ian Harkins	DEIS	Housing, Transportation, CAO	See pages 292-294

DEIS Public Comment Matrix

Date Received	Name	Category	Subcategories	Comment
2/26/2024	Cathy Ridley	DEIS	Land Use, Raydient Reclassification	Kitsap County Commissioners Rolfes, Garrido, Walters, and Eric Baker, Department of Community Development: I suggest that the County adopt Alternative 2 as the basic alternative as you move toward the Preferred Alternative, and wait until after the Comp Plan Update is finished to look at rural land use, zoning, and codes as a whole with attention to ensuring protection of the natural environment. This means putting all requests for changes in the rural zones or LAMIRDs on hold until there is concerted attention to the rural areas following the completion of the Comp Plan Update. I am also writing to express my concerns about the request by Mr. Jon Rose to rezone 400 acres of property owned by Raydient Corporation on Bond Road and the proposed sports complex, commercial zone, and increased density housing development. I oppose this location for a sports complex and intense development. Please do not allow the zoning changes requested by the Raydient of their property on Bond Road near Port Gamble Forest Heritage Park to change from 1 dwelling/20 acres to 1 dwelling/5 acres. Here are my concerns: Growth Management Act: This project would create intense development in a rural area adjacent to the Port Gamble Heritage Park -- resulting in disorganized sprawl that the Growth Management Act was designed to avoid. To promote responsible and sustainable growth, this type of dense project should be located in an urban setting with urban amenities. Our Rural areas are part of Kitsap's beauty and character and need to be protected. Permitting this rezone sets a bad precedent; other developers will want to follow suit and the rural area will be turned into sprawl. In addition, it would establish precedent for Raydient to request rezoning of their other rural and forest properties for commercial development. Traffic: Traffic infrastructure already cannot handle the existing traffic. There is no sensible plan to deal with the traffic added by the sports complex, commercial zone, and additional homes outside one per 20 acres. There is no public transportation to the proposed sports complex site. The preliminary traffic studies completed for the Sports Complex project indicate that Bond Road currently does not meet service requirements; additional development would exacerbate the already unsafe conditions on Bond Road. In addition, the traffic counts conducted to support Raydient's preliminary studies occurred during the pandemic, a period of severely reduced ferry service in Kingston, meaning the counts were likely much lower than they will be when ferry service is fully restored to reliable operations. WSDOT's Transportation Improvement Plan does not show any planned improvements to Bond Road in the near future. The County's new public works facility on Bond Road and the Suquamish Clearwater Retail Development, already approved, will also greatly impact traffic beyond what the initial studies take into account. Duplication of new sports centers: This proposed project is 3.8 miles from the proposed Poulsbo Event and Recreation Center (PERC), and planning for that project is already underway. The city of Poulsbo opposes the rezone of the Bond Road property. Viability of Funding: There is no confirmation that the sports complex can obtain funding for construction and ongoing maintenance, including wastewater discharge and road improvements. Taxpayers could end up with unsustainable tax burdens. We could end up with Raydient's wish list for housing and commercial development being built, but no way for the community to proceed on the sports complex project due to inability to fully fund the project. Water and Environment: This proposed housing development, sports complex, and commercial zone would be located on a critical aquifer recharge area, near mapped fish bearing streams, and a mapped wetland -- putting our local drinking water resources and watershed health at risk. A sports complex including turf fields and large amounts of parking would cause high amount of impervious surface, stormwater discharge, and wastewater. For instance, the septic discharge is estimated at 100,000 gallons a day. Wildlife Habitat and Park environment: The rezoning proposal would displace numerous animal populations, and impact Endangered Species Act-listed wildlife that may be present on this site. The intensity of development would degrade the habitat and outdoor experience of Port Gamble Forest Heritage Park, with neighboring lighting, car trips, and user population. Tribal Concerns: Port Gamble S'Klallam Tribe opposes the Rezone on Bond Road. The Suquamish Tribe opposes the rezoning of rural protection or urban restricted parcels to more intensive uses. Affordable Housing Goals: The rezone and sports complex do not help with the target for affordable housing that the County is required to meet by the GMA. The houses will only be for high income earners. I urge you to vote against the Raydient rezone request and the proposed sports complex to keep development within the UGA as required by the GMA, protect areas of North Kitsap's rural character, discourage suburban sprawl development, minimize additional traffic congestion, and protect our natural environment, water quality and habitat. Respectfully, Cathy Ridley

DEIS Public Comment Matrix

Date Received	Name	Category	Subcategories	Comment
2/26/2024	Anonymous	DEIS	Land Use, Economic Development	I vote for Alternative 2. Not only will compact growth leave more natural lands for hikers, bikers, and wildlife, having the growth happen around the city centers will benefit the small businesses in the community, just by being within walking distance. This will allow for better growth within the city centers and allow recreation outside of it.
2/26/2024	Kitsap Alliance of Property Owners (KAPO) - William Palmer	DEIS	Land Use, Housing, Transportation, Economic, Environmental	See pages 295-306
2/26/2024	David Vliet	DEIS	Land Use, Environmental, Health, CAO	First, a personal thank you to the staff at the DCD for all their hard work and dedication in outreach during the DEIS process. They have held numerous in-person and hybrid events, with display materials to better understand potential changes to our county. Of the alternatives proposed by DCD, Alternative 2 is the one I support. It provides for more rural, farm and environmental protections. To refrain from being repetitious, I would like to call special attention to the comments from Poulsbo Mayor Erickson and the Port Gamble S'Klallam Tribe. I do not support the Raydient rezone request. It would degrade forever the rural character that currently exists and would bring suburban/urban traffic and other environmental mitigation needs that are not supported by the intention of the GMA. Please keep the zoning as it stands. If future citizens decide to change this, let them do so at that time. The same goes for the Island Lake rezone request. Please deny this upzone. Between 1997 and 2017, Kitsap County lost 61% of it farmland (USDA Agricultural Census, 1997-2017), nearly three times the rate of that in the greater Puget Sound Region. Kitsap County needs to make farmland preservation a priority to provide food security for its citizens. We cannot, and should not, expect farmers in other areas to fully supplement our growing food needs. There is a growing number of young and motivated local farmers that we need to embrace and assist in growing our local food supply. Please commit to public hearings with regards to farmland preservation in 2024-25. I agree with previous citizens commenters below on the need to achieve Net Ecological Gain when pursuing development goals as a county. We cannot continue to unsustainably build out and lessen our quality life, in a "death by a thousand cuts," as someone said below. And no more variances when it comes to wetland mitigation. This is a shell game that does not force us to come to terms with building the way we should, where we should. I have heard that our development community is very creative. Let that creativity flow within the existing landscape and work around our critical and forested areas. These are critical areas for a reason. I support expansion and enforcement of the CAO. I however would like to see some exception in the CAO code for farmland. I'm proposing something like a 50% variance of setback in the CAO so these farms can remain in business in a county with rising land values and rapid land conversion. Lastly, Kingston, "The Little City by the Sea," is a gem of a town. I strongly oppose the upzones put forth in the alternatives for Kingston. Especially for the poor folks off Lindvog Rd., a beautiful road that will be forever changed should this zoning be changed. We need to wait to see the impacts that Arborwood has on our quite and kind little town before expanding the UGA. From what I have read, Kingston has already met our population goals as required by the GMA.
2/26/2024	Kitsap County Council for Human Rights (KCCHR) - Kirsten Dahlquist	DEIS	Housing, Infrastructure, Health, Environmental	See pages 307-308
2/26/2024	Squaxin Island Tribe - Erica Marbet	DEIS	Land Use, Environmental	See pages 309-311
2/26/2024	Raydient - Jon Rose	DEIS	Land Use, Environmental, Housing, Infrastructure, Transportation	See pages 312-560

DEIS Public Comment Matrix

Date Received	Name	Category	Subcategories	Comment
2/26/2024	Leah and Kurt Smith	DEIS	Land Use, Environmental	Folks, I had intended to comment within the allotted time, thinking it went to the end of the day today. However, it appears that the comment form has been removed from the website. So, perhaps my comment is for nothing, but I want to try anyway. My husband and I have lived in Kingston since 1995. We treasure the woods and wetlands that surround us. As time has gone on, and development has evolved, it seems that the rules are bent, exceptions are made and zoning changes are not very difficult to accomplish. With more and more people moving to our area, I believe it's time to make implementation of zoning changes more difficult in order to preserve the rural and treed areas that we have. It's what makes us unique. It's also time to get very serious about preserving ground and surface water, growing trees, and protecting the flora and fauna associated with our particular environment. We support Alternative 2. Leah and Kurt Smith
2/26/2024	Shannon Stephens	DEIS	Land Use, Environmental	Hello! I meant to submit this through the website, but it looks like I can no longer submit a comment there. I assumed I could submit anytime today. I hope you will take this-- thank you! I'd like to voice my support for Alternative 2, and state my opposition to the Raydient and Island Lake rezone requests. To protect our farms, wetlands, forests, and the wild creatures who call this place home, we should concentrate growth close to the town center. Many thanks for your work! Shannon Stephens
2/26/2024	Port Gamble S'Klallam Tribe - Marla Powers	DEIS	Environmental, Infrastructure	See pages 561-562
2/26/2024	Washington State Department of Transportation (WSDOT) - George Mazur	DEIS	Transportation, DEIS Plan Edits	See pages 563-565

Thomas Garrett DEIS Comment

12/25/23

DEIS Comments
1.2 SEPA Environmental Review - In the event of a conflict with Kitsap County Regulations/Policies/Best Available Science and the governing WA State Agency Regulations/Policies/Best Available Science (BAS), the WA
State Agency Regulations/Policies/BAS shall apply.

1.4 Section Major Issues, Significant Areas of Controversy & Uncertainty & Issues to Be Resolved Define Level cost estimates for capital improvements shall be made available to the public prior to approval by Kitsap County. If the cost estimates exceed a level not acceptable to the public, it shall go to the public for vote. Project Define level estimates shall be made publicly available prior to a project Execute phase.

1.5 SUMMARY TABLES OF IMPACTS & MITIGATION MEASURES
Exhibit 1.5-1 Earth (Section 3.1.1) Impacts Common to all Alternatives add "regulations of Federal, State and Kitsap County regulations and codes"

Exhibits 1.5-1 through 1.5-4 All Sections with "Significant Unavoidable Adverse Impacts" - Kitsap County should require any major developer/parcel owners to have a legally binding incorporated and bonded Owners Association (OA) to oversee and ensure compliance with State and County Codes/Regulations in the Critical and Sensitive areas. The developer/parcel owners will furnish a detailed project schedule and detailed work plan to be approved by Kitsap County. This would allow Kitsap County to manage with minimum staff and third party services. This OA would continue for life of the Development. OA to manage new permits and ensure compliance with the Critical Area Ordinances. This should also apply to parcels owners bordering on or adjacent to major Kitsap County Parks.

2 Alternatives

Exhibit 2.3-1 Kitsap County Planning Jurisdictions Map This map should be modified to indicate all streams and provide a link to the interactive map with streams.

2.5.7 Capital Facilities Plan Where the Alternative 3 "Dispersed Growth Focus" where the infrastructure/capital facilities only benefits the developer/parcel owner, consider having them pay the cost.

3 Affected Environment, Significant Impacts & Mitigation Measures

Exhibit 3.1.1-1 Kitsap County Soil Survey Map This map should be modified to indicate all streams and provide a link to the interactive map with streams and intermittent streams.

Exhibit 3.1.1.1-2 Geologically Hazardous Map – Erosion hazards This map should be modified to indicate all streams and provide a link to the interactive map with streams and intermittent streams.

Exhibit 3.1.1.1-3 Geologically Hazardous Map – Landslide hazards This map should be modified to indicate all streams and provide a link to the interactive map with streams and intermittent streams.

Exhibit 3.1.1.1-4 Geologically Hazardous Map – Seismic hazards This map should be modified to indicate all streams and provide a link to the interactive map with streams and intermittent streams.

Exhibit 3.1.3.1-1 Watercourse and surface water map This map should be provided with a link to the interactive map.

Exhibit 3.1.3.1-5 Critical Areas Map This map should be modified to indicate all stream sand intermittent streams and provide a link to the interactive map with streams and intermittent streams.

Exhibit 3.2.1.1-2 North Kitsap Land Use Map This map should be modified to indicate all streams and intermittent streams and provide a link to the interactive map with streams and intermittent streams.

Exhibit 3.2.1.1-3 Central Kitsap Land Use Map This map should be modified to indicate all streams and intermittent streams and provide a link to the interactive map with streams and intermittent streams.

Exhibit 3.2.1.1-4 South Kitsap Land Use Map This map should be modified to indicate all streams and provide a link to the interactive map with streams.

Exhibit 3.2.1.1-5 Zoning & Development Standards Kitsap County should provide a hyperlink to the Title 17 Zoning
https://www.codepublishing.com/WA/KitsapCounty/#!/Kitsap17/Kitsap17.html

Exhibit 3.2.1.1-6 North Kitsap Zoning Map This map should be modified to indicate all streams and provide a link to the interactive map with streams including seasonal intermittent streams.

Exhibit 3.2.1.1-7 Central Kitsap Zoning Map This map should be modified to indicate all streams and provide a link to the interactive map with streams including seasonal intermittent streams.

Exhibit 3.2.1.1-8 South Kitsap Zoning Map This map should be modified to indicate all streams and provide a link to the interactive map with streams
including seasonal intermittent streams

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City of Poulsbo

Office of Mayor Rebecca Erickson

November 6, 2023

Department of Community Development
Planning and Environmental Programs
614 Division St. MS-36
Port Orchard, WA 98366
Email: compplan@kitsap.gov

Subject: EIS Alternative, City of Poulsbo Opposition to Alternative 3 rezone request

Dear Kitsap County Board of County Commissioners:

I am writing on behalf of the Poulsbo City Council to express our strong opposition to the rezone application submitted by Jon Rose (aka Raydient) for the vacant, 413.9 acres located off of and north of Bond Road, which seeks to change the zoning designation from Rural Wooded (RW) to Rural Residential (RR) (aka Reclassification Request #72). We understand that this request has been included in the Alternative 3 "Dispersed Growth Focus" land use alternative of the 2024 Comprehensive Plan.

The Growth Management Act was enacted to promote responsible and sustainable growth within city limits and urban growth areas (UGAs) and to preserve rural areas for agriculture, open space, and other valuable purposes. Upzoning land outside of UGAs runs counter to the fundamental purpose of the GMA and undermines the careful planning and thoughtful development that the Act seeks to achieve.

The rezone would result in an increase of at least 60 units by increasing the density from one (1) unit for every 20 acres (20 units) to one (1) unit per every five (5) acres (82 units). We have several concerns regarding this application:

1. **Environmental Impact:** The area currently designated as Rural Wooded (RW) contains valuable natural habitats and forested areas that play a crucial role in maintaining the ecological balance of our region.

The approximate 414 acres has multiple watercourses designated by DNR and the Wildfish Conservancy that includes fish bearing streams, nonfish bearing streams, as well as unknown, unmodeled hydrographic features. Moderate landslides and erosion hazard occur as well as a mapped wetland.

Furthermore, the Port Gamble S'Klallam tribe submitted a comment (April 6, 2023) against this requested siting that it is within the Gamble Creek Watershed that feeds directly into the Port Gamble Bay. They are concerned that the watershed will be directly impacted by any development, but most intensely impacted with Rural Residential development.

Changing the zoning to Rural Residential could lead to increased deforestation, habitat disruption, and environmental stress.

2. **Traffic and Infrastructure:** Bond Road is already a heavily trafficked route, and the proposed rezone will result in increased traffic congestion, putting additional strain on our infrastructure. We are concerned about the adequacy of infrastructure and roadways to support the proposed development. The project will have significant impact on the LOS for major intersections on Bond and must be addressed.

3. **Inconsistent with the Purpose of the R zone:**

   The purpose of the RW zone is to encourage the preservation of forest uses and agricultural activities, retain an area's rural character and conserve the natural resources while providing for some rural residential use. This zone is further intended to discourage activities and facilities that can be considered detrimental to the maintenance of timber production. Residents of rural wooded (RW) residential tracts shall recognize that they can be subject to normal and accepted farming and forestry practices on adjacent parcels.

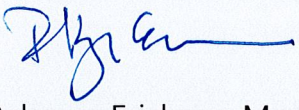
   The purpose of the RR zone is to promote low-density residential development and agricultural activities that are consistent with rural character. It is applied to areas that are relatively unconstrained by environmentally sensitive areas or other significant landscape features. These areas are provided with limited public services.

   The properties do not appear to meet the purpose of the RR zone as they are relatively constrained by environmentally sensitive areas. As stated, the site is largely covered in moderate geological hazard slopes and contains fish and non-fish habitat streams as well as a mapped wetland and hydric soils. It is also within the Gamble Creek Watershed that feeds directly into the Port Gamble Bay.

4. **Community Character and Increased Demand for Services:** The proposed area abuts Port Gamble Heritage Park (Park zone) to the west and Rural Protection zoned areas to the east. An increase in density from one unit per 20 acres to one unit per 5 acres would be a dramatic increase immediately abutting a Park zone and is inconsistent with the existing zoning pattern. Additionally, and as stated in the comment letter from the Suquamish Tribe dated April 14, 2023, increasing rural housing densities will also increase the need for school, libraries, churches, transit, road maintenance, availably commercial and retail opportunities as well as other public amenities. The densification projects require urban services and the extension of services to projects located in the rural areas and is not only expensive but contrary to the GMA.

Given these concerns, we respectfully request that the Kitsap County Board of County Commissioners carefully consider the implications of this rezone application on the environment, traffic, and the character of our community. We appreciate your attention to this matter and urge you to consider the impacts to the residents of Poulsbo and the surrounding natural and manmade environment.

Thank you for your time and consideration.



Rebecca Erickson, Mayor

Signed with unanimous support from the Poulsbo City Council as approved at the November 1, 2023, Poulsbo Council Meeting.

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Kitsap County updated Comprehensive Plan
Comments on Draft Environmental Statement
Dave Shorett 206-200-3433

1. It is clear that under any standard applied, GMA, RCWs, PRC 2050, Kitsap County Code and all planning codes applicable, Alternative 2 is legally supportable in contrast to Alternatives 1 and 3. There are so many references in the EIS that overwhelmingly support Alt. 2 and the Alt 2 map as preferred over Alt 1 and Alt 3 map that it would take pages and pages to highlight them. What stands as a basic summary is well presented in the tables beginning at p. 203.

2. Given the central mandates of the GMA - concentrate growth in UGAs, avoid sprawl and avoid unneeded negative environmental impacts whenever possible, rezones are unnecessary in this 2024 version of the Comp. Plan. More than sufficient capacity for population growth exists in Alternative 2 and the EIS, as stated, provides no support for adding land to existing UGAs. In fact, this EIS states *"• For UGAs that show capacities greater than the population or employment targets, UGA boundaries should be decreased, where possible. Areas should be removed that are more costly to provide public services or that have significant concentrations of critical areas. ."*

Rezones can wait until needed. The Comp. Plan and Kitsap Code allow for adjustments to zoning as needs are demonstrated beyond the date of a new comp plan – if it becomes apparent that capacity for population growth figures set in 2024 is not being met in the following years, there are several opportunities available to the County to make rezoning adjustments as needed.

Moreover, those who have submitted applications for rezones in this Comp Plan can ask for rezones at any time in the future. The Kitsap Code provides a specific means of doing so. Additionally, the 5 year review of the Comp Plan presents another specific opportunity for consideration.

3. Need to incentivize development in UGAs but not outside UGAs.
It has been occasionally contended that developers must be incentivized to build in UGAs. This is reasonable and is or should be a goal of Kitsap County and DCD.

However it has been suggested that adding rural zoned land to UGAs would be another way of incentivizing builders. This idea makes no sense, as zoning then becomes driven by developer's needs, rather than public interest; rural zones would lose much of the protection they now have; as for-profit operations, developers seek to maximize profit and that generally means constructing large single family homes priced out of the presently desired range set by recent legislation. The only conceivable exception might be parcels which would have little or no impact from urban development due to location, adjacent to Highway 303 for example and negligible impact on condition of the land.

4. As to specific proposed rezones in Alt 3, the 95 acre proposed rezone bordering Barker Creek and Island lake stands as an example of land which should never be rezoned to urban growth unless absolutely necessary to meet population growth projected for Kitsap County.

This specific developer generated rezone proposal stands out as an example of what should only be a last resort to meet GMA population needs. It borders a salmon bearing stream and a Lake, is heavily

forested, virtually undeveloped, provides excellent habitat, is not served by urban infrastructure, includes several CAO areas, including stream, wetland and a Category 1 CARA. Much more can be added as reasons this proposal must be rejected. It would be an abuse of discretion to add it to any type of UGA or up zone it in any manner.

Additionally, the EIS states "The Comprehensive Plan is the centerpiece of planning for unincorporated Kitsap County. It expresses the community's vision of itself and the community it aspires to become." The community has weighed in on the proposal to rezone 95 acres at Island Lake and Barker Creek and overwhelmingly opposes this proposal.

5. I could not find any assessment using the standard of "no net loss," applicable to planning under WAC 365-196-830, Protection of critical areas. Reference in the EIS to stream and lake impact from Alt 3 do not appear to use this standard. Specifically, Island Lake and Barker Creek are mentioned several times in this EIS, apparently without reference to how no net loss would factor into a proposed rezone in Alt 3, mentioned above.

6. There is a significant understatement of adverse environmental impacts from development.

The actual significant environmental impact of development is inescapably understated because the EIS has not included assessment of permitting, monitoring, actual on the ground deveolopment and enforcement processes in the county. Despite a few scattered references to codes being sometimes ineffective, the EIS essentially assumes that the processes involed in developement are successful in meeting statutory and code adherence to protection of the environment in development. This assumption, made without an examination of the actual processes and their history, is arguably a significant flaw in the EIS. It is suggested that such studies be required to accurately assess actual probable impacts. The historical performance of the developers, Kitsap County government and its city governments in carrying out their respective obligations under applicable code must be known before making a fair environmental assessment of a comprehensive plan.

The actual process of development includes an application for development supported by paid expert opinion which generally suggests no adverse impact or that impacts will be eliminated by regulatory mitigation or prevention measures taken by the developer and subsequent owners. Experience suggests that the following assumptions occur in the EIS: expert opinion is unbiased and accurate; government has the expertise to recognize bias, lack of information, etc in the application; mitigation measures will not be hedged, avoided or not carried out in actual practice; monitoring will discover any problems with the final product and its performance over the years; that monitoring will result in enforcement; enforcement will remedy adverse impacts. Without having sufficient data of a County's adherence to regulations in granting a permit, contractor adherence to construction requirements, extent of County monitoring, data from the results of that monitoring, and data post enforcement, it cannot be assumed that various adverse impacts will not occur or will be remedied. Thus, the unavoidable impacts, which appears to be an assessment of the impacts which occur after everything in the process is done according to regulation, while accurate enough when stated as categories of impact, are highly likely to be greater, sometimes much greater in actuality than what is predicted by this EIS.

For example, is there a fish bearing stream in Kitsap County which was not permanently adversely affected and its fish population adversely affected by urbanization? Many no longer have sustaining fish populations. What is known about the development process, monitoring, enforcement, etc applicable to these streams? Can anyone say with any level of confidence that Barker Creek, for example, which has viable salmon and cutthroat populations, would not lose those populations if its

surrounding lands were to be urbanized? If you cannot answer this question, you cannot accurately assess the impact of any proposed development.

Finally, the EIS assumes that statutory and code provisions protect undeveloped, relatively pristine land from adverse impacts without truly examining their actual implementation in light of experience and data.

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January 22, 2024

Scott Diener, Kitsap County SEPA Responsible Official
Department of Community Development
Planning and Environmental Programs
614 Division St, MS-36
Port Orchard, WA 98366
Email: compplan@kitsap.gov

Subject: Port Gamble S'Klallam Tribe Comments – DEIS for the 2024 Kitsap County Comprehensive Plan Update

To Mr. Diener,

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Kitsap County Comprehensive Plan 2024 Update. The Port Gamble S'Klallam Tribe is the successor in interest to Indian bands and tribes signatory to the 1855 Treaty of Point No Point, 12 Stat. 933.[1] The Port Gamble S'Klallam Tribe Reservation is located within Kitsap County and much of the county is within the treaty reserved rights for fishing, hunting, and gathering in usual and accustomed areas. The Port Gamble S'Klallam Tribal Council has discussed the potential and imminent impacts of development in Kitsap County to the immediate areas around the Port Gamble S'Klallam Tribal Reservation and its Usual and Accustomed Areas. To protect our tribal treaty rights, heritage, culture, and to improve the livelihood of our people, we have these comments.

DEIS General Comment:
Context: The State Environmental Policy Act Handbook, updated in 2018, provides a number of general standards for a DEIS and FEIS. The EIS substantive authority (WAC 197-11-660) states that any government action may be conditioned or denied under SEPA to mitigate the environmental impacts. The DEIS, Section 1.5 Summary Tables includes the impacts & mitigation measures for 9 topics. Four of these topics are described as resulting in significant unavoidable adverse impacts. The Transportation summary states that there will be no significant unavoidable adverse environmental impacts even though the impacts state that vehicle miles traveled (VMT) will increase between 72 and 78 percent and that greenhouse gas (GHG) emissions will continue to rise.

Comment: The Earth, Air Quality/Climate/Noise, Water Resources, Plants & Animals, and the Transportation Topics must all be revised to include mitigating measures that are sufficient to mitigate the identified impacts in the DEIS.

[1] *United States v. Washington,* 459 F. Supp. 1020, 1039 (W.D. Wash. 1978) (hereinafter *Boldt II).*

Mitigation:
Context: Referenced mitigation measures throughout the EIS point to the WRIA 15 Watershed Restoration and Enhancement Plan, Salmon Recovery Plans, Critical Areas Regulations, the Shoreline Master Program, the Stormwater Ordinance, and other reports and plans as a way to mitigate the environmental impact identified in the EIS. Some State and Federally listed Endangered and Threatened Species have been listed since 1999.

Comment: The county can not rely on the WRIA 15 Watershed and Restoration and Enhancement Plan because it is not an adopted plan. It may be years before the plan is adopted. The WRIA 15 Plan is mandated by state law to result in a net ecological benefit to instream resources, but many involved in the review of the plan rejected the plans' ability to meet these criteria. It needs to go farther to offset the consumptive water use from the expected new permit-exempt wells to avoid negative impacts to groundwater recharge. Of the approximately 40 projects listed in the plan, Kitsap County is listed as a project sponsor for one project.

Lead Entities for salmon restoration/recovery plans have been authorized by the legislature since 1998. The Hood Canal and Eastern Strait of Juan de Fuca Summer Chum Salmon Recovery Plan was developed in November 2005 in response to the ESA listing for summer chum. More recovery plans have been added. These plans are important, and work must continue, but these plans are not fixing the problem and they do not exist to provide additional mitigation to future projects. The county is relying on decades old action to mitigate anticipated environmental impacts from future development. More mitigation is needed to prevent and halt all habitat degradation.

Critical Areas Ordinance was originally adopted on November 25, 2013. The purpose of the ordinance was to "Achieve no net loss and increase the quality, function and value of wetland acreage with Kitsap County…" KCC 19.200.205. No net loss (NNL) has been a standard for 20 years. Yet, during the 2022 Legislative session through the proviso contained within the Engrossed Substitute Senate Bill 5092-the Washington State Legislature directed the Washington Department of Fish and Wildlife (WDFW) to investigate a pathway for incorporating a Net Ecological Gain (NEG) standard into state law with the goal of improving endangered species recovery and ecological health statewide. WDFW submitted a letter and report to the legislature, Net Ecological Gain Standard Proviso Summary Report, December 2022. The letter states, "Despite significant investments in the recovery of salmon and other fish and wildlife species, scientific evidence of continued ecosystem decline in Washington indicates that NNL policies are not working or are not going far enough to protect our state's rich natural heritage." The county can not rely on NNL policies to mitigate significant unavoidable adverse impacts to the environment. Additional mitigation measures are needed.

Shoreline Master Program (SMP) was first adopted in 1976 and the purpose is to guide the future development of the shorelines in Kitsap County in a manner consistent with the Shoreline

Management Act of 1971. Exhibit 3.1.3 1-2 Existing conditions of the county's Shorelines of the State lists nine streams/rivers. These streams and rivers are described as being impaired with impacts such as being on the 303(d) list for DO, pH, bacteria, having fair floodplain connectivity, temperature, etc. County data indicates that 82% of the shoreline properties within the county have been developed and 38% of the shoreline has been altered with shoreline armoring. Policies need to be put into place to protect the existing shoreline and restore as much as possible in the future.

The SMP is also based upon the NNL policy. This policy does not work, and significant revisions need to be put in place to mitigate the adverse environmental impacts of the future development of Kitsap County.

Rural Character:
Context: Section 3.2.2.1 Relationship to Plans & Policies –Affected Environment. This section describes Rural Lands, specifically, "The rural element may allow for a variety of rural densities and uses, but it should include measures for the protection of rural character, bot in terms of the visual compatibility of rural development with surrounding areas and in terms of reducing the inappropriate conversion of undeveloped land into sprawling, low-density development." Page 3-26.

Comment:
The diversity of rural densities is lessening in North Kitsap County. The Port Gamble S'Klallam Tribe is working toward putting lands north of the existing reservation land into trust. This will remove a large swath of Rural Wooded (1 DU/20Ac). There is a 400 acre request to change land use and zoning from Rural Wooded to Rural Residential (1 DU/5 ac) adjacent to the Port Gamble Forest Heritage Park. This is a rezone the tribe does not support. There are many other requests being reviewed by the county to convert Rural Wooded to a smaller lot for single family development. The Rural Wooded Zone is becoming less and less in this area. In addition, many rezone requests are also for the conversion of Rural Protection (1 DU/10 Ac) to Rural Residential. This decrease in larger rural lots will have a significant effect on the variety of rural densities. The variety is an important aspect of the rural character in Kitsap County. Otherwise, it seems the county may end up as Rural Residential only. Take measures to protect the large rural lots and the existing character that makes Kitsap the place people love.

Rural Growth:
Context: Exhibit 3.2.2. 1-1 Vision 2050 calls for reduced rural population growth rates in all counties and encourages counties to plan for even lower growth rates than contained in the Regional Growth Strategy (approximately 5%). PSRC MPP-RGS-14, "Manage and reduce rural growth rates over time, consistent with Regional Growth Strategy, to maintain rural landscapes and lifestyles and protect resource lands and the environment."

Comment:
The county's rural development expectation should be in the single percentage range. The King County EIS also released as a supporting document to the mandated Comprehensive Plan Update in 2024 states that the rural area population will be 1% annually. The county can achieve increased limited development in rural areas. The county expects to grow by 15% in the rural

area as analyzed by the EIS. This is too high. A measure to support decreased rural growth would be to remove the Rural Residential Zone.

Rural Impacts:
Context: Exhibit 1.5-3 Summary of impacts and mitigation-Water Resources states that, "impacts on water quality in rural areas are also assumed to be proportional to the number of residences served by onsite septic systems, which have the potential to produce higher loads of nutrients and bacteria." Page 3-49 a discussion of the Hood Canal Dissolved Oxygen describes a State Legislature adoption of the Hood Canal Rehabilitation Program to develop a program to address the rehabilitation of Hood Canal in Mason, Kitsap, and Jefferson Counties under RCS 90.88. The Upper Hood Canal Restoration Project (2005) Final Report and Hood Canal Coordinating Council Regional Pollution Identification and Correction Program (PIC) focused solely on onsite septic system issues as a source of pollution.

Comment:
Rural development means no urban services. One of the most important services urban areas provide is sewer. Rural development for single family homes requires the use of an on-site septic (OSS) with every home. The OSSs are guaranteed to fail at some point. Homeowners/renters don't understand what is required for maintenance, inspection, and replacement. It is expensive to own an OSS. This is a differed cost that the county does not need to manage with development in the county. Due to the significant impact these uses have on the environment, their future use in all rural development in the foreseeable future, and the lack of oversite the adverse environmental impacts are high. There are several mitigation measures that could be used. One, remove the Rural Residential Zone. Two, charge county residents with OSS a fee for the county to inspect, maintain, replace, and monitor all OSS. Three, use alternative methods of managing waste. Four, several other mitigating measures are out there and available. Add as many as possible to mitigate this environmental impact. Current policies are not enough to limit single family development growth and environmental impacts in rural areas.

Topics requested be included in the EIS Scoping

Context: The tribe requested a number of additional topics be included in the EIS review with a letter submitted on December 8, 2022.

Comment:

- Climate change should have a section of its own. It is sprinkled throughout but it would be clearer if it were in its own section. More detail could be provided for sea level rise, increased storm intensities, and the health impact climate change will have.
- Tree canopies were mentioned six times in the EIS. Reliance on tree canopy loss is based on the draft code provided. This is relinquishing tree canopy to a development activity. Robust efforts and policies should be reviewed and implemented as mitigation to ensure there is no loss of tree canopy over time.
- Fish passage barriers were not specifically discussed. Improvements to fish passage barriers extend beyond fish passage to decreased local area flooding, functioning riparian

areas capable of infiltrating more water, improved habitat with additional tree canopy, GHG sequestration, connection to wildlife corridors, and other benefits.

- Analysis of ground water quantity and quality should be included. Is there enough water to support the additional population and job growth? Can Kitsap County ensure that tribal senior water rights will not be impacted?
- PGST is concerned about the capacity for wastewater treatment and the heavy use of septic tanks for more rural development. Include analysis of environmental impact of septic tank use for development.
- Evaluation of Net Ecological Gain was not discussed in the EIS. This measure could go far as a mitigation measure toward reducing significant adverse environmental impacts.

Should you have any questions, please contact Marla Powers at the address or phone number below.

Marla Powers, Environmental Planner, Natural Resources Department
Port Gamble S'Klallam Tribe
31912 Little Boston Road NE
Kingston, WA 98346
(360) 689-7551
mpowers@pgst.nsn.us

Thank you for considering our comments.

Sincerely,

Amber Caldera

Amber Caldera, Chairwoman
Port Gamble S'Klallam Tribe

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Comments on North Kitsap Comprehensive Plan

The following recommendations are to promote and improve pedestrian walking and biking safety, along with improving public transportation in North Kitsap.

Transportation

- Update on Bicycle plan:
    - Protective bicycle route on:
        - NE SR HWY 104 from ferry terminal to Hood Canal Bridge
        - NE West Kingston Road from ferry terminal to Miller Bay Road NE
        - South Kingston Road NE from NE West Kingston Road to Indianola Road NE
        - Indianola Road NE from Indianola to Miller Bay Road NE
        - Miller Bay Road NE / Hansville Road NE from SR HWY 305 NE to Hansville
        - Bond Road (SR HWY 307 NE) from SR HWY 305 NE to SR HWY 104 NE
- Add secure Bike storage at Ferry terminals, Bus transfer stations, Park and Rides areas, pedestrian only areas, shopping areas, sport facility and swimming pool
- Update Bus Route plan
    - Change Bus Route 307 to include Gamble Wood development
    - Add a Bus Route from Hansville to SR HWY 305 NE at the Suquamish Clearwater Casino along Miller Bay Road NE / Hansville Road NE
    - Add a Bus Route from Kingston ferry terminal along South Kingston Road NE which includes Jefferson point area ending at to SR HWY 305 NE at the Suquamish Clearwater Casino
- Improve Bus Stops by adding Bus Stops islands, actual sidewalk or sidewalk bump outs into the street to allow safe access to the Bus and to slow traffic along the bus route
    - For the Bus Stops within Kingston on HWY 104 and West Kingston (stop between Arco gas station and Grocery Outlet in Kingston on HWY 104)
    - For all Bus Stops along the bus routes, install Covered Bus Stops on raised sidewalks
- Add a light or a traffic circle at the intersection of SR HWY 104 and Highland Road to improve safety

- Add a light or a traffic circle at the intersection of SR HWY 104 and Barber Cutoff and Parcells Road NE to improve safety
- Support a tunnel from Kitsap county to King county to allows Link light rail to connect to Kitsap county while also supporting car, truck, and bus traffic

Pedestrian improvements

- Convert Main Streat into a pedestrian only area from the intersection of NE West Kingston Road with Main Streat to the Kingston Ferry Terminal, while keeping the trees down Main Streat as part of moving ferry traffic off of Main Streat.
- Increase pedestrian crossing times on SR HWY 104 for Lindvog Road NE and Bannister Steet NE to allow for a person with limited mobility to cross in the crossing time.

Parks and Recreation

- Add a sport facility and swimming pool near SR HWY 104 and Miller Bay Road to support Hansville, Kingston and Port Gamble area
- Add trails or walking paths between all parks, schools, and transit transfer stations

Housing

- Change zoning to allow a mix of housing and business with housing over business, multi-level apartments, quadplexes, triplexes, and duplexes housing units along the improved transit Bus Routes
    - NE SR HWY 104 from ferry terminal to Hood Canal Bridge
    - NE West Kingston Road from ferry terminal to Miller Bay Road NE
    - South Kingston Road NE from NE West Kingston Road to Indianola Road NE
    - Indianola Road NE from Indianola to Miller Bay Road NE
    - Miller Bay Road NE / Hansville Road NE from SR HWY 305 NE to Hansville
    - Bond Road (SR HWY 307 NE) from SR HWY 305 NE to SR HWY 104 NE
- All new developments are required to provide side walks and protected bike lanes from the development to existing transit routes

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Comments on the Kitsap County Draft Environmental Impact Study for 2024

submitted by Doug Hayman, Indianola, WA

The environment can survive without humans, but humans cannot survive without a healthy environment. This is an essential starting point in looking at the plans by people in Kitsap County on how we will proceed for the coming decades. What follows are my thoughts and concerns in examining the 400+ page Draft EIS.

- On page 7 of the Draft EIS, it mentions a required approval by the Kitsap Planning Commission. I have attended a handful of their online meetings via Zoom and find that they may need to be provided a better explanation of how each of the proposed alternatives truly work. Those commissioners need more information on what has been discussed in the Critical Area Ordinances working groups and would benefit by hearing short presentations by DCG Watershed, the firm hired to provide recommendations on Best Available Science as it pertains to Kitsap County's CAO update work. Additionally, hearing from the Washington Department of Fish and Wildlife and the Department of Ecology would be of great benefit to then shape their decision-making process. One area in particular stands out, the suggested use of Riparian Management Zones to replace current stream buffers. The commission could use more detail on that science and process.
- One critical thing that lacked specifics in this Draft EIS is just how each of the household income brackets will get their housing needs met. We need to actively target meeting the housing needs of middle- and low-income households regardless of which alternative is chosen with specific detail on what income ranges are already saturated in unincorporated Kitsap County versus what is still lacking. The EIS repeatedly says that Alternative X will meet housing but not jobs or vice versa with little concrete detail.
- In 1.3, pg. 22, the draft says: "Ultimately, the Board of County Commissioners (Board) will select a preferred alternative. The Board is not limited to selecting the alternatives exactly as set forth in the EIS and **may select an alternative that combines various features of the alternatives set forth in the EIS.** However, the selected alternative must be within the range of alternatives addressed by the EIS (WAC 197-11-655(3)(b))." The text I've emphasized in bold raises big flags for me. Pick an alternative and stick to it. Alternative 2 and Alternative 3 are quite different and we shouldn't be opening up a buffet line of sticking to UGAs but then allow expansion into areas zoned to maintain rural standards. Of particular concern would be the request by Raydient to rezone approximately 400 acres currently zoned at 1DU/Acre to a much higher density without a real public need for this but instead much opposition to their request.

- On page 28 and in many other parts of this Draft EIS there is language like this which needs to be strongly fact checked: "***Under Alternative 3, increased riparian buffer widths are proposed compared to Alternative 1 and 2. Within the proposed UGA boundaries, approximately 508 acres would be encumbered by the increased stream buffers, compared to 245.5 acres that would be affected by the existing 50-foot buffers. This increase will improve protections compared to Alternative 1 and 2."*** As someone who took part in the Critical Area Ordinances Update Working group for the Fish and Wildlife section where Riparian Management Zones (RMZs) were discussed, not only was there not enough time to fully discuss this proposed change to stream buffers, there was never mention along the lines of implementing this only for one of the three proposed alternatives. In fact, we left those two meetings thinking that the county might implement it in whole, as a hybrid model or not embrace RMZs at all. And the planning commissioners need some additional information on these as some in their most recent meeting think the WDFW tool is not yet ready for implementation when in reality they are likely more fearful that the increased buffers from 100-feet to perhaps 200-feet would be too much of an encumbrance on property owners. And this will be a challenging process to use RMZs for any of the three alternatives as those wouldn't need to be tied to just alternative 3.
- Pg 34 referring to 3.2.3 states: "Alternative 2 projects to develop 14,684 housing units, which meets the housing need target, and produces about an even split of housing that serves lower income households and middle to upper class income households." Where in these out-of-the-air estimates do you show how you'll meet middle- and low-income housing needs. Are you locking in building permits only for home that guarantee they'll be at prices to meet the income of those segments, or will these be home that cost $600k or more?
- On pg. 38 referring to 3.2.6 it states: "Generally, each alternative results in similar levels of transportation impact." This seem to be in error as an increased density in a UGA like Kingston with public transportation would mean far fewer cars on the road than if the added population was traveling to newly expanded developments in rural zones. This needs to be called out and real numbers shown on how you make such general statements.
- On pg. 46 in reference to 3.3.6 for Solid Waste is again providing a questionable assumption: Why would humans in any of the three alternatives be producing more or less solid waste? How do you arrive at: "tons of solid waste and recycling generated per year would be highest with Alternative 2."
- On pg. 53 referring to 2.1.2 there is mention of "housing affordability and availability" but how with any of the three alternatives are you truly enforcing this goal? If we are saturated in the housing for upper income households, will you block issuing any more building permits until the lower tiers of income have their affordability and availability needs met in unincorporated Kitsap County?

- In 2.2.2.2 on public participation, how will you go beyond "public participation theater" so that the public tracks that their comments were not only submitted, but also taken in by decision makers and discussed?
- Maps used throughout this Draft EIS PDF are highly problematic. They are densely filled with information and even those that can be zoomed in on, result in losing access to simultaneously seeing the legends for the maps. These should be provided as hyperlinks to online GIS maps similar to what the Kitsap Parcel search tool has where the public can zoom in/out while the legend remains, and a choice to activate layers to see just those portions for better clarity. Lastly, you are failing to meet federal accessibility standards which at the minimum would have good alternative text to describe the images and not auto fill in things like "a map of the United Kingdom" which currently exists for many of these Kitsap maps. Throughout the PDF all images relied upon autogenerated descriptions that failed to describe what the images are every time. These are what blind and low vision users rely upon to fully access what the county shares out to citizens.
- In 2.4 Alternatives you once again mention the highly problematic "The Board is not limited to selecting the alternatives exactly as set forth in the EIS and may select an alternative that combines various features of the alternatives set forth in the EIS. However, the selected alternative must be within the range of alternatives addressed by the EIS (WAC 197-11-655(3)(b))." Pick a plan and stick to it, especially where not doing so would allow creep into areas that should remain rural.
- In 2.4.2 it says, "Rural Rezones: Only those that promote limited rural employment opportunities." This is imperative, especially in the case of Raydient's rezone request as it wouldn't truly provide an employment benefit that isn't already being met elsewhere in North Kitsap.
- 2.4.3 states for Alternative 3, "**Reclassification Requests:** Includes most requests except those that are GMA-non-compliant (e.g., urban zones in rural areas, one-acre zoning, etc.)." Raydient's rezone request has been tossed into both alt 2 and alt 3 and both are problematic as it goes against the intent of the GMA to keep rural areas rural.
- The table on pg. 68 of the Draft EIS PDF in reference to stream buffers again is questionable for buffer widths not changing with alt 1 or alt 2 versus alt 3. The CAO update working groups were never discussing such restrictions on where riparian management zones as stream buffers would or would not be applied. And the 100-foot buffer is a minimum to prevent pollution but could be much wider with RMZs if the site-specific tree height for dominant trees was say, 200 feet or more for a 200-year old tree. There needs to be clarification on why Alt 2 would not be able to include RMZs for setting buffer widths.
- In 2.5.2 you state that "County staff reviewed the reclassification requests and categorized them as follows:
    - 1. Requests that fit the "Compact Growth/Urban Center Focus" of Alternative 2
    - 2. Requests that fit the "Dispersed Growth Focus" of Alternative 3
    - 3. Requests that did not fit Alternative 2 or 3 because the change was inconsistent with GMA or other requirements."

      This does not seem to be accurate as it pertains to Raydient's rezone request being dropped into both alt 2 and alt 3. It clearly goes against the intent of the GMA. That

rezone request does not meet a public need and would increase density in an area that is supposed to be 1 home per 20 acres. Someone made a mistake on this or is biased towards this developer.

- In tables 2.5.3 and ones like it you fail accessibility standards wherein you used color alone to distinguish items. Look up "WCAG" and "color alone" to remedy this failure to reach all the citizens in an equitable manner compliant with the law.
- Table 2.5.3-5 stands out for how it does not show the housing capacity for each of the income ranges, unless I'm reading something else in there. We need to know specifically how Kitsap DCD will enforce meeting the housing needs of middle- and low-income households regardless of alternative 1, 2 or 3 and not throw around sub-totals and totals for each without citing details.
- In 3.1.1.3 it states, "Kitsap County will encourage building sites to be located away from critical areas, such as steep slopes and landslide hazard areas, by requiring minimum buffer widths and building setbacks in the CAO." In my experience in looking at several variance requests in the area, the county tends to lean towards NOT strictly enforcing buffers, whether that relates to hazards for the homeowner or risks to the health of the critical areas. Whichever plan is chosen, or CAO updates are made, the county needs to make variances the exception and not the norm.
- In 3.1.2.1 it states, "Kitsap County does not appear to have a current tree canopy cover inventory that could be referenced as the baseline condition." This is a very important issue that follows pretty much all monitoring. If the county is striving towards no net loss of ecological function, you cannot know if a decline is happening if you're not willing to put the resources into such baseline monitoring followed up later to see if you are succeeding.
- In 3.1.2.3 states, "Environment Goal 1. Formally treat natural environments, including forest lands, shorelines, freshwater systems, intact ecosystems, and other critical areas, as an essential asset that is planned for, managed, and invested in to meet the needs of current and future generations." This sounds great on paper but how will you truly commit to this if you allow variances again and again for fear of unconstitutional takings? This difficult challenge needs to be addressed and not swept under the rug till the next comp plan work years from now.
- In 3.1.3.1 regarding Critical Aquifer Recharge Areas (CARA) you state, "CARAs are regulated under the Kitsap County CAO (Kitsap County Code 19.600)." That doesn't mean much if the regulation is written on paper but is ignored in the variance process by DCD. Hold fast to protecting critical areas and if you cannot, address why it is that you aren't complying with the GMA in this regard.
- On page 140 of the PDF, where are you coming up with:

"Under Alternative 3, an additional 5,674 lineal feet of non-fish bearing streams will be affected by the UGA expansion areas compared to Alternative 1. As a result, stream water quality would be expected to decline in those areas where growth is greatest under Alternative 3. Additionally, 17,936 feet of non-fish bearing waters would be affected by up zoned areas under this Alternative. Surface water impacts on streams would be generally greater under Alternative 3 than under Alternatives 1 and 2. The greatest impacts to those basins would be directly associated with the most extensive conversion to impervious surfaces. Under Alternative 3, increased riparian buffer widths are proposed compared to Alternative 1 and 2. Within the proposed UGA boundaries, approximately 508 acres would be encumbered by the increased stream buffers, compared to 245.5 acres that would be affected by the existing

50-foot buffers. This increase will improve protections compared to Alternative 1 and 2."

This was not part of the CAO working group discussion of RMZs, that only one alternative would possibly implement them.

- On page 159, Impacts Common to All Alternatives, again I challenge the line, "Critical areas, including streams and wetlands, would receive similar protection under each of the alternatives with some increased protections for riparian areas in Alternative 3." This inaccurate RMZ information needs to be addressed.
- In 3.2.1.3 for Mitigation Measures it also states, "Critical areas, including streams and wetlands, would receive similar protection under each of the alternatives with some increased protections for riparian areas in Alternative 3." Again, the CAO update process for Fish and Wildlife working groups did not tie the use of Riparian Management Zones only to one of three alternatives. It was the use of Best Available Science recommendations to better protect riparian zones. This needs to be corrected and "similar protection" is a fallacy if one alternative uses 50-foot buffers that then get a variance while alternative 3 supposedly uses RMZs to be 100-foot or wider.
- On page 192 it states, "Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions." What mechanism would allow DCD to both protect the environment AND compensate property owners so that these were not mutually exclusive conditions?
- How will you meet the following mentioned on pg. 196? "Public participation procedures that are described in the procedural rules (WAC 365-196-600) include broad dissemination of proposals and alternatives, opportunity for written comment, public meetings after effective notice, provision for open discussion, communication programs, information services, and consideration of and response to public comments." Especially that last point? Would there be feedback on my challenge that RMZs should not just be associated with Alternative 3 and the public would know about how this comment was being addressed?
- On pg. 247 of the PDF, how is it that you all arrive at the specifics of, "Alternative 2 is the only alternative which adequately meets the expected housing need by 2044 as projected by the Housing All Planning Tool developed by the Washington State Department of Commerce. Alternative 2 projects to develop 14,684 housing units and produces about an even spilt of housing that serves lower income households and middle to upper class income households." Will you enforce not allowing new developments of homes that don't meet the middle and lower household income affordability standards or is this just vague speculation for rating the alternatives?
- On page 249 there is the questionable assertion, "Alternative 3 is the only Alternative that meets the 2044 employment target, generating 1,157 more jobs than the target." Just because you expand into areas with rezones doesn't guarantee increased employment. Or that employment increase would be fleeting as it might just be during a new building phase that more people in that area would be employed in construction.

As a citizen I call upon you all to protect the environment by measuring ecosystem health now to have a baseline to compare to later to see if you have achieved no net loss or better yet, a net ecological gain in ecosystem well-being.

Take into consideration the reality that you cannot have infinite growth in a finite world. You can only squeeze so many people into an elevator, bus or county. We do not need to develop every bit of land in Kitsap County. People choose to live here because of the natural beauty they are surrounded by. We can protect our critical areas like streams, wetlands, aquifer recharge areas. We do not have to yield to demands to develop into those areas and should find mechanisms and incentives to reward property owners for protecting these places.

We need to meet the housing needs of all income ranges as directed by the Growth Management Act, not just build expensive home for the upper tiers of our county. Cap development of those upper end homes in unincorporated Kitsap County until we've met the needs of the middle- and lower-income tiers.

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EIS Comments. For 2024 Beth Nichols

General comment on Draft EIS for Comp Plan:
-First of all, how are our public comments being incorporated into this EIS?

Critical areas ordinances (CAO) are mentioned widely throughout the Draft EIS as a mitigation mechanism for protecting the natural environment as the County is more widely developed. It is brought up in every section as the mitigation for the unavoidable losses. However, in practice, Kitsap County approves variances to the CAOs routinely, making the CAO useless as a protection mechanism. I wonder if currently any variance is ever denied in Kitsap County to uphold the CAO goals of protection. These CAOS are weak and ineffective and not a true mitigation measure in current practice. Critical areas ordinances, which are currently under review, need to be strengthened with fewer routine variances and NO administrative approval decision options.

Every section of the EIS states "Inevitable loss" – how does this contribute to the mandated goal of NO Net loss?? There must be true use of critical areas protections-- without variances and with full mitigation measures.

Climate change needs to be more fully addressed in the EIS, especially for water quality and quantity and the importance of tree canopy preservation.

1.3 Alternatives
-Alternative 2 or 3 are given as distinct choices in approach. However, the County Planners say there can be a "mix" of elements of both Alternatives. This is hugely problematic. You can't do both and have a coherent plan.
By allowing elements of Alternative 3, Alternative 2 will be undermined. You can't pursue both paths at once: Compact Growth/ Urban Center Focus AND elements of Dispersed Growth Focus. This needs to be corrected: it is an underlying serious fallacy and makes the whole approach faulty and inconsistent. This looks like a loophole to allow dispersed rural development while also intensifying the urban center.

1.5-3. Water Resources
As stated in the EIS, the use of on-site septic systems in rural areas is a major impact on water quality. When these systems fail as they will, there will be potential contamination to water systems. The County doesn't do enough to mitigate this major impact and most homeowners do not know enough about these systems to properly maintain them. There should be a program for all homeowners for education, monitoring, and guidance for replacement for those on OSS, with an impact fee collected. Also this is a strong reason for not allowing more development into rural areas without sewer systems.

Water quality and quantity needs to be more fully analyzed and addressed. We need more baseline measures of water quality AND quantity. This is fundamental for all in Kitsap County. Do we absolutely have the water quantity and quality to support the population growth targets?

2.4.2 Housing Diversity
How are guidelines for meeting the housing targets going to be set? How does the County ensure that permitted housing does accomplish the goal of creating missing middle housing, instead of just adding to more housing geared toward high income earners. Especially in Kingston area where we already have 750 high end homes coming in at Arborwood- we need a primary focus now of middle-income housing. No rezones for high end housing; we don't need more of that kind of housing stock. We need a MORATORIUM on rezone requests for multiple single family home developments, until we meet the target for affordable housing.

Exhibit 2.5.1 -1 Page 2-16 Major Revisions table – Countywide
-Alternative 2- Why no tree retention???? Some level of tree retention needs to be in place for urban areas when possible. Trees in the urban environment are significant mitigation to climate change and decrease heat island effect. This needs to change.
-Alternative 2 states no change in stream buffers ?? This number needs to be guided by the Best Available Science and consistent with Critical Areas Ordinances.

2.5.3-1 Population Targets
Kingston has already met its growth target with the addition of Arborwood, approx. 750 homes. We do not need to bring on any more units if this is correct.
2-24 Exhibit 2.5.4-1 UGA increase in Alternative 2- Kingston adds 73 acres when growth targets already have been met. WHY?

3.1.4 Plants and Animals
This review of impacts on plant and animal communities does not address large and small mammals that live specifically in forested habitat, amphibians that live in wetlands and have migration patterns, native plants that are replaced by clearing and grading.
In the specific case of amphibians, migration patterns need to be considered and also silt fences that block those pathways need to be discouraged.
Vague description of animals without specificity makes the EIS review very weak in this area, it needs more specificity.
The EIS needs to add the adverse impact on all wildlife by natural areas' proximity to housing areas, causing more wildlife interactions that can result in animal deaths. Displaced wildlife such as bear and cougar wander into neighboring yards and end up being killed for human safety. This happened with a cougar incident in Kitsap in 2023.

Continued 3.1.4 This section is where the benefits of a tree and native plant retention policy should be added.

3.2 Land Use. Need to address Farmland in Kitsap County. Needs to be added to the land use section. Benefits of farmland to climate resilience, habitat, local food security. Protection of farmland now is needed for food production options in the future. Agricultural land preservation is paramount to a healthy community.

3.2.2.1 Rural Character: "The rural element of the comprehensive plan must include measures to contain development and protect against sprawl, assure visual compatibility with the surrounding rural setting, protect critical areas, and protect against conflicts with agricultural, forest, and mineral resource uses."
How is this being strongly protected? We need a moratorium on rezones of rural lands.
This article chronicles past practice of Kitsap County:
https://www.theurbanist.org/2024/01/29/kitsap-countys-proposed-comp-plan-sleepwalks-toward-more-sprawl/
"Do what you've always done, Get what you've always got"
Rural rezones should be denied. For instance the 400 acre Raydient rezone request on Bond Road would contribute to the same pattern of sprawl and would set a precedent for more development in the rural area. The environmental impact of this rezone would be hugely negative for North Kitsap.

3.3 Built Environment: Public Services and Utilities
-I am not seeing any mention of Health Services in this section. The Kitsap County Health Department declared a health emergency in Kitsap due to high health care costs and inadequate access to services. Although overall health services are not a function of County government, the crisis situation in our County's health services heavily impacts public services, including fire services. In 2023, there was a crisis with overcrowding at St Michael's ER that kept first responders from being able to leave patients at the ER. This is a huge omission in the EIS, and a health services section needs to be added addressing the impact of higher population with an already strained to crisis health system. Talk to the Kitsap County Public Health Department for these additions.
https://providers.kitsappublichealth.org/2023/07/kitsap-public-health-board-declares-crisis-in-response-to-high-healthcare-costs-and-inadequate-access-to-services/

-Although the Washington State Ferries are under State control / WSDOT, the impact on Kitsap County with higher populations and continued expectation of overburdened ferry service needs to be addressed.

-With an increased population located in Silverdale, Kingston, Port Gamble and overall North Kitsap the location of County services in Port Orchard becomes more problematic to citizens. Attending in person meetings, applying for permits, or attending jury duty is a hardship coming from North Kitsap with increasing traffic and time it takes to travel. There is no public transit going directly to the County seat in Port Orchard from North Kitsap, leaving North Kitsap residents less able to access County services. This should be mentioned in the EIS and needs to be addressed for fair representation.

Zoning 17.420.060
Lot aggregation in the Suquamish LAMIRD – removal of requirement for multiple existing lots to aggregate. This should not be removed, there is an environmental benefit to encouraging larger

lots in this area that is too heavily built without being a UGA. Address the difference between the two.

Return to Comment Matrix

February 12, 2024 Kitsap County Commissioners Public Meeting
Christine Rolfes, Charlotte Garrido, Katie Walters

–

From: Dave Pedersen – Phone/text (360)536-5093; peda51@centurytel.net

Good evening Commissioners:

My name is David Pedersen, each of you have been given six document packets that have been highlighted which indicate the most important points of concern to the rural community of North Kitsap. Those packets include examples of what is happening now to our power grid, and disappearing water supply. Also is a packet from NKU's traffic analysis and summary pages from Kitsap County's DEIS that confirm our county's infrastructure is in need of being updated. In the February 2024 Community News, an article stated, "over 1 million ride KT ferries in '23; WSF continues reduce service,"which leaves all kinds of traffic issues in Kitsap County. After reviewing all these documents, I see a common thread, our infrastructure is being used to its limits. These last few weeks on the police scanner, a sheriff told the call center, "we will get to it when we can" on several occasions. From Jan. 13 to 23rd St. Michael's during the cold snap was turning away ambulances because it was filled to capacity. The Commissioners recently agreed to budget $3,176,000 to repair a septic system currently in use in Bremerton. All of these situations are leaving me very concerned about application ID 72 being approved because it will only exasperate the current conditions such as traffic congestion/safety and water quality/quantity in an already fragile environmental biosphere. Why isn't Kingston Rotary trying to fix up the existing play fields in Kingston, rather than partnering with a timber investment company making large profits off of property zoned in a rural wooded environment? The Rotary has full knowledge that this application does not comply with the GMA. Community responses of opposition from the Mayor of Poulsbo, and S'klallam and Suquamish Tribes, and many of the 840 members of Facebook's Stop Raydient Rezone group, have been submitted to the Commissioners. There is no fate but that fate, which we create for ourselves and the Commissioners are our last hope for a vision of a rural life that is being preserved in accordance with the GMA.

Exhibit 1.5-1 Summary of impacts and mitigation—Earth

Earth (Section 3.1.1)
Impacts Common to All Alternatives
All alternatives will result in impacts to earth resources through development to meet population and employment growth but will offer protection of resources through the regulations of the County code, particularly the Critical Areas Ordinance (CAO) and the Shoreline Master Program (SMP). Earth-related impacts will occur from development activities such as clearing, grading, erosion, and sedimentation, expanded areas of impervious surfaces, and increased chemical contamination. The degree of impacts of the alternatives will be based on whether the growth is focused on urban centers or spread across a larger geographic area.
Impacts of Specific Alternatives
Alternative 1, "No Action" Alternative 1 provides for the lowest opportunity for growth of the three alternatives by incorporating no changes from current conditions. Alternative 1 retains the focus on single-family residential development with limited opportunities for multi-family structures. The development activities associated with intensification activities can lead to soil compaction and subsequently loss of soil productivity by the expanding impervious surfaces, modifying soil structure, and increasing site contamination. Impervious surfaces can reduce the volume of water that infiltrates the soil, which leads to increased runoff and decreased groundwater recharge. Stormwater controls are intended to maintain stream flows in ranges consistent with native vegetation cover.
Alternative 2, "Compact Growth/Urban Center Focus" Intensification of development in current UGA boundaries and the limited UGA expansion areas would increase the extent of impervious surfaces, modify soil structures, and allow potential for chronic soil contamination as a result of development activities. Alternative 2 encourages vertical development by increasing the maximum building height allowance, particularly within the Silverdale UGA. This allowance would reduce the impervious surface construction compared with low-rise development of similar capacity and could be considered a stormwater runoff mitigation strategy in densified areas.
Alternative 3, "Dispersed Growth Focus" Impacts on Earth resources would be generally consistent with those of Alternative 1 and 2 but would be commensurate with the limited expanded areas of UGAs. Under Alternative 3, there are more expansions of UGA boundaries than Alternative 2, predominantly within Silverdale, Kingston, and Bremerton. The increases in UGAs would expand impervious surfaces, modify soil structures, and allow potential for chronic contamination of soils associated with development activities.
Mitigation Measures
Incorporated Plan Features • Areas with geologic hazards are mapped to the extent practicable. • Development proposals will undergo technical review to ensure compliance with requirements for protection of public health, safety, and welfare by adhering to development standards.

- Review of development proposals within the vicinity of geologically hazardous areas will require a geotechnical report prepared by a licensed professional to evaluate the site-specific conditions, analyze potential impacts on slope stability, and provide recommendations.
- Kitsap County will encourage building sites to be located away from critical areas, such as steep slopes and landslide hazard areas, by requiring minimum buffer widths and building setbacks in the CAO.

Applicable Regulations & Commitments

- KCC Section 19.400.405 of the CAO defines geologically hazardous areas and outlines regulations for development standards for projects in or near the designated hazard areas.
- Federal National Pollution Discharge Elimination System (NPDES) regulations, as well as County stormwater drainage regulations (KCC Title 12), require stormwater pollution prevention plans and mitigation, including water quantity and water quality controls.
- The development standards administered by the Kitsap County Department of Community Development require that all new construction be designed to withstand the ground motion effects specified in the most recent versions of the International Residential Code (IRC) and International Building Code (IBC) as adopted locally.

Other Potential Mitigation Measures

- Reducing UGA expansions in Moderate and High Geologic Hazard areas would reduce the potential number of persons or structures exposed to risk of damage due to geologic hazards.
- Incorporating the recommended mitigation strategies in the Kitsap County Multi-Hazard Mitigation Plan (2019) for erosion, landslide, earthquake, and tsunami hazards.

Significant Unavoidable Adverse Impacts

All alternatives would result in increased urbanization in the county. The corresponding increase in impervious surfaces and changes in hydrology would be correlated with the amount of growth-related development under each alternative. An overall increase in erosion and sedimentation is an unavoidable consequence of increased development activities to accommodate growth. Sediment leaving development sites can negatively impact nutrient balances and other water quality indicators in receiving waters, including lakes, wetlands, and streams. These impacts are likely to also negatively affect the habitat of anadromous fish and other aquatic organisms. A larger population could also be at risk, depending on specific locations, from the adverse impacts of damage to buildings and infrastructure in the event of an earthquake, landslide, or tsunami.

Exhibit 1.5-2 Summary of Impacts and Mitigation—Air Quality/Climate

Noise (Section 3.1.2)
Impacts Common to All Alternatives
Air quality impacts associated with urban and rural development will occur under all the alternatives. Regional growth, building energy use, transportation volumes, and tree losses are projected to increase under all the considered alternatives. Building energy emission projections are based on net developable acres under each alternative. Fuel types for passenger vehicles are projected to shift from majority gasoline to majority electric vehicles (EV) powered vehicles by 2044. Freight and service vehicles are also projected to increase EV use. Even with greater adoption of EV, Vehicle Miles Traveled (VMT) emissions increase under all alternatives. Increases

in fuel burning are associated with several air quality pollutants, such as particulate matter, carbon monoxide, nitrogen oxides and sulfur oxides. Relative to 2019 greenhouse gas (GHG) emissions will increase under all three alternatives. Existing air quality policies and regulations apply to all alternatives to manage and mitigate these impacts to the extent practicable.

Impacts of Specific Alternatives

Alternative 1, "No Action"

Alternative 1 would not accommodate growth targets for housing or employment. Under Alternative 1 growth would progress under current zoning within current county and UGA boundaries. Building energy consumption emissions are lowest for Alternative 1, relative to Alternatives 2 and 3. GHG emissions resulting from transportation are represented using vehicle miles traveled (VMT). VMT under Alternative 1 is modeled at 680,015 MTCO2e by 2044, an 11 percent increase relative to 2019 values. Tree losses reduce carbon sequestration yielding increased GHG emissions. Difference in forested acreage among alternatives is nominal.

Alternative 2, "Compact Growth/Urban Center Focus"

Alternative 2 focuses growth within multi-family and commercial zones to accommodate growth with limited expansion of UGAs. Specifically, development is targeted in the Silverdale regional center and Kingston countywide center. UGA expansions under Alternative 2 would be associated with existing urban areas, including Bremerton, Port Orchard, and Poulsbo. The approach reduces development pressure on rural areas and provides opportunities for transit use within the urban centers. Under Alternative 2, GHG emissions resulting from building energy consumption are lower than projected for Alternative 3. These lower emissions coincide with greater housing capacity under Alternative 2, relative to Alternative 3. This employment capacity is higher than Alternative 1 and slightly lower than Alternative 3. Transportation impacts on GHG emissions, using the VMT metric, are slightly more than would be expected under the no action alternative. Cascadia's ICLEI LEARN analysis projects a slight decrease in forested acres under Alternative 2.

Alternative 3, "Dispersed Growth Focus"

Alternative 3 is more dispersed than Alternatives 1 and 2. UGAs would expand in more areas under Alternative 3 relative to Alternative 2. This more dispersed growth option offers fewer opportunities for transit and increases growth pressure on rural areas. Alternative 3 is similar to Alternative 2 metrics for GHG emissions, while accommodating less housing and employment growth.

Building energy GHG emissions are greatest for Alternative 3. Alternative 3 building energy emissions are 2.8 percent higher than Alternative 2. However, Alternative 2 accommodates 26 percent more housing than Alternative 3. Employment capacity is highest for Alternative 3, approximately 13 percent more than Alternative 2. Transportation impacts on GHG emissions, as measured by VMT, are highest for Alternative 3. Dispersed development under Alternative 3 would yield a slight increase in emissions relative to Alternatives 1 and 2. Alternative 3 VMT emissions are higher than Alternative 2. Under Alternative 3, Cascadia's ICLEI LEARN analysis projects a slight decrease in forested acres relative to Alternative 1.

Mitigation Measures

Incorporated Plan Features

- The 2016 Kitsap County Comprehensive Plan provides goals and policies intended to preserve and protect the natural environment. Chapters 1 – Land Use, Chapter 3 – Environment, and 5 – Transportation, include goals and policies pertinent to air quality and climate change.

Applicable Regulations & Commitments

- Clean Air Act (CAA) – a comprehensive federal law that regulates all sources of air emissions. The CAA is permitted and enforced by the US Environmental Protection Agency (EPA). The EPA establishes National Ambient Air Quality Standards (NAAQS) for common pollutants.
- Washington State Department of Ecology monitors and tracks NAAQS to ensure outdoor air pollutants meet federal and state air quality standards.
- State Implementation Plan (SIP) provides tools to restore air quality and meet NAAQS when one or more pollutants are not in compliance. EPA reviews and approves a SIP.
- Revised Code of Washington (RCW) 70A.15 – Washington Clean Air Act.
- The Clean Energy Transformation Act (CETA) 2019. CETA commits Washington state to an electricity supply free of GHG emissions by 2045.
- Puget Sound Clean Air Agency (PSCAA) Regulations. PSCAA administers air quality permits and registrations.
- Washington State Department of Health – Shares Air Quality Index (AQI) data with the public. Provides public education on hazards, including wildfire smoke.
- Climate Commitment Act (CCA). The CCA caps and reduces GHG emissions from Washington state's largest emitting sources. Washington is working on polies to help achieve a 95 percent reduction in GHG emissions by 2050.
- Puget Sound Regional Council (PSRC) Vision 2050.
- Kitsap County Comprehensive Plan goals and policies as noted above.

Other Potential Mitigation Measures

- The county should consider public and private incentives to reduce use of fossil fuel energy sources. This may include working with the Washington State Renewable Energy System Incentive Program and regional partners, such as Puget Sound Energy.
- Consider the cap-and-invest program under Washington's CCA to motivate large industrial polluters to reduce emissions.
- Invest in transit to reduce single occupancy vehicle use and reduce VMT overall.

Significant Unavoidable Adverse Impacts

Regional growth under all alternatives increases energy needs and impacts forest canopy cover. GHG emissions will increase under all the alternatives. While the alternatives can manage that population growth to minimize GHG emissions as a priority, none of the alternatives eliminates a net increase over the next 20 years. Tree losses projected for the alternatives cannot be wholly avoided given net developable acres in the county. However, regulations to protect and replace significant trees can minimize this unavoidable impact.

Exhibit 1.5-3 Summary of Impacts and Mitigation—Water Resources

Water Resources (Section 3.1.3)
Impacts Common to All Alternatives

All alternatives would allow for development in various land use designations to accommodate population and employment growth. Each of the alternatives would result in an overall increase in the population and total employed persons in Kitsap County. However, all alternatives must adhere to the policies and regulations to safeguard surface water and groundwater resources, as well as protect public health and safety from flood hazards. Each alternative would allow for increased opportunities for development in UGAs and would allow for lower density development to continue to occur in rural areas. Consequently, all alternatives would indirectly affect surface water resources with future development proposals. The creation of impervious surface areas and removal of forested areas associated with development activities in all alternatives will influence natural surface water systems (Booth et al. 2002).

Impacts of Specific Alternatives

Alternative 1, "No Action"

The increased imperious surface area associated with continued urban development under Alternative 1 may reduce groundwater recharge area and could affect water quality from nonpoint urban runoff and point source contamination. Impacts on water quality in rural areas are also assumed to be proportional to the number of residences served by onsite septic systems, which have the potential to produce higher loads of nutrients and bacteria. Water resources within UGAs are predicted to experience changes in watershed runoff processes, stream flow patterns, and stream water quality with increasing development.

Alternative 2, "Compact Growth/Urban Center Focus"

Densification in current UGAs and UGA expansion areas would increase the extent of impervious surfaces due to development activities. Surface water impacts on streams under Alternative 2 would be greater in several basins and UGAs than those under Alternative 1 as a result of increased total impervious surface area in those basins. Under Alternative 2, an additional 1,458 feet of non-fish bearing streams will be affected by the UGA expansion areas compared to Alternative 1. Additionally, 1,477 feet of non-fish bearing waters will be affected by upzoned areas under this Alternative. Water quality in riparian areas would be expected to decline in those areas where growth is greatest under Alternative 2.

Alternative 3, "Dispersed Growth Focus"

The potential for surface water impacts would be proportionately greater in the areas providing greater levels of growth within the UGAs. Under Alternative 3, an additional 5,674 feet of non-fish bearing streams will be affected by the UGA expansion areas compared to Alternative 1. As a result, stream water quality would be expected to decline in those areas where growth is greatest under Alternative 3. Additionally, 17,936 feet of non-fish bearing waters would be affected by upzoned areas under this Alternative. Surface water impacts on streams would be generally greater under Alternative 3 than under Alternatives 1 and 2. The greatest impacts to those basins would be directly associated with the most extensive conversion to impervious surfaces. Under Alternative 3, increased riparian buffer widths are proposed compared to Alternative 1 and 2. Within the proposed UGA boundaries, approximately 508 acres would be encumbered by the increased stream buffers, compared to 245.5 acres that would be affected by the existing 50-foot buffers. This increase will improve protections compared to Alternative 1 and 2.

Mitigation Measures

Incorporated Plan Features

The Kitsap County Comprehensive Plan Chapter 3, Natural Environment, provides goals and policies intended to preserve and protect critical areas, water resources, and intact ecosystems.

Applicable Regulations & Commitments

- Critical Areas Regulations (KCC Title 19) identify and protect critical areas, including water resources like streams, wetlands, frequently flooded areas, and critical aquifer recharge areas. Alternatives 2 and 3 would include adoption of revisions to critical area regulations; however, the substantive regulatory requirements will be consistent across each of the alternatives.
- Shoreline Master Program (KCC Title 22) applies use and modification standards, as well as mitigation sequencing, vegetation conservation, and critical areas regulations to all Shorelines of the State.
- The Kitsap Regional Shoreline Restoration Plan identifies several voluntary projects and programs to be implemented to improve shoreline functions over time.
- The U.S. Army Corps of Engineers regulates fill of wetlands through the Federal Clean Water Act.
- State Environmental Policy Act (SEPA) requires environmental review and consideration of potential adverse impacts of projects.
- Ecology regulates water quality through general and individual water quality permits as well as Section 401 water quality certifications.
- As a result of a 2008 Biological Opinion by the National Marine Fisheries Service, the County must ensure that any proposals for development or redevelopment within floodplains will not adversely affect water quality, flood volumes, flood velocities, spawning substrate, or floodplain refugia for listed salmonids.
- Under the State Environmental Policy Act (SEPA), all state and local agencies must use an interdisciplinary, integrated approach to include environmental factors in planning and decision making.

Other Potential Mitigation Measures

- Follow the recommendations of the 2019 Kitsap County Multi-Hazard Mitigation Plan for flood mitigation strategies.
- The WRIA 15 Watershed Restoration and Enhancement Plan (Ecology Publication 22-11-017) addresses planned actions to offset the consumptive water use from the expected new permit-exempt wells to avoid negative impacts to groundwater recharge.
- Consider state, local, and tribal restoration plans to ensure salmon recovery is prioritized. These include the Chico Watershed Plan, Curley Creek Watershed Plan, and the Natural Resource Asset study.
- Additional mitigation measures may be needed to ensure adequate protection of anadromous fish including, but not limited to:
  - Increased stormwater management requirements near riparian management zones to increase channel complexity;
  - Establish benchmarks in floodways to accommodate additional flows; or
  - Encourage habitat components that will create pools to provide shelter to salmonids and other anadromous fish.

Significant Unavoidable Adverse Impacts

Impacts to both surface and ground water resources are expected, including increasing peak flows, channel incision, and reduced groundwater recharge, and may be unavoidable as new impervious surfaces are created and vegetation is removed with development activities. It is not possible to eliminate all impacts on surface water resources entirely under any of the alternatives. Some adverse impacts that may still occur include, but are not limited to, the following:

- Decreases in forestland and vegetative cover.
- Increases in impervious surfaces.
- Erosion and sedimentation of streams and wetlands due to increased flow rates and volumes, resulting in the decline of nutrient balances, substrate quality, and habitat availability.
- Decline and eventual loss of some wetland functions for hydrology, water quality, and habitat.
- Long-term cumulative reduction in groundwater recharge and associated discharge to streams.

Exhibit 1.5-4 Summary of Impacts and Mitigation—Plants & Animals

Plants & Animals (Section 3.1.4)
Impacts Common to All Alternatives
Population growth and upzoning will occur under each of the proposed action alternatives throughout the County. As a result, loss and/or fragmentation of habitat is expected to increase. The extent of impacts to plants and animals will depend on the location and intensity of development, habitat patch size, and connectivity across the landscape. Development would be primarily focused within UGAs under all alternatives. However, lower intensity development is still expected in rural areas. Critical areas, including streams and wetlands, would receive similar protection under each of the alternatives with some increased protections for riparian areas in Alternative 3.
Impacts of Specific Alternatives
Alternative 1, "No Action" Direct impacts on plants and animals from intensification of development are assumed to be proportional to the amount of impervious surface created in specific areas. Wildlife habitats are predicted to experience reduced habitat quantity and quality as a result of development activities. Impacts to intact habitat are expected to occur primarily where clearing is being conducted or impervious surfaces are being created. New development to accommodate growth is expected to result in loss of habitat and increased fragmentation. These actions would impact the overall quality of remaining habitat areas. Development of properties within or near environmentally critical areas could result in increased impacts to wetland and riparian habitat functions and values.
Alternative 2, "Compact Growth/Urban Center Focus" Densification in current UGAs and UGA expansion areas would increase the extent of impervious surfaces from increased development activities. These activities are expected to impact plant and animal species most in areas where undeveloped land is converted. Under Alternative 2, an additional 1,458 feet of non-fish bearing stream habitat will be affected by the UGA expansion areas and 1,477 feet of non-fish bearing stream habitat will be affected by upzoned areas under Alternative 2. Impacts to aquatic habitat are expected to be similar to impacts of water resources. The area of expanded UGA boundaries may result in increased conversion of riparian habitat and

related habitat corridors, degraded habitat functions and values, and increased fragmentation. Quantity and quality of riparian areas would be expected to decline in those areas where growth is greatest under Alternative 2.

Alternative 3, "Dispersed Growth Focus"

Alternative 3 would provide for increased growth primarily through expansion of existing UGAs by approximately 1,082 acres overall. Expansion of UGA boundaries would occur in Kingston, Poulsbo, Silverdale, Port Orchard, Central Kitsap, and Bremerton. These changes allow for higher impervious surface coverage compared to the other alternatives, which may result in greater impacts on plants, animals, and related habitat.

An additional 5,674 feet of non-fish bearing stream habitat would be included in UGA expansion areas and 17,936 feet of non-fish bearing stream habitat would be included in upzoned areas compared to Alternative 1 (No Action). As a result, riparian habitats and related habitat corridors would be expected to decline in those areas where growth is highest under this alternative. The greatest impacts to plants and animals would be directly associated with the most extensive conversion of undeveloped habitat areas to impervious surfaces.

However, increased stream buffers are proposed in Alternative 3 compared to the other alternatives. Within the proposed UGA boundaries, approximately 508 acres would be encumbered by the increased stream buffers, compared to 245.5 acres that would be affected by the existing 50-foot buffers. This increase would improve protection for plants and animals by requiring greater buffer widths from development activities. Increased buffer widths provide additional functions for pollution removal and wildlife corridors for terrestrial habitats, in addition to increased protections of riparian and associated aquatic habitat.

Mitigation Measures

Incorporated Plan Features

Kitsap County Comprehensive Plan Chapter 3, Environment, provides goals and policies to generally preserve and protect critical areas and intact ecosystems.

Applicable Regulations & Commitments

- Critical Areas Regulations (KCC Title 19) identify and protect critical areas, including fish and wildlife conservation areas, streams, wetlands, frequently flooded areas, and critical aquifer recharge areas.
- The Shoreline Master Program (KCC Title 22), updated in 2021, applies use and modification standards, as well as mitigation sequencing, vegetation conservation, and critical areas regulations to all Shorelines of the State.
- The Kitsap Regional Shoreline Restoration Plan identifies several voluntary projects and programs to be implemented to improve shoreline functions over time.
- The US Army Corps of Engineers regulates fill of wetlands through the Federal Clean Water Act.
- State Environmental Policy Act (SEPA) requires environmental review and consideration of potential adverse impacts of projects.
- Ecology regulates water quality through general and individual water quality permits as well as Section 401 water quality certifications to protect water quality.

- As a result of a 2008 Biological Opinion by the National Marine Fisheries Service, the County must ensure that any proposals within floodplains not adversely affect water quality, flood volumes, flood velocities, spawning substrate, or floodplain refugia for listed salmonids.
- Under the State Environmental Policy Act (SEPA), all state and local agencies must use an interdisciplinary, integrated approach to include environmental factors in both planning and decision making.

Other Potential Mitigation Measures

- Public outreach and education measures could help mitigate the impact of population growth on plants and animals.
- The County could consider incorporating standards beyond the existing 2021 Kitsap County Stormwater Design Manual requirements by incorporating additional Best Management Practices (BMPs) for stormwater management near roadways to reduce the impacts on aquatic life from roadway runoff that contains 6ppd-quinone. Recommended BMPs to mitigate impacts from 6ppd-q are referenced in Ecology Publication 22-03-020.

Significant Unavoidable Adverse Impacts

Future development activities to accommodate the expected growth in Kitsap County will generate unavoidable adverse impacts to native plant and animal species. By focusing development within UGAs, impacts will be minimized by reducing impacts to high functioning, intact habitats, but is unlikely to reduce landscape-scale impacts. Increased impervious surface area within a basin is expected to impact stream hydrology and water quality and quality. These watershed-level changes are likely to negatively impact listed and unlisted aquatic species. As native vegetation corridors are degraded by selective clearing, wildlife is consequently displaced, colonized by invasive plant species, reduced in size, and fragmented by development.

Exhibit 1.5-5 Summary of impacts and mitigation—Land and Shoreline Use

Land and Shoreline Use (Section 3.2.1)

Impacts Common to All Alternatives

By 2044, Kitsap County is projected to add 28,825 people, 19,882 jobs, and need 14,497 housing units. Impacts common to all alternatives include conversion of undeveloped land for new residential, commercial, an/or industrial uses; increased intensity of use on developed parcels through redevelopment, or infill development on underutilized parcels; and land use compatibility issues resulting from the encroachment of new urban development patterns on current uses, often more rural in nature.

Impacts of Specific Alternatives

Alternative 1, "No Action"

Maintains existing Comprehensive Plan land use designations, zoning, and UGA boundaries, which has a residential pattern that focuses on single-family residential, and a land use pattern defined by sprawl. Alternative 1 does not meet growth targets for population, housing, or employment. There are also no changes to Regional or Countywide Centers.

Alternative 2, "Compact Growth/Urban Center Focus"

Emphasizes a more compact land use pattern that increases density to accommodate growth, specifically in urban centers, and focuses more on multi-family residential and densely clustered

jobs in commercial zones. Alternative 2 meets projected housing need and is very close to meeting employment targets. Additionally, the Silverdale Regional Center and Kingston Countywide Center see significant zoning amendments and incentives to reduce barriers for multi-family and commercial development, which include greater allowed heights and densities.

Alternative 3, "Dispersed Growth Focus"

Emphasizes a more dispersed growth focus that is similar to the land use pattern of Alternative 1, which has a residential pattern that focuses on single-family residential, and a land use pattern defined by sprawl. Alternative 3 exceeds employment targets but does not meet the projected housing need target. There are limited changes to Regional and Countywide Centers under Alternative 3.

Mitigation Measures

Incorporated Plan Features

- Compact development patterns seen in Alternative 2

Applicable Regulations & Commitments

- Kitsap County Code (KCC) Title 17 establishes development standards to reduce compatibility impacts and other measures regarding land use.
- Potential changes to development regulations in Titles 16 and 17 may have a mitigating effect on land and shoreline use impacts. Please see the alternatives analysis for more information.
- KCC Title 19, Critical Areas Regulations & KCC Title 22 Kitsap County Shoreline Master Program.

Other Potential Mitigation Measures

- N/A

Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to land use patterns, compatibility, or urban form are expected under any alternative.

Exhibit 1.5-6 Summary of impacts and mitigation—Relationship to Plans and Policies

Relationship to Plans and Policies (Section 3.2.2)

Impacts Common to All Alternatives

All alternatives have some level of consistency with the GMA, VISION 2050, and Kitsap CPPs.

Impacts of Specific Alternatives

Alternative 1, "No Action"

Impacts on policy consistency under Alternative 1 would be similar to the existing pattern described under impacts common to all alternatives, as there are no policy changes under Alternative 1.

Alternative 2, "Compact Growth/Urban Center Focus"

Proposed policy changes include expansion of MFTE areas, expedited permitting, reduced parking minimums, a tree replacement standard, increased transit service to at least 30-minute frequency in Silverdale Regional Center and Kingston UGA, and meeting PSRC's greenhouse gas (GHG) emission targets.

Alternative 3, "Dispersed Growth Focus"

Proposed policy changes include a tree retention standard, increasing stream buffers to 100 feet, removing lot aggregation requirement for Suquamish and Manchester LAMIRDs, and creating a storefront zone that requires vertically integrated mixed-use buildings in the Kingston UGA.

Mitigation Measures

Incorporated Plan Features

- The proposed policy changes in Alternatives 2 and 3 of the proposal would increase consistency with other plans, policies, and state requirements in different ways. Please see the alternatives analysis in this DEIS for more information.

Applicable Regulations & Commitments

- Submittal of proposed Comprehensive Plan to Washington Department of Commerce for review.
- Ensure consistency with CPPs.
- The County will confirm the adequacy of public urban services in UGA expansion areas with its Capital Facilities Plan before formally amending UGA boundaries.

Other Potential Mitigation Measures

- N/A

Significant Unavoidable Adverse Impacts

With implementation of mitigation measures, no significant unavoidable adverse impacts are anticipated regarding future plan consistency under any of the alternatives.

Exhibit 1.5-7 Summary of impacts and mitigation—Population, Housing and Employment

Population, Housing & Employment (Section 3.2.3)

Impacts Common to All Alternatives

All three alternatives assume an increase in population and employment over the planning period but differ in their assumed intensity and location of development. Alternatives range from adding about 14 percent to 21 percent to the county's population. About 85 percent of the new population would occur in cities and UGAs, while about 15 percent would occur in Rural areas.

Impacts of Specific Alternatives

Alternative 1, "No Action"

Alternative 1 anticipates 2,761 fewer people than the 2044 growth target. Alternative 1 is expected to produce an additional 9,090 housing units, with only about 1,800 of those units expected to serve households with median family incomes of 0 to 50 percent of AMI. This does not meet the housing need target. Alternative 1 also falls 7,097 jobs short of the growth target for 2044.

Alternative 2, "Compact Growth/Urban Center Focus"

Alternative 2 would bring 8,714 more people to Kitsap County than the growth target has set for 2044. Alternative 2 projects to develop 14,684 housing units, which meets the housing need target, and produces about an even split of housing that serves lower income households and middle to upper class income households. Alternative 2 gets close, but also falls short by 959 jobs, of achieving the employment target set for 2044.

Alternative 3, "Dispersed Growth Focus"

Alternative 3 would add an additional 632 people living in unincorporated Kitsap County beyond the 2044 growth targets. Alternative 3 does not produce as much housing as Alternative 2 but does produce about 1,700 more housing units than Alternative 1 does. Alternative 3 also produces about 1,600 more housing units than Alternative 1 for households earning 0 to 50 percent median family income (MFI), but still only produces half of what is needed by 2044. Alternative 3 is the only alternative that meets the 2044 employment target, generating 1,157 more jobs than the target.

Mitigation Measures

Incorporated Plan Features

- Alternative 2 will allow limited expansions of UGA areas with the expansions focusing on increasing job growth and employment opportunities.

Applicable Regulations & Commitments

- Zoning code requirements throughout unincorporated Kitsap County will see a reduction in regulatory barriers to development under Alternative 2.
- Expansion of MFTE zones and other affordable housing incentives under Alternative 2 could help support development of housing that serves households earning 0 to 50 percent of AMI.

Other Potential Mitigation Measures

- For UGAs that show capacities greater than the population or employment targets, UGA boundaries should be decreased, where possible.
- Alternatively, or in combination with UGA reductions, a different mix of densities or land uses may assist the achievement of population and employment allocations.
- The County could work with KRCC and cities to reallocate population from undersized UGAs to oversized ones.
- Where the County has already applied reasonable measures (e.g., upzones or other incentives), the County could consider limited UGA expansions.

Significant Unavoidable Adverse Impacts

This population, housing, and employment growth will cause impacts on the natural and built environment and the demand for public services. Each of these topics is addressed in the appropriate sections of this EIS.

Exhibit 1.5-8 Summary of impacts and mitigation—Historical & Cultural Preservation

Historical & Cultural Preservation (Section 3.2.4)

Impacts Common to All Alternatives

Future development under all the alternatives may affect known or potential historic sites. Archaeological sites tend to be concentrated in the vicinity of waterways, shorelines, and river valleys. These areas are anticipated to be subject to development pressures under all alternatives. Unidentified prehistoric and historic sites and historic/cultural artifacts present throughout the area could be disturbed by future development. Historic and archaeological sites located in urban growth areas are likely to have the highest potential of disturbance during development activities as these areas are likely to have the most intensive development.

Impacts of Specific Alternatives

Alternative 1, "No Action"

Residential and employment-related growth would be focused within existing UGA boundaries. This could create additional incentives to develop or redevelop in urban growth areas, particularly those with zoning designations that allow for higher densities or a broad variety of land uses. Therefore, potential impacts on cultural resources may be higher within UGAs than rural areas. However, new residential growth is anticipated to occur in rural areas as well and may potentially impact cultural resources.

Alternative 2, "Compact Growth/Urban Center Focus"

Alternative 2 would accommodate the greatest amount of residential growth of the three alternatives. Alternative 2 would focus residential growth within UGAs and centers. A focus on infill rather than UGA expansion minimizes potential disturbances. Most development would be focused within the Silverdale Regional Center and the Kingston Countywide Center. Alternative 2 includes approximately 464 acres of UGA expansion. The expansion of UGAs under Alternative 2 would lead to a greater potential for impacts on cultural resources than Alternative 1. Several locally significant historic and archaeological sites could potentially be affected by development pressure associated with the expansion of UGA boundaries. Since archaeological sites are likely to be located within the vicinity of shorelines and water bodies as outlined above, areas of expansion of UGAs near or adjacent to shorelines may have greater impacts on archaeological resources. Alternative 2 proposes expansion of urban areas near or adjacent to shorelines in almost every UGA.

Alternative 3, "Dispersed Growth Focus"

Alternative 3 includes approximately 1,049 acres of UGA expansion. Accordingly, potential impacts on cultural resources are anticipated to be greater than for Alternatives 1 and 2 since the area for greater density of development would be the largest of three alternatives. Alternative 3 is expected accommodate growth primarily with the expanded UGAs, predominantly within Silverdale, Kingston, and Bremerton. There is expected to be less variety in housing types under Alternative 3 than Alternative 2 due to a focus on single-family residential development. This alternative would include greater potential for lower density and widespread urban development throughout the various UGAs. Alternative 3 also includes changes to the density allowances within the Suquamish Limited Area of More Intense Rural Development (LAMIRD), which may preclude Tribal social, economic, or cultural goals. Of the three alternatives, Alternative 3 would have the most potential to affect cultural resources. Overall, UGA expansion in proximity to water bodies would be greater under Alternative 3 than under any alternative, which as a result would create a greater potential impact on cultural resources.

Mitigation Measures

Incorporated Plan Features

- Goals and policies in the Kitsap County Comprehensive Plan encourage a coordinated approach to identification and preservation of historical and archaeologically significant sites and structures throughout the county.

Applicable Regulations & Commitments

- The County has an existing agreement with Department of Archaeology and Historic Preservation under Kitsap County Contract KC 442-07.

- The County will continue to implement the requirements of Port Gamble Historic Rural Town (KCC 17.321B) to ensure that development maintains and enhances the defining and essential characteristics of the town.
- The County will continue to implement the Open Space Plan (KCC 18.12) that allows for tax relief for eligible properties as an incentive to preserve archaeological and historical sites under the Open Space Act (Chapter 84.34 RCW).
- The County will continue to implement the policies and regulations of the Shoreline Master Program (Title 22), which requires Tribal historic preservation officers (THPOs) for tribes with jurisdiction the opportunity to review and comment on all development proposals in the Kitsap County shoreline jurisdiction (KC 442-07).
- If archaeological resources are uncovered during excavation, developers and property owners must immediately stop work and notify Kitsap County, the Department of Archaeology and Historic Preservation, and affected Indian tribes. Uncovered sites shall require a site inspection by a professional archaeologist in coordination with the affected tribe(s). Tribal historic preservation officers shall be provided the opportunity to evaluate and comment on cultural resources evaluations conducted by the professional archaeologist. Further, work shall not recommence until authorized by the Department of Archaeology and Historic Preservation through an archaeological excavation and removal permit, which may condition development permits pursuant to KC 442-07.

Other Potential Mitigation Measures

- A process could be developed that further improves the partnership with the Tribes, the Coroner's Office, DAHP, and other entities.
- The County could consider establishing a historic review board as a strategy to better preserve cultural and historical sites.

Significant Unavoidable Adverse Impacts

Expected development to accommodate growth within Kitsap County may increase development pressure in proximity to cultural resources sites. Future development activities have the potential to impact undiscovered sites as well as documented sites. However, with consistent application of federal, state, and local laws, significant unavoidable adverse impacts to cultural resources are not anticipated.

Exhibit 1.5-9 Summary of impacts and mitigation—Aesthetics

Aesthetics (Section 3.2.5)
Impacts Common to All Alternatives
Future growth and development will include a wider variety of housing types that include more infill midrise buildings, accessory dwelling units (ADUs), and middle housing types (duplexes, townhomes, etc.). Increased density and intensity of development raises the potential for shade and shadow impacts on adjacent land uses, sidewalks, and plazas. There could also be spillover light and glare impacts in rural areas due to increased traffic and household security lighting from neighboring properties.
Impacts of Specific Alternatives
Alternative 1, "No Action"

Similar to what is described in impacts common to all alternatives.

Alternative 2, "Compact Growth/Urban Center Focus"

The Kingston UGA, McWilliams/303 Center, and South Kitsap/Bethel Commercial area see increased allowed height of 10 – 20 feet to their commercial areas. For most of the UGA shadow and light impacts would not increase significantly over Alternative 1. Mixed-use areas in the subarea would likely become more pedestrian oriented over time and have an increase in pedestrian lighting, street trees, street furniture, and access to improved transit.

Alternative 3, "Dispersed Growth Focus"

Similar density ranges and impacts to height, bulk, and scale under Alternative 1, but density is spread out and distributed more broadly across the County's UGAs than is the case in the more focused and intense density found in Alternative 2. Shadow and light impacts would not increase significantly over Alternative 1. Silverdale Regional Center would see an expansion of UGA boundaries and changes in land use designations but would not see changes in allowed densities and maximum heights range from 45 feet to 65 feet. The Kingston Countywide Center would see height increases in its high intensity commercial areas to 55 feet and a mixed-use requirement in a new storefront overlay zone in downtown Kingston.

Mitigation Measures

Incorporated Plan Features

- Managing urban tree canopy.
- Reduce residential parking requirements

Applicable Regulations & Commitments

- Proposed changes to Title 17 regulations for the Silverdale Regional Center, Kingston UGA, McWilliams Center, and South Kitsap/Bethel commercial areas would change bulk requirements in those areas as described above.

Other Potential Mitigation Measures

- N/A

Significant Unavoidable Adverse Impacts

Over time, additional growth and development will occur in Kitsap County, and a generalized increase in development intensity, height, bulk, and scale is expected under all alternatives—this gradual conversion of low-intensity uses to higher intensity development patterns is unavoidable and an expected characteristic of urban population and employment growth. No significant unavoidable adverse impacts to land use patterns, compatibility, or urban form are expected under any alternative.

Exhibit 1.5-10 Summary of Impacts and Mitigation—Transportation

Transportation (Section 3.2.6)

Impacts Common to All Alternatives

Generally, each alternative results in similar levels of transportation impact. In total, the number of vehicle miles traveled (VMT) is expected to increase between 72 and 78 percent during the PM peak hour between now and 2044. The County's current roadway level of service (LOS) standard is measured on a roadway segment volume to capacity (v/c) ratio. Each alternative results in approximately 130 lane-miles of county roadway being below LOS. While a list of projects has

been compiled to address each roadway impact, other options to construction will likely be considered to address these impacts. Additionally, none of the alternatives results in more than 15 percent of the County's lane-miles being below LOS standard, meaning concurrency has not been exceeded, and mitigation is not required. This suggests that without any transportation system improvements the County would still meet the LOS standard. However, the county is likely to focus transportation investments to improve non-motorized travel options (which will result in lower VMT due to mode shift) and prioritize safety investments.

Impacts of Specific Alternatives

Alternative 1, "No Action"

The traffic forecasts associated with Alternative 1 result in a 72 percent increase in vehicle traffic during the PM peak period between 2020 and 2044. This increase in traffic results in approximately 129 lane-miles of County roadway operating below LOS standard. Approximately 56 percent of these deficiencies are in the North-Central county, and the remaining 44 percent are in the South county. Build-out of the proposed land use Alternative 1 is not expected to result in a percentage of deficient lane-miles of roadway that exceeds the County concurrency standard of 15 percent for either the north-central region or the south region.

Alternative 2, "Compact Growth/Urban Center Focus"

The traffic forecasts associated with Alternative 2 result in a 75 percent increase in vehicle traffic during the PM peak period between 2020 and 2044. This increase in traffic results in approximately 134 lane-miles of County roadway operating below LOS standard. Approximately 58 percent of these deficiencies are in the North-Central county, and the remaining 42 percent are in the South county. Build-out of the proposed land use in Alternative 2 is not expected to result in a percentage of deficient lane-miles of roadway that exceeds the County concurrency standard of 15 percent for either the north-central region or the south region.

Alternative 3, "Dispersed Growth Focus"

The traffic forecasts associated with Alternative 3 result in a 78 percent increase in vehicle traffic during the PM peak period between 2020 and 2044, the largest across all alternatives. This increase in traffic results in approximately 137 lane-miles of County roadway operating below LOS standard. Approximately 57 percent of these deficiencies are in the North-Central county, and the remaining 43 percent are in the South county. Build-out of the proposed land use in Alternative 3 is not expected to result in a percentage of deficient lane-miles of roadway that exceeds the County concurrency standard of 15 percent for either the north-central region or the south region.

Mitigation Measures

Incorporated Plan Features

- Goals and Policies within the Comprehensive Plan place additional emphasis on prioritizing expanding the non-motorized transportation system and improving transportation safety.

Applicable Regulations & Commitments

- Kitsap County Concurrency Ordinance (KCC 22.04) – defines transportation concurrency and establishing the process for measuring LOS. The County may consider changing how it measures LOS and concurrency to place further emphasis on all modes of travel.

Other Potential Mitigation Measures

conditions downstream of the planning areas and could potentially aggravate existing downstream flooding and erosion problems.

Exhibit 1.5-20 Summary of Impacts and Mitigation—Water Supply

Water Supply (Section 3.3.9)
Impacts Common to All Alternatives
Data and modeling indicate that Kitsap County has adequate water resources to meet the need for water supply of expected population growth and allocation under all three alternatives, although water may need to be delivered to serve areas of lesser supply, or greater population in the future. Kitsap PUD has been working on developing regional supply and transmission for over 20 years in order to support the County in complying with the GMA. Some of the sources needed have been identified and are certificated, and some are in the process of being approved currently, with more to follow as needed. In terms of resource cost analysis, greater densities should provide a lower cost of service, and lesser densities, such as the majority of Kitsap PUD's rural service area, should be a higher cost of service. With that said, most of the infrastructure is already in place to support the existing UGA boundaries (Alternative 1), with developers covering the cost of future infrastructure needs. If UGA boundaries are greatly expanded (Alternatives 2 and especially 3), there may be a need for more regional infrastructure in the future.
Impacts of Specific Alternatives
Alternative 1, "No Action" Operating costs are increased for Kitsap PUD customers as additional low-density infrastructure is constructed, but it is the best way to manage water resources responsibly if growth is required. Most of the infrastructure is already in place to support the existing UGA boundaries.
Alternative 2, "Compact Growth/Urban Center Focus" Greater concentrations of population and employment growth within the UGAs, particularly in Alternative 2, would minimize impacts on service providers by lessening the need for lateral expansion of distribution systems. There may be a need for more regional infrastructure in the future to support UGA expansion. Most of the infrastructure is already in place to support the existing or minimally changed UGA boundaries.
Alternative 3, "Dispersed Growth Focus" There may be a need for more regional infrastructure in the future to support UGA expansion.
Mitigation Measures
Incorporated Plan Features • Capital Facilities policies promote coordination with non-County facility providers, such as cities and special purpose districts, to support and be consistent with the future land use patterns identified in the County's Comprehensive Plan. • The Capital Facilities Chapter consolidates water provider capital plan information to help coordinate multi-jurisdictional planning efforts. This would be updated with Alternatives 2 and 3.
Applicable Regulations & Commitments • Pursuant to RCW 58.17.110, local authorities must review plat applications to see that adequate provisions are made for a variety of public facilities, including potable water.

- N/A

Significant Unavoidable Adverse Impacts

None.

Exhibit 1.5-11 Summary of Impacts and Mitigation—Noise

Noise (Section 3.2.7)

Impacts Common to All Alternatives

Changes in traffic volumes will increase noise disturbances under all scenarios. Single-family residential construction will continue under all alternatives, resulting in project-specific construction noise impacts. Ambient noise levels will be affected based on changes in population density related to zoning and land use changes.

Impacts of Specific Alternatives

Alternative 1, "No Action"

Construction noise levels will be most affected in existing UGAs, with less in the rural areas. Ambient noise levels will increase less than under Alternatives 2 and 3. Vehicle-related noise increases will be significant along major corridors but will increase the least as compared to the other alternatives.

Alternative 2, "Compact Growth/Urban Center Focus"

Construction noise impacts would be the greatest under Alternative 2 but primarily focused in the modified UGAs, particularly Silverdale and Central Kitsap subareas. Ambient noise levels would rise in the UGAs, while remaining relatively stable in the rural areas. Noise levels along new or expanded bus routes and transit centers within the UGA will increase the most under this alternative.

Alternative 3, "Dispersed Growth Focus"

Construction noise would be greater than under Alternative 1 but less than Alternative 2. Ambient noise levels will increase slightly across all areas, but the changes would likely be more perceptible in rural areas where smaller changes in density can have greater realized noise effects. Traffic-generated noise will increase the most along major commuter routes into and out of the UGAs, resulting from both increased automobile and bus traffic along major traffic corridors.

Mitigation Measures

Applicable Regulations & Commitments

- Kitsap County Noise Ordinance (KCC 10.28) and the associated EDNAs will regulate the levels of acceptable noise disturbances based on land use type.
- Highway noise is regulated under WAC 173-62.
- Federal noise abatement criteria are adopted by WSDOT and are applied by the US Federal Highway Administration (FHA) for projects receiving federal funding.

Other Potential Mitigation Measures

- Project-specific construction activities will be required to maintain standard construction best practices, including limiting the hours of construction noise in accordance with local regulations.

Significant Unavoidable Adverse Impacts

Construction-generated noise will increase, but the extent, location, and duration will vary based on the selected alternative and will be highly associated with project-specific development. Ambient noise levels will increase under all alternatives but will be most realized in urban areas that are more sensitive to changes.

Exhibit 1.5-12 Summary of Impacts and Mitigation—Public Buildings

Public Buildings (Section 3.3.1)
Impacts Common to All Alternatives
All alternatives described in this Draft EIS will accommodate a certain level of growth and development. Along with this level of growth there is expected to be an equal increase in demand for public building space. Increased demand would result in the need for different strategies to increase the amount of public building space.
Impacts of Specific Alternatives
Alternative 1, "No Action"
The level of demand for services at administrative buildings, courthouses, maintenance facilities, and community centers would be consistent with past planning at a countywide level.
Alternative 2, "Compact Growth/Urban Center Focus"
This alternative would benefit from the strategic location of amenities such as community centers to serve a population that would be seeking community gatherings and recreation.
Alternative 3, "Dispersed Growth Focus"
The sizing and location of maintenance facilities and community centers is more sensitive to location. Such facilities would be addressed in the space needs analysis.
Mitigation Measures
Incorporated Plan Features
• Policies in the Capital Facilities Element establish LOS standards for community centers, County buildings, and courts and require the County to apply these standards to its annual budget and Capital Improvement Program. • Alternatives 2 and 3 update the Capital Facilities Plan for the 20-year planning period 2024-2044.
Applicable Regulations & Commitments
• With added development and population, tax revenues to the County would increase and could contribute to funding of additional or expanded facilities and associated staffing needs.
Other Potential Mitigation Measures
• To address future deficiencies, the County could adjust its LOS standards to reflect the likely service levels in 2044, given estimated population growth and planned facilities. • If determining impact fees for parks and recreation facilities, the County could ensure that impacts on community centers are reflected in the calculations of impact fees. • Alternative 2 focuses growth in specific zones and locations. A strategy to plan community spaces around these zones would help address future deficiencies.
Significant Unavoidable Adverse Impacts

Demand for public services will increase under all studied alternatives. With advanced planning, no significant unavoidable adverse impacts on public buildings are anticipated within the range of alternatives reviewed.

Exhibit 1.5-13 Summary of Impacts and Mitigation—Fire Protection

Fire Protection (Section 3.3.2)
Impacts Common to All Alternatives
New development and population growth will result in an increased demand for emergency response to fire, rescue, and emergency medical services. This increased demand will require fire districts to increase their emergency response capabilities concurrent with growth to maintain service levels. All growth alternatives will create challenges for fire districts to maintain service levels.
Impacts of Specific Alternatives
Alternative 1, "No Action"
The level of demand for services at fire protection facilities would be consistent with past planning at a countywide level.
Alternative 2, "Compact Growth/Urban Center Focus"
Will create challenges with larger and more complex buildings to protect along with increased traffic congestion.
Alternative 3, "Dispersed Growth Focus"
With UGA expansion, fire protection services will be challenged by increased emergency response travel times or will otherwise require the development of new fire departments closer to expanded UGA areas.
Mitigation Measures
Incorporated Plan Features
• Under the CFP, the county fire and rescue districts will continue to improve fire protection efficiency by focusing on eliminating overlapping responsibilities and system inefficiencies, as well as coordinating service provision with population growth.
Applicable Regulations & Commitments
• New development would be required to meet city and County codes, as well as International Fire Code and International Building Code regulations, regarding the provision of fire hydrants, fire flow, alarm systems, sprinklers, and emergency vehicle access.
Other Potential Mitigation Measures
• Kitsap County adoption of ordinance allowing fire departments to implement impact fees per RCW 82.02 • Kitsap County adoption of minimum road and driveway standards • Expanded fire and emergency medical services could be provided concurrent with new development
Significant Unavoidable Adverse Impacts

Future population growth and development will continue to increase the need for fire protection/EMS services under any studied alternative. With implementation of the abovementioned mitigation measures, significant, unavoidable adverse impacts are not anticipated.

Exhibit 1.5-14 Summary of Impacts and Mitigation—Law Enforcement

Law Enforcement (Section 3.3.3)

Impacts Common to All Alternatives

Lack of staff currently means a small number of patrol deputies are responsible for very large geographic areas within their patrol areas and current growth has created an increased demand for services and degradation in patrol response time

Impacts of Specific Alternatives

Alternative 1, "No Action"

The level of demand for law enforcement facilities would be consistent with past planning at a countywide level.

Alternative 2, "Compact Growth/Urban Center Focus"

Increased concentrations of population and employment could allow for greater efficiency of service in urban areas, although this focused growth may increase the need for law enforcement services including parking and traffic enforcement.

Alternative 3, "Dispersed Growth Focus"

The further growth of Silverdale and its potential incorporation would have an effect on service levels as revenues are diverted to the new city and development concentrations expand beyond the current UGA boundary.

Mitigation Measures

Incorporated Plan Features

- A comprehensive study of predicted law enforcement services and facilities, including impacts on the corrections services could be conducted to provide an evaluation of potential deficits and the needed resources to meet future demand.
- Future incorporation of Silverdale would likely result in contracting for services to the new city but would also provide a funding source that could provide the level of service the new city requires.

Applicable Regulations & Commitments

- The Sheriff's Office and facilities are maintained primarily through the County's general fund, which is funded through sales and property tax revenue. The increased tax base associated with increased population and development would increase tax revenues and bonding potential.

Other Potential Mitigation Measures

- Staffing will need to be increased as the population increases. Urban areas may be annexed or incorporated. In this case, responsibility for law enforcement services in these areas would be absorbed by the cities.
- Future regionalization of law enforcement services is also a potential pathway for delivering services to county and city residents.

Significant Unavoidable Adverse Impacts
Future population growth and development will continue to increase the need for law enforcement services and facilities under all alternatives. An appropriate assessment of current and future needs should be conducted to provide the framework of needs. The county can then use that tool to determine a course of action and potential adverse impacts on law enforcement services, including the need for future corrections facility needs.

Exhibit 1.5-19 Summary of Impacts and Mitigation—Parks and Recreation

Parks and Recreation (Section 3.3.4)
Impacts Common to All Alternatives
All alternatives would result in an increased demand for park and recreation facilities and enhancement of existing facilities.
Impacts of Specific Alternatives
Alternative 1, "No Action"
The level of demand is consistent with past planning countywide.
Alternative 2, "Compact Growth/Urban Center Focus"
Increased densities would allow for easier planning of outdoor leisure facilities such as playgrounds, picnic shelters, nature centers, and community centers. At the same time, existing park facilities in areas with higher growth allocations may become overburdened.
Alternative 3, "Dispersed Growth Focus"
Natural resource areas, trails, and shoreline access may see more use compared to alternatives 1 and 2 due to the rural nature of those facilities. The adoption of the 2024 Parks, Recreation, and Open Space (PROS) plan may find more specific impacts to these facilities
Mitigation Measures
Incorporated Plan Features
• Improve the connectivity of parks, trails, and open space systems, particularly in proximity to population and job centers, to encourage recreation use when appropriate. • Develop active or outdoor leisure facilities usable in multiple seasons for a variety of activities.
Applicable Regulations & Commitments
• Impact fees are applied to all new housing developments. Fees could be reassessed to reflect increased costs of land for park acquisition or increased impacts within areas of significant intensification.
Other Potential Mitigation Measures
• The County could consider allowing public use of undeveloped or partially developed parkland in or near urban areas. • The County could consider joint use of facilities for parks and recreation purposes such as school athletic fields and playgrounds.
Significant Unavoidable Adverse Impacts
Neighborhoods surrounding existing, new, or expanded parks would experience more activity in the form of vehicles and pedestrians. Costs for acquiring parks will rise with the increased demand for urban land.

Exhibit 1.S-16 Summary of impacts and mitigation—Schools

Schools (Section 3.3.5)
Impacts Common to All Alternatives
All alternatives will result in an increase in projected school enrollment. The alternatives will affect school districts by increasing residential development and consequently the number of students enrolled within the four school districts serving the unincorporated county. Based on where population growth would occur and the demographics of the population within the unincorporated county, each school district will be affected differently. Impacts will generally be higher at schools serving the more urbanized area located within UGAs.
Impacts of Specific Alternatives
Alternative 1, "No Action"
See impacts common to All Alternatives section.
Alternative 2, "Compact Growth/Urban Center Focus"
The most impactful alternative is alternative 2, which focuses growth in multi-family and commercial zones with an emphasis on the Silverdale Regional Center and Kingston Countywide Center as well the associated UGAs of Bremerton, Port Orchard, and Poulsbo. The school districts serving these communities are already overburdened and without planned increases in school facilities, intensive growth in these areas could lead to overcrowding of schools.
Alternative 3, "Dispersed Growth Focus"
See impacts common to All Alternatives section.
Mitigation Measures
Incorporated Plan Features
• Alternatives 2 and 3 amend the CFP to address the new 2024-2044 planning period. • The County's regular review of the CFP in coordination with the school districts should allow for ongoing long-range planning for educational services.
Applicable Regulations & Commitments
• School districts are required to plan for growth over time by regularly updating their six-year capital improvement program. • Adopted school impact mitigation fees would be collected for new residential development.
Other Potential Mitigation Measures
• To address enrollment changes on an ongoing basis, prior to reaching the level of demand that would necessitate construction of a new facility, districts can use portable classrooms to temporarily meet growth demands. Portables can be funded by impact fees paid by residential developers. • The County and school districts could work together to identify potential sites for new school development in areas where higher amounts of growth are planned.
Significant Unavoidable Adverse Impacts
The demand for school services and facilities will increase as new development occurs and the number of families with school-aged children increases. Land developed or set aside for school facilities would be generally unavailable for other uses. Without a significant redevelopment to existing schools or planned development of new schools, the schools which are near or above capacity will become overcrowded.

Exhibit 1.5-17 Summary of Impacts and Mitigation—Solid Waste

Solid Waste (Section 3.3.6)
Impacts Common to All Alternatives
The additional population capacity accommodated by the alternatives would increase demand for additional solid waste capacity. The degree of need would vary among the alternatives based on population and the capacity of existing solid waste facilities. The County, through contracts with private haulers, will continue to be able to provide solid waste management for an increased population regardless of the alternative ultimately chosen. The capital facilities planning conducted within this Comprehensive Plan will allow the County to better anticipate funding needs and sources for future solid waste disposal facilities.
Impacts of Specific Alternatives
Alternative 1, "No Action" The existing level of service for solid waste is calculated on estimated countywide population and the average per capita generation rates for solid waste and recycling. The rates used in the table located in Chapter 3 were taken from the Washington State Department of Ecology, 2018 Recycling and Disposal Numbers for Kitsap County, 2021. If the generation rates from this plan are carried forward from 2022 to 2044, the tons of solid waste and recycling generated per year would be lowest in Alternative 1
Alternative 2, "Compact Growth/Urban Center Focus" If the generation rates from this plan are carried forward in 2022 and 2044, the tons of solid waste and recycling generated per year would be highest with Alternative 2.
Alternative 3, "Dispersed Growth Focus" If the generation rates from this plan are carried forward in 2022 and 2044, the tons of solid waste and recycling generated per year would be between rates generated by alternative 1 and 2.
Mitigation Measures
Incorporated Plan Features • Focusing growth in existing UGAs and cities where solid waste services already exist would reduce impacts related to providing curbside pickup for added population and promote more curbside customers. There would also be less need for additional solid waste handling facilities. Alternative 2 would have the most compact UGAs of the alternatives.
Applicable Regulations & Commitments • Coordination and monitoring at transfer facilities and other facilities would be ongoing to ensure adequate solid waste capacity. Service levels for curbside collection as outlined in the CFP would continue or improve to encourage recycling.
Other Potential Mitigation Measures • Based on available landfill capacity at the County's current contracted landfill location, a new or extended contract could be enacted to provide landfill capacity well beyond the 2044 planning horizon.
Significant Unavoidable Adverse Impacts
Future population growth and development would continue to increase the amount of solid waste generated in the county under any alternative. Regular monitoring of capacity and demand at solid waste facilities will be conducted routinely as needed to address any capacity challenges.

Exhibit 1.5-18 Summary of Impacts and Mitigation—Wastewater/Sewer

Wastewater/Sewer (Section 3.3.7)
Impacts Common to All Alternatives
Under any of the UGA alternatives, additional sanitary sewer service would be necessary to serve increased demand. Construction of new sewer treatment facilities would have potential to result in impacts to both the natural and built environment. These impacts would be addressed at the project level at the time of project implementation.
Impacts of Specific Alternatives
Alternative 1, "No Action"
Capital improvement projects will continue as planned if no action is taken to allocate growth in a certain area or change UGA boundaries.
Alternative 2, "Compact Growth/Urban Center Focus"
Encouraging development within existing urban centers and reduced unincorporated UGAs, as promoted under Alternative 2, will minimize impacts on service providers to extend their services to cover larger areas.
Alternative 3, "Dispersed Growth Focus"
Alternative 3 provides for lesser expansions in some locations and greater expansions in others which may increase the demand for service locationally and reduce it in others.
Mitigation Measures
Incorporated Plan Features
• The Draft CFP proposes improvements associated with studied alternatives. • The Comprehensive Plan Capital Facilities Element (CFE) and CFP establish LOS for County-owned and non-County-owned sanitary sewer systems and require agencies to "determine what capital improvements are needed in order to achieve and maintain the standards for existing and future populations." This element is updated with Alternatives 2 and 3.
Applicable Regulations & Commitments
• Pursuant to Chapter 58.17.110 RCW, local governments must review plat applications to ensure that adequate provisions are made for a variety of public facilities, including "sanitary wastes." • Pursuant to Chapter 16.12 KCC, the County Engineer and County Health Officer provide their respective recommendations as to the adequacy of proposed sewage disposal systems. The hearing examiner then determines whether a proposal includes appropriate provisions for "sanitary wastes" and other public and private facilities and improvements.
Other Potential Mitigation Measures
• The County could continue pursuing opportunities for water reclamation.
Significant Unavoidable Adverse Impacts
With advance planning, implementation, and update of capital facility plans no less than every six years, as well as review of development permits in terms of system impacts, no significant unavoidable adverse wastewater impacts are anticipated within the range of alternatives reviewed.

Exhibit 1.5-19 Summary of Impacts and Mitigation—Stormwater

Stormwater (Section 3.3.8)
Impacts Common to All Alternatives
Under all alternatives, additional stormwater drainage systems would be needed to handle increased stormwater runoff resulting from new development and added impervious surfaces such as roads and driveways.
Impacts of Specific Alternatives
Alternative 1, "No Action"
Alternative 1 would likely result in increased levels of urbanization, adding impervious surfaces and the need for stormwater drainage and treatment facilities in more areas of the county.
Alternative 2, "Compact Growth/Urban Center Focus"
Alternative 2 would result in an increased and focused growth within existing boundaries and could create a greater need for upgrading and retrofitting existing drainage systems compared to Alternatives 1 and 3.
Alternative 3, "Dispersed Growth Focus"
Alternative 3 would result in an increase in UGA boundaries and associated development, impervious surface area, and associated stormwater runoff, and could potentially create a greater need for upgrades to existing drainage systems within expanded UGA boundaries compared to Alternatives 1 and 2.
Mitigation Measures
Incorporated Plan Features
• The Land Use and Natural Systems Elements of the Comprehensive Plan include goals for mitigating erosion, sedimentation, and stormwater runoff problems related to land clearing, grading, and development. Alternatives 2 and 3 update the County's Capital Facility Plan, incorporating a 6-year CIP for stormwater projects. This planning process helps to ensure that the County maintains compliance with the stormwater LOS.
Applicable Regulations & Commitments
• The County has adopted regulations to protect against stormwater impacts of new development (Title 12 KCC). These regulations require all new development to meet specific performance standards before receiving approval. Kitsap County Code regulations addressing clearing and grading, critical areas, and flood hazard areas also direct how stormwater mitigation will be implemented.
Other Potential Mitigation Measures
• Measures to reduce impacts of these alternatives to natural systems and public/private property will be achieved through planning policies, goals, and permit conditions, as described below.
Significant Unavoidable Adverse Impacts
With advanced planning, review of development applications, and implementation of mitigation measures, there should not be unavoidable adverse impacts from any of the three alternatives. The level of unavoidable adverse impacts depends on the degree that potential mitigation measures are implemented. Even if one or more of the mitigation measures is implemented, there could still be some changes to existing stormwater runoff patterns. This could alter flow

- Pursuant to KCC Chapter 16.12, the County Engineer and County Health Officer provide their respective recommendations as to the adequacy of the proposed water supply systems. The hearing examiner then determines whether a proposal includes appropriate provisions for "water supplies" and other public and private facilities and improvements.
- Water supply facilities for new development and public water system expansions must be designed to meet, at a minimum, the fire flow levels specified in WAC 246-293-640, the Uniform Fire Code, and KCC Title 14. In addition, utilities must develop their capital improvement program to meet these fire flow objectives in consultation with the appropriate local fire authorities.
- In accordance with state and local regulations, the Kitsap Health District performs assessments of proposed and existing water supplies for adequacy and potability.
- Pursuant to Chapter 70.116 RCW and Chapter 246-293 WAC, the KPUD coordinates with local water purveyors to evaluate and determine critical water supply service areas and undertake orderly and efficient public water system planning.
- Continued conservation and leak detection programs of the WATERPAK would help to reduce demand.
- The Coordinated Water System Plan for Kitsap County promotes regional water supply and transmission improvements.

Other Potential Mitigation Measures

- Water systems should increase the size of piping, install additional looping to increase water pressure for fire flow, and/or increase frequency of hydrant placement to meet fire flow requirements.
- Water providers and County planners should continue to consult early in plan update processes to coordinate land use with future water supply needs, particularly in urban infill areas designated for higher densities.
- The County should review and revise landscaping codes as necessary to encourage use of drought tolerant plantings and reduce demand for water.
- The County should encourage the use of rainwater retention systems in new and existing development to reduce water demand for landscaping needs.

Significant Unavoidable Adverse Impacts

All alternatives would increase demand for water services. However, with coordination of capital and land use planning, significant unavoidable adverse impacts are not anticipated.

Exhibit 1-3-21 Summary of Impacts and Mitigation—Energy & Telecommunications

Energy & Telecommunications (Section 3.3.10)
Impacts Common to All Alternatives
Cascade Natural Gas (CNG) would increase its service connections upon customer request. Additional facilities would be constructed only when existing systems capacity has been maximized. Puget Sound Energy (PSE) would use forecasts for future electricity need based on 20-year OFM population projections to accommodate increased growth.

The telephone, cable, and cellular service companies would increase their service connections upon customer request.

Impacts of Specific Alternatives

Alternative 1, "No Action"

Alternative 1 maintains current densities and UGA boundaries, which may result in more service extensions/expansions than alternative 2, which focuses on compact growth.

Alternative 2, "Compact Growth/Urban Center Focus"

More population growth in UGAs leads to more demand for energy and telecommunications services in those areas. Expanding or retrofitting the existing services in these areas may be required to accommodate the focused population growth. Focused growth and higher densities allow for higher efficiency of service for natural gas, electricity, and telecommunications.

Alternative 3, "Dispersed Growth Focus"

Dispersed population growth in the county would result in the highest infrastructure cost of the three alternatives due to the demand of service expansions and extensions. Anywhere there is focused growth centers will allow for more efficient services for natural gas, electricity, and telecommunications.

Mitigation Measures

Incorporated Plan Features

- Alternative 2 focuses growth and concentrates densities, allowing for improved efficiency of service for natural gas, electricity, and telecommunications.

Applicable Regulations & Commitments

- Development of future energy resources, transmission facilities, and other facilities will be consistent with federal and state laws, the Northwest Power Planning Council, WUTC, and other laws and agencies regulating utilities.

Other Potential Mitigation Measures

- Continue to encourage site design that emphasizes tree retention and planting, as well as optimizes solar access, to moderate temperatures and reduces energy consumption. Encourage energy conservation through provider-sponsored programs and building codes.
- Continue to encourage co-location of telecommunications facilities and undergrounding of utilities (in urbanized areas) to minimize aesthetic and land use impacts of utility corridors and in rural areas to minimize aesthetic and environmental impacts.
- Continue to encourage appropriate landscaping and stealth design of telecommunication facilities to minimize their visual impacts on their surroundings.

Significant Unavoidable Adverse Impacts

Population and employment growth under all alternatives will increase demands for energy and telecommunications that in turn will increase the need for additional facilities.

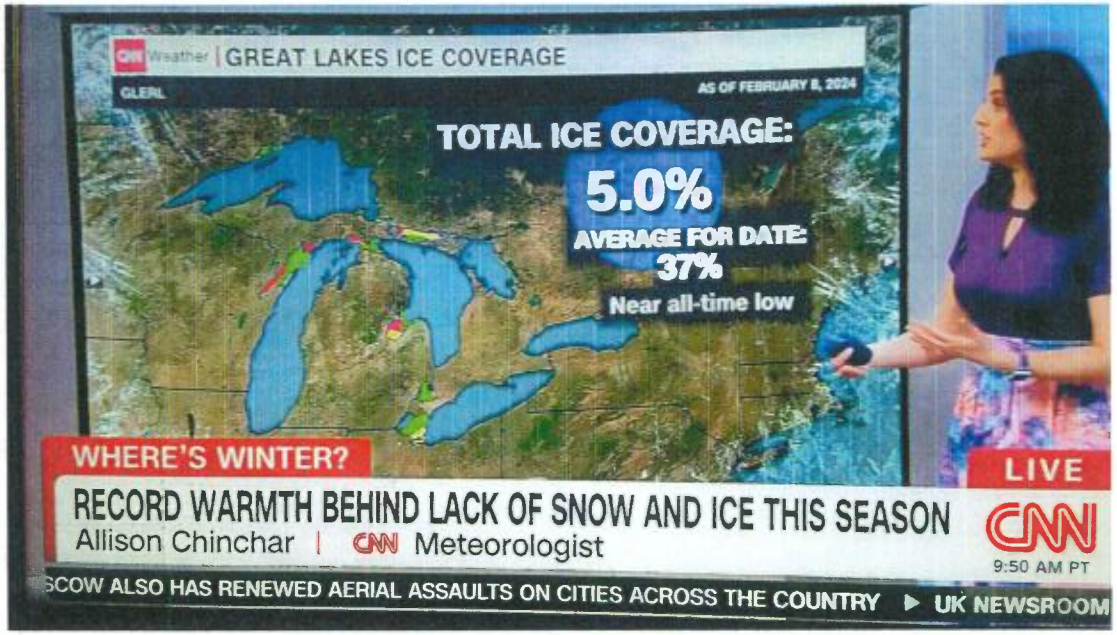
Exhibit 1.5-23 Summary of Impacts and Mitigation—Libraries

Libraries (Section 3.3.11)
Impacts Common to All Alternatives
Because the population increase in Kitsap County is similar under all three alternatives, countywide level of service, both in terms of facility space and collection items per capita, is

CLIMATE CHANGE IS NO LONGER A DISCUSSION TOPIC

PLEASE NOTE ~~THE~~ THE INDEX FOR WA. STATE. NO YELLOW MARKERS FOR N.W. WA. CLIMATE CHANGE IS AFFECTING THE ENTIRE COUNTRY

SAN DIEGO, GOT 6 MONTHS OF RAIN IN 4 HOURS CAUSING SERIOUS FLOODING, DUMPING AT LEAST 4 BILLION GALLONS OF RAIN FOR THE AREA, WHILE WE & THE EAST COAST, ARE DRYING UP & EXPERIENCING A MAJOR LACK OF SNOW & ICE.



Article appeared in The Urbanist website

Kitsap County's Proposed Comp Plan Sleepwalks Toward More Sprawl

By

Travis Merrigan

January 29, 2024

The stated goal of Kitsap County's 2024 Comprehensive Plan Update is to maintain the county's rural character by directing "the majority of growth toward urban areas" and supporting denser housing around transit. And while the County has some progressive ideas, the Comp Plan's updated zoning rules don't go far enough to prevent ongoing sprawl and increased population into the far hinterlands of the county.

Excluding Kitsap's four incorporated cities – Bremerton, Port Orchard, Poulsbo, and Bainbridge Island – unincorporated Kitsap County is primarily rural. 59% of county residents live in rural zoned areas and the majority of housing built in the past 11 years was built in areas zoned rural. If Kitsap wants that to change, it needs to make meaningful zoning changes, but the draft 2024 Comp Plan falls well short. Outside of three small "Growth Centers" (Silverdale, Kingston and Central Kitsap), virtually all of the Urban Growth Areas (UGAs) will be zoned exactly as they were in 2016, the last time the plan was updated.

To be clear, zoning rules do not decide where homes will be built, developers do. Zoning sets rules about where different types of housing might/can't be built. Developers decide where to build based upon where it makes sense (aka makes money) based on a variety of factors: zoning, tax abatements, minimum and maximum density, required parking, etc. Smart zoning incentivizes developers to build in smart places.

Kitsap County is disadvantaged in attracting developers because of its low

housing prices, relative to King or Snohomish counties. Median home prices are $550,000 in Kitsap, $775,000 in Snohomish and $935,000 in King County, according to Northwest Multiple Listing Service. Thus, a developer can sell an apartment building in Bellevue or Edmonds for much more money than an identical one in Silverdale or Kingston. So if Kitsap County wants to encourage developers to build here, the incentives have to be market-oriented and smart.

Do what you've always done, get what you've always got

The 2024 Draft Comp Plan sets a goal: 85% of population growth in Kitsap between 2024-2044 will occur in the county's UGAs, and only 15% in rural zoned land. But in the 11 years 2012-2023, only 48% of new homes were built in the UGAs, 52% in rural areas...and it gets worse.

Despite what the County might hope for, Kitsap is building almost exclusively low-density housing in rural and suburban areas. Almost all the new growth occurs on newly chopped forest. If the trend continues, the County has no chance of addressing its bold stated goals regarding climate, traffic, loss of forest and farmland.

If 20,000 trees fall in a Regional Growth Center, is it really a forest?

It should be noted that the the county's 2021 Buildable Lands Report reports Kitsap's UGAs growing faster (7.6% over 6 years) than the rural area (4.5%), which contradicts the data above. Part of the discrepancy is the county's tendency to permit suburban growth in rural areas and then reclassifying that land as UGA. Instead of filling in with density, Kitsap's UGAs sprawl outward into farms and forests. Despite moving the goalposts, UGAs fell short of "policy target of 76%

forests. Despite moving the goalposts, UGAs fell short of "policy target of 76%urban for new growth," stating "unincorporated UGAs, growth from 2013-2019 was... between 1% and 50%." The phenomenon of moving borders to accommodate "urban" sprawl can be seen clearly in the two alternatives for Silverdale Regional Growth Center (RGC). Apparently unable to achieve growth goals within its boundaries, commissioners will choose whether to sprawl Silverdale RGC to the east or the west, designating hundreds of acres of doomed forest for future housing.

The problem of unbuilt rural lots

Yet another challenge to dense growth in Kitsap County is a deep stock of unbuilt lots, most in rural areas. Building out these lots not only costs more to build because they lack sewers, sidewalks and broadband, they also contribute to sprawl, as future residents will have to drive much farther to schools, jobs and shopping.

Many of these rural lots were created in the early 1990s. Between the 1990 passing and 1994 effective date of Washington State's Growth Management Act, which greatly restricted the ability of rural landowners to subdivide their land, there was a rush to subdivide before the deadline. According to the county's Parcel Data, 13,895 undeveloped lots still remain. At one house per lot and 2.5 humans per house, that's enough lots to accommodate all of unincorporated Kitsap County's growth through 2050.

County leaders are powerless to prevent development on these unbuilt lots. The County simply can't prevent a landowner from building on a lot they own. So the 2024 Kitsap County Comp Plan must use every tool to incentivize new homes tobe built by increasing density limits, limiting or eliminating parking minimums and streamlining permitting so developers choose to build in UGAs.

Bright spot: Urban Growth Centers

In fairness, the County is significantly upzoning three small Growth Centers. As of 2019, unincorporated Kitsap County disallowed any housing zoned higher than "medium low" density.

But those three Growth Centers consist of fewer than 1,000 of Kitsap's 285,000 acres. And most of the scarce areas where higher-density uses would be allowed are already built out. UGA land surrounding the Growth Centers remain zoned only for low-density housing (1-9 dwelling units per acre).

All that means developers have very few opportunities to build multi-family homes near transit or within walking distance to urban amenities. The scarcity of lots available for high-density development pushes up the prices of the land and makes those housing projects less likely to pencil out. Developers will continue to conclude that it's more profitable to chop down virgin forests for subdivisions rather than build walkable, transit-oriented housing.

How it might be different

Kitsap County could improve this with modest solutions that other communities have successfully executed. Here's some ideas.

Adopt HB1110 'Missing Middle' rules in Kitsap UGAs – Three of Kitsap's cities will soon be required to permit multi-family housing and ADUs in single-family zones. Kitsap's UGAs should adopt these rules to build up existing neighborhoods.

- **Allow very high density buildings in more areas.** Permit and incentivize buildings with 250+ apartments built 80-feet-tall like those common in Tacoma, Seattle and Bremerton. Unincorporated Kitsap has exactly zero of these types of buildings and, in the Comp Plan, only Silverdale allows them. Just one 300-unit building would be equivalent to 20% of the unincorporated County's yearly projected growth.

- **Build density walkable to high-volume transit routes.** The suburbs can support bus systems, but only if people live close enough to the bus stops. Expanding the McWilliams County Growth Area just north of Bremerton would allow new residents to tap into existing, high-frequency bus routes on Wheaton Way (SR 303).

- **Ferry-Oriented Development** – Washington State's proposed "Transit Oriented Development" bills at the legislature continue to exclude ferry zones. That's a mistake. Kitsap County should permit parking-limited housing near the for car-free ferry commuters near Southworth and Kingston. Incorporated Bainbridge Island should do the same.

- **Merge bus systems:** Kitsap County has three bus systems: Kitsap Transit, Worker-Driver (a KT-operated legacy of WWII US Navy transportation) and several school district bus systems. Merging would create a single, stronger bus system. The new service could serve both students and shipyard workers by coordinating start times at schools and the Base. Vehicle miles traveled would plummet if parents could rely on safe, reliable schools buses for student drop off.

Kitsap County's officials and citizens have a sincere desire to reduce sprawl, maintain "rural character" and create walkable, transit-oriented communities. And the three Regional Growth Centers made strides in that direction. But the housing zoning in the 2024 Comp Plan is simply too timid to reverse the trend of ever-spreading sprawl. Changes can still be made to the Comp Plan, but time is running out. Residents can comment on the plan until April 8, 2024.

DEC. 8, 2023

NORTH KITSAP UNITED TRAFFIC ANALYSIS

Table 4. Future (2028) Without and With-Project Weekday PM Peak Hour LOS Summary

PAGE 180 NORTH KITSAP UNITED FEASABILITY REPORT

Intersection	Traffic Control	2028 Without-Project			2028 With-Project		
		LOS[1]	Delay[2]	WM[3]	LOS	Delay	WM
1. SR 104/Bond Rd NE (SR 307)	Signal	B	19	-	C	24	-
2. NE Minder Rd/Bond Rd NE (SR 307)[4]	TWSC	**E**	**36**	**SB**	**F**	**78**	**SB**
		E	**36**	**NB**	**F**	**95**	**NB**
3A. Port Gamble Rd NE (N of SR 307)/SR 307	TWSC	B	13	SB	C	17	SB
3B. Port Gamble Rd NE (S of SR 307)/SR 307	TWSC	B	15	NB	C	18	NB
4. Bond Rd NE (SR 307)/NE Minder Rd	TWSC	**D**	**30**	**WB**	**F**	**54**	**WB**
5. Bond Rd NE (SR 307)/Stottlemeyer Rd NE (North)	TWSC	**D**	**28**	**EB**	**F**	**1,003**	**EB**
6. Bond Rd NE (SR 307)/Stottlemeyer Rd NE (South)/NE Gunderson Rd	Signal	C	24	-	C	33	-

Note: TWSC = two-way stop controlled. Bold text indicates not meeting the LOS standard.

1. Level of Service (A – F) as defined by the *Highway Capacity Manual* (TRB, 7th Edition)
2. Average delay per vehicle in seconds
3. Worst Movement shown for stop controlled intersections. EB = eastbound approach, WB = westbound, NB = northbound, SB = southbound.
4. Note that both the north and south stop controlled approaches of this intersection are operating below standard so both are included in the table.

DEC. 27, 2023

THIS MAP HAS BEEN DESIGNED BY RICK ECKERT

REZONE WOULD LIKELY ACCELERATE BOND RD IN TO A COMMERCIAL CORRIDOR. IN DIRECT CONFLICT WITH RURAL GMA GUIDELINES!

RCW 36.70A.020

- Application ID 72 total acres 418.90 acres, proposes to change From Rural Wooded (1 du/20 acres) to Rural Residential (1 du/5 acres).

  The Port Gamble S'Klallam Tribe opposes this application. The opposition has been provided to county staff during many meetings. PGST has been working in good faith for the coordination of the Port Gamble Forest Heritage Park design and the Master Plan for the Town of Port Gamble. The owner of these lands must first show that full development of the Historic Port Gamble Town can be completed before requesting more land for rural sprawl development. This location is within the Gamble Creek Watershed that feeds directly into the Port Gamble Bay. The watershed will be impacted by development of any kind, but most intensely impacted with a development of Rural Residential. Deny this application. The Tribe will provide more detailed comments on this application separately.

Summary of Findings

General findings of the preliminary transportation assessment for the NKU South Gamble development include:

Land Use Assumptions – For purposes of the transportation assessment the following range of development was reviewed:

- Residential – 80 residential lots with and without a detached accessory dwelling unit (ADU) as permitted in the Rural Residential Zone.
- YMCA regional facility - 80,000 square-feet (sf)
- 6-12 fields as well as supportive uses such as baseball, tennis, pickleball, etc.
- Restaurant - 2,000-4,000 sf anticipated to be high turnover sit down
- Retail – 2,000-4,000 sf strip mall WHAT STRIP MALL?

Trip Generation – The primary weekday daily trips are estimated to range from approximately 3,546 trips to 6,472 trips with between 225 and 407 trips occurring during the weekday AM peak hour and 371 to 690 trips occurring during the weekday PM peak hour.

Traffic Operations – The existing full access side street stop-controlled intersections along Bond Road (SR 307) are shown to operate below the LOS C standard by future (2028) conditions without the project during the weekday PM peak hour due to the high volumes along Bond Road (SR 307). The traffic signals are shown to operate acceptably with additional project traffic, although they are near level of service thresholds.

Access – Access in the preliminary traffic analysis was assumed via Stottlemeyer (north) connecting to Bond Road (SR 307), consistent with where the majority of the traffic generated by the project will desire to travel. Stottlemeyer Road NE currently travels through the site and accesses Bond Road (SR 307); however, occurs at an obtuse angle and operations would fail with just a two way stop controlled intersection. Advanced traffic control such as a traffic signal or roundabout would be necessary. Locating a traffic signal or roundabout along Bond Road (SR 307) needs to be evaluated further in coordination with WSDOT. Initial thoughts would be to further explore aligning Stottlemeyer Road NE with NE Minder Road into one intersection or consider shifting Stottlemeyer Road further south or west of its current location. Note that it is possible that the project may include a northern road connection directly onto Port Gamble Road, but this access was not assumed as the single access provides a more conservative impact at the Bond/Stottlemeyer/Minder Road intersections.

Next Steps/Additional Considerations –

- Explore access alternatives through on-going coordination with WSDOT and design review. This would likely include evaluating options for realigning NE Stottlemeyer Road to either align with NE Minder Road or shifting the Stottlemeyer Road intersection further south.
- Seasonal impacts – the current analysis reflects average (typical) conditions. Higher seasonal impacts during summer months could result in increased delay and additional impacts.
- The above analysis focuses on the weekday PM peak hour condition. Given the proposed recreational field uses which may have peaking conditions outside of the typical weekday PM peak hour condition (e.g. Fridays and/or weekends), additional review of these non-typical periods may be necessary. This could identify the need for event management strategies to address traffic and/or parking concerns.

NKU Feasibility Report - Preliminary Transportation Assessment pp 160-241

- **Comments from various members of Stop Raydient Rezone**

- "The executive summary is pretty eye opening. It bluntly states that current traffic is pretty much at capacity, and significant ($$$) improvements would be required by both the county and the state. Hidden down on p177 is a worst case projection of an *additional* 6,742 daily trips! Even worse on p173 is a note that the worst case assumes 80 more dwellings *plus* 80 accessory dwellings, for a grand total of 160 more units!! " (note: I believe the dwellings are mentioned on p 163, not 173 and the worst case scenario could be up to 160 units if there are are 80 ADUs)

- "Traffic studies typically show impacts by rating the traffic before and after a development occurs by the "level of service" or LOS. LOS is rated A thru F, very much like school grades. An A is best (free flowing), a C is disrupted traffic, and from there it gets worse to an F where demand exceeds capacity."

"The level of traffic generated by the development that would need to access Bond (SR 307) would require a traffic signal or roundabout for traffic control." And who is going to pay for this? This study further validates the position of those against this project. A more simplistic view, but with validity, is that they are trying to put 10 gallons of poop into a 5 gallon bucket. The light, or roundabout, merely manages the flow. Lipstick on a pig. The bucket is still going to overflow, and we're going to be left with a stinky mess."

"It also floors me if you are familiar with the problems with the highway at Highland for school traffic. Evidently the DOT refuses to put in any kind of light there due to it being a highway? I got DOT to reduce speed there but it is ignored and not enforced. I'm really surprised that a bus hasn't been hit. I have to be very careful to schedule Dr. appointments around traffic from school and commuters. Now imagine even more parents picking up and trying to turn left to get to this stupid Y after school. I would like to see county commissioners come down and work as traffic guards on the highway during peak periods."

"So it affirms what we all know, see and experience every day on Bond Road. Well at least someone/reporting is honest. Nevermind the fact that the way that road is built an emergency crew would have a heck of a time to get in/out of the area in a major emergency. There are some portions that there is no shoulder, no where to get out of the way and in some times of day no escape for anyone. Note some of the closures for Asplundh tree trimming made this blatantly obvious. "

"I communicated with WSDOT staff overseeing SR 307 and 104 corridors in Oct The WA state legislators must fund studies, design and construction of these roads. No funding has been approved at this time that would address this added traffic. Some rough numbers from a Poulsbo official for the SR305 Johnson Rd roundabout is 10+ years to design and build, $10+ million in costs. Funding came from a variety of sources. Also know the state has huge costs associated with fixing salmon passages under roads with costs rising. It appears Bond Rd has a few passages that will be addressed. Other than the work on SR104 at Port of Kingston to redesign the ferry traffic flow there is relatively minor changes scheduled for local state and county roads in this area. All your traffic concerns are valid. Do we want to look like King County? "

"John Rose the big Property owner /Raydient, developer would have to pay for the roadway improvements to Bond Road, new sidewalks so all the Soccer families can safely walk to the facility, or ride their bikes.

They would most likely have to widen the highway put in a turn lane down the middle so all the YMCA and soccer parents can get into their complex and buy food at their amazing restaurants that they want to build as John Rose said you have to feed your soccer kids!
And then all the new home owners need to be able to turn into their new homes and get across the HWY during ferry traffic streaming by heading towards poulsbo and Kingston!
He's trying to turn North Kitsap into a congested sprawling community.
Much like Edmonds , Shoreline across the water from us.
I don't want to pay for this do you?
Did anyone notice that he said there would be no affordable housing
It would be on the high side so only the wealthy would be able to afford to buy his property and build."

Excerpts from:

News from the Columbia Climate School
WATER

America's Groundwater Crisis

Steve Cohen
November 6, 2023

The *New York Times* has undertaken an excellent and comprehensive study of America's groundwater resources. According to a report last week by Dionne Searcey and Delger Erdenesanaa:

"America's stewardship of one of its most precious resources, groundwater, relies on a patchwork of state and local rules so lax and outdated that in many places oversight is all but nonexistent, a New York Times analysis has found. The majority of states don't know how many wells they have, the analysis revealed. Many have incomplete records of older wells, including some that pump large volumes of water, and many states don't register the millions of household wells that dot the country... For generations, groundwater regulations around the country were routinely based on legal principles or economic forces that prioritized the needs of the moment, like farming and ranching in the West, or urban expansion in Eastern states... There is no shortage of rules. In fact, states have created such a tangle of regulations that it can be difficult to understand how much water is being extracted from aquifers, complicating the efforts to protect them."

This basic resource is endangered, while at the same, time anti-regulatory forces dominating the fringe of the Republican-controlled House of Representatives are working to cut EPA's budget and shut down the government due to their perception that public administration is not important. Groundwater contamination is not a new issue, but it rarely attracts attention. This is because even though it is a critical resource, it is not visible to the naked eye. It is buried underground. Here, in New York City, our original ecosystems featured plentiful groundwater resources that we completely destroyed as the city's development moved north from lower Manhattan. The result was the construction of reservoirs. including one located where Bryant Park sits today, another in Central Park, and finally, today's multi-billion-dollar engineering marvel that includes a system of reservoirs in the Croton and Delaware watersheds north of the city.

In our case, groundwater destruction was the price we paid for the density of development we wanted, but that density created the wealth required to generate the tax revenues needed to build and now maintain our water system. I doubt the rest of the country wants to imitate New York City's population density or tax burden. But unwittingly, the anti-tax and anti-regulatory zealots that dominate some of our state and local governments may eventually have to pay cash to purify water that today is filtered by environmental services provided by natural ecosystems. Destroy the ecosystems, over-pump the groundwater, and before you know it, you are digging

reservoirs and spending billions of dollars to filter and treat water to get rid of all the chemical contaminants you've allowed to pollute this essential resource.

Water, like air, is not an optional resource for our species. And dirty air and water make humans sick and can kill us. So, today's anti-regulatory advocates will be leaving expensive water bills as a legacy to their children and grandchildren.

The *New York Times*' report provides examples of weak and understaffed state agencies regulating groundwater. Many states do not know the number of wells that are pumping water from aquifers within their borders. Population growth and increased economic activity lead to the increased use of these resources. The great danger is that by over-pumping, aquifers that feed groundwater sources can run dry. Climate change has altered weather patterns, and communities that once had little groundwater may have over-supply, and places that once had lots of supply are now suffering from drought conditions. The lack of information and organizational capacity are indicators of America's weak ability to manage this increasingly threatened resource.

I anticipate that water scarcity and water quality issues will reach crisis levels in localities all over America in the next several decades. Like the groundwater in Manhattan, some of the damage will be irreversible and will require billions of dollars of infrastructure construction. In other cases, ecosystem restoration, investment in filtration plants, and construction of public water systems may enable continued use of groundwater resources. The sad fact is that an active program of data collection and remedial measures today could save billions of dollars in the future, but local politics and the economic and political power of those currently over-using groundwater makes it unlikely that these resources can be protected adequately. Aquifers are recharged by rainwater, but if recharge zones are paved over, the rain may never reach the places they need to get to replenish the groundwater.

It is a pure case of the "tragedy of the commons," where it is in everyone's self-interest to overuse a free common resource until we so overuse it that it is destroyed. The *New York Times*' study is an important effort to enhance our understanding of the issue, and I am certain that there are many state and local officials who worry about current trends. In today's U.S. Congress, there is no chance that a national policy to promote groundwater protection could be enacted. Since water supply is largely a local issue, the locus of any policies that protect groundwater would be at the state and local levels. The federal government could provide expertise and funds, but not with the current congress. The objective environmental conditions that localities will be confronted with will be reduced supply and contaminated water. In most cases, these conditions will deteriorate gradually, and prevention will require a forward-facing government that can act on trend lines. Some will manage to accomplish this, others will not, but communities cannot exist without water. Homeowners may be confronted with the choice of radical increases in water taxes or radical decreases in their home equity. While I might sound alarmist to some, the impact of water supply on housing is already being experienced....

The American idea that resources are infinite and the market can be totally free is running directly into the limits of local water supply. It is not that we are running out of water. The planet has the same amount of water that it has had throughout human existence.

However, some has been polluted, some has been contaminated by salt water, and people have moved away from places with plenty of water to places that have limited supplies. The land may be cheaper in Arizona, and the building regulations may be less stringent, but without water, none of that matters.

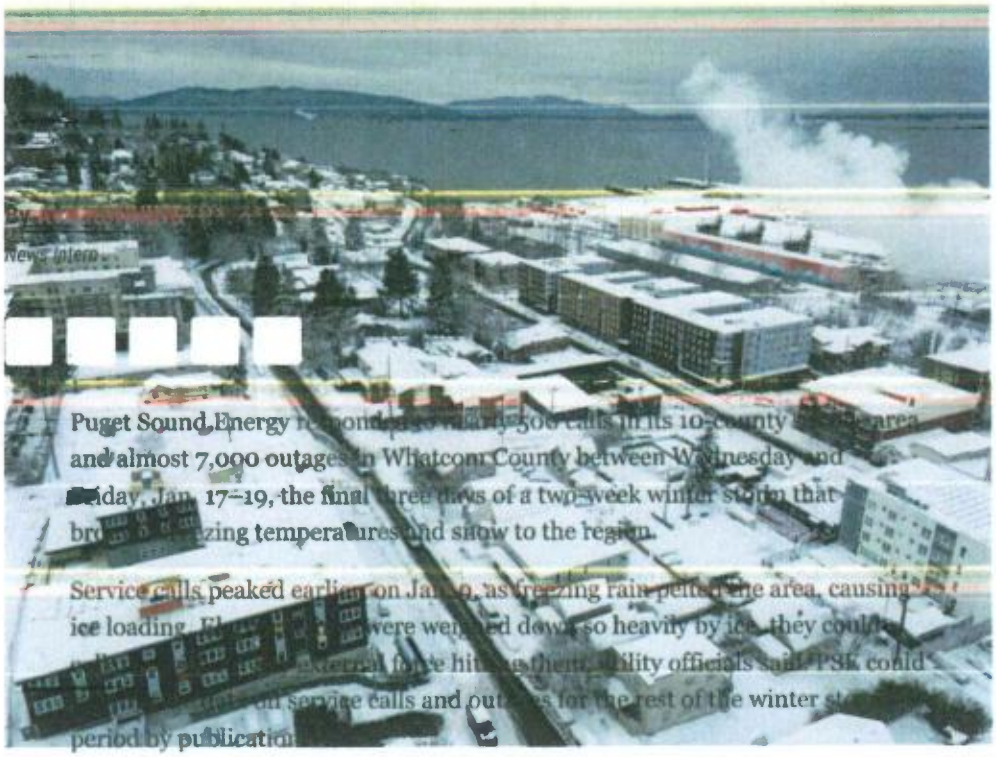
Most of America is not a desert, and with adequate infrastructure investment, water can be transported over thousands of miles to meet people's needs. But that costs money, and the era of clean and free groundwater supply is likely coming to an end. Groundwater could be protected with adequate planning and governance, but it will likely fall victim to short-term thinking, greed, and under-regulation. The future of America's water supply is an open question. The need for an adequate water supply is not open to question.

NEWS

PSE hit record demands for gas, electricity during winter storm

Conservation request was sent out due to an outage at a gas storage facility

Jan. 23, 2024 5:39 p.m.



Snow covers downtown Bellingham on Wednesday, Jan. 17. Two weeks of severe weather resulted in high demands for gas and electricity in Puget Sound Energy's 10-county service region. (Hailey Hoffman /Cascadia Daily News)

PSE also hit record demands for natural gas and electricity on Jan. 19, PSE spokesperson Melanie Coon said. PSE keeps crews on call and monitors more than 27,000 miles of electrical line to identify issues before they become outages, Coon added.

PSE said it also had support from multiple service providers to help perform functions such as outage investigation, damage assessment, vegetation management and power restoration.

A request sent to customers in all 10 counties on Jan. 13 urging conservation of natural gas was due to an outage at Jackson Prairie Gas Storage facility in Lewis County. The facility went offline in the early afternoon but returned by the evening, producing at 50-70% capacity during the outage. Additional customer conservation requests went out Jan. 14 and Jan. 22.

"The outage was caused by failed redundant cables," Coon said. "The fiber optic network is like the nervous system in the human body — it sends control signals throughout the facility. Without a fiber optic network, the work at the facility can be more manual. We have redundant systems in place to help with back up."

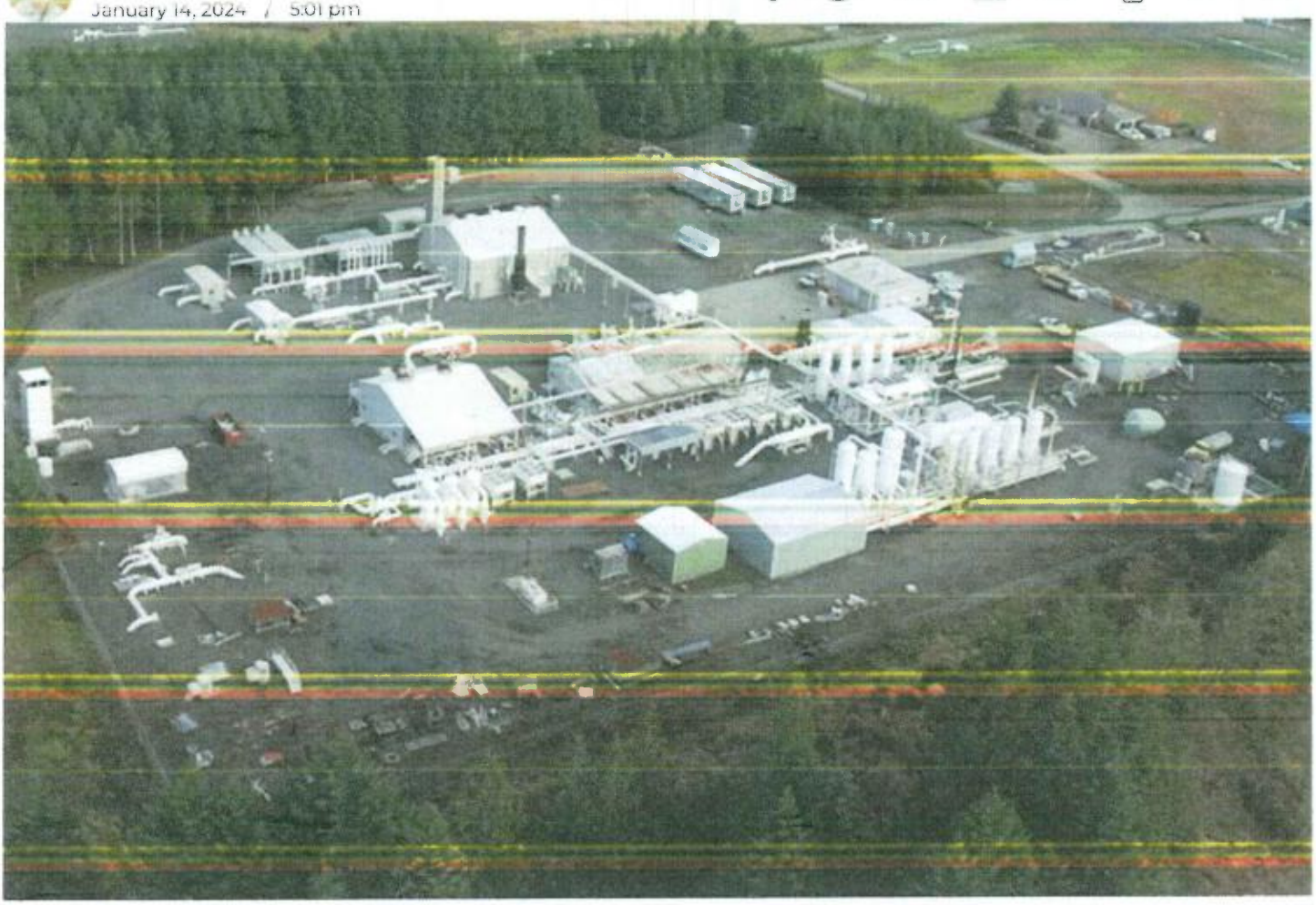
The conservation request was intended for the duration of the cold snap, but especially during the time the facility was offline.

NEWS & STORIES / ENVIRONMENT

Why PSE urged Western Washington to conserve energy amid severe cold

John Ryan

January 14, 2024 / 5:01 pm



Puget Sound Energy's Jackson Prairie gas storage plant outside Chehalis, Washington

Courtesy of Puget Sound Energy

Energy utilities in Washington and Oregon asked their customers to curtail gas and electricity usage on

A spokesperson for Puget Sound Energy, Washington state's largest utility, said Sunday afternoon that it will keep asking customers to conserve as long as the region's unusually cold weather continues.

In sandstone layers, more than 1,000 feet underground, it holds gas purchased in summer, when prices are low, for pumping into Williams' Northwest Pipeline in winter, when demand and prices are high.

With the need for heat and gas-fired electricity spiking during the region's coldest temperatures in many years, the volume of gas in the Northwest's pipeline system on the I-5 corridor was dropping "at a rapid rate," the company warned customers.

"Northwest requests all customers to take IMMEDIATE action to reduce loads on the system," Williams' notice stated.

Just before 7 p.m., Puget Sound Energy asked its customers to conserve gas and power that evening, blaming "extreme cold temperatures" and "higher energy use than forecasted" without mentioning the dwindling supply of gas entering the Northwest Pipeline.

"This evening, we're asking customers to set their thermostats at a lower setting and limit the use of hot water, such as dishwashing or clothes washing, dryers and other appliances."

Gas-fired power plants are the leading source of electricity for Puget Sound Energy, followed by hydropower and coal.

Other utilities in Washington and Oregon made similar asks of their customers, though some acknowledged the outage at Jackson Prairie as well as the weather.

In an interview on Sunday, PSE spokesperson Christina Donegan said she did not know how long Jackson Prairie's output was stopped, but that it was up to 50-70% of capacity later that afternoon and up to full

that, especially when it's extremely cold," Donegan said.

Though some customers complained on social media about being asked to conserve during a cold snap, Donegan said many customers came through and saved energy.

"We saw the load drop correlated with that request to our customers," Donegan said. "They did an amazing job."

Donegan said Puget Sound Energy's liquified-natural gas plant in Tacoma, which mostly fuels ships at the Port of Tacoma but also provides backup supplies to gas users on land during times of peak demand, has been running at "full tilt" to help gas customers in the Tacoma area stay warm.

Utilities including NW Natural, which serves 800,000 customers in Oregon and southwestern Washington, and Cascade Natural Gas, which serves 300,000 customers in Washington and eastern Oregon, told their customers on Sunday the crisis had passed.

"The issue with the natural gas storage facility has been resolved and operating conditions have returned to normal," Cascade told its customers. "Customers may resume normal usage."

Puget Sound Energy customers, meanwhile, are still being asked to curtail their energy usage.

"We will be asking customers to continue to conserve into the evening and then tomorrow and really, as long as we're facing these unusually cold temperatures," Donegan said.

"Extreme cold poses all sorts of problems for the gas system – from reduced supply due to frozen oil and gas wells, to pipeline malfunctions to frozen equipment at gas plants," Seattle-based fossil-fuel industry

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Return to Comment Matrix

KUOW Live Stream

To: Scott Diener, Colin Poff, compplan@kitsap.gov

From: Betsy Cooper

Date: Feb 14, 2024

RE: Comments on Kitsap County 2024 Comp Plan Draft EIS (December 2023)

Thank you for the opportunity to comment on the Draft EIS prepared for the consideration of the 2024 Kitsap Comprehensive Plan Update. Below please find my comments on the EIS:

Page 20 (1-2) (also page 54) - 1.1.3 – Location – while this document must focus only on County land and land use, it is not correct that the Cities Comprehensive planning activities should not inform and be considered in this EIS. If there are significant changes proposed for Poulsbo, Bremerton, or Port Orchard they may affect traffic, infrastructure, or recreational planning done by the county. Also, annexations proposed or anticipated in the near future would reduce the rural area the County is responsible for and thus make continued 'dispersed development' even more undesirable. I believe that the results and potential impacts of the City's planning should be discussed in this document, to the extent that it may change impacts or decisions being considered by the County and the effects on future CFP planning and rural preservation. Please add references and information in the final EIS.

Page 21 (1-3) – Phasing – the reference here and later in the EIS mentions that this is a 'phased review'. Please explain or give examples of actions that would warrant a 'narrower' or specific review after this non-project EIS level review is complete.

Page 24 (Exhibit 1.5-1 and throughout the document) – The Critical Areas Ordinance is cited as a regulation that will a moderator of impacts to natural resources and a check on impacts. However, the CAO is under revision and there are many changes that are still being considered. The fact that this regulation is in flux should be stated clearly in the EIS and perhaps a summary of the changing aspects of the CAO should be presented to more accurately indicate what aspects of these regulation can affect impacts to water resources, sensitive areas, etc.

Page 25 (1-7) – Exhibit 1.5 1 Earth Impact Summary – as will be commented on later in the Earth Section, the Earth impacts section is missing shoreline zone impacts that should be included in this section as well as Climate Change.

Page 28/29 (1-8) 1.5.3 – Water Resources Impacts Alt 3 - I am glad to see the impacts quantified for non-fish bearing stream, since Alt 3 carries clear significantly more impact (5-10X). However, 'fish bearing' stream impacts were not mentioned in this document. I would request that a similar analysis presented, if possible, on Fish-bearing streams. One other aspect of stream and wetland effects was not presented, the potential for additional buffers area losses that is allowed by the buffer averaging regs already in place. Could buffer averaging losses be estimated, and if not at least mentioned?

Page 29 (1-9) also in Water Resources Impacts and elsewhere in the document, the ACOE are mentioned as regulating Wetlands. While this is still correct for contiguous wetlands, the agency has recently lost the ability to regulate small, disconnected wetlands so the general statement you have about the Corps jurisdiction should be modified to reflect this reduction in jurisdiction. It could also be stated that if

these small wetlands are not identified and regulated by the County or State that more wetland loss is an unmitigated impact in the future.

Page 31 (1-11) – Alt 3's proposed buffer widening mitigation should be considered to be added to any eventual hybrid Alternative. This is an important measure and would have the potential to offset the inevitable losses of small non-contiguous wetlands that will result from the loss of ACOE jurisdiction.

Page 32 (1-12) – SW BMPS – I also strongly recommend that the County include in any final alternative that stronger BMPs for Water Quality improvement be part of Stormwater building or maintenance in the County. While adding expense it will be very important to the future of Kitsap's stream and nearshore health.

Page 33 (1-14/15) 1.5-5 – Land and shoreline – The summary does not include Sea Level Rise expected in the coming years. This will result in changes to shoreline development potential and thus there will be adverse impact on the shoreline if the SMP is not changed to include policies and permit requirements to address these effects when developing in the shoreline zone.

Page 34 (1-16) Plans and policies – This summary page and later in the document, Alt 3 is described as including removal of lot aggregation requirements. What are those requirements and what would be the effect of removing of those requirements? This should be described rather than just stated.

Page 38/39 (1-20) 1.5-9 Transportation Summary – Later in the Transportation Section the LOS for each state roadway is shown to be barely adequate now. The fact that the State Roadways are North Kitsap's major arterials and their conditions in the next 20 years must be considered when loading population to the North of Kitsap. Also, the effect on freight transport from the Kingston Ferry Terminal to South and on to the Olympic peninsula is threatened by inaction for planning and improving LOS on these roadways. Here too is where knowing what Poulsbo City Comp Planning is anticipating must be considered by Kitsap County now.

Page 44 (1-26) Recreation – The EIS does not acknowledge or identify the current lack of adequate active recreation facilities in the current (no Action) condition. Also, it states the PROS Plan will address this issue. Will that information be in hand by the Final EIS? The current degraded conditions of the existing facilities, and a cost estimate for the improvement of the existing facilities and a plan for the future is vital for North Kitsap and I am sure for all of Kitsap. Please add this information in the final EIS.

Page 47/48 (1-29/30) 1.5-18/19- Wastewater and Stormwater – This planning effort should include a new way to generate or allocate funding to these vital Capital Facilities so that the strategy for new facilities is not solely on the shoulders of developers. Impact fees will always go up but heaping all the burden on development is slowing residential and commercial growth in Kitsap. The mitigation measures should be strengthened to acknowledge the need for new County funding of needed infrastructure.

Page 62 (2-10) Definition of Countywide Centers is vague at best and is difficult to distinguish from Regional Growth Centers. It is concerning that since Kingston is designated 'countywide', but Silverdale and Bremerton are 'regional' the badly needed transportation, transit and road infrastructure funding may go to them over Kingston in all cases. Also how do Kingston and McWilliams/303 in any way relate or resemble each other? Why were they the only Countywide centers designated? How are their needs or characteristics similar?

Page 69 (2-17) SEPA Flexibility Thresholds – What does “increase SEPA Flexibility Thresholds” mean? What is the E-pacer Program? These mechanisms need to be explained and their actual effects on development should be clarified so that their effects can be understood.

Page 71 (2-19) Kingston Storefront Zone – How was this storefront zone size decided upon? It appears larger than any proposal received by the County. This proposed Storefront zone is wholly too large. It would put pressure on the potential for multifamily residential development to occur throughout the zone but particularly in the newly proposed area along Lynvog. The document is correct to state that such a ground floor commercial requirement would be (as it was when it was first implemented for the first 8 years) detrimental and a barrier to development in the Kingston Core.

Page 72 (2-19) Mc Williams/303 appears to be a carved-out section of the Rt 303 Highway Commercial zone and not in any way resembling Kingston. Thus, Kinston should not be the same overlay ‘countywide center’.

Reclassification proposal #72 – As part of Alternative 3 the reclassification of a 200-acre rural wooded area is proposed to be reclassified to rural Residential. That Reclassification should not be included in any action by the County. It wholly goes against the GMA effort to maintain rural character. I have also recently learned that the Port Gamble S Klallam Tribe is planning to remove a large area of land from the Rural Wooded category. Since the uses they may propose for these lands are not known at this time this action would further diminish the rural wooded area in North Kitsap. And since the rural areas are continuing to be developed at a greater rate than would be supportive of the basic GMA tenants of maintaining rural character, there is no justification for granting such an upzoning of the Raident property.

Exhibit 2.5 3-2 Employment Growth Targets – The figures for Poulsbo appear to be extremely low and should be checked. Is this only for a small area that is to be annexed? Also, on this topic the Alt 3 is described to meet and exceed the employment targets but how that would occur – what additional employment-producing elements yield this conclusion is not clear. Please expand on this in the EIS.

Page 93 (3-11) Earth Impacts – While the statement “the assigned land use designations and zoning classification do not generate impacts themselves” may generally be true, one aspect of land designation is not being fully addressed - the potential for new and changing shoreline effects as sea level rises and storms intensify. These effects will not be felt by all zoning designations. The Final EIS should acknowledge this. The County should add a section to the SMP updating permit requirements for development along the shoreline, and a mitigation measure in document should call for that review and revision.

Page 122 (3-41) Exhibit 3.1.3.1-2 shows only limited coverage of streams. There is no mention of important North Kitsap lowland streams. Also, this section should mention shoreline vegetation (eelgrass) and forage fish populations areas. These resources have been shown to be affected by land-based development and thus should be mentioned in the EIS.

Page 128 (3-45/46) – Lake list does not mention Carpenter Lake. It is important that this unique bog environment, rare in Kitsap, be included in the list of lakes, as well as any other bogs in Kitsap.

Page 130 (3-49) – WQ Section should include a link to all the waterbodies that are listed as impaired by some constituent for example, Carpenter Creek is listed for Fecal Coliform. Mentioning all the listings is

important to correctly characterize these existing conditions. Such a figure or list should be available from the Dept of Ecology.

Page 148 (3-68) – rare plants – as noted above, this section also does not mention the bog plants found in at least one bog in North Kitsap – Carpenter Lake Bog. Please add mention of this and other bog/fen environments in the plants and wetland sections of this document. These are important and rare in our region and occur only because of unique surface water conditions that should be taken into account when land is considered for development.

Page 148 (3-67/8) – Bear, cougar, and coyote should also be mentioned as being present in North Kitsap woodland areas. And as a consequence of development the bear's habitat is certainly being reduced. These effects could be expected to be greater in Alternative #3.

Page 151 (3-70) – estuarine nearshore habitat – There should be mention of the fact that in several places throughout the County that significant restoration investment has been made in areas to regain more natural conditions (e.g. Carpenter Creek; Clear Creek; Harpers creek) and these areas are in the process of enhancing the estuarine ecosystems in these areas.

Page 152 (3-70/71) Marine Nearshore habitat – the data for land cover is from 2013 and the other data is from much older references. Unfortunately, it is possible that statistics of tree cover and other vegetation are out of date. Unless they can be verified as still correct, I suggest they be removed or caveated in some way.

Habitat section – while fish species in the intertidal and in the estuary are covered well in this document, there is no reference to Eelgrass coverage along the Kitsap shoreline and Kelp Forest areas (some restoration areas that exist). These are important components of the marine nearshore environment along the Kitsap shoreline and should have some mention in the document. Since runoff from new development, or intensified land uses in or near these areas could affect their patchiness, it is important they be mentioned.

Also, the WRIA 15 Plan is cited as an important tool to direct action and achieve improvement in habitat and water quality. However, the WRIA plan is not an approved plan, and its initiatives are certainly not fully funded. Therefore the description of this plan and its use in this EIS should be revised to clearly note that it is not fully approved or funded.

Page 167 (3-83) – Mitigation for shoreline affects – a mitigation again could be added here that speaks to a revision of the Shoreline Management Program that incorporates increase protections for nearshore areas from development and climate-related degradation with development.

Page 169-70 (3-2) – Centers designations – the distinction between regional centers and countywide centers is not clear. Why is Kingston a Countywide Center? How are its characteristics the same as the other area in that category? While it is important that Kingston be eligible for grants or other programs that can support transit, housing, road, ferry improvements, it is not clear why Kingston is distinguished differently than the regional centers (e.g. Silverdale). These distinctions should be explained in the Final EIS or Kingston may need to be reclassified.

Page 188 (3-20) – While the 2016 subarea plan may have mentioned the potential for Kingston to incorporate, there is no determination at this time that such an incorporation is reasonable or feasible during the next 20 years. This statement should be revised to say that Kington, like all UGA's, are slated at some time to be incorporated.

Page 195 (3-28) – Plan consistency – This section notes that jurisdiction's plans much be consistent. Here this EIS may fall short of evaluating all the impacts of these alternatives without being aware of, and considering, the effects of the plans of Poulsbo, Port Orchard and Bremerton. While it is understandable that the County needed to prepare this plan in time for a timely review by all, it should however share the important components of these Cities updates as well in the Final EIS so that all effects on Transportation, recreational planning, transit, changes can be assessed on County proposals.

Page 197 (3-30) – Regional Center designation vs Countywide designation – the distinction between these two centers in vague at best. If there are differences in requirements and expectations, then they should be more thoroughly explained. Kingston has been listed as an HCTC, and has been given additional population and employment requirements, because of that designation but, it may not be able to effectively compete for transportation funding against these other Regional Centers. The distinction between these two zones and the attendant benefits and requirements should be clarified or Kingston should perhaps be designated a Regional Center.

Page 260 (3-93/4) – Visual Character - Kingston – I would request that the photographs Exhibit 3.2.5.1 – 4 and narrative for Kingston be revised the Old Town component do have a storefront area and Kingston does also have enforceable design standards that focus on a small-town maritime feel. This narrative does not reflect those aspects and the images are not representative of the town in any way. A picture of the downtown core showing the building type would be more illustrative.

Page 269 (3-102) Kingston section should be revised to mention the stairstep nature of the UVC zoning that preserves light and views for the Downtown main streets. It also incorrectly states (However, commercial zoned areas will have an increased maximum height of 50 feet.) This would be allowed only in a stairstep manor and for roof peaks.

Page 272 (3-105) The impacts listed under Kingston Alt #3 neglect to present the significant light and visual changes a 55ft building height allowance would cause in the main street in Kingston, creating a canyon effect, significant loss of light and views of the water, the key aspect of the towns appeal. This effect should be stated in the Final EIS.

Page 273 (3-105) - Exhibit 3.2.5.3 -1 While this table is a summary of the whole county, in Alt 3 the significant change in the light, visual effects and character of potentially creating 55 ft buildings on either side of Main Street in Kingston, where those heights and canyon effects exist in no City in Kitsap, should be highlighted. This would be a significant change to Light, shadow and view corridor.

Page 307 (3-136) – Ferries – While the data on ridership is great and well presented, there is no data presented regarding vehicles and particularly the truck and commercial vehicles that the ferries carry. This is particularly important information regarding planning for roadway capacity. A key aspect of the Kingston Ferry run is that it carries the most commercial vehicles of any part of the WSF system and the need to plan for those vehicle movement is crucial. Therefore, it should be discussed, and future

planning should consider the increase in these vehicles and their effects on LOS on County and State roadways.

Page 312 (3- 140) – Pedestrian – This section is written in a way that currently seems to indicate that there are adequate and safe shoulders on roadways for pedestrians in the UGAs. Kingston, and perhaps other areas in the County, do not have adequate pedestrian ways. Therefore, the existing conditions sections and the no Action should be amended to state this clearly and mitigations measures should be noted in all alternatives that pedestrian ways development is needed to meet reasonable consistency with Urban service requirements.

Page 318 (3-150/151) – Transportation/Roadway impacts - In seems the methodology used here is flawed. The way the sections of the county roadways deficiencies are lumped together, and averaged significantly minimizes deficiencies in serve, rather than highlight deficiencies. For example, in Kingston's UGA, all the major arterials corridors (state Rt 104 and Miller Bay) leading to and from the UGA are currently nearing or are significantly deficient. Averaging these deficiencies with all other county roads dilutes these impacts and seems to bring under 15 % and thus achieves consistency. This approach must be revised in the Final EIS to more accurately highlight the pinch points and issues for roadway LOS for the next 20 years. Analyzing the arteries alone associated with UGA could be one approach. Also discussing their conditions' impacts on commerce and presenting them would also be important and illustrative planning challenges.

Also, one example of a missing component in the North Kitsap area is NE 288th St, which runs between Hansville rd. NE and St Highway 104. This roadway is a narrow, curvy two-lane road without shoulders that is used by many to avoid the stretch of Bond Rd (also called SR 104) from the Miller Bay/Hansville highway intersection where it becomes St route 307. This stretch is regularly busy with offloading of ferry traffic from Kingston that heads south and to the Olympic peninsula. Since that stretch is often congested, and the NE 288th St is a straighter, alternate route to RT104 for many leaving The Point Casino, it is used heavily, particularly at night. This has resulted in property damage (loss of many mailboxes) and many visits by law enforcement. While there have not been fatal accidents as yet, the area is not safe for pedestrians to walk. This is an example of another type of deficiency not identified in the EIS and not taken into account in the current analysis of consistency.

Page 326 (3-159) Exhibit 3.2.6.3.-1 roadway improvements – This table should include shoulder widening for Barber Cutoff Rd and South Kingston Rd for pedestrian safe and recreational opportunity. For existing and both alternatives.

Page 402 (3-235) – Stormwater Infrastructure – an additional mitigation measure that could be added would be to require additional SW WQ remediation for all road projects.

Page 413 (3-246) Impacts on Telecommunications – This section did not describe any of the deficiencies and inequities demonstrated by the pandemic when online school was not supported equally throughout the county. Kingston and North Kitsap had significant areas where internet was not adequate and as reported in this section, the communication companies do not intend to improve availability. This is a critical impact to residential and commercial as it grows. This issue should be acknowledged and quantified in the Final EIS.

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Comments on Draft Environmental Impact Statement
Dated December, 2023

After reading the entire Draft Environmental Impact Statement (DEIS) prepared for the 2024 Comp Plan it is clear the least environmental impact of the three alternatives is Alternative 2. According to the statement Alternative 2 will achieve the housing targets and nearly meet the employment targets for 2044. Alternative 1 as stated on page 2-11 does not meet growth targets for population, housing, or employment. Alternative 3 as stated on page 2-13 exceeds employment targets and accommodates less population (housing) growth than Alternative 2. I would like to see Tree Retention in some form incorporated into Alternative 2 rather than only Tree Replacement to help protect vital environmental concerns with the loss of an entire tree canopy on future developed properties. This should be addressed in the final EIS.
Most of my following comments have to do with the environmental concerns with the expansion of the Silverdale UGA into rural properties in Central Valley that were considered in the DEIS. This specifically is the East 75 acres of the former Crista Camp property and the 20 acre tract immediately south of that property being the Courter Farm.

- **Seismic Hazards – Silverdale Subarea page 3-11**:
  "Erodible soils are found along the Dyes Inlet and some creek drainage corridors associated with Clear Creek, Strawberry Creek, Steele Creek, and Barker Creek."
  Comment: Barker Creek traverses the properties noted above. As these soils are disturbed by development they will become prone to contaminate the creek with turbid run-off. This may occur both during development and after. Barker Creek is a fish bearing creek including salmon and cutthroat trout which are affected by turbid waters.

- **Water Resources (Surface and Ground) page 3-37**
  " The quantity and quality of surface water also directly affects the extent of flooding and amount of groundwater recharge. Maintaining groundwater recharge is imperative for the residents of Kitsap county, as groundwater is the only source of drinking water outside of Bremerton's public water supply service area. Groundwater also contributes to base flows of streams, provides direct input into lakes, aids in the prevention of seawater intrusion, and other related benefits."
  Comment: As stated in a later citation, the Island Lake Aquifer is a Category I aquifer and as such is susceptible to contamination. The properties noted above are the largest remaining mostly undeveloped tract that contributes to groundwater recharge of the Island Lake Aquifer which supplies drinking water for the residents of Central Valley, Ridgetop, and much of Silverdale. The loss of this vital resource to development will have a severe impact on aquifer recharge and possible contamination of the groundwater. Island Lake itself has been in peril as evidenced by the fact that tens of millions of gallons of water must be pumped into the lake each summer (since 1992) to maintain an acceptable water level.

- **Critical Aquifer Recharge Areas (CARA) page 3-51**
  " The regulation of development and land use activities that may impact the quantity or quality of groundwater is critical to public welfare given the reliance of groundwater for the county's potable water supply. Several areas have been specifically identified in the CAO as Category I CARA's due to special circumstances or identified in accordance with WAS 365-190-100(4) as aquifer areas of significant potable water supply with susceptibility to groundwater contamination including, but not limited to Hansville, Seabeck, Island Lake, Gorst and

Poulsbo."
Comment: Allowing development of the above referenced properties potentially will cause irreversible negative impacts to the Island Lake Aquifer. Once this property is clear-cut, bulldozed, and developed with impermeable surfaces the area will be forever lost for recharge of the aquifer. In addition, as ground surfaces are altered, the potential for contamination of the aquifer will be exacerbated.

- **Critical Aquifer Recharge Areas (CARA) Silverdale Subarea page 3-51**
"Ecology has listed seven streams in the Silverdale subarea on the 2018 303(d) impaired waters list, including an unnamed fish-bearing stream near Kitsap Mall and Clear, Strawberry, Mosher, Illahee, Steele, and Barker Creeks."
Comment: According to data supplied by Silverdale Water District the level of Island Lake has not reached the outflow from the lake into Barker Creek since February 2021. Since Island Lake is the headwaters to Barker Creek, no water being supplied at the headwaters means reduced water flow down stream which several fish species including salmon and cutthroat trout call home at various times of the year. As climate change continues, one can expect this trend to continue. Development next to Barker Creek and Island lake will only make this situation worse. In addition, there are wetlands associated with Barker Creek that will suffer from development of the property.

- **Water Resources – Impacts Streams & Rivers page 3-53**
"Increased development under all alternatives is likely to impact the quality and quantity of surface water from soil compaction, draining, and ditching across the landscape, increased impervious surface cover, and decreased forest cover associated with construction activities (Booth and Jackson 1977, Moore and Wondzell 2005). …
The development of previously undeveloped upland areas can result in various water quality concerns, including, but not limited to, increased fine sediment, nutrients, pathogens, and metals. Further, the impacts of fertilizers, pesticides, nutrients, bacteria and chemicals become more widely dispersed as more land area is developed.... Land clearing activities may accelerate runoff or result in elevated stream temperatures. Stream temperatures and summer low flows may be exacerbated by climate change under all alternatives. Moreover, alteration of a watershed runoff process and stream flow patterns is anticipated to be the most significant impact on water resources. ..."
Comment: This says it all. With the inclusion of the property south of Island Lake in Alternative 3, we can expect all of this to occur in Barker Creek.

- **Water Resources – Impacts Lakes page 3-54**
"The cumulative effects of development under all alternatives are expected to impact water quality in lakes in similar ways as marine resources and streams. Development activities and conversion of undeveloped land can increase the volume and quantity of surface water runoff and increase sediment and pollutant loads to lakes. … Eutrophication, pathogens, and low dissolved oxygen levels are primary concerns for impacting water quality in lakes. …
Structural stabilization along lakeshoresis expected to negatively impact shoreline habitat and interrupt natural processes."
Comment: As long time residents of Island Lake, we have already experienced all of this. In the late 1980's and early 1990's this was allowed to happen when Silverhills was developed. The lake became turbid from runoff which eventually settled to the bottom of the lake. As time went on, noxious lake weeds began to proliferate throughout the lake. With further development at

the south end of the lake, we can expect this problem to exacerbate. One can also expect an impact from the reduced riparian functions, values, and overall water quality of Island Lake and Barker Creek by inclusion of 48 acres in the Silverdale UGA under Alternative 2 as described on page 3-58 Silverdale Subarea.

- **Plants & Animals – Impacts Silverdale Subarea page 3-84**
  "A portion of the UGA boundary expansion includes the southern portion of Island Lake and Barker Creek. Expansion of the UGA boundary in this area may impact the current undeveloped shoreline habitat, similar to those impacts described in Section 3.1.3 Water Resources. Conversion or indirect impacts to the shoreline habitats associated with Island Lake and Barker Creek are expected to impact both aquatic and terrestrial species that occupy there ecosystems. Increased zoning density is expected to increase impervious surface coverage and may result in conversion of intact wildlife habitat areas."
  Comment: Island Lake and Barker Creek is home to varied species of wildlife and fish including bald eagles, blue heron, osprey, kingfishers numerous species of waterfowl (ducks, geese, cormorant), deer, coyote, black bear, otters, beaver, trout, bass, bluegill, salmon and cutthroat trout in Barker Creek, amphibians (frogs, newts, salamander), and turtles. All of these animals and fish will be negatively impacted by the loss of habitat should the Silverdale UGA be expanded into the Island Lake area. Not only will they be impacted during construction but will be exposed to long term impacts of added light and noise from development for years to come.

- **Historical & Cultural Preservation – Impacts Alternative 3 page 3-87**
  "Overall UGA expansion in proximity to water bodies would be greater under Alternative 3 than under any alternative, which as a result would create a greater potential impact on cultural resources.
  Silverdale Subarea page 3-88
  " A portion of the UGA boundary expansion in Alternative 3 includes the southern portion of Island Lake and Barker Creek. This area may include increased impacts on cultural resources as most of this area is undeveloped."
  Comment: The southern portion of Island Lake and the northern section of Barker Creek was operated as a children's summer camp for more than 60 years. As stated above, most of this property is undeveloped and may have historical and cultural resources. There has been indication from the State that this area may have been occupied by local tribes. In light of that, a comprehensive study of the historical and cultural aspects should be done prior to inclusion in the Silverdale UGA and subsequent development.

- **Fire Protection – Impacts Alternative 3 page 3-197**
  "Alternative 3 with UGA expansion will be challenged by increased emergency response travel times or will otherwise require the development of new fire departments closer to expanded UGA areas."
  Comment: Increased emergency response times are a matter of life and death for the citizens of Kitsap County. It is not prudent to expand the Silverdale UGA into the Island Lake area with narrow roadways and limited access points thus leading to even slower response times in event of an emergency.

- **Parks & Recreation – Impacts Community Parks page 3-212**
  "Currently and within the 20-year planning period, the County will not be able to meet the

Community Parks LOS standard as shown in Exhibit 3.3.4.2-4."
Comment: I can not think of a better way to help meet the Community Parks LOS than the County purchasing the east portion of former camp property (75 acres) for an additional park at the south end of Island Lake. There is already some infrastructure in place that could be utilized for park amenities.

- **Stormwater – Impacts page 3-233**
"The creation of more impervious surface area and the reduction of forest land cover would reduce the amount of rainwater intercepted by trees and infiltration into the ground, thereby increasing the volume and rate of stormwater runoff."
Comment: By including the property immediately south of Island Lake in and increased Silverdale UGA boundary and the development associated with that, impervious surface area and stormwater runoff will have a detrimental affect on Island Lake and Barker Creek. In addition, climate change could increase temperatures of the stormwater emptying into Barker Creek.

- **Energy & Telecommunications – Impacts page 3-247**
"Alternative 3 focuses on dispersed growth. Dispersed population growth in the county would result in the highest infrastructure cost of the three alternatives due to the demand of service expansions and extensions. Anywhere there is focused growth centers will allow for more efficient services for natural gas, electricity and telecommunications."
Comment: There is currently no infrastructure on the property being considered to be added to the Silverdale UGA next to Island Lake and Barker Creek. This includes sewers, electricity, gas, and water. The infrastructure needed would be very costly and much would need to be extended from the west of Barker Creek. This could result in contamination of the creek as these facilities cross the creek.

Summary:
All of the citations above point to the severe environmental impacts for including the property south of Island Lake in an expanded Silverdale UGA under Alternative 3. Also, Alternative 3 does little if anything to meet the County stated goal of reducing urban sprawl as shown in Exhibit 3.2.2.2-1 on page 3-36 and mentioned many times throughout the DEIS. In addition to this, in the early 1990's the then County Commissioners promised the Island Lake community that the county would not expand urban growth into the Central Valley Corridor. By including this property in the Silverdale UGA, it does exactly the opposite of their promise.

Regards,
Donald Fenton
Donald Fenton
Island Lake Resident
Dated 2-19-2024

Return to Comment Matrix

"Save Enetai"
2811 Rozewood Drive
Bremerton WA 98310
Saveenetai.org

February 20, 2024

Commissioners of the Kitsap County Comprehensive Plan update (2024)
614 Division Street, MS-36
Port Orchard, WA 98366

Dear Sirs and Madams:

We are asking that the county change the zoning of the Cheney-Fisher plat, located to the south of the Illahee Community Plan and 30th street. Our suggestion to the Kitsap County Comprehensive plan update is to lower the zoning of this plat (associated with permit number 23-05658) to something more consistent with major ecological concerns existing there. We think returning that plat to the zoning prior to 2016 is appropriate; it certainly should be much lower than the proposed nine units per acre the developer is now planning. We believe that the county was in error when they changed the zoning in 2016. Possibly the seller of the property misrepresented the area; it is fairly well established that this is an eagle habitat as well as containing probably two salmon streams. From LIDAR it is an unstable slope, as such falls under the critical areas classification, and is protected both federally and at the state level by many ordinances.

We understand this is a small concern in comparison to Kitsap's other concerns, but Enetai is dropping through the cracks between Bremerton and Kitsap County planning. It is not enough to expect the developer and owner of this property to generate an environmental impact study (EIS); *that is like putting the fox in charge of the henhouse*. Let's not be naive. There are other solutions the owner can find for his land which would be less impactful. The area *should* be an extension of the Illahee Plan, already adopted by the county.

Ms. Schultz is professionally qualified/certified to teach Biology and Science in the State of Washington, and she holds a Master of Science degree. She is also a tribal member of the Muskogee-Creeks, and takes the heritage of her people and their relationship to the land very seriously. Our concerns are that of citizen-scientists, of educators, and as a matter of cultural heritage. She lives on Viewcrest, to the north of the Fisher Plat.

The first of multiple concerns is biological. The wildlife in the Enetai-Illahee greenbelt biome is often observed by resident citizens; some are listed under the Priority Habitat and Species Act (PHS) and include eagles (species of concern under PHS), raccoons, opossums, deer, bobcats (possible Canadian Lynx which are endangered), river otters, bats, doves, pileated woodpeckers, two species of squirrel (Douglas and grey) at least four species of owls (Great Grey, Barred, Barn-Tyto and Screech) all have been observed, sited, tracked, photographed and heard for over 25 years in this region. Innumerable migratory songbirds are also here along

with small hawks, and the purple martin (listed “of concern” under PHS) and marble murrelet. Off-shore waters sometimes host orca and seals, and the shoreline is mapped as surf smelt spawning habitat, and sand lance spawning area as per Fish and Wildlife. ALL raptors (hunting birds) have protection under the Migratory Bird Act (MBA.) Enetai is a dynamic, well-populated, active biome, home to MANY species of animal.

Our primary concern is the Fisher Plat as an eagle habitat. The eagles were personally heard by Ms. Schultz in Oct 2023, right where the nest is mapped on the Fisher Plat, then again (same area) Feb 3, 2024, and a nest was sighted. Eagle nests are huge, built to be sturdy (they don't just disappear with a click of the mouse as "old information") and the two documented by Fish and Wildlife (see attached email from Alexia Henderson) in the proposed Fisher development are likely still occupied, home to eaglets in breeding season. Both nests probably belong to the same pair of eagles (they like a choice) and residents in the area see AND HEAR eagles on a regular basis. It seems a foregone conclusion that the eagles are still there. The site is perfect for eagles, and there is no reason they would have decamped. Eagles not only are long-lived, but their nests can pass down to future generations, for when one mate dies, the survivor goes out and finds another mate; that might go on for years. Eagle nests have been documented to last for decades, occupied up to 34 years.

Eagles are covered under PHS (Priority Habitat and Species) and that reference may be found at https://wdfw.wa.gov/species-habitats/at-risk/phs. The GMA and Shoreline Management act requires that this process, developing an "Eagle Plan" is part of the planning process for any development in Washington State where eagles are present. Eagles AND THEIR NESTS are also covered by a wide range of State AND Federal protections, all of which may be read at the following link:

https://en.wikipedia.org/wiki/Bald_and_Golden_Eagle_Protection_Act

https://www.fws.gov/species/bald-eagle-haliaeetus-leucocephalus/map

https://wdfw.wa.gov/species-habitats/at-risk/species-recovery/bald-eagle

Not far to the west of the Fisher Plat, there is a new installation next to Mountain View Middle School, a sports field with huge white flood-lights (not the amber lights of Viewcrest and neighborhoods in our greenbelt), and neighbors are already complaining about disturbed sleep patterns. If anyone bothered to do an EIS on this construction, they utterly failed. As per writings by noted biologist, UW professor John Marzluff in *Subirdia*, light pollution is one of the most destructive effects Mankind has in our modern world, it throws off migratory patterns of MANY birds, and is often in violation of the MBA (which also covers migratory mammals such as bats.) Add to this the new Fisher development, and you may as well kiss goodbye the migratory nocturnal creatures of this area, bats and owls. As well, houses bring with them pet cats which roam loose and eat songbirds (protected under MBA), and power lines which are deadly to large eagles. SOME animals can live with development (such as crows) but many can NOT and that impacts diversity of species, which is a cornerstone concept in all ecological studies.

Hydrogeology: Climate change is often promoted as a governing factor in development. The Cheney/Fisher plat is only a short distance from Bainbridge Island, and a very thorough study of that island and aquifer system has already been done, and is on file.

https://pubs.usgs.gov/sir/2011/5021/pdf/sir20115021.pdf

https://www.bainbridgewa.gov/DocumentCenter/View/14968/GW-Fact-Sheet-Final-052121

We don't know what the future will bring; *ours is not an infinite aquifer*, and it services not only Bainbridge, but the entire region of Illahee and the Manette peninsula. The study plainly states that septic returns form part of the aquifer recharge system of our area. A sewer system to the Fisher development will take that water away from the aquifer, and run-off will increase urban toxic dumps into Dyes Inlet.

This Comp Plan update is now trying to forecast to the year 2044. In the Aquifer Plan, pg. 77 plainly states that the greater the population growth, the lower the aquifer. That's common sense. There is a clear correlation of ground flow from springs and precipitation. Taking out this massive stand of Enetai trees will alter aquifers for the entire region.

There are also stormwater concerns. From casual observation, right now, around a third if not more of the storm-water run-off from the Viewcrest neighborhood is "dumped" into the Fisher plat. Adding 189 units will accelerate erosion, and will take along all the toxic lawn and road run-off from the Fisher housing tract to the Sound, which is already seriously polluted.

ALL Puget Sound builders know our type of soil (glacial till) is not conducive to absorption, water runs off, and the lodgepole pines in the region are needed to slow the rain as it falls, as well as aid in absorption to the aquifer through transpiration from leaves. This is a common situation here; we have massive rainfall events and trees slow the erosion on sheer slopes. A simple look at the LIDAR of the Fisher-Cheney plat will fully illustrate this situation; the Enetai slope shows visual evidence of old landslides in this region. The entire Puget Sound region is known for landslides, often due to poor planning in developments. No one should need to be reminded of the terrible tragedy in Oso, Washington on March 22, 2014, where forty homes were covered in a massive landslide, and 43 people died. Puget Sound is ALL susceptible to land-slides; I have attached three articles from geologically recent slide events right here in Kitsap County. No one knows what tips a slope to slide, but some of us live on Viewcrest, and don't want to be on the slope next to the Fisher plat when we find out. There is already one collapsed road on the Fisher property.

The landslide which covered Hwy 166 in Port Orchard continues today, during heavy rains, as anyone who travels that road is well aware. Considering the layered nature of the land (ref Bainbridge Island Aquifer study) it can happen here too. This is nothing to treat lightly, there should be a comprehensive study of the Fisher plat by a competent impartial hydrogeologist prior to any ground breaking.

The County has a *Buildable Lands Report* and other documents concerning environment all over their website:

https://www.kitsapgov.com/dcd/Pages/Protect-My-Natural-Environment.aspx

Are we merely giving this lip service? It is not just the “birds and Bambis” we are concerned about. The preliminary report on this potential development discusses removing trees to "improve the view" therefore these homes will NOT fall into the "affordable housing" concerns of the county. They will be high end "with a view" after the trees are removed, and affordable by few in this current economy. As a resident to the north of this plat on Viewcrest (the same geological terrain, perhaps more stable from LIDAR evidence) the county should be aware of the longitudinal issues of homes on this slope. Ms. Schultz’s home, built in the 60s, is showing signs of settling, apparently the house was built on top of a filled gully. It's livable for now, but what about the future? To the east downslope, her neighbors have water intrusion in their daylight basement during heavy rains. Other people further down the slope have had foundation problems, and the only home built here recently needed a massive cantilever to stabilize the structure; they sold their home within two years of completion. The Viewcrest neighborhood is zoned at four to an acre. Filling gullies and slapping in nine homes to an acre on the same terrain is NOT appropriate for this area. The proposed development is on the top ridge, and the run-off will be eroding all the way downhill, unless mitigation of septics, settling ponds, bioswales and rain gardens are put in place.

Community Concerns: Almost 200 new units will bring more families to the area. Can emergency services cover this? We have ongoing mail theft on Viewcrest now, and no police coverage. We are missing an elementary school in Manette and this will mean that children K-5 grades will have to be bussed a considerable distance. We wonder if Bremerton has planned for this influx of students, and how they feel about little ones having to get up early to catch the bus? Viewridge and Arman Jahr need to be rebuilt as it is. Everyone, get ready for more bond issues.

Above all, with the constant drumbeat of the UGA, we citizens KNOW that "we need housing" is a weak argument in the Bremerton area; a statistic I pulled from the firehose of information on line is that Bremerton has reached around 136% of the 2036 target date for growth; pushing that date to 2044 won't change the fact that the growth mandate in the Bremerton area has been FULFILLED. The push by the County for development is unsupported by clear or convincing facts and figures, the only people development will benefit is developers, and the Cheney-Fisher development will NOT be affordable housing. Any city planner worth their salt knows when you run out of land, you put in affordable housing far from the city core, then provide rapid transit for workers. Rather than pushing inappropriate development and destroying the urban greenbelts with zoning tricks, the County should perhaps start planning an electric monorail to the shipyard.

The Cheney-Fisher Plat has been sitting undisturbed for over 100 years, and presently shows a wide diversity of species, as indicated by more than seven species of mushrooms spotted during casual walks through the Enetai forest, and the six-story lodgepole pines which cover much of the area. It's a lovely little wild area with potential for passive recreation. We citizens moved here, and live here for a reason. *We don't like concrete, we like trees. Our County is enabling the creeping destruction of greenbelts.* Kitsap county is being preyed upon by out-of-state

developers who have bought cheap land and want to make a massive profit by destroying our communities, not understanding the unbuildable nature of much of that "cheap" land which is cheap for a reason.

One civil engineer when informed of this, commented "**You'll find creatures like eagles often live in places unbuildable for people, because sheer cliffs near the ocean are perfect for THEIR lifestyles."** In a nutshell, that is our concern. The land is not suitable for nine units per acre, nor is it suitable for massive tree removal.

We would beg the County to reconsider their erroneous zoning of this parcel; lowering the density will not impact the "population pressure" on county housing needs in the slightest. We would urge adoption of the most environmentally protective version of the update to the plan.

Regards,

Christie Schultz
Secretary and Science/Biological Consultant
“Save Enetai”

Find attached: three articles regarding landslides in Kitsap, complaint TO Fish and Wildlife, and email FROM Fish and Wildlife.

Return to Comment Matrix

3.3.4.2 Parks & Recreation − Impacts

Issue: There is insufficient information to assess the impact of the Alternatives on active recreation.

- The DEIS states "the final EIS will revise the Draft EIS as appropriate and respond to comments as required in WAC 197-11-560".
- The DEIS refers to an updated PROS plan to provide information on the recreation needs of future growth. That update is in progress with approvals scheduled for the second quarter of 2024. The Community Recreation Priorities survey, needed to support that Update was scheduled for December but it has not yet been completed. It is not feasible for that information, needed to assess the impact of the Alternatives on active recreation to be available for public review and comment (per WAC 197-11-560) before the EIS is final.
- A GMA goal is "to stimulate the health and welfare of human beings". Active recreation is important to achieving that goal, especially for young people. The lack of information in the DEIS on active recreation makes it impossible for those involved with active adult recreation and youth sports to evaluate the Alternatives.
- The 2012 PROS plan identified field shortages. Since, there has not been sufficient funding to meet the active recreation gaps identified in the Plan. As a result, addressing that need in the EIS is a matter of significant public concern.

Recommendation: Use the LOS standards in the 2012 PROS Plan, to calculate 2044 active recreation needs and gaps as is being done in the DEIS for passive recreation needs.
Facility inventory varies by County region. For north Kitsap include the objective data on inventory and need collected by the KCAC Parks and Trails subcommittee.

3.3.4.3 Parks and Recreation − Mitigation Measures

Issue: There are no mitigation measures identified to address the active recreation gap.

- The 2012 PROS Plan reports that "School Districts provide most of the (active) athletic facilities. The recent failed NKSD bond measure indicates substantial school investment in new athletic fields is unlikely.
- The PROS Plan has identified public-private partnerships and community organizations as a means to address recreation needs gaps.
- The Noth Kitsap Unted project which could be accommodates in Alternative 3, is an example of a partnership that could meet active recreation gaps.

Recommendation: Include public-private partnerships and community projects to mitigate active recreation gaps in Alternative 3.

Population, Housing & Employment (Section 3.2.3), Transportation (Section 3.2.6), Parks and Recreation (Section 3.3.4)

Issue: The DEIS does not include the positive impact and mitigation that Alternative 3 will have by including a central North Kitsap sports complex.

- Alternative 3 (which includes Application 72) will facilitate the establishment of a sports complex which will have significantly less adverse impact than the collective impact of those facilities if dispersed throughout North Kitsap.
- The location is central to all North Kitsap's communities. This location is equitable to all NK residents and will reduce traffic impacts.
- Nearly all the 400 acres is underlain by sand. Documented surveys found no streams and only one small wetland. Based on Rotary's several years of search this would not likely be the case if the complex were located on similarly sized sites available elsewhere in Noth Kitsap.
- Because of the above storm and sanitary sewer can be infiltrated on-site easily and sand is the perfect material for field construction

- The highway location means that no local streets or neighborhoods will be adversely affected. Locating the complex in or adjacent to urban areas would have significantly greater transportation traffic impact.
- Adjacency to the Port Gamble Forest Heritage Park will create a "mixed-use" effect whereby families can engage in numerous recreation activities with less traveling to diverse locations. This was a stated purpose when establishing Heritage Parks.

Recommendation: Include in the above sections potential benefit in Alternative 3 of a sports complex in meeting recreation needs in sections 3.2.3,4, and 6. Consider a stipulation that application 72 includes setting aside 40 acres to a non-profit or government organization for a recreation complex.

3.2.2.1 Relationship to Plans & Policies − Affected Environment

Goal: "Encourage a variety of housing types including affordable housing. Goal: "The region preserves, improves, and expands its housing stock to provide a range of affordable, accessible, healthy, and safe housing choices to every resident."

Issue: The comparison of Alternatives to meet these two goals cannot be objectively assessed.

- High density in urban areas, with limited available land, would increase demand for land and drive-up urban housing costs. Affordability appears to be achieved only by residents having less living space.
- Requiring large tracts in rural areas would increase rural housing costs. While rural land may be lower cost, requirements to buy large lots results in higher net housing costs.
- Limited housing choices to either high density urban dwellings or large rural lots is contrary to public housing preferences. Please see the 2023 Profile of Home Buyers and Sellers1Survey by the National Association of Realtors.
- Cluster development (Chapter 17.450) has been promoted to reduce environmental impact. By locating clusters in, and among, rural greenbelt areas rural environment character will be sustained.

Recommendation: Include housing cost per square foot as a metric for comparing Alternatives. Include a metric that compares future housing supply and diversity to documented public preferences. Include cluster development to mitigate housing development impact in rural areas.

Return to Comment Matrix

Wendy C. Arness
6735A 24th Ave. NW
Seattle, WA 98117

February 19, 2024

Re Kingston Urban Growth Area (UGA)
Parcels #**252702-2-022-2004** and **262702-1-003-2008**
and Alternative #2 and #3

To Whom it May Concern;

I am writing regarding Parcels 252702-2-022-2004 and 262702-1-003-2008 which are located just north of the current Kingston UGA, north and east of the Alternative #2 UGA proposal and are included in the Alternative #3 UGA planning option. These parcels are currently zoned RR or "Low -density residential development and agricultural activities." I strongly advocate these parcels be included in the UGA or Urban density (Medium) to allow for a higher density Comprehensive Plan and zoning designation as part of the Kitsap County Comprehensive plan update. This change would meet many of the stated goals in the draft Environmental Impact Statement (EIS) and would also be beneficial to the community for the following reasons:

1. **Growth and demand for housing in Kingston**:
   a) The Kingston area is expected to experience significant growth within the coming years and needs additional housing options to maintain affordability. The draft EIS indicates the target population in 2044 is expected to rise to 5,556, up over 3,000 additional people from 2020 census levels. This kind of growth is going to require all types of housing options on land adjacent to municipal services.

b) Both these properties are currently adjacent to the existing UGA which would allow for efficient use of land and minimize sprawl. For Example, parcel 4304-001-001-0101 immediately south of parcels 2004 and 2008 is currently zoned Urban Medium Residential (UM) and appears to make accommodations for future extension of Gravity Avenue to the southern boundary of parcel 2004 and 2008 when additional phases of the Cherry Hill Plat are recorded. The proposed UM comp. designation under Alternative #3 would be consistent with the Cherry Hill development and would allow for consistent development patterns between the parcels. Expanding the UGA would allow development close to the existing community core and in proximity to businesses and available transportation (highways, arterials and the ferry). (Goals and Policies- Environmental Policy 1.5 1.a and 1.b)
c) According to MPP-RGS-11 in the draft EIS, incorporating additional properties into the UGA for Kingston would "Encourage growth in designated countywide centers." And would help reduce more intensive development patterns in other areas of the county.

2. More efficient use of Infrastructure and Utilities:

a) The County could better utilize existing infrastructure including roads, public transportation, utilities and reduce the environmental impact and costs associated with extending services to more rural areas as these lots are close to the current and future planned urban development.
b) The Kingston 20-Year CIP Overview Map indicates that sewer already extends to the southern boundary of 2004 and 2008 through the Cherry Hill development to the south. This could potentially allow for an extension of services from Cherry Hill to serve future development on both 2004 and 2008. There is

also sewer that extends along Ohio Avenue to the east of 2004 and 2008.

c) During a previous Comp. Plan cycle parcels 262702-1-008-2003 and 262702-1-007-2004 were brought into the UGA under the UM designation. Those properties don't appear to be adjacent to any municipal/urban services and therefore, have yet to develop. Proximity to urban services plays a fundamental role in the development of property to urban densities.
d) Kingston is classified as a "High-Capacity Transit Community" with ample access to the ferry system for commuters. Allowing for additional growth would allow more people to reside in a walkable community and minimize private vehicles by having housing closer to the ferry system, stores, or other important community amenities. This is consistent with the EIS goals for fewer vehicles, less emissions, pollutants and reduced greenhouse gasses. Having a walkable community will enhance the economy and bolster the downtown businesses.

I strongly believe that allowing denser development in these lots could benefit the community and makes sense from a planning and zoning standpoint. With anticipated growth for the community, having additional properties close to the community core and adjacent to urban services would be an asset to the community to help provide affordable housing options. Although I am a proponent of expanding the UGA, I am not supportive of all proposed elements of Alternative #3 (even though it includes parcels 2004 and 2008 in the UGA zoning increase). This alternative increases the potential for sprawl and does not keep the community center localized. I do, however, believe that these parcels could be included in the UGA, and additional housing allowed in Alternative #2 to make a better-rounded plan for urban growth. It would allow for diverse housing and adhere to the EIS goals

of reducing greenhouse gasses with a “walkable transit oriented” community, and “Compact growth” and an “Urban center focus.”

Finally, adding these parcels to the UGA could allow for a well-designed housing community complete with green spaces and possible parks and trails nearby. All of which help create a healthy community and allows for growth without diminishing the Kingston charm.

In conclusion, incorporating these parcels into the County’s UGA would be a balanced approach to the anticipated growth and development in the Kingston area. It would meet current and future housing needs, align with smart growth principles, meet planning goals in the draft EIS, maintain community character, and address the critical need for affordable and diverse housing. I urge the Kitsap County Planning Commission and the County Commissioners to consider this proposal.

Thank You for your consideration.

Sincerely,

Wendy Arness

Owner of parcels #**252702-2-022-2004** and **262702-1-003-2008**

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February 23, 2024

Kitsap County Administrator
Attn: Eric Baker
614 Division Street MS-4
Port Orchard, WA 98366

RE: Kitsap County Comprehensive Plan 2024 Periodic Update

Mr. Baker,

Thank you for the opportunity to provide comments on the proposed alternatives for the Kitsap County 2024 Periodic Update. I am writing on behalf of the City Council and the Mayor to express Port Orchard's support for proposed Alternative 2. While Alternative 3 is also palatable, we believe that Alternative 2 is most consistent with the legal requirements to plan for affordable housing across all income levels. In addition to expressing support for Alternative 2, we would like to offer comments on some other policy proposals in the proposed plan.

1. UGA Amendment #60. The City is neutral on the expansion of the UGA in this area. Port Orchard has concerns about the critical areas impacting these properties but is supportive of the expansion if the County believes that the critical areas that are present do not preclude urban development. Port Orchard is concerned about the proposed industrial designation and would prefer to see a commercial or residential designation in this location.
2. UGA Amendment #79. Port Orchard supports amendment #79 as proposed. This property is bordered on two sides by urban development and the third side is a stream. The proposed urban boundary is both logical and regular. Port Orchard is willing to have this parcel added to its UGA.
3. Phillips Road UGA Contraction: The City understands that the County must size their UGA appropriately and supports the proposed reduction of the UGA east of Phillips Road and North of Sedgwick.
4. Commercial Redesignations: The County has proposed several Commercial redesignations within the Port Orchard UGA. Port Orchard does not object to these redesignations.
5. Increasing SEPA Thresholds: Port Orchard has serious concerns about the County's proposed changes to SEPA thresholds. These concerns could be addressed if the County were to enter an ILA with Port Orchard to ensure that impacts on Port Orchard (especially transportation impacts) from development in

the Port Orchard UGA, are mitigated. We want to ensure that development in the Port Orchard UGA pays its fair and proportionate share toward city transportation projects including but not limited to Bethel Ave, Lund Ave, Tremont Street, and Sedgwick. Perhaps a policy could be added to the County's comprehensive plan that states that the County will enter interlocal agreements with cities adjacent to affiliated UGAs to ensure that transportation impacts caused by development in UGAs are mitigated through the payment of mitigation fees based on trip generation and that the County will not approve development that causes a level of service failure on a city facility. Ultimately, Port Orchard would like to see payment of transportation mitigation fees via an ILA to help fund Port Orchard transportation projects that benefit new development in the Port Orchard UGA. We have successfully conditioned projects outside of the City through SEPA review to ensure that impacts to Port Orchard are mitigated. This opportunity to seek mitigation will be lost if the County increases SEPA thresholds without a framework to mitigate transportation impacts.

6. Transportation Level of Service: Kitsap County should include transportation levels of service for County roads that include segments, intersections, and non-motorized facilities. The current LOS standard in the Comprehensive Plan only adopted a road segment LOS.
7. South Kitsap Fire and Rescue. SKFR has acquired a property just outside of the Port Orchard UGA for a new fire station. This property, parcel 052301-3-014-2001 should be added to the UGA with a public facility designation to allow for the construction of a fire station connection to public sewer.
8. UGA Amendment #66: The City objects to the proposed addition of rural commercial lands at the intersection of SR-16 and Mullenix Road. The site of this proposed change in land use designation is encumbered by a type F stream, wetlands, and has indications for geologic hazards. The proposal is inconsistent with the countywide planning policies and Vision 2050 concerning rural development and the protection of critical areas. The proposal is also inconsistent with the goals of the growth management act concerning reducing sprawl, protecting the environment, and for rural development. The proposed redesignation is not supported by rural employment growth targets as found in the countywide planning policies and should be denied. Additional employment growth in rural areas should be prioritized in rural centers, not on lands encumbered by critical area resources. There is ample commercial land capacity proposed in the Port Orchard UGA along Bethel Avenue South, near this location. An expansion of rural commercial land in this location is not warranted.

Thank you for the opportunity to comment.

Sincerely,

Nicholas Bond

Nicholas Bond, AICP
City Development Director

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PUGET SOUND ENERGY

Puget Sound Energy
P.O. Box 97034
Bellevue, WA 98009-9734
PSE.com

February 23, 2024

Kitsap County Department of Community Development
Planning and Environmental Programs
Attn: Scott Diener (SEPA Official)
614 Division Street, MS-36
Port Orchard, WA 98366
Submitted via email compplan@kitsap.gov

Re: Kitsap County 2024 Comprehensive Plan – Draft Environmental Impact Statement

Thank you for the opportunity to comment on Kitsap County's Draft Environmental Impact Statement (DEIS), issued December 2023, for the 2024 Comprehensive Plan update. Puget Sound Energy (PSE) anticipates that our comments contribute towards countywide collaboration on topics pertaining to energy resource planning and policy.

Electrification

Electrification of the building and transportation sectors will increase electric load in the County. It is important to recognize that, as the County is reviewing impacts to the environment, the increase in electric demand due to electrification policies will increase demand and result in the need for additional electrical infrastructure. Energy efficiency and conservation, including demand response technologies, will be important tools in managing electric energy consumption. However, these tools will not remove the need for additional electrical facilities in the County.

Additional electrical facilities will include new and upsized transmission and distribution lines, transformers, substations and switching stations to serve new electrical load. Local generation (such as wind, solar, hydrogen, geothermal, hydropower, biomass, small-scale nuclear) and energy storage (batteries) could also be installed.

This increase in energy demand and the subsequent development of new electrical infrastructure will need to be balanced and consistent with many of the other policies contemplated in the proposed Comprehensive Plan update. Policies will need to support an increase in infrastructure in the electric distribution and transmission systems and will need to work in concert with policies that support reliability, resiliency, safety, the provision of low cost energy, and Kitsap County's electrification and de-carbonization policies.

Electrical infrastructure within Kitsap County has been installed over time in response to local population growth and the development pattern established by the County. In contrast to the

standard model of utility growth being driven by population growth, the phase out of fossil fuel energy creates new demand for utility service within existing communities. Guided by electrification policies and codes, a neighborhood with little to no growth in population will still see significant growth in electric demand. In this situation development is not driven by the chosen growth strategy but by the policy framework supporting electrification and decarbonization.

PSE is committed to meeting our obligation under state law to provide the necessary electrical service to meet growing demand in a safe, affordable and reliable manner. We also are committed to transition to a decarbonized energy future. We share this information to foster a solid understanding of the impacts that these policies will bring. It is important to approach the energy transition with an understanding of what will be needed to achieve the County goals and policies.

We look forward to continued collaboration with the County to address policy and development challenges that come with increased electrification and decarbonization. PSE is encouraging the County to ensure the impacts of proposed policies and action alternatives adequately address the need for new electrical infrastructure throughout unincorporated Kitsap County.

Zoning & Development Regulations – Compatibility with Carbon Reduction and Electrification Goals and Policies

PSE encourages the County to review their development regulations during this DEIS Comprehensive Plan update process to ensure alignment between goals and policies that support development and environmental protection alongside the goals of carbon reduction and electrification. For example, providing flexibility and certainty for permitting, development, operation, maintenance and repair of the needed electrical infrastructure within the County's development regulations will support reliable, resilient, and cost effective provision of power.

Vegetation Management – Safety, Reliability and Resiliency

PSE places high priority on providing safe, reliable and resilient energy. Tree retention and/or vegetation management policies can impact PSE's ability to provide safe, reliable electricity and increase costs. Additionally, tree and/or vegetation management policies should support PSE's need to remove vegetation in an effort to fulfill wildfire prevention strategies.

PSE supports a strong focus on 'Right Tree, Right Place' policies to address tree protections. The DEIS makes mention of regulations to protect and replace significant trees as a minimization effort to avoid tree canopy loss. PSE encourages the County to analyze their tree policies (existing and proposed) through the lens of safety, reliability and resiliency as it pertains to electrical infrastructure. Utility corridors tend to follow transportation corridors however, that is not always possible. Tree protection policies need to support the operation and maintenance of electrical facilities in rights-of-way and utility corridors and not impact PSE's need to provide reliable, resilient, safe, and cost effective electric service to the community.

Public Safety Power Shutoff – Wildfire Prevention

In addition to vegetation management practices intended to reduce facilities/vegetation contact, PSE is now implementing a program called Public Safety Power Shutoff (PSPS). In this scenario, PSE will determine if a power shutoff is warranted to prevent the potential sparking of a wildfire. This generally would occur during drier times of the year and/or forecasted storm events. This PSPS is a preventive measure and supports PSE's commitment to safety, reliability and resiliency. The County may consider including vegetation management and PSPS as mitigation measures for avoidance of wildfire events in the DEIS.

The following comment section is provided to the County to consider updating the existing electricity overview in the DEIS Comprehensive Plan update.

"Electricity Overview
Electricity service in Kitsap County is provided by Puget Sound Energy (PSE), which is a privately held, investor-owned utility formed in 1997 with the merger between Puget Sound Power & Light Company and Washington Natural Gas. PSE is the largest electric utility in Washington State, with more than one million electric customers and a service area of 6,000 square miles, primarily in the Puget Sound region. PSE electricity is generated from a variety of sources, including hydroelectric power, thermal power plants, coal, natural gas, wind power, and more. In ~~2013~~2022, the PSE fuel mix for electricity was ~~31~~ 23 percent coal, ~~32~~ 27 percent hydroelectric, ~~28~~ 23 percent natural gas, ~~7~~ 16 percent wind, 10 percent unspecified, <1 percent nuclear, <1 percent solar and <1 percent other (Biomass, non-biogenic and petroleum). (Puget Sound Energy, ~~2015~~2023) PSE in Kitsap County PSE serves over 127,960 electric customers in Kitsap County and maintains over 132 miles of high-voltage transmission and distribution lines throughout the county. (Puget Sound Energy, 2022) PSE also maintains 1,317 miles of overhead wire and 1,562 miles of underground cable along with 30 total substations. (Puget Sound Energy, 2022)

Power is supplied to western Washington primarily from hydro generation stations along the mid-Columbia River and in Canada. Interregional 230 and 500 kV transmission lines carry power from the generating stations westward to PSE's transmission switching stations and to transmission substations operated by the Bonneville Power Administration (BPA) in the Puget Sound region. The existing PSE electrical facilities inventory in unincorporated Kitsap County consist of the following:
• Transmission Switching Stations – ~~South~~ Bremerton~~, Foss Corner, and~~ Valley Junction, Foss Corner, Port Madison and Long Lake.
• Transmission Substations– South Bremerton~~, Bremerton~~.
• Distribution Substations – Port Gamble, Christensen's Corner, Miller Bay, Silverdale, Central Kitsap, Bucklin Hill, Tracyton, McWilliams, Chico, Sinclair Inlet, South Keyport, Fernwood, Manchester, Long Lake, Fragaria, East Port Orchard, Sheridan, Rocky Point, Poulsbo, Bremerton, Port Madison, Murden Cove, and Winslow, Serwold, Kingston. Some of these substations are within city limits.
• Transmission Lines 115 kV – Foss Corner-~~Salisbury Point~~Port Gamble, Foss Corner-~~Murden Cove~~Port Madison, Bangor-Foss Corner, Port Madison Tap, Foss Corner-Keyport , Valley Junction-Foss Corner, Winslow Tap, Murden Cove Tap, Bremerton-Keyport, Bremerton-Navy Yard ~~Foss CornerKeyport~~, South Bremerton-Bremerton, BPA Kitsap-Valley Junction, BPA Kitsap-South Bremerton #1, South Bremerton-Valley Junction, ~~O'BrienLong~~ South Bremerton-Long Lake #1,~~,~~ South Bremerton-Long Lake #2 and

O'Brien-Long Lake~~, South Bremerton-Fernwood Tap, Fernwood Tie, and Bremerton-Navy Yard. Foss Corner - US Navy at Bangor, Miller Bay to Kingston~~.

• Other Facilities – Command Point Cable Station and Salisbury Point Cable Station. (Kitsap County, 2023)

PSE has divided Kitsap County into two sub-areas (north and south) for the purposes of electric facilities planning. The North Kitsap sub-area is generally from Hood Canal in the north to Sinclair Inlet in the south. The South Kitsap sub-area is generally from Sinclair Inlet to the south county boundary. (Kitsap County, 2023)

The north and south sub-areas receive power from a network of 115kV interconnecting transmission sources in the southern part of the county and transmission switching stations in central and northern Kitsap County. A 230 kV transmission source comes into Kitsap County via BPA lines to the BPA Kitsap substation in Gorst, then PSE has a short run of 230kV to their South Bremerton Substation. From there 115kV lines transmit power throughout Kitsap County. PSE also has a 115kV tie consisting of underwater submarine cables that connect PSE transmission networks in South Kitsap area and King County, via Vashon Island. This tie is operated normally-open and can be used to transfer part of South Kitsap area load to PSE King County transmission network during outages and system emergencies.

Long-range plans are developed by PSE's Total Energy System Planning Department and are based on system needs and electrical growth projections. County population projections produced by OFM are used to determine new load growth for the next 20 years. Projected load is calculated as the existing load combined with forecasted new load, with deduction for conservation reductions and demand side management.

PSE's future electrical facilities plan is based on an estimated normal peak winter load. PSE plans to construct additional transmission and distribution facilities to meet demand. The exact timing of individual projects will be determined by the rate of load growth in specific areas. ~~Planned or pending projects are listed below.~~ Two large electrical projects that are currently in the planning phases are provided below.

~~**Exhibit 3.3.10-1 Puget Sound Energy Current & Planned Projects**~~

Kitsap Transmission Capacity Upgrade Project
Start Date: Planning phase End Date: after 2028
PSE has identified transmission capacity needs on the 230 kV bulk transmission system serving Kitsap County, and the 115 kV transmission network local to Kitsap County for providing reliable service to existing load and meeting the projected load growth in Kitsap County. In addition, an aging infrastructure replacement need has been identified for the 115kV submarine cables that tie Kitsap County transmission network to King County via Vashon Island. The project is currently in planning phase. The final solution is expected to be determined by end of 2024 and energized after 2028.

South Kitsap Distribution Capacity
Need Date: 2030
Estimated Date of Operation: 2030

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The South Kitsap area of Western has two existing substations with long feeder circuits running out to the south, east, and west edges of the PSE service territory in an area that has seen increased load growth. In order to meet increasing demand and meet service quality there is a study to add distribution capacity in the area. The project will likely include a new substation and create a 115 kV transmission loop in the area between the existing Fernwood and Fragaria substations. The study is planned to commence in Q1 2024 to be completed by Q4 2024. A final solution will be selected following a full Needs Assessment and Solution Study for the area. This project will address anticipated future load growth in the area and help alleviate upcoming capacity constraints.

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~~*Project Name Location Project Need Estimated Start-End Dates Status*~~

~~Southeast Salmonberry Road electric reliability improvements Port Orchard, 98366 Electrical, System Improvement Start Date: 12/1/2022 End Date: 4/30/2023 In Construction~~

~~West Belfair Valley Road electric system upgrade Bremerton, 98312 Electric, System Improvement TBA, in permitting stage Permitting~~

~~Northeast West Kingston Road Kingston, 98346 Electric, System Improvement Start Date: 4/3/2023 End Date: 8/31/2023 Pending Construction Start~~

~~Hansville Road Northeast electric system upgrade Kingston, 98346 Electric, System Improvement Start Date: 10/24/2023 End Date :6/30/2024 In Construction~~

~~Highway 3 electric system upgrade Poulsbo, 98370 Electric, System Improvement Start Date: 8/26/2019 Pending Construction Start~~

~~Northwest Lofall Road electric system upgrade Poulsbo, 98370 Electric, System Improvement Start Date:1/1/2022 Pending Construction Start Source: Puget Sound Energy~~"

If you have questions or need further clarification on the information provided here please do not hesitate to contact me at (360) 522-0322 or at robert.bergquist@pse.com.

Sincerely,

Bob Bergquist

Bob Bergquist
Senior Municipal Land Planner/ Liaison Manager

Cc: Ted Vanegas, WA Commerce
Tom Buroker, WA Ecology
Liz Underwood-Bultmann, PSRC

Return to Comment Matrix

February 23, 2024

Kitsap County Comprehensive Plan
614 Division Street MS-36
Port Orchard, Washington 98366

Dear Staff:

Subject: Comments on the 2024 Comprehensive Plan Update Draft Environmental Impact Statement Kitsap County (Dec. 2023)
Sent via email: compplan@kitsap.gov

Thank you for the opportunity to comment on the 2024 Comprehensive Plan Update Draft Environmental Impact Statement for Kitsap County (DEIS). We appreciate the data and analysis in the DEIS. We believe the DEIS includes valuable information that will help decision makers and the public make good decisions on the comprehensive plan and the future of Kitsap County.

Futurewise works throughout Washington State to support land-use policies that encourage healthy, equitable and opportunity-rich communities, and that protect our most valuable farmlands, forests, and water resources. We have members across Washington State including Kitsap County.

The comprehensive plan must reduce greenhouse gas pollution consistent with VISION 2050. See 3.1.2.2 Air Quality/Climate – Impacts and 3.1.2.3 Air Quality/Climate – Mitigation Measures pp. 3-31 – 3-26.

We appreciate that the DEIS projected greenhouse gas emissions for the three alternatives. Unfortunately, the DEIS concludes that "[r]elative to 2019 greenhouse gas (GHG) emissions will increase under all three alternatives."[1]

Unfortunately, increasing greenhouse gas emissions is inconsistent with VISION 2050. Comprehensive plans must be consistent multicounty planning policies.[2] VISION 2050 includes the following goal:

[1] 2024 Comprehensive Plan Update Draft Environmental Impact Statement Kitsap County p. 1-8 (Dec. 2023).
[2] *West Seattle Defense Fund v. City of Seattle*, CPSGMHB Case No. 94-3-0016, Final Decision and Order (April 4, 1995), at *55; *Friends of Pierce County, et al., City of Bonney Lake, and Marilyn Sanders, et al. v. Pierce County, and Orton Farms et al., City of Sumner, Bethell School District,*

> GOAL: The region substantially reduces emissions of greenhouse gases that contribute to climate change in accordance with the goals of the Puget Sound Clean Air Agency (50% below 1990 levels by 2030 and 80% below 1990 levels by 2050) and prepares for climate change impacts.[3]

Multicounty Planning Policy (MPP)-CC-11 provides "[s]upport achievement of regional greenhouse gas emissions reduction goals through countywide planning policies and local comprehensive plans."[4] CC-Action-3, Policies and Actions to Address Climate Change, provides that:

> Cities and counties will incorporate emissions reduction policies and actions that contribute meaningfully toward regional greenhouse gas emission goals, along with equitable climate resiliency measures, in their comprehensive planning. Strategies include land uses that reduce vehicle miles traveled and promote transit, biking, and walking consistent with the Regional Growth Strategy, developing and implementing climate friendly building codes, investments in multimodal transportation choices, and steps to encourage a transition to cleaner transportation and energy systems.[5]

As you can see, the goal, multicounty planning policy, and action require the comprehensive plan to incorporate emissions reduction policies and actions that contribute meaningfully toward regional greenhouse gas emission goals. These goals are substantial. A comprehensive plan whose alternatives will increase greenhouse gas pollution is inconsistent with VISION 2050. The County must comply with the requirement that the comprehensive plan policies and actions must reduce greenhouse gas emissions. This the current draft does not do.[6]

To comply with VISION 2050, we recommend the following additional mitigation be included:

Puyallup School District, and Forterra NW, CPSRGMHB Case No. 12-3-0002c, Final Decision and Order (July 9, 2012), at 11 of 138.

[3] Puget Sound Regional Council, *VISION 2050: A Plan for the Central Puget Sound Region* p. 56 (Oct. 2020) last accessed on Feb 20, 2024, at: https://www.psrc.org/planning-2050/vision-2050 and at the link on page 15 of this letter with the filename: "vision-2050-plan.pdf.

[4] *Id.* p. 61.

[5] *Id.* p. 61.

[6] 2024 Comprehensive Plan Update Draft Environmental Impact Statement Kitsap County p. 1-8 (Dec. 2023).

- Not approving comprehensive plan and zoning amendments including urban growth area expansions and rural capacity increases that will increase greenhouse gas emissions.
- A peer-reviewed scientific paper has documented that to meet the necessary reductions in greenhouse gas pollution higher residential densities are needed.[7] Nationally, densities must increase on average by 19 percent.[8] The paper concluded this can be achieved by a "mix of small apartment buildings and modest single-family homes ...."[9] Incorporate these housing types and densities into the County's urban growth areas (UGAs). This will also help make housing more affordable.
- Amend the zoning regulations to allow corner stores, cafes, day care, and other basic services in residential neighborhoods as a transportation mitigation strategy. Bringing these destinations closer to homes will shorten trips and increase the ability of residents to complete these trips by walking and bicycling. This will reduce greenhouse gas emissions and provide healthy, active transportation options.
- Invest in multimodal transportation facilities, which is already a feature of the comprehensive plan, and do not invest in transportation facilities that will increase greenhouse gas emissions.
- The Southern Resident Orca Task Force's *Final Report and Recommendations* recommends promoting "'live where you work' to reduce commutes while improving public transportation infrastructure."[10] This is an effective mitigating measure to reduce traffic and greenhouse gas emissions along with impacts on water quality and fish and wildlife habitats.

[7] Benjamin Goldstein, Dimitrios Gounaridis, and Joshua P. Newell, *The carbon footprint of household energy use in the United States* 117 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA (PNAS) 19122, p. 19122 (Aug. 11, 2020) last accessed on Feb. 20, 2024, at: https://www.pnas.org/content/117/32/19122 and at the link on page 15 with the filename: "goldstein-et-al-2020-the-carbon-footprint-of-household-energy-use-in-the-united-states.pdf." PNAS is a peer-reviewed journal. PNAS Author Center last accessed on Oct. 19, 2023, at: https://www.pnas.org/author-center and at the link on page 15 with the filename: "PNAS Author Center.pdf."

[8] Benjamin Goldstein, Dimitrios Gounaridis, and Joshua P. Newell, *The carbon footprint of household energy use in the United States* 117 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA (PNAS) 19122, p. 19128 (Aug. 11, 2020).

[9] *Id.*

[10] Southern Resident Orca Task Force, *Final Report and Recommendations* p. 107 (Nov. 2019) last accessed on Feb. 20, 2024, at: https://www.orca.wa.gov/wp-content/uploads/TaskForceFinalReport-2019.pdf and at the link on page 15 of this letter with the filename: "TaskForceFinalReport-2019.pdf."

- The U.S. Environmental Protection Agency (EPA) found that state and local governments can significantly reduce greenhouse gas emissions through land and materials management practices such as materials efficiency, industrial ecology, green design, land revitalization, sustainable consumption, smart growth, pollution prevention, and design for environment.[11] These should also be included as additional mitigation measures.
- We recommend adding as mitigating measures the strategies and actions identified as most effective to reduce vehicle use by the recent meta-analysis by Kuss and Nicholas.[12]

Incorporate additional upzones within the existing urban growth areas such as those required by RCW 36.70A.635 as a mitigating measure that can reduce or eliminate the need for UGA expansions. Include the measures in Sections 3.1.3.3, 3.1.4.3, and 3.2.3.3 Mitigation Measures on pp. 3-61 – 3-63, pp. 3-82 – 3 – 83, and pp. 3-84 – 3-86.

An additional mitigation measure for surface water quality, land use, and fish and wildlife impacts is to grow up, not out. The Southern Resident Orca Task Force's *Final Report and Recommendations* calls for Washington to "increase affordable housing and reduce urban sprawl by growing 'up instead of out.'"[13] We recommend this be included as a potential mitigating measure for surface water quality, land use, and fish and wildlife impacts.

[11] US Environmental Protection Agency, Office of Solid Waste and Emergency Response, *Opportunities to Reduce Greenhouse Gas Emissions through Materials and Land Management Practices* pp. 19 – 28 (Sept. 2009) last accessed on Feb. 20, 2024, at: https://www.epa.gov/sites/production/files/documents/ghg-land-materials-management.pdf and at the link on page 15 of this letter with the filename: "ghg-land-materials-management.pdf."
[12] Paula Kuss and Kimberly A Nicholas, *A dozen effective interventions to reduce car use in European cities: Lessons learned from a meta-analysis and transition management* 10 CASE STUDIES ON TRANSPORT POLICY pp. 1494-1513 (Issue 3, Sept. 2022) last accessed on Feb. 19, 2024, at https://www.sciencedirect.com/science/article/pii/S2213624X22000281 and at the link on page 15 of this letter with the filename: "1-s2.0-S2213624X22000281-main.pdf." Case Studies On Transport Policy is a peer reviewed journal. Case Studies On Transport Policy Guide for Authors pp. *13 – 14 last accessed on Feb. 20, 2024, at: https://www.sciencedirect.com/journal/case-studies-on-transport-policy/publish/guide-for-authors https://www.sciencedirect.com/science/article/pii/S2213624X22000281 and at the link on page 15 of this letter with the filename: "CASE STUDIES ON TRANSPORT POLICY Guide for Authors.pdf."
[13] Southern Resident Orca Task Force, *Final Report and Recommendations* p. 107 (Nov. 2019).

The EIS should analyze the impacts on and mitigate the impacts on impervious surfaces due to increased urban development allowed by the alternatives. See DEIS 3.1.3.2 Water Resources – Impacts and 3.1.3.3 Water Resources – Mitigation Measures pp. 3-52 – 3-63

Researchers at the University of Washington have carefully studied the effects of development on stream basins in the Puget Sound Region. These studies have shown that when total impervious surfaces exceed five to ten percent and forest cover declines below 65 percent of the basin, then salmon habitat in streams and rivers is damaged.[14] Impervious surfaces are continuing to increase in Kitsap County.[15] The EIS should analyze which basins will have total impervious surfaces above five to ten percent and forest cover below 65 percent of the basin for the various alternatives. The EIS should propose as mitigating measures policies and regulations that will keep total impervious surfaces below five to ten percent and forest cover at or above 50 percent of the basin to protect salmon habitat.[16]

The EIS should analyze the impacts on and mitigate the impacts on rare plant categories and listings from the department of natural resources, natural heritage program. See 3.1.4.1 on p. 3-67.

The "GMA requires the County to protect the functions and values of Critical Area Ecosystems."[17] This includes the "high quality ecosystem and rare plant categories and listings from the department of natural resources, natural heritage program."[18] The *2021 Washington Vascular Plant Species of Conservation Concern*

[14] Christopher W. May, Richard R. Horner, James R. Karr, Brian W. Mar, Eugene B. Welch, *The Cumulative Effects of Urbanization on Small Streams in the Puget Sound Lowland Ecoregion* p. 17 of 26 (University of Washington, Seattle Washington) last accessed on Feb. 20, 2024, at: https://www.researchgate.net/publication/240437080_Effects_of_Urbanization_on_Small_Streams_in_the_Puget_Sound_Lowland_Ecoregion and enclosed at the link on page 15 of this letter with the filename: "Effects_of_Urbanization_on_Small_Streams_in_the_Pu.pdf."
[15] *2020 State of Our Watersheds State of Our Watersheds: A Report by the Treaty Tribes in Western Washington* p. 316, p. 318 last accessed on Feb. 20, 2024, at: https://nwifc.org/publications/state-of-our-watersheds/ and at the link on page 15 of this letter with the filename: "state-of-our-watersheds-sow-2020-final-web.pdf."
[16] Christopher W. May, Richard R. Horner, James R. Karr, Brian W. Mar, Eugene B. Welch, *The Cumulative Effects of Urbanization on Small Streams in the Puget Sound Lowland Ecoregion* pp. 20 – 21 of 26 (University of Washington, Seattle Washington).
[17] *Whidbey Environmental Action Network v. Island County*, Western Washington Region Growth Management Hearings Board (WWRGMHB) Case No. 14-2-0009, Final Decision and Order (June 24, 2015), at 21 of 49 last accessed on Feb. 7, 2024, at: https://eluho2022.my.site.com/casemanager/s/case/50082000001BDWk/detail.
[18] *Id.* at 32 – 35 of 49. See also WAC 365-190-040(4)(b).

identifies rare plants in Kitsap County.[19] The impacts on these plants and ecosystems need to be analyzed and mitigating measures included in the EIS.

The alternatives must be analyzed to determine if they meet the gap in need and capacity for medium high and high housing densities. See Land & Shoreline Use 3.2.1.2 Impacts 3-21 – 3-21.

RCW 36.70A.070(2)(c) requires the housing elements adopted by Kitsap County and the cities in the county to identify "sufficient capacity of land for housing including, but not limited to, government-assisted housing, housing for moderate, low, very low, and extremely low-income households, manufactured housing, multifamily housing, group homes, foster care facilities, emergency housing, emergency shelters, [and] permanent supportive housing ...." The Kitsap County Buildable Lands Report identified a gap between the need for 9,700 housing units at medium high and high housing densities to provide housing affordable to individuals and families with incomes of less than 80 percent of the adjusted median income and the existing capacity of less than 4,500 units or, if housing is built to its maximum capacity, up to about 6,000 housing units.[20] To adequately serve those individuals and families the land zoned for medium high and high density housing units will have to be significantly above 9,700 housing units since housing at those densities is attractive to higher income individuals and families. The EIS needs to analyze whether the alternatives close this gap.

[19] Walter Fertig, 2021 *Washington Vascular Plant Species of Conservation Concern* pp. 7 – 44 (Washington Natural Heritage Program, Natural Heritage Report 2021-04: Aug. 31, 2021) last accessed on Feb. 20, 2024, at: https://www.dnr.wa.gov/publications/amp_nh_vascular_ets.pdf and in the link on page 15 with the filename: "amp_nh_vascular_ets.pdf."

[20] *Buildable Lands Report Kitsap County, Washington Draft* (Aug. 2021) Appendix E: Draft Housing Availability and Affordability Memo p. 8 last accessed on February 16, 2024, at: https://www.kitsap.gov/dcd/PEP%20Documents/FINAL%20Buildable%20Lands%20Report_November%202021.pdf and at the link on page 15 of this letter with the filename: "FINAL Buildable Lands Report_November 2021.pdf."

Please analyze the extent to which the alternatives will increase development in Wildland-Urban Interface (WUI) and please add directing growth away from the WUI as a Mitigation Measure. See DEIS 3.2.1.2 Impacts and 3.2.1.3 Mitigation Measures on pp. 3-5 – 3-23.

Large areas of Kitsap County are located in the Wildland-Urban Interface (WUI).[21] Wildfire is a significant threat in Kitsap County and climate change is making the threat worse.[22] We recommend that the EIS analyze the which alternatives will increase development in the WUI. An additional mitigating measure of directing growth away from the WUI fringe should be added to DEIS. This is consistent with RCW 36.70A.070(1) which provides in part that:

> The land use element must reduce and mitigate the risk to lives and property posed by wildfires by using land use planning tools, which may include, but are not limited to, adoption of portions or all of the wildland urban interface code developed by the international code council or developing building and maintenance standards consistent with the firewise USA program or similar program designed to reduce wildfire risk, reducing wildfire risks to residential development in high risk areas and the wildland urban interface area, separating human development from wildfire prone landscapes, and protecting

[21] Ashley Blazina and Kirk Davis, *The Wildland-Urban Interface: Mapping Washington State's fastest-growing environment* (Sept. 2, 2020) last accessed on Feb. 17, 2024, at: https://storymaps.arcgis.com/stories/7016c437623a445997c072a05e26afbb. See also the map University of Washington Climate Impacts Group's (UW CIG) Climate Mapping for a Resilient Washington (CMRW) webtool Change in High Fire Danger Days last accessed on Feb. 20, 2024, at: https://cig-wa-climate.nkn.uidaho.edu/ and at the link on page 15 of this letter with the filename: "Kitsap Cnty Change in High Fire Danger Days.png." The State of Washington Department of "Commerce considers the CMRW webtool a source of best available science and scientifically credible projections, so this guidance makes using the webtool a required starting point for all jurisdictions that are creating or updating a climate resilience sub-element. Commerce encourages jurisdictions to use additional resources ..., as needed, to explore climate hazards and impacts on local assets and sectors. State of Washington Department of Commerce Climate Element Planning Guidance p. 17 (Dec. 2023 – Intermediate Version) last accessed on Feb. 20, 2024, at: https://deptofcommerce.app.box.com/s/fpg3holbwln2ctqjg7jg802h54ie19jx and at the link on page 15 of this letter with the filename: "IntermediatePlanningGuidance_FINAL.pdf."

[22] H.A. Morgan, A. Bagley, L. McGill, and C.L., Raymond, *Managing Western Washington Wildfire Risk in a Changing Climate Workshop Summary* pp. 4 – 7 (Workshop summary report prepared by the Northwest Climate Adaptation Science Center and the Climate Impacts Group, University of Washington, Seattle: Dec. 3, 2018) last accessed on Feb. 20, 2024, at: https://cig.uw.edu/publications/managing-western-washington-wildfire-risk-in-a-changing-climate/ and at the link on page 15 of this letter with the filename: "Managing-Western-Washington-Wildfire-Risk-in-a-Changing-Climate.pdf."

existing residential development and infrastructure through community wildfire preparedness and fire adaptation measures.

Exhibit 3.2.2.2-2, Consistency of alternatives with PSRC's VISION 2050, on 3-39, did not analyze the consistency of the urban growth area expansions on VISION 2050 and the multicounty planning policies.

Alternatives 2 and 3 propose urban growth area expansions.[23] "VISION 2050 calls for a stable and sustainable urban growth area into the future, thus any adjustments to the urban growth area [UGA] in the coming decades should continue to be minor. When adjustments to the urban growth area are considered, it will be important to avoid encroaching on important habitat and natural resource areas."[24] MPP-RGS-5 provides "[e]nsure long-term stability and sustainability of the urban growth area consistent with the regional vision."[25] MPP-RGS-6 also provides "Encourage efficient use of urban land by optimizing the development potential of existing urban lands and increasing density in the urban growth area in locations consistent with the Regional Growth Strategy."[26] Comprehensive plans must be consistent multicounty planning policies.[27] Exhibit 3.2.2.2-2 does not adequately analyze the consistency of the urban growth area expansions on VISION 2050 and must do so. MPP-RGS-5 is not even mentioned in the EIS and compliance with the multicounty planning policy is not considered.[28] This must be corrected.

[23] 2024 Comprehensive Plan Update Draft Environmental Impact Statement Kitsap County pp. 2-12 – 2-13, p. 2-24 (Dec. 2023).
[24] Puget Sound Regional Council, *VISION 2050: A Plan for the Central Puget Sound Region* p. 43 (Oct. 2020).
[25] *Id.*
[26] *Id.*
[27] *West Seattle Defense Fund v. City of Seattle*, CPSGMHB Case No. 94-3-0016, Final Decision and Order (April 4, 1995), at *55; *Friends of Pierce County, et al., City of Bonney Lake, and Marilyn Sanders, et al. v. Pierce County, and Orton Farms et al., City of Sumner, Bethell School District, Puyallup School District, and Forterra NW*, CPSRGMHB Case No. 12-3-0002c, Final Decision and Order (July 9, 2012), at 11 of 138.
[28] 2024 Comprehensive Plan Update Draft Environmental Impact Statement Kitsap County p. 3-39 (Dec. 2023).

Exhibit 3.2.2.2-2, Consistency of alternatives with PSRC's VISION 2050, on page 3-40 needs to adequately analyze the alternatives consistency with Multicounty Planning Policy MPP-RGS-14 and the Regional Growth Strategy.

The Growth Management Act requires counties to comply with the Puget Sound Regional Council Multicounty Planning Policies.[29] Multicounty Planning Policy MPP-RGS-14 directs Kitsap County, and all of the Central Puget Sound counties, to "[m]anage and reduce rural growth rates over time, consistent with the Regional Growth Strategy, to maintain rural landscapes and lifestyles and protect resource lands and the environment."[30] The Regional Growth Strategy adopted rural population growth target of 8 percent of the county's total population growth or 8,000 people for Kitsap County.[31] On a percentage basis, this is the highest rural growth population growth target of the four Central Puget County counties.[32] Kitsap County's Buildable Lands Report documents that in 2013 through 2019, 29 percent of the county's population growth occurred in the rural area.[33] While this was an improvement over the past years, it shows that Kitsap County faces significant challenges in crafting a comprehensive plan and development regulations that comply with the Regional Growth Strategy.[34]

Exhibit 3.2.2.2-2 states that "[a]ll alternatives limit growth in rural land." But that is not what MPP-RGS-14 requires. MPP-RGS-14 directs Kitsap County to "[m]anage and reduce rural growth rates over time, consistent with the Regional Growth Strategy, to maintain rural landscapes and lifestyles and protect resource lands and the environment."[35]

The EIS, needs to analyze if any of the alternatives will reduce rural growth rates over time and will put Kitsap County on a path to achieve the Regional Growth Strategy adopted rural population growth target of 8 percent of the county's total population growth or 8,000 people for Kitsap County by 2050.[36] The data in DEIS did not show whether this was the case.

[29] *Stickney v. Cent. Puget Sound Growth Mgmt. Hearings Bd.*, 11 Wn. App. 2d 228, 244 – 45, 453 P.3d 25, 34 (2019).
[30] Puget Sound Regional Council, *Vision 2050: A Plan for the Central Puget Sound Region* p. 43 (Oct. 2020).
[31] *Id.* at p. 30.
[32] *Id.*
[33] *Buildable Lands Report Kitsap County, Washington Final* p. 18 (Nov. 2021).
[34] *Id.* p. 19.
[35] Puget Sound Regional Council, *Vision 2050: A Plan for the Central Puget Sound Region* p. 43 (Oct. 2020).
[36] *Id.* at p. 30, p. 43.

Exhibit 3.2.2.2-2, Consistency of alternatives with PSRC's VISION 2050, on DEIS pages 3-39 – 3-42, did not adequately analyze the rural comprehensive plan amendments or upzones that increase rural population and employment capacity with VISION 2050 and the multicounty planning policies. See also Appendix B: Reclassification Request Summary List.

The Growth Management Act requires counties to comply with the Puget Sound Regional Council Multicounty Planning Policies.[37] Multicounty Planning Policy MPP-RGS-14 directs Kitsap County, and all of the Central Puget Sound counties, to "[m]anage and reduce rural growth rates over time, consistent with the Regional Growth Strategy, to maintain rural landscapes and lifestyles and protect resource lands and the environment."[38] The Regional Growth Strategy adopted rural population growth target of 8 percent of the county's total population growth or 8,000 people for Kitsap County.[39] On a percentage basis, this is the highest rural growth population growth target of the four Central Puget County counties.[40] Kitsap County's Buildable Lands Report documents that in 2013 through 2019, 29 percent of the county's population growth occurred in the rural area.[41] While this was an improvement over the past years, it shows that Kitsap County faces significant challenges in crafting a comprehensive plan and development regulations that comply with the Regional Growth Strategy.[42]

We were unable to find data on the capacity of the various rural zones in the Land Capacity Analysis or the DEIS.[43] It is also unclear what the rural capacity totals in Exhibit 2.5.3-3 are based on given that Alternative 3 increases the acreage of the Rural Residential (1 DU/5 Ac) zone and decreases the acreage in the Rural Protection (1 DU/10 Ac) and Rural Wooded (1 DU/20 Ac) zones but has the same reported capacity as Alternatives 1 and 2.[44] Data on rural capacity by zone would be helpful to determine if the comprehensive plan can comply with the Regional Growth Strategy.

[37] *Stickney v. Cent. Puget Sound Growth Mgmt. Hearings Bd.*, 11 Wn. App. 2d 228, 244 – 45, 453 P.3d 25, 34 (2019).
[38] Puget Sound Regional Council, *Vision 2050: A Plan for the Central Puget Sound Region* p. 43 (Oct. 2020).
[39] *Id.* at p. 30.
[40] *Id.*
[41] *Buildable Lands Report Kitsap County, Washington Final* p. 18 (Nov. 2021).
[42] *Id.* p. 19.
[43] *Buildable Lands Report Kitsap County, Washington* Final pp. 56 – 67 (Nov. 2021); Comprehensive Plan Update Draft Environmental Impact Statement Kitsap County pp. 2-21 – 2-28 (Dec. 2023).
[44] 2024 Comprehensive Plan Update Draft Environmental Impact Statement Kitsap County pp. 2-22 – 2-26 (Dec. 2023).

The County's own data makes clear that the one thing Kitsap County should not do is increase rural development capacity. The Olympic Property Group/Raydient proposal to rezone land from one dwelling unit per 20-acre zoning to one dwelling unit per five acres is the opposite of what the Regional Growth Strategy requires because it will increase rural population capacity and rural growth rates. This rezone appears to be inconsistent with VISION 2050. Other comprehensive plan amendments and zoning amendments that increase rural population capacity also appear to be inconsistent with VISION 2050. The impacts of these amendments including their consistency with VISION 2050 need to be analyzed in the EIS.

The Regional Growth Strategy limits rural growth to retain important cultural, economic, and rural lifestyle opportunities; to protect the environment including reducing greenhouse gas pollution; and to reduce the costs of transportation facilities.[45] So there are important policies behind the numbers.

The DEIS needs to analyze whether the impact of removing the lot aggregation requirement from the Suquamish and Manchester LAMIRDs complies with Multicounty Planning Policy MPP-RGS-14 and the Regional Growth Strategy. DEIS pp. 3-45 – 3-46.

The DEIS states that the "removal of lot aggregation requirements is consistent with PSRC policies to streamline development, while also allow rural areas to add limited growth and population without changing the character of the rural lands." We do not believe that taking a step that increases rural development capacity is consistent VISION 2025 and MPP-RGS-14.[46] The test to be applied to determine if an EIS is adequate is "'whether the environmental effects of the proposed action and reasonable alternatives are sufficiently disclosed, discussed and that they are substantiated by supportive opinion and data.' *Leschi v. Highway Comm'n*, *supra* at 286, 525 P.2d at 785."[47] The EIS should provide or cite to the data or the supportive opinion to document this claim.

[45] Puget Sound Regional Council, *Vision 2050: A Plan for the Central Puget Sound Region* p. 23 – 24, p. 37, p. 43 (Oct. 2020).
[46] *Id.* at p. 30 & p. 43.
[47] *Ullock v. City of Bremerton*, 17 Wn. App. 573, 580, 565 P.2d 1179, 1184 (1977).

Part 3.2.2.4, Significant Unavoidable Adverse Impacts, needs to identify as a significant unavoidable adverse impact any alternative that does not reduce rural growth rates. See DEIS page 3-46.

Part 3.2.2.4 states that "[w]ith implementation of mitigation measures, no significant unavoidable adverse impacts are anticipated regarding future plan consistency under any of the alternatives." But the DEIS did not analyze if any of the alternatives will reduce rural growth rates over time and will put Kitsap County on a path to achieve the Regional Growth Strategy adopted rural population growth target of 8 percent of the county's total population growth or 8,000 people for Kitsap County by 2050.[48] Failing to do this is a significant unavoidable adverse impacts and needs to be identified as such.

The DEIS should analyze whether the alternatives will exceed the Watershed Restoration and Enhancement Plan permit-exempt well estimate for WRIA 15. See DEIS 3.1.3.1 Water Resources – Affected Environment Groundwater pp. 3-55 – 3-60.

It is good that the DEIS includes on page 3-55 the estimate that Kitsap County will have 2,568 new permit-exempt domestic well connections between 2018-2038. This important because wells potentially impact low flows.[49] "Coho salmon, steelhead and cutthroat trout are the most vulnerable to low stream flows (and warm waters) because they rear in freshwater in the summer when low flow/high temperature conditions can constrain habitat and stress fish in some streams."

The current 2022-2044 rural population growth target is 4,391 and this is also shown as the rural growth capacity for each alternative.[50] The DEIS reports that Kitsap County's average household size is 2.46 people.[51] This would translate into 1,784 housing units. There are also proposals to increase rural capacity. The DEIS should analyze whether the alternatives will exceed the new permit-exempt domestic well connections estimate. If the alternative exceeds the estimate, additional measures to mitigate the impacts on ground water and instream flows should be included in the EIS.

[48] Puget Sound Regional Council, *Vision 2050: A Plan for the Central Puget Sound Region* p. 30, p. 43 (Oct. 2020).
[49] *2020 State of Our Watersheds State of Our Watersheds: A Report by the Treaty Tribes in Western Washington* p. 321.
[50] 2024 Comprehensive Plan Update Draft Environmental Impact Statement Kitsap County p. 2-22 (Dec. 2023).
[51] *Id.* p. 3-59.

We recommend that the EIS include as an addition mitigation measure adopting regulations that require pre-ground disturbance site investigations for sites were the predictive model show cultural resources are likely or when requested by affected Native American Tribes and Nations. See 3.2.4.3 Historical & Cultural Preservation – Mitigation Measures p. 3-89.

We appreciate the DEIS's analysis of cultural impacts. As the DEIS notes many historical and cultural sites are in shoreline areas due to the availability of water, food, and transportation routes. The Washington State Department of Archaeology and Historic Preservation has developed an archaeological predictive model that can predict where archaeological resources are likely to be located and where the department recommends archaeological surveys should be completed before earth disturbing activities and other uses and activities that can damage archaeological sites are undertaken.[52] Large areas of Kitsap County are rated as "4 - Survey Highly Advised: High Risk (Color: Pale Yellow)" and "5 - Survey Highly Advised: Very High Risk (Color: Brightest Yellow/Canary Yellow)."

If earth disturbing activities are undertaken before a survey is conducted, significant costs can be added to the project and significant damage to archeological resources can occur. For example, the Jefferson County Public Utility District's (PUD) contractor building a community septic system at Becket Point in Jefferson County encountered human bones and Native American artifacts.[53] The contractor had to stop construction. An archaeologist was called in and conducted an investigation that allowed the project to be redesigned and to be completed. However, PUD staff "estimated the delays and additional engineering incurred because of the artifacts added about $90,000 to the project's cost."[54] At least some of that money could have been saved by an upfront archeological investigation.

To address these adverse impacts, we recommend that the EIS include as an addition mitigation measure adopting regulations that require pre-ground disturbance site investigations for sites were the predictive model show cultural

[52] Washington State Department of Archaeology and Historic Preservation WISAARD webpage last accessed on Feb. 19, 2024, at: https://dahp.wa.gov/historic-preservation/find-a-historic-place. The results of the predictive model are available for Whatcom County to use in planning and project reviews from the Washington State Department of Archaeology and Historic Preservation.
[53] Jeff Chew, *Jefferson PUD sticks with Beckett Point* Connections p. 8 (Washington Public Utility Districts Association [WPUDA]: Winter 2008) last accessed on Feb. 19, 2024, at: https://www.yumpu.com/en/document/view/46547248/connections-washington-public-utility-district-association/11.
[54] *Id.* at p. 9.

resources are likely or when requested by affected Native American Tribes and Nations.

Reconsider designating agricultural lands of long-term commercial significance.

In 2023, the State of Washington Department of Commerce updated its minimum guidelines for designating agricultural lands of long-term commercial significance. These changes included expanding the soil types that indicate an area has long-term commercial significance to include farmlands of statewide importance soils in addition to prime and unique farmland soils.[55] Commerce made additional changes in 2023 as well.[56]

The 2022 Census of Agriculture documents that the acres of land in farms in Kitsap County increased from 9,391 acres in 2017 to 9,539 acres in 2022.[57] Total income from farm-related sources in Kitsap County increased from $3,161,000 in 2017 to $4,791,000 in 2022.[58] Average per farm income increased from $23,944 in 2017 to $53,831 in 2022.[59]

One of the purposes of periodic updates is to comply with the requirements of the Growth Management Act including the designation of natural resource lands and the application of the minimum guidelines in WAC 365-190-050.[60] Given the changes in the minimum guidelines and the economic benefit of local agriculture, Kitsap County should designate agricultural lands of long-term commercial significance consistent with the updated minimum guidelines. The impacts of designating and not designating agricultural lands of long-term commercial significance should be analyzed in the EIS.

[55] WAC 365-190-050(3)(c)(i) (2023).
[56] WAC 365-190-050 (2023).
[57] United States Department of Agriculture National Agricultural Statistics Service, *2022 Census of Agriculture Washington State and County Data Volume 1 • Geographic Area Series* • Part 47 AC-22-A-47 Chapter 2. County Data Table 8. Farms, Land in Farms, Value of Land and Buildings, and Land Use: 2022 and 2017 p. 286 (Issued Feb. 2024) last accessed on Feb 20, 2024, at: https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_2_County_Level/Washington/ and at the link on page 15 of this letter with the filename: "wav1.pdf."
[58] United States Department of Agriculture National Agricultural Statistics Service, *2022 Census of Agriculture Washington State and County Data Volume 1 • Geographic Area Series* • Part 47 AC-22-A-47 Chapter 2. County Data Table 6. Income From Farm-Related Sources: 2022 and 2017 p. 274 (Issued Feb. 2024).
[59] *Id.*
[60] RCW 36.70A.130(1)(a); *Concerned Friends of Ferry Cnty. v. Ferry Cnty.*, 191 Wn. App. 803, 834, 365 P.3d 207, 222 (2015).

Thank you for considering our comments. If you require additional information, please contact me at telephone (206) 343-0681 or email: tim@futurewise.org.

Very Truly Yours,

Tim Trohimovich, AICP
Director of Planning & Law

Enclosures included at the following link:

https://futurewiseorg.sharepoint.com/:f:/g/Esm6h_SA4lRNmI9V73SKKsEB5-1sFxocA2MbUg2fhAqLUw?e=rOQ4m0

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KITSAP COUNTY
Boards and Commissions

Kingston Community Advisory Council (KCAC) | kcacchair@gmail.com

February 15, 2024

Kitsap County Administration Building
Commissioners' Chambers
619 Division Street
Port Orchard, WA 98366

Board of Commissioners
Kitsap County Commissioner's Office
614 Division St. MS-4
Port Orchard, WA 98366

Planning Commission Members & Kitsap County Board of Commissioners:

In preparation for the upcoming meetings of the Planning Commission and the County Board of Commissioners, we are renewing the Environment & Land Use committee's position regarding three key decisions being considered. The Kingston Community Advisory Council (KCAC) remains in support of the committee recommendations and principles we shared in our June 2023 letter to the Board of Commissioners.

The following reflects a majority position of the Committee. To provide transparency, the vote counts associated with each of the three issues is provided and the blind details of the opinion poll are attached. We also propose a few compromises in *italic* in an effort to address some of the interests and concerns of Port of Kingston Executive Director and Commission. Each compromise proposed here was reviewed with individuals from the UVC Workgroup who remain actively involved in the 2024 Update. In all cases they were agreeable to the compromises being offered.

- **Planning Alternative Map:** By a committee vote of Ayes (5), Nays (2), Abstain (2) we prefer the Compact Growth/Urban Center Focus Kingston UGA boundary in the Alt 2 map.
- **Maximum Building Heights in the Kingston design districts:** By a committee vote of Ayes (5), Nays (2), Abstain (2) we prefer preserving the current height allowances (35'/45') in the UVC / Old Town to provide the pedestrian-focused scale and small town feel in the Old Town Design District consistent with the Kingston Design Standards. *If additional height is needed downtown, the frontage along Central Ave would be an appropriate place to allow that because of the grade/elevation.*
- **Mixed use on the ground floor:** By a committee vote of Ayes (6), Nays (3), Abstain (0) we prefer the flexibility recommended by the UVC Task Force intended to encourage new infill development. Dave Wetter's statement on the topic is attached. *To address the Port's concerns about "losing" the downtown, we recommend adding language preventing properties currently with commercial on the ground floor from backsliding and converting existing commercial to residential.*

We acknowledge that while we are not in full agreement on these issues, we all have the best interests of Kingston in mind.

Kind regards,

Kate Joncas
KCAC Chair

Tim Davis
KCAC Chair

\attach

Port-Proposed Kingston Storefront Zone Meeting

Statement prepared & read by Dave Wetter for March 28, 2023 community mtg

2018 & 2019 Comprehensive Plan Task Force was assigned to address Reducing Barriers to Development in the Urban Village Core (UVC map purple).

Participants: Johnny Walker, Betsy Cooper, Jet Wolke, Jim Pivarnik, Jon Rose, Ken Hanson, Mike Brown, Rick Lanning, Beth Berglund and myself.
Kitsap County staff: Peter Best and Liz Williams.

A few of the major barriers to development identified were:

1. **MIXED USE REQUIREMENT**
   Every site in the UVC was zoned mixed use, the concept being, commercial on the ground floor and residential on the upper floors.

   From a practical standpoint this limited the building to 3 floors or a ratio of 2 SF of residential to 1 SF of commercial. This is simply not sustainable. Our existing downtown businesses, in this town of roughly 2,500 people, were already struggling in the winter months. Forcing more commercial space into the UVC didn't make any sense.

   A more sustainable ratio might be in the area of 30 SF residential to 1 SF of commercial. Bainbridge Island which has roughly 10 times the population of Kingston, has a mixed use development on Winslow Way right across the street from the ferry parking lot that was built roughly 10 years ago.

   They have struggled to keep the ground floor occupied and, as of this past Sunday, they have 3 of 9 commercial spaces vacant.

   Kingston simply needs more residential units to support commercial occupancy. By designating space as commercial does not make it commercially viable and/or occupied. The market, not code, determines

Port-Proposed Kingston Storefront Zone Meeting

Statement prepared & read by Dave Wetter for March 28, 2023 community mtg

what occupies commercial space.

The Task Force suggested that mixed use should be optional in the UVC zone and not by specific site. A compromise was worked out with the staff that convertible ground floor space should be limited to eastbound 104 and Washington Avenue.

Convertible space (depending on market demand for commercial) is space that could, initially, be residential which could be later converted to commercial as needed.

Commercial space has four significant additional costs over non-commercial space. Those being higher ceilings, Fire Sprinklers, ADA access and air conditioning.

From a practical standpoint, a developer of convertible space, would likely have to, initially, build the higher ceilings and maybe some of the ADA access requirements.

The fire sprinklers, Air conditioning and some of the ADA requirements could be addressed at the time of conversion to commercial space.

If this ground floor commercial / convertible zone was to be considered for expansion, it should not be undertaken lightly, lest we, again, raise up the same barriers to development that were just removed before the pandemic.

A fact-based market study should be conducted which should include comparable populations. And, ground floor storefront space need not be the entire floor, particularly, for deeper sites and our low population.

Port-Proposed Kingston Storefront Zone Meeting

Statement prepared & read by Dave Wetter for March 28, 2023 community mtg

2. **PRESCRIPTIVE LIMITATIONS ON HOUSING TYPES**

Another barrier to development was the requirement that any residential in the UVC zone need to be attached or multi-use. The Task Force advanced the argument that, as long as the density requirements are being met, the county should not dictate the type of residential style.

Let the market decide the product. This argument prevailed in the approved use table.

This brings us to the Design Standards for the Community of Kingston. (The little city by the sea) Stated Purpose (page 4 after yellow tab):

> *"The purpose of the following Design Standards is to help implement the physical aspects of the Kingston community vision for downtown in the Kingston Subarea Plan. These standards are intended to promote Kingston's small town character and support economic vitality while accommodating the impact of existing regional transportation and tourism issues. The intent is not only to provide some assurance to the community of basic conformity to the vision statement but, also to encourage creativity."*

The Task Force supported this purpose by suggesting the developers should use their creativity to implement a performance-based, and marketable product, that fit this small town character vision, and that met the density requirements.

The developer's solution might not be a ubiquitous and/or prescriptive 3 or 4 story rectangular block but, rather, hopefully, something more unique.

Port-Proposed Kingston Storefront Zone Meeting

Statement prepared & read by Dave Wetter for March 28, 2023 community mtg

3. **REQUIREMENTS PROBLEMATIC FOR SMALL PARCEL INFILL**
   Another barrier to development was the UVC relatively small sites that, in addition to store frontage, and density, they also needed to accommodate parking on site and 15% landscaping.

   We were able to get some parking reductions with the implementation of the High Capacity Transit Station Area. Also, by some adjacent street parking and remote parking.

Other barriers were addressed in the 2019 Comprehensive Plan Amendments ordinance and use table.

Before the Committee's work could be approved, it first had to be publicly vetted in Kingston and presented before the Board of Commissioners in a public hearing.

On 4-27-2020, the Board of Commissioners approved the Task Force final recommendations which are in the notebook I distributed.

Kingston Comp Plan Team Poll

(1/31/24-2/4/24)

	Do you have a strong preference about the Kingston UGA boundaries / maps?	Do you have a strong preference for max building height allowances along 104 (UVC zone / Old Town / Waterfront design districts)?	Do you have a strong opinion about buildings having commercial frontage on the ground floor?
Responder #1	Yes, I prefer the Alternative 2 Map (compact growth)	Yes, I'd like to see height limited to 35' with an additional allowance for 10 more feet with a setback so the street-side facades appear to be 35'. This could include additional heigh allowances on the Central Ave side of the UVC where it's open on the shoreline / parking lot side of the street.	Yes, same as the one just above but that flexibility should only be available to new buildings. Existing structures with commercial in place can't change use to residential on the ground floor.
Responder #2	Yes, I prefer the Alternative 2 Map (compact growth)	No, the maximum building height in downtown Kingston isn't a priority for me.	Yes, I want to offer flexibility for commercial use on the first floor inside the UVC as long as it's built to be convertible to commercial once Kingston has more population.
Responder #3	Yes, I prefer the Alternative 3 Map (dispersed growth)	Yes, I'd like to see height limited to 35' with an additional allowance for 10 more feet with a setback so the street-side facades appear to be 35'. This could include additional heigh allowances on the Central Ave side of the UVC where it's open on the shoreline / parking lot side of the street.	Yes, I want to offer flexibility for commercial use on the first floor inside the UVC as long as it's built to be convertible to commercial once Kingston has more population.
Responder #4	No. The UGA lines don't matter much to me.	Yes, I'd like to see height limited to 35' with an additional allowance for 10 more feet with a setback so the street-side facades appear to be 35'. This could include additional heigh allowances on the Central Ave side of the UVC where it's open on the shoreline / parking lot side of the street., Also prefer a 55' limit in the commercial district (along Hwy 104 from Banister to Lindvog.	Yes, storefronts throught the area on the map called the Storefront Overlay should have commercial frontage.
Responder #5	No. The UGA lines don't matter much to me.	Yes, I'd like to see more height (55') allowed all along 104 from Lindvog to wherever the Shoreline Master Plan restrictions kick in.	Yes, storefronts throught the area on the map called the Storefront Overlay should have commercial frontage.
Responder #6	Yes, I prefer the Alternative 2 Map (compact growth)	Yes, I'd like to see height limited to 35' with an additional allowance for 10 more feet with a setback so the street-side facades appear to be 35'. This could include additional heigh allowances on the Central Ave side of the UVC where it's open on the shoreline / parking lot side of the street., But the current height is 45 not 35 so I believe your second option has a typo	Yes, I want to offer flexibility for commercial use on the first floor inside the UVC as long as it's built to be convertible to commercial once Kingston has more population.
Responder #7	Yes, I prefer the Alternative 3 Map (dispersed growth)	Yes, I'd like to see more height (55') allowed all along 104 from Lindvog to wherever the Shoreline Master Plan restrictions kick in.	Yes, storefronts throught the area on the map called the Storefront Overlay should have commercial frontage.
Responder #8	Yes, I prefer the Alternative 2 Map (compact growth)	No, the maximum building height in downtown Kingston isn't a priority for me.	Yes, I want to offer flexibility for commercial use on the first floor inside the UVC as long as it's built to be convertible to commercial once Kingston has more population.
Responder #9	Yes, I prefer the Alternative 2 Map (compact growth)	I would like to see 55 in a small part of the UVC along Ohio between 104 and Central and along Washington, leaving the rest of the UVC at 45. I could support 50 in the Commercial zone with setbacks to reduce prevent a tunnel effect.	Yes, I want to offer flexibility for commercial use on the first floor inside the UVC as long as it's built to be convertible to commercial once Kingston has more population.

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Comments on the Draft Kitsap County Comprehensive Plan and Draft Environmental Impact Statement from the Suquamish Citizens Advisory Council

February 26, 2024

We appreciate this opportunity to provide comments on behalf of the Suquamish Citizens Advisory Council – a County Commissioner appointed forum to discuss and share issues of mutual interest.

SCAC appreciates Kitsap County staff work on a very big, very impactful periodic update to the Comprehensive Plan as analyzed in a large, multi-faceted Draft Environmental Impact Statement (EIS).

After careful and thorough review of the EIS and its review and analysis of the potential, irreversible adverse impacts to the natural and human environment, we are concerned that there are areas in the EIS that do not fully discuss nor mitigate environmental impacts connected with the alternatives, especially Alternative 2 (Dense Centers) and Alternative 3 (Dispersed Growth). This is very concerning to the Suquamish Subarea and the North Kitsap region within which Suquamish exists. We believe these areas of incomplete review and analysis must be corrected before the publication of the final EIS, final preferred alternative and final Comprehensive Plan.

Specific comments follow:

Proposed Upzoning of lands in North Kitsap Rural Areas. The upzoning of hundreds of acres of forested-zoned land from 1 dwelling unit per twenty acres to 1 dwelling unit per five acres on Bond Road is absurd. The analysis of the impacts of this proposal on the human and natural environment is incomplete and unacceptable. The Suquamish subarea stands to be significantly and irreversibly impacted by the intense densification of large acreage in the region that includes the Suquamish subarea. Impacts on traffic flow, roadway quality, pedestrian uses, water resources and populations of birds, fish and wildlife dependent on forested zoned lands are significant. This is true even though forested-zoned lands are harvested and replanted. Further, the EIS relies upon existing development standards (e.g., critical areas and stormwater regulations) as mitigation measures. Under the State Environmental Policy Act (SEPA), the impacts discussed in an EIS are assumed to already be subject to existing regulations. The impacts associated with this large, atypical upzoning remain even after applicable development standards and related 'programmatic' measures are applied. Measures other than existing regulations, such as in-kind (e.g., preservation ratios) and out-of-kind (e.g., offsite preservation, in-lieu fee, etc.) are required to be considered in mitigating probable adverse impacts to the human and natural environment. We believe the preparation of a second draft EIS be considered that fully analyzes mitigation measures, as required by SEPA, that contemplate actions outside of the application of existing programs and standards.

Connecting New Standards to Alternatives. We are concerned that the imposition of certain, selected new standards has not been adequately analyzed or discussed. First, we note the removal of lot consolidation for the Suquamish Subarea as discussed solely in Alternative 3. We understand that the impetus of this removal is to encourage higher housing production. This new proposed prohibition on lot consolidation does not appear to consider that substantial areas in the Suquamish Subarea are still

reliant on septic systems and do not have access to municipal wastewater treatment. This does not appear to have been considered. We propose that lot consolidation be optional and not prohibited.

Second, we believe Accessory Dwelling Units should be analyzed on both alternatives.

Third, we note that the proposal for expanded stream protections (expanded buffers and management areas) is described only in Alternative 3 and not in Alternative 2. During a public open house recently held in Suquamish, county staff gave details that expanded stream protection would only be needed because only in Alternative 3 there is conceived to be dispersed growth which may put more pressure on critical areas and their buffers, including streams. We disagree with this reasoning. Under both Alternatives, increased impacts to regulated streams and their buffers exist. We believe the expanded buffer and other stream protections should have been a component of both Alternatives.

Tree Protection and Retention Missing from the Draft EIS and Comprehensive Plan update. We are disappointed that the County has not joined other nearby jurisdictions to propose regulations specifically to protect and retain mature trees. Regulating the retention of trees, tree cover and mature tree canopies provide numerous benefits to the human and natural environment and ameliorate effects of climate change. Particularly in the rural areas of North Kitsap where valuable, mature, intact forest tracts exist, there is urgently needed land use and environmental controls to protect trees. We are deeply dismayed that the County proposes heavy decreases in rural wooded and rural protection acres. Confusingly, under Alternative 3 only, tree retention is not applicable to rural zones – precisely where tree protection is needed most. Similarly, the EIS blatantly describes tree conservation solely in terms of tree replacement after development occurs. We believe this is shortsighted and believe a revised draft EIS should include and analyze tree protections to address climate change, and to preserve and protect the human and natural environment.

Comments on the Suquamish Subarea Plan

VISION

We recommend that the County utilize both a “climate lens” and an “equity lens” in relevant decisions such as budgeting, program support, capital project planning and code changes in expressing the vision for the County. We suggest they follow the language edits made by the Kitsap Environmental Coalition in their submission to the County.

CAPITAL AND ECONOMIC DEVELOPMENT

We urge the County to treat high-speed internet as a necessary utility and provide access to 5G throughout Suquamish, whether provided by KPUD or a different entity.

Enhance the community by encouraging the development of amenities including expanded retail venues such as a coffee shop and a community meeting place.

Allow for designated loading areas for large trucks delivering to Suquamish businesses.

TRANSPORTATION

The location of Suquamish between two of the major ferry links of Bainbridge and Kingston means that significant traffic moves through our community every day causing increased safety risks. For that reason we want to see some road improvements designed to protect pedestrians and reduce vehicle speeds. To that end we support the following:

- Add traffic calming changes, such as traffic speed tables, to certain streets including Augusta, Division, and Columbia to encourage drivers to observe speed limits.
- Add crosswalks and walkways on Division, Augusta, and Brockton where needed to enhance pedestrian safety.
- Improve and/or pave the shoulders of Miller Bay Road from Geneva St. to Gunderson Road to provide a safe route for pedestrians and bicyclists from Suquamish to Kingston.
- Improve and/or pave the shoulders on NE Columbia Street from Division to Lincoln Road to provide a safe route for pedestrians and bicyclists as the alternate northern route out of Suquamish.
- Add additional street lighting where necessary for public safety such as adjacent to bus stops and on Division above and below the intersection with Suquamish Way.

In addition, encourage Kitsap Transit to add back direct service between the Suquamish Park and Ride (at the Suquamish UCC) and Kingston, Poulsbo, and Bainbridge Island.

PARKS AND OPEN SPACE

Parks and open space are important to the Suquamish community. We support coordinating efforts among the community, the Suquamish tribe and the County to maintain and enhance existing parks within and surrounding Suquamish to their fullest potential.

- Coordinate with the Suquamish Tribe to transfer ownership of the Sports Court and Angeline Park from the County to the Tribe with an agreement that the parks will be maintained with access to the general public and in cooperation with park stewards.
- Enhance public access to County road ends at James and Hemphill through improved trails consistent with the goals of the Shoreline Management Act.
- Provide a pedestrian connection between Suquamish and the network of trails within the Cowling Creek Preserve.

STORMWATER AND SEWER

Stormwater runoff continues to be a problem in Suquamish. For that reason we want to have the County continue to implement Suquamish Stormwater and Sewer Improvements and assess where additional work is needed.

- Complete the stormwater treatment project that has been designed and expand this project to include Harris and Angeline Ave.
- Conduct an assessment to determine where additional work is needed

HOUSING

In the past, some areas of Suquamish were divided into small lots that are not consistent with current County zoning requirements. These “legacy lots” are grandfathered in and can be built on; however, the Suquamish area is designated to remain primarily a more rural area. Lot consolidation should be an option based on sewer availability.

Future County growth should be directed to Urban Growth Areas and cities as identified through the County Comprehensive Plan consistent with the direction of the Growth Management Act and Puget Sound Regional Council.

There remains a regional shortage of affordable housing. The Suquamish Subarea could allow accessory dwelling units provided there is adequate lot size and sewer available.

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Draft EIS comments due February

Topics:

Alternative 2: fits GMA putting growth in the UGA's. This would be the best application and should be the only alternative considered for growth and while also protecting our rural areas for farming and for keeping clean watersheds.

Environment:

3.3.3.4 Heritage Parks: Port Gamble Forest Heritage Park as included in the draft Comp plan needs to be assessed under this EIS. There have been no delineations of wetlands in the park which is a great oversight. What is meant by a heritage park and why is this considered a heritage park? I would imagine it is called a heritage park because it was previously inhabited by the indigenous people for centuries, but there is no indication here that this is what happened. Only a leftover of the logging industry yet instead of loggers raking over the land we now let mountain bikers destroying the park.

3.1.4.1 Rhododendron macrophyllum is an important native plant in Kitsap County and should be listed here.

Also, in this section scotch broom and Himalayan blackberry need to be listed as nonnative, invasive shrubs.

Table 3.1.4.1-3 Should Port Gamble Bay herring be listed as declining?

3.2.6.1 Regarding the STO/NSTO there is currently no construction to be done in 2024 and this should not be included here unless an EIS will or has been done. There are toxic effects of asphalt on the environment as well as toxic effects of the tires from bicycles. See this article: https://washingtonstatestandard.com/2023/08/01/tribes-call-for-feds-to-ban-chemical-in-car-tires-that-is-linked-to-salmon-deaths/

And

https://ecology.wa.gov/Water-Shorelines/Puget-Sound/Issues-problems/Toxic-chemicals

Also, regarding nonmotorized transportation: This is one of the key things we should be concerned with, the effects of all our fossil fuel cars on the environment. The concept of the STO/NSTO is not an efficient plan for a nonmotorized transportation system. It is, at best a developer's plan for a developer rather than a plan for common sense use for the county. With some rerouting done it would be a much better plan. Putting a paved road through our heritage parks is nothing but a disaster to the environment. The plan should be around the UGA's, neighborhoods and schools so people can get to the everyday places they go, not for tourists to ride around the county on a highly expensive, barely used asphalt trail that goes through our heritage parks and causes pollution via asphalt and rubber tires.

3.2.6.1-13 This map is only a conceptualization.

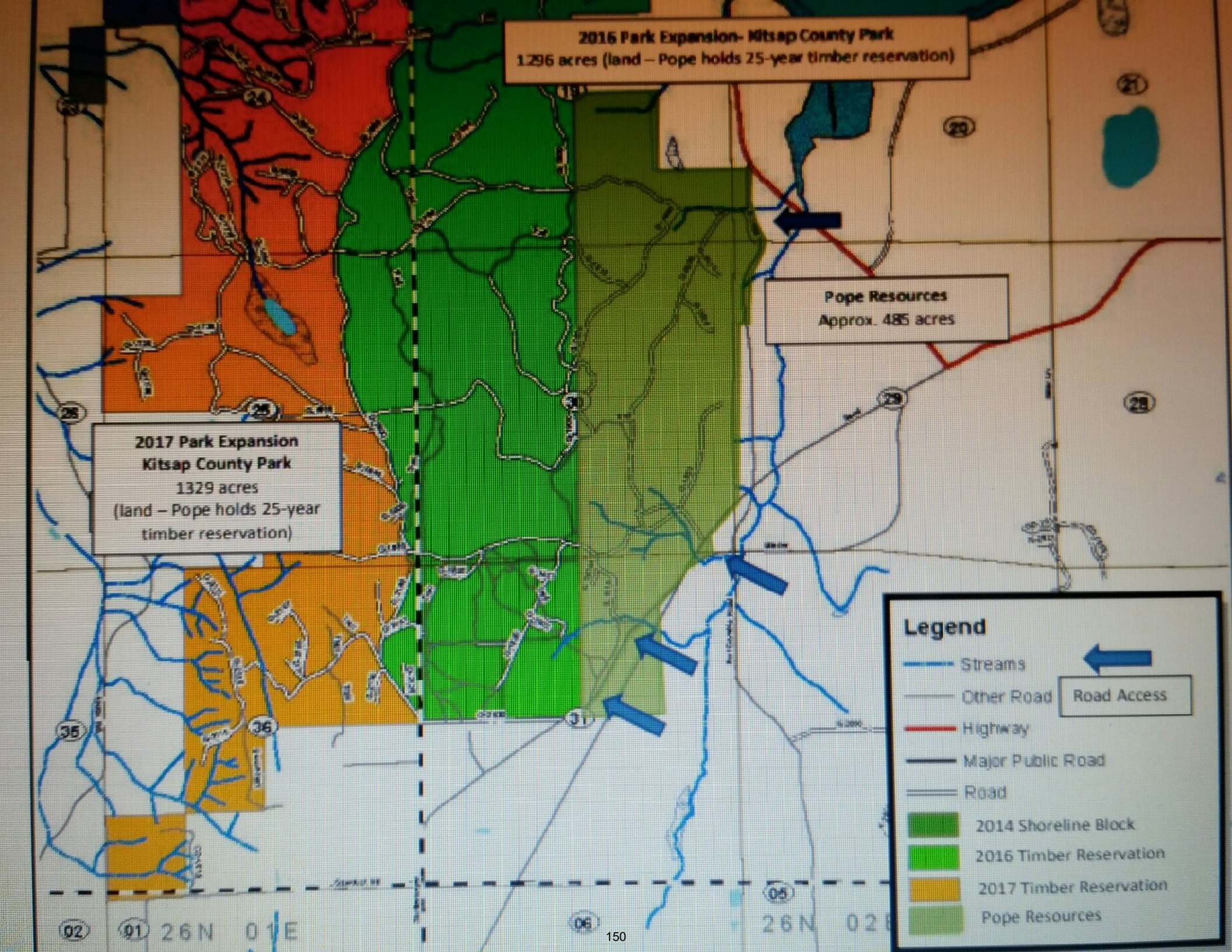
Question: Why does the dEIS not address climate change?

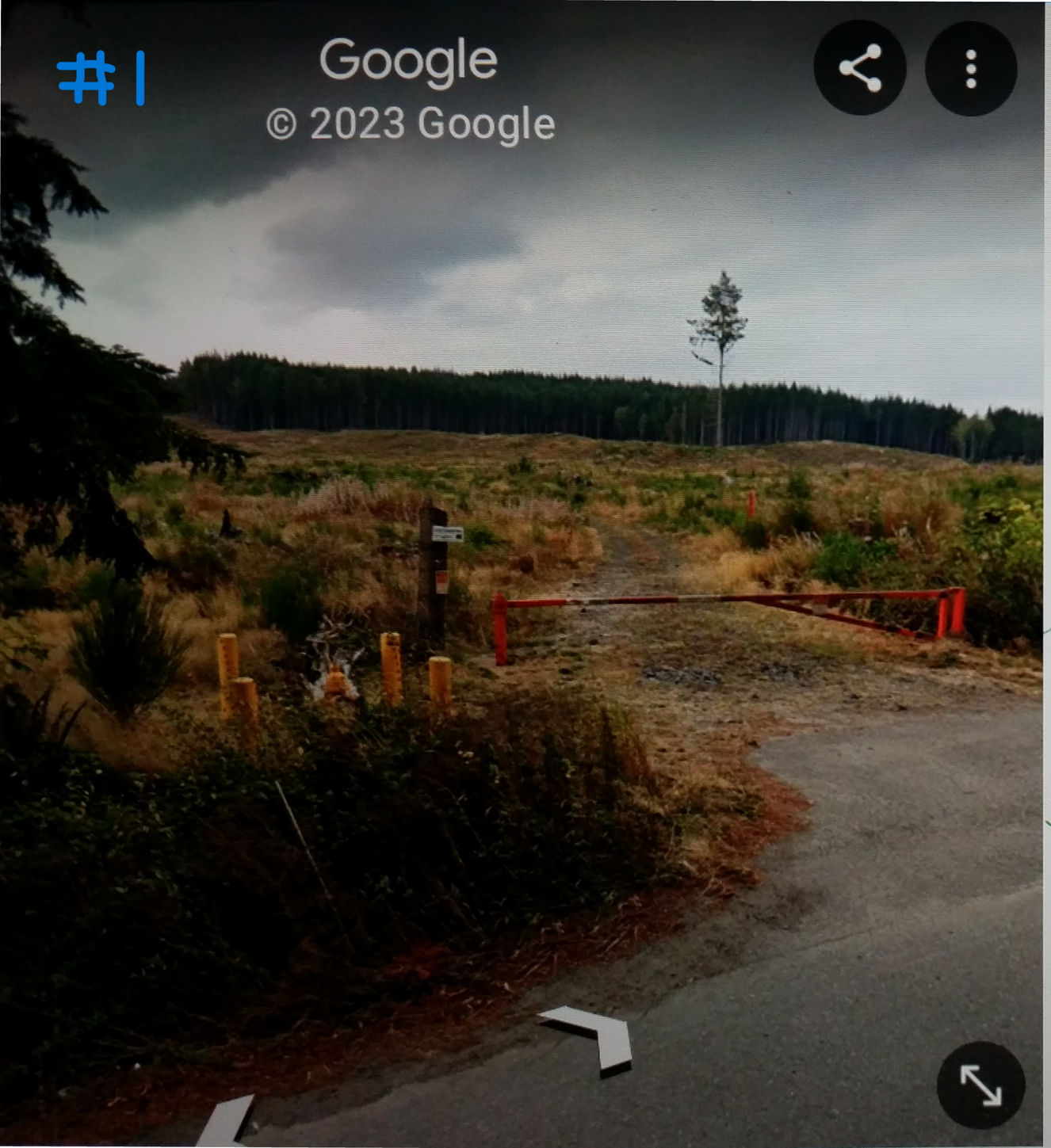
Return to Comment Matrix

acts to create farms. A sawmill was founded by William Talbot S
Andrew Pope on Gamble Bay in 1853, which remained in operati
until 1995. The land has been a working timber forest for more th
160 years. The timber companies have traditionally allowed pub
access and recreational use. A trail system was developed over ti
by the local hiking, equestrian, and mountain biking community.

After many years of effort and fundraising, Kitsap County was
able to afford to buy both the land and trees and decided to priorit
long run land conservation over saving trees. In a series of 20
and 2017 transactions (see data in the column to the right), Kits
County acquired 2,723 additional acres, while Pope Resources (n
Rayonier) retained the timber rights to make one more harvest o
25 years (until 2042). By the end of December 2017, Kitsap Cou
had acquired all of the 3,500 acres which make up PGFHP. In so
blocks, the County purchased the land and the timber; in other are
Rayonier retained the timber rights and will be allowed to harv
timber once more. The public will continue to see more industr
timber harvests in these areas where Rayonier retained timber harv
rights.

However, the terms of the purchase agreements do allow Kits


2016 Park Expansion- Kitsap County Park
1296 acres (land – Pope holds 25-year timber reservation)
Pope Resources
Approx. 485 acres
2017 Park Expansion
Kitsap County Park
1329 acres
(land – Pope holds 25-year timber reservation)
Legend
Streams
Other Road
Highway
Major Public Road
Road
2014 Shoreline Block
2016 Timber Reservation
2017 Timber Reservation
Pope Resources
Road Access
26N 01E
26N 02E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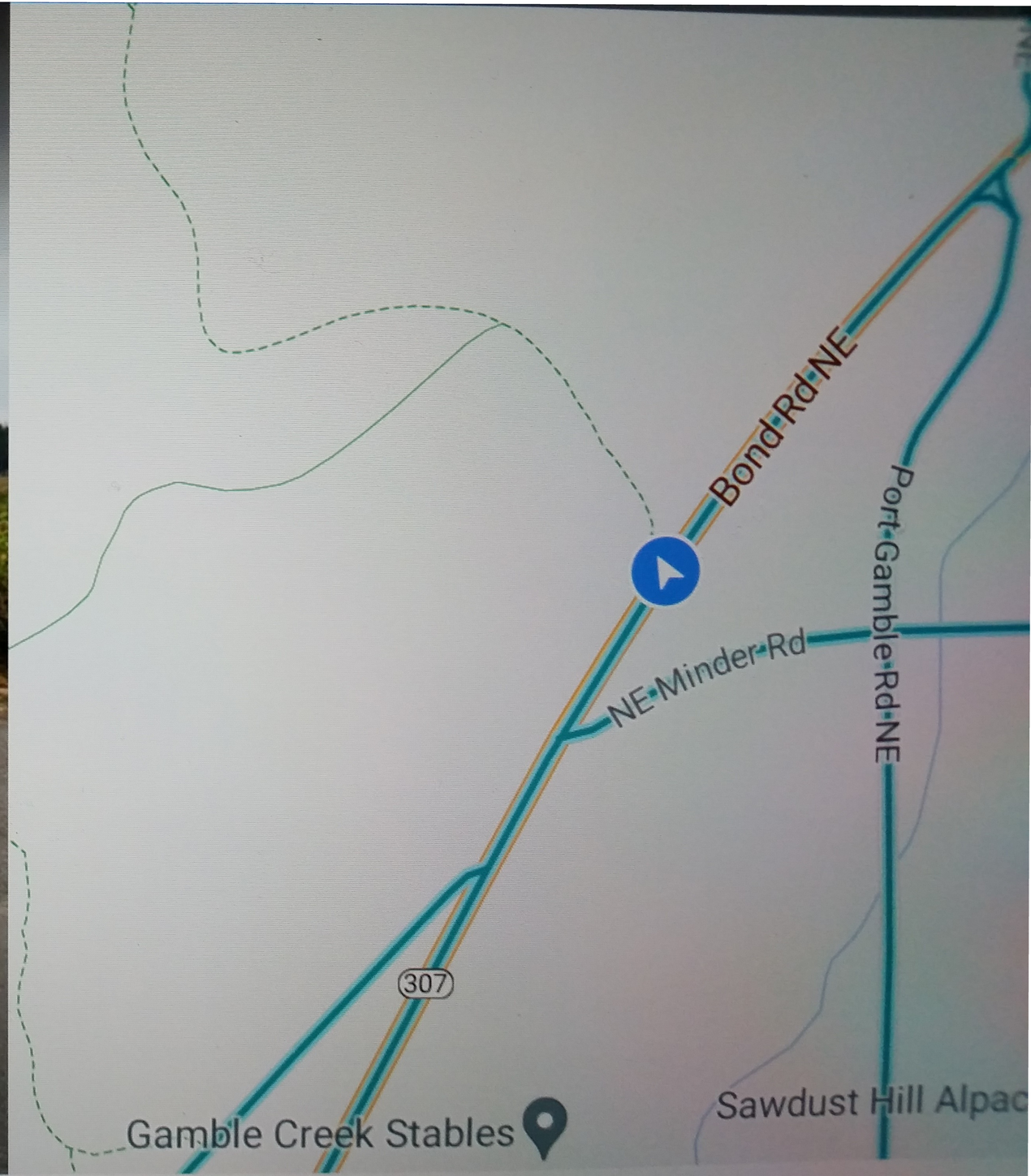
Google
© 2023 Google


Bond Rd NE
Port Gamble Rd NE
NE Minder Rd
307
Gamble Creek Stables
Sawdust Hill Alpac


#2

Return to Comment Matrix

Port Orchard Police Chief Matt Brown overlooking the Sinclair Inlet of the Puget Sound in the picturesque area of Washington. A drug ring linked to the CJNG cartel operated a meth conversion lab in the small town. Nov. 13, 2023 *Sam Upshaw Jr./Courier Journal*

Drug cartels Add Topic

'That level of violence is terrifying': Mexican cartel targets tranquil Puget Sound city

Beth Warren
USA TODAY NETWORK

Published 6:03 a.m. ET Feb. 10, 2024 | **Updated 5:45 p.m. ET Feb. 15, 2024**

PORT ORCHARD, Wash. — A Mexican super cartel brought its deadly drugs and violence to the tranquil and remote waterfront community of Port Orchard, a 90-minute ferry ride west of Seattle.

Here, the Kitsap Peninsula, billed as "the natural side of Puget Sound." attracts hikers, bikers, golfers and boaters — and members of a top U.S. target, the Cártel Jalisco Nueva Generación.

The cartel, known as CJNG, set up a meth conversion lab here years ago as part of a Western Washington drug cell that pummeled the region with millions of dollars worth of heroin, meth, cocaine and fentanyl-laced pills.

Standing near the chilly waters of the Sinclair Inlet during a recent interview, Police Chief Matt Brown described how Port Orchard's police force of 23 is outnumbered in the struggle to safeguard the town's nearly 17,000 residents from international drug networks and deadly fentanyl.

The situation he described contrasts with the image across the water on the opposite bank in Bremerton, home to the sprawling Puget Sound Naval Shipyard, providing maintenance and support to help assure U.S. "dominance at sea."

"We no longer have a drug task force" in Port Orchard or Kitsap County, said the chief, who considers it "absolutely" concerning.

Selecting a town like Port Orchard, 28 miles northwest of Tacoma, is indicative of a key CJNG strategy to reach its tentacles deep into small, unexpected corners of America.

"They chose places that may not have a large law enforcement presence, and places people wouldn't expect cartels to be operating in — in the beautiful community of Port Orchard on the water," said Tessa Gorman, acting U.S. Attorney for the Western District of Washington, headquartered in Seattle.

A Tacoma-based task force, led by the U.S. Drug Enforcement Administration, stumbled onto CJNG's drug ring in 2019 and secured authorization from a federal judge to perform wire taps, monitoring more than two dozen phones for 18 months.

Investigators soon learned the drug ring's crimes stretched to several West Coast communities and south into Oregon and California.

"It wasn't until six months into the investigation until we knew how big it was, because it just kept spider-webbing and spider-webbing, getting bigger and bigger," said Luke Brandeberry, who worked on the case as a DEA task force officer.

"The drug ring we were investigating, CJNG, the Cartel Jalisco New Generation, is notorious for the amount of violence they would use down in Mexico, as well as locally here in Washington," he said.

Gorman, who oversees all federal prosecutions in Western Washington, said the investigation unearthed a massive drug network that stood out for its savagery. She said the violence drug ring members were willing to use to protect their business, was "extremely disturbing."

"There were kidnapping plots, there were shots fired, there were talks about torture, including cutting off hands," Gorman said. "That level of violence in our community is terrifying."

The Louisville Courier Journal, part of the USA TODAY Network, traveled to Seattle, Tacoma, Kent and Port Orchard in November to interview police and prosecutors and sift through court records to learn more about the violent CJNG drug ring that targeted Western Washington. This report is part of an ongoing project that began in 2019 with a nine-month investigation on CJNG and its key role in the deadliest drug epidemic in U.S. history.

Americans tend to know more about CJNG's top rival, the Sinaloa Cartel, and its infamous former kingpin "El Chapo," but CJNG is the other dominant cartel pummeling the U.S. with deadly drugs, according to DEA reports.

CJNG's leader, "El Mencho," has remained on the run in Mexico for more than a decade, despite a $10 million reward for tips leading to his capture.

In Washington, CJNG put Juan Antonio Gonzalez-Carrillo, known as "Toto," over the drug ring and he often "fronted" drugs — allowing local traffickers to take the drugs on loan and repay him later, prosecutors allege in court records. Some dealers began to use drugs themselves, running up big tabs, while others were robbed or lost drug shipments during police traffic stops.

Back in Mexico, CJNG leaders grew angry. They sent cartel supervisor Alan Gomez-Marentes to take the reins of the drug ring and oversee debt collection. After a territorial dispute, Toto left the area and resurfaced in California. A grand jury in Seattle indicted him in 2020 on drug trafficking charges, but he disappeared. Police aren't sure if he's in hiding or dead.

Marentes left his home in Zapopan, west of Guadalajara in the state of Jalisco, CJNG's headquarters, unaware of the trouble awaiting him in the U.S.

Marentes headed to Washington and settled in the Kent area of King County, between Seattle and Tacoma. During phone calls with underlings, he openly boasted about his close ties to top CJNG leadership and his new role as the boss of the Washington cartel cell, said Brandeberry, who overheard the conversations while monitoring wiretaps.

Marentes didn't know investigators were listening as he revealed details about specific drug shipments and revenge plots — words that would come back to haunt him.

"There were several times we had to jump in the middle of something because we found out with five or 10 minutes to spare, that someone's about to be killed, kidnapped or shot," Brandeberry said.

The drug ring's muscle, Luis Arturo Magana-Ramirez, who lived in Fife, Washington, often chatted about plans to abduct, harm or kill debtors as agents monitored the calls or texts, according to Magana-Ramirez's plea agreement.

Investigators would have to rush, often rousting the lead case prosecutor from sleep, to ask for guidance. They didn't want to prematurely blow up their investigation, but they didn't want anyone to get hurt.

"It's a really hard balancing act for officers and prosecutors," Gorman said. "You're walking a tight rope every day. They are constantly assessing when to intervene."

Sometimes, police didn't have enough information ahead of time to prevent kidnappings and beatings and other violence.

For instance, investigators were going to arrest a local street-level dealer, but couldn't find him. The man, who owed the drug ring money, vanished. Brandeberry, who had bought drugs from the man while working undercover, said information learned during the investigation indicates the man was murdered and his body dumped somewhere in a vast, wooded area of south King County.

Another time, drug ring member Jose Elias Barbosa attempted to seize a woman's car because she owed a drug debt. Someone stepped in and shot Barbosa in the collarbone in the November 2019 incident outside the Port

Orchard meth house, which was near a shopping center. Barbosa survived but refused to identify the gunman, so the case remains unsolved.

He ended up in danger again, and this time police came to his rescue.

Magana-Ramirez offered another drug ring member $10,000 for Barbosa's head. At the time, no one could find Barbosa, so another plan was hatched to kidnap Barbosa's brother-in-law and cut off the man's hand, which would be sent in a box as a warning to Barbosa.

Barbosa resurfaced, so police rushed to arrest him at a Mexican restaurant in Kent to prevent his murder. As officers arrived, they spotted suspicious men in a BMW watching the restaurant and believe the men had been waiting for the chance to snatch Barbosa.

Somehow, Barbosa's brother-in-law learned of the murder plot and successfully convinced relatives in Mexico to lobby cartel leaders to spare him and Barbosa.

CJNG often sends boxes of hands or even heads to victims' relatives in Mexico as a way to rule by fear. But CJNG and other cartels typically avoid "spill over violence" across the border because it draws too much attention from U.S. police.

But this drug ring continuously plotted acts of violence in Western Washington.

In Port Orchard, when agents raided the meth house after Barbosa was shot, they found 15 guns, along with heroin and cocaine. They also found 1,700 fake prescription pills laced with fentanyl, of particular concern as DEA testing indicates seven out of every 10 pills on the streets today contain a potentially lethal dose.

Inside the house, police also found 120 pounds of methamphetamine, including meth-infused candles. Cartels are increasingly sneaking meth into the U.S. in liquid form, hidden in candles, gasoline or windshield wiper fluid.

CJNG's Washington cell routinely gave shipment orders to a cook in Mexico, who infused candle wax with liquid meth. Once the candles arrived at the home in Port Orchard, drug ring members extracted the meth and turned it back into a solid. Traffickers then packaged the product, in hard, clear chunks that resemble rock candy, to sell to customers.

In April, 2020, Magana-Ramirez described revenge plots against those who owned money for drugs, saying one man "needed a beating."

Magana-Ramirez told a drug ring member to "gather as many toys as you can," referring to guns, "so I can take them down," according to his plea agreement.

"This is about me getting, grabbing them and tying them up with a strap like a [expletive] dog."

Marentes and Magana-Ramirez were among about two dozen drug ring members or associates arrested in July 2020. All ended up pleading guilty.

In sentencing memos for some of the key drug ring members, prosecutors attempted to describe the harm they had done to the community. The assistant U.S. attorneys cited overdose data for King County, home to Seattle and Kent, which was averaging 17 deaths a week from overdoses, mainly from fentanyl.

Marentes admitted the drug ring trafficked at least 78 kilos of meth, more than two kilos of heroin and 930 grams of fentanyl, according to his plea agreement. Considering an amount of fentanyl as small as 2 milligrams can kill, Marentes' drug ring brought in an estimated 465,000 potentially lethal doses.

A judge in Seattle sentenced Marentes to serve 11 years in federal prison, where parole is not an option, noting Marentes' prior federal conviction for drug trafficking.

A month after the arrests in 2020, Brandeberry left the DEA task force and returned to patrolling the streets of Kent, forcing him to confront his own town's casualties of international drug trafficking.

"It seemed like every day there was an overdose — just me and another officer with a body in the street, trying to bring them back, trying to find their ID and trying to find their next of kin," Brandeberry said.

"You forget about how many grieving mothers and fathers there are in the country dealing with a lost loved one because of this."

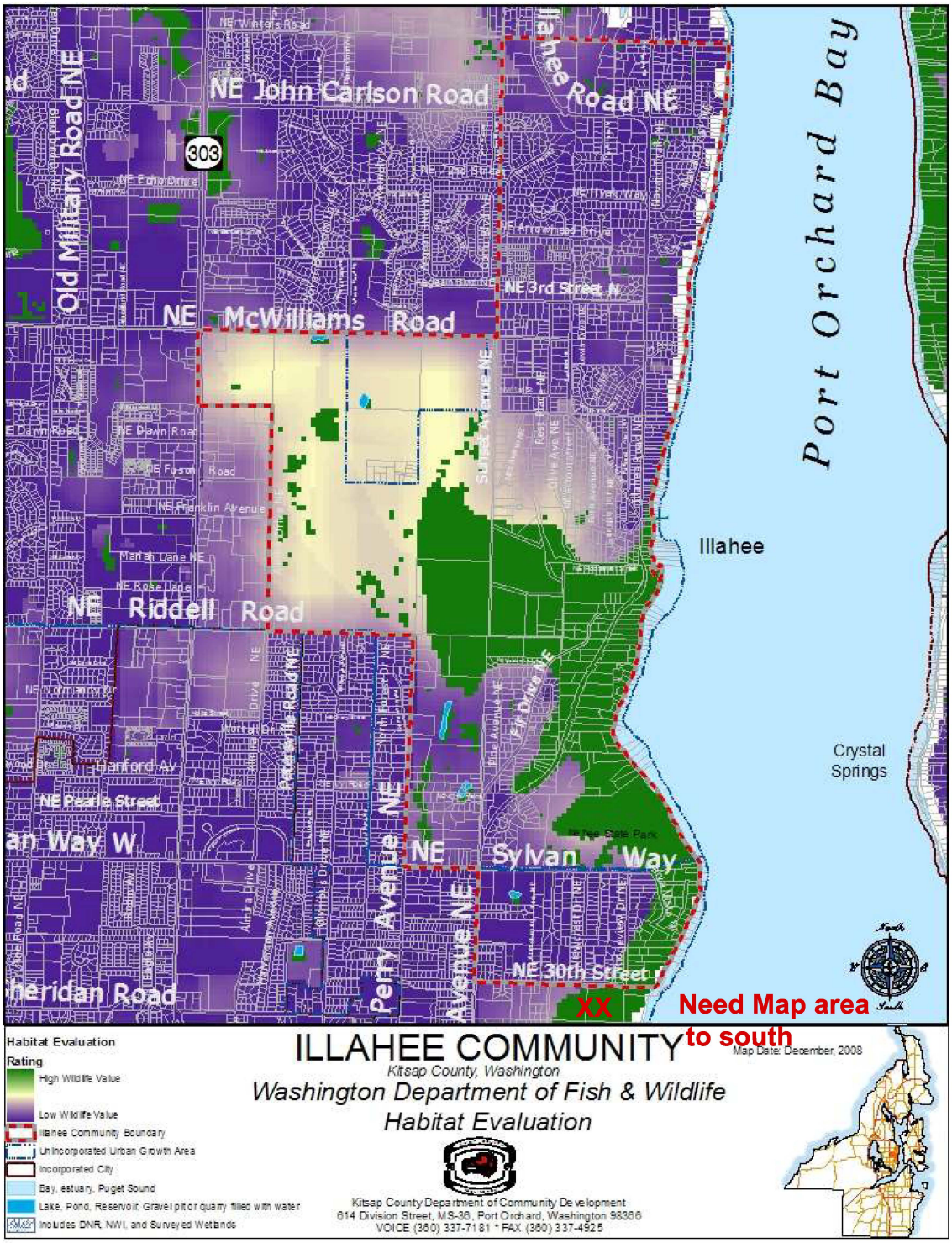


Figure 4.7 Illahee Community WDFW Habitat Evaluation

Wildlife Habitat Patches

This Plan defines "Wildlife Habitat Patches" as significant wildlife habitat areas where significant acreage and quality habitat support a variety of wildlife species. Two major wildlife patches exist within the Illahee community boundaries, and the third wildlife patch, the Cheney Estate–Enetai community area, is contiguous to the Illahee community.

The largest of the Wildlife Habitat Patches is located in the Illahee Preserve. The Preserve is presently 460 acres and has been designated as a primary wildlife preserve conservation habitat area, as designated by the Department of Fish and Wildlife. The wildlife preserve area is comprised of old growth forest and a significant portion of Illahee Creek watershed in its natural state. This represents a premium wildlife habitat area that was recently expanded from 352 acres to the current 460 acres, with plans to further increase the preserve boundaries via conservation easements and land purchases.

The next largest Wildlife Habitat Patch in Illahee is the 75-acre Illahee State Park. This shoreline park with approximately one-half mile of waterfront is heavily forested and is a sanctuary for both marine and terrestrial wildlife.

The Cheney Estate–Enetai Community is a third Wildlife Habitat Patch of approximately 100 acres of primary wildlife habitat immediately south of the Illahee community's southern border. The area is heavily forested with minimal development along the nearly one linear mile of shoreline. Discussions with community and estate personnel indicate it is highly unlikely the area will be developed beyond its present state. This area also has the highest available WDFW habitat rating in the countywide habitat assessment.

Wildlife Corridors

The wildlife within these three Wildlife Habitat Patches are prone to species isolation unless they can be in contact or connected with other patches. This is less of a problem for birds that can fly between other patch areas. It is a larger problem for terrestrial mammals that must traverse overland to reach other wildlife patches.

Wildlife Corridors provide safe paths, free of vehicles and other human disturbance, for wildlife to travel between areas used for sleeping, accessing drinking water, foraging or hunting, and

breeding. Wildlife corridors can range in quality from high to low depending on the obstacles encountered. Lower quality paths are encumbered by more private residences, roadways, and other obstacles that tend to interfere, but not deter, the movement of wildlife. Every consideration must be made to maintain the tree canopy that will provide some kind of continuity for wildlife migration.

Four Wildlife Corridors already exist in the Illahee community and connect the three Wildlife Habitat Patches, i.e., the Illahee Preserve, Illahee State Park, and the Cheney Estate–Enetai community area (Figure 4.8).

The first is a corridor already used by wildlife and links Illahee State Park with the Cheney Estate–Enetai Community. With the near build-out of this corridor area in the 1960s as semi-rural and the fact that there is little vehicle traffic in the area, this Wildlife Corridor functions well to provide movement of wildlife between the two Wildlife Habitat Patches. Because of the natural features in the area, the Illahee community requested the designated housing density for this area to be changed from an Urban Low designation (5-9 housing units per acre) to an Urban Restricted designation (1-5 housing units per acre). The lower density housing designation is more compatible with the natural features of the area and lower densities support the continuation of this already established wildlife corridor. The requested lower zoning changes were agreed upon by the Planning Commission and the Board of County Commissioners and were included in the 2006 Comprehensive Plan Update.

The next Wildlife Corridor already in use connects Illahee State Park with the forested area along the South Fork of Illahee Creek. The Wildlife Corridor runs northwest along the ravine from the State Park boundary, through the Fisher Park area, across Illahee Road, and then directly west across several private properties to the recently acquired Kitsap County Parks property. This area, like the previous area, was approved for the Urban Restricted zoning designation.

The third Wildlife Corridor connects two pieces of Kitsap County Parks Department properties that are part of the Illahee Preserve. The Illahee Preserve Stewardship Committee identified a number of properties along the Illahee Creek corridor that were targeted for purchase or conservation easements. These two properties, or portions thereof, were not secured by previous grants and are being targeted with future grants. Portions of both properties are

considered essential for maintaining a viable Wildlife Corridor in that area.

The fourth Wildlife Corridor also connects Illahee State Park with the natural areas to the north, which are all private but not developed primarily because of the steep slopes along both sides of Illahee hill. This corridor extends upland toward the Fir Drive area and also northward along the shoreline, both of which terminate along the Illahee Creek corridor. The housing density in this area was changed from Urban Low to Urban Restricted based on the natural features of the area. As stated in the previous paragraphs, the lower housing density also supports the already existing wildlife corridors in these areas.

Habitat Standards for Wildlife Habitat Patches and Wildlife Corridors

As stated earlier, the protection of fish and wildlife resources and habitat within the Illahee borders is ultimately the responsibility of the Illahee community. While the two Wildlife Habitat Patches within Illahee are publicly owned, the Wildlife Corridors are primarily in private ownership, and the success of maintaining the habitat quality will depend on the voluntary actions of Illahee landowners.

There are varying habitat standards for Wildlife Habitat Patches and Wildlife Corridors that are only briefly mentioned in this Plan. The first is to maintain the natural features to the maximum extent possible such as wetlands and streams. The second is to maintain natural vegetation as much as is possible such as native trees, shrubs, and plants. The last is to avoid barriers such as solid fences, etc., to the maximum degree possible.

“SAVE ENETAI” – ENETAI-ILLAHEE COMMUNITY ALLIANCE

SaveEnetai.org **FACEBOOK: SAVEENETAI** (Look for purple mountains) GOFUNDME: SAVE ENETAI

SAVE ENETAI is a citizen’s group dedicated to protecting and enhancing the Enetai community’s character and environment. Our goal is to protect a 65 acres waterfront estate of old growth forest that connects to a designated wildlife corridor south of Illahee State Park. A developer is proposing a 189 homes subdivision on 37 acres. Our vision includes amending the existing Illahee Community Plan to include Enetai and create the Illahee-Enetai Community Plan.

CRITICAL AREAS OF ENETAI

Maps:

1. Groundwater Resources-Recharge Areas, City of Bremerton
2. Critical Aquifers (includes shoreline wetlands overlay) - County GIS Parcel System
3. Seismic High Hazard-Earthquake / Potential Wetlands-Enetai Creek – County GIS Parcel System
4. Geologic Critical Areas - County GIS Parcel System
5. Bald Eagles Nest - County GIS Parcel System
6. ZONING – County Map 2016 Comp Plan June 2016
7. Lot Layout from Team4 as part of Permit Application – note spring
8. Reference document: Illahee Community Plan: https://www.kitsapgov.com/dcd/PEP%20Documents/Illahee%20Community%20Plan.pdf
9. Reference document: Illahee Aquifer Protection Plan
10. Reference documents additional -see saveenetai.org DOCUMENTS page.

HYDROGEOLOGY – NORTH MANETTE AQUIFER RECHARGE AREA

The entire 65-acre estate is considered a critical aquifer recharge area. Most all of the proposed Fisher Plat is considered **Category I,** the highest rating (see MAP 1.) There is a water source (spring) located on the SE edge of the Fisher Plat (see MAP 7.) The spring has been the sole water source to the Enetai Beach area for decades aside from few wells. The holding tanks are on the Fisher estate (formerly Cheney) and ENETAI residents have service the tank for decades with Cheney permission. In the past year, all ENETAI residents have put in their own wells due to developer/owner preferences not to allow others on his properties.

The mouth of ENETAI Creek is at the south end of ENETAI Beach and is a designated fish-bearing creek. (See Maps 3 & 4). The SE corner of Fisher Plat sits on the top of slope for Enetai Creek in an area designated moderate to high landslide hazard area. The proposed sewer-line extension for city sewer preferred by Team4 is to come down Fruitland/Helm crossing ENETAI Creek. Significant birds roost in this area of ENETAI creek.

STORMWATER runoff and impacts to critical aquifer by this proposed subdivision have not been assessed and will have significant impacts to the area.

GROUNDWATER:

According to a study done by Parametrix and Ketawaters in 2008, that was part of the Illahee Community Plan, “data suggests that groundwater resources on the Manette Peninsula and within Illahee creek watershed may be over-allocated.” Land use changes that have resulted from urbanization and development have likely resulted in reduced groundwater recharge within the Illahee Creek watershed.” This also applies to the Manette watershed. The detailed report supports development of a groundwater model for the Manette Peninsula. To date, “No model has been developed for simulating flow conditions and impacts on the Manette Peninsula.” See attached for Illahee Aquifer Protection Plan and weblink for Illahee Community Plan for more detail.

WETLANDS

There are suspected wetlands adjacent to the NW corner of Fisher Plat and are indicated on the shoreline (See Map 2 and 5). Long-time residents have knowledge of ponds forming seasonally and known frogs there. We are not aware of any wetland assessments being done on the parcels aside from the shoreline.

GEOLOGY/TOPOGRAPHY

There are numerous Geologic Critical Areas on the 65 acres estate. (See Maps 3 & 4). The Fisher Plat area sits on the edge of 40% slopes that drop to the water and known High Landslide Hazard area with moderate seismic hazards at the base. The estate is south of recently identified Seismic High Hazard Area in Illahee. Approximately 70% of the Fisher Plat (proposed subdivision) is High Erosion Hazard, with 30% designated Moderate Erosion Hazard area. The SW corner of the Fisher Plat sits at the top of slope for ENETAI Creek where it is designated High Landslide and Erosion Hazard areas. The topography of the Fisher Plat is full of steep gullies and ravines. Although the top of the slope and the Fisher Plat have less steep slopes. The elevation difference from north to south exceed 200 feet drop in elevation. Based on general soils mapping from USDA, at least 60% of the Fisher Plat area consists of "Alderwood gravelly sand loam" which supports the HIGH EROSION hazard designation.

FISH & WILDLIFE -WILDLIFE HABITAT PATCH/CORRIDOR

The Fisher Estate borders on 30th Ave and the southern end of the **Illahee Community Plan**. "The plan defines "**Wildlife Habitat Patches"** as significant wildlife habitat areas where significant acreage and quality habitat support a variety of wildlife species. Two major wildlife patches exist within the Illahee Community boundaries, the third wildlife patch, the Cheney Estate- ENETAI community area, is contiguous to the Illahee community. "

"Four Wildlife Corridors already exist in the Illahee community and connect the three Wildlife Habitat Patches, i.e., the Illahee Preserve, Illahee State Park, and the **Cheney Estate– ENETAI community area** (Figure 4.8). The first is a corridor already used by wildlife and links Illahee State Park with the **Cheney Estate– ENETAI Community**. With the near build-out of this corridor area in the 1960s as semi-rural and the fact that there is little vehicle traffic in the area, this Wildlife Corridor functions well to provide movement of wildlife between the two Wildlife Habitat Patches."

"The Cheney Estate- ENETAI Community is a third Wildlife Habitat Patch of approximately 100 acres of primary wildlife habitat immediately south of the Illahee Community's southern border. The area is heavily forested with minimal development along the nearly one linear mile of shoreline. **The area also has the highest available WDFW habitat rating in the countywide habitat assessment."** See pages 4-18- thru 4-22 of the Illahee Community Plan.

The forest is home to barn, barred and horn owls and possibly others. Numerous species of bats, significant deer populations, a cougar and black bear. It is well documented it is an Eagles nesting site. A family of otters and live oysters exist on the shoreline of ENETAI Beach.

OLD GROWTH FOREST & BIODIVERSITY OF FLORA & FAUNA

ENETAI Beach area was home to a former sawmill and ship building operation (designated historical site) that burnt down in 1870. It likely is at least 150 years since it was logged if ever. There is evidence in the forest this is a cultural significant site and was frequented by indigenous tribes. This is documented by the Kitsap County Historical Society and/or Manette Historical Club.

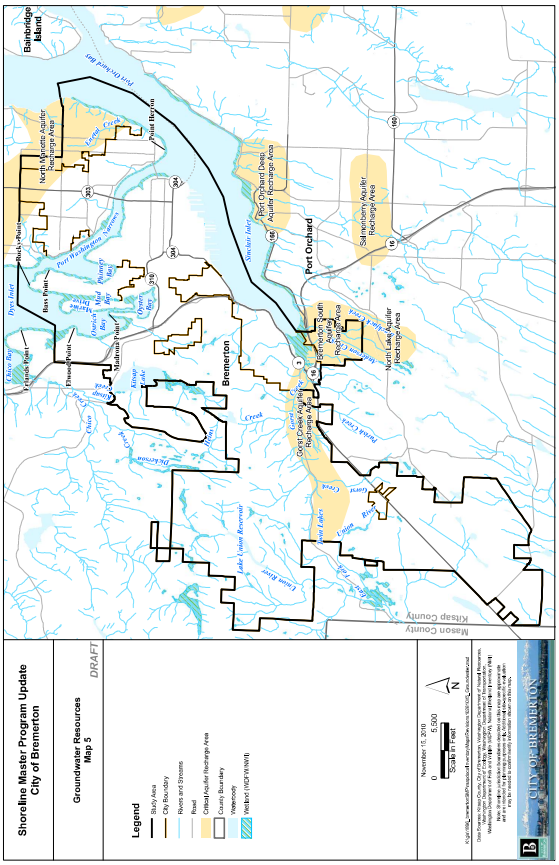
The plant species are typical of an old growth forest and rare. Mushroom enthusiasts have identified several rare fungus and mushroom varieties. A formal assessment needs to be done. To date, we are not aware of any written assessment on the forest or its age, types of trees, flora & fauna, etc. A forest evaluation needs to be performed to document the extent of the diversity of the forest.

Trees along geologically hazardous areas help maintain slope stability and should not be removed. The developer intends to clear-cut the forest and the tops of his adjacent parcels to improve views. This high impact land use is incompatible with the ecosystem this old growth forest provides and will disrupt wildlife, if not destroy critical habitat.

ZONING

According to the Illahee Community Plan (see page 4-20), "With the near build-out of this corridor area in the 1960s as semi-rural and the fact that there is little vehicle traffic in the area, this Wildlife Corridor functions well to provide movement of wildlife between the two Wildlife Habitat Patches. Because of the natural features in the area, the Illahee community requested the designated housing density for this area to be **changed from an Urban Low designation (5-9 housing units per acre) to an Urban Restricted designation (1-5 housing units per acre).** The lower density housing designation is more compatible with the natural features of the area and lower densities support the continuation of this already established wildlife corridor. The requested lower zoning changes were agreed upon by the Planning Commission and the Board of County Commissioners and were included in the 2006 Comprehensive Plan Update. (NOTE: zoning changes occurred within the community plan boundaries)

As part of the 2016 Comprehensive Plan Update, an area-wide rezoning of the ENETAI community was proposed to change from Urban Low to Urban Restricted. After maps were printed showing this and just weeks away (May 10, 2016) from final adoption of the Comp plan, Brad Cheney (Cheney Estate) attended a Planning Commission Hearing opposing the zoning change on a portion of the estate. With the help of a County DCD planner, Cheney claimed the county was trying to rezone his estate to ONE (1) dwelling per FIVE (5) acres, NOT 1-5 per acre (actual) and represented the surrounding neighborhoods as High Density Residential. Based on staff recommendations, the Planning Commission allowed for him to retain the Urban Low designation on what now is known as the Fisher Plat. Planning commission comment matrix indicate the county stated it was "unbuildable". It is unclear why this was allowed to occur. SAVE ENETAI intends to ask the County Commissioners reconsider this decision and correct the error that occurred in 2016. SAVE ENETAI will request the Illahee Community Plan be amended to include the ENETAI community.



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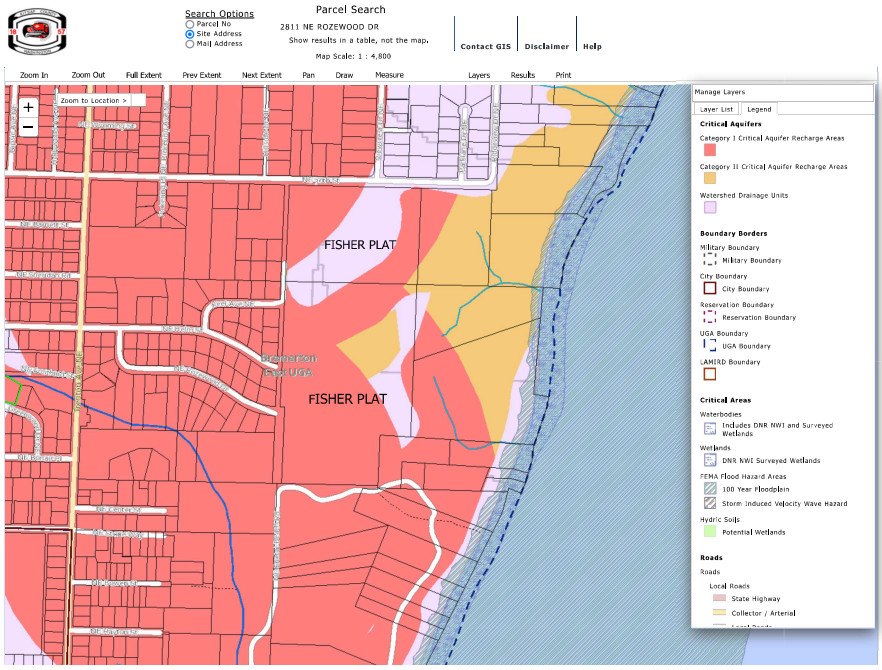
MAP 1

Parcel Search https://psearch.kitsap.gov/psearch/



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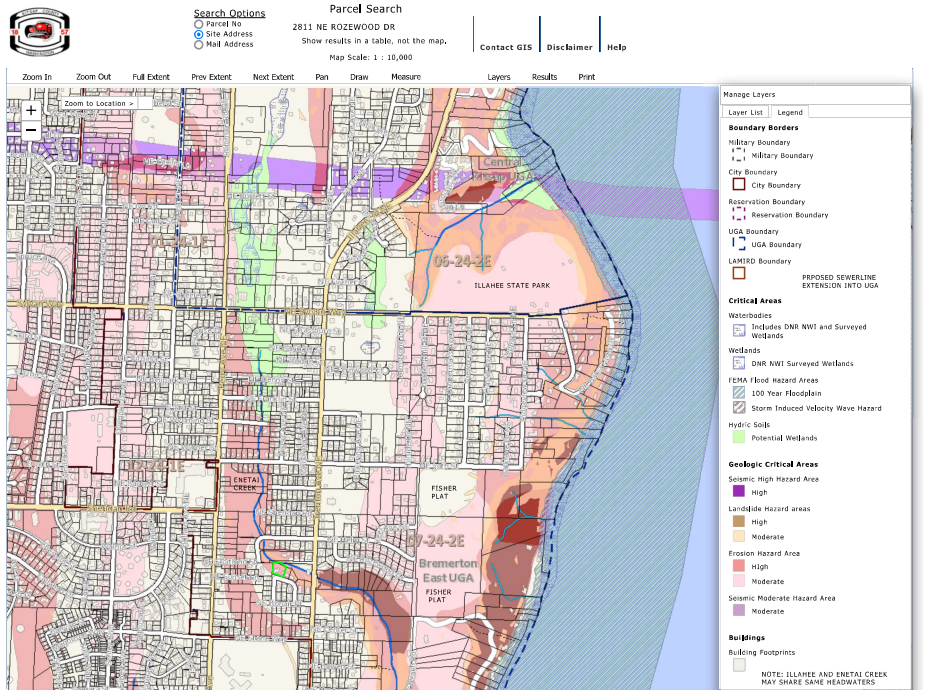
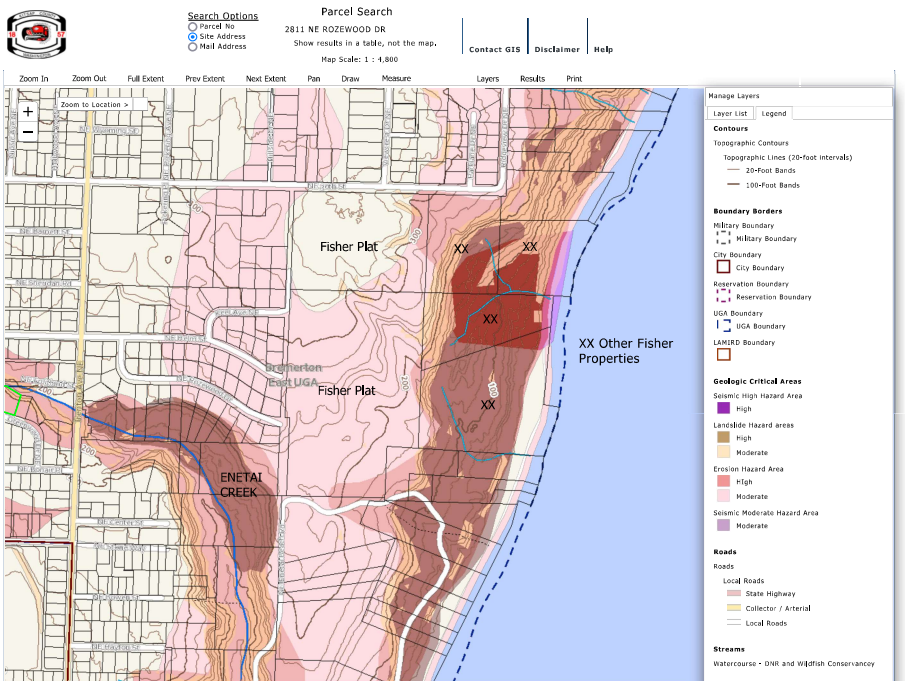
MAP 2

Parcel Search https://psearch.kitsap.gov/psearch/



1 of 2 1/14/24, 12:30 PM

MAP 3


Search Options
Parcel No
Site Address
Mail Address
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2811 NE ROZEWOOD DR
Show results in a table, not the map.
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Contact GIS
Disclaimer
Help
Zoom In
Zoom Out
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Pan
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Measure
Layers
Results
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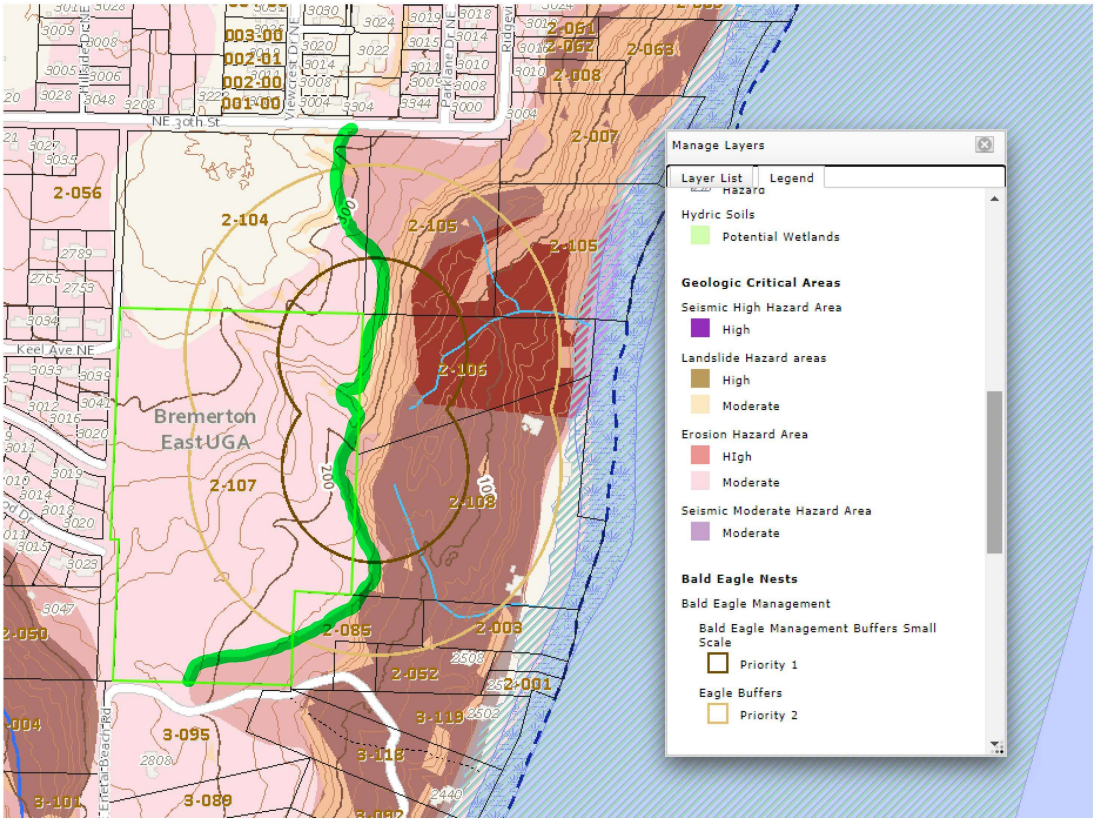
Zoom to Location >
Fisher Plat
XX
XX
XX
XX Other Fisher Properties
Bremerton East UGA
Fisher Plat
XX
ENETAI CREEK
Manage Layers
Layer List
Legend
Contours
Topographic Contours
Topographic Lines (20-foot intervals)
20-Foot Bands
100-Foot Bands
Boundary Borders
Military Boundary
Military Boundary
City Boundary
City Boundary
Reservation Boundary
Reservation Boundary
UGA Boundary
UGA Boundary
LAMIRD Boundary
Geologic Critical Areas
Seismic High Hazard Area
High
Landslide Hazard areas
High
Moderate
Erosion Hazard Area
High
Moderate
Seismic Moderate Hazard Area
Moderate
Roads
Roads
Local Roads
State Highway
Collector / Arterial
Local Roads
Streams
Watercourse - DNR and Wildfish Conservancy

MAP 4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Bremerton East UGA
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2-104
2-105
2-106
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2-001
2-007
2-008
2-061
2-062
2-063
3-095
3-088
3-101
3-118
3-119
Manage Layers
Layer List
Legend
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Potential Wetlands
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Seismic High Hazard Area
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Landslide Hazard areas
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Erosion Hazard Area
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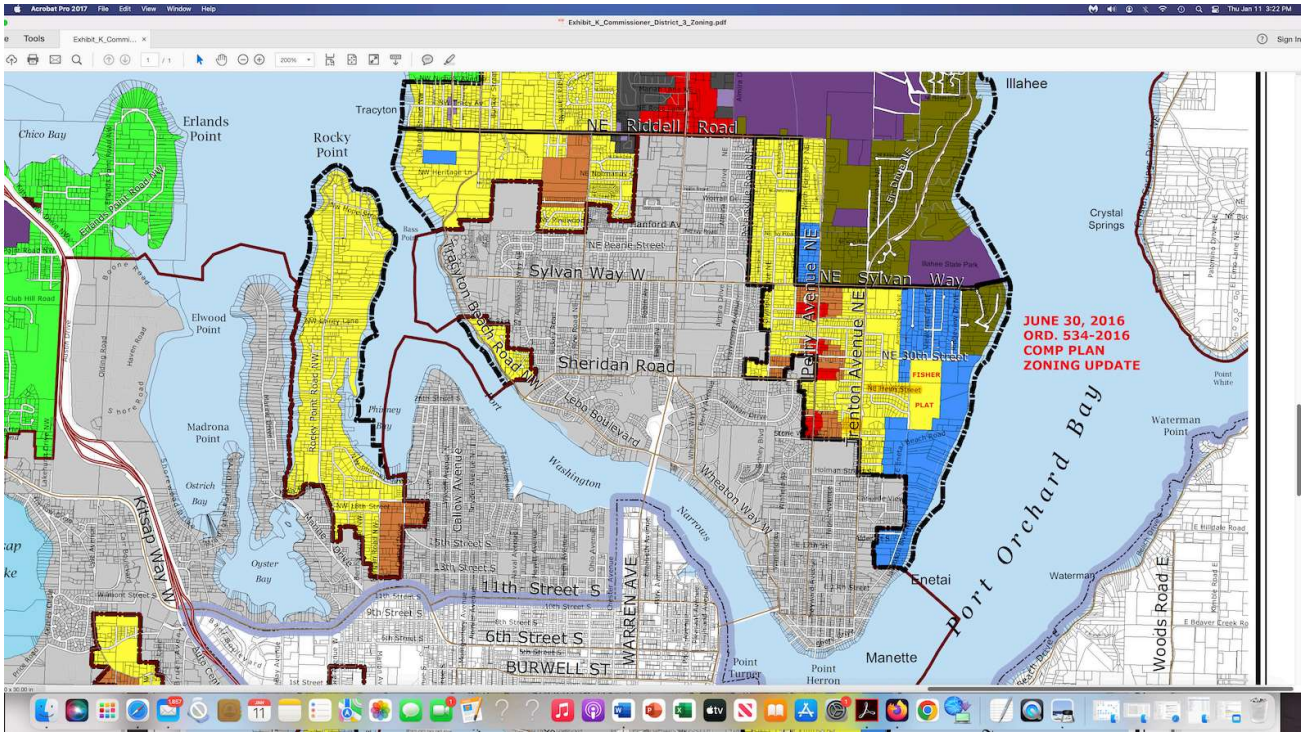
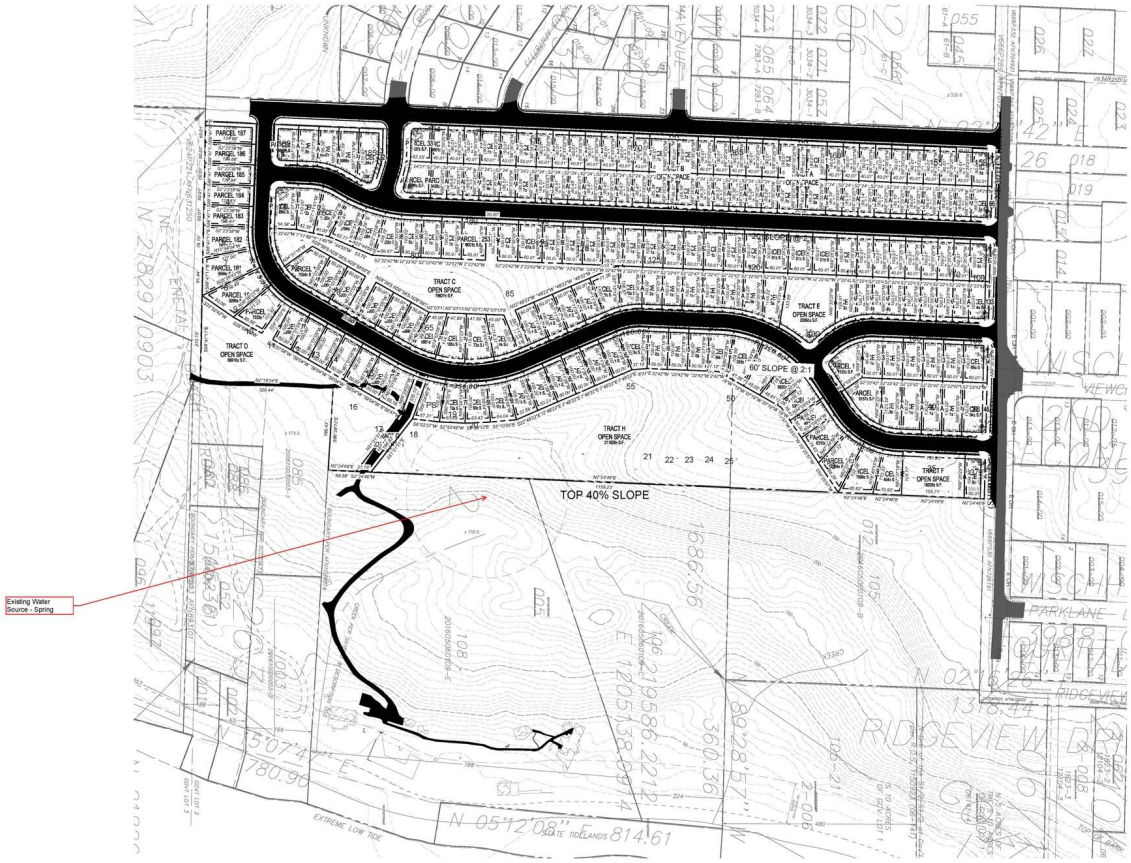
Moderate
Bald Eagle Nests
Bald Eagle Management
Bald Eagle Management Buffers Small Scale
Priority 1
Eagle Buffers
Priority 2

MAP 5



MAP 6



MAP 7

Links to materials included in comment:

Washington State Landscape Planning for Washington's Wildlife: Managing for Biodiversity in Developing Areas (A Priority Habitats and Species Guidance Document)

Return to Comment Matrix

To:
Kitsap County Comissioners; Christine Rolfes, Charolette Garrido, Katie Walters
Kitsap County Community Development: Director Jeff Rimack, SEPA Manager Scott Diener, Permit manager Darren Gurnee, Clerk of Hearing Examiner Amanda Walston, Comp. Plan Colin Poff, Deputy Administrator Eric Baker

From:
Jackie Kelly
12800 Lake Ave. NW Poulsbo WA.

Re: Comprehensive Plan Environmental Impact Statement

First of all I want to thank you for serving the residence of Kitsap County. It is an awesome responsibility but you are not alone in this work of governing. The comments and questions I pose are not meant to be inflammatory but rather as food for thought offered as a citizen who cares about creating the best possible world for all sentient beings which include everything that is impacted by the environment.

Taken from **RCW 42.30.010** Legislative declaration.
"The people of this state do not yield their sovereignty to the agencies which serve them. The people, in delegating authority, do not give their public servants the right to decide what is good for the people to know and what is not good for them to know. The people insist on remaining informed and informing the people's public servants of their views so that they may retain control over the instruments they have created."

To some extent the process of opening the Comp Plan to public comment follows this RCW requirement but is it used to direct the decisions that are made or to say we followed the rules? This remains to be seen.

The EIS comprised of over 250 pages is indeed a detailed analysis of the environment comparing impacts of the three alternative choices, coming to conclusions without making suggestions. It is interesting to me that Alternative 1 was used at all since there was never any chance that the County would or could select to remain the same considering the new growth needs over the next 20 years. It just added confusion in my opinion. Alternative 2 clearly brings about the best outcome according to the EIS towards meeting the County's vision as stated:

Kitsap Countywide Planning Policies Vision Statement

"Objectives: We work on strategies to achieve the following objectives:
a. Livable urban communities that are centers for employment, civic activities, and homes: • Attractive, livable urban neighborhoods that are bike/pedestrian-friendly and offer a range of services, housing, and transportation options. • Cities that are centers for employment, affordable housing, and cultural activities.
b. A vital and diversified economy that provides career pathways and living wage jobs for residents, supported by adequate buildable lands for a range of employment uses.

c. An efficient multi-modal transportation system: Accessible roads and highways, transit, ferries, airports, and non-motorized travel – supporting our land use pattern while providing mobility for residents.
d. Natural systems protection: Respect the natural environment, including natural resource lands such as forests, wetlands, wildlife habitat, streams, and the Puget Sound – as well as the quality of our waters, land, and air. In addition, maintain a system of open space, trails, parks, and greenbelts providing opportunities to spend time outdoors and to learn about the environment.
e. Rural Character: Maintain the traditional appearance, economic, and ecological functions of Kitsap's rural communities, to include the production and distribution of locally grown food."
(bold italics are mine)

However, 1.2.3 Level of Analysis in the EIS page 1-3 states: "Site specific analyses are not required". That means no one has actually walked the properties requesting rezoning to actually see what critical areas may be impacted by a zoning change. How can this detailed and expensive of an EIS not include actual land observations? How could it possibly be accurate or complete as is? Is it the Counties policy to turn a truly blind eye to actual potential damage to the environment in favor of development? How could this possibly meet the Counties vision statement unless that too, are empty words.

While much of my concerns pertain to the entire county, I am focused specifically on the rezoning of parcels 102501-1-016-2004, 102501-4-001-2005, and 102501-4-002-2004 plus parcel 102501-2-004-2006, 102501-2-002-2008, and 102501-2-001-200. The last three were already rezoned Urban Low density without a site based Environmental Impact Study completed. This is so unfortunate that no environmental impact study has been required because this 55 acre area has a critical aquifer, critical erosion areas along with the lake shoreline and creek wetlands. I am lumping them together because if rezoned, the same people will be developing the entire acreage. Also of note the NOA of September 2023 lists parcel 102501-1-0016-2004 as already zoned Urban Low Density which, after bring it to the Permit managers attention, he changed it. But the public records I am receiving still have that large parcel as listed incorrectly giving anyone who reads it the idea that the rezoning is a finalized deal. It is misleading unless there is an unofficial agreement or perhaps even an unofficial commitment to follow through with a rezoning between the county and the developers. Also of concern regarding these parcels is that the County has told us numerous times that the alternatives are not set in stone but will be customized to meet the needs of each area in particular. This is also misleading to the public when asking us to select one alternative and then the county saying, we are going to pick and choose what we think is best. Who makes these administrative decisions? All of the above parcels have Island Lake, Barker Creek and Central valley in common. All of them have numerous critical areas identified that are currently in the process of updating possibly with larger buffers than currently required. It is shortsighted to think of rezoning any parcel with critical areas identified on it before the critical reports are concluded and an environmental study has been competed not just a SEPA checklist!. It should be required for any developer before development to have a full environmental review done before any ground is moved. Who makes these administrative decisions to reduce the lake shore buffer and the stream buffers? Does this policy follow the stated vision of Kitsap County??? There should not be any buffer reductions in

critical areas period. The only reason to do this is to allow developers to make as much money as possible and the county to get as much money as possible. It shouldn't be money first, environment second. That narrow minded driven policy is killing our planet and will certainly wipe out the natural beauty of our area. Environment and economy need to be working together in order to have the most positive outcome for the long run.

I have heard from the developer as well as one of our Commissioners that "Island Lake just wants to be a wetland". We who live here are not of that opinion in the slightest. Talking to one of the water districts representatives I have learned that there is a lot of colluding between the County and the developers. When I hear the same silly statement out of both parties mouth, developer and County, it reaffirms what I was told unofficially about collusion. Just to be clear…Island Lake is a 40 acre lake over 20 feet deep sitting over the largest critical 1 Aquifer in the Silverdale area. It has been a vibrant lake that was full and overflowing into Barker Creek all the way through Central Valley to Dyes inlet before all the development started. It wasn't until all the big development went in around the hillsides of the Lake in the late 1980's to early 1990's that the lake level dropped so drastically that Silverdale Water District by 1992 had to pump in water to maintain the lake level. The water use of the surrounding new developments draws from the aquifer which in turn lowers the level of the aquifer and thus the lake level drops to replenish what was pumped and that is why the lake needed to be subsidized with more water. It is a vicious cycle. The Silverdale Water Districts wants to say it is evaporation that causes the lake level to lower but how can that be when before all the development around the lake, it was just fine? Saying that Island Lake 'just wants to be a wetland' is just a ruse to say development has nothing to do with the lowering of the water level. Only people that favor development over the environment would say something like that. We have residents here who have lived around the lake over 60 years. Surely they know what the lake was like before the dense development around the hillsides of the lake began and long before any need to pump water into the lake to maintain the level ever happened.

I want to address Barker Creek and it's struggle to reach Dyes Inlet as it once did.
Kitsap Conservatory fish mapping site clearly has Barker Creek marked as fish barring all the way to Island Lake. This was the case before Crista Camp put in a poorly designed and maintained culvert from the lake outflow through 450 feet or so of their property to have more of a level playing field. The new owner of this property even though he has doubled his original cost of $6 million to purchase the camp by selling 55 acres three months later for $12 million say that they can't afford to day light the clogged portion of the creek unless they get the property rezoned so they can develop it. They have also insinuated they would have commercial as well as residential housing that could include a mini mart gas station. They have clearly expressed this plan to the County as well as to the public upon occasion. I say…they have already doubled their money and any good steward of the land would day light that creek because it is the right thing to do and not hold it over the head of the county to grant them a rezone. Barker Creek has been cared for by the residents living near the creek for years. Aided by The Salmon Recovery Funding Board in 12/21/2006 with $723,964.20 and citizens donating their property on the Creek to be held as a salmon stream, the County promised Central Valley and Barker Creek would never be developed. How do we honor this commitment and work and funds already put into

Barker Creek? We know the Tribes have voiced opposition to development of this property. How do we honor the rural farms and those on well systems when thinking about development of the Central Valley corridor? How could anyone with foresight even consider rezoning and developing this critical and unique area without a complete full Environmental study done on site by a professional third party unbiased company?

The EIS includes Appendix C Transportation Project List by Alternative. No where on the project list is any improvement to Camp Court or Island Lake Rd. It is inconceivable that the County could consider a 340+ development in this area with no intentions to add sidewalks for the school children that stand out in the dark on the road waiting for the school bus or added stop signs or a round-a-bout or any protection for pedestrians, dog walkers and bicyclists.

According to SEPA Manager Scott Diener, almost all permits in Kitsap County are granted a DNS. That seems to be the standard policy of our county government. Why is that? Who does that favor? I am including his email with this submittal.

There is more to say but it will have to wait for the public hearing.
Thank you for including my comments.
Jackie Kelly

Answers from Scott Diener received 11/29/2023
Hi Scott
When you came to our meeting at Island Lake in Summer of 2022, you identified yourself as the Lead for the SEPA process so I have a couple questions for you regarding SEPA.
1) Are you the SEPA determiner for all the SEPA reviews for the DCD or just for the parcel # 102501-2-004-2006 specifically? I am the SEPA Responsible Official, but staff are considered SEPA Coordinators and are responsible for making determinations. If there are questions about a SEPA determination, we consult with each other. So in this instance, Darren is making the SEPA determination.
2) Can you give me an estimate of the larger developments (10+ homes), how many go through a formal Environmental Impact study in Kitsap County? I can think of 2 subdivisions that went through an EIS, but they are not really good comparisons. Arborwood went through an EIS (in 2006), but its EIS was also a part of the Comp Plan adoption at the time since it was going from rural to urban. The other is Port Gamble (2022), but the EIS was for the whole townsite redevelopment. For the routine large subdivisions, we do not see EIS preparations because the SEPA review generally shows the applicant is mitigating the impacts to less than significant.
3) Can you give me an estimate on how many larger projects are given a determination of non-significence? I would estimate that approx 90% receive DNS. The balance typically include a condition that the applicant did not consider, but which DCD imposes to mitigate a concern (the Mitigated DNS, or MDNS).

4) Can you estimate how many of the projects given a DNS are appealled successfully? I do not recall a successful appeal of a project, but that is largely because if we have an application for a development, there is a presumption the applicant knows or will learn they have to mitigate any SEPA impacts to a less than significant level. At this moment, we have one appeal of an apartment building's SEPA and also the project approval itself (2 appeals). There is a component of the Arborwood project being appealed, but that is more about one element of the project than the project itself.

I'm sure you can imagine what I am thinking and why.
Darren Gurnee has indicated that our citizen comments on the environmental impact are part of the record and do come into play but only liscensed experts' surveys and facts will change the outcome of the determination. Of course experts are expensive and Lawyers more so... Is there any financial help from the County to help with the costs of an appeal?

Thank you for you time
Jackie

Sorry, I saw the very last Q... The County cannot assist with costs of an appeal. In addition to many comments we would hear from the public and applicant about this, it would be considered a gifting of public funds, which is a violation of state law.

Again, good luck to you. Let Darren know if there are further Qs.

Return to Comment Matrix

LOCATION	COMMENT
General Comment	The forthcoming update to the Kitsap County Critical Areas Ordinance will require an update to the county's buildable lands and land capacity analyses. How is this version of the draft Comprehensive Plan EIS anticipating changes that may occur as a result of the new CAO?
General Comment	In support of the expansion of MTFE zones and other affordable housing incentives for all alternatives.
General Comment	The preferred alternative should be a combination of the affordable housing and centered growth incentives from Alternative 2 combined with some expansion of single-family zoning in Alternative 3. This would provide Kitsap citizens a range of housing options and price points while recognizing the housing shortage crisis.
Exhibit 1.5-7, pg 1-16	It is noted that Alternative 2 falls short by 957 jobs. How does the county propose to reconcile this discrepancy?
Exhibit 1.5-7, pg 1-16	Alternative 3 comes in fairly close to the growth target. Will this number fall short after the CAO update?
Exhibit 1.5-10, pg 1-21	The county requires traffic impact fees. Shouldn't they be counted as a mitigation measure under this section?
Section 2.4.2, pg 2-12	Under "Growth Accomodation" it is noted that Alternative 2 ***generally*** meets employment targets yet is short by almost 1000 jobs. What number of jobs (+/-) does the county consider to be meeting job targets?
Exhibit 2.5.1-1, pg 2-14	Consider reducing the minimum density of the commercial zones in Alternative 2 from 19 to 10 du/ac?
Exhibit 2.5.1-1, pg 2-15	For Alternative 3 under 'Countywide', individual garage units should count as required parking under all alternatives.
Exhibit 2.5.1-1, pg 2-17	The requirements under Alternative 2 Tree Replacement Proposal are not clear. What happens if the existing site does not contain trees? What is a legacy tree? Do street trees, required landscaping, and trees within critical areas count? What is the requirement for surveying existing trees?
Exhibit 2.5.1-1, pg 2-17	It appears that Alternative 3 requires tree retention but does not allow for tree replacement. It seems problematic to implement tree retention without a provision for replacement. For example, what if the only trees on site are located at the only point of access for the parcel?
Exhibit 2.5.1-1, pg 2-17	Were tree replacement and retention requirements considered in the land capacity/buildable lands calculations?
Exhibit 2.5.6-1	Why was 'Human Services' removed as part of the 'Housing Element'? Where was the 'Glossary' moved?
Exhibit 3.2.2.2-1, Goal-Ensure timely and fair permit procedures	The notes under this goal indicate that permitting goals are met for all alternatives. Current permit timelines are not currently meeting code requirements. Please explain how these alternative will meet permitting timeline goals when the no action alternative is not meeting these goals?

LOCATION	COMMENT
Exhibit 3.2.6.3-3	If 'funding redirects' are ended that currently go to the sherrif and community development, how will the resultant shortfall for those departments be mitigated?
pg 3-199, Other Potential Mitigation Measures	Aren't bullet points 3-5 already part of the county code, road standards and fire standards? Or are these points referring to expansion of the requirements already set forth in code? Expand on the meaning of the last bullet.
Chapter 3.1.1.1, pg 3-234	Note that the heading number is incorrect.
Chapter 3.1.1.1, pg 3-235	Another potential mitigation measure would be for the county to create or incentivize regional stormwater treatment systems.

Return to Comment Matrix

From: Nancy Langwith
To: Comp Plan
Subject: Kingston Stakeholders Comments on the Draft EIS, Comp Plan, Kitsap
Date: Monday, February 26, 2024 1:45:10 P

I am submitting the following letter containing comments on the EIS of the Kitsap County Comp Plan on behalf of the Kingston Stakeholders.
Respectfully,
Nancy Langwith
Chairperson, Kingston Stakeholders

KINGSTON STAKEHOLDERS

February 26, 2024

Kitsap County Administration Building
Commissioners' Chambers
619 Division Street
Port Orchard, WA 98366

Board of Commissioners
Kitsap County Commissioner's Office
614 Division St. MS-4
Port Orchard, WA 98366

RE: 2024 Amendments to the Comprehensive Plan, Kingston Subarea Plan

Planning Commission Members & Kitsap County Board of Commissioners:

The Kingston Stakeholders appreciate the opportunity to comment on the Amendments to the 2024 Kitsap County Comprehensive Plan, Kingston Subarea Plan. The Kingston Stakeholders is a group comprised of North Kitsap residents, the Port of Kingston leadership, Kingston Community Advisory Council leadership and members, the Greater Kingston Chamber of Commerce and a Kitsap County Commissioner. Our Mission is "To actively support and advocate for economic vitality that enhances the livability of our community". We were formed in 2005 as part of the Greater Kingston Chamber of Commerce and are now independent. We have been very active in SR 104 traffic management planning and advocacy and have members sitting on the SR104 Working Group. We are also conducting research to identify and offer suggestions to improve the permitting process for Kingston businesses. The areas of the subarea plan relating to Economic Development are of particular interest to us.

One of the goals of community members working on the 2024 Comprehensive plan update is supporting a vibrant retail economy in downtown Kingston and on the 104 commercial strip between downtown and Lindvog Road. Thriving retail businesses at the street level is seen as essential to a strong and diverse local economy. To achieve this goal, the plan recommendations need to reflect the new retail realities that emerged during the COVID 19 pandemic.
All retail enterprises experienced significant disruption during COVID 19. The pandemic accelerated already emerging shifts in all economic sectors. Online shopping was impacting the retail sector before the pandemic, but in 2020 with in-person shopping severely limited, online shopping grew from about 10% of retail sales to close to 30%. Though the percentage has declined to the low 20's since, sales in some categories -- like books, music and video, electronics, and office supplies, have mostly moved online and consumer behavior in all categories has permanently changed.

There were many retail failures during the pandemic including small entrepreneurs, major brands and entire shopping centers, shakeout continues. However, there are still opportunities in the sector, with considerable new entrepreneurial activity and retail sales in general reaching record highs in 2022. Retail businesses who survived during the pandemic became omni-channel – interacting with customers through social media, websites, and in person. Though in

the future, most will need to invest in online ways to attract and retain customers and get support from local governments and property owners.

This new reality has made developing strategies to support street level retail in small towns challenging. Quality of the place and location is still important, but where local customers were formerly a captive market, now they can shop the world from their phone. For communities hoping to help their traditional commercial shopping districts to recover, multiple strategies are needed, and public sector and property owner requirements need to be flexible and adaptive.

Strategies for success:

- Clean, safe, and attractive neighborhood.
- Quality pedestrian experience with wide sidewalks and landscaping.
- Modern retail spaces that have sufficient height and are smaller and shallower. Retailers do not want to pay for traditional spaces that tend to have low ceilings and be narrow and deep. Property owners with traditional store fronts and alley access are working to divide long spaces into two spaces, front and back.
- Clean, bright retail spaces with adequate HVAC, power, and broadband. Post pandemic, airflow and connectivity capacity are critical.
- Landlords who will partner with retailers to support success. In larger commercial urban buildings, entrepreneurial landlords no longer view their street level spaces as part of the proforma, but as a tenant amenity which is wholly or partially subsidized. In small communities this can take the shape of leases that are flat rent plus % of sales, or rents that escalate as sales increase.
- Small business assistance. Omni-channel marketing can be intimidating, so small business assistance for entrepreneurs has become important for communities trying to reduce retail vacancies.
- Flexible zoning and regulation that eliminates requirements that constrain entrepreneurial energy or result in vacancies. Communities are broadening restrictive retail zoning beyond traditional retail categories like apparel to include maker spaces, services like veterinary, cosmetic procedures and light industrial – adding new categories that also provide robust customer traffic.
- Customer data and metrics provided by local business organizations. Though traditional retail market analysis that relies on identifying retail gaps by geography is much less relevant in today's market, data such as pedestrian counts, local resident and visitor demographics and customer perception surveys are very useful to potential retail tenants.

A note on dining. The restaurant sector was also disrupted during the pandemic. Survivors in this sector adopted omnichannel strategies and found new and creative ways to serve their customers. Staffing challenges and food costs are now additional barriers to success for many restaurant owners. Many of the ideas listed above will be helpful for this sector, with the addition of two key strategies:

1. Permit Streamlining. Restaurants often face permit requirements from multiple departments with confusing and conflicting requirements and timelines.

Streamlining the permit process and providing permit navigators can help to reduce time and expense and give new food businesses a stronger start. but most important is reducing permit time, duplication and confusion.

2. Flexible Rules. During the pandemic food trucks, pop ups and outdoor dining became essential to restaurant survival. Local regulatory bodies and the alcohol boards issued emergency rules and were flexible and accommodating. These changes should be retained, as customers liked the options and existing and start up restaurateurs benefited.

The Kingston Stakeholders support a forward-thinking and flexible approach to economic vitality in the downtown core while being true to the community's strong desire to maintain the small town feel of Kingston. We have discussed the Port of Kingston's submission and that of Kingston Community Advisory Council (KCAC) on several occasions and generally support their approaches where they agree. There are two key areas, maximum height and required retail on the ground floor, where they disagree. To better understand the opinions of our members on these two issues, we conducted an informal (not all members feeling adequately informed to respond) survey and looked at responses from those members not associated with KCAC or the Port of Kingston.

Height Requirement

In looking at the strategies above, modern retail spaces must have sufficient height and are smaller and shallower. The Port proposal raises the height to 55" where KCAC and the UVC working group support preserving the current height allowances (35'/45') in the UVC / Old Town. Among Stakeholder members responding, there was unanimous support for " Height limited to 35' with an additional allowance for 10 more feet with a setback so the street-side facades appear to be 35'. This could include additional height allowances on the Central Ave side of the UVC where it is open on the shoreline/parking lot side of the street." We understand the Port's concern for additional height, but do not want a tunnel effect with the higher building heights. Is there a compromise that will better serve the community?

Requirement for Mixed Use

Again, the Stakeholders support flexibility in the development of our downtown core. The downtown Kingston retail mix is still recovering from the impacts of the pandemic and suffering from changes in consumer behavior. In a strongly performing retail market, sales and rents can both be high, as in a good retail proforma rents are a percent of sales. In Kingston, as sales are likely weak, rents are likely low and property owners are struggling to keep tenants. The best strategy to improve conditions is to focus on support for existing retailers, helping them to grow their business, which will attract other retail and enable existing retailers to pay higher rents. In a healthy downtown, there is active retail at street level. The worst impact to downtown Kingston's recovery would be vacancies, as a vacant storefront can depress sales at adjacent businesses, further stresses property owners and sends negative signals to potential customers. In these circumstances, non-retail uses at street level, though not ideal, are less damaging than a vacant storefront. When market conditions improve and retailers can pay higher rents, property owners will likely be motivated to replace non-retail uses with retailers who can pay

higher rents. Stakeholder members were split between wanting to offer flexibility for commercial use on the first floor inside the UVC as long as it's built to be convertible to commercial once Kingston has more population and the same response with the addition that it applies only to new buildings. We strongly encourage the County to consider the potential impacts of new regulations and avoid requirements that might result in vacancies.

We want to thank all that are working to improve the economic vitality of Kingston, especially the Port of Kingston and the Kingston Community Advisory Council. We all have the same the goal, but our tactics differ in these two cases.

Respectfully,
Nancy Langwith
Chairperson, Kingston Stakeholders

Return to Comment Matrix

February 9, 2024

Kitsap County
ATTN: Scott Diener, SEPA Responsible Official
614 Division Street, MS-36
Port Orchard, WA 98366

Subject: WDFW Comments on the Kitsap County Draft Environmental Impact Statement for the 2024 Comprehensive Plan Updates

Dear Scott Diener,

On behalf of the Washington Department of Fish and Wildlife (WDFW), we offer our comments on the proposed Draft Environmental Impact Statement (DEIS) for Kitsap County's 2024 Comprehensive Plan update, as part of the current periodic review under the Growth Management Act (GMA). WDFW is dedicated to preserving, protecting, and perpetuating the state's fish, wildlife, and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities. In recognition of our responsibilities, we submit the following comments for the County's DEIS; other comments may be offered in the future. We strive to maintain contact throughout this update process and look forward to continued engagement as the process moves toward completion.

Overarching Comments:

WDFW evaluated the three alternatives outlined in the County's DEIS but cannot fully endorse any one of them based on their current form. The alternatives fall short of WDFW's management recommendations due to the lack of environmental protection outlined within each of them. WDFW recognizes that, by necessity, all alternatives outlined result in increased urbanization of the county likely leading to adverse impacts on habitats and ecosystems that humans and wildlife depend on to varying extents. Below we capture the highlights and disadvantages of each alternative from our perspective. In our recommendations section, we emphasize where we see room for further improvement to these alternatives to increase the long-term resilience of the county's riparian ecosystems and their extensive co-benefits.

Alternative 1, "No Action"
Alternative 1 does not offer any extra environmental safeguards beyond the present levels. These protective measures currently fall short of WDFW's management recommendations that are based on the best available scientific evidence and the goals of GMA during this periodic update. Due to these factors, WDFW requests that the county not pursue Alternative 1.

Alternative 2, "Compact Growth/Urban Center Focus"
WDFW prefers the objectives outlined in Alternative 2 out of the three proposed alternatives but acknowledges that even this alternative falls short of fully meeting the agency's recommendations. The compact growth focus of this alternative promotes infill, limits urban growth area (UGA) expansions to 464 acres, and affects the least amount of non-fish bearing streams out of the three alternatives. WDFW also recognizes that this alternative would enable Kitsap County to achieve the 2044 housing goals while falling just short of the expected employment rate provided by the Department of Commerce but reaches towards VISION 2050 targets closer than the other alternatives.

WDFW highlights that this alternative focuses on the urban growth in areas of Silverdale and Kingston while limiting the UGA expansion of Bremerton, Port Orchard, and Poulsbo. The tree replacement rates for urban residential areas are reasonable to reestablish green spaces and shade as those trees mature.

Even with the notable aspects above, we have concerns with this alternative due to the expected impact on 1,477 linear feet of non-fish bearing streams, no expansion of stream buffer widths, and the increase in fragmented habitat.

Alternative 3, "Dispersed Growth Focus"
Alternative 3 is the only option that proposes expanding the riparian buffer widths from 50 feet to 100 feet for non-fish bearing streams and imposing tree retention requirements for development. Although these steps are closer to WDFW management recommendations than the other alternatives in this DEIS, the expected expansion of UGAs by 1,049 acres and impacts to non-fish bearing streams by 17,936 feet is a significant concern. Therefore, we do not recommend that Kitsap County pursue this alternative.

WDFW Recommendations:

WDFW is recommending Kitsap County explore a hybrid alternative between Alternatives 2 and 3. This would help increase environmental protections as stated in these options while fulfilling the overarching GMA goals outlined during this update process. This suggested hybrid alternative would include:

- All features of Alternative 2 including but not limited to focused infill, limited UGA expansions, limited impacts to non-fish bearing streams, and tree replacement rates
- Features from Alternative 3:
    - Adding an increased stream buffer width from 50 feet to 100 feet (minimum) for non-fish bearing streams
    - Tree retention rates for urban areas

These increased environmental protections may still fall short of WDFW's full management recommendations, but it would be an overall increased benefit from the current protections in place.

Our agency requests that Kitsap consider using low-impact development and green infrastructure during infill development to promote better air and water quality, stormwater management,

climate adaptation measures, and limited impervious surfaces during development. Although not required until 2029 for Kitsap County, WDFW supports early adoption of the climate change goals and action plans outlined by the Department of Commerce.

WDFW's management recommendation for full riparian function can be achieved using the Site Potential Tree Height at age 200 ($SPTH_{200}$). We urge Kitsap County to consider adopting this method for delineating riparian management zones to prevent any further loss of functions and values in these ecologically important and vulnerable priority habitats. This approach can also help to increase water and air quality, which were noted as concerns across all alternatives outlined in the Kitsap DEIS along with promoting habitat connectivity corridors and open spaces.

WDFW underscores that counties and cities shall include the best available science in developing policies and development regulations (RCW 36.70A.172). Our riparian resources, including but not limited to the Riparian Ecosystems, Volume 1: Science Synthesis and Management Implications, Volume 2: Management Recommendations, and the $SPTH_{200}$ GIS mapping tool, are based on current best available science. We encourage Kitsap County to follow these recommendations more closely as the county continues to develop and revise its DEIS alternatives, Comprehensive Plan, and Critical Areas Ordinance. When departures from the best available science are made in policies and development regulations, scientifically based, reasoned justifications must be provided in the record (WAC 365-195-915(1)(c)). Adaptive management programs, such as the Kitsap Natural Resource Asset Management Program, should be followed when departures from the best available science occur as outlined in WAC 365-195-920 (1)(b).

We value our relationship with Kitsap County and look forward to continue working collaboratively with everyone involved as this periodic update is brought to a successful conclusion, especially as you contemplate revisions to the county's proposed Comprehensive Plan and Critical Areas Ordinance. If you have any questions or concerns, please feel free to contact me at (564) 669-4755 or at Jessica.Bryant@dfw.wa.gov.

Sincerely,

Jessica Bryant
WDFW Regional Land Use Planner
1111 Washington St. SE
Olympia, WA 98501

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The Kitsap Environmental Coalition Board sends these concerns about the Draft EIS report to you so that you can be aware of what several KEC members have been working on over past 2 months. Attached also are our specific comments, which are also being submitted to Mr. Diener as the Responsible Official. Our comments focus on Alternative 2 since this is the Alternative that is most closely aligned with the direction given to the County through PSRC and Legislative guidance. However, providing for the opportunity to “mix and match” alternatives makes it difficult to assess the impact of what is finally decided on as the “preferred alternative”, without any additional opportunity to comment on those impacts. We have noted specific impacts when possible in our comments, but the “preferred alternative” may require an additional opportunity for comment.

The Draft EIS for Kitsap County’s Comprehensive Plan and the draft plan itself makes it hard to do any analysis of the accuracy of the growth estimates on which it is based. There are estimates of the growth targets for certain areas, based on those adopted by KRCC. But these appear to be aspirational, since the population for Kitsap County has been growing over the past three years at about 1% a year, while the plan estimates increases of almost 3% for certain UGAs. This is unlikely, for a number of reasons, including reduced household size, aging population, and problems with ferry service, and health care, as well as other issues. The Draft plan in that case does not need to accommodate that estimated growth through expanded UGAs and zoning changes. This is an important consideration since throughout the document they propose UGA expansions although they are not necessary to accommodate even those ambitious population estimates, and these result in increased environmental impacts such as allowing building in critical areas. The impacts of these assumptions also carry over in the need for greater investment in mass transit and other non-motorized options although the availability of funding for these investments is far from assured.

The County does not have, or show, a good baseline of the current conditions of the environment. Without a baseline, how do we know how bad conditions will get? Data are available to evaluate water, wastewater, wildlife, tree cover, solid waste, cars, etcetera. Yes, we may not know which square kilometer will be impacted the most and how, but we can say that several positive factors will decline and several negative factors will increase in the County as a whole. Furthermore, citizens are not asking for precision. Assume 10% increase in population and then 20% increase and make estimates for County-wide impacts. If the County will not start the conversation about current and future environmental impacts, they will not be able to measure future declines, or more hopefully, improvements. This needs to be coupled with effective monitoring to measure those changes.

If the goal is truly to protect the environment, the County should strive not just to limit negative impacts but to work to actually improve the environment. The goal should be for Net Ecological Gain, rather than no net loss. The natural environment is dying by a thousand cuts, through the loss of trees, wildlife corridors, farmlands, degradation of parks, and diminished rural areas. This concept of NEG is not discussed in the DEIS but should be included.

In many areas the DEIS and the Comprehensive Plan are too vague on the actions that need to be taken, sometimes relying on plans (e.g. WRIA 15) that have not been adopted or implemented, or are not adequate to mitigate future actions. For example, the Critical Areas Ordinance is called out numerous times as a key mitigation measure, however that ordinance is currently under review. It will only be as effective as the strength of its final requirements. If it has too many opportunities for variances and waivers, this mitigation measure will be weak and useless. Rather than vaguely describing the direction the County plans to take, the EIS and Plan should spell out specifically what the County has to do. In certain cases this will require some hard decisions on what is allowed; to apply the rules and regulations without the use of variances.

Climate change should have a section of its own, perhaps at the front, to call attention both to the impacts of climate change, as well as the actions needed by the County to address them. More detail should be provided on sea level rise, increased storm intensities and health impacts from climate change. For example, although sea levels are expected to rise over a foot in the next 25 years, there are no proposed regulations governing the development of shoreline property.

Neither the draft EIS nor the draft Comprehensive Plan address or evaluate the so-called “Framework” for the Port Gamble Forest Heritage Park as required under GMA, and as the County said would be done. The park plan is a proposed revision to the Comprehensive Plan, so the environmental impacts of the park needs to be included in this EIS. It is insufficient to vaguely say it is incorporated by “reference”, especially since significant environmental impacts are neither described nor addressed. The EIS and plan must acknowledge and address the significant issues and weaknesses remaining/imbedded in this proposed park plan. Further, all environmental impacts of the park plan are required to be expressly identified, studied, and analyzed in this EIS. If impacts caused by the park plan will be identified and analyzed under SEPA in the future then it should be clearly stated that the park plan (the “Framework”) will not be adopted nor projects in it funded or completed until that happens. If the County does not evaluate all environmental impacts of the park plan in the

Final EIS, then it will be opening itself to potential legal challenges regarding the scope and adequacy of the County's SEPA review.

In conclusion, we hope to someday view an EIS that actually deals with real impacts to the environments of Kitsap County. If X impacts are happening in 2023-2024, predict how X will change. And precisely how finances and actions will differ from the past to accomplish that change. Don't simply state that one alternative is better than another in 4 ways and worse in 7 ways. And that more impacts can be avoided (even though they haven't been avoided in the past). Residents now know the environmental impacts that resulted from the 2016 Comp Plan. Give us a clear vision of the future not a blurry one.

Specific Comments

1.2.2 Please provide a link to view the comment letters received during the scoping period.

1.2.3.1 Phased review – Please explain this idea of a phased review in more detail. What exactly would be incorporated “by reference” and what would warrant a “narrower” or specific review?

1.3 Alternatives – Allowing a mix of Alternatives 2 and 3 can be problematic. You can’t have “your cake and eat it” - pursue both Compact Growth and Dispersed Growth. You should strengthen Alt 2, but not by allowing more dispersal.

1.5.3 Water Resources – Water quality and quantity needs to be more fully addressed, including establishing baseline measures for both. Several aspects of water resources were not addressed including impacts on “fish bearing” streams and the impact on small and intermittent streams and wetlands which are currently not regulated at any level (these are not regulated by the ACOE). These are critical habitats for a number of flora and fauna species. This is one area where Alt 3’s wider buffer requirements is preferable to Alt 2.

1.5.7 Summary of Impacts1. – Population, Housing and Employment. As discussed above, the estimated population does not align with actual experienced population, nor is there a good rationale for why that will change, unless the County actually *encourages* growth through incentives. In fact, Alternative 2 actually *exceeds* the population growth targets provided to the County by PSRC. The County’s rationale for this is that it is necessary to meet the distribution of housing, i.e. to create more affordable housing options. But if the need is for a different *mix* of housing, it seems it is possible to do that without expanding the UGAs with associated adverse impacts. Up zoning within the UGA could be done with fewer adverse impacts, and might better meet the objective of denser, more accessible developments for a changing population. The County could also provide incentives by making it easier to develop in these existing urban areas through simplifying and streamlining the permit process, waiving permit costs and consultation fees for such developments, or providing density bonuses. There does not seem to be any need to expand the existing UGAs.

1.5-10 Each alternative results in similar levels of transportation impact. In total, the number of vehicle miles traveled (VMT) is expected to increase between 72 and 78 percent during the PM peak hour between now and 2044. (No mention of the chemicals from tires and from vehicle exhaust flowing into natural areas and our

water at levels 78% more than at present.) However PSRC traffic demand modeling assumes VMT reductions based on the RTP model (Cascadia Aug 2022).” Thus, the data show increasing per capita miles driven, but their mathematical model predicts fewer miles driven in the future given unknown assumptions and unknown (optimistic?) effort and financing by the County and State. A good but pessimistic model would likely show increases in VMT due to increases in both people and per capita miles driven. Later in the Transportation Section the LOS for each state roadway is shown to be barely adequate now.

1.5-15 If the population is increasing, especially if we want to develop greater density, there will be an even greater need for parks and natural areas. The need for people to have access to nature is well documented, and natural parks are an increasing refuge for the protection of native plants and animals. Therefore an important “mitigation” should include the expansion of natural parks. Funding for this effort might include creation of a parks district. On the other hand, the EIS fails to describe the contamination flowing in terms of water pollution, air pollution, noise, illegal movement of motorized bikes into parks from new adjacent subdivisions.

1.5-17 The sections pertaining to Solid Waste in this EIS fail to address the increasing amount of litter on roads and public properties. The simplest prediction is that litter will increase and illegal dumping will increase at the same rate as population growth. Illegal dumping is common in County Parks according to reports by citizens and park stewards. If the garbage dumped includes chemicals or biological waste, they are significant threats to humans, wildlife, and nature. According to the Department of Ecology's 2022 litter pickup summary, (https://ecology.wa.gov/Waste-Toxics/Solid-waste-litter/Litter/Litter-pickup). In the March 13, 2023, issue of the Kitsap Sun, the Department of Ecology reported that 413,697 pounds of trash were collected along state highways in Kitsap County. Litter is increasing in the State. Kitsap led the whole group in the number of "dump sites" — more than even King County. The effort to clean it all up dramatically increased with more than 10,000 hours of work in Kitsap County recorded by paid workers and volunteers. However, only half the miles of road were cleared in 2022 compared to the recent past.

1.5-18 The current wastewater treatment facilities fail to stop unpermitted dumping of sewage into the bays and Sound every year. Why does the County believe that the future will be better? If the future is not better, then the statement above about absolutely no adverse impacts is wrong. And they are avoidable with better stormwater systems, but unavoidable under current conditions. We

recommend stronger BMPs for Water Quality improvement as necessary for the future of Kitsap's stream and nearshore health.

2.5 1-1 Table states no change to stream buffers for Alt 2 and no tree retention. What is the rationale for these decisions, especially since Alt 3 *does include* tree retention and an expanded stream buffer to 100 feet? Wouldn't this requirement be just as needed for Alt 2? County will consider other changes including "increase SEPA flexible thresholds for residential development in all UGAs." What does this mean? An explanation is needed.

2.5 4-1 UGA size changes of alternatives. Over 460 acres increased for Alt 2, although not needed to accommodate population. Why? As discussed earlier, there does not seem to be any need to increase the UGAs. Not only is it unnecessary, but it will result in allowing developments in areas of higher risk with greater environmental impacts.

3.1.1.2 Earth Impacts – under Alt 2 an additional 94 acres of high geologic hazard areas would be included in expanded UGAs. However, later it states that that "Reducing UGA expansions in Moderate and High Geologic Hazard areas would reduce the potential number of persons or structures exposed to risk of damage due to geologic hazards." These statements are inconsistent and, as discussed earlier, we don't believe it is necessary to expand UGAs.

3.1.2.4 Significant Unavoidable Adverse Impacts They state that "trees can minimize this unavoidable impact", but earlier they stated that there were no proposed tree protections under Alt 2. In talking about Greenhouse Gas (GHG) emissions, they also state that tree loss is responsible for ~15% of the increase. Seems like the County should include tree protections in all the alternatives including Alt 2.

3.1.3.1 Water Resources – Affected Environment. There is no discussion of the impact of rising sea levels due to climate change and how this should impact development regulations of shoreline property. It is estimated that sea levels will rise over a foot by 2050. The County has done its own study (Kitsap County Climate Assessment Study 2020) that summarizes the projected effects, yet it does not appear that is impacting how these areas can be developed. East Coast states like Florida and Georgia have required homeowners to implement significant changes to mitigate these effects including raising building heights, but there is no evidence of that happening in Kitsap. This is irresponsible, both to the taxpayer and the property owner.

Silverdale Subarea – As noted in the draft, two-thirds of the area is in a Category I or II CARA. According to data supplied by Silverdale Water District, the level of Island Lake has not reached the outflow from the lake into Barker Creek since February 2021. Since Island Lake is the headwaters to Barker Creek, no water being supplied at the headwaters means reduced water flow downstream which several fish species including salmon and cutthroat trout call home at various times of the year. As climate change continues, one can expect this trend to continue. Development next to Barker Creek and Island Lake will only make this situation worse. In addition, there are wetlands associated with Barker Creek that will suffer from development of the property. The rural area proposed for rezoning are the largest remaining mostly undeveloped tract that contributes to groundwater recharge of the Island Lake Aquifer which supplies drinking water for the residents of Central Valley, Ridgetop, and much of Silverdale. The loss of this vital resource to development will have a severe impact on aquifer recharge and possible contamination of the groundwater. Island Lake itself has been in peril as evidenced by the fact that tens of millions of gallons of water must be pumped into the lake each summer (since 1992) to maintain an acceptable water level.

3.1.3.2 Water Resources – Impacts In February, 2023, Dr. David Onstad studied all 14 watersheds for Kitsap Peninsula plus 1 for Bainbridge Island found on the web site https://www.epa.gov/waterdata/hows-my-waterway for water quality information (recorded in 2018). The database contains information about inland water bodies (streams and lakes) and coastal sites. Several easy conclusions can be drawn. First, some rivers and streams have not been evaluated. Thus, their conditions are unknown. Second, of the 15 facilities with discharge permits, such as sewage treatment plants (STP) and wastewater treatment plants (WWTP), only 1 had no current violation identified in the database. The Naval facilities are included in this database. Third, all inland waterbodies are either impaired or have unknown quality. Fourth, of the 348 coastal sites along the edges of the Peninsula and Bainbridge Island, 107 are impaired (31%), 34 are rated good10%), and the rest have unknown quality. The ratio of impaired to good is 3:1. If we omit the unknowns, 76% of tested sites along the coast are impaired. Impaired inland waterbodies include Square Lake in CCHP and Coulter Creek at the SW border of CCHP. Others include Long Lake and Kitsap Lake. Note that possibly the best evaluated watershed is the Big Beef Creek watershed near Seabeck on the western side of the Peninsula. All inland waterbodies for that watershed in the database are impaired except for 2 unknowns.

The Kitsap Public Health District monitors County lakes and streams for bacteria hazardous to humans. In its last two reports (2022-2023), the KPHD reported that the number of streams with high bacteria levels increased 50% from 16 in 2022 to 24 in 2023. For 17 lakes, the KPHD reported that 12-18% of the lakes had too much bacteria. Hazardous level advisories were posted for 21

days in 2022 and 127 days in 2023. The EIS does not explain how the County plans to improve the quality of these lakes and streams. Will the number of impaired coastal sites increase as population increases?

3.1.3.3 The Kitsap County Coordinated Water System Plan (CWSP) Regional Supplement 2005 Revision (May 9, 2005) presents an assessment of municipal and industrial water supply needs in Kitsap County and a program to effectively provide water supply and service to customers throughout the area. Exhibit (figure) 9-1 in the CWSP report shows a prediction made in 2004 that estimates water demand out to 2030. An extrapolation of that line out to 2044 has the demand exceeding water rights for all of Group A systems by 2035-2044 depending on assumptions. Furthermore, the predicted demand also approaches the water rights for all systems by the 2040s. Doesn't the County have a newer prediction? Doesn't the prediction depend on assumptions of infiltration in the future and climate change? There should be alternative curves on the chart based on alternative assumptions about the future. KPUD could make this a stochastic model and produce confidence intervals around projections. Also, the draft does not clearly state where the water will be extracted from to supply high-density communities. Are they outside of the County? How will increased groundwater extraction influence surrounding flows of groundwater needed to support streams in the dry season?

3.1.4.1 Plants & Animals This review of impacts on plant and animal communities does not address large and small mammals that live specifically in forested habitat, amphibians that live in wetlands and have migration patterns, native plants that are replaced by clearing and grading. In the specific case of amphibians, migration patterns need to be considered and also silt fences that block those pathways need to be discouraged. Vague descriptions of animals without specificity makes the EIS review very weak in this area; it needs more specificity. The EIS needs to add the adverse impact on all wildlife by natural areas' proximity to housing areas, causing more wildlife interactions that can result in animal deaths. Displaced wildlife such as bear and cougar wander into neighboring yards and end up being killed for human safety. This happened with a cougar incident in Kitsap in 2023.

This section also does not mention the bog plants found in at least one bog in North Kitsap – Carpenter Lake Bog. Please add mention of this and other bog/fen environments in the plants and wetland sections of this document. These are important and rare in our region and occur only because of unique surface water conditions that should be taken into account when land is considered for development. In addition, a rare plant, Hypericum majus, has been identified at Coulter Creek Heritage Park.

The map from WDFW ranking the condition of freshwater habitat (Exhibit 3.1.4 1-1) shows that Port Gamble ranks as high quality despite the comment that most intact habitats occur in the south county.

Exhibit 3.1.4 1-2 Known Occurrences of rare plants in Kitsap County – this table states that their habitats are wetlands and riparian areas, making these areas even more valuable for protection. Later Exhibit 3.3.4.2-1 Target LOS analysis for natural resource areas – shows a significant deficit that just increases over the planning period.

3.2 Land Use – The Plan needs to protect farmland in Kitsap County. This needs to be added to the land use section. Protection of local farmland helps climate resilience, habitat, and local food production. Protection of farmland is paramount to a healthy community.

3.2.1.3 Kitsap Environmental Coalition supports the recommendation by Washington Department of Fish and Wildlife to use Riparian Management Zones (RMZs) as a replacement for the standard stream buffer widths currently used in the Kitsap County Critical Areas Ordinances.

Riparian Management Zones look at several factors that play a part in the health of these ecosystems. Salmon need cooler water temperatures to thrive and survive and the shade of trees is essential for this function. Woody debris aids in regulating the velocity of the streams and helps trap sediment. Trees and other plants in the zone stabilize the bank and the riparian zone acts as a filter to greatly reduce pollution excess nutrients from fertilizers, pesticides, herbicides or other harmful chemicals from nearby roadway use.

These Riparian Management Zone buffer widths are based upon the height of the dominant trees in the area which in Kitsap County is most likely Douglas fir. The Washington Department of Wildlife has created an online map tool to indicate these heights using data on how tall they would be if 200-years old. In those areas of Washington with few or no trees along a stream bank the buffers would be as low as 100-feet to protect streams from pollution.

For an in depth examination of riparian management zones, please refer to Riparian Ecosystems, Volume 1 as it goes into great detail about these complex systems.

Two other Washington state governments have implemented critical areas ordinances based upon riparian management zones. The City of Anacortes implemented RMZ-based buffers in 2021 while Clark County implemented a hybrid of standard buffer widths and those based upon riparian management zones.

3.2.2.1 Rural Character - The Rural Wooded Zone is becoming less and less in this area. In addition, many rezone requests are also for the conversion of Rural Protection (1 DU/10 Ac) to Rural Residential. This decrease in larger rural lots will have a significant effect on the variety of rural densities. The variety is an important aspect of the rural character in Kitsap County. Otherwise, it seems the county may end up as Rural Residential only. Take measures to protect the large rural lots and the existing character that makes Kitsap the place people love. Rural rezones should be denied, and the County's rural development expectation should be in the single percentage range. A measure to support decreased rural growth would be to remove the Rural Residential Zone. Rural development for single family homes requires the use of an on-site septic (OSS), which usually fail at some point. This environmental impact needs to be addressed and mitigated.

3.2.6.1 Transportation - Affected Environment (pdf 276)

Sound to Olympics STO Trail (pdf 308)

The STO trail presents several issues that must be addressed by this EIS.

First, the original STO alignments reviewed for SEPA DNS (for the String of Pearls and Non-Motorized plans) has changed greatly. About 90% of the reviewed alignments in the Poulsbo, Port Gamble, and Kingston area have been abandoned. Therefore, the earlier DNS determinations are inapplicable and a new SEPA evaluation is required.

Second, significant and unmitigatable adverse environmental impacts have been unacknowledged. The most recent example is an alignment through a Natural Area designated in North Kitsap Heritage Park. The construction would destroy important habitat that is an undeveloped, critical, and relatively large wildlife refugia and wildlife corridor adjacent to a large wetland and salmon stream complex. Bear, cougar, deer, bobcat, coyote, and beaver are among known species. No on-site mitigation is possible. There is no equivalent area available off-site anywhere in north Kitsap.

Third, because "significant adverse environmental impact for which mitigation cannot be easily identified" exists, a Determination of Significance must be issued and an EIS process started. Because alignments are connected and one section must begin where another ends, the project must be evaluated in total--phasing is not appropriate.

3.3 Built Environment Public Services and Utilities – There is no mention of Health Services in this section. The Kitsap County Health

Department declared a health emergency in Kitsap due to high health care costs and inadequate access to services. Although overall health services are not a function of County government, the crisis situation in our County's health services heavily impacts public services, including fire services. A health services section needs to be added addressing the impact of higher population with an already strained crisis health system.

3.3.4 Parks & Recreation (pdf 375)

There are unresolved difficulties with the SEPA and GMA status of Heritage Parks.

These parks have "land use policy plans" that bring them under the jurisdiction of the GMA. The plans have various names and purposes, including forestry plans, resource management plans, master plans, Framework, etc. Some have been approved by the Board of Commissioners, others not. None of these plans, separately or collectively, have been addressed within the context of the GMA. It is our understanding that all of these park land use policy plans must be evaluated under the GMA.

The SEPA status of some heritage parks also overlaps with planning of the Sound to Olympic trail (comment §3.2.6.1). Where Parks and Public Works planning and projects overlap geographically, all relevant plans must be evaluated for SEPA in concert.

3.3.4.2 Parks & Recreation - Impacts (pdf 378)

3.3.4.3 Parks & Recreation - Mitigation Measures

Applicable Regulations & Commitments

Kitsap County policy must incorporate current WDFW and Ecology recommendations for the use of Riparian Management Zones and appropriately amend the Critical reas Ordinance.

Kitsap County must incorporate current Ecology recommendations for wetland buffers, specifically the Critical Areas Code be amended to ensure the integrity of buffers as undisturbed, well vegetated areas.

Other Potential Mitigation Measures

Mitigation for Heritage Parks and other large county areas must include monitoring programs of wildlife and habitat health. Results can be used to modify management plans and projects, thus avoiding and minimizing adverse environmental impacts.

Environmental impacts of the Sound to Olympic trail must be properly addressed and addressed within the context of the PROS Plan and individual park forestry, resource management, master or other plans. (ref. comment on §3.2.6.1)

3.3.4.3 Establish a policy standard to protect and restore wildlife habitat and natural ecological functions. Establish monitoring programs to identify the success of restoration efforts.

3.3.4.4 - Significant Unavoidable Adverse Impacts (pdf 382)

EIS must add additional information.

The Parks, Recreation and Open Space Plan for Heritage Parks specifies protection of wildlife and habitat as important park policies, which provide multiple environmental and quality of life benefits. Wildlife and habitat management is an important and critical aspect for these parks. So-called "unavoidable impacts" can be avoided by proper planning, which includes resource assessments and subsequent landscape classifications prior to

specifying development plans (PROS Plan Appendix 5). These elements must be augmented with monitoring programs of wildlife and habitat health. Results can be used to modify management plans and projects, thus avoiding and minimizing adverse environmental impacts.

3.3.4.23-212 Heritage Parks. Shows that County can meet the LOS for this metric assuming “consideration of concepts within the Port Gamble Heritage Park Framework completed in December 2022”. This is the only clear reference to PGHP. Since that Framework is not correct and needs changes, this reference is both insufficient and inaccurate as noted in the summary comments. Additional environmental assessment is needed in regards toinal:

1. Identification of legal encumbrances and easements;
2. Identification of all existing physical features (including pipelines, wells, specialized recreation areas, etc.)
3. Identification of potential environmental hazards (water system);
4. Policies for conservation, preservation, and/or restoration of critical natural resources;
5. Lack of resource assessments including wetlands and buffers, streams and riparian management zones, wildlife habitat, and wildlife corridors;
6. Amendments to landscape classifications as necessitated by resource assessments;
7. Trail location procedures and lack of compliance with the Critical Areas Ordinance;
8. Level of usage in terms of carrying capacity;

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Puget Sound Regional Council

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February 26, 2024

Eric Baker, Deputy County Administrator
Kitsap County
614 Division St MS-4
Port Orchard, WA 98366

Subject: PSRC Comments on Draft Kitsap County Comprehensive Plan

Dear Mr. Baker,

Thank you for providing an opportunity for the Puget Sound Regional Council (PSRC) to review a draft of the Kitsap County draft comprehensive plan. We appreciate that the county has invested a substantial amount of time and effort in developing the draft plan and appreciate the chance to review while in draft form. This timely collaboration provides an opportunity to review plan elements for the 2024 comprehensive plan and prepares the county well for certification by PSRC once the full plan has been adopted.

We encourage the county consider the following comments as further work is completed for the comprehensive plan update to align with VISION 2050 and the Growth Management Act. We reviewed the draft plan using the PSRC Plan Review Consistency Tool. Comments on portions of the consistency tool are noted below:

Transportation

Plan Review Consistency Tool	PSRC Comment on Draft Kitsap Plan
The Growth Management Act requires a variety of technical analysis to support the transportation element, including inventories of existing facilities (roadways, freight routes, sidewalks, transit routes, airports, ferry routes, and bicycle facilities), level of service standards, forecasts, and project lists. (RCW 36.70A.070(6)).	Technical information supporting the transportation element can be found across multiple documents, though primarily the DEIS and Capital Facilities Plan, making it challenging to account for all the required components. The county should consolidate required technical information in an adopted portion of the plan, which could be the capital facilities plan, an appendix, or the transportation element itself.
Include mapped inventories for each element of the transportation system, including roadways, transit, cycling, walking, freight,	The DEIS provides descriptive transportation inventories but provides limited mapping of facilities. Mapped inventories are not provided for state facilities,

Plan Review Consistency Tool	PSRC Comment on Draft Kitsap Plan
airports, and ferries (RCW 36.70A.070, RCW 36.70A.108, MPP-T-7, T-15-17)	freight routes, or airports. See the Washington State Department of Commerce's Transportation Element Guidebook, pages 108-114, for information about inventories of existing facilities and conditions.
Provide travel demand forecasts and identify state and local system projects, programs, and management necessary to meet current and future demands and to improve safety and human health (RCW 36.70A.070, MPP-T-4-5) Identify maintenance and system preservation projects and programs necessary to maintain the ability of the transportation system to provide safe, efficient, and reliable movement of people, goods, and services (RCW 36.70A.070, MPP-T-1-2, T-4)	The DEIS includes project lists by alternative that address roadway level of service deficiencies. The 20-year list should also include system needs to advance other goals in the transportation element such as safety, maintenance and preservation, street connectivity in the regional growth center, improving transit connections, and addressing nonmotorized gaps. PSRC's Transportation Element Guidance includes more information about development of the project list. While they do not need to be included in the project list, the plan should also describe projects advanced by other partners during the planning horizon, such as WSDOT and Kitsap Transit.
Support a safe and welcoming environment for walking and bicycling (MPP-DP-15): • Include a pedestrian and bicycle component and collaborative efforts to identify planned improvements for pedestrian and bicycle facilities and corridors (RCW 36.70A.070(6)(a)(vii))	The role of the Kitsap County Non-Motorized Facility Plan is not clear in the draft plan. If this document is intended to fulfill the requirement for a nonmotorized component, the plan should be incorporated as a component of the comprehensive plan. The plan for implementation of nonmotorized projects should also be clear, and for projects included on the 20-year list as noted above, should include identification of project scope and costs, and how they will be prioritized and funded.
Include a 20-year financing plan, as well as an analysis of funding capability for all transportation modes (RCW 36.70A.070(3), RCW 36.70A.070(6)(a)(iv), WAC 365-196-415, WAC 365-196-430, MPP-RC-11-12, T-6, T-15)	While the plan discusses revenue and revenue tools in the capital facilities plan, the transportation element should also analyze funding relative to identified multimodal transportation project costs.
Prioritize investments in centers, including regional centers, countywide centers, high-capacity transit areas with a station area plan, and other local centers (MPP-RC-8-9)	The plan should include a policy to prioritize investments in the designated regional and countywide centers, consistent with regional policy.

Plan Review Consistency Tool	PSRC Comment on Draft Kitsap Plan
Counties: Avoid construction of major roads or capacity expansion on existing facilities in rural and resource areas (MPP-T-22, DP-38)	The plan should include a policy to avoid adding road capacity in rural or resource areas.

Land Use / Regional Growth Strategy

Plan Review Consistency Tool	PSRC Comment on Draft Kitsap Plan
Maintain a stable urban growth area with densities and capacity that support the Regional Growth Strategy	Several urban growth area expansions are evaluated in the county's DEIS alternatives. Several rezones are proposed to accommodate the county's allocated housing need and increase residential capacity. In general, urban growth area expansions should be avoided, and any expansions should be based on identified countywide need, be well-documented, and consistent with state, regional, and countywide policy.
Demonstrate sufficient zoned development capacity to accommodate targets (RCW 36.70A.115)	Two alternatives considered in the DEIS do not provide sufficient capacity to accommodate the county's share of housing need. The final comprehensive plan should include land use assumptions consistent with the growth targets and accommodate projected housing need.
Counties: Include a full range of strategies, including zoning and development standards, incentives, infrastructure investments, funding for conservation easements, housing tools, and economic development to reduce rural growth rates and protect natural resource lands over time (MPP-RGS-14-15, RGS-4, RGS-Action-7)	The plan should include additional discussion of the tools the county is employing to reduce the rate of rural growth.

Housing

Plan Review Consistency Tool	PSRC Comment on Draft Kitsap Plan
Identify and begin to undo local policies and regulations that result in racially disparate impacts, displacement, and exclusion in housing, including zoning that may have a discriminatory effect and areas of disinvestment and infrastructure availability.	Analysis of racially disparate impacts, exclusion, and displacement should be included in the draft plan or accompanying housing analysis. Commerce provides guidance on how to approach analysis of racially disparate impacts.

Plan Review Consistency Tool	PSRC Comment on Draft Kitsap Plan
Address affordable housing needs by developing a housing needs assessment and evaluating the effectiveness of existing housing policies, and documenting strategies to achieve housing targets and affordability goals. This includes documenting programs and actions needed to achieve housing availability including gaps in local funding, barriers such as development regulations, and other limitations (H-Action-4)	The plan includes several policies and strategies to address housing need. The plan should be supported by evaluation of barriers to affordable housing that may currently exist. Commerce's adequate provisions checklist can help document this work.

Capital Facilities

Plan Review Consistency Tool	PSRC Comment on Draft Kitsap Plan
Promote working with school districts on school siting and design to support safe, walkable access, including strategies to provide adequate urban capacity for new schools and to avoid serving urban students with schools in the rural area (MPP-PS-26-28)	The draft plan should include policies on working with school districts to support school siting and access.

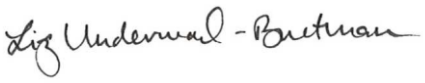
Silverdale Regional Growth Center

Plan Review Consistency Tool	PSRC Comment on Draft Kitsap Plan
Include growth targets for designated regional growth centers and manufacturing/industrial centers (MPP-RGS-2)	Once the county selects a preferred alternative, the Silverdale subarea plan should be updated with growth targets consistent with regional center guidelines.
A market study is recommended for all jurisdictions with centers. Market studies are required for designation of new centers and regional growth centers that have existing density levels below the level required for new centers at the time of the 2025 monitoring review. See pages 9-10 of the Regional Centers Framework for more information.	Silverdale currently has a density below 18 activity units per acre. Once a market study has been completed for the Silverdale regional growth center, please be sure to provide the document to PSRC staff.

PSRC has resources available to assist the county in addressing these comments and inform development of the draft plan. We have provided links to online documents in this letter, and additional resources related to the plan review process can also be found at https://www.psrc.org/planning-2050/vision/vision-2050-planning-resources.

We appreciate all the work the county is doing and the opportunity to review and provide comments. We are happy to continue working with you as the draft progresses through the adoption process. If you have any questions or need additional information, please contact me at 206-464-6174 or LUnderwood-Bultmann@psrc.org.

Sincerely,



Liz Underwood-Bultmann, Growth Management
Puget Sound Regional Council

cc: Review Team, Growth Management Services, Department of Commerce

Return to Comment Matrix

February 26, 2024

To: Mr. Scott Diener, Kitsap County SEPA Responsible Official
Department of Community Development Planning and Environmental Programs
Email: compplan@kitsap.gov
SDiener@kitsap.gov

Dear Mr. Diener:

This DEIS is quite extensive and must have taken DCD some time to compile. It has taken myself a little over a week to read it, all while taking notes of the areas of concern which I have commented on below. I have also read all the comments the public has submitted through February 9, 2024 and find many comments reflect the highest priority is in protecting our rural environment by all means. As stated on p.1-1 under "Objectives" objectives for DCD include writing "new policies that reflect the priorities of communities in unincorporated Kitsap County." In reading the public comments, a couple of priorities were repeated over and over, namely, our community requests that the forests be protected and the rural character must be kept in tact, therefore they are requesting no rezone of RW to RR be included in Alternate 3. I believe that DCD must consider the priorities of what its citizens want when writing new policies reflecting the priorities of the communities.

Draft EIS Comment

1. **Comments regarding format and errors found in DEIS**

First, and foremost, I found the page numbering in Chapter 3 to be irregular and confusing, namely duplicate page numbering under "Natural Environment" and "Built Environment: Land Use and Transportation". Page numbers should not be duplicated like this, and hopefully in the Final EIS the page numbering will show a proper page numbering system to eliminate confusion. Also "3.1.2 Air Quality/Climate" in the Table of Contents does not even show a page number, instead it shows" Error! Bookmark not defined." An example of the page confusion: In looking up Puget Sound Regional Council Vision 2050, Table of Contents showed 3-30. On the first try, I went to the wrong page 3-30.

P. 3-19, under section 3.1.2 Air Quality/Climate, paragraph 2, "Changes to seasonal precipitation, including **snowpack**, are projected to reduce hydropower's reliability in the energy sources available to the county." **Comment:** This sentence should be deleted since it does not apply to Kitsap County since the County does not get any of its water from snowpack.

P. 3-20 "Kitsap County does not appear to have a current tree canopy cover inventory that could be referenced as the baseline condition." **Comment:** Why doesn't it? Might include explanation as to why it doesn't.

P.3-33 Shows mitigation measures for air quality/climate referencing goals and policies listed in 2016 Comprehensive Plan. **Comment:** Since the rural community is going to have significant impacts as well, why aren't the policies and goals for the rural communities listed as well? I have listed some that would should be added to this section:

Land Use Goal 14. Foster rural businesses and business opportunities on designated commercial and industrial lands in the rural area, while balancing protection of rural character.(p.1-22)

Land Use Policy 57. Unlimited expansion of commercial and industrial uses in the rural areas is not appropriate. Accordingly, only limited new commercial and industrial uses will be permitted in the rural areas. Such commercial and industrial uses must be consistent with Growth Management Act and Comprehensive Plan requirements for rural areas, preserve Kitsap County's rural character, and shall not allow urban-type uses or services. (p.1-22)

Land Use Goal 15. Develop strategies for future use and compatibility for properties used for minerals.(p.1-24)

Land Use Policy 77. Require that all plats, short plats, development permits, and building permits issued for development activities on, or within five hundred feet of, lands designated as mineral resource lands, contain a notice that the subject property is within or near designated mineral resource lands on which a variety of commercial activities may occur that are not compatible with residential development for certain periods of limited duration. (p.1-24)

Land Use Goal 16. Develop a strategy for use and compatibility of properties used for timber production. Land Use Policies 80-85 (p.1-25)

Comment: The above goals and policies should be included in the DEIS since on page 3-36 under 3.1.2.4 Air Quality − Significant Unavoidable Adverse Impacts, the DEIS states "Regional growth under all alternatives increases energy needs and impacts forest canopy cover. Tree losses projected for the alternatives cannot be wholly avoided given net developable acres in the county. However, regulations to protect and replace significant trees can minimize this unavoidable impact." **Comment**: This should be a priority in the rural areas where development is encroaching onto wooded areas resulting in a great loss of tree canopy.

P.3-38 "Due to the lower elevations, none of the streams are supported by snow runoff (Williams et al. 1975)" **Comment:** I don't think this should be in since our county has no snow runoff since we have no snowpacks. Also,is the highlighted reference listed in the DEIS somewhere? I could not locate it. **Side note:** I have attached a newspaper article written in 2009 where Commissioner Steven Bauer talks about the county's water supply where there are no snowpacks here.

P. 3-41 and 3-42 show a chart, Exhibit 3.1.3.1-2 Existing conditions of the county's Shorelines of the State. **Comment:** It does not mention North Kitsap County but it should since Gamble Creek contains excellent coho and chum habitats and limited spawning habitat. See https://srp.rco.wa.gov/project/170/14107. It flows into Gamble Bay, supplying it with coho salmon.

p.3-48 Kitsap County Critical Area map – **Comment:** this map uses 2 similar pink colors making it hard to determine which risk I'm looking at, even magnified to 400%!

p.3-68 "Areal extent continues to be reduced throughout Kitsap County and the Puget Lowland" **Comment:** What does "Areal Extent" mean?

p.3-76 under Forage Fish, spawning grounds have been documented in Kitsap County. **Comment:** DEIS should include reference as to where this happens.

P.3-79 Paragraph one states, "Increased stormwater runoff from new impervious surface areas and roadways may result in increased contaminants and pollutants in habitats under all alternatives, including 6ppd-quinone". **Comment:** I think a definition of what this is should be included **and** what it does to salmonids.

P.3-83 Impacts of Alternative 3"Dispersed Growth Focus", **Comment:** states Alternative 3 would provide for increased growth primarily through expansion of existing UGAs by approximately 1,082 acres overall but doesn't mention the 418.8 acres of forest land in the North Kitsap rural area that would be reduced by a rezone application request going from RW to RR.

P.3-20 Last sentence in fifth paragraph "... residential and auto-oriented commercial uses ringing the downtown." **Comment:** Not sure why the word "ringing" is used and what it means, can a better word be found?

P.3-29 The 2022-2050 Regional Transportation Plan is a transportation plan for the central Puget Sound region. As most people don't experience transportation based solely on the jurisdiction they live and travel through the region. **Comment:** not a complete sentence since it begins with the word "As".

P. 3-35 "Both the Suquamish Tribe and the Port Gamble/S'Klallam have tribal lands within Kitsap County. The Tribes have control over development that occurs on those lands and develop plans to guide that growth. Other than Tribal lands, the Port Gamble/S'Klallam and Suquamish Tribes have usual and accustomed areas throughout the county as well." **Comment:** What does highlighted portion mean?

P.3-47 Population Change Summary chart 1990-2022 **Comment:** this chart needs to be reformatted since the letters letters and numbers are off set and make the chart hard to read, Also, why is there no data in spaces? Also, where does the rural population come in to this chart?

P.3-58 Sentence beginning with "Householders aged 55 and older represent", **Comment:** I think homeowner is a better suitable word.

P.3-62 Sentence "County's rate of adding new housing units between 2000 and 2010 by adding new housing ..." **Comment:** spaces need to be fixed.

P.3-63 "(see Exhibit 3.2.3.1-20 below)" **Comment:** "below" should be changed to "next page" or just deleted.

P.3-69 "Housing cost burden can put households in vulnerable situations and force them to make trade-offs between housing costs and other essentials like food, medicine, or

transportation. This unstable condition can also lead to rental evictions, job instability, school instability for children, and homelessness. Since housing at the low-income cost range is rare, most households in this income range pay more than 30% of their income for their housing. Low-income households that are severely cost burdened are at high risk of homelessness if a household crisis emerges" **Comment:** Has Kitsap County counted the population of the homelessness in the County? On page 3-70, it states, "...severe cost burden (paying more than 50 percent of household income on rent) increased sharply, from 18 percent of renter households to 30 percent," **Comment:** This suggests there may be a large homeless population in this County. This population is important and suffers from a severe significant impact because the County does not have adequate housing for low-income individuals. This should be addressed in the DEIS.

P.3-87 **Comment:** In the section titled Impacts of Alternative 3, "Dispersed Growth Focus", it states that of the three alternatives, Alternative 3 would have the most potential to affect cultural resources. Not mentioned in this DEIS is the rezoning request for 418.8 old timber forest land owned by Raydient currently zoned RW (1 unit per 20 acres) and requested to be rezoned to RR (1 unit per 5 acres) and one 24 acres RW to Rural Commercial. North Kitsap United recently had its own environmental impact statement done of this property, including an individual report done on the cultural findings dated December 8, 2023. Titled "Cultural Resources Assessment for the North Kitsap United Project, Kitsap County, Washington", it can be found as "Appendix D: Site Cultural Resources Report Cultural Resources (Westland Resources)." **Following is the report's Conclusions and Recommendations** " As discussed in the Anticipated Finds section above, background research indicates that there is a moderate potential for encountering historic period cultural resources and a low potential for encountering precontact cultural resources in the API. This cultural resources assessment revealed that very little of the API has been surveyed previously; based on the results of the assessment, there is a potential for extant cultural resources in the API. Therefore, WestLand recommends that a cultural resources survey of the entire API should be conducted. This should include 100 percent pedestrian survey of the API and shovel testing in areas and on landforms with a higher likelihood of encountering cultural resources, to be determined based on field observations. **Comment:** This is a new study and a reference that DCD should incorporate into the DEIS.

2. **Comment Regarding Why Alternative 3 Should NOT allow Rezone of RW (1 unit 20 acres) to RR (1 unit 5 acres) and Rezone of RW to RC of a total 417.98 acres (31 parcels) as requested by Raydient, ID 72**

First, there is an obvious difference of opinion between how the citizens of the county view this rezone and how North Kitsap United (NKU), comprised of a partnership of Raydient, Kingston Rotary and the YMCA view it. At the December 12, 2023 meeting NKU had to go over its environmental studies, Jon Rose explained reason for the rezone,"We're asking for the most

common zoning in North Kitsap." For our benefit, we are asking to rezone the lots from 20 acre lots to 5 acre lots. That's what we are asking for." **First Comment:** Two things that popped out to me about this explanation is: 1) Raydient doesn't care about protecting the county's rural environment and character since the only reason they are asking for a rezone on a busy state highway which is already border lining on urban sprawl where he wants to put the NKU project is because it is the most common zone in the county and 2) Raydient is asking for the rezone for their benefit, like Mr. Rose stated, not the community's. He goes on to explain that if he gets the rezone, Raydient will provide a certain amount of land to the community as a gift, free of charge. North Kitsap doesn't have much RW left and to change 400+ acres of RW to RR because its the most common is not justification to change the zoning.

Second Comment: He presented this vision as "Hypothetical Concept B" on slides he was showing, but in reality, I see this as only a marketing negotiation tactic, a little short of a bribe to get what his company wants.

Third Comment: Since there is no actual development site plans for a permit, I don't think the Commissioners should approve this zone request at this time. In reviewing NKU's Feasibility Study, on page 4, it states, "This report was written in the context of one potential development scenario provided by the Owner including: • One large community sports and recreation facility (including a YMCA and approximately 40 acres of sports and recreation. • Five acres of commercial use. • Eighty residential lots. To be conservative, each lot was assumed to include one primary and one accessory dwelling unit (ADU) as permitted in the Rural Residential zone."

Fourth Comment: In Mr. Rose's presentation, he did not mention ADUs in his Concept B slides. And, the study states this was a conservative estimate. We do not know what will happen to that property if it is rezoned without a site development application and permitted being approved first. On page 13 of the NKU Feasibility Study, you will find they have incorporated a strip retail plaza, estimated to be 2,000 sqft low to 4,000sqft high in the trip generation section. Again, the citizens of Kitsap County have no way of knowing what a rezone for this project will do to our rural environment along State Highway 307 (Bond Road), but we do know it does not comply with the mandates of the Washington State GMA, The Vision 2050 Regional Growth Strategy, as stated in the Puget Sound Regional Council Vision 2050(on page ES3) and in the NKU's Feasibility Study confirms this site has moderate erosion hazards and moderate deep landslide hazards, which will need "further studies once development plans become more final"(p.19).

I feel the DEIS should be updated page 3-5 and 3-15 to include this site's moderate hazards.

Final Comment: As time is dwindling for me to turn in this DEIS comments, I will close for now. In conclusion, by looking at all the comments your department has received from the

citizens of Kitsap County, including Poulsbo's Mayor and the Suquamish and S'klallamTribes

asking for this rezone request by Raydient/Jon Rose, application ID 72 to be denied, in which I fully agree, and now to add my request for the denial and removal of this rezone request from Alternative 3. The rezone does not have to happen now since there is no way of knowing exactly what will become of this property. Too many unknowns for a rezone to happen.

I appreciate being given this opportunity to submit my comments regarding the DEIS.

Kitsap Daily News, It's time to rethink water management in Kitsap County | From the Commissioner, by Commissioner Steven Bauer, September 4, 2009

Let me explain. Surface water in our county is good and bad.

The good water recharges our groundwater. Did you know that because we have no mountain ranges or snow pack, most of our water comes from aquifers? The water in the aquifers got there over long periods of time and we draw on it every day for our residential, business and commercial purposes. We need to refill those aquifers or we will literally run out of water.

When rain falls in natural forests, about a third of the water evaporates back into the air, about a third seeps down into the aquifers and about a third moves slowly downhill under the ground to replenish streams and wetlands. The water going to the aquifer is available for our use.

The ground water feeds streams that support salmon runs and wildlife, not to mention providing recreation for us. The natural ground flow limits flooding because it meters the water getting to the streams and gullies. Only about 3 percent of rain becomes surface runoff that causes flooding.

When we build roads and homes and businesses, we take out trees and natural vegetation, we cover up the ground with water barriers like roofs, roads, driveways, and parking lots. Because there isn't the natural vegetation to absorb it and slow it down, less water gets to the aquifer, less water is absorbed into the ground and more water runs rapidly off the surface into neighbor's yards, streams, gullies and wetlands. This causes flooding, property damage and pollution into streams and Puget Sound and Hood Canal.

What has been our traditional answer? We call rainfall storm water, stick it in a pipe and send it directly into ditches, streams or the saltwater. In recent years, we've put in the fenced detention ponds you see all around and we provide some " treatment" to take out the big particles and pollutants.What is the result of our traditional techniques? We are drawing down our aquifers. On Bainbridge Island, some wells already have salt water intrusion as the freshwater is depleted. There was a recent request for the federal government to designate the entire City as a critical aquifer recharge area.

We hear from long time residents that in the old days it would take a couple of days for streams to rise after a big rainfall. Now those same streams flood in hours. We are seeing more property damage and increasing pollution into our streams, wetlands and saltwater.On another front, we send used water to the sewer plant where we treat it for biological hazards and pump it out into the Puget Sound.The county's central sewer plant puts three million gallons of treated effluent into Puget Sound every day. While it may not carry diseases, the effluent carries nitrogen, pharmaceutical byproducts and other compounds. So what? There's lots of water in the Sound to dilute these compounds, right?

There's ample evidence that Puget Sound and Hood Canal are in trouble. A recent Department of Ecology study in south Puget Sound found that about 80 percent of the nitrogen that was contributing to low oxygen in the Sound was coming from sewer treatment plants.

Kitsap County has more miles of saltwater shoreline than any other county in the state and saltwater is a critical and integral part of our identity and lifestyle.

We need a healthy Sound and canal. In addition, we need those three million gallons of water to replenish our aquifers and feed our streams and wetlands.

In other words, we need to treat our water as a resource as opposed to a nuisance which we just stick in a pipe and throw away.

p.1

So what can we do as we rethink past practices? Here are some ideas:

1. Preserve our natural forests and natural environment. This preserves the natural water cycle, provides wildlife habitat, protects our streams and saltwater, provides outdoor recthe rural feel that we all love.

2. Septic tanks have gotten a bad rap but they actually treat the effluent and replenish the aquifer.

3. Local governments and the Homebuilders Association in Kitsap County are pioneering what are called low- impact techniques for treating building runoff.

This involves pavement and sidewalks that allow the water to flow through them to the ground below and " rain gardens" that absorb the runoff and let it infiltrate into the soil.

We want to mimic the natural water cycle by allowing the water to stay on the property and infiltrate into the soil in a normal fashion.

4. We need to treat sewer effluent to a cleaner standard. The days of dumping the waste and avoiding the cost of proper treatment are past. Then if we dispose of the effluent in saltwater, at least it is cleaner water.

5. A better approach being considered by the Silverdale Water District, West Sound Utility and the county involves higher treatment and then recycling the cleaner effluent to be used for non drinking purposes like irrigation. This would require parallel piping systems and be similar to areas that have drinking water systems and separate irrigation districts.

6. Concentrate our density in cities and urban areas that are already hard- scaped in order to preserve the rural environment.

7. We also have a huge installed system of roads, homes and businesses that lack these techniques. We will need to seek creative and affordable ways to retrofit these sites.As our population increases, managing our water resource will make sense economically and will contribute to preserving our natural, rural atmosphere.

So if this is so important, why haven't we done it before? First, we have better technology and understanding of the water cycle than we've had in the past.

Second, it was cheaper in the short run just dispose of water than the treat it properly.

We know now that there are long term consequences from that short- sightedness.

Over the coming months and years, the Puget Sound area and Kitsap County will be discussing many of these issues and the price tag that goes with them.

It will be important for you to be involved and be heard as those debates unfold.

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Rural Lands Goals, Policies, and Strategies

Key Terms **Rural Character** – Rural land uses consist of both dispersed and clustered residential developments, farms, wooded lots, and small and moderate-scale commercial and industrial uses that serve rural residents as their primary client. Agriculture and natural resource-based activities including farming, mining, aquaculture and logging.	Include a more precise definition of rural character using allowable land uses and activities permitted in rural zones in the key terms. The discussion of "Rural Character" in this chapter uses vague and nebulous terms. Sounds more like a real estate agent's description of a property than a document which will guide planning activities for the next decade. Leaning on amorphous terms like "quality of life and philosophy of living" invites conflicts over allowed natural resource uses in rural zones.
Land Use Goal 8. Food security, systems, and production *Promote food security, food systems, local food production, and public health by encouraging locally based food production, distribution, and choice.*	
Land Use Policy 8.1. Promote inter-agency and intergovernmental cooperation to expand community gardening opportunities.	All references to growing in urban and suburban areas should also be identified as ***urban agriculture.*** The USDA defines ***urban agriculture*** as the cultivation, processing, and distribution of agricultural products in urban and suburban areas. They provide technical and financial assistance for a variety of growing operations, which provide healthy, local food, encourage economic development, provide employment and on-the-job training, expand community greenspaces, foster community collaboration, build climate and disaster resilient communities, and are an essential part of a resilient diversified food system.

Land Use Policy 8.2. Support the development and adoption of joint-use agreements on publicly owned sites or institutional facilities to allow gardens, distribution, and sales. **Land Use Policy 8.3.** Prioritize underserved communities, including communities with food deserts, as areas for potential locations for community gardens, farmers markets, and local food access programs.	County-owned public sites all require fee for service to access for farmers markets, urban agriculture and other food access activities. If food security for income -limited and vulnerable populations is a goal then strategies must include low-barrier access. **Suggested language:** Support and invest in inter-agency and intergovernmental collaboration to expand opportunities for urban agriculture, including urban and peri-urban farms, community gardens, and all other forms of cultivation, processing, and distribution of agricultural products in urban and suburban areas.
Land Use Strategy 8.a. Adopt initiatives that will enhance urban and rural agriculture, community gardens, farmers markets, and food access.	See comment re: **Land Use Policy 8.1.**
Land Use Strategy 8.b. Consider allowing alternative retail models including pop-ups and mobile markets.	These activities are allowed per code
Land Use Goal 16. Rural character *Protect Kitsap County's unique rural character.*	
Land Use Policy 16.1. Permit residential uses in rural areas in a variety of rural lot sizes consistent with the rural character of the surrounding area.	See earlier comment regarding defining "Rural Character" in the key terms of this chapter. As the majority of Kitsap has been reduced to the minimum lot size in RR zones (1 DU/5A) a goal to limit to "low residential densities" is largely a moot point. **Strategy:** Incentivize lot line adjustments and aggregation of smaller parcels by a single landowner to further reduce rural densities.
Land Use Policy 16.4. Accommodate appropriate rural uses not characterized by urban growth. **Land Use Policy 16.5.** Allow for essential public facilities, other regional infrastructure, and rural governmental services.	**Policies 16.4 & 16.5** allow for higher densities, sprawl and resultant UGA creep into rural areas. Preferred language from 2016 should replace these policies. **2016 - Land Use Policy 50.** Limit the designated rural area to low residential densities that can be sustained by minimal infrastructure improvements, cause minimal environmental degradation, and that will not cumulatively create the future necessity or expectation of urban levels of service.

Land Use Strategy 16.a. Review and revise as necessary standards and development regulations for the rural area to preserve rural character.	**Strategy:** Review Chapter 17.455 – the Agricultural Code enacted in 2016 every five years. Design standards, while appropriate for urban and suburban areas of the county, can limit agricultural activity. Brush clearing, ditch maintenance, plowing and other land disturbing activities can be normal on farms. While commercial agricultural activities are typically excluded from an SDAP under Kitsap County Code (12.10.040 Exemptions) it is possible that these activities can be interpreted erroneously. A complaint from a neighbor about a common agricultural practice can lead to an expensive and time-consuming process for the farmer. **Strategy:** Provide a separate website with agriculture specific practices and regulatory requirements with an emphasis on common agricultural practices vs. land disturbing activities
Land Use Strategy 16.b. Explore development regulations that minimize changes in grade from pre-development site conditions in order to maximize native vegetation retention.	Tree retention ordinances limit farming and agricultural activities and restrict conversion of timberland to agriculture. While it is recognized this is a high impact development process per the Critical Areas Ordinance when appropriate permits are obtained and measures are taken to preserve water quality conversion is an allowed activity. Tree retention ordinances prevent this activity.
Land Use Strategy 16.d. Continuously review and revise as necessary development regulations regarding clustering, density transfer, design guidelines, conservation easements and other innovative land use techniques to ensure they are working as intended.	**Strategy:** Adopt all locally applicable recommendations from the Washington State Food Policy Forum "Land Use Policy Solutions to Stem Agricultural Land Loss" specifically: • Relieve the pressure to develop agricultural land by requiring cities to allow more options for in-fill housing, such as accessory dwelling units, duplexes, triplexes, and townhomes. • Prior to allowing a city annexation or urban growth area expansion, require completion of an agricultural impact statement that sufficiently addresses the concerns raised.
Land Use Strategy 16.f. Explore regulation and incentive programs to improve compatibility between diverse rural uses (e.g., ~~small-scale~~ agriculture, rural businesses, and residences).	Replace all references in this Comprehensive Plan to "small-scale agriculture" with the preferred term **agriculture.**

Land Use Goal 17. Foster rural business *Foster rural businesses and business opportunities on designated commercial and industrial lands in the rural area while balancing the protection of rural character.*	
Land Use Policy 17.2. Allow or conditionally allow home-based cottage-type businesses and industries in the rural areas that do not negatively affect rural level of service or rural character. **Land Use Strategy 17.a.** Review allowed uses and level of review for rural zones and update regulations based on findings.	Conditional Use and Administrative Conditional Use processes result in undue regulatory burden on farmers and other rural businesses. DCD staff unfamiliar with allowed accessory uses in the Chapter 17.455 - Agricultural Code may require additional requirements on farmers seeking to incorporate value-added processing or construct exempt buildings for agricultural purposes. **Strategy:** Provide a separate website with agriculture specific practices and regulatory requirements with an emphasis on common farm-based businesses. Assign a planner with expertise in Chapter 17.445 to respond to all inquiries regarding accessory agricultural uses. RCO Zones require a conditional use permit for food processing facilities and do not permit farming, however they do allow restaurants. As farm-to-table dining typically involves processing of seasonally excess produce and growing food for the restaurant on-site this seems a limitation of these zones. Ironically, RCO does allow aquaculture which seems odd. RI Zones allow for slaughter facilities however a USDA slaughter plant will require public water and sewer. This represents an incompatibility and limits crucial infrastructure for local agriculture. Many farm-related activities (small equipment repair, custom farming, co-packing, saw milling) provide additional income for farmers. **Strategy:** Expand the definition of agricultural accessory uses in the Agriculture Code to clarify what types of home-based businesses are allowed.

Land Use Policy 17.3. When considering public spending for facilities and services within the rural area, prioritize the maintenance of existing facilities and services that protect public health and safety and only upgrade facilities and services to provide rural service levels without creating capacity for urban growth.	Farmers wanting to engage in value-added food processing and animal harvesting are able to do so without public water and sewer – however their capacity in those accessory uses is significantly limited without public services. Specifically, a USDA Slaughter plant would be a tremendous benefit for Kitsap and the surrounding region and it would require public water / sewer. **Strategy:** Make infrastructure investments in rural areas that specifically support agricultural accessory uses.
The following policies from the 2016 Comprehensive Plan should be included in the 2024 update: **2016 Land Use Policy 61.** Re-examine and, if appropriate, adopt or amend criteria used to determine if land meeting Growth Management Act designation criteria as Agricultural Resource Land exists within the county. **2016 Land Use Policy 62.** Explore creation of Create a "no-net-loss" policy for agricultural lands. ***Absent inclusion of these policies from 2016, include the following strategy to ensure adequate staff resources and attention to the concerns and needs of the rural element of the plan are addressed:*** **Strategy:** Review and revise all sections of the rural element as it pertains to agriculture and farming in 2025 to create a Comprehensive Plan to compensate for the focus on urban and suburban elements of the 2024 Comprehensive Plan	The American Farmland Trust identified ineffective agricultural zoning as the foremost problem to prevent the conversion of farmland. They suggest including all currently farmed land in agricultural zones as the most effective strategy to stop conversion of farmland to non-farm uses. While this option seems unlikely in Kitsap County for several reasons, including a commercial agricultural zone in land use tables remains a slim possibility. **Strategy:** Allow landowners to designate rural parcels of "agricultural lands of local importance" per WAC 365-190-050 (6) to afford additional protections to their parcels. **Strategy:** Adopt secondary strategies for farmland preservation, specifically economic development for farmers, TDR and PDR programs, and tax programs, to preserve remain agricultural lands. Kitsap Conservation District conducts annual watershed inventories of parcels engaging in agricultural activities and has a GIS layer of these inventories. This inventory presents a valuable tool to develop policies and strategies to limit loss of agricultural land. **Strategy:** Adopt an asset management approach to agricultural lands and working landscapes and prioritize agricultural and open space land in planning processes. **Strategy:** Prevent annexation of agricultural lands by cities. For example, the annexation of several farms on the southeast boundary of Poulsbo (Heron Pond Farm) along Noll Rd. Additional examples include the rezone of a large section of land off of Central Valley Rd and Hwy 303 to Urban Low / Urban Protected which is currently slated for development, the creep of commercial and residential land northwest of Silverdale (the Trails and

	associated high density housing), and loss of farmland on the west side of Hwy 16 in South Kitsap (Sidney Meadows).
Land Use Goal 18. ~~Small-Scale~~ Agriculture (See earlier note regarding preferred terminology) *Maintain the viability of agricultural uses and activities in rural areas, including cultivation, animal husbandry, ~~and~~ value-added production, and other allowed accessory uses.*	
Land Use Policy 18.1. Foster agriculture opportunities by promoting flexibility in development regulations.	Housing for farm workers is a crucial need for farmers and inadequate access to labor limits the productive capacity and profitability of many local farms. Incorporate the following policy from the 2016 Comprehensive Plan in the 2024 version: **2016 Land Use Policy 69.** Develop and adopt criteria for permitting temporary farm worker housing standards and policies to allow for construction of farm worker housing and infrastructure**.** **Strategy:** Engage stakeholders every five years to review the Kitsap County Agricultural Code and associated regulations impacting farmers.
Land Use Policy 18.2. Continue regulatory and non-regulatory preservation of historic or working farmland.	See **"*In Our Hands Farmland | Preservation Strategies: Analysis and Recommendations*"** from the Kitsap Farmland Preservation Working Group (April 2023) for a detailed discussion of the options available for TDR, PDR, economic support for farmers and other strategies to preserve farmland and the farmers who work the land.
Land Use Policy 18.3. The Kitsap County Agricultural Strategic Plan and Inventory shall be the basis for discussions of Kitsap's food system, including agriculture, policies, and programs developed by the County. Agricultural mapping detailed in the Plan shall be maintained and refined.	The Farm Focus Areas in the Agricultural Strategic Plan hasn't been updated since 2011 and is not an accurate representation of the farming activity in the agricultural activity across the county over time. As farming is allowed in all rural zones it is entirely possible that those areas will change. **Strategy:** Evaluate the feasibility and applicability of farm activity clusters as a basis for agricultural policies and programming and incorporate other metrics (i.e ongoing farming activities, soil type, historic use, parcel size) **Strategy:** Update the Strategic Plan and Inventory every five years to coincide with the USDA Census of Agriculture
Land Use Policy 18.4. Coordinate with federal, state, and local governments, community groups, and private landowners to promote long-term preservation of farmlands.	See **"*In Our Hands Farmland | Preservation Strategies: Analysis and Recommendations*"** from the Kitsap Farmland Preservation Working Group

	(April 2023) for a detailed discussion of the challenges and options available for preserving working landscapes. A significant challenge for Kitsap is operationalizing our Transfer of Development Rights Program (TDR) for farmland preservation. Due to Kitsap's lack of commercial agricultural zoning participation in a regional TDR program (should one be organized) is not possible as the regional program will only allow transfer of development rights from land zoned for commercial agriculture to receiving municipalities. This means Kitsap must have receiving sites for development rights inside existing UGAs and incorporated areas with our county and significantly limits the usefulness of this program for farmland preservation. **Strategy:** Develop, implement, evaluate, and restructure, if necessary, the existing Transfer of Development Rights (TDR) program to support preservation of agricultural lands. Progress occurs when dedicated staff implement goals and policies outlined in the Comprehensive Plan. Regionally, several models for this approach exist. The Snohomish County Agricultural Coordinator supports agricultural services within Snohomish County government and serves on the county's economic development team. They represent the county executive as needed on local, regional, state, and national issues, and works with farmers and other agricultural groups to promote the vitality and sustainability of agriculture in the county. Pierce County's Agriculture Program helps local agricultural producers and processors navigate permitting procedures and interpret County regulations, works to improve relationships between agricultural operations and County government, and establishes partnerships with other agricultural service providers in the County and region. The current focus of the Agriculture Program includes permitting assistance for landowners, updating County policies affecting agriculture, providing support to rural landowners in solving drainage issues, and facilitating greater market access for local farms. **Strategy:** Fund a staff position (minimum of .5 FTE) for a County Agricultural Coordinator located at Kitsap Conservation District focused on farmland preservation, economic support for farmers and agricultural technical assistance.

Land Use Policy 18.5. Recognize and value water as an agricultural necessity. **Land Use Strategy 18.a.** Develop and adopt policies with appropriate local, county, and state agencies to promote viable coordinated water resources for greater accessibility to water rights for agriculture usage.	Commercial agriculture requires a water right or access to affordable public water. Currently Washington State Department of Ecology is not issuing new agricultural water rights and has contracted with the Washington Water Trust to identify unused water rights for reclamation to increase in-stream flows in priority watersheds. **Strategy:** Explore options for reclaimed water (purple pipe) for agricultural uses and other options with public utility districts **Strategy:** Create an irrigation district and water bank to create access to water for farmers without water rights
Land Use Strategy 18.b. Review and amend development regulations to consider impacts of non-farm-related commercial or industrial uses to the Farming Areas identified in the Agricultural Strategic Plan and Inventory.	**Strategy:** Expand RI and RCO zones to include more farm related activities to support agriculture related economic development in rural Kitsap
Land Use Strategy 18.c. Encourage small farms through strategies including tax policy, conservation easements, Transfer of Development Rights (TDR), Purchase of Development Rights (PDR), innovative design criteria, expedited agricultural activity permit review program, educational and agritourism activities, and the establishment of a small farms institute.	See comment regarding **Land Use Policy 18.4.** To reiterate – the TDR program does not currently work for farmland preservation in Kitsap. Due to Kitsap's lack of commercial agricultural zoning participation in a regional TDR program (should one be organized) is not possible as the regional program will only allow transfer of development rights from land zoned for commercial agriculture to receiving municipalities. This means Kitsap must have receiving sites for development rights inside existing UGAs and incorporated areas with our county and significantly limits the usefulness of this program for farmland preservation. **Strategy:** Develop, implement, evaluate, and restructure, if necessary, the existing Transfer of Development Rights (TDR) program to support preservation of agricultural lands.
Land Use Strategy 18.d. Form an agricultural advisory committee to inform development of future regulations and act as a resource to farmers regarding incentive and other assistance programs.	An Agriculture Advisory Committee should provide recommendations to the Board of County Commissioners on issues of significance to or that impact the agricultural community and provides a forum to enhance and promote the long-term success of commercial agriculture in Kitsap County. This can involve the following: • Reviewing and making recommendations regarding existing and proposed policies and regulations affecting commercial agriculture; • Monitoring and making recommendations concerning land use issues as they impact agriculture;

	• Acting as a sounding board on agriculture issues; and • Developing recommendations on county farm and food policy Sufficient staff support is essential to the effective functioning of any county advisory committee or board. **Strategy:** Form ***and appropriately staff*** an agricultural advisory committee to inform development of future regulations and act as a resource to farmers regarding incentive and other assistance programs.
Land Use Strategy 18.e. Review Kitsap's agricultural land uses, businesses, and products against the criteria for agricultural resource lands and evaluate future designation.	See expanded comments below

Strategy: Set up a separate website with detailed information on permits required for agricultural activity AND clarify language. Designate an ag planner at DCD. Develop an educational webinar covering the agricultural code and common permitting activities. Reduce regulatory burdens on farmers.

There is a lack of clarity in determining what permits are required for agricultural activities in Kitsap. As the majority of permit activity focuses on non-farming residential or commercial development, individuals seeking assistance for farming and agriculture related activities will find it challenging to determine what they need AND DCD planners may require more permits than are needed per the agricultural code.

For example, the following permits are identified under "Agriculture" at: https://www.kitsapgov.com/dcd/Pages/Development-and-Land-Use.aspx

- Agriculture Assembly Event - Site Plan Review
- Agriculture Conditional Use Permit/Agriculture Administrative Conditional
- Agriculture Building - Commercial
- Agriculture Structure - Residential
- Agriculture RV

The majority of these permits aren't referenced in the agricultural code or the zoning and use tables. And there seems to have been some regulatory creep since the ag code was drafted.

For example, in the Agricultural Code with regard to on-farm animal harvest and processing it states:

B. Mobile agricultural processing or production facilities, including for slaughtering, are allowed; provided, that:

1. The facility and operations are shielded to minimize visibility from immediately adjacent residences and public rights-of-way; and
2. The facility must have all appropriate registrations and licenses necessary to operate as a mobile slaughtering facility.

C. A permanent use meeting the Food Safety and Inspection Service definition of a very small processing facility or a very small slaughtering facility may be allowed on a farm as an accessory agricultural use; provided, that a site plan review permit is acquired.
https://www.codepublishing.com/WA/KitsapCounty/#!/Kitsap17/Kitsap17455.html#17.455

A search of for “Site Plan Review Permit” yields the Building Site Plan Review Permit (15 pages) found at: https://www.kitsapgov.com/dcd/Documents/DCD%20Building%20Site%20Plan%20Brochure.pdf This really makes sense for a farmer seeking the conversion of an existing building or garage on a farm into a WSDA Processing Facility to slaughter and process poultry under the 20,000 bird permit.

Further, searching for information on agricultural accessory uses Brochure #103 – Accessory Agricultural https://www.kitsapgov.com/dcd/FormsandBrochures/Accessory%20Agriculture%20Use-%20Wineries,%20Breweries,%20Cideries%20and%20Distilleries.pdf for information for on-farm processing under the heading “APPLY FOR A PERMIT Processing Facility or Slaughtering Facility” for a very small (under 10 employees) processing facilities and slaughtering facilities may be allowed as an accessory provided that a Commercial Industrial Building Permit is acquired.

This leads to Brochure #17 - Commercial Building Permit Application (3 pages) https://www.kitsapgov.com/dcd/FormsandBrochures/Commercial%20Bldg%20Plan%20Requirements.pdf which requires detailed information including a cover sheet, architectural and engineering drawings, lighting, structural, parking, landscaping and civil drawings, plumbing design and all mechanical information.

With regard to the permit requirement for a Small (10-500 employees) or large (more than 500 employees) processing or slaughtering facility may be allowed in industrial zones, subject to an Agricultural Conditional Use Permit. This information is found at:

The Agricultural Conditional Use Permit is found at: https://www.cognitoforms.com/KitsapCounty1/RequiredPermitQuestionnaireAgricultureConditionalUsePermitAgricultureAdministrativeConditionalUsePermit

It is unclear how an Agricultural Conditional Use Permit varies from a regular Conditional Use Permit.

The original intent of the agricultural code was to create low-barrier, minimal permitting for farmers seeking to engage in agricultural uses – both primary and accessory.

The following polices from the 2016 Comprehensive Plan should be included in the 2024 update: **Land Use Policy 67.** Permit all agricultural uses as defined KCC 17.110.050 and agricultural activities as defined in Revised Code of Washington 7.48.310 in the Rural Wooded, Rural Protection and Rural Residential zoning districts.	With regard to the Rural Zones in Kitsap. The Comprehensive Plan Land Use Designation: Rural Wooded with a density of 1 dwelling unit per 20 acres is intended ***to encourage the preservation of forest uses and agricultural activities,*** retain an area’s rural character and conserve the natural resources while providing for some rural residential use. This zone is further intended to discourage activities and facilities that can be considered detrimental to the maintenance of timber production. Residents of rural wooded (RW) residential tracts shall ***recognize that they can be subject to normal and accepted farming and forestry practices on adjacent parcels.*** This is the ONLY zone that specifically focuses on the preservation of lands for agricultural activities – but in real practice it preserves timber land – and

	it is extremely difficult if not impossible to convert timber land to agricultural activities in Kitsap. **Strategy:** Amend the RP and RR zoning definitions to include the same outcome as the RW Zone – preservation of agricultural activities.
Land Use Policy 70. Consider procedures to notify neighboring landowners about approved agricultural uses in the Rural Wooded, Rural Protection and Rural Residential zoning districts.	Kitsap County Agricultural Code states: 17.455.100 Right to farm and notifications. C. Notification. All landowners in Kitsap County shall receive a notice in the annual tax statement newsletter that unincorporated parcels in Kitsap County may be within or near agricultural lands on which a variety of commercial activities may occur. This hasn't happened for the last 3-4 years. **Strategy:** Create a system to ensure that notification of rural residents about the potential for commercial agricultural activity in rural zones occurs on an annual basis.

Resource Lands Goals, Policies, and Strategies

Land Use Goal 19. Forest resource lands

Maintain forest resource lands in Kitsap County for continued forestry production.

Land Use Policy 19.4. Allow the use of industry-standard Best Management Practices within designated Forest Resource Lands and the Rural Wooded designation, provided all applicable environmental laws and regulations are followed. **Land Use Strategy 19.a.** Maintain and enhance the continuation of forestry lands and forestry through tax policy, conservation easements, purchase of development rights, Transfer of Development Rights (TDR), and clustering incentives. **Land Use Strategy 19.b**. Develop, implement, evaluate, and restructure, if necessary, the existing Transfer of Development Rights (TDR) program. **Land Use Strategy 19.c.** Require that all plats, short plats, development permits, and building permits issued for development activities on, or within eight hundred feet of, lands designated as forest resource lands contain a notice that the subject property is within or near designated forest resource lands on which a variety of commercial activities may occur that are not compatible with residential development for certain periods of limited duration. **Land Use Strategy 19.d.** Develop and promote incentives for continued rural and resource uses and preservation.	All of these policies and strategies maintain and support continued resource-related land uses for forest resource lands – agricultural lands need the same strong language for ongoing farm activities despite lack of designation as commercial agricultural lands in the use tables. Incentivizing the continuation of agriculture via tax policy, and evaluation and revision of the existing Transfer of Development Rights (TDR) preserves rural land use activities on both farmland and associated timberlands. With regard to notification see note regarding **2016 Land Use Policy 70** above. Strengthening existing notification requirements in 17.455.100 to include all plats, short plats, development permits, and building permits issued for development activities on in rural zones that the subject property maybe within or near farmland on which a variety of commercial agricultural activities may occur and makes landowners unfamiliar rural activities that farming is an allowed activity.

Economic Development Goals, Policies and Strategies

Economic Development Goal 2. Government Operations & Regulations

Foster a business-friendly climate through county government operations and regulations.

Economic Development Policy 2.5. Promote a balance between economic growth and protection of Kitsap County's environmental assets and rural character. **Economic Development Policy 2.6.** Support efforts to enhance economic, visual, and environmental qualities of rural areas.	Support for new and beginning farmers and BIPOC farmers is key to the future of farming in Kitsap. All regulations should support the economic viability and growth of agriculture and natural resource activities in the rural zones.
Economic Development Strategy 2.a. Promote positive relationships with economic development stakeholders as valued members of Kitsap County.	Include food and farm businesses as stakeholders and a sector of economic activity in Kitsap County.

Economic Development Goal 3. Jobs & Business *Prioritize living wage jobs, business formation, retention, and expansion efforts in Kitsap County.*	
Economic Development Policy 3.3. Support new business development. **Economic Development Strategy 3.a.** Support programs that grow entrepreneurship through creative, programmatic, and collaborative efforts by individuals, business, and organizations. **Economic Development Strategy 3.f.** Support educational and economic programs that prioritize and encourage the ability of our youth to maintain residency in Kitsap County.	
Economic Development Goal 4. Sustainability *Focus on Kitsap's strengths in building our economy for a healthy and sustainable economic future.*	
Economic Development Policy 4.4. Encourage appropriate economic opportunities in rural areas. **Economic Development Policy 4.5.** Recognize that the health and preservation of Kitsap County's natural environment increases economic activity.	All previous reports, analyses and strategic plans advised supporting farmers with education, outreach, and technical assistance on ways to start, expand and sustain farm businesses. Recommendations from 1992 to goals in the 2016 Comprehensive Plan call for supporting economic health and viability of farmers. Implementation of these policies – coordinating activities between organizations serving farmers, applying for grant funding, and providing outreach and technical assistance to farmers – to make this a reality requires organizational capacity. For most capacity is a function of financial support for staffing. **Strategy:** Fund a staff position (minimum of .5 FTE) for a County Agricultural Coordinator located at Kitsap Conservation District focused on farmland preservation, economic support for farmers and agricultural technical assistance.
Economic Development Goal 5. Social Determinants of Health & Economic Vitality *Acknowledge and address economic disparities experienced by residents of Kitsap County.*	
Economic Development Policy 5.6. Expand access to affordable healthy food and the community's capacity to produce, process, and distribute local foods.	Access to affordable, nutritious food is key to community health and reducing food insecurity. **Strategy:** Provide ongoing support and funding for the Kitsap Farm to Food Pantry Program which purchases produce from local farmers for distribution to food banks and community feeding programs. **Strategy:** Provide ongoing funding and support for Kitsap Harvest Gleaning Program

Economic Development Policy 5.7. Support food-oriented programs that will stimulate economic growth, such as agritourism, food-oriented businesses, manufacturers, and distributors.	Agritourism is a commercial enterprise and allowed accessory agricultural use linking agricultural production with tourism to attract visitors to a farm or agricultural business for entertainment and education, while creating income for the farm. **Strategy:** Designate 5% of the Kitsap Lodging Tax to support agritourism and local food marketing / promotion.
Economic Development Strategy 5.a. Incentivize mixed-use developments, multifamily housing, and other strategies to ensure affordability in Kitsap County.	Farm worker housing is one of the single biggest challenges facing farmers today. Lack of affordable, on-site housing for farm workers limits the ability of farms to maximize production on existing acreage or expand their farms. Lack of housing is a significant factor in farmers inability to hire farm labor. **Strategy:** Allow for flexibility in regulations for the construction of farmworker housing. Include farmworkers in planning for affordable housing programs.
Economic Development Strategy 5.b. Support community gardens, school gardens, farm-to-school programs, farmers or public markets, and other small-scale collaborative initiatives.	All references to growing in urban and suburban areas should be identified as ***urban agriculture.*** The USDA defines ***urban agriculture*** as the cultivation, processing, and distribution of agricultural products in urban and suburban areas. They provide technical and financial assistance for a variety of growing operations, which provide healthy, local food, encourage economic development, provide employment and on-the-job training, expand community greenspaces, foster community collaboration, build climate and disaster resilient communities, and are an essential part of a resilient diversified food system.

Environment Goals, Policies and Strategies

Background

Kitsap County strives to treat its environment as an asset. Adjacent to Puget Sound and Hood Canal, the county includes 216 miles of marine shorelines. The county is part of Water Resource Inventory Area (WRIA) 15 and includes 1000 miles of streams, numerous wetlands, lakes, and estuaries. Kitsap County's landscape is varied, with large areas of forested land cover including second and third growth trees.

- Kitsap County actively acquires lands for long-term open space and passive recreation including fish and wildlife habitat areas, wetlands, and shorelines. Kitsap has acquired over 4,000 acres of private timber land in the last 10 years; doubling its open space lands.
- Kitsap County continues to carry out its programs under the "Water as a Resource" policy (Kitsap County Resolution 134-2016), which cooperatively addresses water as a resource, not a waste stream.
- Kitsap County's programs that affect and address public water supply also work to provide for protection of the quality and quantity of groundwater.

Key Terms • **Asset management** refers to treating the components of the public infrastructure system as assets within the public trust to be stewarded by the local government. • **Kitsap Natural Resource Asset Management Program** (KNRAMP) is a new framework to manage natural assets (such as forests, streams, and shorelines) using the same asset management and capital improvements principles that municipalities use to manage built infrastructure. The Program provides a mechanism to incorporate nature-based solutions and green infrastructure practices into traditional infrastructure planning and uses ecosystem services principles to quantify the "level of service" (LOS) provided by natural resources, using the same terminology as public works for prioritizing investments in grey infrastructure. • **Levels of service** are measures of the condition and performance of the asset in relation to the expected service. The Kitsap Natural Resource Asset Management Program defines the levels of service provided by streams, forests, and marine shorelines. Methodologies used for calculating Level of Service are based on best available science, per RCW 36.70A.172, and may require revision over time as additional or improved data become available.	The same asset management approach should be applied to agricultural lands in Kitsap. A resource-based planning approach values the assets offered by working landscapes as well as by naturally vegetated lands. Currently, the Kitsap County Natural Resource Asset Management Program does not include farmland and open space in their analysis. While recognizing the value of naturally vegetated areas for watershed health, many of the areas in their current model's Upland Forest LOS story map identified as moderately low/low level of service are farmland (Central Valley area, Scandia, Big Valley as well as Blackjack Creek). Open space and working landscapes offer ecosystems services in different ways - aside from their obvious benefits for food production - including pollination, pest control, soil retention, and regulation of soil fertility, nutrient cycling and water. And as open space or working landscapes their most important function is that they lack urban scale development. Recognizing that most land in production agriculture is unlikely to revert to native forests, it is crucial to capture the degree to which they contribute to environmental health. The current model's assessment of their LOS has the potential to penalize those activities in future planning, policy and program implementation. **Strategy:** Add farmland and open space to the Kitsap County Natural Resource Asset Management Program or create a similar asset-based management program for agricultural lands and establish performance measures for level of service for those lands to accurate capture their contribution to a healthy environment.
Environment Goal 1. Ecosystems and Habitat *Protect and enhance the health, resilience, functions, and processes of natural environments and ecosystems, including forest lands, shorelines, freshwater systems, and critical areas to ensure functioning ecosystem services and fish and wildlife habitat are sustained into the future.*	
Environment Strategy 1.c. Provide incentive-based, non-regulatory programs for the protection of the natural environment such as acquisition of important habitats through fee-simple and conservation easements from willing sellers. Institutionalize the Shore Friendly Kitsap Program which provides technical assistance for residential property owners to motivate voluntary actions for healthy shorelines.	Apply similar strategies to the preservation of working landscapes, agricultural land and open space. Engage Kitsap Conservation District to provide technical assistance to landowners to motivate voluntary habitat preservation.

Environment Strategy 1.d. Use the Kitsap Natural Resource Asset Management Program and other planning mechanisms to assess the potential impacts of higher intensity land uses and development in ecologically sensitive and critical areas.	See earlier comments above regarding the Kitsap Natural Resource Asset Management Program. The ecosystems services provided by farmland and open space include regulation of water flows, sustaining plant and animal life, filtering and buffering potential pollutants, cycle nutrients, carbon capture, aquifer recharge and more. Explore how to compensate for these services in the form of property tax relief, reduced fees for permitting and regulatory flexibility around critical areas. **Strategy:** Enumerate the value of ecosystems services and the fiscal contribution provided by farmland and open space and incorporate those elements into assess Level of Service (LOS) assessment Cost of Community Services (COCS) studies determine the fiscal contribution of existing local land uses. COCS studies have emerged as an inexpensive and reliable tool to measure direct fiscal relationships and evaluate working and open lands on equal ground with residential land uses. The American Farmland Trust estimates that Revenue-to-Expenditure Ratios in Western WA are $1 : $1.25 for residential lands versus $1 : $0.51 for Farmland and Open Space. **Strategy:** Include the cost of community services into asset management LOS determinations for land use and economic development planning processes
Environment Strategy 1.f. Develop development standards or programs that protect tree canopy in urban and rural areas.	Tree retention ordinances limit farming and agricultural activities and restrict conversion of timberland to agriculture. While it is recognized this is a high impact development process per the Critical Areas Ordinance when appropriate permits are obtained and measures are taken to preserve water quality conversion is an allowed activity. Tree retention ordinances prevent this activity.
Environment Strategy 1.g. Convene experts to strategize on prioritization, funding, and regulatory and non-regulatory incentives to acquiring, restoring, and managing public lands for conservation purposes. **Environment Strategy 1.h.** Support and incentivize protection of habitats and ecosystems, their functions, and the processes that form and maintain them with the Conservation Futures Tax Program.	Similarly, establish a strategic process for farmland preservation and equitably distribute Conservation Futures funding across preservation activities.
Environment Strategy 1.l. Encourage recolonization of beavers, promote a thriving beaver population, and reduce beaver-human conflicts by protecting	Many farms include streams and riparian areas with ongoing and existing agricultural activities adjacent to those areas. Beaver recolonization can

and restoring suitable beaver habitat, relocating vulnerable infrastructure away from areas likely to be flooded by beavers, restricting removal and modification of beaver dams except in extreme circumstances, and providing public education about the benefits of beavers in recovering natural ecosystems.	result in the loss of farmland, cause reclassification of farmland into wetlands and impact the financial viability of a farm. **Strategy:** Kitsap County partner with Kitsap Conservation District on an Adaptive Beaver Management Plan similar to that developed by Jefferson Conservation District for Chimacum Creek including "Living with Beaver" Best Management Practices (BMPs) for farmers.
Environment Goal 2. Critical Areas	
Designate and protect critical areas. Critical areas include wetlands, critical aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas.	
Environment Policy 2.1. Use the best available science in developing policies and development regulations to protect the functions and values of critical areas.	**Strategy:** Require farmers be included in all stakeholder groups to develop policies and regulations for all critical areas and shorelines ordinances.
Environment Policy 2.3. Provide development regulations that protect all functions and values of critical areas to ensure no net loss of ecological functions and values. **Environment Policy 2.4.** When considering expanding an urban growth area, avoid including lands that contain large amounts of mapped critical areas. **Environment Strategy 2.c.** Review plan, regulation, and permit implementation monitoring results and, where applicable, incorporate adaptive management measures to ensure regulations are efficient and effective at protecting critical area functions and values.	A "No Net Loss" approach limits the impacts from new development by adopting a mitigation hierarchy to avoid, minimize, remediate, and offset negative impacts on ecosystems. Net Ecological Gain (NEG) means that after development, there is an increase in biodiversity or resilience that improves the delivery of valued ecosystem functions in the affected ecosystem. **Strategy:** Adopt regulations that promote a Net Ecological Gain (NEG) Current development regulations allow mitigation of wetlands for developers. The Kitsap Transfer of Development Programs (TDR) is a major mechanism which allows developers to mitigate wetland loss or impacts. **Strategy:** Restrict the use of the TDR program which converts farmland or rural lands with prime agricultural soils for wetland mitigation.

Environment Goal 3. Natural Resources as an Asset	
Formally treat natural environments and ecosystems including forest lands, shorelines, freshwater systems, and critical areas as essential assets that are planned for, managed, and invested in to meet the needs of current and future generations.	
Environment Policy 3.1. County Departments and the Board of County Commissioners cooperatively plan for, invest in, track progress, and adaptively manage the natural environment as an asset. **Environment Strategy 3.a.** Adopt and implement the Kitsap Natural Resource Asset Management Program as a mechanism to manage, plan for, and invest in Kitsap County's natural environment as an essential asset. Other mechanisms may include, but are not limited to, plans, ordinances, resolutions, or official policy directives. **Environment Strategy 3.e.** Develop a framework to determine economic value of ecosystem including methods to identify, describe, and evaluate the quantifiable services provided by natural environments.	The same asset management approach should be applied to agricultural lands in Kitsap. A resource-based planning approach values the assets offered by working landscapes as well as by naturally vegetated lands. Currently, the Kitsap County Natural Resource Asset Management Program does not include farmland and open space in their analysis. While recognizing the value of naturally vegetated areas for watershed health, many of the areas in their current model's Upland Forest LOS story map identified as moderately low/low level of service are farmland (Central Valley area, Scandia, Big Valley as well as Blackjack Creek). Open space and working landscapes offer ecosystems services in different ways - aside from their obvious benefits for food production - including pollination, pest control, soil retention, and regulation of soil fertility, nutrient cycling and water. And as open space or working landscapes their most important function is that they lack urban scale development. Recognizing that most land in production agriculture is unlikely to revert to native forests, it is crucial to capture the degree to which they contribute to environmental health. The current model's assessment of their LOS has the potential to penalize those activities in future planning, policy and program implementation. **Strategy:** Add farmland and open space to the Kitsap County Natural Resource Asset Management Program and establish performance measures for level of service for those lands to accurate capture their contribution to a healthy environment.
Environment Goal 4. Collaboration and Partnerships *Coordinate natural environment management and recovery with internal and external partners.*	
Environment Strategy 4.d. Coordinate and share data with conservation land trusts and other community organizations to identify and preserve priority areas for environmental protection and preservation.	Kitsap Conservation District has focused on partnering with landowners to conserve natural resource for over 70 years using best available science. **Strategy:** Engage with the District on natural environment management and recovery projects.

Environment Goal 5. Use Best Practices *Utilize best practices to protect people, property, and the natural environment.*	
Environment Policy 5.2. Employ Best Management Practices to protect the long-term integrity of the natural environment, adjacent land uses, and the productivity of resource lands. **Environment Strategy 5.a.** Explore opportunities for mitigation banks and participate in mitigation programs. **Environment Strategy 5.c.** Ensure staff are trained on the use of emerging best practices in the area of sustainable land use practices, including green building and site design, and create awareness of these preferred practices through the use of pilot programs, model ordinances, education, and incentives, while in balance with other Growth Management Act required elements.	Current development regulations allow mitigation of wetlands for developers. The Kitsap Transfer of Development Programs (TDR) is a major mechanism which allows developers to mitigate wetland loss or impacts. **Strategy:** Restrict the use of the TDR program to prevent conversion of farmland or rural lands with prime agricultural soils for wetland mitigation. Conservation District staff are subject matter experts in best available science and agricultural Best Management Practices (BMPs) to effectively protect water quality and the natural environment. **Strategy:** All county staff and planners should be aware of or adequately trained in agricultural BMPs, or seek technical assistance appropriate subject matter experts, whenever questions regarding agricultural lands and/or farming practices are involved.
Environment Strategy 5.d. Identify and protect critical aquifer recharge areas and utilize Low Impact Development (LID) site planning principles to the greatest extent possible for reducing stormwater runoff.	
Environment Strategy 5.e. Use stormwater Best Management Practices (BMPs) to reduce the amount of pollutants in runoff.	
Environment Strategy 5.h. Provide public resources to identify parcels likely to be inhabited, colonized, or flooded by beavers. Consider incentivizing relocation of structures away from potential beaver habitat and areas likely to be flooded by beavers.	

Climate Change Goals, Policies and Strategies

Climate Change Goal 7. Resiliency Through Land Use *Establish land use patterns that increase the resilience of the built environment, ecosystems, and communities to climate change.*	
Climate Change Policy 7.1. Restore and maintain critical areas and open space areas to maximize the climate resilience benefits they provide (e.g., frequently flooded areas, floodplains).	Maintain farmland and working landscapes using regenerative agricultural techniques and agroforestry practices to increase climate resilience.

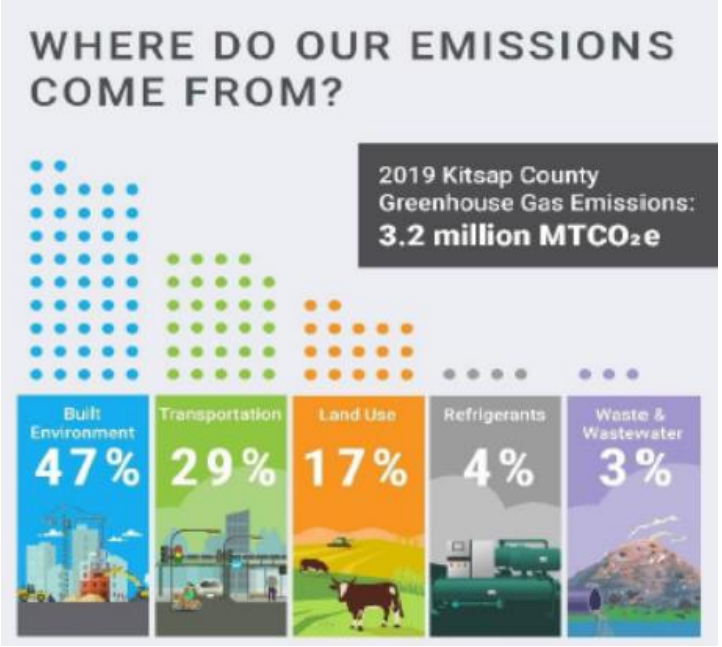
Climate Change Goal 8. Protect and enhance forests, farms and other working landscapes	
Climate Change Policy 8.5. Promote programs and grants to protect forested areas. **Climate Change Strategy 8.a.** Reduce loss of private forestland through forest stewardship, education, and incentives for forest landowners to keep private forest lands in production. **Climate Change Strategy 8.b.** Provide vegetation guidance to promote the planting of species that are resilient to climate change.	Climate-smart farming practices result in: • Increased productivity: Produce more and higher quality food without putting an additional strain on natural resources, to improve nutrition security and boost farm economic viability. • Enhanced resilience by reduce vulnerability to droughts, pests, diseases and other climate-related risks and shocks; and improve the capacity to adapt and grow in the face of longer-term stresses like increased seasonal variability and more erratic weather patterns. • Reduced emissions: Reduce greenhouse gas emissions of the food system and increase the carbon sequestration of plants and soils. **Strategy:** Promote programs and grants for farmers using climate-smart practices like no-till or minimal tillage, adoption of climate-resilient crop varieties, conservation agriculture techniques, agroforestry, precision farming, water management strategies, and improved livestock management.
Climate Change Strategy 8.c. Coordinate with conservation groups and land trusts to identify and implement public outreach and education opportunities for the use of the Open Space Program, Transfer of Development Rights Program, Conservation Futures Tax Program, and other programs.	The Kitsap County Open Space, Farm & Agricultural Land, and Designated Forest Land exemptions allows property owners to have their open space, farm and agricultural, and forest land valued at their current use rather than their highest and best use (market value). This state law seeks to maintain, preserve, conserve, and otherwise continue in existence adequate open space lands for the production of food, fiber, and forest crops. These lands allow for carbon sequestration, aquifer recharge, and a host of other climate resiliency benefits. **Strategy:** Include the Kitsap County has Open Space, Farm & Agricultural Land, and Designated Forest Land exemptions along with other programs in this strategy.

Climate Change Goal 9. Hydrology and Hydrogeology	
Protect and preserve water quality and quantity from drought, extreme heat, extreme precipitation, and other hazards exacerbated by climate change.	
Climate Change Policy 9.2. Promote environmentally sustainable farming practices, water-storage systems, and nutrient management that help adapt to a changing climate and reduce production losses while balancing ecosystem needs. **Climate Change Strategy 9.b.** Provide guidance to promote the use of smart irrigation, stormwater nutrient management, preventative maintenance, water conservation and wastewater reuse, plant selection, and landscape management.	**Strategy:** Coordinate with Kitsap Conservation District and WSU Kitsap Extension on educational programming, demonstration projects, grants and other opportunities to promote and support climate-smart farming
Climate Change Strategy 9.d. Restore and protect suitable beaver habitat to encourage natural recolonization of beavers.	While beaver activity contributes to riparian area health and aquifer recharge, many farms include streams and riparian areas. There is ongoing and existing agricultural activities adjacent to those areas. Beaver recolonization resulting in the loss of farmland impacts the financial viability of a farm. **Strategy:** Partner with Kitsap Conservation District on an Adaptive Beaver Management Plan similar to that developed by Jefferson Conservation District for Chimacum Creek including "Living with Beaver" Best Management Practices (BMPs) for farmers.

Climate Change Goal 12. Wildfire Resilience	
Create resilience against wildfire across private forest lands and Wildland Urban Interface / intermix areas.	
Climate Change Policy 12.1. Promote and incentivize creation and implementation of Firewise strategies in coordination with county fire districts, the WA Department of Natural Resources, community groups, and landowners in forest and urban interface / intermix areas. **Climate Change Strategy 12.b.** Provide incentives for current landowners to adopt and implement best management practices and modern fire regulations on existing land development and forest lands. **Climate Change Strategy 12.c.** Provide educational material and resources for new and existing property owners to use in lowering their risk for wildland fires including fire resistive construction techniques, construction and maintenance of defensible spaces, and fire-resistant landscapes, fuel reduction, and land use practices. **Climate Change Strategy 12.d.** Develop a mitigation fund for fire-wise neighborhood projects and re-roofing of homes with noncombustible materials.	Washington Department of Natural Resources (DNR) works closely with local fire districts, conservation districts, counties, and WSU Extension programs to help Washington residents benefit from the Firewise to help homeowners and communities to prepare for wildfire. DNR administers a Firewise USA® Micro Grant as part of the Wildfire Ready Neighbors (WRN) Program assisting Firewise USA® sites in community effort to implement their Firewise USA® Action Plans and be more prepared for a wildfire. Rolling applications accepted thru March 28th for projects to be completed by June 15, 2024. https://www.dnr.wa.gov/publications/rp_fwmg_nofo_2024.pdf
Climate Change Goal 15. Tree Loss Prevention *Minimize tree loss due to development and preserve existing tree canopy cover.*	
Climate Change Policy 15.2. Reduce tree loss by using infill, redevelopment techniques, and lot clustering in rural zones. **Climate Change Policy 15.4.** Coordinate with the Department of Natural Resources (DNR), Tribal governments, community groups, and private forest landowners to promote long-term preservation of forest lands **Climate Change Strategy 15.a.** Develop and implement a tree preservation ordinance to protect existing tree canopy cover and replace removed trees in areas slated for development (Alternative 2 and 3).	Tree retention ordinances limit farming and agricultural activities and restrict conversion of timberland to agriculture. While it is recognized this is a high impact development process per the Critical Areas Ordinance when appropriate permits are obtained and measures are taken to preserve water quality conversion is an allowed activity. Tree retention ordinances prevent this activity. Ensure any ordinances allow for continued agricultural activities.

A final note: Language and images matter.

Based on 2019 data, Kitsap County's total greenhouse gas emissions were 3.2 million metric tons of carbon dioxide equivalent (MTCO2e). According to Figure 1, five main sectors produced greenhouse gas emissions. Given that agriculture accounts for less than 1% (32,000 tons) per the August 2022 Kitsap County Communitywide Geographic Greenhouse Gas Emissions Report using images of agriculture reinforces negative views not supported by the data.



Agriculture

Agriculture accounts for less than 1% of GHG emissions in Kitsap County, and this relative contribution has remained steady over time. Emissions are primarily derived from the release of methane and nitrous oxide emissions associated with livestock digestion (enteric fermentation) and manure management. **Emissions from livestock and manure management** in 2019 **decreased** 7% compared to 2015, likely due to a decrease in the number of beef and dairy cattle, which release more methane than other farm animals. Nitrous oxide emissions from soil have decreased 11% since 2015 due to a decrease in acres of cropland in Kitsap County.

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From: David Pederson
To: Comp Plan
Cc: Kitsap Commissioners
Subject: DEIS comments submitted Feb,26th 2024 before 5pm
Date: Monday, February 26, 2024 4:12:43 PM

This particular article written by former Kitsap County Commissioner Steven Bauer, was published September 4th, 2009 and submitted to the Kitsap Daily News for circulation throughout Kitsap County. I have lived here for well over 30 years and seen the changes the county has gone through and find this article is extremely accurate in it's facts and findings as my neighborhood was flooded at it's lower end because of a retaining pond overflow across the street during a rain storm, which then flowed into the adjacent ditch which had a very large culvert that lead directly underneath HY104 to our storm water ditches and created a massive influx of water, our 2.5 foot by 3 feet wide ditches could not handle. Water overflowed on to Bond road and headed due north to the lower established homes across the street and through our culverts which could not handle the flow as well! So I ended up having to due a lot of photographic work to show the DOE after arriving. Just one of our culverts could fill a fire truck in less than 5 minutes! The water finally slowed after several homes had water up to their front porches above steps. It is my understanding the business that refused to follow their own approved blueprint in its inception clearly stated the ground was to be left with at least 60% gravel to assist in our Category1aquafer recharge area. Instead it was completely paved over with blacktop and a piping system leading directly to the retaining pond. The DOE was very upset about this issue and I still to this day have no idea if DCD Code Enforcement was ever involved with repair work. I am under the impression that culvert under HY104 may now be plugged, which allows thousands of gallons of water to flow straight down the hill to Gamble Bay under same conditions. Mitigation is nothing more than a means to slow down the destruction of a particular resource, and as I have said before, KPUD will "simply" walk away if any of these actions occur! I hope to live another 30 years, and pray those who make decisions for our next generation are long term and solid.
On page 48 of the Puget sound Regional Council vision 2050, " the amount of impervious surface as a key metric related to the health of the region's water resources. Increasing the

amount of impervious surface may have numerous impacts... degraded water quality, decreased aquafer recharge, and increased water temperature." " King and Kitsap Counties have the highest percentage of impervious surfaces at 9.4% and 9.1%." Kitsap County has reached the mark of it's resiliency in my and many others belief that leads to that same thread where I have now endured the smell of chlorine in my drinking water for over four year's, but have not been medically affected to the best of my knowledge at this time. My community has expressed their concerns as well on our web page. Health advisory issued for Dyes Inlet due to sewage spill. For information, go to: https://lnks.gd/2/nNdxx7

Kitsap Daily News, It's time to rethink water management in Kitsap County | From the Commissioner, by Commissioner Steven Bauer, September 4, 2009

Let me explain. Surface water in our county is good and bad.

The good water recharges our groundwater. Did you know that because we have no mountain ranges or snow pack, most of our water comes from aquifers? The water in the aquifers got there over long periods of time and we draw on it every day for our residential, business and commercial purposes. We need to refill those aquifers or we will literally run out of water.

When rain falls in natural forests, about a third of the water evaporates back into the air, about a third seeps down into the aquifers and about a third moves slowly downhill under the ground to replenish streams and wetlands. The water going to the aquifer is available for our use.

The ground water feeds streams that support salmon runs and wildlife, not to mention providing recreation for us. The natural ground flow limits flooding because it meters the water getting to the streams and gullies. Only about 3 percent of rain becomes surface runoff that causes flooding.

When we build roads and homes and businesses, we take out trees and natural vegetation, we cover up the ground with water barriers like roofs, roads, driveways, and parking lots. Because there isn't the natural vegetation to absorb it and slow it down, less water gets to the aquifer, less water is absorbed into the ground and more water runs rapidly off the surface into neighbor's yards, streams, gullies and wetlands. This causes flooding, property damage and pollution into streams and Puget Sound and Hood Canal.

What has been our traditional answer? We call rainfall storm water, stick it in a pipe and send it directly into ditches, streams or the saltwater. In recent years, we've put in the fenced detention ponds you see all around and we provide some " treatment" to take out the big particles and pollutants.What is the result of our traditional techniques? We are drawing down our aquifers. On Bainbridge Island, some wells already have salt water intrusion as the freshwater is depleted. There was a recent request for the federal government to designate the entire City as a critical aquifer recharge area.

We hear from long time residents that in the old days it would take a couple of days for streams to rise after a big rainfall. Now those same streams flood in hours. We are seeing more property damage and increasing pollution into our streams, wetlands and saltwater.On another front, we send used water to the sewer plant where we treat it for biological hazards and pump it out into the Puget Sound.The county's central sewer plant puts three million gallons of treated effluent into Puget Sound every day. While it may not carry diseases, the effluent carries nitrogen, pharmaceutical byproducts and other compounds. So what? There's lots of water in the Sound to dilute these compounds, right?

There's ample evidence that Puget Sound and Hood Canal are in trouble. A recent Department of Ecology study in south Puget Sound found that about 80 percent of the nitrogen that was contributing to low oxygen in the Sound was coming from sewer treatment plants.

Kitsap County has more miles of saltwater shoreline than any other county in the state and saltwater is a critical and integral part of our identity and lifestyle.

We need a healthy Sound and canal. In addition, we need those three million gallons of water to replenish our aquifers and feed our streams and wetlands.

In other words, we need to treat our water as a resource as opposed to a nuisance which we just stick in a pipe and throw away.

p.1

So what can we do as we rethink past practices? Here are some ideas:

1. Preserve our natural forests and natural environment. This preserves the natural water cycle, provides wildlife habitat, protects our streams and saltwater, provides outdoor recthe rural feel that we all love.

2. Septic tanks have gotten a bad rap but they actually treat the effluent and replenish the aquifer.

3. Local governments and the Homebuilders Association in Kitsap County are pioneering what are called low- impact techniques for treating building runoff.

This involves pavement and sidewalks that allow the water to flow through them to the ground below and " rain gardens" that absorb the runoff and let it infiltrate into the soil.

We want to mimic the natural water cycle by allowing the water to stay on the property and infiltrate into the soil in a normal fashion.

4. We need to treat sewer effluent to a cleaner standard. The days of dumping the waste and avoiding the cost of proper treatment are past. Then if we dispose of the effluent in saltwater, at least it is cleaner water.

5. A better approach being considered by the Silverdale Water District, West Sound Utility and the county involves higher treatment and then recycling the cleaner effluent to be used for non drinking purposes like irrigation. This would require parallel piping systems and be similar to areas that have drinking water systems and separate irrigation districts.

6. Concentrate our density in cities and urban areas that are already hard- scaped in order to preserve the rural environment.

7. We also have a huge installed system of roads, homes and businesses that lack these techniques. We will need to seek creative and affordable ways to retrofit these sites.As our population increases, managing our water resource will make sense economically and will contribute to preserving our natural, rural atmosphere.

So if this is so important, why haven't we done it before? First, we have better technology and understanding of the water cycle than we've had in the past.

Second, it was cheaper in the short run just dispose of water than the treat it properly.

We know now that there are long term consequences from that short- sightedness.

Over the coming months and years, the Puget Sound area and Kitsap County will be discussing many of these issues and the price tag that goes with them.

It will be important for you to be involved and be heard as those debates unfold.

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THE SUQUAMISH TRIBE
NATURAL RESOURCES DEPARTMENT
PO Box 498 Suquamish, WA 98392-0498

26 February 2024

Department of Community Development
Planning and Environmental Programs
614 Division Street, MS-36
Port Orchard, WA 98366

Subject. Comments on 2024 Comprehensive Plan Update Draft Environmental Impact Statement Kitsap County

Introduction

The Suquamish Indian Tribe of the Port Madison Reservation appreciates the opportunity to provide additional review of the Draft Environmental Impact Statement (DEIS) and supporting documents for Kitsap County's 2024 Comprehensive Plan Update.

Concurrent with issuing the DEIS, the County has published proposed amendments to Kitsap County Code Title 16 (Land Division), Title 17 (Zoning), and Title 18 (Environment). Additionally, at this time, the County is reviewing its Critical Areas Ordinance (CAO), the County's primary mechanism to reduce impacts to Fish and Wildlife conservation areas (streams/riparian areas), Frequently Flooded Areas, Geologically Hazardous Areas (steep slopes), and Critical Aquifer Recharge Areas.. The CAO is undergoing review for compliance with Best Available Science (BAS). However, at this time there are no published proposed changes to the CAO despite the DEIS frequently referring to the CAO as a protective mechanism. In effect, reviewers are being asked to accept changes in UGA without an ability to review the extent to which proposed changes to CAO reflect BAS or potential environmental impacts. As noted in the DEIS, "*The Board of County Commissioners will select a preferred alternative based on this Draft EIS in April of 2024.*" Page 2-11 of the DEIS states:

> *"The Board is not limited to selecting the alternatives exactly as set forth in the EIS and may select an alternative that combines various features of the alternatives set forth in the EIS. However, the selected alternative must be within the range of alternatives addressed by the EIS (WAC 197-11-655(3)(b)).*"

The DEIS makes numerous references to significant impacts but does not quantify them. In the absence of information about how the CAO will be amended, the DEIS is unable to provide the Board, Tribe and public with sufficient information to discuss environmental impacts select a reasonable alternative, or include mitigation measures, that would avoid or minimize adverse impacts or enhance environmental quality.

County staff have said that the CAO updates will undergo their own separate SEPA review at a later date. However, wording in the DEIS, such as that for stream buffers, suggests the County has already decided upon stream buffer widths. Updates to the CAO and the Comprehensive

Plan should either be on substantially the same time path or the CAO updates should already be completed so reviewers are aware of the potential impacts resulting from what is being proposed.

As noted in the Tribes comments on the "*Draft Land Use Alternatives*", the

> *"Tribe (1) does not support the rezoning of rural protection parcels to more intensive uses; (2) believes growth should be accommodated within the existing UGA and only when that is filled should it be expanded; (3) the UGA should not include riparian areas such as Grovers and Chico creeks to protect groundwater recharge; and (4) though not currently identified, does not support increased density within the Suquamish LAMIRD.*"

Others, such as the City of Poulsbo have expressed opposition to upzoning large parcels of rural land. In a letter dated November 6, 2023 and entitled "*EIS Alternative, City of Poulsbo Opposition to Alternative 3 rezone request*" the City of Poulsbo states its

> "*strong opposition to the rezone application submitted by Jon Rose (aka Raydient) for the vacant, 413.9 acres located off of and north of Bond Road, which seeks to change the zoning designation from Rural Wooded (RW) to Rural Residential (RR) (aka Reclassification Request #72).*

The Tribe concurs with the City's statement "*Upzoning land outside of UGAs runs counter to the fundamental purpose of the GMA and undermines the careful planning and thoughtful development that the Act seeks to achieve*" as well as rationale stated in the City's letter.

General Comments

Aquifer Recharge

Throughout the DEIS, the issue of reduced groundwater is generally looked at through the lens of reduced groundwater due to consumptive use. However, the impacts of development upon groundwater recharge as well discharge to springs and streams need to be quantified. The DEIS mentions changes in hydrology as a significant unavoidable adverse impact, but the DEIS and CAO (as currently written) do nothing to quantify the impacts of growth-related decreases in infiltration over a typical water year. Such impacts can and must be quantified. Whether an action is considered to generate an impact, often depends upon the information collected and how that information is analyzed as well as an understanding of the limitations and assumptions in the models or assessment used to quantify impacts. And then even if something is recognized qualitatively as an impact, it is often not quantified.

The DEIS refers to numerous significant adverse impacts yet does not proposed an effective methodology to quantify them or describe mitigation measures, for example, development induced changes in water infiltration despite the DEIS on page 1-12 states: *"Long-term cumulative reduction in groundwater recharge and associated discharge to streams*" is a significant unavoidable adverse impacts.

Furthermore, the DEIS states in many cases an impact may occur (such as found on pages 1-10, 3-12, and 3-26), rather than is expected to occur or will occur. Though for any single project, some impacts may be considered *de minimus*, but when taken collectively, such as expanding the UGA/increasing impervious surfaces the DEIS has acknowledged some of these impacts are significant. For accuracy, the Tribe requests that "may occur" should be written as "will occur". It also indicates additional mitigation measures (such as found on pages 1-11, 3-63) might be required, but neither the DEIS nor the current CAO requires the collection of information needed to quantify the scale of impact and resulting mitigation needs to offset those impacts.

Declining baseflows also need to be considered in the context of increased intermittency of seasonal streams in both space and time, and converting perennial streams to seasonal streams.

Fish and Wildlife Habitat Conservation Areas

It should be noted that the Washington Department of Fish and Wildlife Best Available Science1 for riparian areas, as recently reviewed by the County,2 recommends significantly wider buffers than those proposed by the County for both non-fish and fish bearing streams.

The DEIS outlines three Alternatives and proposed increased protection for non-fish streams under Alternative 3 (Dispersed Growth Alternative), but there are no proposed increased stream buffers for non-fish streams under Alternative 2 (Compact Growth/Urban Center Focus) - even though development will continue outside the UGA.

Alternative 3 (Dispersed Growth Alternative) the DEIS (page 3-45) states there will be "*increased stream buffers, from 50 feet to 100 feet, for non-fish-bearing streams.*" However, there is no proposed increase in buffer width for non-fish streams for Alternative 2 (Compact Growth/Urban Center Focus). The expansion of buffers widths to 100 feet for Alternative 3, might be based upon the following statement from recent WDFW guidance on riparian areas.

> *"Where neither SPTH200 nor the extent of the riparian vegetative community is at least 100 feet, we recommend RMZ delineation of a minimum distance of 100 feet, because this distance will achieve 95% or more removal efficacy of phosphorous, sediment, and most pesticides.3"*

Rentz et al is Best Available Science and goes on to state on page 4 (emphasis added):

> *"Restoration of riparian ecosystems is critically important because legacy of environmental impacts resulting from the ways land use has affected riparian areas over the past 200 years. In other words, what* ***remains available for***

1 Rentz, R., A. Windrope, K. Folkerts, and J. Azerrad. 2020. Riparian Ecosystems, Volume 2: Management Recommendations. Habitat Program, Washington Department of Fish and Wildlife, Olympia.
2 Best Available Science Summary Report: Critical Area Ordinance Update Kitsap County. Prepare for Kitsap County Department of Community Development by DCG Watershed May 21, 2023.
3 Page 27. Rentz, R., A. Windrope, K. Folkerts, and J. Azerrad. 2020. Riparian Ecosystems, Volume 2: Management Recommendations. Habitat Program, Washington Department of Fish and Wildlife, Olympia.

> ***protection is not enough to provide the full functions and values Washington's fish and wildlife need."***

And also on page 4:

> "*In reviewing the current science literature for Volume 1, we found no evidence that full riparian ecosystem functions along non-fish-bearing streams are less important to aquatic ecosystems than full riparian ecosystem functions along fish-bearing streams.*

Washington Department of Fish and Wildlife Best Available Science4 for riparian areas as recently reviewed by the County5 indicates significantly wider buffers than proposed by the County are required for non-fish streams and larger buffers for most fish bearing streams.

Though describing the length of non-fish streams affected (for example, see pages 1-10), the DEIS does not describe the length of affected fish streams. Erroneously, the County is presuming these are non-fish bearing streams, most likely based on County maps. These maps have a great deal of error as described later. Furthermore the DEIS focus on stream length is directed towards land that will be encumbered by buffers, rather than the impacts to the stream channel. Additionally, the DEIS implies that impact is proportional to the length of stream segment within or adjacent to the upzoned parcels. There are two issues with this. First, it does not appear to consider stormwater travels downstream so in addition to the new length stream affected by the UGA expansion, there is the downstream channel subject to cumulative stormwater effects to be considered. Second, by using length of stream rather than area of upzone, the implication is that each upzone has the same affect. While length might be more applicable for impacts to the functions such as shading and wood recruitment, area is most likely a more appropriate measures for potential changes to infiltration and thus impacts to groundwater recharge and stream baseflows. This premise is implicitly acknowledged in the following statement from page 1-12: "*Direct impacts on plants and animals from intensification of development are assumed to be proportional to the amount of impervious surface created in specific areas.*"

The EIS should acknowledge that the correct stream typing of many streams is unknown, hence the importance for surveys to be conducted in accordance with approved stream typing methodology. The CAO, as currently written, allows for many small or seasonal Type F streams to be erroneously categorized as Type N. . In the absence of verification of whether these streams are fish bearing or not, perhaps a better word choice for what the information the DEIS is trying to convey is simply to use the word streams, rather than the current wording will states as fact that these streams are non-fish bearing waters and potentially mislead property owners. In the absence of verification that a stream is not Type F, it should be assumed that it could potentially be a Type F. Impacts to affected non-fish streams which are tributary to fish streams are still an impact to downstream fish habitat. This is implicitly acknowledged in the

4 Rentz, R., A. Windrope, K. Folkerts, and J. Azerrad. 2020. Riparian Ecosystems, Volume 2: Management Recommendations. Habitat Program, Washington Department of Fish and Wildlife, Olympia.
5 Best Available Science Summary Report: Critical Area Ordinance Update Kitsap County. Prepare for Kitsap County Department of Community Development by DCG Watershed May 21, 2023.

statement on page 3-235:

> "*Even if one or more of the mitigation measures is implemented, there could still be some changes to existing stormwater runoff patterns. This could alter flow conditions downstream of the planning areas and could potentially aggravate existing downstream flooding and erosion problems*"

However, while the DEIS only acknowledges the impacts of increased flood volumes or velocities upon spawning habitat it has restricted that discussion to the effects of development in the floodplain and not included the effects of upland development generated stormwater. Additionally, there is no explicit acknowledgement that increased flows can affect fish passage.

Mitigation

The definition of mitigation in SEPA at times does not match the non-SEPA usage. From 197-11-768 (2) *Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;* To "minimize" something is to reduce it to the smallest amount or degree. To "*reduce*" something is simply to make it smaller. When the EIS refers to minimize, it actually means reduce. Avoidance should be the preferred mitigation measure.

The County will rely greatly upon Critical Areas (page 1-11 and other) to "*identify and protect critical areas, including water resources like streams, wetlands, frequently flooded areas, and critical aquifer recharge areas.*". However, the CAO as currently written does not required an evaluation of many impacts, such as development induced changes to the typical volume of water infiltrated over a year.

The DEIS relies upon numerous speculative or voluntary mitigation measures for which the County lacks the authority or staff to implement or require. For example, such as voluntary project identified under the Kitsap Regional Shoreline Restoration Plan (DEIS pages 1-11, 1-13, 3-85). Some mitigation measures are suggested as encouragement (such as pages 1-7, 1-11, 3-16), rather than obligatory. Furthermore, the County is relying (such as noted on pages 1-11, 3-38, 3-39) upon the unadopted "*WRIA 15 Watershed and Restoration and Enhancement Plan*" to offset consumptive water use from permit-exempt wells. The Suquamish, Port Gamble, and Squaxin tribes have opposed this plan (see the Suquamish Tribe comments on WRIA 15 plan previously forwarded to Kitsap County). This plan contains no assurances that there is water for water mitigation. Furthermore, there is little effort made to deal with consumptive water uses from non-exempt users and no more than a qualitative discussion of potential impacts of development upon water infiltration and no means proposed to quantify the loss in infiltration. Yet, the DEIS on page 1-12 under Significant Unavoidable Adverse Impacts states: *"Long-term cumulative reduction in groundwater recharge and associated discharge to streams.*"

There is reference to existing salmon habitat restoration plans on page 1-11 (and others) that reads: "*Consider state, local, and tribal restoration plans to ensure salmon recovery is prioritized. These include the Chico Watershed Plan, Curley Creek Watershed Plan, and the Natural Resource Asset study.*" This is most welcome, but many of these plans are voluntary

and beyond the control of the County to implement. However, the County should read these plans as providing guidance and detailed information of key areas for development to avoid or areas that required larger buffers.

Page 1-11 and others refers to additional mitigation measures that may be needed to ensure adequate protection of anadromous fish. These measures are most welcome and if implemented will ensure the stream channel is more resilient to climate change and stormwater. However, given the current degraded state of many stream channels and riparian areas, they should be considered "**as needed**" rather than may needed.

Specific comments on the DEIS are presented in Annex A. Comments on proposed draft development regulations for Title 16 Subdivisions and Title 17 Zoning (which also included the proposed tree retention/replacement standards) are incorporated as comments to applicable sections of the DEIS are presented in Annex B.

Considerably more information is required in the FEIS before the Board can make an informed decision about the impacts of the Comprehensive Plan and potential mitigation measures.

Thank you for the opportunity to comment on this DEIS. The Tribe looks forward to working with the County on revisions to the EIS as well as Comprehensive Plan updates. If you have any questions, please contact me directly at 360-394-8449.

Sincerely,

Roderick Malcom
Ecologist/ Biologist
Suquamish Tribe

Attachments – 2

Annex A - Specific comments on the DEIS.
Annex B - Comments on proposed draft development regulations for Title 16 Subdivisions and Title 17 Zoning.

Annex A - Specific comments on the DEIS.

DEIS page number	DEIS narrative (bold emphasis added)	Comment
1-2	Moreover, an EIS is to provide an impartial discussion of significant environmental impacts and inform decision makers and the public of reasonable alternatives, **including mitigation measures,** that would avoid or minimize adverse impacts or enhance environmental quality (WAC 197-11-400(2)).	The DEIS has failed to provide sufficient information is to provide an impartial discussion of significant environmental impacts and inform decision makers and the public of reasonable alternatives, including mitigation measures, that would avoid or minimize adverse impacts or enhance environmental quality for reasons outlined above and below.
1-3	For non-project proposals SEPA allows more flexibility in EIS preparation because "there is normally less detailed information available on their environmental impacts and on any subsequent project proposals."	As noted above and below, neither the DEIS nor the CAO proposed a methodology to quantify some site specific impacts (such as changes in water infiltration due to development) and the resultant cumulative effects. Though, at this time there is little information on what might be actually developed at the locations subject to DEIS, there is sufficient information based upon proposed rezone request and current zoning to ballpark some proposed impacts, such as changes in infiltration due to new impervious surfaces. The Tribe is willing to work with the County to develop a methodology to ballpark these impacts.
1-5	Major issues facing decision makers include the following:	Other issues include an insufficient understanding of the limitations of the CAO special reports to collect information needed to ensure the applicable CAO objectives are meet, the low resiliency of many stream channels to stormwater due to simplified channels, that impacts to aquatic life can occur at flows well below that required to cause channel erosion (the focus of stormwater management)

		etc.
Exhibit 1.5-1 Summary of impacts and mitigation—Earth		
Impacts Common to All Alternatives		
1-6	but **will offer protection of** resources through the regulations of the County code, particularly the Critical Areas Ordinance (CAO) and the **Shoreline Master Program (SMP).**	A more accurate statement would be, "but **reduce impacts to** resources through the regulations of the …" Additionally, the SMP buffers are typically much less than those required by the current CAO, let alone what BAS now indicates is needed.
Alternative 1, "No Action"		
1-6	can **reduce the volume of water that infiltrates the soil**, which leads to increased runoff and decreased groundwater recharge	Though the DEIS mentions reduction in infiltration, nothing is proposed to quantify the reduction in the volume that is infiltrated and thus the potential impact. Additionally, the current version of the CAO does not require quantification. This is an example of where an impact is acknowledged, but it not quantified.
1-6	Stormwater controls are intended to **maintain stream flows in ranges consistent with native vegetation cover**.	The intent of this statement stream flows consistent with native vegetation cover should be clarified. Is it to mean ranges consistent with pre-development conditions, or something else? Additionally, what is meant by range should be stated. Unless stormwater that would have previously infiltrated is infiltrated, there will be increases in the frequency and duration of sub-peak flows even through peak flows are reduced.
1-6	and allow potential for chronic soil contamination as a result of development activities.	This impact will occur under Alternative 1 also, except the concentration and location will change.
Alternative 2, "Compact Growth/Urban Center Focus"		
1-6	Intensification of development in current UGA boundaries and the limited UGA expansion areas would increase the extent of impervious	Suggest adding "*reduce volume of water that infiltrates to soil*" (as noted in Alt 1) and contaminate surface and ground

	surfaces, modify soil structures,	waters. Suggest wording as "*similar housing capacity*" to reduce the potential for any confusion that capacity refers to impervious surface and stormwater. Densification doesn't mean there are no environmental protections.
Alternative 3, "Dispersed Growth Focus"		
1-6	The increases in UGAs would expand impervious surfaces, modify soil structures, and allow potential for chronic contamination of soils associated with development activities.	Suggest adding "*reduce volume of water that infiltrates to soil*" (as noted in Alt 1) and contaminate surface and ground waters.
Mitigation Measures		
1-7	Kitsap County will **encourage** building sites to be located away from critical areas, such as steep slopes and landslide hazard areas, by requiring minimum buffer widths and building setbacks in the CAO.	Encourage should be changed to require. The County's buffer requirements, though known to be inadequate based upon Best Available Science, are in many cases the maximum the County requires as the County allows administrative reductions in buffer width (see tables below), reduction that can be up to 50%. And these reductions can be made without any public or Tribal input, resulting in administrative decisions that might lack complete information. There should be no administrative reductions in buffer width.

Critical Area	Amount of Proposed Buffer Reduction	Type of Application	Decision Type	Where Decision is Made	Potential Levels of Appeal	
Wetlands						
Wetland - Buffer Averaging	Up to 25%	Critical Area Buffer Reduction Request	I	DCD Staff	Hearing Examiner	Superior Court
	>25%	Variance	III		_ _ _ _ _	Superior Court
Wetland Category III or IV with Habitat Score* less than 5 pts. (with Averaging)	Up to 50%	Critical Area Buffer Reduction Request	I	DCD Staff	Hearing Examiner	Superior Court
	>50%	Variance	III		_ _ _ _ _	Superior Court
Wetland - Administrative (not Averaging)	Up to 25% (Min. 30' for Single Family and Low-Intensity Land uses; Min. 40' for all other uses)	Critical Area Buffer Reduction Request	I	DCD Staff	Hearing Examiner	Superior Court
	>25%	Variance	III	Hearing Examiner	_ _ _ _ _	Superior Court

*Using the Wetland Rating System for Western Washington, updated 2014.

Streams and Lakes Under 20 Acres**						
Stream-Administrative	Up to 25%	Critical Area Buffer Reduction Request	I	DCD Staff	Hearing Examiner	Superior Court
Stream-Administrative- for Single Family	25-50%	Critical Area Buffer Reduction Request	II	DCD Staff	Hearing Examiner	Superior Court
	>50%	Variance	III	Hearing Examiner	_ _ _ _ _	Superior Court
Stream-Administrative- all other uses	>25%	Variance	III	Hearing Examiner	_ _ _ _ _	Superior Court

Decision Types

Buffer reduction requests are reviewed under different decision types, depending on the type of critical area and the size of the reduction being requested. The table on page 2 provides this detail.

Type I decisions do not require public notice or a public hearing.

Type II decisions require public notice and a 14-day comment period.

Type I or II decisions may be appealed to the Hearing Examiner (for details, see KCC Chapter 21.04).

Type III decisions are subject to public notice and Hearing Examiner review and approval. The Hearing Examiner decision may be appealed to the Kitsap Superior Court.

Applicable Regulations & Commitments		
1-7	KCC Section 19.400.405 of the CAO defines geologically hazardous areas and outlines regulations for development standards for projects in or near the designated hazard areas.	This is a potential example of where referencing the Comprehensive Plan DEIS prior to having the implementing ordinances roughly fleshed out impedes the ability to effectively assess the

		mitigative value of applicable regulations and commitments. The CAO is undergoing review and what it will require in terms of buffers, special studies or reports is unknown. For example, will slope failure runout zones be considered a geologically hazardous area.
Significant Unavoidable Adverse Impacts		
1-7	The corresponding increase in impervious surfaces and changes in hydrology would be correlated with the amount of growth-related development under each alternative.	The DEIS mentions changes in hydrology as a significant unavoidable adverse impact, but the DEIS and CAO (as currently written) do nothing to quantify the impacts of growth-related decreases in infiltration over a typical water year. Such impacts can and must be quantified.
Exhibit 1.5-2 Summary of impacts and mitigation—Air Quality/Climate		
Significant Unavoidable Adverse Impacts		
1-9	However, regulations to **protect and replace significant trees** can minimize this unavoidable impact.	Current County Code (19.150.575) defines significant trees as "*any healthy tree that is at least eight inches in diameter at breast height (48 inches). A tree growing with multiple stems shall be considered significant if at least one of the stems, as measured at a point six inches from where the stems digress from the main trunk, is at least four inches in diameter. Any tree that is planted to fulfill requirements of this title shall be considered significant, regardless of size or species.*" It is unclear why the County considers only significant trees to contribute to efforts to minimize GHG emissions. Replacing trees does not address temporal loss impacts. See Annex B for more details.
Exhibit 1.5-3 Summary of impacts and mitigation—Water Resources		
Impacts common to All Alternatives		

1-9		The potential impacts of growth-related decreases in infiltration upon groundwater and stream flows have not been quantified and need to be discussed in more detail.
1-10	However, all alternatives **must adhere to the policies and regulations to safeguard surface water and groundwater resources**, as well as protect public health and safety from flood hazards.	There are numerous caveats and assumptions in stormwater management that are not fully described in the DEIS. A more detailed response is found in the main Water Resources Section.
1-10	Consequently, all alternatives would indirectly affect **surface water resources with future development proposals.** The creation of impervious surface areas and removal of forested areas associated with development activities in all alternatives will influence **natural surface water systems** (Booth et al. 2002).	Groundwater is also influenced as noted elsewhere in the DEIS.
Alternative 1, "No Action" Impacts		
1-10	The increased imperious surface area associated with continued urban development under Alternative **1 may reduce** groundwater recharge area and **could affect water** quality from nonpoint urban runoff and point source contamination.	As noted elsewhere in the overall impact of development is to reduced groundwater recharge and degrade water quality. "**May"** and "**could"** should be changed to **will**.
Alternative 2, "Compact Growth/Urban Center Focus" Impacts		
1-10	Surface water impacts on streams under Alternative 2 would be greater in several basins and UGAs than those under Alternative 1 as a result of increased total impervious surface area in those basins.	As stormwater management focuses on reducing the potential for channel erosion, scant attention is paid to the observation that an additional impacts of development is that impervious surfaces area can result in an increase frequency of subpeak flows and create peaks where none existed before and by concentrating on the geomorphic threshold for channel erosion, overlooks biological thresholds for displacement and increased energy

		expenditures of aquatic life due to the increased volume of water discharged to the stream. These are direct impacts to aquatic life. 6PPD-q is a concern though mentioned in in the DEIS, more needs to be done. See comments to page 1-14.
1-10	Water quality in riparian areas would be expected to decline in those areas where growth is greatest under Alternative 2.	Water quality will be expected to decline not only in areas where growth is greatest but all areas where there is development. Page 52 of the 2019 Stormwater Manual states (emphasis added): ***The engineered stormwater conveyance, treatment, and detention systems advocated by this and other stormwater manuals can reduce the impacts from development to water quality and hydrology.*** *However, they cannot replicate the natural hydrologic functions of the natural watershed that existed before development,* ***nor can they remove enough pollutants to replicate the water quality of pre-development conditions.*** *Ecology understands that despite the application of appropriate practices and technologies identified in this manual, some degradation of urban and suburban receiving waters will continue, and some beneficial uses will continue to be impaired or lost due to new development*. To mitigate impacts to riparian areas, the County should enforce buffer widths by denying most buffer reduction requests. Furthermore, without a database and associated maps describing the extent and location of the buffer reduction, the County is unable to ascertain the extent to which buffer reductions has reduced

		the riparian buffer width and thus functions and values. This is key to understanding cumulative effects.
Alternative 3, "Dispersed Growth Focus" Impacts		
Mitigation Measures - Incorporated Plan Features		
1-11	Alternatives 2 and 3 would include adoption of revisions to critical area regulations;	The relationship between the proposed buffers in this DEIS and what buffers might result from revision to the Critical Areas regulations should be stated. Separate environmental review of the updated Critical Areas Ordinance differs from establishing buffers. It should be stated in the Comprehensive Plan FEIS what proposed CAO changes the County intends to make with reference to the actual increase (such as 50 feet), rather than ambiguous terms such as increase.
1-11	The Kitsap Regional Shoreline Restoration Plan identifies several **voluntary** projects and programs to be implemented to improve shoreline functions over time.	As there is no requirement to implement these voluntary projects and programs, these should not be considered mitigation measures.
Other Potential Mitigation Measures		
1-11	Consider state, local, and tribal restoration plans to ensure salmon recovery is prioritized.	These state, local, and tribal restoration plans should also be read as areas where development should be steered away from as well as guidance to where buffers should be increased over standard requirements.
1-11	Additional mitigation measures **may be needed to ensure adequate protection of anadromous fish** including, but not limited to:	Wording in the Ecology and Kitsap Stormwater manuals clearly indicates additional mitigation measures beyond stormwater facilities is required. A more detailed commentary follows later.
1-11	Increased stormwater management requirements near riparian management zones to increase channel complexity;	Please clarify the intent of this stormwater management requirement. If the intent is to increase stream channel complexity, that is most welcome. If the intent to do something else? Or is the

		intent is to increase instream hydraulic complexity, such as increasing the quantity of habitat components that increase pools (see below)
1-11	Establish **benchmarks** in floodways to accommodate additional flows;	Please clarify the intent of this statement. Is the intent to establish "benches" to provide for additional conveyance?
	Encourage habitat components that will create pools to provide shelter to salmonids and other anadromous fish.	Wording in the Ecology and Kitsap Stormwater (quoted elsewhere in this letter) clearly indicates additional mitigation measures beyond stormwater facilities is required. Projects that over the water year discharge a total volume of stormwater to the stream exceeding the existing condition should be considered to have create an impact to aquatic life and provide mitigation. The mitigation would depend upon project location, presence of Type F streams at the project site, ability of the project to provide wood from land clearing to County or fisheries enhancement groups, funding to fisheries enhancement groups, etc.
Significant Unavoidable Adverse Impacts		
1-12	Impacts to both surface and ground water resources are expected, including **increasing peak flows**, channel incision, and reduced groundwater recharge, **and may be unavoidable as new** impervious surfaces are created and vegetation is removed with development activities.	Additional unavoidable impacts are an increased frequency of subpeak flows and create peaks where none existed before and by concentrating on the geomorphic threshold for channel erosion, overlooks biological thresholds for displacement and increased energy expenditures of aquatic life due to the increased volume of water discharged to the stream. These are direct impacts to aquatic life
1-12	**Long-term cumulative reduction** in groundwater recharge and associated discharge to streams.	The DEIS admits that this is an impact, but neither the DEIS, nor the exiting CAO does anything to quantify the scale of loss of infiltration due to increased impervious surfaces are or consider

		which areas might be the most vulnerable in terms of reduced groundwater inputs to streams and wetlands. Site specific and cumulative alterations in infiltration need to be quantified for all developments where, over the water year, the development discharges a total volume of stormwater to the stream exceeding the existing condition, and mitigation required.
Summary of impacts and mitigation—Plants & Animals		
Impacts Common to All Alternatives		
1-12	Critical areas, including streams and wetlands, would receive similar protection under each of the alternatives with some **increased protections for riparian areas in Alternative 3**.	The wording in the DEIS indicates the increased protection (increase of buffer from 50 to 100 feet) is for non-fish streams, so DEIS overstates the increased protection. No additional protection is proposed for fish streams nor streams under Alternative 2.
Alternative 1, “No Action” Impacts		
1-12	Development of properties within or near environmentally critical areas could result in increased impacts to wetland and riparian habitat functions and values.	Streams should be added to this sentence.
Alternative 2, “Compact Growth/Urban Center Focus” Impacts		
1-12		See previous comments in Water Resources about wording in this section.
Alternative 3, “Dispersed Growth Focus” Impacts		
1-13		See previous comments in Water Resources about wording in this section.
Mitigation Measures		
Applicable Regulations & Commitments		
1-13		See previous comments in Water Resources about wording in this section.
1-14	The County could consider incorporating standards beyond the	A major hurdle to upgrading existing water quality treatment facilities is the

	existing 2021 Kitsap County Stormwater Design Manual requirements by incorporating additional Best Management Practices (BMPs) for stormwater management near roadways to reduce the impacts on aquatic life from roadway runoff that contains 6ppd-quinone. Recommended BMPs to mitigate impacts from 6ppd-q are referenced in Ecology Publication 22-03-020.	lack of space as no consideration was given to the potential need for feature components arising from changes in science or BMPs. Similar to the requirement for a reserve septic field, the County should require some additional area be set aside for projects subject to water quality treatment in case the Ecology review indicates additional stormwater treatment is needed to treat 6PPD-q. These areas can be considered as open space, unless needed for water quality treatment. If there is no requirement for a reserve set aside, then the FEIS should acknowledge that certain chemicals might not be treated effectively.
Exhibit 1.5-6 Summary of impacts and mitigation—Relationship to Plans and Policies		
1-16	Proposed policy changes include a **tree retention standard,**	The tree retentions standard is a draft. Additionally, the proposed standards allow for the trees in required buffers to be considered part of the standard, when they should not be. See Annex B for more details.
1-16	increasing **stream buffers to 100 feet**,	It should be specific that this if for non-fish streams.
Significant Unavoidable Adverse Impacts		
1-30	With advanced planning, review of development applications, and implementation of mitigation measures, **there should not be unavoidable adverse impacts from any of the three alternatives.** The level of unavoidable adverse impacts depends on the degree that potential mitigation measures are implemented. Even if one or more of the mitigation measures is implemented, **there could still be some changes to existing stormwater runoff patterns**. This	The statement of unavoidable adverse impacts is not supported by Best Available Science nor current County Code.

	could alter flow conditions downstream of the planning areas and could potentially aggravate **existing downstream flooding and erosion problems.**	
ALTERNATIVES		
2-13	Alternative 3, "Dispersed Growth Focus" **Expanded buffers along mapped non-fish streams**.	It should be clarified what is meant by *"mapped non-streams*". For example, does it mean streams that are currently mapped as non-fish streams excluding unmapped streams that are later found, or does it include not yet discovered non-fish streams. This is important as the County and this DEIS (Exhibit 3.1.3.1-1 Watercourse and surface water map) refers to mapped streams and makes no reference to unmapped streams as it does for unmapped wetlands and rare plants. The expanded buffers should apply to all streams, whether mapped or not.
2-14	Exhibit 2.5.1-1 Major policy revisions of Alternatives 2 and 3	A legend explaining the abbreviations would be helpful.
2-16	Increased stream buffers Alt 1 - No Change No Change **(50-foot buffers)** Alt 2 - No Change **(50-foot buffers)** Alt 3 Non-Fish increased (100-foot buffers)	Buffers for fish streams should also be included. Otherwise, the impression might be that Type F streams have a 50 foot buffer. As communicated to the County numerous times, the County's current buffers of 50 feet on Type N streams are inadequate, and the 150 buffer on a Type F stream in most cases does not meet the SPTH recommendation to ensure full buffer function.
2-17	Alternative 2 Tree Replacement Proposal:	See Annex B
2-17	Alternative 3 Tree Retention Proposal:	See Annex B.
2-22	Exhibit 2.5.3-5 Housing capacity of	The housing capacity of Alternatives 2 and 3 is lower than what it could be due

	alternatives	to restrictions on building heights.
2-28	The County is proposing a variety of amendments to development regulations as part of the proposal. Key updates to development regulations are shown in Exhibit 2.5.1-1.	Many of the proposed amendments, such as to the CAO, are unknown.
AFFECTED ENVIRONMENT, SIGNIFICANT IMPACTS & MITIGATION MEASURES		
3-8		To the extent possible, the geological hazard of mass wasting or debris flows runout zones should be mapped.
3.1.1.2 Earth − Impacts		
Impacts Common to All Alternatives		
3-11	…. over time but will offer protection of resources through the regulations of the County code, particularly the CAO and SMP. Review procedures will also ensure adequate public health and safety measures are in place.	More apt would be that impacts will be reduced.
3-11	expanded areas of impervious surfaces,	Though mentioned later in terms of stormwater and under the alternatives, add "*reduced areas for infiltration"* as rainfall itself is not stormwater.
3-12	Compacted soil, or areas covered by impervious surfaces, allows for less stormwater infiltration into the ground and may cause impacts to groundwater recharge.	This known impact must be quantitatively addressed in terms of how much development alters the volume of water infiltrated over the water year.
3-13	Impervious surfaces can reduce the volume of water that infiltrates the soil, which leads to increased runoff and decreased groundwater recharge.	Add "*resulting in reduced stream flows*".
3-13	Stormwater controls are intended to maintain stream flows in ranges consistent with native vegetation cover.	The intent of this statement stream flows consistent with native vegetation cover should be clarified. Is it to mean ranges consistent with pre-development conditions, or something else? Additionally, what is meant by range should be stated.

3-16	Kitsap County will **encourage** building sites to be located away from critical areas, such as steep slopes and landslide hazard areas, by requiring minimum buffer widths and building setbacks in the CAO.	Given the wording in the CAO, the word "*require*" should be used.
3-16	Most geologic hazards may be avoided or minimized by locating developments outside of the **mapped** areas	Mass wasting runout zones are not mapped.
3-16	KCC Section 19.400.405 of the CAO defines geologically hazardous areas and outlines regulations for development standards for projects in or near the designated hazard areas.	Mass wasting runout zones are not adequately addressed in the CAO.
Earth − Significant Unavoidable Adverse Impacts		
Air Quality − Significant Unavoidable Adverse Impacts		
3-36	Tree losses projected for the alternatives cannot be wholly avoided given net developable acres in the county. However, regulations to protect and replace significant trees can minimize this unavoidable impact.	This is another example, where the time delay between impact and when mitigation compensates for the impacts, such as replacing significant trees, results in a long term impact. significant trees. See Annex B for more details.
3.1.3 Water Resources (Surface & Ground)		
3-36	The flow of water through the landscape is determined by delivery and movement.	A discussion that the flow of water through a stream channel is affected by channel hydraulic complexity - which is often in the short-term a function of wood in the channel and in the long-term the condition of the riparian corridor - and that complexity creates a mosaic of depths and velocity essential to aquatic life is needed.
3-37	Groundwater also contributes to base flows of streams, provides direct input into lakes,	In many streams, groundwater maintains base flows and in the absence of groundwater, there is no stream flow.
3-38	Of those, approximately 322 miles are non-fish bearing waters in the	This appears to be a continuation of the emphasis in the DEIS on describing the extent of non-fish bearing streams. It

	unincorporated county.	would be helpful for the total length of fish bearing streams known to date to be included.
3-38	Likewise, some adjacent **watersheds share a common regional aquifer**, which contributes **significantly to the summer flows of these streams**.	This emphasizes the importance of quantify development induced alterations on water infiltration and ana analysis of groundwater flow paths. Additionally, in some cases, the aquifer is the only source of water for summer flows. Furthermore, groundwater can be an impact source of cooler water to the stream channel during the warmer months and provide areas of thermal refugia that will become more important with climate change. The DEIS has not considered thermal refugia, nor is it considered in the current CAO.
3-41	**Exhibit 3.1.3.1-2 Existing conditions of the county's Shorelines of the State**	Maps overlaying fish streams and non-fish streams tributary to fish streams with streams on the 303(d) list for temperature, DO, or low flows would be helpful to assess the vulnerability of streams to the proposed zoning changes.
3-48	Water Quality 303(d) Listings	The listing of 303(d) streams should expand to all streams and include maps overlaying fish streams with streams on the 303(d) list for temperature, DO, or low flows. Maps overlaying fish streams and non-fish streams tributary to fish streams with streams on the 303(d) list for temperature, DO, or low flows would be helpful to assess the vulnerability of streams to the proposed zoning changes.
3-50	**Areas of high impervious surface area coverage can** negatively impact the potential for groundwater recharge by routing precipitation into nearby stream channels or stormwater discharge facilities instead of natural infiltration.	This is a qualitative statement recognizing an issue but nothing in the DEIS or the CAO requires a quantification of the impact.

3-50	Critical Aquifer Recharge Areas (CARA)	Despite its objectives, those sections of the CAO dealing with CARA typically consider impacts to quality and quantity of the human water supply, and not impacts to aquatic life. For example, well potential impacts to wells are considered, equal consideration is not given to springs and areas of groundwater upwelling with the same distance of the project.
3.1.3.2 Water Resources − Impacts		
Impacts Common to All Alternatives		
3-52		There is no discussion of the how important thermal refugia or inputs of cooler water are to salmonids.
3-52	The creation of impervious surface areas and removal of forested areas associated with development activities in all alternatives **will influence natural surface water systems** (Booth et al. 2002).	See previous comments about groundwater impacts regarding this wording.
3-53	In areas where land is currently undeveloped, increased impacts may be experienced as engineered surface water systems **may not be effective in replicating natural processes or systems.**	Engineered systems will not effectively replicating natural systems. Page 52 of the 2019 Ecology Manual (emphasis added) states: **"The engineered stormwater conveyance, treatment, and detention systems advocated by this and other stormwater manuals can reduce the impacts from development to water quality and hydrology. However, they cannot replicate the natural hydrologic functions of the natural watershed that existed before development, nor can they remove enough pollutants to replicate the water quality of pre-development conditions. Ecology understands that despite the application of appropriate practices and technologies identified in this manual,**

		some degradation of urban and suburban receiving waters will continue, and some beneficial uses will continue to be impaired or lost due to new development. This is because land development, as practiced today, is incompatible with the achievement of sustainable ecosystems. **Unless development methods are adopted that cause significantly less disruption of the hydrologic cycle, the cycle of new development followed by beneficial use impairments will continue**." Page 122 contains the following statement. **The BMPs listed in this section are likely insufficient by themselves to prevent significant hydrologic disruptions and impacts to streams and their natural resources.** Therefore, local governments should look for opportunities to change their local development codes to minimize impervious surfaces and retain native vegetation in all development situations. **Most importantly, to maintain the beneficial uses of our lowland freshwater systems will require land use planning that targets retention of a majority of a creek's watershed in its natural condition, and retains most of the benefits of headwater areas, , connected wetlands, …..**
3-53	Changes in land use can also lead to declining **summer base flows.** Stormwater runoff that flows quickly downstream reduces infiltration and allows less runoff to be stored in the soil for summer flows. for summer flows. Without adequate stormwater detention, channels that were formerly resilient may become	Declining baseflows also need to be considered in the context of increased intermittency of seasonal streams in both space and time, and converting perennial streams to seasonal streams. Additionally, potential impacts to cold water refugia (a separate issue from overall stream temperature) must be considered.

	unstable due to larger and **more variable stream flows over time**. Reduced summer base flows may result in a loss of flood-carrying capacity, **increased stream temperatures**, decreased supply of dissolved oxygen, loss of capacity to assimilate and dilute contaminants, loss of aquatic habitat, and creation of seasonal fish passage barriers (EPA 2021).	
3-55	Pumping water from permit exempt wells can reduce groundwater discharge to springs and streams, which in turn has the potential to reduce stream flows (Barlow and Leake, 2012).	As throughout the DEIS, the issue of groundwater discharge to springs and streams is generally looked at through the lens of reduced groundwater due to consumptive use. However, the impacts of development upon groundwater recharge need to be quantified.
Impacts of Alternative 1, "No Action"		
Impacts of Alternative 2, "Compact Growth/Urban Center Focus"		
3-58	Under Alternative 2, an additional 1,458 feet of non-fish bearing streams will be affected by the UGA expansion areas compared to Alternative 1. Additionally, 1,477 feet of non-fish bearing waters will be affected by upzoned areas under this Alternative.	See previous comments re this type of wording.
3-58	Water quality in riparian areas would be expected to decline in those areas where growth is greatest under Alternative 2.	See previous comments re this type of wording.
3-58	**Unmapped** wetlands may also occur in all areas of proposed UGA expansion under this alternative,	Unmapped streams, both fish and non-fish may also occur.
3-63	Additional mitigation measures may be needed to ensure adequate protection of anadromous fish. Potential mitigation measures could include, but are not limited to:	See earlier comments.

3.1.3.4 Significant Unavoidable Adverse Impacts – Water Resources		
3-63	Additional mitigation measures may be needed to ensure …	See earlier comments.
3-63	The County's stormwater management requirements would minimize the impacts from new impervious surfaces.	Suggest reduce, not minimize.
3-63	However, it should be noted that the 2019 Stormwater Management Manual for Western Washington (SWMMWW) and the 2021 Kitsap County Stormwater Design Manual do not address outside factors, such as area increases in stream flows or rates of erosion.	This is a key point and highlights the need to collect information, such as reduction on annual volume of infiltration, changes to stream hydroperiod at velocities that impacts salmonids, etc. in order to comprehend the impacts and develop mitigation measures. Furthermore, to emphasis the point, suggest a footnote taken from the County Stormwater Manual be added to emphasis to Decision Makers the shortcomings of the Manual : *"This manual presents Kitsap County's minimum standards for engineering and design of drainage BMPs. While Kitsap County believes these standards are appropriate for a wide range of project proposals, compliance solely with these requirements does not relieve the professional engineer submitting designs of their responsibility to ensure drainage facilities are engineered to provide adequate protection for natural resources and private property.* ***Compliance with the standards in this manual does not necessarily mitigate all probable and significant environmental impacts to aquatic biota. Fishery resources and other living components of aquatic systems are affected by a complex set of factors. While employing a specific flow control standard may prevent stream channel erosion or instability, other factors affecting fish and other biotic resources (e.g., increases in stream flow***

		velocities) are not directly addressed by this manual*. Likewise, some wetlands, including bogs, are adapted to a very constant hydrologic regime. Even the most stringent flow control standard employed by this manual does not prevent all increases in runoff volume, and it is known that increased runoff can adversely affect wetland plant communities by increasing the duration and magnitude of water level fluctuations.* ***Thus, compliance with this manual should not be construed as mitigating all probable and significant stormwater impacts to aquatic biota in streams and wetlands; additional mitigation may be required.*** *Additional mitigation may also be required to compensate for loss of critical drainage area habitat functions associated with activities inside the critical drainage area or critical drainage area buffers.*"
3-63	However, some impacts to both surface and ground water resources, including increasing peak flows, channel incision, and reduced groundwater recharge, may be unavoidable as new impervious surfaces are created and vegetation is removed with development activities.	These statement should be expanded to note that if a development increases impervious surface area and the increase in stormwater generated cannot be infiltrated onsite, then an outcome of detention is that though released at a rate that should not create significant erosion in the channel, this greater volume of water is released over a longer period of time altering increasing stream velocities above what they would have been otherwise in the absence of development. This points out another benefit of calculating total pre and post development runoff volume over the water year as it can used to estimate changes in water velocities and duration of flows that might impact aquatic life.
3-63	It is not possible to eliminate all impacts on surface water resources	It is clearly not possible, unless development is restricted to what can be

	entirely under any of the alternatives.	constructed without increasing the volume of stormwater leaving a site, to prevent alterations in stream flow. However, it is possible to locate outfalls away from areas used by salmonids to shelter from high flows or to increase instream structural complexity as noted elsewhere in this DEIS, an increase that would typically provide a greater volume of water within acceptable velocities.
3-64	Decline and eventual loss of some wetland functions for hydrology, water quality, and habitat.	The same will occur to streams.
3.1.4 Plants & Animals		
3-69	Water levels are more stable and peak flows are more typical of historic flows	The presence of historical peak flows should not be assumed to mean the water in the channel behaves the same as historically. Stream hydraulics are function of flow and hydraulic complexity. The focus in stormwater management on reducing peak flows to avoid channel erosion (a geomorphic threshold) has led to a lack of focus on biological thresholds for flows. Water flows (velocities) required to displace aquatic life (such as juvenile salmonids), to increase their energy expenditures to maintain position, or requires holding in positions with an acceptable velocity or generally not considered. In undeveloped channels, due to the hydraulic complexity (often created by wood) water moves through the stream channel much differently than in channels that have been altered by development. The complex mosaic of differing water velocities and depths has been converted to a system with greater uniformity of depth and velocity with fewer area for aquatic life to avoid flows above their

		swimming thresholds.
3-69	Many structural features typical of historical vegetation, such as snags, dead and downed wood, and brush piles, are often completely removed from the landscape.	The same has and is occurring in streams. Habitat forming wood has been removed from many stream or stream reaches, in the absence of a mature riparian corridor the amount of remnant wood is declining, if there is remnant wood. The lack of hydraulic complexity makes aquatic life more vulnerable to development induced alterations of the hydroperiod.
3-70	stream channels, which has resulted in degraded overall water quality and resulted in alterations to **hydrology**.	More discussion of the impacts of development, such as reducing stream hydraulic complexity, upon how water moves through streams should be presented.
3-70	Nearshore Estuary Habitats.	A definition for pocket estuary should be provided as well as a map to the location of the larger pocket estuaries. Though incomplete, Kitsap County does have a map of pocket estuaries. https://www.kitsap.gov/dcd/NR_Nearshore_Assessement_Maps/KitsapEast_PocketEstuaries.pdf a Kitsap County Map of pocket estuaries
3-70	These diverse nearshore habitats are critical for rearing of anadromous fish, including Chinook salmon,	Estuaries are particularly important for juvenile chinook, coho and chum as well as forage fish and other marine species
3-73	USFWS has identified nine federally listed **terrestrial wildlife species** that are documented to occur or may occur in Kitsap county (USFWS 2022). These **aquatic species** include Chinook salmon, chum salmon, …	The first sentence refers to terrestrial species but the examples given are aquatic. As noted in other communications to the County from the Tribe, the County should be designating species of local concern. Additionally, the County should plan for wildlife corridors.
3-74	Fish habitat is largely dependent on water quality and quantity.	This is an oversimplification. Sufficient amounts of good freshwater water without physical habitat such as wood,

		properly size sediment, etc., provide little fish habitat. Suggest this sentence be expanded to note the stream habitat arises from the interaction of flow, water, and sediment and changes in the amount or timing of the input of these affects habitats. This would set the stage for the longer following sentence found in this paragraph of the DEIS. Additionally, a discussion of the interaction of wood with water to form complex habitats, particularly pools that can remain wetted during low flows (thus increased resilience to climate change) is warranted. Furthermore, low velocity water created by wood helps shelter aquatic life form peak flows.
3-77	**Estuarine habitat** occurs at the stream mouths of Barker, Clear, and Steele Creeks, while areas along Dyes Inlet are considered marine nearshore habitat.	A definition of pocket estuary would helpful as pocket estuaries also occur at the mouths of smaller, unnamed streams; and in tidally influenced wetlands with freshwater input etc.
3.1.4.2 Plants & Animals − Impacts		
Impacts Common to All Alternatives		
3-78	Critical areas, including streams and wetlands, would receive similar protection under each of the alternatives with some increased protections for riparian areas in Alternative 3.	As the CAO is undergoing revision, the extent of any increased protection, beyond the proposal to increase the buffer for non-fish stream in Alternative 3 from 50 to 100 feet is unknown. However, the DEIS implies and BAS indicates the current county stream buffers are insufficient.
3-78	However, indirect impacts may also occur with the introduction and establishment of nonnative invasive species.	Other indirect impacts to vegetation includes increased potential for (1) windthrow of trees in the riparian areas; and (2) requests to remove danger trees from the riparian area or stream buffers.
3-79	Aquatic species **may** be impacted by loss of habitat due to development or	Suggest “may” be switched to “will”. Additionally, changes in water quantity

	alteration of habitat due to changes in water quality and quantity that may occur under each alternative	are using considered towards the extremes: (1) base flows; and (2) peak flows (erosion and flooding concern). However, also need to consider development induced changes in the frequency and duration of flows less than the design event for developments required to plan for flow duration control or the cumulative impacts from multiple projects that are not subject to flow control, but are unable to infiltrate stormwater.
3-80	Reduced quality and quantity of aquatic habitat **may** occur as a result of future development activities ….. Fish habitat **may** be impacted by the conversion of land, increased density, changes in types of land use activities, and all alternatives.	Switching “may” to “will” is consistent with wording found in Ecology and Kitsap County stormwater manuals.
3-80	Resulting impacts could include, but are not limited to, increased water temperatures sedimentation, increased peak flows, reduced groundwater recharge, increased shoreline armoring, channelization, and overall reduced riparian and wetland habitats.	Additional impacts include reduced base flows, increased intermittency of seasonal streams in both space and time, and converting perennial streams to seasonal streams. In addition to increased peak flows, there is typically an increase in the frequency of the equivalent of sub-peak flows as well as their duration. Direct impacts to fish, such as displacement or higher energy expenditures due to increased duration of flows at or exceeding the upper end of their swimming ability are an impact.
3-80	Intact riparian or shoreline buffers may reduce adverse effects of watershed-wide development on streams and wetlands.	Though intact riparian or shoreline vegetation buffers are more likely to reduce many adverse effects, this DEIS statement is debatable for impacts that are deliberately conveyed through a buffer to the stream channel, such as some stormwater discharge.
3-80	Established, mature forested buffers allow large woody debris recruitment	A sentence or two of the importance of instream wood to create hydraulic

	and support maintaining healthy stream temperatures.	complexity and the mosaic of water velocities required by salmonids is warranted. This would provide the linkage between the riparian corridor and instream wood.
3-80	Salmonid species are particularly sensitive to changes in water quality and temperature, which may affect their ability to survive, grow, and reproduce.	Juvenile and many stream rearing salmonids are also particularly sensitive to changes in water velocities that exceed their preferred range and habitat alterations due to loss of wood from stream channels as well as temperature increases resulting from removal of riparian vegetation.
3-80	Direct impacts on fish habitat will be **minimized** by regulatory buffer requirements and the	Suggest reduced is a more appropriate word than minimized.
3-80	However, current state and County regulations require stormwater management and treatment standards for projects that create significant new impervious surface area to help **minimize** detrimental effects on aquatic species and their associated habitats. These regulations are intended to **minimize** or mitigate impacts on fish habitat but **may not eliminate** the impact entirely.	Suggest "minimize" be changed to "reduce". Suggest "*may not eliminate*" be changed to "*will note eliminate*" for consistency with the Ecology and County stormwater manual. State and county regulations require stormwater analysis look at potential alterations to wetland hydroperiods. No such comparable analysis if required for alteration of hydroperiods in stream channel. Aquatic life, such as overwintering juvenile coho that have not found preferred overwintering habitat, in response to storm induced increases in stream flows often move into small tributaries, often backwatered from the main channel and only containing water during storm events to avoid the higher flows in the main channel. Stormwater discharge into these smaller channels can be a significant portion of the flow and reduce their suitability for high flow refugia.

		Additionally, these regulations are intended to reduce impacts to the form of the stream channel, such as reducing flows below the erosion threshold. These regulations are not designed to address stormwater induced flow changes upon water velocities within aquatic life swimming abilities, impacts which can occur at much lower velocities than those needed to erode the stream channel.
3-83	Unmapped rare plants may occur in all areas of proposed UGA expansion and could be affected by future development activities.	Unmapped streams and wetlands are also expected to be present, particularly small low gradient seasonal streams used for overwintering and high flow refugia and small headwater wetlands.
3.2.4.1 Historical & Cultural Preservation − Affected Environment		
3-84	The Suquamish Tribe, working alongside Tribal Elders and the Cultural Co-op, have identified and mapped traditional places in and around the Port Madison Indian Reservation.	The Tribe does not just gather information for places only in and around the reservation, but rather for the entire county. There are ethnographic place names and Suquamish villages and camping spots all over Kitsap County, not limited to the reservation boundaries.
3-89	Additionally, coordination with Washington State Department of Fish and Wildlife and local Tribes is **encouraged** to ensure protection of treaty reserved natural and cultural resources, where applicable.	Coordination with the Tribe at the earlies possible stage will reduce the potential delays due to (1) redesigning a project after Tribal input has indicated a redesign would avoid sensitive areas; or (2) an inadvertent discovery when there is no plan to deal with discovery..
3-89	…..notify Kitsap County, **the Office of Archaeology and Historic Preservation** and affected Indian tribes.	Please verity the DEIS has the correct title, it might be the Department of Archaeology and Historic Preservation
3.1.4.3 Plants & Animals − Mitigation Measures		
3-85	The Shoreline Master Program (KCC Title 22), updated in 2021, applies use and modification standards, as well as mitigation sequencing, vegetation	There is a disconnect between the SMP and SEPA for activities within the Shoreline Management Zone. Buffers in the SMP are typically much less than

	conservation, and critical areas regulations to all Shorelines of the State. The updated Shoreline Master Program was adopted to meet the standards of no net loss of shoreline ecological functions. Additionally,	those found in the CAO, yet No Net Loss (NNL) reports typically evaluate whether a proposal is compliant with the mitigation sequencing requirements of all comprehensively updated SMPs and not, rather than cumulative, short-term, long-term, direct and indirect impacts to the environment outside of the buffer. If an impact is not identified, there will be no directed mitigation for that impact. The wording in the SMA and SMPs allows NNL reports and the equivalent to claim certain activities have no impact, when in fact they do. In effect, NNL reports are being used by some applicants to truncate the area over which impacts are to be considered.

Annex B Comments on proposed draft development regulations for Title 16 Subdivisions and Title 17 Zoning.

Title 16 Subdivisions

Page number	Narrative (bold emphasis added)	Comment
4	16.04.020 Purpose	There appears to be nothing in the purpose about environmental protection and climate change, despite the linkages of many objectives. Putting some reference to those here, would set the stage for the wording in "*16.04.060 Conformity with other codes*".
12	Any associated documents, including but not limited to covenants, conditions and restrictions (CCRs), road maintenance agreements (RMAs) and easement documents, shall be recorded concurrently with and be cross-referenced on the face of the final plat or binding site plan. Recordings shall be at the expense of the applicant.	GPS polygons for Critical areas and critical area buffers, and GPS coordinates for retained and replaced trees, wildlife trees, should be recorded concurrently.
36	Where a land segregation contains or **borders** a critical area, development shall occur in accordance with the appropriate standards as required by Title 19, including specified native vegetation buffers and construction setbacks where applicable.	A definition should be provided for "borders". Suggest "borders" means the site is within one (1) Site Potential Tree Height, or 100 feet whichever is greater. Subdivision of land shall not result in buffer reductions or reasonable use exceptions based on the CAO when the subdivision is proposed.
16.40.030 Preliminary Subdivisions.		
37	One or more **maps**, to scale no less than one inch to one hundred feet, which scales hall be shown on the drawing, both	Polygons for Critical areas and critical area buffers and CMZs, and GPS coordinates for retained and replaced trees, wildlife trees, survey stakes, survey points, where stream bankfull widths were taken, photopoints should be recorded concurrently. There should also be wording that additional information collected in Special Reports might be required to be included on this maps as directed by the CAO.

38	The location of all water bodies (including but not limited to lakes, ponds, saltwater shorelines, streams, and wetlands), their associated buffers and construction setbacks, and mapped flood hazard areas;	Add, "*including channel migration zones, as applicable*".
Amendments to approved preliminary subdivisions**.**		
39	Amendments. For these purposes, "**significant**" shall mean a greater than ten percent increase when the impact is quantifiable.	Whether an amendment is considered *minor* or *significant* will often depend upon the information collected for the various special reports. To help ensure amendments that are actually significant or not considered minor, greater effort is needed to quantify impacts numerical rather than use terms such as greater, larger, reduced etc. For example, if the impact of a proposal upon the volume of water infiltrated onsite is not quantified during review, then it would not be possible to determine if a proposed amendment had affected the infiltration volume by more than 10%. The onus must be on the applicant to document that they cannot quantify an impact or a reasonable surrogate for the impact (for example, using infiltration changes as surrogate for impacts to groundwater recharge). Given that projects with proposed significant changes will not be considered vested, there will be considerable incentive to try not to quantify impacts.
40	If one or more are not satisfied, the application must proceed as a major amendment.	Suggest adding words to the effect "*There has been changes in the Best Available Science that affects the understanding of the efficacy of proposed mitigation measures*".
41	Vesting. Major amendments proposed by an applicant shall cause the application to lose its vesting and be reviewed under the regulations in effect at the time of the revised project permit application. Minor	The Tribe is supportive of the proposal that a major amendment shall cause an application to lose vesting. However, vested projects for which substantial work has not commenced with five (5) years of approval should also lose vesting.

	amendments are amendments that do not qualify as major and shall not affect vesting.	If not currently incorporated into the process, Tribes should be included in the review of request for minor and major amendments to ensure Tribal input prior to the County coming to a recommendation as to amendment type.
Final Subdivisions		
41		See comments to 16.40.030 Preliminary subdivisions
Preliminary short subdivisions.		
45		See comments to 16.40.030 Preliminary subdivisions.
46	The location of all water bodies (including but not limited to lakes, ponds, saltwater shorelines, streams, and wetlands), their associated buffers and construction setbacks, and mapped flood hazard areas;	This wording is not found in some of the other sections. Consideration should be given to incorporating it into that wording. Additionally, drainage pathways should be included.
46	The location of geologically hazardous areas and their associated buffers and construction setbacks. Delineate all slopes thirty percent in grade or greater and all slopes from fifteen percent to thirty percent in grade where they are rated as areas of “moderate” or “high” geologic hazard pursuant to Section	This wording is not found in some of the other sections. Consideration should be given to incorporating it into that wording.
Amendment to preliminary short subdivisions.		
47		See comments to 16.40.040 Amendments to approved preliminary subdivisions
Final short subdivisions.		
49		See comments to 16.40.030 Preliminary subdivisions.
Preliminary large lot subdivisions.		
53		See comments to 16.40.030 Preliminary subdivisions.
Amendment to preliminary large lot subdivisions.		
55, 56		See comments to 16.40.040 Amendments to approved preliminary subdivisions
Final large lot subdivisions.		
57		See comments to 16.40.030 Preliminary subdivisions.

Binding site plan contents and approval criteria.		
67	16.60.030 Alterations of final short plats, large lot plats and binding site plans.	A more extensive use of GPS to record various features (features listed earlier such as in the comments on 16.40.030 Preliminary subdivisions) will help ensure a more accurate review of the potential impacts of proposed alterations.

Title 17 Zoning

Page number	Narrative (bold emphasis added)	Comment
9	Lighting is to be directed downward and away from adjoining properties.	Suggest adding at end of sentence" *and critical areas and their buffers.*"
15	Line 116 Multiple-family ~~ACUP~~ to P in Urban Reserve and Greenbelt zones	It should remain an ACUP
20	Exterior Lighting. In all zones, artificial outdoor lighting shall be arranged so that light is directed downward or away from adjoining properties and shielded from above to prevent light pollution of the night sky and so that no more than one foot candle of illumination leaves the property boundaries.	The additional attention to light and glare is welcome, but could be improved. This as currently written to reduce light and glare impacts to neighbors. However, light and glare affects wildlife. As the property boundaries might include critical areas and their buffers suggest and a second statement to the effect "no more artificial illumination shall not enter wetlands or Fish and Wildlife Habitat Conservation Areas or their buffers.
51	Permeable pavements are encouraged where feasible;	This proposed addition is welcome, but should be strengthened to read "*Permeable pavements are required where feasible.;*" ”
Kitsap County Comprehensive Plan Alternative 2: Tree Replacement Tree Density/ Unit Credit Method		
64	A healthy tree canopy contributes to physical and mental health, safety, aesthetics, and overall welfare of the public.	The use of word canopy implies canopy closure and that suggests retained trees should be clustered to the extent possible. This has several benefits such as reducing risk of wind throw, creating a

		microhabitat for fauna and flora, etc.
64	Tree replacement standards shall apply to any lot under development in urban residential, commercial, and industrial zones in Kitsap County.	The wording here sets the stage that it applies to all lots, but based upon conversations with the County it does not apply to Critical Areas. The following wording from page 65, should be adopted to here: "*Tree management and protection within critical areas and their buffers are regulated by Kitsap County Title 19 Critical Areas Ordinance and trees within shoreline jurisdiction are regulated by the Shoreline Master Program.*"
64	Lots that are 8,000 square feet in size or less are exempt from the tree replacement standards of this chapter.	Please clarify if this means a developer with a project of 80,000 square feet divided equally into 11 lots is exempt while a developer with a 25,000 square foot project divided into 3 lots is not. If that is the case, then the exemption should be based upon total project size and not lot size.
64	Only healthy, significant trees can count toward the required minimum tree density.	Only counting healthy trees overlooks the importance of wildlife trees, what a later section of this document refers to as significant habitat trees. See comments to Table 17.495.030-1 re wildlife trees.
65	Table 17.495.030-1 Minimum Tree Unit Credits by Land Use Zone	Consideration should be given to an additional credit for retaining wildlife trees of a certain size. Conversely, there should be an additional debit for the removal of wildlife trees - trees with snags and cavities that are used by a variety of birds and small animals. See the following links for species, sizes, clustering, etc. WDFW https://wdfw.wa.gov/species-habitats/living/snags#trees BC https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/conservation-habitat-management/wildlife-conservation/wildlife-tree-

		committee/chief_forester_short_cwd.pdf
65	Tree density requirements for a lot can be met by trees located within shoreline jurisdiction, critical areas, and their associated buffers	Allowing the density requirement to be meet by trees located in critical areas or their associated buffers is allowing credit for something the applicant is required to do – maintain a buffer. It also is contrary to the intent of the statement on page 64, "*Trees also mitigate the negative effects of urban development including the loss to native wildlife biodiversity, increased temperatures, airborne particulates, carbon dioxide, noise, and stormwater runoff caused by increases in impervious surfaces and vehicular traffic.*" Particularly in regard to the loss of native wildlife biodiversity – animals, particularly smaller ones, need suitable habitat features to move between areas that are not connected by habitat corridors. Allowing the density requirement to be meet by trees located in critical areas or their associated buffers is allowing credit for something the applicant is required to do – maintain a buffer. It also is contrary to the intent of the statement on page 64, "*Trees also mitigate the negative effects of urban development including the loss to native wildlife biodiversity, increased temperatures, airborne particulates, carbon dioxide, noise, and stormwater runoff caused by increases in impervious surfaces and vehicular traffic.*" Particularly in regard to the loss of native wildlife biodiversity – animals, particularly smaller ones, need suitable habitat features to move between areas that are not connected by habitat corridors.
65	Tree management and protection within critical areas and their buffers are regulated by Kitsap County Title 19 *Critical Areas Ordinance* and trees within shoreline jurisdiction are	This should be added to wording an page 64 as noted previously.

	regulated by the Shoreline Master Program.	
66	Table 17.495.030-2 Credit Values for Existing and Replacement Trees	See previous comments re wildlife trees.
66	Replacement 2-inch caliper deciduous or broadleaf tree Replacement 6-foot-tall evergreen, conifer tree	These replacement credit ratios appears to be rather arbitrary. Is there any quantitative information behind this ratios, such as the time required for the replacement trees to reach the size set for the existing trees?
67	Developments shall locate a minimum of 25 percent of the required trees in protected tracts, such as tree conservation tracts, recreation tracts, stormwater tracts, and critical area tracts;	If the required trees are planted in critical areas tracts, the developer should not get a mitigation credit for buffer enhancement.
67	When lots or building sites are located next to protection tracts (such as park, stormwater, or critical area tracts), the preferred location of the trees is the area adjacent to these tracts;	If small animal movement, such as amphibians, is a concern, and the project is in a location where critical areas are spatially disjunct, then consideration should be given to locating the trees in a manner that facilitates movement
67	Trees may be planted on a solitary basis or within clusters to form stands or groves.	For reasons outlined earlier, such as reducing the risk of windthrow, creation of microclimates, etc., the preference would be clusters to form stands or groves.
67	Irrigation shall be provided until the tree is established.	In regard to the wording “until the tree is established”, these replacement trees are effectively mitigation for tree removal and/or required to provide for certain objective, such as those listed in 17.495.010 Purpose. As mitigation for impacts, the applicant should be required to conduct periodic inspections of the tree after establishment to ensure it is still viable and replace it if needed treating the tree that needs to be replaced as retained tree for credit values (Table 17.495-030-2)
68	show approximate locations of trees to	Approximate location is vague, GPS work

	be retained or planted	is cheap. The GPS locations of retained and replacement trees and information should be required.
68	Where circumstances warrant, the Director may require more substantial tree protection fencing, as necessary, to protect intrusion of construction into the critical root zones.	Care must be taken to ensure more substantial tree protection fencing does no impede the movement of small animals, such as amphibians
Kitsap County Comprehensive Plan Alternative 3 - Tree Retention Tree Density/Unit Credit Method		
		See comments to Kitsap County Comprehensive Plan Alternative 2: Tree Replacement Tree Density/ Unit Credit Method for general concerns
73	Trees identified as having significant habitat value (i.e., large diameter, snags, or nesting trees) and those located within a critical area or its buffer may be credited toward the tree density requirements, regardless of the health or state of the tree, so long as they have not been deemed a moderate to high risk hazard tree by ….	A definition for what constitutes a tree having significant habitat value is required. A habitat analysis would be required to document why a tree that meets the criteria is not significant to avoid the significant status. The stream typing system has been around for many years, but many reports still claim what are clearly Type F streams as Type N, even given the stream typing procedures found in the WACs. To have no guidance for significant habitat trees means little protection. Trees located within critical areas or their buffers should not count as credit. Large trees with significant wildlife habitat value should be given a bonus. Additionally, often a tree can be stubbed, reducing the hazard, but maintaining much of the habitat value.
Kitsap County Comprehensive Plan Alternative 3 - Tree Retention Canopy Cover Method		
		See comments to Kitsap County Comprehensive Plan Alternative 2: Tree Replacement Tree Density/ Unit Credit Method for general concerns
76	Table 17.495.030-1 Minimum Tree	The canopy proposal will overlook wildlife

	Canopy Cover by Land Use Zone	trees even more than the trees per acre proposal as many wildlife trees will not contribute substantially to the canopy due to them being dead or dying.

Return to Comment Matrix

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February 26, 2024

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RE: Draft Environmental Impact Statement (DEIS) Alternatives

Kitsap County Board of Commissioners,

Thank you for considering City comments regarding the published *Kitsap County Comprehensive Plan Draft Environmental Impact Statement (DEIS)* to considered by the Board of Commissioners. Please take into account the following comments, some which include a review of comments previously submitted by the City during the current Comprehensive Plan update process:

SUMMARY OF PREVIOUS CITY COMMENTS:

1. *Reclassification & Change Request (9/16/2022).* With initial engagement requested from Kitsap County, the City of Bremerton noted a number of areas our two jurisdictions could work cooperatively on, including:
   a. *Central Kitsap Urban Growth Area (CK-UGA).* The City of Bremerton requests Kitsap County Associate the CK-UGA to the City of Bremerton with the current 2044 Comprehensive Plan update. The following is a brief review of reasoning to associate the CK-UGA to Bremerton, please see the original 9/16/22 document for a full account.
      - *Washington State Directives.* The State establishes that cities are the appropriate providers of urban services within Urban Growth Areas per WAC 365-196-310(2)(g) and RCW 36.70A110(4).
      - *Growth Management Hearings Board (GMHB).* The GMHB has made clear that cities should be the providers of urban services to UGAs and that the comprehensive plan update process is the appropriate time to plan for transference (*City of Spokane v. Spokane County, Case No. 06-1-0002* and *Abenroth, et al. v. Skagit Co., Case No. 97- 2-0060*).
      - *Countywide Planning Policies (CPPs).* Kitsap Regional Coordinating Council (KRCC) Countywide Planning Policies (CPP), adopted by Kitsap County and the City of Bremerton, note that association of urban growth areas will occur with the comprehensive plan update process per CPP UGA-2(b) and that Kitsap jurisdictions encourage the incorporation of UGAs to cities per CPP CW-1(c).
      - *Kitsap County Comprehensive Plan.* Kitsap County's existing Comprehensive Plan Plan Policy 25, states, *". . . Considering that the Central Kitsap Unincorporated Urban Growth Area is unassociated with a city, work with the City of Bremerton on an agreement to associate the Central Kitsap Unincorporated Urban Growth Area*."
      - *City of Bremerton Comprehensive Plan.* The *Eventual Growth Intent* section of the current Bremerton Comprehensive Plan establishes that the CK-UGA should be associated with the City of Bremerton to ensure future annexation.

- *Mason County Superior Court, Case No. 16-2-00695-1.* A 2017 Settlement Agreement, signed by the Kitsap County Commissioners and the Bremerton Mayor, concluded that the CK-UGA can be annexed into the City of Bremerton. A copy of this document is included with the original request.

b. *West Bremerton Urban Growth Area (WB-UGA).* A limited expansion of the WB-UGA is requested with this comprehensive plan update process. Specific mapping is included in the original letter.
   - *Kitsap Lake (North).* Existing sewer service has been provided within the requested UGA expansion area since the 1970's. The City request is consistent with CPP UGA-3(i) for areas prioritized for UGA expansion. City utility professionals concluded that the proposed boundary would provide the City with the most logical service area based on the location of existing sewer and road network.
   - *Kitsap Lake (West).* To improve water quality, and avoid toxic levels of algae blooms, Bremerton invests significant funds annually to ensure water quality standards are maintained. Limited UGA expansion will enable lakeside properties the opportunity to further improve Kitsap Lake water quality by removing waterfront septic systems in favor for municipal sewer connection. This limited expansion would also enable GMA conformance for two existing sewered properties currently located outside the WB-UGA.
   - *City Owned Properties.* Lands owned by the City, that are currently used for City utility purposes or are within the City watershed, are requested to be included with the WB-UGA expansion for municipal purposes.

2. *SEPA EIS Scoping Comments (12/8/2022).* In response to the County *November 8, 2022 Determination of Significance & Request for Comments on Scope of Environmental Impacts Statement (EIS)* notice, the City of Bremerton identified impacts requiring resolution with the County 2024 Comprehensive Plan update EIS. The comment letter provided an attached copy of the *9/16/2022 Reclassification & Change Request*, summarized the contents of the letter, and requested association of the CK-UGA and limited expansion of the WB-UGA.

3. *Kitsap County Comprehensive Plan, Reclassification Request #75 (4/13/2023).*
   Mayor Greg Wheeler writes to support a reclassification request to expand Bremerton Urban Growth Area to include lands adjacent to the Puget Sound Industrial Center (PSIC). As a Puget Sound Regional Council (PSRC) designated Manufacturing Industrial Center (MIC), the PSIC is integral to the Regionals economic growth. Expansion of the UGA will support this important regional center of job growth.

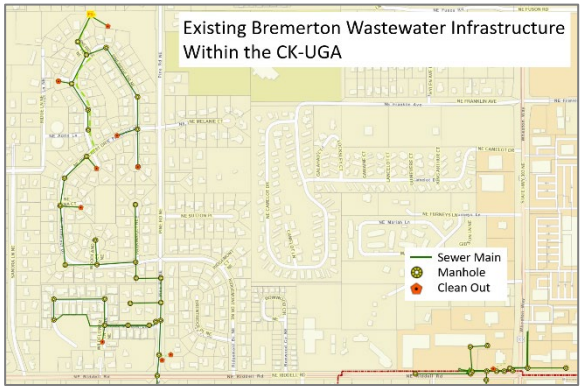
4. Land Use Alternatives (4/14/2023). City comments were provided for proposed Kitsap County Comprehensive Plan Land Use Alternatives. The City thanked the Board of Commissioners for including proposed WB-UGA expansions in Alternative 2. Comments note that at the time Land Use Alternatives were released, there appeared to be no mention of association of the CK-UGA. The City summarized commentary of previous comment letters, and reiterated requests to associate the CK-UGA to the City of Bremerton.

DECEMBER 2023 DRAFT ENVIRONMENTAL IMPACT (DEIS), COMMENTS:

With this current *February 26, 2024 Draft Environmental Impact Statement (DEIS) Alternatives Comment Letter*, the City requests the Board of Commissioners consider the following:

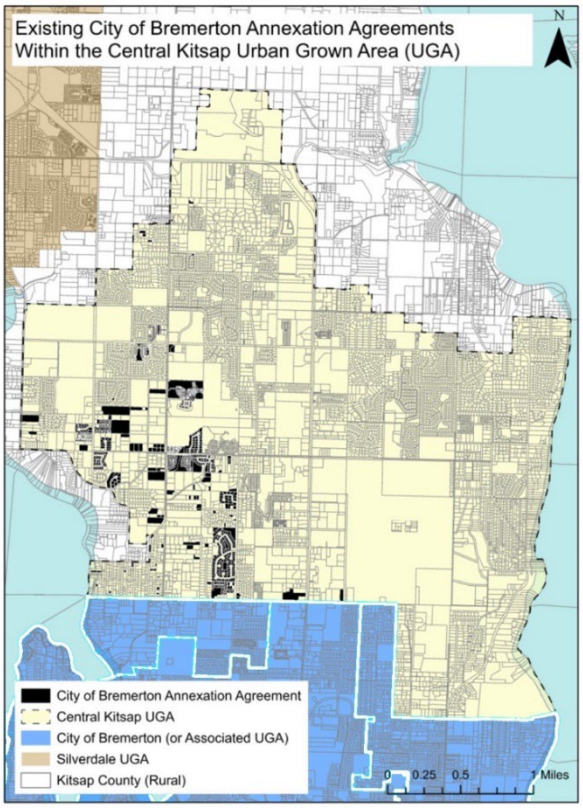
1. *Central Kitsap Urban Growth Area (CK-UGA).* As noted in *December 2023 Draft Environmental Impact Statement, Section 2.3.1 Urban Growth Areas*, The Central Kitsap UGA is not currently recognized for future annexation by a city, but is associated to Bremerton in Alternative 2, "Compact Growth/Urban Center Focus". The City appreciates County association in this alternative, and requests association be included in the EIS preferred alternative. The only other two UGAs listed as currently not recognized for annexation are the Kingston and Silverdale UGAs, which the December 2023 DEIS notes are anticipated to incorporate and become their own cities at some point in the future.

The City of Bremerton requests that Kitsap County associate the CK-UGA to the City of Bremerton with the current 2044 Comprehensive Plan update and make this part of the preferred alternative. In this current comment letter, the City lists each document previously supplied to Kitsap County related to the current Comprehensive Plan update, and summarizes requests made in those documents; please see those original letters for any further needed specificity.

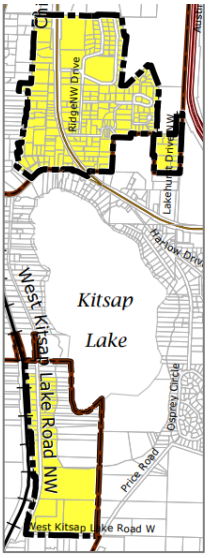


The City would also like the Board of Commissioners to consider the following additional information not addressed in previous comments related to the CK-UGA.

- *Existing Wastewater Service.* The City of Bremerton currently provides urban services to the CK-UGA. As seen in the above image, wastewater service is supplied to well over 150 properties within the CK-UGA. The *December 2023 Draft Environmental Impact Statement, Section 3.3.7.1.3 Wastewater/Sewer* should be updated to note that Bremerton currently provides wastewater service to portions of the CK-UGA. As the City currently provides wastewater service to the CK-UGA, and for other reasons documented in this comment letter, the County should associate the UGA to the City with this Comprehensive Plan update.
- *Existing Annexation Agreements.* As the City of Bremerton has provided water and wastewater utility connections throughout the CK-UGA, property owners have signed agreements (more commonly known as *Outside Utility Agreements*) not to protest any future annexation efforts by the City of Bremerton. Those agreements are recorded on property titles with the Kitsap County Auditor. Parcels illustrated in black in the above image, represent properties with recorded agreements; there are now more than 800 properties subject to these agreements within the CK-UGA. These properties nearly reach as far north as Waaga Way, the farthest recorded example located on Watson Place NE.



2. *West Bremerton Urban Growth Area (WB-UGA).* Bremerton notes that City requests for expansion of the WB-UGA have been granted in their entirety in both *Alternative 2 "Compact Growth/Urban Center Focus"* and also in *Alternative 3 "Dispersed Growth Focus";* as seen in part within the adjacent illustration excerpt from *Map of Proposed Zoning Changes by Alternative* published by Kitsap County. Our sincere thanks to the County for placing proposed UGA alterations within both proposed alternatives. Granting this limited UGA expansion will resolve outstanding urban service discrepancies for parcels currently outside the UGA, better address ongoing water-quality concerns with Kitsap Lake, and would place City owned properties into the WB-UGA for municipal purposes. Please include this limited UGA expansion



in the preferred alternative. Please contact the City if any further support is needed to ensure the proposed UGA expansion is adopted.

3. City Reclassification Support. The City supports the following reclassification requests:
   - *Reclassification Request #41.* Some iteration of this request exists in both Alternative 2 "Compact Growth/Urban Center Focus" and also in Alternative 3 "Dispersed Growth Focus" though geographies between the two are substantially different. The City supports industrial uses in this area, we encourage Kitsap County to continue to work with the property owner on appropriate geographies and include that in the preferred alternative.
   - *Reclassification Request #75.* Mayor Greg Wheeler submitted a 4/13/2023 letter of support for this reclassification request, noting the benefits to the Regionally serving Puget Sound Industrial Center (PSIC). Currently, this request is found only in Alternative 3 "Dispersed Growth Focus". The City requests that this request be included in the future preferred alternative.

Thank you for working with the City of Bremerton on resolving these matters during the current Comprehensive Plan update process. Should any additional information be required, please provide the City with specific information requests as soon as possible.

Garrett Jackson
Planning Manager
(360) 473 – 5289
345 6th Street, Suite 100
Bremerton, WA 98337

Return to Comment Matrix

The Kitsap Building Association firmly believes that every resident of Kitsap County deserves the right to achieve the ultimate American Dream: owning a home. Alternative 3 is the only alternative suggested in the draft environmental impact statement that works towards making this dream a reality. The situation we are currently in is dire: Puget Sound Regional Council's Vision 2050 estimates over 800,000 households being added to the Puget Sound region over the next 26 years. Kitsap County's consultant, who was hired to conduct a housing analysis for this Comprehensive Plan Update, estimates that Kitsap will need to add over 25,000 housing units to accommodate its share of this massive growth. Alternative 2, while providing much needed incentives and zoning changes to make multi-family construction more realistic, does not go far enough to foster the correct market conditions that will allow enough units to be built.

Preferred Alternative

The Kitsap Building Association suggests that the county combine the elements from alternatives 2 and 3 that allow for the greatest number of units to be constructed. Alternative 2 leads us to believe that younger generations, for whom home ownership is becoming increasingly unlikely, must be subjected to multi-family style living by decreasing the amount of single-family detached homes that can be built. While it is true that we need more multi-family housing, we also need more detached single-family homes for households to eventually move into. The only way you can combat a housing shortage is by building more housing. Alternative 3 is the clear better option in terms of promoting detached single-family residences. However, we would also like to see the incentives and zoning changes for urban center development that are currently only available via Alternative 2. If the county wants to encourage more multi-family housing construction, then it needs to increase the amount of property that is zoned for that use. A combination of Alternatives 2 and 3 is the correct path forward to ensure the regulatory environment encourages all forms of housing. Continuing on the path of increased regulations will only lead to unaffordable housing, government subsidies, (a vicious cycle of increasing costs), and disenchantment of more people who have less hope for their future.

The county needs to encourage more housing of all types, not just one over the other.

It must be noted that the Growth Management Act explicitly states that cities and counties planning under the GMA must: "Plan for and accommodate housing affordable to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock." *RCW 36.70A.020.* A combination of Alternatives 2 and 3 is the only way this section of GMA is achieved.

Issues with Housing Analysis

The draft EIS housing analysis presents a delineation and trend of the overall housing units permitted within unincorporated Kitsap County from 2012 to 2022 in Exhibit 29. This exhibit

shows a consistent trend of permitted single family residential development exceeding that of permitted multifamily development throughout the study period, even in the years 2021 and 2022. We believe this data is incorrect. We are certain most residents of Kitsap County have witnessed that multifamily development has been booming for the past several years throughout the county and in the cities. No mention of this boom is included in the analysis. While footnote 10 references a couple of multifamily developments being potentially applicable but not included, that is a significant understatement and disservice to the overall analysis. By omitting key data, it appears that the housing analysis is determined to show an ongoing housing trend that fits the desired narrative aimed at supporting selection of the Alternative 2, nicknamed in the draft EIS as the "bending the trend" Alternative.

The Housing Analysis is supposed to provide "key information to help contextualize and update existing conditions in housing…". This is important data and information that must be clearly understood when it is a major basis for the Alternatives. If multifamily development is underestimated to such a significant degree, then it follows that buildable land availability in the zoning districts designated for future multifamily development is overstated on that basis. Combining this with the pending revisions to the Critical Area Regulations, the buildable lands available for multifamily development within the UGA must be over-estimated for the 20-year period to 2044. Anyone currently involved with conducting feasibility assessments for potential multifamily projects within the existing UGA boundaries knows this.

Parking

The discussion regarding more multifamily development must also include the rather large obstacle of parking requirements. A reduction in parking requirements should be available under both Alternatives 2 and 3, not just 2. *Pg. 68*. Garages should also count towards parking under both alternatives 2 and 3. There is no reason that a garage can count for parking under one alternative but not the other. *Pg. 68*. Cities impose parking requirements to pre-empt (or in response to) residential neighbors and retailers from complaining their free street parking is consumed by multifamily dwellers. Parking requirements make less sense in the city core (where the multifamily development is expected to occur) where short-term parking and permit parking are enforced. Here, developers will respond to (or anticipate) market demand for parking. The more flexible the parking regulations are, the quicker newer supply can be delivered affordably.

Traffic Mitigation

The issue of traffic mitigation is also worth mentioning. With the level of expected growth that is coming, it would make sense for the county to make investments in transportation infrastructure in order to help accommodate. However, with a projected increase in traffic of 72% by 2044, the EIS simply states that there are no transportation improvements needed for the county to maintain compliance with the required level of standard. *Pg. 343.* This is a shocking statement that should be met with high levels of scrutiny, especially when considering that transportation impact fees were raised an unprecedented 514% just three years ago.

It must also be mentioned that the vast majority of proposed future roadway projects are focused in the rural areas. *Appendix C – Transportation Project by Alternative of the EIS.* They will also

be adding pedestrian and bike facilities to accommodate these projects. *Ibid.* Wouldn't the dollars the county is spending on these projects be better spent constructing similar pedestrian and bike facilities inside the UGA, or perhaps reducing requirements for future road frontage improvements that developers will need to build when infilling and redeveloping. Removing that burden from future multifamily development is one way to help with affordability, which will be much more effective than building amenities in the rural areas for only a select few to enjoy.

Critical Areas Ordinance Update

It also must be stated that any discussion regarding UGA boundaries and buildable lands cannot be had until the Critical Areas Ordinance Update has been finalized and adopted. The land use portion of the comprehensive plan process hinges on an update to critical areas code that is not complete. The KBA, and the Kitsap community at large, are being done a disservice by being asked to comment on a comprehensive plan before the Critical Areas Ordinance process has been completed. How can we make suggestions in good faith without knowing what critical area buffers we will be working with?

Conclusion

In conclusion, the county must acknowledge that a public-private partnership is required in order to ensure enough housing is built to accommodate the growth that is coming. There must be compromises made to allow younger generations to experience the dream of homeownership. Regulations play a key role in making that happen or preventing that from happening. We urge the board of county commissioners to adopt a combination of Alternatives 2 and 3. This is the most equitable path forward and will foster strong development for years to come.

Sincerely,

Randall King
Executive Officer of the Kitsap Building Association

Return to Comment Matrix

KITSAP ALLIANCE OF PROPERTY OWNERS

February 23, 2024

Scott Diener, SEPA Responsible Official
KITSAP COUNTY
Department of Community Development
Planning and Environmental Programs
619 Division Street, MS-36
Port Orchard, Washington 98366

SUBJECT: Review Comments – 2024 Comprehensive Plan Draft Environmental Impact Statement

Dear Scott,

It is noted that the Draft EIS includes over 400-pages of discussion. Any comprehensive review analysis of all such provisions might lead to an equally lengthy tome if not a document size in excess of the Draft EIS. KAPO's comments, will be thus more summary in nature, but our points made here-in are of sufficient detail to explain why the existing analysis is incomplete, fails to address significant features of the environment or an issue raised in the County's analysis. Thus, we are confining our critique to seven-parts of the DEIS discussion material. They are as follows:

- Advantages / Disadvantages of Delaying the Proposed action;
- Untenable pursuit of the Status Quo / No Action Alternative;
- Untenable pursuit of the Compact Growth / Urban Center Focus;
- Lack of sound foundation support for "Housing Affordable To All" analysis and plan provisions;
- Lack of proper foundation analysis of environmental features
- Lack of analysis of the 15-Goals of the Growth Management Act as to how the proposed comprehensive plan update would implement those goals by anyone of the three alternatives, and
- Lack of compliance with both the US and Washington State Constitution's provisions for the protection of the rights of people to own and use their property without undo restrictions.

ADVANTAGES / DISADVANTAGES OF DELAYING THE PROPOSED ACTION –

Prior to this discussion found on page 2-29, there is no reference made to the Goals and Objectives of the County's Comprehensive Plan and how they would or might be implemented by the proposed Comprehensive Plan Update. There is reference to the County-wide Planning Policies and how the plan's implementation would provide

compliance. The problem with this analysis is the Citizens of Kitsap County have no say in the construct of those policies and cannot critique them individually or collectively. Add to that the problem of a lack of "showing" that the County-Wide Planning Policies, while adopted by the four Cities and Kitsap County in the Kitsap Regional Coordinating Council (KRCC), are in fact compliant with the provisions of the Growth Management Act (GMA).

The reason for the County-Wide Planning Policies, which have their origin in the Puget Sound Regional Council's (PSRC) 2050 Transportation and Land Use Plans is to secure federal funding for transportation projects that is funneled through that organization. KRCC's adoption of the County-Wide Planning Policies is really a substitute action because Kitsap County and its four-municipalities have not established policies derived by and for Kitsap County and its cities.

There is this statement found on page 2-29 *"Conversely, a disadvantage of delaying the proposal is GMA noncompliance status. To be eligible for grants and loans from certain state infrastructure programs, a local jurisdiction must be up to date with the requirements of the GMA, including the periodic update requirements."*

At best this statement is inadequate and more important it portrays an expedient plan update process that over emphasizes grant and loan funding without demonstrating what is best for Kitsap County and its citizens. Just as significant our representative republic was set up to provide *"government of the people, by the people and for the people"* and not government just to qualify for grants and loans.

Any comprehensive plan update process as mandated by GMA requires only a review of the existing plan (last updated in 2016) in regard to amendments to GMA since, in this case, 2016, changes in technology, population forecasts land use-based market forecasts or economic conditions including trends in commercial and industrial development. Such an update may also consider findings from a "deficiencies analysis" of prior plan provisions, goal achievement or policy implementation.

Regarding this quoted statement as found on page 2-29, unless there is a showing of how this complies with *"government of the people, by the people and for the people,"* what has changed since 2016 in current conditions as well as recent updates to GMA, how the plan proposals actually implement Kitsap County's Planning Goals (those in the 2016 Comprehensive Plan) and what would happen if grants and loans were delayed, i.e., the real or theoretical monetary impact to Kitsap County's budget, **there is no reason to proceed at this time** (i.e., with the pending public hearing process to consider plan proposals). Thus, KAPO advocates for a delay in the plan adoption process.

UNTENABLE PURSUIT OF THE STATUS QUO / NO ACTION ALTERNATIVE –

Pertinent to the discussion addressing the need or not for a delay in the plan adoption process, there is no analysis in the DEIS to detail why the No Action Alternative will not be effective to implement the most recent update change in requirements of the GMA or the development trends now observable in Kitsap County.

But there is a reason why the pursuit of the "no action alternative" is not desirable. The answer portrays three deficiencies in the DEIS analysis. The first is lack of documentation as to what legislative changes in GMA that have been adopted since 2016 that cannot be implemented with the current provisions of Kitsap County's 2016 adopted plan and ordinances.

The second and just as important is the lack of documentation in the DEIS to address the consequences of implementing provisions of the 2017 Critical Areas Ordinance update (now in process). One such possible provision that appears likely to be adopted is the replacement of critical area buffers with "riparian habitat zones." The significance of this proposition, which would be imposed adjacent to all ditches, streams and creeks will take away significant portions of the "urban or urban growth area" allocations. The net effect of the implementation of that ordinance provision would cause the reduction in the amount of property that could be used to accommodate the influx of new people coming into the County. The DEIS for the comprehensive plan does not address this issue in quantifiable terms. This oversight has another consequence in that the 2021 Buildable Lands Analysis document is subsequently deficient as there is no analysis in that report to document what the effect of a diminished supply of urban / urban growth area would have to conclude whether or not such areas could accommodate of the project population numbers allocated to those urban or urban growth areas.

A third oversight in the DEIS analysis pertains to the lack of documentation of the price impacts on limited land supply, particularly in the urban and urban growth areas. Failure to properly account for sufficient available land supply within an urban or urban growth area will have a predictable and evitable consequence of increasing the price of land. With escalating land prices one result is in the effect on the cost of a new home and even the rent charged in apartment buildings – an ever-increasing cost of a new home or apartment complex. This consequence, also portrays the faulty assumptions about land supply contained within the 2021 Buildable Lands Analysis report. Believe it or not, whether Kitsap County wants to admit it or not, the economic based law of supply and demand still predicts results when the supply of land is limited, in this case artificially limited.

Therefore the "No Action Alternative" is not tenable.

UNTENABLE PURSIT OF THE COMPACT GROWTH / URBAN CENTER FOCUS –
For all the reasons set forth in the discussion of why the "no action alternative" is not tenable, the same are true for the "compact growth / urban center focus alternative."

Those observed and discussed, there are other issues associated with "compact growth" having an "urban center focus." The two primary ones are replacing existing development in "centers" with new multi-story buildings and densifying existing single-family neighborhood developments. There are fatal flaws associated with both possibilities.

The fatal flaws are summarized herein, even in recognition that some investors/developers may pursue compact growth projects within the specified centers:

1. Building up in confined space or small lot allocations inevitably comes with a higher cost and thus forces any housing provided to have a higher per square foot price than single-family detached or low-rise apartment complexes. Those higher costs are for utilities in water, sewer, power, gas or storm water facility extensions and/or upgrades to existing facilities as well as the structural infrastructure of buildings.
2. Cost of compliance with energy code, emission standards, or unwanted/needed "climate change & resiliency" standards is much higher in compact developments than for single-family detached or low-rise multiple family projects. One example, is the compliance with 1970 Clean Air Act. Kitsap County's air quality standards are now good to excellent per the Clean Air Act. However, the concentration of vehicles associated with "compact development" will have an adverse impact on Kitsap County's air quality because of the vehicle emissions. The problem is not just with vehicles circulating within or around such development patterns it is also with the congestion exacerbated on SR-3, SR-16, SR-166, Sr-160, SR-303, SR-104, Silverdale Way, Wheaton Way, and all major arterials in Kitsap County.

   Relative to the proposition that transit will replace and therefore reduce the dependence on single-driver cars and trucks, that has yet to be proven. Also, not a tenable proposition is that electric powered vehicles with replace the combustion engine powered cars. Way too many problems with that latter postulation, some of which will be addressed in the discussion regarding compliance with GMA Goal Number 14 -Climate Change and Resiliency.
3. Existing residents in single-family developments are generally opposed to apartment buildings being constructed on neighbor's lots. Predictably, these neighbors will find ways to appeal building permit approvals for projects changing the character of their neighborhoods.
4. Higher development costs will price housing beyond the median income household's ability to afford housing. There is evidence to show that such a condition already exists in Kitsap County. Two consequences are imminent and possibly a third. First since higher housing costs preclude new home (and equivalent exiting housing) purchases, there will be a rise in the homeless population. Alternatively, families will relocate to other areas having a lessor

land prices as well as overall home costs, such as found in Mason County. If employment opportunities still exist in Kitsap County connecting highways will be jammed with traffic as is now the case between Belfair and Bremerton along SR-3 and SR-16.

The third consequence may adversely impact the County's largest employer, the US Navy and their long-term plans to maintain facilities in Kitsap County to repair and refurbish Naval vessels. Lack of housing affordable to their personnel and families could affect decisions as to where vessel repair takes place in the United States.

5. Lack of timely upgrades to the road system, particularly in the SR-3 to Gorst and to SR-16. Clearly, an existing traffic jam exists where SR-3 intersects with Sinclair Inlet and traffic exiting the Puget Sound Naval Shipyard / Bremerton at the afternoon/evening peak-hour. For well over 20-years this intersection has been a "problem child." Apparently, the discussions continue for how to solve the congestion problem, yet until there is a concrete plan and an implementation project this will remain a congested corridor. This one area will affect the ability of "compact development" in the two primary "centers," Silverdale and Bremerton to remain viable places for development or redevelopment.

   Just what solution in an unspecified time-frame will work remains to be seen. Consider too, that the Port of Bremerton's allowance for a race track to be located in the vicinity of the Bremerton International Airport will bring new traffic patterns into this already congested area. Traffic solutions and continued delays in the start of construction projects to solve this problem will have a "chilling effect" on center's development, therefore limiting the ability of Kitsap County to fully implement "compact growth" within identified "centers" in the County over the projected life of the plan. Incidentally, no Capital Improvement Plan has been referenced in the DEIS to show when a project will be initiated and funded to solve this one problem.

LACK OF SOUND FOUNDATION SUPPORT FOR "HOUSING AFFORDABLE TO ALL" ANALYSIS AND PLAN PROVISIONS –

While statistical data is presented to document income levels of people residing and working in Kitsap County, the data is presented without context. For example, on page 3- 64 there is a chart showing the Average Market and Fair Market Rents for two-bedroom apartments. The 2022 average for such units in Kitsap County is $1,865.00. However, when U.S. Housing and Urban Development housing allotment standards are considered of 30% of gross income the recorded number is $530.00 per month. Even that median income family with a household income of $1767.00 per month, that family cannot afford the going rent of a two-bedroom apartment pretty much anywhere in Kitsap County even if all of their income goes to pay rent.

Consider the family of 2-4 with Kitsap County's Median Income level of $78,000.00. That household can barely afford a 2-bedroom apartment with 30% of their income going to rent plus utilities @ $1,950.00 per month. But, if their income is close to the median income for Kitsap County, then such household is better off than those making less or substantially less than the median Income.

When the price of a new home and comparable prices of a like product in the existing housing inventory is, as it is reported to be, close to $600,000.00 in 2022 / 2023. The financing costs, i.e., the mortgage rates to be paid for conventional financing @ 6.89% requires a payment of approximately $3,140 per month and that assumes a down payment of $120,000.00. Veterans Administration (VA) loans, for those who qualify, could finance the entire $600,000 at $3,925 per month. In the latter case there would have to be a household income of at least $157,000 per year and desirably higher.

The obvious conclusion is that unless a family has an existing home to sell (at a profit, which can be applied to a down payment), a contributing family member (wealthy of course) or there is an unexpected inheritance to apply to a down payment, the cost of a new home as well as rent is beyond the means of a substantial number of Kitsap County potential home owners. Discussion analysis such as this should have been a part of the DEIS as it is a requirement of GMA for any plan or plan alternative Kitsap County proposes to adopt.

Using the data already compiled in the DEIS there provides sufficient basis to draw conclusions regarding the three primary alternative plan provisions about housing affordable to all income levels. The analysis proscribed in the GMA. Unfortunately, the DEIS makes no such assessment, this omission does, in fact, underpin the conclusion that the DEIS lacks a sound foundation to provide support for what constitutes "housing affordable to all income levels."

A further omission is the lack of any discussion of Navy / Military housing allowances for different grades of enlistment such as an E-3 cadet and his or her family. Military families coming into the County with aircraft carriers, submarines or battleships needing refurbishment, which can take 2-3 -years to complete, are a significant part of Kitsap County's population / community and thus should be included in a housing affordability analysis.

LACK OF PROPER FOUNDATION ANALYSIS OF ENVIRONMENTAL FEATURES ANALYSIS

1. The GMA does not define the word environment. When a law lacks a definition of a key feature, the usual default is to the dictionary definition. The Oxford English Language Dictionary defines the word as follows: 1. the surroundings or conditions in which a person, animal, or plant lives or operates. Examples being habitat, territory, domain, home, abode or surroundings. 2. the natural world, as a whole or in a particular geographical area, especially as affected by human activity.

With that understanding as a backdrop in the context of GMA, there is no clear path to discern how or why one finds Goal No. 10 calling jurisdictions to "protect the environment." Defaulting back to the dictionary definition, "what surroundings or conditions in which a person, animal or plant lives or operates" is to be protected? Also, left unstated is the question of how. Mentioned specifically in Goal No. 10 is air and water quality and the availability of water. Protection usually means a set defense against an outside force to prevent destruction or annihilation of, in this case an environment.

Other than air and water quality (to include the availability of water) what natural or manmade environment is to be protected? Is it the land resource? is it tree stands? Is it wet areas? Is it a dry creek bed? Is it topographic relief with slopes calculated in excess of 15%? Is it habitat for endangered species of wildlife? Is it prime farm land? Is it developed areas with streets, utilities, housing and commercial/industrial development? Is it a heavily traveled road corridor? Is it vistas of Puget Sound, lakes and mountains? Or is it understory vegetation with nettles and blackberry vines? In short, the word environment can include a wide variety of natural features or human settlement patterns / conditions (as implied in the definition) both urban and rural in nature. But if there is going to be a comprehensive plan to address "environment(s)" there needs to be a specific reference to which or what kind of environment is a feature of the plan's provisions not to forget an assessment of impacts of at least the three plan alternatives.

Assuming "environment" has a broader reference beyond just air and water, how is the term "protection" defined of the generalized term environment? Does "protection" translate into "no change" to existing environment conditions? *If no other consideration is given in the construct of a "no change" to existing conditions proposition, the law of entropy will come into play and that which exists will deteriorate, with or without man's interference.* Does "protection" apply then to only some aspects of a natural or manmade environment?

Back to the question of "how" protection is defined, some have argued in the past that the "how" is defined as "no net loss of functions and values." The problem with that proposition is (when it was promoted) there was no baseline study antecedent to determine what functions and values prior existed. And there was no clear definition of "functions" or "values." Also, not a consideration was how or whether a particular development proposal would affect those so-called "values and functions" supposedly in a deleterious manner. A further defect was or is, if this is somehow still a measurement, concerns the lack of specificity as to whether the assessment was to measure so-called natural conditions or the state of existing development patterns to include manmade structures.

The questions posed addressing the lack of foundation for an "environmental" analysis cannot be passed by as trivial. There is a body politic proffering the suggestion / assumption that "best available science" can be used in an environment analysis. It is politics and not science because unless the studies quoted or referenced can be replicated in Kitsap County's jurisdictional area by scientists with the same qualifications as those who conducted the original analytic studies in other locations outside of Kitsap County or the State of Washington, ...by **definition IT IS NOT QUANTIFIABLE SCIENCE** and may or may not have application to conditions in Kitsap County.

A further point of emphasis, relying only on assumptions as opposed to measurable data or lack thereof, any change to Silverdale or Bremerton (not to overlook the other "centers") to build up or even build at all, would be an environment change to existing conditions and therefore posing a requirement need for "protection."

The issue needing address in the DEIS is an evaluation of the three plan alternatives compliance with Goal No. 10 relative to impacts on air, water and water availability. If other features of Kitsap County's natural and manmade conditions are to be included in such analysis, they need to be specified as to which will be assessed and why.

LACK OF ANALYSIS OF THE 15-GOALS OF THE GROWTH MANAGEMENT ACT AS TO HOW THE PROPOSED COMPREHNSIVE PLAN UPDATE WOULD IMPLEMENT THOSE GOALS BY ANY ONE OF THE THREE ALTERNATIVIES -

The DEIS in Section 3.2.2.1 entitled Relationship to Plans and Policies - Affected Environment lists the 15-Goals found in GMA Chapter 36.70A.020. What is missing from the discussion / analysis of these goals is "how" or "whether" any of the three alternatives would implement each and every one of these goals. Thus, no judgement can be formed as to which alternative better implements all the goals. Note too, that besides Goals No. 4 and 10, there are other goals with associated problems.

According to the Department of Community Development staff, none of the 15-Goals are weighted any more for plan compliance than another. Aside from the fact that is patentably not a valid conclusion, the evidence in both the Comprehensive Plan Update and the Critical Areas Ordinance Update, proves otherwise. Consider the "riparian habitat zone" substitute for buffers along ditches / creeks as earlier referenced in the discussion of Untenable Pursuit of Status Quo / No Action alternative. The implications of just this one regulatory measure (if included in the CAO Update), trumps all other goals. In other words, Goal No. 10 - Environment and its protection becomes the defacto number one or number two Goal priority even with its lack of specificity.

The lack of examination of each of the 15-Goals, with respect to the three plan alternatives is significant oversight in the DEIS, this is especially the case since within the last 8-years two-new Goals were added to the Act - No. 14 Climate Change and

Resiliency and No. 15 Shorelines of the State (Ref. RCW 90.58.020). Neither of these goals have been a consideration in past Comprehensive Plan Updates. So, there is no fallback analysis to reference in past Environmental Impact Statements preceding the adoption of those prior Comprehensive Plans.

Prior to the Goals address in the Final Environmental Impact Statement (FEIS) there are five of the goals needing special consideration in how the Impact Statement is finalized. Two of the five have already been highlighted as having issues not well examined in the DEIS, Goal No. 4, Housing Affordable to all Income Groups and Goal No. 10, Environment. Goal No. 7, Permits – Timely and Fair, Goal 11, Citizen Participation & Coordination and Goal No. 14, Climate Change and Resiliency are to be discussed here. Goal No. 6, Property Rights is reserved for the next set of comments.

Pertinent to **Goal No. 7, Permits – Timely and Fair** – Each plan alternative needs to be discussed in the EIS in terms of whether this goal can be achieved, i.e., does one alternative verse another promote the possibility that permits can be secured in a timely and fair manner. Context for this discussion analysis needs to reference that Kitsap County's existing permit process, whether for land use-based permits or building permits have time frames far in excess of the proscriptions for permit processing and approval in Kitsap County's own Procedures Ordinance Kitsap County Code 21.04. Suffice to say the ordinance calls for project approval / permit issuance in 120-days (21.04.250) after the date of application completeness. There are quite a few caveats in the ordinance for time extensions, but suffice to say, the permit review process is rife with delays and individual applicants can be waiting as long as two-years just to get to a public hearing (if one is required) and not permit issuance.

In the assessment of each plan alternative, the EIS must address how one or the other alternatives (once adopted) will promote timely and fair permit issuance. Of particular note, since there is a housing crisis (as detailed in the 2020 Kitsap County / Bremerton housing study, ECO Northwest's Final Report March 2020, p v), providing housing more affordable requires some 700 homes to be built per year to get to the projected need of 25,150 new homes by 2036. The County's building permit approval data (as published on the Department of Community Development's website) for new single-family homes indicates that within the last three years, there have been only about 338 approved building permits or one half the amount needed per year. Even if multiple family, i.e., tri-plexes, four-plexes and buildings with five or more units are added in, only 45-such building permits have been issued within the last three-years.

One conclusion is, Kitsap County does not now have a permit approval process to accommodate the projected influx of new people planned for in the next 20-years. So, how will the 2024 Comprehensive Plan update address this shortage, which appears to be related to the log-jam of permit processing in the Department of Community Development? A question perhaps related to plan implementation, but in consideration

of the three plan alternatives, which such option would promote the address of this housing shortage crisis?

There is another aspect to this goal, "fairness" that deserves comment. One problem clearly evident in Kitsap County's Department of Community Development (DCD) related to permit processing is the complicated set of regulations adopted without any regard to the cost of how these regulations will be applied in the review of permits. Most of these ordinance provisions are "environment" or storm water control related. A few are spawned out of Kitsap County's Zoning Ordinance and subdivision code. Taken together, there is not enough staff in DCD to provide an efficient review of the relevant code restrictions with respect to an individual building permit or land use related approval. This is an issue, devoid of any discussion the DEIS, presumably because it is plan implementation rather than plan proposal related. But, since the Comprehensive Plan does envision its consideration in the permit approval process, this is an issue worthy of address in the EIS.

Also related to this issue is for then of the EIS to discuss presumption that the permit applicant will bear the cost of plan implementation. That statement is made in full recognition that there are infrastructure obligations undertaken by either the County or one of its taxing districts. The real issue in fairness is the answer to the question of what lies in the confines of the "public interest?" If, for example, it is in the public interest to adopt draconian regulatory measures, then it follows that the "public" should pay the "lion's share" of associated costs of regulation compliance. That is not the evident stance of County Government. Rather, the position taken by the County is to make it the applicant's responsibility for such compliance in the form of fee assessment (to included impact fees), study analysis (mostly environmental related) and site improvement costs, primarily related to storm water control infrastructure. One direct consequence of "regulatory compliance" by the applicant is directly related to the ever-increasing cost of housing across all income categories.

Aside from the fact this "fairness issue" deserves analysis in the Comprehensive Plan EIS, a component of such analysis should include a discussion of the real need for the multiplicity of regulations now plaguing the County's permit review process.

Goal No. 11, Citizen Participation and Coordination - The DEIS in Section 1.2.2 entitled Public Participation highlights the "opportunities" for public involvement to include the State Environmental Policy Act (SEPA) public review process. This critique of the DEIS is one such example of an "opportunity" for public participation to provide comment. But while these comments might prompt a response or even a change in the content of the Final EIS, citizens cannot influence the content of the Comprehensive Plan itself if grant funding is tied to a specific provision such as in the instance of the County-wide Planning Policies (previously the subject of discussion herein). Also, citizens cannot suggest or recommend that a provision in the plan is bogus and therefore should not be included in the plans provisions, like "climate change" or so-called "best available

science," which in reality is "junk science" as previously noted. Clearly, the persuasion of state agencies and their opinion will override any contrary data or commentary presented by citizens of Kitsap County.

In reality, the 2024 Comprehensive Plan Update is not a citizen derived plan reflecting their goals and objectives for the future of Kitsap County. Instead, the plan update is an agency driven plan intended to control the people who comprise the county, i.e., control where they live, how they must live, how they travel and what they must do in order to find community here. Exaggeration? Hardly if one pays attention to the substance of this critique of the DEIS or indeed the plan's provisions when one of the three alternatives are pursued or aspects of one of the three.

Consider by contrast what was achieved in an earlier era, when true comprehensive planning could take place. Kitsap County has Silverdale and the Ridgetop development. Such could not be approved in a GMA compliant plan, especially since it does not foster the private / public sector partnership brought it to be along with Trident Impact Funding from the US Navy. Ironically, Silverdale is now a primary "center" in the County, but no other "center" could be created today from such a farming area. The State Agencies vis-à-vis GMA and their funding programs would not allow it regardless of the opinion of the citizens and property owners.

Sadly, citizen input is limited to comments, but not real participation with even a chance that their vision of what Kitsap County might hold for its future.

Goal No. 14 Climate Change and Resiliency – Of course this is a new focus for plan provisions. In the DEIS beginning with section 3.1.2 Air Quality/Climate, there is a so-called link to "biophysical impacts and impacts to economic and social systems." The assessment attempt here in this portion of the DEIS to somehow relate population growth to climate impacts, is nothing short of ludicrous. Just adding more people to Kitsap County's land area does and will have impacts, on the natural and built environments, in all sorts of ways. Keep in mind that one of the "mandates of GMA" requires jurisdictions like Kitsap County to house their fair share of the incoming population – impacts notwithstanding.

First and foremost, there is no scientific proof of anything other than the earth's climate changes that occur, at least in the United States four-times per year. And despite some claims by individuals with scientific training, United Nations members and the Governor of this state, the global data does not exist to support a claim that global warming is a threat to mankind's way of life.

As an incidental note, the reason for a change from the earlier nomenclature of "global warming" to the term "climate change," is that the populists quoted in the media could not reconcile "deep freezes" in winter months such has occurred here in the US over the last 15-years, with a warming trend. Also, not reconcilable are the observations of

polar bears and their migration patterns. So much more hype that did/does not fit the narrative, was thought to be resolved by this same populist media when it switched from "global warming" to "climate change," which can mean anything.

Pertinent to Air Quality / Climate, the plan alternative that promotes a dispersed pattern of development, clearly is the option with the least emissions impact option. See also previous discussions under the headings of Untenable pursuit of the Compact Growth / Urban Center Focus and lack of proper foundation analysis of environmental features.

LACK OF COMPLIANCE WITH BOTH THE US AND WASHINGTON STATE CONSTITUTION'S PROVISIONS FOR THE PROTECTION OF THE RIGHTS OF PEOPLE TO OWN AND USE THEIR PROPERTY WITHOUT UNDO RESTRICTIONS –

This issue is encapsulated in Goal No. 6, Property Rights - Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions.

Of the now 15-goals of GMA this one typically has the least ink devoted to how a plan and subsequent implementing ordinances will implement this goal. For example, there is no correlation between a plan and implementing ordinance such as the Critical Areas Ordinance (CAO) requirement to have the property owner provide for stream protective buffers (or possibly the riparian habitat zone). Since such restrictions limit the use of his, her or their property while providing a "public benefit," the reality is, the private property owner is burdened, really penalized, because of what the public has declared a benefit. Yet the public bears no responsibility for what they believe is in their best interest.

What needs to be addressed in the Comprehensive Plan EIS is how the person owning property is protected from the overreach of government rule making. Specifically, there needs to be an understanding reflected in this analysis of what the Washington State Attorney General, published in September 2018 as his "Advisory Memorandum and Recommended Process for Evaluating Proposed Regulatory or Administrative Actions to Avoid Unconstitutional Takings of Private Property.

A follow-on note, causing property owners proposing to develop their property to have to apply for a Variance, a Reasonable Use Exception or a Conditional Use Permit (either administratively or public hearing approved), is nothing but a penalty levied against the property owner for no personal benefit. The public bears no responsibility and assuming permit approval, the only thing gained for all that expense is a project with some conditions to placate some ordinance requirement.....an unfair burden on the property owner, which should be borne by Kitsap County.

William M. Palmer, President, KITSAP ALLIANCE OF PROPERTY OWNERS

Return to Comment Matrix

KITSAP COUNTY COUNCIL FOR HUMAN RIGHTS

Commissioners' Office, 614 Division Street, MS-4, Port Orchard, WA 98366
https://kcowa.us/chr
kitsapcouncilhumanrights@gmail.com

February 26, 2024
Department of Community Development
Planning and Environmental Programs
614 Division St, MS-36
Port Orchard, WA 98366
Email: compplan@kitsap.gov

Subject: Kitsap County Council for Human Rights – Comments on the DESI for the 2024 Kitsap County Comprehensive Plan

To Whom it May Concern:

This comment is in reference to the Draft Environmental Impact Statement (DEIS) studies three land use alternatives. Options 1 and 3 do not support and uphold human rights for all residents of Kitsap County. Option 2 supports compact growth and contributes to the promotion and protection of human rights in several ways:

1. Access to Basic Services:
    a. Affordable Housing: Compact developments have efficient land use, leading to the availability of affordable housing options. This ensures that everyone has access to adequate housing, a fundamental human right.
    b. Transportation: Compact developments have well-planned public transportation systems, reducing commuting times and expenses. This benefits individuals who may not own single-occupancy vehicles and ensures their human right to freedom of movement.
    c. Utilities and Infrastructure: Efficient land use allows for better planning and distribution of utilities and infrastructure. Compact growth facilitates the provision of essential services like water, sanitation, and electricity to a larger population, supporting the human right to a standard of living adequate for health and well-being.
2. Social Inclusion:
    a. Proximity to Opportunities: Compact growth concentrates economic, educational, and cultural opportunities in central areas. This reduces disparities in access to these opportunities, promoting social inclusion and the human right to participate in cultural, social, and economic life.
    b. Community Interaction: Compact areas foster a sense of community, enabling social interactions and the exchange of ideas. This contributes to the human right to freedom of association and the right to participate in civic affairs.
3. Environmental Sustainability:
    a. Reduced Environmental Impact: Compact growth promotes sustainability by reducing urban sprawl, thus minimizing the environmental footprint of cities, contributing to the human right to a healthy environment for present and future generations.
    b. Preservation of Green Spaces: Compact areas prioritize the preservation of green spaces within urban areas, providing Kitsap County residents with access to nature. This supports the human right to enjoy the benefits of cultural and natural heritage.

4. Equitable Access to Opportunities:
    a. Employment Opportunities: Compact developments attract diverse businesses and industries, offering a variety of employment opportunities. This helps in realizing the human right to work and to free choice of employment.
    b. Educational Facilities: Compact urban planning allows for the efficient placement of educational institutions, ensuring that Kitsap County residents have access to quality education, promoting the human right to education.
5. Reduced Inequalities:
    a. Economic Equality: Compact growth contributes to more equitable economic development by concentrating resources in more developed centers. This reduces socio-economic inequalities, aligning with the principle of non-discrimination and equal protection under the law.
    b. While compact growth offers these advantages, it's essential that planning policies are implemented with a focus on inclusivity, affordability, and social justice to truly support human rights for all Kitsap County residents.

Additionally, from an environmental perspective, there are individuals who are currently unhoused due to barriers associated with housing availability. While development occurs over the course of twenty years, how do we work on reducing the environmental impact of systemically reinforced economic and housing disparities from a human rights perspective? As population increases, how do we determine where waste goes? Who disposes of it? Where folks without housing will be staying in the meantime? Will this increase their visibility and subsequent discrimination based on class?

Lastly, when it comes to expanding infrastructure, the environmental impact statement particularly focuses on housing and economic infrastructure. However, environmental impact also needs to include considerations about expanding and developing resource infrastructure, including expanding the space or number of offices required by community resources, such as primary care offices, behavioral health facilities, utility resource centers, food banks, etc. If this is not considered, this will increase the burden on already struggling systems and reduce healthcare and resource equity.

Please also note the KCCHR attempted to include these DEIS comments on February 26, the date noted on https://www.kitsap.gov/dcd/Pages/ComprehensivePlanUpdate_2024.aspx that comments would be collected through, and the comment form was not accepting comments.

Should you have any questions, please contact Kirsten Dahlquist at the email address noted below.

Kirsten Dahlquist, Chair of the Comprehensive Plan Review Committee, Kitsap County Council for Human Rights.
kirstenkcchr@gmail.com

Thank you for considering our comments.

Sincerely,

Kirsten Dahlquist, Chair of the Comprehensive Plan Review Committee, , Kitsap County Council for Human Rights.

Return to Comment Matrix

SQUAXIN ISLAND TRIBE

SENT BY ELECTRONIC MAIL February 26, 2024

Director Scott Diener - Manager
Department of Community Development
Planning and Environmental Programs
614 Division St, MS-36
Port Orchard, WA 98366
Email: sdiener@kitsap.gov; compplan@kitsap.gov

Re: Comprehensive Plan 2024 Draft Environmental Impact Statement

Dear Mr. Diener,

Since the Squaxin Island Tribe Department of Natural Resources last commented in April 2023, we have continued to have productive conversations with Kitsap County staff surrounding the County's comprehensive plan update.

Interests of the Squaxin Island Tribe

Watersheds that drain the southern end of Kitsap County, in to Case and Carr Inlet, are the Squaxin Island Tribe's usual and accustomed fishing area ("U&A") (United States v. Washington, 384 F.Supp. 312, 377-378 (W.D. Wash. 1974) and 626 F.Supp. 1405, 1441-1442 (W.D. Wash. 1985)). Since time immemorial, the Tribe has lived, hunted, fished and gathered in and around these watersheds. Anadromous fish, and particularly salmon, have played a central role in the Tribe's subsistence, economy, culture, spiritual life and day-to-day existence. The Tribe is adjudicated to be a successor-in-interest to signatories of the Treaty of Medicine Creek, 10 Stat. 1132 (hereinafter "Treaty"), by which the Tribe reserved various rights, including the right to exercise off-Reservation fishing rights at its U&A". *Therefore, the fate of freshwater in Kitsap County is of great concern to the Tribe.*

Draft Environmental Impact Statement Alternatives

The Squaxin Island Tribe's concerns for the rural areas on the south end of the County are directly tied to development patterns in its cities and urban growth areas. We understand that you are using these alternatives as bookends for environmental review. We see Alternative 2: Compact growth/Urban center focus as most aligned with protecting the water resources and fish resources of the Squaxin Island Tribe. Part of our strategy for survival of salmon in South Puget Sound is to preserve the best habitat that remains for those species. For Squaxin U&A, that includes the rural areas of southern Kitsap County. Increased growth in rural areas is contrary to that strategy. Concentrated growth in urban areas and disincentivizing growth in rural areas will help maintain salmon habitat in rural areas. Allowing increased density in rural areas (like, for example, upzoning from RR1/10 to RR1/5) causes habitat fragmentation for terrestrial and aquatic life.

Critical Areas and Variances
Regarding mitigation of impacts in DEIS Alternative 3 with larger Type N Buffers
(p. 1-13)

The County is offering up a wider Type N stream buffer width in Alternative 3 as mitigation for more dispersed growth. The Tribe would not support any proposed riparian buffer widths less than $SPTH_{200}$ (One site-potential tree height or 200 ft, whichever is larger). In Washington Department of Fish and Wildlife's (WDFW) Riparian Ecosystems Volume 2: Management Recommendations (p. 3-28), WDFW recommends to local jurisdictions, "The scientific literature review (see Volume 1) informs WDFW's position that protecting the area within one $SPTH_{200}$ from the edge of a stream channel maintains full riparian ecosystem functions for all aquatic species, including salmon, and promotes healthy, intact riparian ecosystems." If this poses a challenge inside Urban Growth Areas (UGA's), no matter which DEIS alternative, then the County needs to reconfigure densities and building heights to accommodate that, or mitigate by protecting equivalent land areas outside the UGA's. Regarding nonconforming lots in light of riparian buffers, and requested variances to make those buildable, the County should take on this problem as a whole and establish a process to resolve the problem or leverage existing processes to solve the problem.

Water Resources- Impacts to Groundwater-(p. 1-9 -1-11)

Impacts to groundwater are described as loss of pervious surfaces and pollution to groundwater from the land surface. Yet groundwater pumping is also an impact that should be listed. The County has added the draft WRIA 15 Watershed Restoration and Enhancement Plan on p. 1-11 as potential mitigation, though stream depletion of groundwater pumping is not listed as an impact.
DEIS Alternative 2 leads County development in the direction of concentrated growth relying on public water systems with existing water rights. Though public water systems have their own significant impacts, they are preferrable to dispersed growth with proliferation of permit-exempt wells in rural areas.

Surface Waters (p.3-52)

Pumping of groundwater affects all kinds of freshwater surface water bodies. This fact is stated on p. 3-55. "Increased water supply demand can impact the underlying aquifers, increase susceptibility of saltwater intrusion, and reduce the groundwater baseflow which contributes to stream flows."

Relationship of the Comprehensive Plan to the
WRIA 15 Watershed Restoration and Enhancement Draft Plan

> "The purpose of the Water Resource Inventory Area (WRIA) 15 Watershed Restoration and Enhancement Plan is to identify projects and actions intended to offset the impacts of new domestic permit-exempt (PE) wells to streamflows. The Watershed Restoration and Enhancement Plan is one requirement of RCW 90.94.030. Watershed Restoration and Enhancement Plans must identify projects to offset the projected consumptive impacts of new PE domestic groundwater withdrawals

on instream flows over 20 years (2018-2038) and provide a net ecological benefit (NEB) to the WRIA."

The Squaxin Island Tribe did not approve this plan, partly because of lack of commitment of Kitsap County and the Washington State Department of Ecology to find projects and to implement the plan. However, the Salmon Recovery Funding Board (SRFB) has made recommendations to Ecology for modification and approval of the plan. Ecology will likely approve some version of the plan. The Tribe expects Kitsap County to actively seek and sponsor projects to implement the plan. It's the County's growth and therefore the County's responsibility to mitigate.

Water Supply (Section 3.39)

Question: How many Group B water systems does Kitsap County have. How many of those Group B systems have water rights, and how many use permit-exempt wells?

Sincerely,

Christine Erica Marbet

Erica Marbet
Water Resources Biologist
Squaxin Island Tribe

Return to Comment Matrix

RAYDIENT
PLACES + PROPERTIES

February 26, 2024

Kitsap County Planning Commission
Kitsap County Board of Commissioners
Kitsap County Commissioner's Office
619 Division St. MS-36
614 Division St. MS - 4
Port Orchard, WA 98366

RE: Comments regarding the Comprehensive Plan Update Draft Environmental Impact Statement (DEIS)

Planning Commission and Board of County Commissioners

Thank you for reviewing the proposed changes and the comments regarding the Comprehensive Plan and the DEIS. In this letter we are providing comment in support of the DEIS alternative three. The changes to the Comprehensive Plan we are concerned with are the proposed changes to the Comprehensive Plan southeast of Port Gamble Heritage Park near the intersection of Port Gamble Road NE and Bond Road NE. The proposed action can be found in DEIS Appendix B, Reclassification Request Summary List, Line 72. The proposed action can also be found in DEIS Appendix A. Zoning Changes by Alternative, Alternative Three.

We support alternative three that proposes to change the zoning of the majority of the approximately 400-acre area from Rural Wooded to Rural Residential, with a small area located adjacent to Bond Road to be changed to Rural Commercial.

We see two strong reasons to approve this alternative.
First, one of the primary purposes of the Rural Wooded Zone is to preserve forest land for future timber harvest. The land in question has been in ownership of forest production companies for more than a century. However, with the closure of the Port Gamble Mill, the creation of the Port Gamble Heritage Park, and the increased population of North Kitsap County, the land in question is no longer viable for timber production and harvest. As such, a zoning designation that is intended to preserve land for timber production and harvest is no longer appropriate. In selecting the appropriate designation, the rural residential zone is representative of the rural zoning in the surrounding area with the exception of the zoning used to protect Port Gamble Creek. Which leads to the next point.

Second, the subject 400 plus acre area contains nearly no critical areas. We have commissioned wetland, stream and geotechnical studies of the area and have found that the majority of the site is well drained soils. Surface water infiltrates into the soils nearly immediately. Ravines through this area do

not support flowing water. Depressions do not support wetlands. The majority of the slopes are not steep enough to create stability concerns. This land is remarkably free of surface water and geologically related critical areas. In some areas of Kitsap County where critical areas are found, such as Dogfish Creek in Big Valley, or Port Gamble Creek, other zones are used for environmental protection. Since the subject 400 plus acre area does not contain these critical areas, it makes sense to use the zone designation that the County has used for the majority of rural Kitsap County. That zone is Rural Residential.

Along with this comment letter, we are submitting our feasibility study. This document contains the findings of environmental and geotechnical consultants. Their findings show that the subject property is appropriate for the designations of rural Residential and Rural Commercial. In addition, we are submitting our supporting letter from our initial application.

With this information, we encourage the Planning Commission to approve Option three as the preferred option for the Final Environmental Impact Statement.

Sincerely,

Jon Rose, Vice President
Raydient Places + Properties

Attachment: North Kitsap United Feasibility Report

North Kitsap United Development

FEASIBILITY REPORT

KITSAP COUNTY, WASHINGTON

Prepared For:
Raydient Places + Properties
19950 7th Avenue NE Suite 200
Poulsbo, WA 98370

DEA Job No. RAYORYPP0001

Issued: December 8, 2023

Prepared By:
Brook Jacksha, PE
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LIST OF SUPPLEMENTAL INFORMATION

Appendix A: Kitsap County Land Use Regulations and Growth Management Act Compliance

Land Use and GMA Compliance White Paper (Raydient)

Appendix B: Geotechnical Site Conditions

Geotechnical Report (AESI)

Appendix C: Site Sensitive Areas Study

Sensitive Areas Study (Ecological Land Services)

Appendix D: Site Cultural Resources Report

Cultural Resources (Westland Resources)

Appendix E: Access

Transportation Report (Transpo Group)

Appendix F: Stormwater

Flow Chart for Determining Minimum Requirements for New Development Projects, Kitsap County

Preliminary Infiltration Rates

Appendix G: Water

Kitsap County Water Purveyor Map
KPUD Water Service Exhibit

1 INTRODUCTION

This engineering feasibility provides preliminary analysis for the future potential development at the North Kitsap United project site. The properties that make up North Kitsap United have historically been land owned and operated as a commercial tree farm; first by Pope and Talbot, then Pope Resources, and beginning in 2020 by Rayonier/Raydient Places + Properties. Today, the property is also used as a connection to the Heritage Park trails by the public. The North Kitsap United site consists of 417.98 acres made up of 31 parcels in unincorporated Kitsap County.

This report summarizes the findings and research from publicly available information, technical reports provided by separate consultants and provides commentary based on David Evans and Associates (DEA) experience in land development in the Puget Sound Region. Sources for this data are cited throughout this report with verbatim quotes provided in narrow formatted italics texts. The attached appendix contains a mix of publicly available figures and summary exhibits produced by DEA and other consultants.

This report was written in the context of one potential development scenario provided by the Owner including:

- One large community sports and recreation facility (including a YMCA and approximately 40 acres of sports and recreation.
- Five acres of commercial use.
- Eighty residential lots. To be conservative, each lot was assumed to include one primary and one accessory dwelling unit (ADU) as permitted in the Rural Residential zone.

2 SITE CONDITIONS

The site contains moderate to sleep slopes that are generally tributary to Gamble Creek, which runs south to north directly east of the site. Per the AESI Geotechnical Report, the site is generally underlain by Ragnar sandy loam soils. These soils are outwash type soils (type A/B soils) which are known to have high infiltration characteristics when dry. The geotechnical report is included as an attachment to this report.

2.1 Critical Areas

Kitsap County Code governs the development within Critical Areas. The code chapter is complex and involves several exceptions based on site specific conditions and, in general, the specific delineations and impacts of critical areas on development must be studied on a case by case basis by licensed professionals. Kitsap County Code (KCC) regulates the following Critical Areas:

KCC 19.150.215

"Critical areas" means those areas and ecosystems identified as:

A. wetlands;
B. critical recharging effect on aquifers;
C. fish and wildlife habitat conservation areas;
D. geologically hazardous areas;
E. frequently flooded areas.

Kitsap County maintains a catalog of known Critical Areas in their Critcal Area Ordinance Overlay (CAO). This database (updated in 2022 and in review for an update in 2024) was researched along with detailed site investigations. See Appendix B and Appendix C for the reports provided by AESI (Geotechnical Report) and by Ecological Land Services (Sensitive Areas Report).

Further information on critical areas within the project site is explored in the studies prepared. Please see these reports for background information regarding anticipated critical areas.

2.1.1 Streams and Wetlands

There are no agency mapped wetlands on the project site, and only one was found during a several-day field inspection of the property. This unusual condition is consistent with soils that are highly permeable and freely infiltrate surface water. See the Sensitive Areas Report prepared by Ecological Land Services in Appendix C for further information.

2.1.2 Critical Aquifer Recharge Areas

A category 2 Critical Aquifer Recharge Area (CARA) is mapped by Kitsap County. This condition was affirmed during he investigation by Associated Earth Sciences (See Appendix B). This condition with its highly permeable soils creates a uniue condition on the NKU site. There is an extreme lack of streams, ponds, wetlands or surface water of any sort.

2.1.3 Wildlife Habitat Conservation Area and Wildlife Habitat Network

There are no Wildlife Habitat Conservation Areas on the Project Site. See the Sensitive Areas report prepared by Ecological Land Services for further information.

2.1.4 Erosion Hazard

There are moderate Erosion Hazards mapped on the site per the Kitsap County Sensitive Area Ordinance. See the AESI geotechnical report for further information.

2.1.5 Landslide Hazards

There are moderate Deep Landslide Hazards mapped on the site per the Kitsap County Sensitive Area Ordinance. See the AESI geotechnical report for further information.

2.1.6 Seismic Hazard Areas

The Puget Sound region in general is susceptible to earthquakes due to the presence of a tectonic subduction zone near the coast. The region has experienced several earthquakes in the recent history including a magnitude 6.8 earthquake in 2001. See Appendix B for the AESI geotechnical report for further information.

2.1.7 Flood Hazard Areas

Kitsap County maps no Flood Hazard Areas at North Kitsap United and there are no marked FEMA flood zones on the project's FIRM panel.

2.2 Cultural Areas

A cultural resources desktop review has been completed for the site by Westland Resources dated 10/26/23, see Appendix D. Westland Resources found the following:

- There are no recorded archaeological sites or listed historic properties within or adjacent to the project area
- The project area has been logged and cleared historically, more than once
- The risk of intact archaeological sites is considered low (for precontact sites) and moderate (for historic period sites, possibly related to historic logging)
- A field survey and subsurface testing was recommended to identify any unknown resources
- The Port Gamble S'Klallam and Suquamish Tribes have been provided with a copy of the desktop study and both were asked for their input
- No feedback from either tribe has been received to date, though this may happen later during a formal review period

3 PLANNING AND ENTITLEMENTS

3.1 Key Development Components

The following five key aspects to the NKU Development trigger different planning and entitlement processes which are highlighted in this section.

- Comprehensive Plan Amendment with Concurrent Rezone
- Indoor Recreation; YMCA
- Outdoor recreation; Regional Ball Fields
- Rural Commercial
- Residential Development

3.2 Zoning Considerations Summary

The current zoning of the property is Rural Wooded with a minimum lot area of 20 acres. Two parcels in the southwest portion of the site are Zone Rural Residential which allows for one dwelling unit per 5 acres. See NKU Kitsap County Land Use Regulation and Washington State Growth Management Act Compliance white paper report in Exhibit A. A Comprehensive Plan Docketing Request to change the Comprehensive Plan and Zoning to Rural Residential for the majority of the property, and to Rural Commercial for a portion of the property between Stottelmeyer Road and Bond Road. The County estimates that the Comprehensive Plan and Zoning Map amendment process will follow the following schedule: Draft EIS done by December 2023, Preferred alternatives selected April 2024, Final EIS completed by August 2024, and final approval by the Board of Commissioners by December 2024.

Once the Comprehensive Plan amendments are completed there are several ways to achieve these developments.

The proposed YMCA facility fits into the definition of “Recreational Facility, Indoor”. “Recreational Facility, Indoor” is allowed with a Conditional Use Permit within the Rural Residential and within the Rural Wooded zones.

The proposed ball fields fit into the definitions of “Recreational Facility, Outdoor” and can be approved through an administrative conditional use permit in the Rural Residential zone, and can be approved through a Hearing Examiner approved Conditional Use permit in the Rural Wooded Zone.

3.3 Performance Based Development

The residential and commercial components of NKU can be achieved using Performance Based Development (PBD).

Residential Performance Based Development
Residential clustering can be achieved using the Performance Based Development Code (PBD) (KCC 17.450. 040). The open space requirements appear to allow regional recreational uses with ownership vested not only in an HOA, but also vested with a Nonprofit corporation or a public agency.

Commercial Performance Based Development
Commercial PBD is also outlined in the code (KCC17.450.045). The code does not marry the commercial element of the PBD to the residential element. However, there is no prohibition against a PBD that contains both commercial and residential elements. Further, the PBD code was used to gain approval for the Port Gamble Master Plan. Therefore, we can assume that one PBD could be used to include the residential and the commercial area.

With these definitions and requirements, it appears that a YMCA and regional playfields could be allowed as elements of the open space in a PBD. In addition any commercial development proposed in the new Rural Commercial zone could be included in the PBD. Because f of this the development could be approved under one combined permit Performance Based Development with concurrent subdivision for the entire site and concurrent conditional use permits for the playfields and the YMCA. See code analysis and alternative recommendations below.

3.4 Comprehensive Plan Process

The County has provided their three preliminary alternatives for comprehensive plan and zoning map changes. One of the three alternatives includes changing the plan and zoning of the site from Rural Wooded to Rural Residential, and changing a portion of the property between Bond Road and Stottelmeyer Road to Rural Commercial. The County's proposed comprehensive plan amendment schedule is below.

April 2023	December 2023	April 2024	August 2024	December 2024
Preliminary Alternatives Selected	Draft EIS, Comp Plan, CFP and Regulations Released	Preferred Alternative Selected	Final EIS, Comp Plan, Capital Facilities Plan and Regulations Released	Board Approval of Final Documents

3.5 Entitlement Alternatives (Permitting Paths)

Because of the code allowances, there are three possible permitting paths to achieve the desired development plan:

- Apply for a <u>combined permit master plan for all</u> elements of the project:
    - PBD for the entire site
    - Conditional use permits for the YMCA and for the playfields.
    - Subdivision to create the lots and tracts for the residential, commercial and recreational sites.
- Apply for the <u>PBD and Recreational Activities as one</u> application, apply for <u>commercial activities separately</u>.
    - PBD includes all of residentially zoned property.

  - Subdivision application includes all residentially zoned property.
  - Commercial property applied for and developed separately.
- Apply for the PBD for the residential clustering only.
  - Use the BLA process to create the boundary for the YMCA, for the Playfields and for the residential cluster development.
  - Apply for a PBD and subdivision for the residential cluster, providing open space with trails and critical area protection areas.
  - Apply separately for Conditional Use permits for the YMCA and for the playfields.
  - Apply separately for commercial uses in the new Rural Commercial zone.

The first alternative above contains the fewest steps. The first and second alternatives would allow the development application to utilize all of the residential density would be calculated upon all of the residentially zoned area within the PBD to calculate the allowed residential density. The third alternative exposes the development application to the most appeal opportunities while reducing the total number of residential units allowed. There appears to be very little advantage to including the commercial development in the PRD. Therefore, we recommend the second option above as the best choice, with the first option as a very close second. The third alternative above is a distant third choice.

3.6 Code Analysis

Because of the code allowances, there are three possible permitting paths to achieve the desired development plan:

Performance Based Development (PBD) KCC 17.450

The Performance Based Development code is a multipurpose code section that allows alterations in the underlaying bulk standards. The code allows for both residential and commercial developments. The code does not allow an increase in residential density and the code does not allow uses that are not otherwise allowed in the underlying zoning. The code explicitly states that it can be used for residential clustering. The code is also the best tool within the County for master planning across different zones and different uses.

17.450.040 Performance based Development Standards and Requirements – **Residential** :

B. Common Open Space:
The PBD code requires a minimum of 15% open space in 17.450.040.B.1 and 50% open space in 17.450.040.C.3. A summary of the open space requirements are as follows:

- Open space must be “suitable” for the PBD.
- Open space must be suitable for use as an amenity or recreational purpose.
- Open space must be held either by:
  - An HOA
  - A Public Agency
  - “A private nonprofit conservation trust or similar entity with the demonstrated capability to carry out the necessary duties.”

17.450.040.C.2* Contains the requirements for **Recreational Facilities** within a PBD.

This section requires the development to include recreation facilities. Ballfields are included as a recreational activity. Thus, the proposed ballfields and the proposed YMCA could help the development comply with the requirements of a PBD. However, there are several sections of this code that contain contradictions. Section h. notes that the recreation facility must be owned by an HOA, while section j. allows the recreational facility to be owned by a public agency and section 17.450.040.B.4.c allows for ownership by a private nonprofit conservation trust or similar.

Another degree of uncertainty is added with section 17.450.040.C 4. Which states:
"In order to promote creativity and innovation, these standards and criteria may be modified or substituted with other design concepts if so approved by the board of county commissioners."

Our interpretation is that the code will allow the open space to be owned by any of the different types of ownership outlined in the various sections of code.

The following list are the criteria for recreational facilities.

a. Developments of zero to nineteen lots/units are not required to have such an amenity;
b. For developments with greater than nineteen lots or units, one amenity shall be provided for every twenty lots/units within the development. Required amenities shall be sized to accommodate three hundred ninety square feet per lot/unit;
c. Amenities shall be centrally located within the development in clearly visible areas on property suitable for such development. Amenities may be located in other areas of the development if directly linked with a regional trail system or other public park facility;
d. Based upon topographical or site design characteristics of the subject property(s), amenities may be combined (while continuing to meet the overall square footage requirements established above) if the combination provides for increased benefit to all residents of the PBD;
e. Amenities may be located within, and be calculated towards, the recreational open space area if contiguous;
f. An athletic field with a minimum size of one hundred twenty yards long and sixty yards wide or swimming pool shall count as two amenities;
g. An equestrian development or similar theme community may be provided in lieu of other amenities;
h. Owned in common and available for use by all residents of the PBD;
i. The active recreational amenity(s) shall be located on five percent grade or less, except if a greater grade is necessary for the activities common to the amenity, e.g., skate park, trails; and
j. Written provisions or agreement for perpetual maintenance by the homeowners' association or a public agency willing to assume ownership and maintenance.

*****Note on KCC Section 17.450.040.C and subsections:
17.450.040.C topic heading is "Recreational Open Space. All residential PBDs within urban zones shall provide a developed recreational area that meets the following requirements". This heading clearly notes that the section applies only to urban areas. However, subsection 3 notes that Rural areas must provide 50% open space in contradiction with 17.450.040.B.1, and then directs the reader that rural developments must comply with 17.450.040.C.2. These contradictions make the requirements difficult

to read and understand, but our conclusion is that the rural cluster development will require 50% open space, and that the rural development must comply with the criteria found in 17.450.040.C.2. Because of this structure we must assume that 17.450.040.C.4 applies and this it is not intended only to apply to urban recreational facilities.

Allowance of the YMCA and the Rotary Ballfields in the Rural Residential and rural Wooded zones:

The Rural Residential Zone and the Rural Wooded zone allow "Recreational facility, indoor" with a Conditional use Permit with a public hearing before the Hearing Examiner (Type III Decision). Both zones disallow "Fitness Center". An interpretation could be made that the proposed YMCA is either "Recreational facility, indoor" or "Fitness Center". However, there is nothing in the "Recreational facility, indoor" that precludes the YMCA.

Comprehensive Plan Land Use Designation		Rural Residential	Rural Protection	Rural Wooded
Zoning Classification (1)(3)(4) ➡		RR (2)	RP	RW (2)
Categorical Use (1)(3)(4) ⬇		17.130	17.140	17.150
320	Recreational facilities, indoor	C	C	C
322	Recreational facilities, outdoor	ACUP	ACUP	C

(Portion of the table found in KCC 17.410.042 Rural, resource, and urban residential zones use table)

17.110.647 Recreational facility, indoor.

"Recreational facility, indoor" means a commercial recreational land use conducted entirely within a building. Examples include, but are not limited to, amusement centers, arcades, arenas, bowling alleys, gymnasiums, pool or billiard halls, skating rinks, and tennis courts.

17.110.278 Fitness center.

"Fitness center" means a place of business with equipment and facilities for exercising and improving physical fitness. Examples include health clubs, boxing gyms and micro-gyms.

The Rural Residential Zone allows Recreational Facilities – Outdoor with an administrative conditional use permit (Type II decision), while in the Rural Wooded zone Recreational Facilities – Outdoor with Conditional Use Permit approved by the Hearing Examiner (Type III decision).

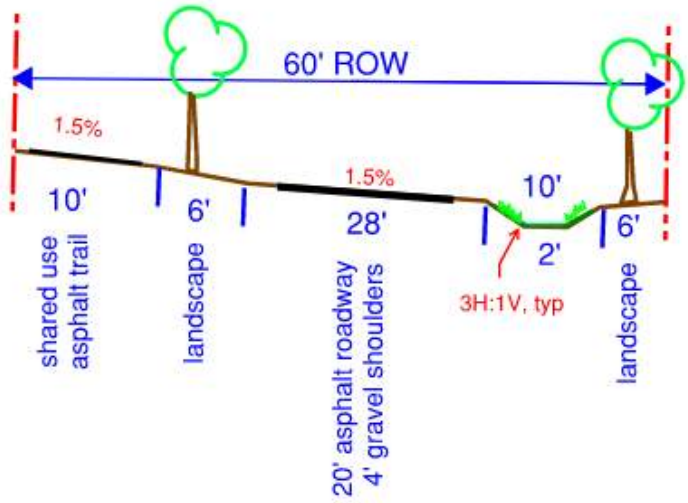
4 ACCESS

North Kitsap United is surrounded by a state highway and lower classification roads:

- SR 307 – a Washington State Highway running east/west south of North Kitsap United
- Stottlemeyer Road – a local Sub-Collector running east/west just south of North Kitsap United
- Port Gamble Road NE – a local Road running north/south just east of North Kitsap United

Primary access to North Kitsap United is currently available via Stottlemeyer Road and Port Gamble Road NE. Traffic count data, preliminary development trip generation, and traffic related recommendations were provided by Transpo Group. On November 15, 2023 the development and engineering team met with the Washington State Department of Transportation (WSDOT), Andy Larson and Justin Belk, regarding the development and access considerations. WSDOT concurred with the traffic investigation, primary access and intersection considerations presented by Transpo Group. WSDOT also noted with intersection upgrades it could be possible for the development to access SR 307 directly. See the traffic report prepared by Transpo Group in appendix 3 for further information.

Internal roadways to the proposed development can be either private or public depending on a number of factor such as access to County or State roadways, access to private residences, access to commercial facilities, and access to recreation facilities such as the YMCA, BallFields, and Trails. Internal roads are planned to maintin a rural character or the place complimenting the natural setting and significant open space preserved in the development. The road section identified below is envisioned and is intended to generally follow the 2020 Kitsap County Road Standards for local roads. The local roadways are intended for low volume slow traffic and not intended to ever become a bypass or a higher classification roadway. The largest vehicles are anticipated to be SU-30 (Single Unit Trucks), Garbage Collections, and Fire Apparatus Trucks capable of navigating the roadways without leaving the traveled way.



INTERNAL ROAD SECTION
NTS

Internal Local Roadway Considerations

Speed: Posted 25 mph or less

Surface: Curbless Asphalt Paved 20' wide. 3"HMA/2"CSTC/6"CSBC. 4' shoulders gravel or paved. Shoulder width allows bike route designation for biking withing traveled way.

Slope: 1.5% min cross slope towards roadside swale. 1% min and 12% Max Longitudinal

Peds/Bikes: Encouraged to use 10'min Shared Use Trail with shoulder riding possible.

Landsape: Formal or informal vegetated shoulders

Parking: Assumed to be in designated areas not roadside

5 STORMWATER

Developments at North Kitsap United will be required to follow the stormwater management guidelines set out in the 2021 Kitsap County Stormwater Design Manual (2021 SWDM). The 2021 SWDM has 9 minimum requirements that will apply to North Kitsap United. A brief description of each requirement is given below.

5.1 Minimum Requirements

5.1.1 Minimum Requirement #1: Preparation of Stormwater Site Plans

> *2021 SWDM: Stormwater Site Plans shall use site-appropriate development principles to retain native vegetation and minimize impervious surfaces to the extent feasible.*

Stormwater Site Plans for North Kitsap United will be prepared in accordance with the requirements of the 2021 SWDM. The residential areas are planned to utilize rooftop dispersion with new pollution generating hard surface roadways sheet flowing to open channel swales. The roadside swales are envisioned to utilize natural energy dissipation on steep slopes to control erosion and maintain a natural roadside character, see Exhibit below. Large wetponds are recommended for water quality treatment and flow control for the roadways, parking, commercial areas, and ball fields. While a preliminary site plan has yet to be developed initial feasibility has been performed and features noted in the following sections. The intent of the feasibility study was to determine the features necessary to keep 100% of the developed area drainage on-site, no on-site developed area stormwater discharges to the adjacent off-site areas. Large on-site wetponds can be sized to also accommodate the treatment of portions of the adjacent Stottlemeyer county roadway.

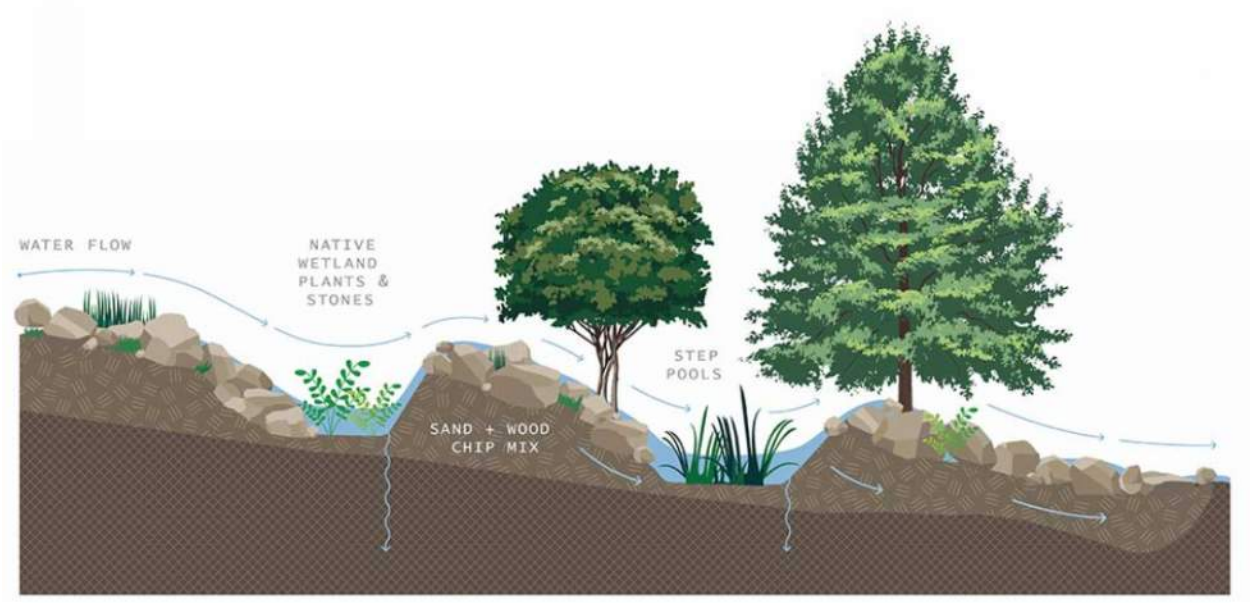


Exhibit: Swale Energy Dissipation Concept

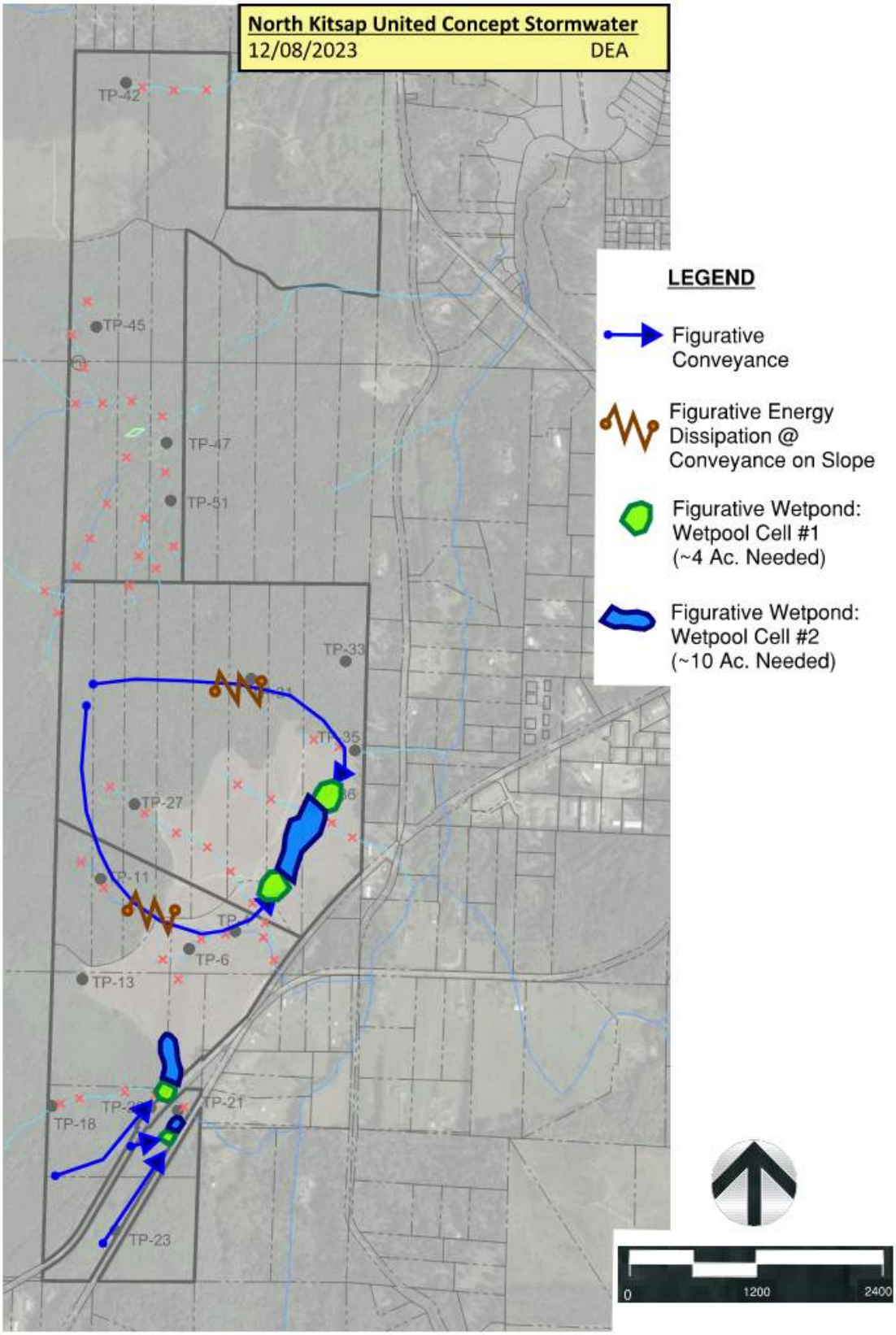


Exhibit: Figurative Stormwater Management Concept

5.1.2 Minimum Requirement #2: Construction Stormwater Pollution Prevention Plan

> *2021 SWDM: All new development and redevelopment projects are responsible for preventing erosion and discharge of sediment and other pollutants into receiving waters.*

This project will develop an erosion control plan to be used during construction as part of the Stormwater Site Plans. This plan is intended to prevent the release of sediment laden water and potential spills from the construction area. Typical measures and plans include the use of mulching, silt fences, swales and sediment treatment facilities such as ponds and filters. The plan will consider and include all 13 Construction SWPPP elements unless it is deemed unnecessary. Along with the plan, the project will develop a Construction SWPPP narrative that documents and explains the decisions for all BMPs considered and those to be implemented.

All projects that disturb more than one acre of ground are required to apply for and maintain a National Pollution Discharge Elimination System construction permit (NPDES permit). These permits are administered by the Washington Department of Ecology and require weekly monitoring and reporting of stormwater quality. These permits require approximately 2 months to obtain and involve a public notice period.

5.1.3 Minimum Requirement #3: Source Control of Pollution

> *2021 SWDM: All known, available and reasonable source control BMPs shall be applied to all projects.*

The project will implement all applicable source control Best Management Practices (BMPs) in accordance with the 2021 SWDM to help prevent stormwater runoff from contacting any pollutants on-site that may be conveyed to downstream receiving waters.

5.1.4 Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls

> *2021 SWDM: Natural drainage patterns shall be maintained, and discharges from the project site shall occur at the natural location, to the maximum extent practicable. The manner by which runoff is discharged from the project site must not cause a significant adverse impact to downstream receiving waters and downgradient properties.*

Stormwater from North Kitsap United in the pre-developed condition discharges to Gamble Creek and an unnamed creek. In the developed condition the project will infiltrate all stormwater generated by the development. Any none developed areas will continue to discharge to Gamble Creek and the unnamed creek.

5.1.5 Minimum Requirement #5: On-Site Stormwater Management

> *2021 SWDM: Projects shall employ On-Site Stormwater Management BMPs in accordance with project thresholds, standards, and lists to infiltrate, disperse, and retain stormwater runoff on site to the extent feasible without causing flooding or erosion impacts.*

All projects are required to provide on-site flow control BMPs to mitigate the impacts of increased stormwater runoff generated by new development or redevelopment. The required on-site flow control measures vary widely depending on the classification of the development. The classifying a project is based on three main criteria. The first being, is the project a Large Project (triggering Minimum Requirements 1- 9) or a Small Project (triggering only Minimum Requirements 1-5). The second being, is the project urban, inside the Urban Growth Area (UGA) and/or the Census Urbanized Areas (UA), or rural. And lastly, is it on a small parcel (less than 5 acres) or large parcel (5 acres or larger).

The proposed development, location and size of the project would classify it as a new large project outside the UGA and UA on parcel larger than 5 acres. The requirements for this classification require the project to abide by the LID Performance Standard and utilize the Post-Construction Soil Quality and Depth BMP, or comply with the BMPS for individual surface types under List #2. The requirements for either of the paths would be met by the use of on-lot dispersion devices that would disperse roof and driveway runoff on an individual lot basis and infiltration facilities for roadways and commercial areas.

5.1.6 Minimum Requirement #6: Runoff Treatment

> *2021 SWDM: Projects shall provide runoff treatment to reduce pollutant loads and concentrations in stormwater runoff using physical, biological, and chemical removal mechanisms so that beneficial uses of receiving waters are maintained and, where applicable, restored.*

All projects triggering Minimum Requirements #6 must provide runoff treatment for stormwater from new and replaced pollution-generating hard surfaces (PGHS) and new pollution-generating pervious surfaces (PGPS). Areas requiring runoff treatment include all paved or hard surface areas subject to vehicular traffic and landscaped areas subject to fertilizers and pesticides. Runoff from rooftops are generally considered clean and residential backyards are usually considered non-pollution generating so individual lots are typically not required to provide water quality treatment. Residential projects are required to utilize “basic” treatment BMPs while commercial and multi-family developments must provide “enhanced” treatment BMPs. The selection of a basic or enhanced treatment for runoff treatment will depend on what portion of the project site the runoff was generated from. Oil control treatment is required for any site designated as high-use, or sites that generate a high concentration of oil due to high traffic turnover or frequent transfer of oil. Once basic or enhanced is determined runoff treatment BMP options are laid out in the *Department of Ecology Stormwater Management Manual for Western Washington* (Ecology Manual).

The Ecology Manual provides many options to achieve basic runoff treatment: bioretention, filter strips, wetpond/wetvault, stormwater treatment wetlands, combined detention and wetpool facilities, sand

filters and proprietary media and membrane filters. Bioretention, filter strips and media filters are typically used for smaller basin areas. For large scale developments wetponds, wetvaults and combined facilities are typically the most cost effective ways to accomplish basic water quality. Wet ponds are facilities that remove sediment from stormwater using settling. These facilities are usually permanently inundated with water and can be combined with detention facilities.

To achieve enhanced runoff treatment the Ecology Manual lists these options: large sand filter, stormwater treatment wetland, bioretention, proprietary media and membrane filters, or two-facility treatment trains consisting of combinations of basic treatment BMPs. To achieve the enhanced runoff treatment standard on a large scale the use of sand filters or proprietary filters are required. For Noth Kitsap United, the strategy to achieve enhanced runoff treatment will be to segregate the stormwater from the residential and commercial uses to limit the size and added cost of satisfying the enhanced runoff treatment requirements.

The required volume (and area) of a wetpond is dependent on the size of development it serves and the impervious coverage of that development. Low density residential development will require a smaller volume than a more dense residential or commercial development. A hydrologic modeling analysis was run for several hypothetical development scenarios at the North Kitsap United site. The table below gives the anticipated wetpond and infiltration pond volumes for a 5-acre area of low density and commercial development as well as 1,000 lineal feet of roadway. The volumes are presented in acre- feet (1 acre-foot = 43,560 cubic feet) and a corresponding land area required for that facility.

Table: Conceptual Water Quality Facility Sizes

Development Scenario	Impervious Coverage	Total Area	Impervious Area	Pervious Area	Standard Wetpond Volume	Top Area
	%	(ac)	(ac)	(ac)	(acre-feet)	(sf)
Low Density Residential	50%	5.0	2.50	2.50	0.30	5,456
Commercial	85%	5.0	4.25	0.75	0.51	8,816
1,000 LF of Roadway	63%	1.38	0.87	0.51	0.16	2,288

Wetponds storage volumes scale linearly so it is anticipated that for every five acres of residential area 0.30 acre-feet of storage would be required and 0.51 acre-feet of storage for commercial uses. The footprint of the final facility depends on the depth available to store stormwater. Wetponds are more space efficient the deeper they can be constructed but depth is limited by the location and depth of the outfall. These modeling results assume 6-feet of storage depth.

Roughly 4 Acres of wetpond footprint is needed for water quality treatment of a conservative assumption of up to 5 miles of internal roadways and 12 acres of parking for commercial, YMCA, and ballfields.

5.1.7 Minimum Requirement #7: Flow Control Facilities

2021 SWDM: Projects shall provide flow control to reduce the impacts of stormwater runoff from hard surfaces and land cover conversions.

All projects are required to provide flow control to mitigate the impacts of increased stormwater runoff flow rates generated by new development. Flow control is intended to slow down the rate at which runoff leaves new developments to reduce the possibility of erosion and flooding problems downstream. Flow control can be achieved through three main strategies: detention, infiltration or dispersion.

Infiltration is the practice of discharging stormwater to groundwater using either large regional facilities or at small, dispersed facilities. Infiltration at a large scale for rural and commercial development is likely feasible for North Kitsap United given that much of the site is underlain by outwash type soils that typically have a medium to high permeability/infiltration capacity.

Dispersion is the practice of discharging stormwater to sheet flow over a large undeveloped area on site. This is feasible for the residential portion of North Kitsap United but may have limited uses in the commercial areas as this practice requires that large amounts of land be permanently set aside in growth protection easements and tracts and therefore reduces the density that properties can be developed. Dispersion is a feasible strategy to meet individual lot flow control requirements for low-density residential development.

Detention is the practice of collecting and storing runoff from development in ponds or vaults and discharging the runoff at a lower rate. Detention is the most feasible form of flow control for high density developments where infiltration is impracticable as it is scales more efficiently than the other methods of flow control. For North Kitsap United detention ponds would collect and store stormwater from the proposed development before discharging towards the on-site creeks if infiltration is infeasible. Detention ponds are typically combined with water quality facilities to meet runoff treatment requirements. Stormwater ponds that detain over 10-acre feet of water must be registered as a Dam with the Washington State Department of Ecology Dam Safety office. These “Dam Safety” ponds must incorporate additional design features resulting in a significantly more expensive stormwater facility.

Depending on choices made by the developer, the project may need to provide a higher level of flow control than a similar project that lies inside of the Urban Growth Area. This additional level of flow control is known as the Low Impact Development (LID) performance standard and is known to require at least 1.5 times the detention volumes as compared to the standard flow control requirement.

The required volume (and area) of an infiltration pond is dependent on the infiltration rate of the soil, the size of development it serves and the impervious and pervious coverage of that development. A Low-density residential development will require a smaller volume than a denser residential or commercial development.

Associated Earth Sciences, Inc. (AESI) has performed a preliminary soil study and estimates the infiltration rate to range from 2-10 inches per hour in the lower elevations along the southern boundary of the site and from 0.25-2 inches per hour in the upper elevations.

A hydrologic modeling analysis was run for several hypothetical development scenarios at the North Kitsap United site. The table below gives the anticipated infiltration pond volume for 5-acre low density and commercial development as well as 1,000 lineal feet of roadway with a 1 inch-per-hour and 5 inch-per-hour infiltration rate. The volumes are presented in acre-feet (1 acre-foot = 43,560 cubic feet).

Table: Conceptual Flow Control Facility Sizes

Development Scenario	Impervious Coverage	Total Area	Impervious Area	Pervious Area	1 in/hr Infiltration Volume	5 in/hr Infiltration Volume
	%	(ac)	(ac)	(ac)	(acre-feet)	(acre-feet)
Low-Density Residential	50%	5.0	2.50	2.50	0.87	0.45
Commercial	85%	5.0	4.25	0.75	1.44	0.81
1,000 LF of Roadway	63%	1.38	0.87	0.51	0.29	0.14

Infiltration facility storage volumes don't scale linearly and are dependent on the calculated infiltration rate, tributary area to the facility and the depth available to store stormwater. Infiltration ponds are more space efficient the deeper they can be constructed but depth is limited by the location and depth of infiltrating soil layer. These modeling results assume 6-feet of storage depth.

Roughly 10 Acres of wetpond footprint is needed for flow control of up to 5 miles of internal roadways, and non-residential developed areas. This is anticipated to be broken up into multiple wetpond locations with the intent of balancing the minimization of maintenance locations and cost of conveyance. Residential lots are anticipated to have zero runoff utilizing dispersion and infiltration within each lot.

5.1.8 Minimum Requirement #8: Wetlands Protection

> *2021 SWDM: Projects whose stormwater discharges into a wetland, either directly or indirectly through a conveyance system shall comply with Volume II, Chapter 6 on page 271.*

Projects with on-site wetlands or those that discharge to them must provide protection to prevent the diminishment of the ecological functions that wetlands provide. Changes to the existing hydrologic conditions, structural appearance or water quality characteristics of these critical areas shall be limited to the extent feasible. Wetlands protection is divided into three categories that all wetlands must receive: general protection, protection from pollutants, and wetland hydroperiod protection. The level of protection provided under each category is dependent on the wetland category, habitat score and wetland characteristics. Any on-site wetlands or wetlands the North Kitsap United project discharges stormwater to shall be mapped and categorized to determine appropriate protection BMPs to be utilized in order to maintain wetland ecological functions and characteristics. The NKU downstream condition will need to be studied further to confirm if wetlands exist and receive existing site runoff and if so what if anything will need to be done to protect the existing wetlands by matching the hydroperiod.

5.1.9 Minimum Requirement #9: Operation and Maintenance

> *2021 SWDM: An operation and maintenance manual that is consistent with the provisions in Volume II, Chapter 7 on page 273 shall be provided for proposed stormwater facilities and BMPs, and the party (or parties) responsible for maintenance and operation shall be identified.*

The 2021 SWDM requires that a maintenance and operation manual be developed for the proposed stormwater facilities. Stormwater facilities for developments at North Kitsap United will be privately owned and maintained. Stormwater facilities that fall under the private maintenance responsibility and typical maintenance activities include:

Conveyance systems include curbs, gutters, catch basins, pipes, ditches, intakes, outfalls and dispersion devices. Maintenance responsibilities for these facilities include cleaning of sediment and trash, repair of incidental damage.

Flow control facilities: removal of trash and debris, landscaping including mowing of grass pond embankments and pond bottoms, sediment removal from pond bottoms, repair of intake structures and spillways.

Water quality facilities: cleaning/dredging of accumulated sediment and regular replacement of filter media for sand filters and filter vaults.

These maintenance activities are typically funded by a Home Owners Association but can be funded by the developer directly.

6 WATER

6.1 Water Availability

North Kitsap United is within the Kitsap Public Utility District Service Area and is currently served by a water main which crosses the southwest portion of the site. The existing watermain which traverses the southwest corner of the site is a 12” pipe with a Fire Flow capacity of 2,000 GPM. The entire project is within the 540-pressure zone which is served by the Ridge Tanks reservoir (275,000 gallons) directly west of the site. A future 8” watermain is proposed within the KPUD system that would extend off the existing 12” main north to the northeast corner of the site. A future reservoir has also been proposed in the northwest corner of the site.

6.2 Water System Design

Future water system improvements and expansions will fall under Kitsap Public Utility District’s jurisdiction and must be designed to the Kitsap Public Utility District Standards and Specifications, more recently updated in 2020.

6.3 Water Connection Application

Kitsap Public Utility district has a Water Availability Certificate online application that must be submitted with a fee, this can also be submitted to their office. The districts engineering team will then determine if there is water availability, there is an appeal process if no water availability is determined. Developer extension of watermains requires a utility permit submittal to Kitsap Public Utility District and KPUD Water approval of a Developer Extension agreement that reserves system capacity.

7 SEWER

The nearest municipal sewer treatment to the site is the Central Kitsap Treatment Plant. This plant is a conventional activated sludge treatment plant located in Brownsville and serving the cities of Silverdale, Keyport, Poulsbo, Central Kitsap, Bangor base, and the Naval Station at Keyport. This plant treats more than 3.5 million gallons of sewer each day. The plant discharges treated effluent approximately ½ mile offshore into Port Orchard Bay. The NKU project site is not located within the Central Kitsap Plant service area and will be required to treat and discharge and sewer entirely on-site. On-site treatment is common in Kitsap County. More than 58,000 residences in Kitsap County discharge to on-site septic systems.

The NKU project is anticipated to consist of 80 residential lots anticipated to be one-half acre or more in size. To be conservative, each lot was assumed to include one primary and one accessory dwelling unit (ADU) as permitted in the Rural Residential zone. Also proposed is a YMCA facility, and a sports complex (outdoor) with supporting restroom facilities. There may be minor food production facilities to serve the public attending events.

7.1 Jurisdiction

With design flows less than 3,500 gallons per day on any given day the Kitsap County Health Department has jurisdiction over the on-site sewage disposal systems.

- Systems can be designed with soil (original, undisturbed, permeable material) depths of eighteen inches. Between eighteen- and 30-inches pre-treatment of the effluent is required prior to the drain field.
- Between 30 and 48 inches the system does not need pre-treatment (unless nitrogen is an issue) but needs pressure distribution.
- With over 48 inches of soil a gravity system may be used.
- Nitrogen is anticipated to be an issue due to the Critical Aquifer Recharge Areas (CARA) being a sensitive area. Also with downgradient waterways, and/or possible prior high levels in the area of Nitrogen then an aerobic treatment unit may be required which will treat to 10 to 20 mg/l Nitrogen.
- Design applications are normally a one-step process with follow up as built activities.
- The systems must be monitored by a Kitsap County accredited operation and maintenance firm.

With design flows between 3,500 gallons per day and 14,499 gallons per day on any given day the Washington State Health Department (DOH) has jurisdiction and the system is considered a Large On-Site System (LOSS).

- A minimum of 48 inches of soil is required for a LOSS.
- Nitrogen levels are a higher priority and are investigated more thoroughly. Treatment may be required to achieve less than 10 mg/l which normally requires a relatively expensive primary treatment unit.
- The design application is a multi-step process which includes pre-engineering report, soils investigation, site risk survey (which may lead to a hydrogeologic report), final engineering report, final plans and as built documentation including operation and maintenance manuals.

- The LOSS must be maintained by an operation and maintenance firm that is acceptable to DOH and Kitsap Health and is qualified to maintain the type of LOSS installed.
- If there are multiple owners of facilities connected to the LOSS a public entity (licensed as a utility) must be engaged in addition to the operation and maintenance firm to oversee the overall monitoring of the system.
- A yearly operating permit must be obtained for a LOSS.

With design flows between 14,500 gpd and 99,999 gpd on any given day the DOH still has jurisdiction of the LOSS. In addition to the above LOSS requirements some other items are required.

- The review of the larger LOSS may be more thorough and more information requested due to the system size (normally with the site risk survey and a greater chance that the hydrogeologic study is needed).
- Public notice is required with a comment period.
- Treatment plant, collection lines, and pump stations shall be a minimum of 100 feet away from wells providing public drinking water supplies. Treatment plants and drainfield discharges must be outside of the 100-year floodplain.

This is a generalized summary of the jurisdictions and differences in processes and regulations. These vary based on the site conditions and amount and type of sewage being disposed of.

7.2 Flows Generated

Each of the development uses for NKU are summarized below. **73,000 gallons per day is estimated as the sewer demand design flow for the development uses. For the sake of this feasibility study a system capable of treating 99,999 gallons per day is anticipated.**

7.2.1 Residences

For single family residences Kitsap Health and DOH size systems at 120 gallons per bedroom per day. There is a restriction that limits size of the residence to a minimum of two bedrooms. For a LOSS once there are enough bedrooms to equal the 14,500 change of LOSS sizes (120 bedrooms) then each additional residence is sized at 270 gallons per day regardless of number of bedrooms. For the sake of this study a conservative estimate of 480 bedrooms is assumed. This represents a flow of 46,900 gallons. This checks out when comparing against the WA ST Dept. of Ecology Criteria for Sewage Works Design (Orange Book) which states 100gpd per person for residential uses. For 80 residential lots assumed to include ADUs we can guesstimate 480 people resulting in a flow of 48,000 gallons per day. **48,000 gallons per day will be assumed for residential demand.**

7.2.2 YMCA

The YMCA facility flows are modeled after the Haselwood YMCA in Silverdale which indicates the highest average water usage from years 2011 to 2023 to be 16,665 gallons per day. A conservative estimate for

wastewater generated at the YMCA is 90% of the water usage. **15,000 gallons per day will be assumed for the YMCA demand.**

7.2.3 Outdoor Sports Complex

For a restroom facility that serves an outdoor sports complex calculations are normally done to create a conservative estimate of how many people will be using the restrooms during a peak day. A flow of two gallons per use (1.6 gallons per flush and 0.4 hand washing) is normally used. For this type of facility, it is also recognized that the facility may not be used to peak capacity every day so larger pump tanks can be utilized to provide a surge capacity that meters out the sewage to the drain field over non-peak times. This increases the tank size but can reduce the drain field area required. For the outdoor complex the Orange Book estimate of 5 gallons per day per car was used. It is estimated by the Traffic Study that 836 cars a day will use the sports fields on the high end. **5,000 gallons per day will be assumed for the sports complex demand.**

7.2.4 Commercial Areas

For the Commercial areas it is estimated that up to 15,000 square feet of space will be developed. The Orange Book estimates 300 gallons per day per 1,000 square feet on the high end for shopping centers. **5,000 gallons per day will be assumed for the Commercial Area Demand.**

7.3 Waste Strength

This Feasibility Study does not size or select wastewater systems for the use components of the NKU project. On-site sewage disposal systems are however commonly sized and designed based on the effluent being residential in nature in waste strength. Discharge of effluent is commonly anticipated to be through a septic drainfield. The main factors in sizing the system are biochemical oxygen demand, total suspended solids, oil and grease, and nitrogen.

No commercial or industrial waste is allowed in an on-site sewage disposal system. This includes water from swimming pools which has high levels of chemicals or salt that can sterilize the biological colonies that treat the effluent. If the YMCA is to have a swimming pool it will need to be side streamed and pretreated separately before discharging to a drainfield.

Facilities such as restaurants can be connected to the on-site sewage disposal system. Pre-treatment of the sewage can take place using grease traps and/or treatment plants that will reduce the higher strength waste associated with this type of connection down to the residential strength levels and below.

In Kitsap County if there is less than 30 inches of soil the effluent going to the drain field requires additional treatment to substitute for the lesser treatment provided in the soils by the shallower soils. This can be achieved with many different types of systems or treatment units.

DOH does not allow for reduction in required soil depth (48 inches) for LOSS systems with advanced treatment.

7.4 Size of Wastewater System

This Feasibility Study does not size or select wastewater systems for the use components of the NKU project. Common components of On-site sewage disposal systems however are gravity piping, sewer ejector pumps where gravity may not be possible, septic tanks to collect the sewerage and handle fluctuations in flows, and a dosed drainfield. Additionally treatment systems can be added to reduce the risk of underperforming drainfields and to minimize the size required for the drainfield. Types of systems range from trench (gravity or pressure dosed distribution) to subsurface irrigation and top of surface systems. The trench systems take up more area but the reduction in size with the more advanced systems normally requires advanced treatment of the effluent.

The second factor is the type of soil. The finer the soil the more absorption area is required. Loading rates are established in the regulations for different soil types. One exception to the soil typing are extremely coarse soils which due to the lack of treatment provided by the soils require pretreatment of the effluent.

The third factor is the design flow to the system which was discussed in a previous section of this report and estimated as 73,000 gallons per day at full capacity. A system capable of 99,999 gallons is the basis for this feasibility study. For facilities that do not have established flows, design flows can be found by gathering data from like facilities or calculating use based on facility use patterns.

Design flows are the flows that are used for the design of the system and represent the peak daily flows going to the system. Operating flows are flows that are less than the design flow and represent the target average daily flow to the system. The operating flow is normally about 80% of the design flow. The reason for this second flow is that if you dose the drain field at the design peak flow on a continual basis you may stress the system to the point of failure.

7.4.1 Treatment Technologies

Sustainable water strategies also known as **integrated water resource management strategies** are very relevant in today's growing world. Lack of clean water and downstream effects from pour or failing stormwater and sewer treatments are polluting our fresh and salt waters. As an example of such strategies the nearby Port Gamble project took on integrated water resource management with an advanced wastewater treatment process setup for irrigation reuse and capable of tens of thousands of gallons of water reuse each day. This Feasibility Study does not size or select wastewater systems for the use components of the NKU project however it is worth noting that similar opportunities to develop a holistic look at integrated water resource management will be available to NKU. This section will identify possible septic treatment technologies that allow for the reduction of drain field sizes and some that provide re-use opportunities. The site soils are noted to be fine sands and silty sand soils which will likely have a ground loading rate of 0.6 gallons of treated sewer effluent per square foot per day. Treating to Secondary standards will likely result in twice this loading rate and a 50% drainfield reduction. The more advanced systems capable of treating to the Reuse Standard will likely result in 7 or 8 times the loading rate and an 88% drainfield reduction. These treatment systems range from Advanced Secondary treatments such as the AdvanTex Pod system for BOD and Nitrogen reductions to Biological Secondary treatments such as Sequence Batch Reactors (SBR), Moving Bed Biofilm Reactors (MBBR), and Membrane Bio Reactors (MBR) that can take the treated effluent well below the ground discharge standard of 10mg/L BOD/TSS to below the blackwater reuse standard of below 5mg/L BOD/TSS as described in WAC Chapter 246-274.

Advanced Secondary Treatment. **Orenco's AdvanTex AX-Max Attached Growth Multipass Packed Bed.**
AX-Max Treatment Systems are intended for large residential applications or for commercial and municipal applications that require advanced secondary treatment. They provide recirculation and a discharge tank in one module. AX-Max units are ideal for subdivisions, "fringe" development, hotels, resorts, schools, churches, businesses, manufactured home parks, RV parks, campgrounds, rest areas, and truck stops. They are approved for use by DOH and DOE as a LOSS. 95% BOD reductions and 65% Total Nitrogen reductions are possible. A single unit can treat up to 15,000 gpd and can be phased over time as development grows. A 7 unit system was currently built at the Yakima Buena ByPass SubDivision at a cost of $1.5M excluding the cost of the drainfield and supply piping. A drainfield reduction of up to 50% may be possible with this system.

Figure: AdvanTex AX-Max Module

Sequence Batch Reactors (SBR)
SBR's are an advanced treatment derived from the activated sludge treatment similar to that of the Central Kitsap Treatment plan except they have been simplified to take place in a single or dual reactor tank which can be a large buried vault or an in building application. SBR's include 4 main Processes.

1. Filling the tank
2. Reacting, which involves aerating the mixed liquor
3. Settling
4. Separating purified water from the biological sludge. (some sludge must be wasted during this stage to maintain consistent biomass concentrations)

This four-step process can be performed several times per day. Sometimes aeration is cycled on and off during the react stage to encourage nitrification and denitrification for nitrogen removal. While the process does not require costly membranes to operate it can have challenges with settling out the solids over time and must be closely monitored to ensure it is operating properly for BOD and TSS removal. Additional processes are often added for adequate solids handling and removal. Cold temperatures possible at the NKU site would likely mean placing the SBR within a building in a similar manner to the MBR used out at Port Gamble thus increasing it's cost to be closer to the cost of the MBR. A drainfield reduction of more than 50% may be possible with this system

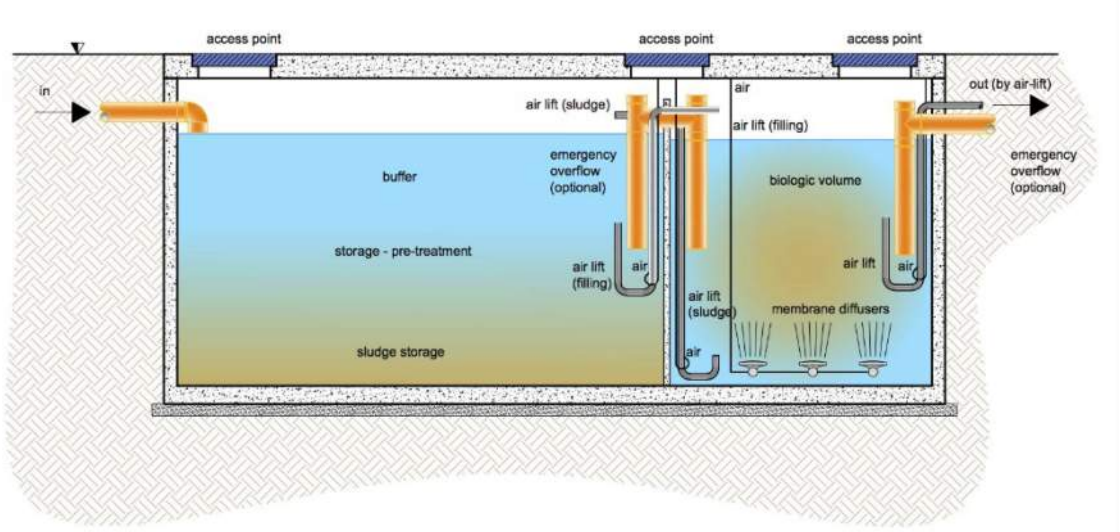


Figure: SBR Diagram

Moving Bed Biofilm Reactors (MBBR)

The MBBR process is an advanced biological treatment which utilizes floating plastic carriers (media) within an aeration tank to increase the amount of microorganisms available to treat the wastewater. The microorganisms consume organic material. A company called Sustainable Water created an MBBR process and coupled it with hydroponic plants to create what they called WaterHub for Emory University. In addition to the plastic media they also developed a textile root zone mesh that supports the plant roots while also breaking down the organic matter in 400,000 gallons of blackwater each day. The addition of the plants is very intriguing and makes this a focal point in the landscape.

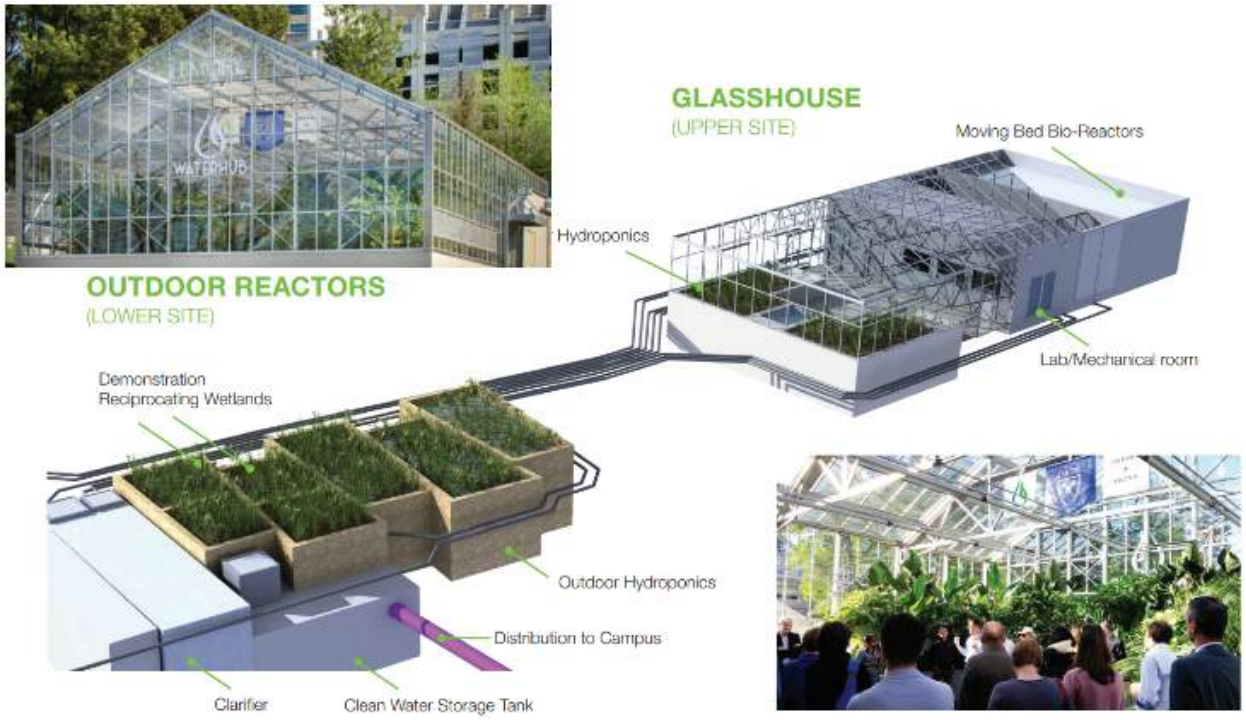


Figure: WaterHub at Emory University

Membrane Bio Reactors (MBR)

MBR's are an advanced treatment where sewerage is pre-screened and solids removed followed by forcing the blackwater through a series of membrane plates or hollow tubes which remove BOD, Nitrogen, Phosphorus, and TSS. This process can be repeated multiple times along with nitrifying and denitrifying the water for treatment down to less than 5mg/L of BOD and TSS. There are many different manufacturers of membranes. The Port Gamble project utilized the Ovivo membranes which have recently gone to making entirely ceramic membranes which are quite costly and come with long lead times. Another large scale manufacturer Kabota utilizes their Japanese factory to project a less costly flat plate membrane. GE Zennon membranes are also of the hollow tube or fiber variety. Kabota boasts a smaller footprint than all three of these large scape producers. All three can make reliable treatments and initial discussions with Wilson Engineering suggested that the Ovivo MBR and likely also the Kubota MBR have gone up significantly in the past 3 years and can expect their systems to be significantly more than what they cost at Port Gamble ($5M to 6M). Dale Richwine, the WWTP program manager out at Port Gamble discussed all three companies at length with DEA and suggested Kubota to likely be the front runner. Another very reliable and significantly less costly and more compact product is the MBR Package Plant by A3-USA. DEA spoke with the A3-USA owner and they just completed a 100,000 GPD system that came in under $3M.

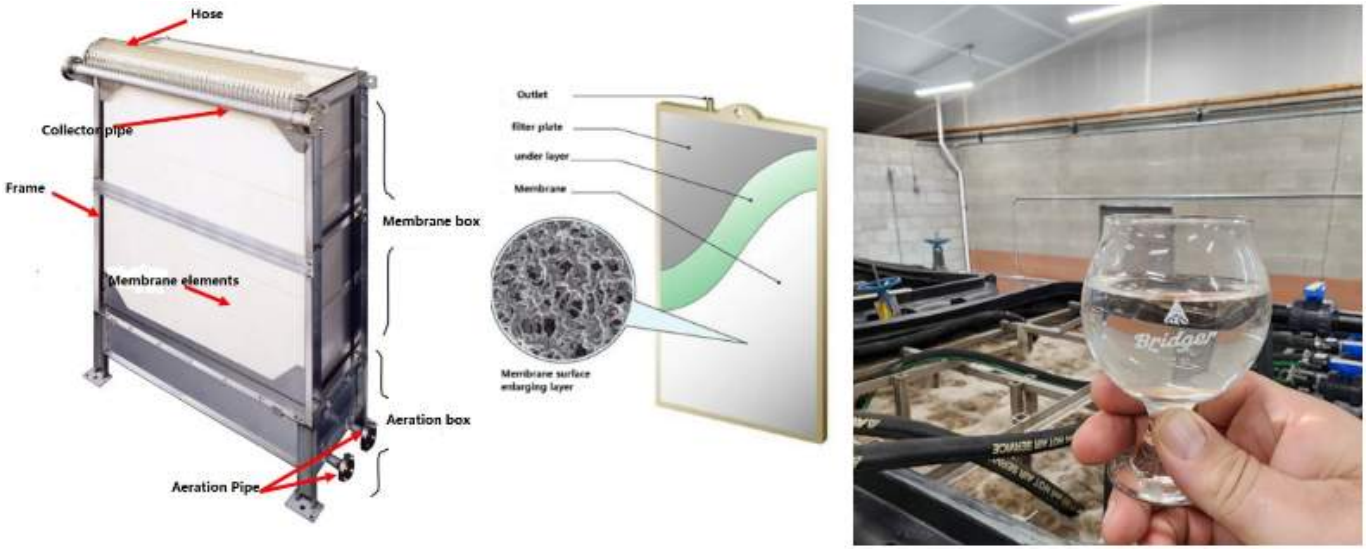


Figure: Kubota MBR Membrane & A3 USA Treated Effluent

The MBR used out at Port Gamble was able to achieve a drain field size ~7 times smaller than a conventional system due to the treatment to less than 5mg/l BOD & TSS and by going through a waiver process with the DOH. An MBR with a footprint used by A3-USA and a Drainfield size similar to that from Port Gamble was used for this feasibility study and shown in the Sewer concept that follows.

7.4.2 Example Drain Field Size without Secondary Treatment

A conservative set of factors are used to give a drain field size for a trench system and a subsurface irrigation system. The following factors were used:

- 500 gallons per day
- Type 4 soils
- Flat site with no trees or other site features impacting the installation of the system

For a trench system using three-foot-wide trenches, 50-foot-long trenches, and seven-foot spacing center to center on the trenches an area of 3,650 square feet is required for the combined active and reserve drain fields. A subsurface irrigation system with two foot lateral spacing and 50-foot drip line lengths an area of 2,500 square feet is required for the combined active and reserve drain fields. Based on this conventional loading approximately 11.5 acres of combined active and reserve drain field areas are needed if no additional treatment is provided.

Sewer Treatment	Resulting Drainfield & Replacement Drainfield Size (Ac)
Conventional	11.5 Acres
Secondary Treated (AdvanTex)	5.8 Acres
Advanced Secondary Biological Treatment	1.5 Acres

7.5 Summary

The feasibility of using a LOSS system for the uses at NKU is based on the presence of acceptable soils in a large enough area to support the number of houses proposed. While this Feasibility Study does not size or select wastewater systems for the use components of the NKU project it is recommended that at a minimum an AdvanTex system be considered if a combined residential and commercial LOSS is planned. And furthermore if such a combined system is planned a Biological system such as a Membrane Bio Reactor (MBR) is recommended to also be further studied as it provides the most reliable system possible and provides the ability to operate under cold weather conditions with varying flows, as well as the opportunity to generate greywater for reuse as irrigation, toilet flushing, dust control, etc.

Appendix A: Kitsap County Land Use Regulations and Growth Management Act Compliance

Land Use and GMA Compliance White Paper (Raydient)

North Kitsap United

Compliance with Kitsap County Land-Use Regulations

and

The Washington State Growth Management Act

October 20, 2023

Preamble

In 1990 the Washington State legislature passed the Growth Management Act ("GMA"). The Washington State legislature's purpose in passing the GMA was to plan for growth and to ensure it happens in a thoughtful, orderly manner.

The GMA requires that certain cities and counties in the State of Washington, including Kitsap County, develop comprehensive plans. Kitsap County's Comprehensive Plan is a policy document—a blueprint—that guides the County's development of regulations (such as zoning and critical area ordinances) that mandate that development of higher residential densities, and large-scale commercial be directed to urban areas while preferring that rural areas be utilized for rural residential densities, open space, recreational activities, and the conservation of natural resources.

The GMA does not prohibit all development in rural areas. To the contrary, the GMA encourages cities and counties to use rural areas to provide recreational facilities and encourage the development of small businesses that provide employment opportunities for those living in the state's rural areas. Per Futurewise (*A Beginner's Guide to Growth Management, 2-3*), counties and cities are required to identify lands useful for public purposes and open space corridors. Open space corridors link together fish and wildlife habitats, parks, and open spaces into connected local and regional networks of green spaces.

Kitsap County implements the plans and policies in its Comprehensive Plan through the Kitsap County Code ("Code"). The Code controls the use and development of land within the County. Unless Comprehensive Plan policies or Code regulations are timely challenged after adoption, the Comprehensive Plan and Code are binding law within the County and any uses permitted by Code either outright or conditionally may be developed subject to certain application/approval processes. If a particular proposed use is not permitted either outright or conditionally, a project proponent may request that the County amend its Comprehensive Plan or Code to allow for such use, and the Board of County Commissioners may accommodate such request so long as it accords with the GMA.

1. **Purpose** The purpose of this white paper is to demonstrate that the proposed North Kitsap United project concept ("NKU") is compliant and consistent with the Washington State GMA, the Kitsap County's Comprehensive Plan, and the County's regulations.

2. **Executive Summary** The Comprehensive Plan and its implementing land use regulations ("Zoning Code") have been brought before the Growth Management Hearings Board ("Board") several times since the state adopted the GMA to challenge their compliance with the GMA. The current Plan and Zoning Code are GMA compliant. Therefore, if a proposed land use is compliant with the Zoning Code, it is compliant under the GMA.

   There are 5 primary elements (land use types) within the proposed NKU Project concept as currently conceived. Three of the five are compliant with the current Comprehensive Plan and Zoning Code. Two elements, related to commercial services and residential uses, will require a Comprehensive Plan and a Zoning Code amendment.

3. **Proposed NKU Project Primary Elements**
   The proposed NKU Project concept includes 5 primary elements:
   1. A comprehensive sports and recreation complex

2. A YMCA to service North Kitsap County residents
3. Unimproved open space to serve as trail and wildlife corridors and areas of native vegetation
4. 3 to 5 acres of commercial services (primarily to develop a restaurant site to serve the YMCA, sports, and recreation activities)
5. Approximately 80 single family residential lots

This paper will demonstrate that:

- Elements 1, 2 and 3 are already either allowed outright or allowed with a conditional use permit under the current Zoning Code.
- Elements 4 and 5 require amendments to the Comprehensive Plan and the Zoning Code before development.

Elements 1, 2, and 3

Currently the NKU property is designated and zoned Rural Wooded ("RW"). Raydient has requested the designation to be changed to Rural Residential ("RR"). Elements 1, 2, and 3 are allowed either outright or through a conditional use under both designations. (See excerpts taken from the use tables in the Zoning Code). No change to the designation or zoning is required.

When the legislature adopted the GMA, it did not mandate that such uses are exclusive to urban areas.

An RW property owner can make an application for these uses today and, if properly mitigated, can expect County approval.

Element 4

Raydient has applied to redesignate and rezone 3 to 5 acres of its property from RW to Rural Commercial ("RC"). The goal is to establish a restaurant and uses that support the Heritage Park, and the proposed YMCA, recreation, and sports facilities.

This will create advantages commonly associated with "mixed use" projects. The inclusion of some commercial uses will help mitigate traffic impacts; visitors won't need to leave the area or make special trips before, between, or after their games and activities. Further, the services will provide a common meeting ground for citizens from all parts of North Kitsap County and enhance the overall user experience.

Element 5

Raydient has applied for a change from RW to RR to allow for an increase in residential lot density. This will allow a density of 1 residential lot per 5 acres. According to the County's Performance Based Development provisions, lots can be made smaller (or clustered) such that the residential footprint is reduced and open space can be created.

The goal of the proposed NKU Project is to find community uses for the property's open space.

This requested amendment reflects the reality of current conditions in North Kitsap County and is GMA compliant.

A. GMA Compliance

*"Kitsap County has approximately 256,661 upland acres. Approximately 34% of the County is zoned Rural Residential at **86,544** upland acres."* (See Kitsap County Zoning Code at https://storymaps.arcgis.com/stories/731881f1c32e4128b94704252dbb6077)

There is more Rural Residential land in Kitsap County than *all other rural designations combined* inclusive of Local Area of More Intense Rural Developments (LAMIRDS). (See Exhibit A). Redesignation and rezoning of Raydient's property will align with the County's common practice of designating its rural lands for residential uses.

B. Changed Conditions and the RW Designation

The RW zone was created early in the Comprehensive Plan after the county determined that there were virtually no areas in the county that were appropriate for long-term timberland management or designation as "resource" lands. (The resource designation is different than rural or urban). The purpose of the RW designation was to help preserve long-term timberland management for as long as possible in Kitsap County.

To quote The Plan:

"This zone is intended to encourage the preservation of forest uses and agricultural activities, retain an area's rural character and conserve the natural resources while providing for some rural residential use. ***This zone is further intended to discourage activities and facilities that can be considered detrimental to the maintenance of timber production.*** *Residents of rural wooded (RW) residential tracts shall recognize that they can be subject to normal and accepted farming and forestry practices on adjacent parcels."*

The vast majority of the RW lands lie in Southwest Kitsap County (see Exhibit C). If one drives that area it is easy to see how its character is dramatically different than North Kitsap County. There is very little population density and commercial forest management is commonplace. Large areas are devoid of any meaningful commercial services.

However, the conditions in North Kitsap have changed dramatically from the days when timberland management was commonplace. The viability of commercial timber production has been greatly reduced, to the point that it may not be profitable anymore. A large majority of its rural lands are zoned for RR (see Exhibit A). Currently, only a few large tracts remain zoned RW. These tracts are primarily owned by Rayonier's subsidiaries, the Port Gamble S'Klallam Tribe, and the Washington State Department of Natural Resources (DNR). DNR has applied to remove their property from timberland production as "economically under-performing state trust lands…" (See Exhibit B).

The proposed NKU Project property was once part of a 4,000-acre tree farm but is now a fraction of that. Also, the creation of the Port Gamble Forest Heritage Park adjacent to land currently zoned RW is not compatible with timber production over the long-term.

Looked at through a slightly different lens, it is easy to see that if the proposed NKU Project property was sold today, *it is highly unlikely that it would be purchased by an entity interested in commercial timberland management.*

4. <u>Conclusion</u>

The Washington State Legislature intended for Comprehensive Plans to be living, breathing planning documents that evolve to reflect the changing realities of conditions in the state and in cities and counties. That's why GMA mandates local governments to regularly review and revise them.

Conditions are changing rapidly in North Kitsap. The shortage of housing (of all types, affordability levels, and locations), and sports and recreation facilities is real. The supply of such facilities has not kept pace with past population growth, a situation that will get worse without proactive efforts.

Finally, all the elements of the proposed NKU Project concept comply with the Growth Management Act, the Kitsap County Comprehensive Plan, the Zoning Code, and the changing conditions in North Kitsap County.

Summary of Elements, Zones, and Allowed Uses			
Element	**Rural Wooded (current zoning)**	**Rural Residential**	**Rural Commercial**
1. Sports and Recreation	P if non-commercial C if commercial	P if non-commercial ACUP if commercial	
2. YMCA	P if non-commercial C if commercial	P if non-commercial C if commercial	
3. Open Space	P	P	
4. Commercial	X	X	P
5. Residential Density 1 residential lot per 5 acres	X	P PBD if clustered	

Key	
P	Permitted outright in the zone
C	Permitted with conditional use permit
ACUP	Permitted with administrative conditional use
X	Not permitted
PBD	Performance Based Design

Note: ALL uses must undergo review under the State Environmental Policy Act

Note

The requirement for ACUP and Conditional Use permits are very similar for low, medium, and high-density residential zones **inside** Urban Growth Areas.

See tables on following pages.

Helpful links from Chapter 17 of Kitsap County Land-use Regulations

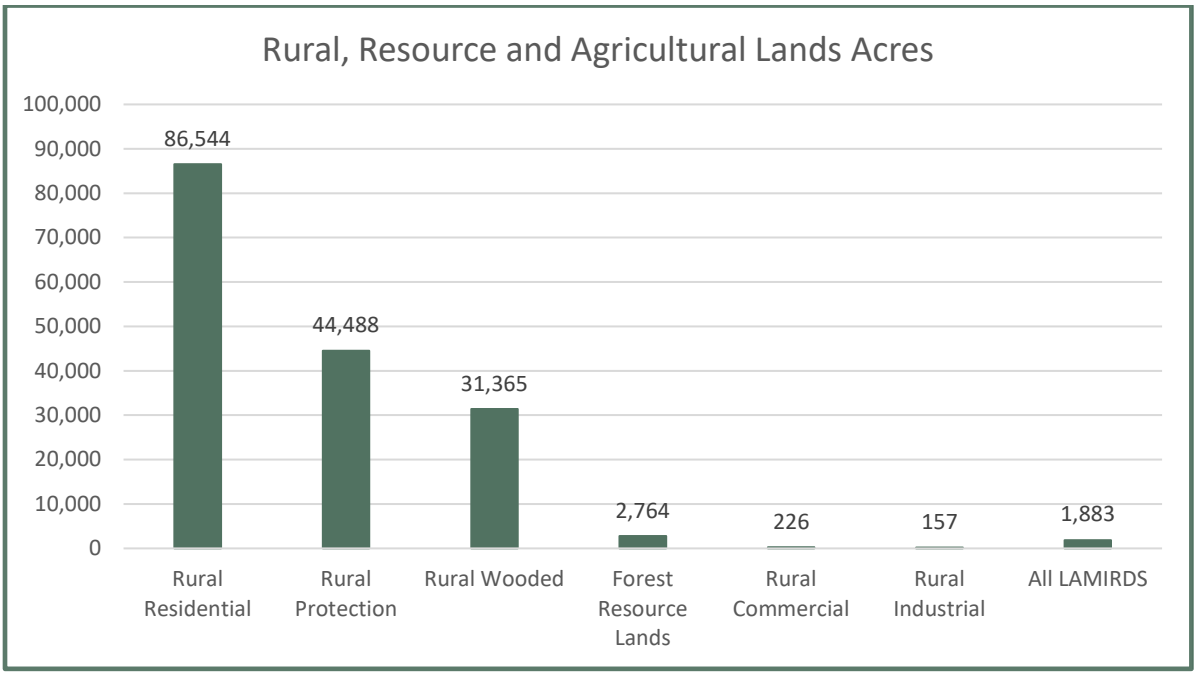
1. Chapter 17.150 Rural wooded zone
2. Chapter 17.130 Rural residential zone
3. Chapter 17.290 Rural commercial zone
4. Chapter 17.410 Allowed uses
5. Chapter 17.110 Definition open space
6. Chapter 17.110.647 Definition Recreational facility, indoor
7. Chapter 17.110.648 Definition Recreational facility, outdoor
8. Chapter 17.110.325 Hearing examiner use
9. Chapter 17.450 Performance Based Development

Exhibits

Exhibit A	Percentage of Rural Lands by Comprehensive Plan Designation
Exhibit B	Trust Land Transfer Revitalization Pilot Project
Exhibit C	Location of Rural Wooded Zoned Lands

Exhibit A

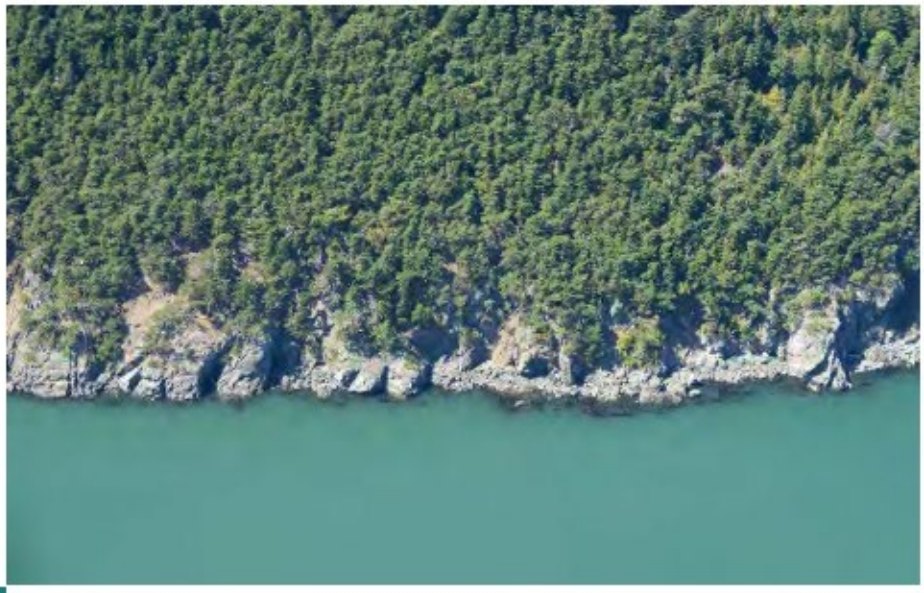
Percentage of Rural Lands by Comprehensive Plan Designation



	Percent*	Acres
Rural Residential	34%	86,544
Rural Protection	12%	44,488
Rural Wooded	17%	31,365
Forest Resource Lands	1%	2,764
Rural Commercial	≪ 1%	226
Rural Industrial	≪ 1%	157
All LAMIRDS**	< 1%	1,883
		167,427
* Kitsap County contains 256,660 acres of uplands		
** Local Areas of More Intense Rural Development		
Source: Kitsap County Zoning Code		

Exhibit B

Trust Land Transfer Revitalization Pilot Project



NATURAL RESOURCES

Trust Land Transfer Revitalization Pilot Project

Eglon Packet

July 2022

WASHINGTON STATE DEPT OF NATURAL RESOURCES

Exhibit B (cont.)

Trust Land Transfer Revitalization Pilot Project

TRUST LAND TRANSFER APPLICATION

(This application is available electronically.)
Submit by 4:00 PM on June 16, 2022 for consideration for the next funding cycle

Trust Land Transfer is an innovative tool for the Washington State Legislature, through the Department of Natural Resources, to address several land management needs. Specifically, this tool enables DNR to achieve the following:

- **Transfer out of economically under-performing state trust lands and acquire funds to purchase replacement lands with higher long-term income producing potential**
- **Conserve lands that have high ecological values or public benefits**

Applicant Information		DNR Staff contact (if different)	
Applicant's name:		Staff name:	Brandon Mohler
Address:		Address:	950 Farman Ave N
City, State, Zip:		City, State, Zip:	Enumclaw, WA 98022
Phone:		Phone:	360.918.1115
E-mail:		E-mail:	Brandon.mohler@dnr.wa.gov

Parcel name/moniker: **Eglon**

Property Information

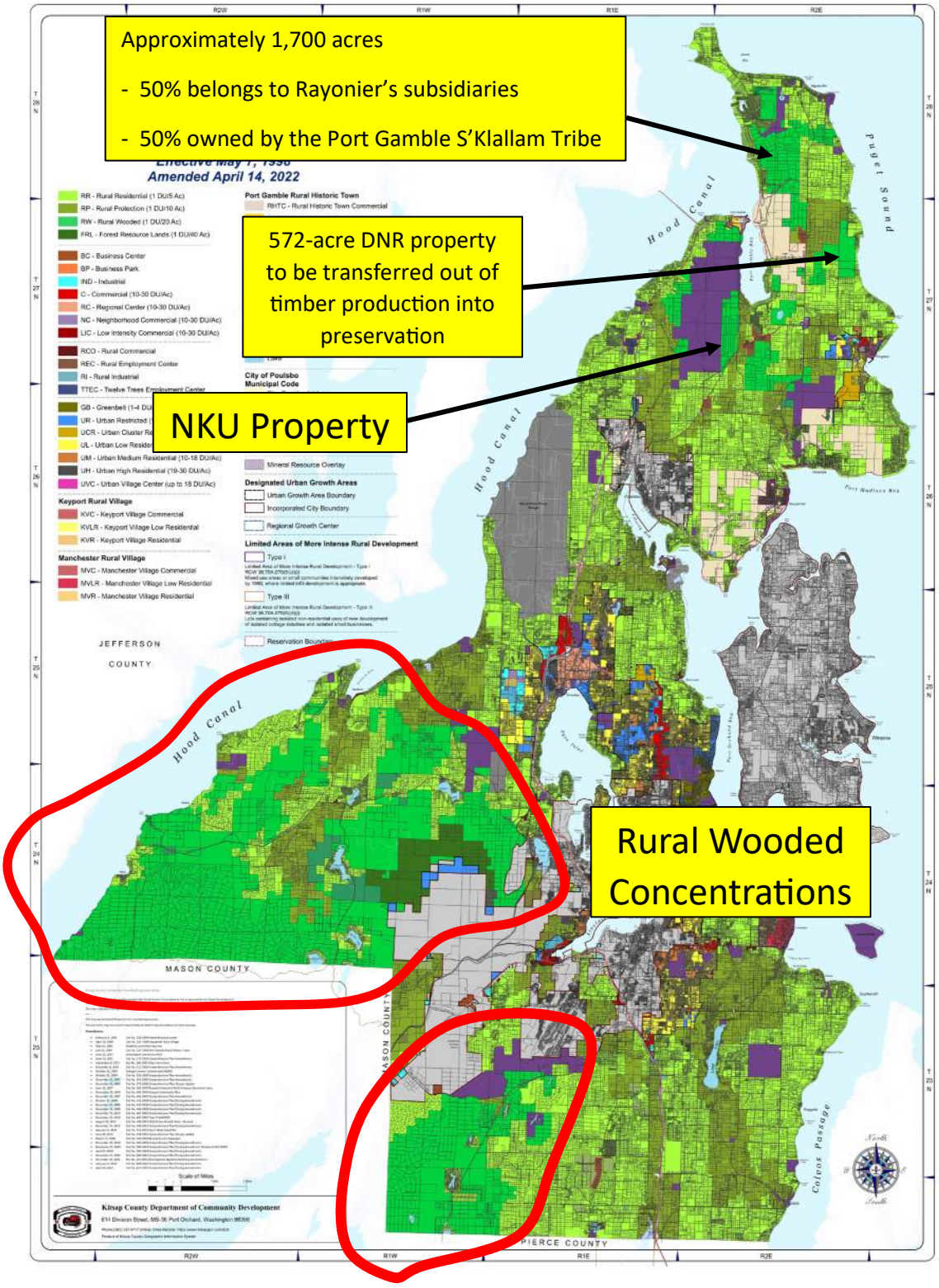
For proposals with more than one trust ownership, or in more than one county, describe parcels separately:

1.	County:	Kitsap	Section:	Portions of 2, 10,11, 14 & 22	Township:	27 N	Range:	2 E	B&M		Parcel#:	022702-3-035-2004, 112702-2-003-2003 & 142702-2-002-2001 102702-4-001-2002 & 222702-1-002-2003
	County:	Kitsap	Section:	Portions	Township:		Range:		B&M		Parcel#:	
	County:		Section:		Township:		Range:		B&M		Parcel#:	

2.	What is the land currently zoned as?	RW – Rural Wooded (main parcel) and Rural Residential (small parcel)			
3.	What is the current land type/land cover?	Wetlands and forest			
4.	What are the current uses of the property?	State trust land			
5.	Total project acres:	707	Total acres forest:	707	
6.	Proposed receiving agency. Kitsap County				
7.	What trust(s) does this property currently belong to? 03 & 11				
Trust #1	Common School (Trust 03)	Acres	226		
Trust #2	University Original (Trust 11)	Acres	481		
Trust #3		Acres			

Exhibit C

Location of Rural Wooded Zone Lands



Kitsap County Chapter 17.410
Rural Allowed Recreational/Cultural Uses

	Comprehensive Plan Land Use Designation	Rural Residential	Rural Protection	Rural Wooded	Forest Resource Lands	Mineral Resource Overlay	Urban Low Density Residential				Urban Medium Density Residential	Urban High Density Residential	Definition ⬇	Categorical Use Standards ⬇
	Zoning Classification (1)(3)(4) ➡	RR (2)	RP	RW (2)	FRL	MRO	UR (5)	GB (5)	UL (5)	UCR (5)	UM (5)	UH (5)		
	Categorical Use (1)(3)(4) ⬇	17.130	17.140	17.150	17.160	17.170	17.180	17.190	17.200	17.210	17.220	17.230		
300	Arboreta, botanical garden	--	--	--	--	--	C	C	--	--	--	--	17.110.086, Aquarium, arboretum, botanical garden, zoo.	17.415.050, Arboreta, botanical gardens
302	Campground	C	C	C	--	--	C	C	C	C	--	--	17.110.147, Campground.	17.415.090, Campground
304	Club	ACUP	C	--	--	--	C	C	C	C	ACUP	ACUP	17.110.165, Club.	17.415.115, Club.
306	Entertainment facility, indoor	--	--	--	--	--	--	--	--	--	ACUP	ACUP	17.110.261, Entertainment facility, indoor.	17.415.165, Entertainment facility, indoor.
308	Entertainment facility, outdoor	--	--	--	--	--	--	--	--	--	--	C	17.110.262, Entertainment facility, outdoor.	17.415.170, Entertainment facility, outdoor.
310	Golf courses	C	C	--	--	--	-- C	C	C	C	--	--	17.110.303, Golf course.	17.415.240, Golf courses.
312	Marinas	--	--	--	--	--	-- C	C	C	C	C	C	17.110.480, Marina.	17.415.350, Marinas.
314	Marina support services	--	--	--	--	--	--	--	--	--	--	--	17.110.482, Marina support services.	17.415.355, Marina support services.
316	Parks and open space	P	P	P	P	--	P	P	P	P	P	P	17.110.535, Open space.	
318	Racetrack	--	--	C	C	--	--	--	--	--	--	--	17.110.644, Racetrack.	17.415.405, Racetrack.
320	Recreational facilities, indoor	C	C	C	--	--	C	C	ACUP	ACUP	ACUP	ACUP	17.110.647, Recreational facility, indoor.	17.415.410, Recreational facilities, indoor.
322	Recreational facilities, outdoor	ACUP	ACUP	C	--	--	C	C	C	C	C	C	17.110.648, Recreational facility, outdoor.	17.415.415, Recreational facilities, outdoor.
324	Shooting/gun facility, indoor	C	C	C	--	--	--	--	--	--	--	--	17.110.678, Shooting/gun facility, indoor.	17.415.485, Shooting/gun facility, indoor.
326	Shooting/gun facility, outdoor	C	C	C	--	--	--	--	--	--	--	--	17.110.679, Shooting/gun facility, outdoor.	17.415.490, Shooting/gun facility, outdoor.
328	Zoo, aquarium	--	--	--	--	--	--	--	--	--	--	--	17.110.086, Aquarium, arboretum, botanical garden, zoo.	17.415.595, Zoo, aquarium.

Kitsap County Chapter 17.410
Rural Commercial Allowed Uses

	Comprehensive Plan Land Use Designation →	Urban High Intensity Commercial			Urban Low Intensity Commercial		Rural Commercial	Urban Industrial			Rural Industrial	Public Facilities		
	Zoning Classification (1)(3)(4) ➡	C	RC	LIC	UVC	NC	RCO	BC	BP	IND	RI	P		
	Categorical Use (1)(3)(4)(5) ⬇	17.240	17.250	17.280	17.260	17.270	17.290	17.300	17.310	17.320	17.330	17.340	Definition ⬇	Categorical Use Standards ⬇
	COMMERCIAL USES													
	Hotels or Hospitality													
200	Adult entertainment	C	C	--	--	--	--	C	--	C	--	--	17.110.043, Adult entertainment.	17.415.025, Adult entertainment.
202	Conference center	P	P	P	P	--	--	--	--	--	--	ACUP	17.110.177, Conference center.	17.415.125, Conference center.
204	Drinking establishments	P	P	P	ACUP	P	ACUP	--	--	--	--	--	17.110.229, Drinking establishments.	17.415.155, Drinking establishments.
206	Espresso stands	P	P	P	P	P	ACUP	P	P	P	ACUP	--	17.110.267, Espresso stands.	17.415.190, Espresso stands.
208	Event facility	ACUP	ACUP	ACUP	ACUP	ACUP	--	--	--	--	--	ACUP	17.110.269, Event facility.	17.415.195, Event facility.
210	Hotel/motel	P	P	ACUP	ACUP	C	--	--	--	--	--	--	17.110.361, Hotel/motel.	17.415.285, Hotel/motel.
212	Resort	ACUP	ACUP	ACUP	ACUP	--	--	--	--	--	--	ACUP	17.110.661, Resort.	17.415.440, Resort.
214	Restaurants, with drive-through service	P	P	C	ACUP	C	--	P	P	P	--	--	17.110.662, Restaurant, with drive-through service.	17.415.445, Restaurant, with drive-through service.
216	Restaurants, without drive-through service	P	P	P	P	P	P	P	P	P	--	--	17.110.663, Restaurant, without drive-through service.	17.415.450, Restaurants, without drive-through service.

Definition: Open Space

17.110.535 Open space.

"Open space" shall mean land used for outdoor active or passive recreational purposes or for critical area or resource land protection, including structures incidental to these open space uses, including associated critical area buffers, but excluding land occupied by dwellings or hard surfaces not related to the open space uses and yards required by this title for such dwellings or hard surfaces. Open space may be used for native vegetation, drought-tolerant vegetation, and vegetated LID facilities. "Open space" is further divided into the following categories:

A. "Common open space" shall mean space that may be used by all occupants of a development complex or, if publicly dedicated, by the general public;

B. "Active recreational open space" shall mean space that is intended to create opportunities for recreational activity. Active recreational open space may be occupied by recreational facilities such as ball fields, playground equipment, trails (pedestrian, bicycle, equestrian or multi-modal), swimming pools, and game courts or sculptures, fountains, pools, benches or other outdoor furnishings;

C. "Passive open space" shall mean all common open space not meeting the definition of active recreational open space, including, but not limited to, critical areas and their associated buffers;

D. "Permanent open space" means an area that is permanently reserved as open space and remains in native vegetation unless approved for forestry, passive recreational or access uses; and

E. "Recreational open space" means an area that shall be improved and maintained for its intended use. Exterior as well as interior areas can constitute recreational open space. Examples of usable recreational space include swimming pools, community buildings, interior gyms, picnic areas, tennis courts, community gardens, improved playgrounds, paths and passive seating areas.

(Ord. 540 (2016) § 28, 2016; Ord. 534 (2016) § 7(5) (App. E) (part), 2016)

Definition: Recreation Facility

17.110.647 Recreational facility, indoor.

"Recreational facility, indoor" means a commercial recreational land use conducted entirely within a building. Examples include, but are not limited to, amusement centers, arcades, arenas, bowling alleys, gymnasiums, pool or billiard halls, skating rinks, and tennis courts.

(Ord. 611 (2022) § 106, 2022; Ord. 534 (2016) § 7(5) (App. E) (part), 2016)

17.110.648 Recreational facility, outdoor.

"Recreational facility, outdoor" means a commercial recreational land use conducted in open or partially enclosed facilities. Examples include, but are not limited to, amusement centers, miniature golf, swimming pools, tennis courts, basketball courts, outdoor racquetball courts, skateboard parks, and batting cages.

(Ord. 611 (2022) § 107, 2022)

Administrative Conditional Use Permit

Chapter 17.420
ADMINISTRATIVE CONDITIONAL USE PERMIT

Sections:
17.420.010 Purpose and applicability.

17.420.020 Administrative conditional use permit procedure.

17.420.030 Previous use approval.

17.420.035 Third party review.

17.420.040 Decision criteria – Administrative conditional use permit.

17.420.050 Revision of administrative conditional use permit.

17.420.060 (Repealed)

17.420.070 (Repealed)

17.420.080 Transfer of ownership.

17.420.090 Land use permit binder required.

17.420.100 Effect.

17.420.010 Purpose and applicability.
The purpose of this chapter is to set forth the procedure and decision criteria for administrative conditional use permits. An administrative conditional use permit is a mechanism by which the county may place special conditions on the use or development of property to ensure that new development is compatible with surrounding properties and achieves the intent of the Comprehensive Plan. This chapter applies to each application for an administrative conditional use and to uses formerly permitted after site plan review.

(Ord. 367 (2006) § 110 (part), 2006)

17.420.020 Administrative conditional use permit procedure.
A. The department may approve, approve with conditions, or deny an administrative conditional use permit through a Type II process as set forth in Title 21 of this code.

Administrative Conditional Use Permit (cont.)

B. Applications for an administrative conditional use permit shall contain the information required by the submittal requirements checklist established by the department as set forth in Section 21.04.045.

C. When an application is submitted together with another project permit application, the administrative conditional use permit shall be processed as set forth in Section 21.04.035.

D. Upon a determination of a complete application, the director shall have fourteen calendar days to notify the applicant whether the application shall be reviewed administratively or by the hearing examiner at a scheduled public hearing. A public hearing will be required when a component of development located within a commercial zone involves the conversion of previously undeveloped land which abuts a residential zone. Further, the director may refer any proposal under this section to the hearing examiner for review and decision.

(Ord. 367 (2006) § 110 (part), 2006)

17.420.030 Previous use approval.
Where, prior to December 11, 2006, approval was granted for establishing or conducting a particular use on a particular site through a site plan review process, such previous review and use approvals are by this section declared to be continued as an administrative conditional use permit.

(Ord. 367 (2006) § 110 (part), 2006)

17.420.035 Third party review.
The director may require a third-party review from a technical expert to provide information necessary to support an administrative decision. The expert will be chosen from a list of prequalified experts prepared and kept current by an annual solicitation by the department. The applicant shall select the expert from a list of three names selected by the director from the larger pre-qualified list. The expert will be contracted to the county and report their findings to the director and the applicant. The cost of such report will be the responsibility of the applicant.

(Ord. 415 (2008) § 186, 2008)

17.420.040 Decision criteria – Administrative conditional use permits.
A. The department may approve, approve with conditions, or deny an administrative conditional use permit. Approval or approval with conditions may be granted only when all the following criteria are met:

1. The proposal is consistent with the Comprehensive Plan;
2. The proposal complies with applicable requirements for the use set forth in this code;
3. The proposal is not materially detrimental to existing or future uses or property in the immediate vicinity; and

Administrative Conditional Use Permit (cont.)

4. The proposal is compatible with and incorporates specific features, conditions, or revisions that ensure it responds appropriately to the existing character, appearance, quality or development, and physical characteristics of the subject property and the immediate vicinity.

B. The department may impose conditions to ensure the approval criteria are met.

C. If the approval criteria are not met or conditions cannot be imposed to ensure compliance with the approval criteria, the administrative conditional use permit shall be denied.

(Ord. 415 (2008) § 187, 2008: Ord. 367 (2006) § 110 (part), 2006)

17.420.050 Revision of administrative conditional use permits.

A. Revision of an administrative conditional use permit or of conditions of permit approval is permitted as follows:

1. Minor revisions may be permitted by the department and shall be properly recorded in the official case file. No revision in points of vehicular access to the property shall be approved without prior written concurrence of the director of the department of public works. Minor revisions shall be processed as a Type I application; and
2. Major revisions, including any requested change in permit conditions, shall be processed as a Type II application;

B. Minor and major revisions are defined as follows:

1. A “minor” revision means any proposed change which does not involve substantial alteration of the character of the plan or previous approval, including increases in gross floor area of no more than ten percent; and
2. A “major” revision means any expansion of the lot area covered by the permit or approval, or any proposed change whereby the character of the approved development will be substantially altered. A major revision exists whenever intensity of use is substantially increased, performance standards are reduced below those set forth in the original permit, detrimental impacts on adjacent properties or public rights-of-way are created or increased, including increases in trip generation of more than ten percent, or the site plan design is substantially altered.
3. Any increase in vehicle trip generation shall be reviewed to determine whether the revision is major or minor. The traffic analysis shall be filed by the applicant at the same time as the request for revision. The traffic analysis will follow Traffic Impact Analysis guidelines as set forth in Chapter 20.04.

(Ord. 367 (2006) § 110 (part), 2006)

Hearing Examiner Conditional Use

17.110.325 Hearing examiner.

“Hearing examiner” means a person appointed to hear or review certain land use applications and appeals pursuant to Title 21, Land Use and Development Procedures.

(Ord. 534 (2016) § 7(5) (App. E) (part), 2016)

Performance Based Development

(Excerpt from Chapter 17.450)

Chapter 17.450
PERFORMANCE BASED DEVELOPMENT

Sections:

17.450.010 Purpose.
17.450.020 Authority.
17.450.030 Uses permitted.
17.450.040 Standards and requirements – Residential.
17.450.045 Standards and requirements – Commercial, industrial and institutional.
17.450.050 Decision findings.
17.450.060 Application.
17.450.070 Public hearing and notice.
17.450.100 Effect.
17.450.110 Revision of performance based development.
17.450.120 Revocation of permit.
17.450.130 Land use permit binder required.

17.450.010 Purpose.
To allow flexibility in design and creative site planning, while providing for the orderly development of the county. A performance based development (PBD) is to allow for the use of lot clustering in order to preserve open space, encourage the creation of suitable buffers between differing types of development, facilitate the residential densities allowed by the zone, provide for increased efficiency in the layout of the streets, utilities and other public improvements and to encourage the use of low-impact development techniques and other creative designs for the development of land.

Standard regulations that may be modified through the use of a PBD include:
A. Lot size.

B. Lot width and depth.

C. Structure height (only within designated urban growth areas).

D. Setbacks (front, side and rear yards).

Minimum and maximum densities and allowed uses authorized by the zone shall not be subject to modification through the use of a PBD.

(Ord. 534 (2016) § 7(5) (App. E) (part), 2016)

END

Appendix B: Geotechnical Site Conditions

Geotechnical Report (AESI)

associated earth sciences incorporated

December 7, 2023
Project No. 20230264H001

David Evans and Associates, Inc.
1620 W. Marine View Drive, Suite 200
Everett, Washington 98201

Attention: Brook Jacksha

Subject: Preliminary Existing Conditions Characterization and Hydrogeologic/Geologic Hazard Analysis for Due Diligence
North Kitsap United Property
Portions of Sections 19, 30, and 31, T27N, R2E, W.M.
Kitsap County, Washington

Dear Mr. Jacksha:

Associated Earth Sciences, Inc. (AESI) is pleased to present this report providing the results of our geologic reconnaissance and feasibility-level hydrogeologic/geotechnical assessment for the above-referenced project.

Written authorization for this study was granted by Mr. Brook Jacksha with David Evans and Associates, Inc. Our study was accomplished in general accordance with our proposal dated September 15, 2023. This report has been prepared for the exclusive use of David Evans and Associates, Inc. and their agents, for specific application to this project. Within the limitations of scope, schedule, and budget, our services have been performed in accordance with generally accepted geotechnical engineering practices in effect in this area at the time our report was prepared. No other warranty, express or implied, is made. It must be understood that no recommendations or engineering design can yield a guarantee of stable slopes. Our observations, findings, and opinions are a means to identify and reduce the inherent risks of the owner. Our current scope includes visual reconnaissance and a limited subsurface exploration.

PROJECT UNDERSTANDING

The subject site consists of approximately 400+ acres located centrally between the communities of Poulsbo, Kingston, and Port Gamble in unincorporated Kitsap County (Figure 1). The site has a Rural Wooded Zoning overlay that allows for 1 residential unit per 20 acres. We understand that Raydient has applied for a Comprehensive Plan Amendment to allow for Rural Residential Zoning along with

5 acres of highway-type commercial and a community facility. The proposal would provide an enormous community benefit through partnership with the YMCA to build a community center and with the local Rotarians for an athletic field complex, along with open space and trails.

Specific project elements under consideration include:

- 80 residential lots
- 5 acres of highway commercial
- 1 large community facility
- Public water (existing onsite)
- Individual drainfields for residential and highway commercial
- Large on-site septic system (LOSS)for community facility
- 100 acres to 200 acres of permanent open space potentially contributed to the existing Port Gamble Heritage Forest
- Permanent trail corridors

The purpose of this study was to identify key geotechnical issues associated with site development for planning purposes. Our study included reviewing available geologic literature, site reconnaissance, excavating 14 exploration pits, and performing geologic studies to assess the type, thickness, distribution, and physical properties of the subsurface sediments and groundwater. This report summarizes our fieldwork and offers preliminary recommendations based on our present understanding of the plans for the property. We recommend that AESI review the recommendations presented in this report and revise them, if needed, when the project plans have been determined.

The site location is shown on the "Vicinity Map," Figure 1. A map of Light Detection and Ranging (LIDAR)-based topography is shown on Figure 2. A regional geomorphology map is shown on Figure 3. The approximate locations of the explorations completed for this study are shown on Figure 4. A schematic hydrogeologic cross-section is shown on Figure 5. Critical area maps are included as Figure 6, Figure 7, and Figure 8. Copies of the exploration logs are included in Appendix A.

KEY GEOTECHNICAL AND HYDROGEOLOGIC CONSIDERATIONS

AESI conducted an initial site visit on September 9, 2023. Using observations collected during this site visit and subsequent review of mapped geologic and groundwater conditions, we developed key geotechnical and hydrogeological project elements to address during this Due Diligence phase which were outlined in our proposal as follows:

- Presenting complex geologic and hydrogeologic conditions to the owner, the design team, and for presentation to the general public.

- Critical aquifer recharge areas and stormwater management opportunities: both are defined by depth to water table, soil characteristics, presence of flat terrain, and presence of permeable surficial geology. We understand that on-site stormwater infiltration and wastewater (individual and LOSS) systems will be a part of the proposal, so context for the mapped critical aquifer recharge areas (CARAs) onsite is important to document impacts and designing mitigation to protect groundwater quality.

- Streams and remnant drainages: AESI can relate current geomorphology to shallow and deep groundwater conditions and post-glacial processes, to document the subsurface "plumbing" that occurs onsite and the connection between groundwater and surface water. It may be that the hydrology that formed a portion of the ravines is likely a result of immediate post-glacial recession and does not exist currently.

- Geologic hazards: a landslide complex is mapped on the site as shown on Figure 3 "Geomorphology." Exploration pits were completed in the mapped landslide deposit to understand the presence and thickness of surficial sediments and implications for site development.

To assess these geotechnical and hydrogeological project elements we first conducted desktop review of available documents focusing on critical areas as defined by the Kitsap County Code, available geological maps, and LIDAR-based topographic maps. We then conducted a site reconnaissance followed by a limited subsurface exploration to evaluate our interpretations of the site conditions from the desktop review focusing on the site geology and groundwater. A summary of our conclusions are provided in a later section of this report.

CRITICAL AREAS REVIEW

Critical areas are described in Chapter 19 of the Kitsap County Code and geologically hazardous areas are noted in section 19.400. We have reviewed the code for geologic hazards on the site and have identified the site as having Erosion hazards, Landslide Hazards, Seismic Hazards, and within a Critical Aquifer Recharge Area.

Erosion Hazard Areas

According to the Kitsap County Code, Erosion hazard areas are described as the following:

19.400.420 Erosion hazard areas

A. General. Erosion hazard areas include areas likely to become unstable, such as bluffs, steep slopes, and areas with unconsolidated soils. These include coastal erosion-prone areas and channel migration zones, and may be inclusive of landslide areas.

B. Potential Erosion Hazard Areas. Potential erosion hazard areas are depicted on the Kitsap County erosion hazards map. These potential erosion hazard areas are identified using the following criteria:

1. *Areas of High Erosion Hazard.*
    a. *Channel migration zones, as mapped by the Washington Department of Ecology;*
    b. *Coastal erosion with a sediment source rating value of 0.6 to 1.0, per the Prioritization Analysis of Sediment Sources in Kitsap County;*
2. *Areas of Moderate Erosion Hazard.*
    a. *Slopes fifteen percent or greater, not classified as I, U, UOS, or URS, with soils classified by the U.S. Department of Agriculture NRCS as "highly erodible" or "potentially highly erodible";*
    b. *Coastal erosion with a sediment source rating value of 0.3 to 0.6 per the Prioritization Analysis of Sediment Sources in Kitsap County.*

C. Erosion Hazard Indicators. The project proponents are responsible for determining actual presence and location of an erosion hazard area. These areas may be indicated by, but not limited to, the following:

1. *Any of the above criteria currently identified in subsection (B) of this section or amended hereafter.*
2. *Coastal Erosion Hazards.*
    a. *Areas with active bluff retreat that exhibit continuing sloughing or calving of bluff sediments, resulting in a vertical or steep bluff face with little or no vegetation;*
    b. *Lands located directly adjacent to freshwater or marine waters that are identified as regressing, retreating, or potentially unstable as a result of undercutting by wave action or bluff erosion. The limits of the active shoreline erosion hazard area shall extend landward to include that land area that is calculated, based on the rate of regression, to be subject to erosion processes within the next ten-year time period.*
3. *Channel Migration Zones. The lateral extent that a river or stream is expected to migrate over time due to hydrologically and geomorphologically related processes, as indicated by historic record, geologic character, and evidence of past migration over the past one hundred years.*

<u>Erosion Hazard Areas Review</u>

We reviewed the following published critical areas map as part of our research:

- *Geologically Hazardous Map, Erosion Hazards, Kitsap County Washington* (Kitsap County Department of Community Development), Product of Kitsap County Geographic Information System, dated February 23, 2017.

According to the above-referenced critical areas map and as shown on Figure 6, "Critical Areas Erosion," the site exhibits moderate to high hazards areas with slope gradients of fifteen percent or greater with soils classified by the U.S. Department of Agricultural NRCS as "highly erodible" or "potentially highly erodible." The illustrated hazard areas represent approximate locations and should be considered guidelines that generally identify the potential for erosion hazard. The actual risk should be evaluated and the critical areas ordinance should be consulted and applied on a site-specific basis.

With proper implementation of a well thought out Temporary Erosion and Sedimentation Control plan and by field-adjusting appropriate erosion mitigation throughout development, the potential adverse impacts from erosion hazards on the project may be mitigated.

Landslide Hazard Area

According to the Kitsap County Code, landslide hazard areas are described as the following:

19.400.425 Landslide hazard areas.

A. General. Landslide hazard areas include those areas at risk of mass movement due to a combination of geologic, topographic, and hydrologic factors, such as bedrock, soil, slope (gradient), slope aspect, structure, hydrology, and other factors. Landslide hazards are further classified as either shallow or deep-seated.

B. Potential Landslide Hazard Areas. Potential landslide hazard areas are depicted on the Kitsap County landslide hazards map. These potential landslide hazard areas are identified using the following criteria:

1. *Areas of High Landslide Hazard.*
    a. *Shallow landslide areas with factor of safety (FS) of 0.5 to 1.5. FS is a method (Harp, 2006) for determining slope stability based on the angle of the slope from LiDAR elevation data and strength parameters.*
    b. *Areas with slopes greater to or equal to 30 percent in grade and deemed by a qualified geologist or geotechnical engineer to meet the criteria of U, UOS, or URS.*
    c. *All deep-seated landslide areas.*
2. *Areas of Moderate Landslide Hazard.*
    a. *Shallow landslide areas with FS of 1.5 to 2.5.*
    b. *Slopes of fifteen percent or greater and not classified as I, U, UOS, or URS, with soils classified by the U.S. Department of Agriculture NRCS as "highly erodible" or "potentially highly erodible"; or slopes of fifteen percent or greater with springs or groundwater seepage.*
    c. *Slopes in all areas equal to or greater than forty percent.*

C. Landslide Hazard Indicators. Project proponents are responsible for determining the actual presence and location of a landslide hazard area. These areas may be indicated by, but not limited to, the following:

1. *Any of the above criteria currently identified in subsection (B) of this section or amended hereafter;*
2. *Areas of historic failures, including areas of unstable, old and recent landslides or landslide debris within a head scarp;*
3. *Areas within active bluff retreat that exhibit continuing sloughing or calving of bluff sediments, resulting in a vertical or steep bluff face with little or no vegetation;*
4. *Hillsides that intersect geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock;*
5. *Slopes that are parallel or sub-parallel to planes of weakness, such as bedding planes, joint systems, and fault planes in subsurface materials;*
6. *Areas exhibiting geomorphological features indicative of past slope failure, such as hummocky ground, back-rotated benches on slopes, etc.;*
7. *Areas with tension cracks or ground fractures along and/or near the edge of the top of a bluff or ravine;*
8. *Areas with structures that exhibit structural damage such as settling and cracking of building foundations or separation of steps or porch from a main structure that is located near the edge of a bluff or ravine;*
9. *The occurrence of toppling, leaning, bowed, or jackstrawed trees that are caused by disruptions of ground surface by active movement;*
10. *Areas with slopes containing soft or liquefiable soils;*

11. Areas where gullying and surface erosion have caused dissection of the bluff edge or slope face as a result of drainage or discharge from pipes, culverts, ditches, and natural drainage courses;
12. Areas where seeps, springs or vegetative indicators of a shallow groundwater table are observed on or adjacent to the face of the slope;
13. Areas that include alluvial or colluvial fans located at the base of steep slopes and drainages;
14. Areas within two hundred feet of areas classified as U, UOS, or URS.

Landslide Hazard Area Review

We reviewed the following published critical areas map as part of our research:

- *Geologically Hazardous Map, Landslide Hazards, Kitsap County Washington* (Kitsap County Department of Community Development), Product of Kitsap County Geographic Information System, dated February 23, 2017.

According to the above-referenced critical areas map and as shown on Figure 7, "Critical Areas Landslide," the site exhibits moderate hazard areas for the potential for both deep landslide hazards and shallow landslide hazards with slope gradients between 15 to 30 percent containing soils classified by the U.S. Department of Agricultural NRCS as "highly erodible" or "potentially highly erodible." The illustrated hazard areas represent approximate locations and should be considered guidelines that generally identify the potential for landslide hazards. The actual risk and the presence of other areas that meet the steepness requirements based upon actual survey should be evaluated and the critical areas ordinance should be consulted and applied on a site-specific basis.

A mapped landslide is present on the site as shown on the geomorphology map (Figure 3) and per 19.400.425C2 and C6 is considered a landslide hazard area. Our assessment of this mapped landslide is discussed later in this report.

Seismic Hazard Areas

According to the Kitsap County Code, seismic hazard areas are described as the following:

19.400.430 Seismic hazard areas.

A. General. Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake-induced land sliding, seismic ground shaking, dynamic settlement, fault rupture, soil liquefaction, or flooding caused by tsunamis and seiches.
B. Potential Seismic Hazard Areas. Potential seismic hazard areas are depicted on the Kitsap County seismic hazards map. These potential seismic hazard areas are identified using the following criteria:
1. Areas of high seismic hazard are those areas with faults that have evidence of rupture at the ground surface.
2. Areas of moderate seismic hazard.
a. Areas susceptible to seismically induced soil liquefaction, such as hydric soils as identified by the NRCS, and areas that have been filled to make a site more suitable for development. This may include former wetlands that have been covered with fill.
b. Areas identified as Seismic Site Class D, E, and F.
c. Faults without recognized evidence of rupture at the ground surface.

C. Seismic Hazard Indicators. Project proponents are responsible for determining actual presence and location of a seismic hazard area. These areas may be indicated by, but not limited to, the following:

1. Any of the above criteria currently identified in subsection (B) of this section or amended hereafter;

2. Areas identified as potential landslide areas, including slopes that can become unstable as a result of strong ground shaking, even though these areas may be stable under non-seismic conditions;

3. Areas identified as high and moderate liquefaction and dynamic settlement hazard areas by the Washington Department of Natural Resources, including areas underlain by unconsolidated sandy or silt soils and a shallow groundwater table (static groundwater depth less than thirty feet) capable of liquefying in response to earthquake shaking. Dynamic settlement hazard areas are those underlain by more than ten feet of loose or soft soil not susceptible to liquefaction, but that could result in vertical settlement of the ground surface in response to earthquake shaking;

4. Tsunami and seiche hazard areas. Generally, these are areas that are adjacent to Puget Sound marine waters and lakes that are designated as "A" or "V" zones as identified by FEMA and depicted on the FEMA maps or other maps adopted by Kitsap County;

5. Fault rupture hazard areas, including areas where displacement (movement up, down, or laterally) of the ground surface has occurred during past earthquake(s) in the Holocene Epoch, and areas adjacent that may be potentially subject to ground surface displacement in a future earthquake.

Based upon the recent site work it is inconclusive as to whether seismic hazards exist in the site, and further must be performed to determine the depth to the water table and the potential for liquefaction.

Critical Aquifer Recharge Areas

According to the Kitsap County Code, critical aquifer recharge areas are described as the following:

19.600.610 Critical aquifer recharge area categories.

As defined at Section 19.150.210, "critical aquifer recharge areas" means those land areas that contain hydrogeologic conditions that facilitate aquifer recharge and/or transmit contaminants to an underlying aquifer. Critical aquifer recharge areas under this title may be established based on general criteria, specifically designated due to special circumstances, or based on scientific studies and mapping efforts. Factors considered in the identification of critical aquifer recharge areas include depth to water table, presence of highly permeable soils (specifically Group A hydrologic soils), presence of flat terrain, and the presence of more permeable surficial geology.

A. Category I Critical Aquifer Recharge Areas. Category I critical aquifer recharge areas are those areas where the potential for certain land use activities to adversely affect groundwater is high. Category I critical aquifer recharge areas include:

1. Areas inside the five-year time of travel zone for Group A water system wells, calculated in accordance with the Washington State Wellhead Protection Program.

2. Areas inside the ten-year time of travel zones in wellhead protection areas when the well draws its water from an aquifer that is at or above sea level and is overlain by permeable soils without any underlying protective impermeable layer.

3. Areas identified as significant recharge areas due to special circumstances or identified in accordance with WAC 365-190-100(4) as aquifer areas of significant potable water supply with susceptibility to groundwater contamination, including but not limited to the following:

a. Hansville Significant Recharge Area. The Hansville aquifer is a significant potable water supply that is highly susceptible to the introduction of pollutants. Additional information regarding this aquifer is available from the Kitsap public utility district.

b. Seabeck Significant Recharge Area. The Seabeck aquifer is a significant potable water supply that is being developed for use in central and north Kitsap County. Additional information regarding this aquifer is available from the Kitsap public utility district.

c. Island Lake Significant Recharge Area. The Island Lake aquifer is a significant potable water supply for the Silverdale area. Additional information regarding this aquifer is available from the Silverdale water district.

d. Gorst Significant Recharge Area. Aquifers in the Gorst basin are highly susceptible to the introduction of pollutants and provide significant potable water supplies for the city of Bremerton.

e. Poulsbo Significant Recharge Area. The Poulsbo aquifer is highly susceptible to the introduction of pollutants and provides a significant potable water supply for the Kitsap public utility district and city of Poulsbo.

4. The department may add, reclassify or remove Category I critical aquifer recharge areas based on additional information about areas of significant potable water supply with susceptibility to groundwater contamination or supply reduction, or based on changes to sole source aquifers or wellhead protection areas as identified in wellhead protection programs.

B. Category II Critical Aquifer Recharge Areas. Category II critical aquifer recharge areas are areas that provide recharge effects to aquifers that are current or potentially will become potable water supplies and are vulnerable to contamination based on the type of land use activity. The general location of these areas is available on the Kitsap County geographic information system. Category II critical aquifer recharge areas include:

1. Highly permeable soils (Group A hydrologic soils). The general location and characteristics of Group A hydrologic soils in Kitsap County are given in the Soil Survey of Kitsap County by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). The soil survey information is available on the Kitsap County geographic information system (GIS).

2. Areas above shallow aquifers or surface areas that are separated from the underlying aquifers by an impermeable layer that provides adequate protection from contamination to the aquifer(s) below. The general location of shallow aquifers in Kitsap County is based upon the professional judgment of licensed hydrogeologists with knowledge of the area. The location of shallow aquifers is available on the Kitsap County geographic information system (GIS).

3. Areas above the Vashon aquifer. Surface areas above the Vashon aquifer that are not separated from the underlying aquifers by a poorly permeable layer that provides adequate protection to preclude the proposed land use from contaminating the Vashon aquifer below. Vashon aquifers in Kitsap County are typically mapped as "Qva" (Vashon advance aquifer) or "Qvr" (Vashon recessional aquifer) on geologic maps. Best available information concerning the location of Vashon aquifers is available on the Kitsap County geographic information system (GIS).

4. Areas with high concentration of potable water supply wells.

5. The department may add, reclassify or remove Category II critical aquifer recharge areas based on additional information about areas of potential potable water supply with susceptibility to groundwater contamination or supply reduction, or based on changes to sole source aquifers or wellhead protection areas as identified in wellhead protection programs.

Critical Aquifer Recharge Areas Review

Kitsap County Code 19.610 classifies critical aquifer recharge areas into two categories, Category I and Category II, based on the potential of land use activities to adversely affect groundwater. Factors considered in the identification of critical aquifer recharge areas include the depth to water table, soil characteristics, presence of flat terrain, and the presence of permeable surficial geology. We reviewed the Kitsap County Best Available Science (BAS) Study for CARAs. This study mapped a

Class II CARA that encompasses the entire site (see Figure 8). A number of small water supply systems are present within a ¼ mile of the project to the southwest and east as shown on Figure 8.

Development in critical aquifer recharge areas requires stormwater best management practices (BMPs) in accordance with Kitsap County Code Title 12, Stormwater Drainage. Further exploration including the installation of groundwater monitoring wells and submittal of a hydrogeological report may be required for a large on-site septic system or for multiple small on-site septic systems. Project hydrogeology and local wells are discussed in more detail in the "Hydrogeology" section of this report.

PROJECT TOPOGRAPHY, GEOLOGY, AND GEOMORPHOLOGY

Our on-site review, reconnaissance, and explorations were focused on the southern half of the project area based upon our conversations with the design team, the locations of critical infrastructure, and the feasibility timeline. The southern half contains potential locations for a commercial area and stormwater management/infiltration facilities. We also focused further explorations in the vicinity of the landslide feature identified on Figure 3, "Geomorphology."

Topography

As shown on the attached LIDAR-based topographic map of the property (Figure 2) and observed during our site reconnaissance, the project site contains significant topographic relief formed by glaciation of the region. The topography consists of three general terrains: (1) higher elevation gentle to moderate sloping upland area that generally slopes down toward the east and southeast; (2) a band of moderate to steep slopes located in the central portion of the site that is dissected by several steep-sided ravines; and (3) the lower elevation eastern portion of the site below these steep slope areas and adjacent to SR307 (also called Bond Road). Gamble Creek is located 500 to 800 feet east of SR307. Several streams are shown onsite on the County GIS maps within the site ravine areas; however, no evidence of surface flow was identified.

The site is accessed via numerous logging roads and bike trails that can be driven or ridden.

Site Geology

We reviewed the following published geologic maps as part of our research:

- *Geologic Map Units, Kitsap County Washington* (Kitsap County Department of Community Development), Product of Kitsap County Geographic Information System, dated April 11, 2017.
- *Preliminary Geomorphic Map of the Kitsap Peninsula, Washington* (U.S. Geological Survey) by R.A. Haugerud, 2009, Open-Field Report OF-2009-1033, 1:36,000.

- *Geology and Ground-Water Resources of Kitsap County, Washington*: U.S. Geological Survey, Water-Supply Paper 1413 by J.E. Sceva, 1957.
- *Water Resources and Geology of the Kitsap Peninsula and Certain Adjacent Islands*: Washington Division of Water Resources, Water-Supply Bulletin 18 by M.E. Garling, and Dee Molenaar, 1965.

We also reviewed NRCS soils mapping. The geologic mapping is conducted at a more regional scale than the soils mapping, and indicates that most of the site above about elevation 200 feet is mapped as glacial till, while the remainder of the site is mapped as glacial outwash. Our limited subsurface exploration did not encounter glacial till at the site. Detailed descriptions of these units are described in the "Geologic Unit" section of this report.

Geomorphology and Landslide Mapping

A portion of the *Preliminary Geomorphic Map of the Kitsap Peninsula*, *Washington*: U.S. Geological Survey, Open-File Report OF-2009-1033, scale 1:36,000 is included as Figure 3, "Geomorphology," and provides an illustration of the generalized surface based upon LIDAR and topographic features. The map indicates terrain that is the result of the last glaciation in the Puget Sound. The geomorphic map shows the surficial morphology is dominated by pock-marked glaciated surfaces. The pock-marked glaciated surfaces are consistent with a kame-kettle topography. Hillslope morphology is generally dominated by colluvium (small incoherent deposits from upper slopes) and can include mass movement processes, such as debris flows or shallow landslides. Kame-kettle channel features were mapped on the northern portion of the project area. One large area of potentially deep-seated landslides was mapped in the southern portion of the site, indicated by "ls" on the map. Hillslope morphology is also present within incised ravines. It is important to note that the map is generated from review of LIDAR images and topographic mapping of the area. Features that may indicate landslides need to be studied further onsite to verify their existence. Explorations were conducted in the mapped landslide deposit. In our opinion, the mapped landslide complex area is shallow and inactive, as discussed later in this report.

Site Reconnaissance

AESI performed a limited geologic reconnaissance of the project area on October 10, 2023. The reconnaissance was limited by the presence of dense undergrowth, forest management disturbance, and areas of dense forest with various types of trees. Select site features observed and stations are identified on Figure 4, "Existing Site and Exploration Plan." The following was noted during our reconnaissance:

- We circumnavigated the central and southern regions of the project site using trails and existing access roads. Within this portion of the site, we observed the ground surface to be undulating with generally shallow sloping topography from west to east with some steep ravines in the western region of the drainages.

- We observed mapped ravines and associated culverts extending from the central region to the southern boundary of the site. During our reconnaissance, no groundwater or evidence to suggest the existence of recent surface flow were observed at the time of our reconnaissance (i.e., lack of depositional features, erosional features, and/or vegetation that favors wet soil conditions). The only mapped drainage that was observed to contain surface flow was Port Gamble Creek located east of the project site.

- Within the area of the mapped landslide complex shown on Figure 3, "Geomorphology," we observed hummocky terrain, trees with "pistol-butt" characteristics, and steep bowl-shaped terrain with a crest-like topography near the top of slope. We interpret the "pistol butt" to be consistent with shallow soil creep, common in sloping terrain. However, no leaning trees, open cracks or fissures, or emergent groundwater were observed. Therefore, based upon the surface features observed there were no conditions that would be associated with current large-scale movement of the slope.

Subsurface Exploration

Our field study included a reconnaissance of the site and excavation of 14 exploration pits to gain subsurface information about the site. The various types of sediments, as well as the depths where characteristics of the sediments changed, are indicated on the exploration logs presented in Appendix A. The depths indicated on the logs where conditions changed may represent gradational variations between sediment types in the field. The approximate locations and depths explored of the exploration pits are shown on Figure 4, "Existing Site and Exploration Plan."

Exploration Pits

The exploration pits (EP-1 through EP-14) were excavated in October 2023 using a John Deere 160G track-mounted excavator operated by Seton Construction contracted through Raydient. The pits permitted direct, visual observation of subsurface conditions. Materials encountered in the exploration pits were studied and classified in the field by an engineering geologist from our firm. The exploration pits were backfilled after examination and logging. Samples collected from the exploration pits were classified in the field and representative portions placed in watertight containers. The samples were then transported to our laboratory for further visual classification.

We were limited at this time to 2 days of exploration to expedite the work and meet the project schedule. We generally focused the exploration in potential infiltration areas and the mapped landslide area.

Subsurface Conditions

Our interpretation of surface and subsurface geologic/hydrogeologic conditions in the project area is based on a review of the available geologic and hydrogeologic information, a brief reconnaissance,

targeted exploration pits, and our experience on similar projects. We also reviewed a limited number of water well reports from the Washington State Department of Ecology (Ecology). Detailed review of water well logs outside the study area was beyond the current scope of this project. A schematic hydrogeologic cross-section illustrating conceptual geologic conditions for a portion of the site based upon our observations is presented on Figure 5. The location of Cross-Section A-A' is shown on Figure 4. The following section presents more detailed subsurface information organized from the shallowest (youngest) to the deepest (oldest) sediment types. Copies of the exploration logs are included in Appendix A.

Geologic Unit Summary

Colluvium (Qco): Near-surface sediments encountered within EP-5, EP-12, EP-13, and EP-14 consisted of loose to medium dense yellow to light brown to grayish brown with gray mottles fine- to coarse-grained sands to sandy silt with gravel and cobble. Moisture varies from slightly moist to moist and no groundwater was observed at the time of our exploration. Colluvial sediments included variable abundance of rootlets and roots up to 0.5-inch in diameter, fragments of buried organics, pockets of sandy silt with gravel, and a chaotic texture. Where observed these materials extended to depths of about 4.5 feet below ground surface and display moderate weathering and trace pinhole voids. The lower contact of this unit typically displays an undulating oxidized contact with the glacial outwash deposits below.

This unit is interpreted to be landslide runout deposits. Due to the thin nature of the unit and absence of evidence to suggest recent large-scale movement (i.e., leaning trees and cracks or fissures emergent groundwater), we believe the landslide is ancient, consistent with the period of glacial retreat, and is inactive. However, further study beyond feasibility level is recommended to confirm.

Vashon Recessional Outwash (Qvr) and Vashon Ice-Contact Deposits (Qvi): Geologic and geomorphic mapping includes both recessional outwash and coarse-grained kame ice-contact deposits in the site vicinity. For purposes of this report, we have grouped the loose sandy sediments within the Vashon recessional outwash. Recessional outwash sediments were encountered within EP-1, EP-4, EP-5, EP-6, EP-8, and EP-11. These sediments were observed to be loose to medium dense, light brown to gray fine- to medium-grained sand with silt and gravel with occasional boulders. A large truck-sized glacial erratic boulder was observed onsite. Moisture contents typically range from dry to slightly moist and no groundwater was observed at the time of our exploration. Where observed these recessional outwash materials displayed a massive structure with occasional faint laminations, thin oxidized lenses of sandy silt to very fine-grained sand, and thin beds of fine- to coarse-grained sand and gravel. The upper 4 feet is typically moderately weathered. During excavation, these materials displayed minor to heavy caving. We interpret these sediments to be representative of material deposited by meltwater streams flowing off of the retreating glacial ice during the latter portion of the Vashon Stade of the Fraser Glaciation, approximately 12,000 years ago. Recessional outwash if not saturated can be a suitable receptor horizon for infiltration. Recessional outwash on

upland surfaces can commonly be underlain by Vashon lodgement till, restricting infiltration capacity.

Vashon Lodgement Till (Qvt): Although not encountered during our site reconnaissance or exploration pits, Vashon lodgement till may be present, particularly in the higher elevation areas of the site. Vashon lodgement till is generally comprised of low-permeability silty fine sand with few gravel that has been consolidated by the weight of an ice sheet. Till is commonly referred to as "hardpan," and is typically 10 to 30 feet thick, and rarely more than 50 feet thick. The till generally acts as an aquitard or confining unit, and is not suitable for infiltration facilities unless a significant lateral dispersion area is present.

Vashon Advance Outwash (Qva): Advance outwash sediments were encountered within EP-2, EP-3, EP-7, EP-9, EP-10, EP-12, and EP-13. These sediments were observed to be medium dense to dense yellowish brown to dark brownish gray fine- to medium-grained sand with silt, gravel, and cobble. Moisture contents ranged from dry to moist with an increase with depth. No groundwater was observed during our exploration. Where observed advance outwash sediments were massive with occasional laminations to thin beds approximately 1-inch thick of varying sand grain size, laminated silt fragments up to 6 inches in diameter with oxidized rims, discontinuous oxidized lenses, and rare boulders up to approximately 24 inches in diameter. Vashon advance outwash was deposited by meltwater streams from an advancing ice sheet during the Vashon Stade of the Fraser Glaciation and was glacially overridden and compacted. Relatively thick advance outwash sand deposits are interpreted to be present beneath the upland and can be excellent receptor horizons for treated stormwater and treated wastewater. The advance outwash on the upland may also contain a thin aquifer as illustrated on the Schematic Hydrogeologic Cross-Section A-A', Figure 5.

Pre-Fraser Deposits (Qpf): Sediments encountered within EP-1, EP-2, EP-4, EP-7, EP-8, and EP-14 at depths ranging from 8 to 14 feet below existing grade consisted of medium dense to dense dark grayish brown fine- to coarse-grained sand to silty sand with gravels and cobbles. These sediments included occasional fine-grained sand laminations, thin oxidized beds, lenses of increased gravel and cobble abundance, and gray silt clasts with laminations. Pre-Fraser-age sediments can include a variety of depositional environments, including in a low-energy lacustrine and moderate- to higher-energy fluvial systems. The pre-Fraser-age sediments have been overridden by glacial ice during at least one subsequent glaciation. Where encountered, the pre-Fraser sediments extended to depths of approximately 15 to 18 feet and beyond the maximum depth explored.

Hydrogeology

Groundwater conditions and aquifer properties are an important consideration for siting of stormwater infiltration and wastewater treatment facilities. Stormwater infiltration and on-site wastewater disposal act to increase groundwater recharge. Increases in groundwater recharge are beneficial to stream baseflow and for maintaining groundwater levels, but the effects of increasing groundwater recharge can include groundwater mounding and potentially groundwater loading in

areas of geologic instability. This section contains an overview of hydrogeologic conditions and for purposes of due-diligence characterization, describes three principal groundwater "regimes" and two intervening aquitard units in the project area.

Regional Hydrogeologic Studies

Regional hydrogeology in the site vicinity is primarily described in the following reports:

- *Geology and Ground-water Resources of Kitsap County, Washington*, U.S. Geological Survey Water-Supply Paper 1413, 1957: Prepared by J.E. Sceva, Tacoma, Washington.
- *Water Resources and Geology of the Kitsap Peninsula and Certain Adjacent Islands*, Washington State Department of Conservation, Division of Water Resources, 1965, Water Supply Bulletin No. 18 (including Plates 1 to 5): Prepared by M.E. Garling and Dee Molenaar, Olympia, Washington.
- *Kitsap County Initial Basin Assessment*, Open File Report 97-04, October 1997: Prepared by Kitsap Public Utility District in association with Economic and Engineering Services, Inc., Pacific Groundwater Group, Robinson and Noble, Inc., and KCM, Inc.: Prepared in cooperation with Ecology, Northwest Regional office, Bellevue Washington.
- *Hydrogeologic Framework, Groundwater Movement, and Water Budget of the Kitsap Peninsula, West-Central Washington*, U.S. Geological Survey Scientific Investigations Report 2014-5106, 2014: Prepared by Wendy B. Welch, Lonna M. Frans, and Theresa D. Olsen, Tacoma, Washington, in cooperation with the Kitsap Public Utility District.
- *Numeric Simulation of the Groundwater Flow System of the Kitsap Peninsula, West-Central Washington*, U.S. Geological Survey Scientific Investigations Report 2016-5052, 2014: Prepared by Lonna M. Frans and Theresa D. Olsen, Tacoma, Washington, in cooperation with the Kitsap Public Utility District No. 1 of Kitsap County.

The *Kitsap County Initial Basin Assessment* (KPUD, 1997) builds on the fundamental hydrogeologic field data contained in Sceva (1957) and Garling and Molenaar (1965) and includes more local geologic and hydrogeologic information. The *Hydrogeologic Framework, Groundwater Movement, and Water Budget of the Kitsap Peninsula, West-Central Washington* (Welch et al., 2014) compiled significant hydrogeologic and water system data information into numerical databases and GIS software. However, the scale of the study necessitated generalizing some of the detail contained in the previous studies and is less specific.

Project Hydrogeology and Nearby Water Supply Wells

No groundwater was observed in our explorations and no evidence of groundwater springs was observed within the on-site ravines at the time of exploration and site reconnaissance. Higher moisture contents in the bottom of the exploration pits at the lower elevations were observed, possibly indicative that groundwater may be just out of reach of the excavator.

Although not encountered in our explorations and site reconnaissance, for purposes of due-diligence characterization, we describe the following principal groundwater "regimes" in the project area: (1) intermittent interflow, (2) perched upland aquifer (at base of Vashon advance outwash), (3) deeper aquifer systems (contained in the pre-Fraser sediments), and (4) valley aquifer (Recent alluvial and Vashon recessional outwash). Hydrogeologic conditions are illustrated on Cross-Section A-A' (Figure 5). It should be noted that the presence and depth of groundwater may vary in response to such factors as changes in season, precipitation, and land use. Our work was conducted in October when groundwater levels are near seasonal lows.

Interflow: In upland areas, perched groundwater occurs when surface water infiltrates down through relatively permeable soils, such as thin Vashon recessional outwash and the weathered portions of the glacial till, and becomes trapped or "perched" atop a comparatively impermeable barrier, such as unweathered till horizons or silty outwash horizons. This zone of shallow perched groundwater when formed in weathered till sediments is commonly referred to as the "interflow zone." The perched groundwater can only slowly penetrate the underlying low-permeability zones. Much of the ground observed during site reconnaissance and in our explorations was dry and sandy, and it appears that very little classic "interflow" is present onsite. Off-site areas west of the site may contribute interflow to the site, which then infiltrates into the sandy outwash sediments and recharges deeper groundwater.

Perched Upland Aquifer: A thin unconfined aquifer within the Vashon-age advance outwash is interpreted to be present beneath the upland, perched on either fine-grained basal bed of the Vashon advance outwash or on pre-Fraser-age sediments, as illustrated on Cross-Section A-A' (Figure 5). The Vashon advance aquifer corresponds with aquifer unit Qg1a in the Initial Basin Assessment (KUPD, 1997) and Qva in the Kitsap Peninsula Framework (Welch et al., 2014). The advance outwash aquifer typically has fine-grained sediments at the base which grade upward into coarser deposits. The advance outwash aquifer is typically an unconfined aquifer. Very little information was readily available on groundwater within the Vashon advance outwash in the project vicinity. A few domestic water wells south of the site are interpreted to be completed in Vashon advance outwash based on the driller's logs. Recharge to the upland aquifer is from downward migration of precipitation through the lodgement till, where present, or from direct precipitation or infiltration of surface water runoff where the till is absent. Discharge occurs in the form of downward seepage to underlying aquifers in the older undifferentiated pre-Fraser-age sediments, from withdrawal by domestic water supply wells, and as seeps and springs where the advance outwash aquifer has been exposed on slopes and bluffs. We note that no indications of groundwater springs or seeps were observed on the southern portion of the site during site reconnaissance. We have inferred a groundwater elevation on the geologic cross-section on Figure 5 based upon limited review of water well logs offsite to the south. To assist with site feasibility and design, groundwater level monitoring wells should be installed to better characterize the extent and seasonal variation.

Deeper Aquifers: Groundwater is present at depth beneath the upland in pre-Fraser-age sediments, as shown on the geologic cross-section on Figure 5, based upon limited review of water well logs

offsite to the south and information present in the regional documents. The upper portion of the pre-Fraser-age groundwater is hydraulically connected to the Valley aquifer in the site vicinity. At least two deeper aquifers in the pre-Fraser-age sediments are documented during review of area water wells, including two Kitsap PUD wells, which indicate significant groundwater is present between about elevation +100 and -220 feet. The data also indicate the presence of a much deeper aquifer that is separated from the near-surface regional water table that contributes to Gamble Creek.

Valley Aquifer: Groundwater is present within the Gamble Creek valley east of the site as shown on Figure 5 and is contained within the Recent alluvial and Vashon recessional outwash. The Valley aquifer is recharged by direct precipitation, seasonally by surface water infiltration in losing reaches of ditches and channels that cross the valley floor, and by lateral hydraulic connections with deeper aquifers.

Groundwater - Surface Water Interaction

Stream channels and wetlands are surface water features which interact directly with groundwater. Three general processes occur: (1) the surface water features gain water from inflowing groundwater, (2) the surface water features lose water to groundwater by outflow through the streambed or depression sidewalls or base, or (3) the systems vary between gaining water and losing water either seasonally or spatially, in particular for streams as the streambed intersects different geologic units or groundwater discharge zones.

Wetlands also receive water from groundwater, provide a source of recharge to groundwater, or both. Wetlands located on the upland surfaces generally result from interflow or direct runoff collecting in depressions between till ridges, and can be an expression of a very shallow perched water table in topographically low areas on shallow, low-permeability sediments.

No streams or large wetland features were observed onsite. It is our interpretation that the on-site ravines are the result of a paleo-drainage system formed during or immediately following deglaciation of the area approximately 10,000 to 11,000 years ago. This finding is consistent with (1) the lack of headwater wetland areas and supporting hydrology, (2) the presence of permeable sand deposits that allow for vertical infiltration of rainfall, (3) no evidence of naturally occurring stream channels, and (4) the ravines terminate well above modern base levels.

CONCLUSIONS

Mapped Landslide Review

U.S. Geological Survey (USGS) geomorphic map (Figure 3) depicts a large, deep-seated landslide in the center of the southern portion of the site. It should be noted that the USGS landslide mapping

is based on a desktop review of LIDAR and aerial imagery and the presence of the mapped landslides was not field-verified by USGS. The feature is located in the moderately to steeply sloping areas in the southeastern portion of the project site. The extent of the mapped landslide feature originates at mid-slope and has a runout area that extends to the eastern limits of the property.

During our site reconnaissance of the mapped landslide feature, surface observations indicated a hummocky-like topography, occasional trees displaying "pistol-butt" characteristics, and a steep bowl-shaped terrain with a crest-like topography near the top of slope. During our limited subsurface exploration in the area, we observed a thin deposit of fine- to coarse-grained sands and sandy silts that contained fragments of buried organics and pockets of gravels within a massive matrix with a chaotic texture. However, we did not observe cracks or fractures, emergent groundwater, or shear-like characteristics of the subsurface soils. Where observed, the colluvium that contained a chaotic structure was generally shallow within depths ranging from 1.4 to 4.5 feet below ground surface. Below this elevation undisturbed outwash with horizontal bedding was observed.

Our preliminary evaluation based upon limited exploration suggests that the features observed are remnants of an ancient landslide deposit. It is likely that the subject area was historically part of a glacial lake environment during the last glacial retreat. When the glacial lake was rapidly drained the shoreline failed due to saturation and the subsequent release to pore water pressure, along less impermeable lenses. The resultant "bluff" failure deposited a thin layer of potentially subaqueous landslide debris.

The lack of evidence of groundwater discharge near what would be the potential failure surface suggests that the mechanism for failure is no longer present. In our opinion, the mapped landslide complex area is inactive. We recommend additional study consisting of deep borings and monitoring wells to provide additional characterization of the mapped landslide and determine if mitigation measures are necessary.

Infiltration Potential

Infiltration feasibility is dependent on the permeability of the infiltration receptor horizon, the vertical and lateral extent of the unsaturated material, the depth to groundwater for perched water, the transmissivity of the underlying aquifer, proximity to geologic hazards, and considerations for other nearby water users such as wells, springs, and streams.

The County has adopted the *2021 Kitsap County Stormwater Design Manual* (2021 KCSWDM). The County encourages development proposals to incorporate low impact design (LID) planning and design approaches into project development. A geotechnical report must be completed to address the feasibility of infiltration LID measures such as pervious pavement, bioretention and other stormwater infiltration facilities. The County also requires establishment of seasonal high groundwater elevations at the site as part of stormwater infiltration feasibility assessment.

Based on our review of the regional geologic and soils mapping, shallow infiltration of stormwater into the recessional outwash in lower elevation areas west of Bond Road may be feasible. The recessional outwash is anticipated to contain a shallow groundwater table aquifer that corresponds generally to the elevation of Gamble Creek. Seasonal high groundwater will be a key datapoint to determine feasibility and sizing for infiltration facilities.

On the upland areas, shallow dispersed infiltration BMPs are feasible where the Vashon recessional or coarser-grained ice-contact sediments are present in sufficient lateral or vertical extent. However, for larger or more concentrated facilities, it is possible that deeper infiltration into sediments below the upland is feasible, and recommended, to avoid impacts to steeply sloping areas.

FUTURE STUDIES

Future phases of work should include exploration borings and monitoring wells to provide key information related to subsurface conditions critical for basic characterization of geologic units, documentation of groundwater resources, obtaining geotechnical parameters for slope stability analysis, and potentially liquefaction analysis. The groundwater monitoring data will provide documentation of seasonal high groundwater levels.

The following exploration and testing activities are recommended for potential development areas to provide additional data for feasibility and site design:

- Site reconnaissance of the northern portion of the site.
- Three shallow monitoring wells (25 to 30 feet) along the east side of the site adjacent to Bond Road to allow for seasonal high groundwater level monitoring.
- Groundwater level monitoring during the wet season.
- Two deep monitoring wells (80 to 120 feet) within the upland area near the top of the landslide feature.
- Exploration borings near the proposed tunnel location.
- Site-wide shallow exploration pits using an excavator.
- Grain-size testing and pilot infiltration testing in areas under consideration for infiltration facilities.
- Depending upon the results of the additional exploration and testing, it may be necessary for more testing to evaluate the seismic risks or other project design elements.

CLOSURE

Thank you for allowing us to conduct this feasibility-level geotechnical/hydrogeologic assessment of the property in support of planning on the proposed development. Based on the current preliminary findings during our research and reconnaissance of the site, the planned development described previously appears feasible with mitigations and the implementation of appropriate BMPs. However, it must be understood that further subsurface exploration of the site is recommended to complete the study for a design-level report. Our opinions have been based upon visual reconnaissance and readily available information. AESI is available to provide specific geotechnical engineering recommendations for the property once development plans become more final. Kitsap County may require such services as part of permitting for the planned development.

We appreciate the opportunity to submit this report and hope that it meets your needs. If you have any questions, please do not hesitate to call.

Sincerely,
ASSOCIATED EARTH SCIENCES, INC.
Kirkland, Washington

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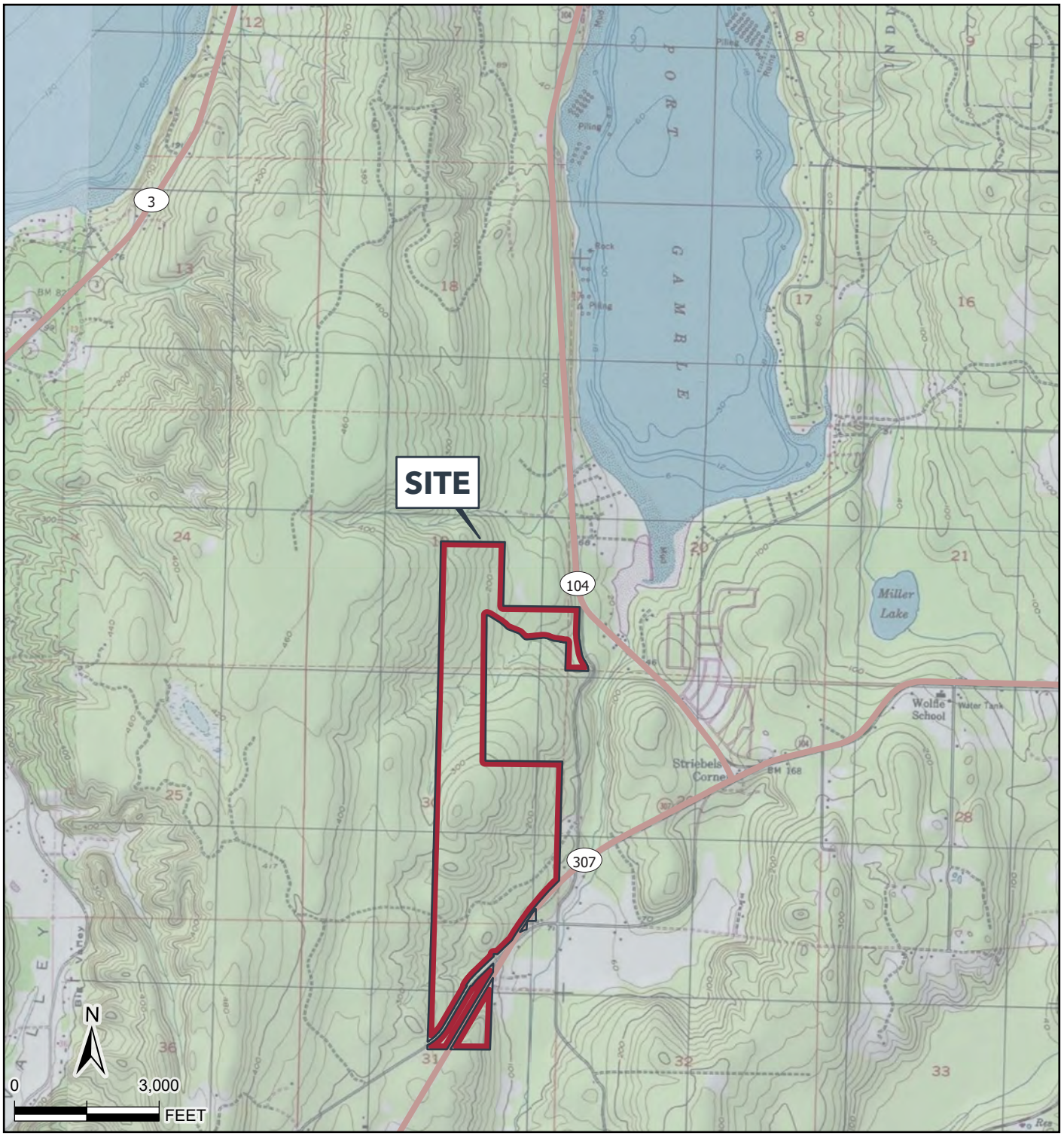
ATTACHMENTS

Figure 1. Vicinity Map
Figure 2. Topography
Figure 3. Geomorphology
Figure 4. Existing Site and Exploration Plan
Figure 5. Schematic Hydrogeologic Cross-Section A-A'
Figure 6. Critical Area Erosion
Figure 7. Critical Area Landslide
Figure 8. Critical Aquifer Recharge Area
Appendix A. Exploration Logs



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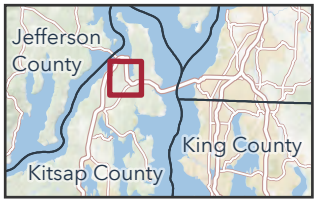

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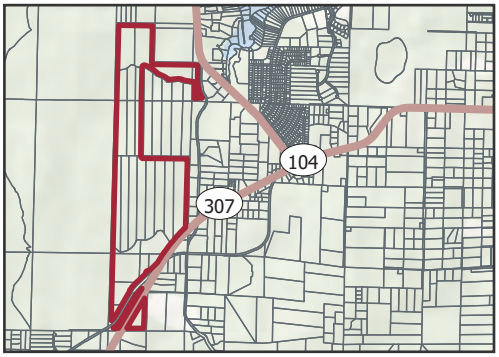

ESRI, USGS, NATIONAL GEOGRAPHIC, DELORME, NATURALVUE, I-CUBED, GEBCO: ARCGIS ONLINE BASEMAP. WADOT STATE ROUTES 24K (12/20). KITSAP CO: PARCELS, ROADS (6/22). NOTE: LOCATION AND DISTANCES SHOWN ARE APPROXIMATE. BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION.

associated earth sciences incorporated

VICINITY MAP

NORTH KITSAP UNITED
KITSAP COUNTY, WASHINGTON

PROJECT NO.	DATE	FIGURE
20230264H001	11/23	1

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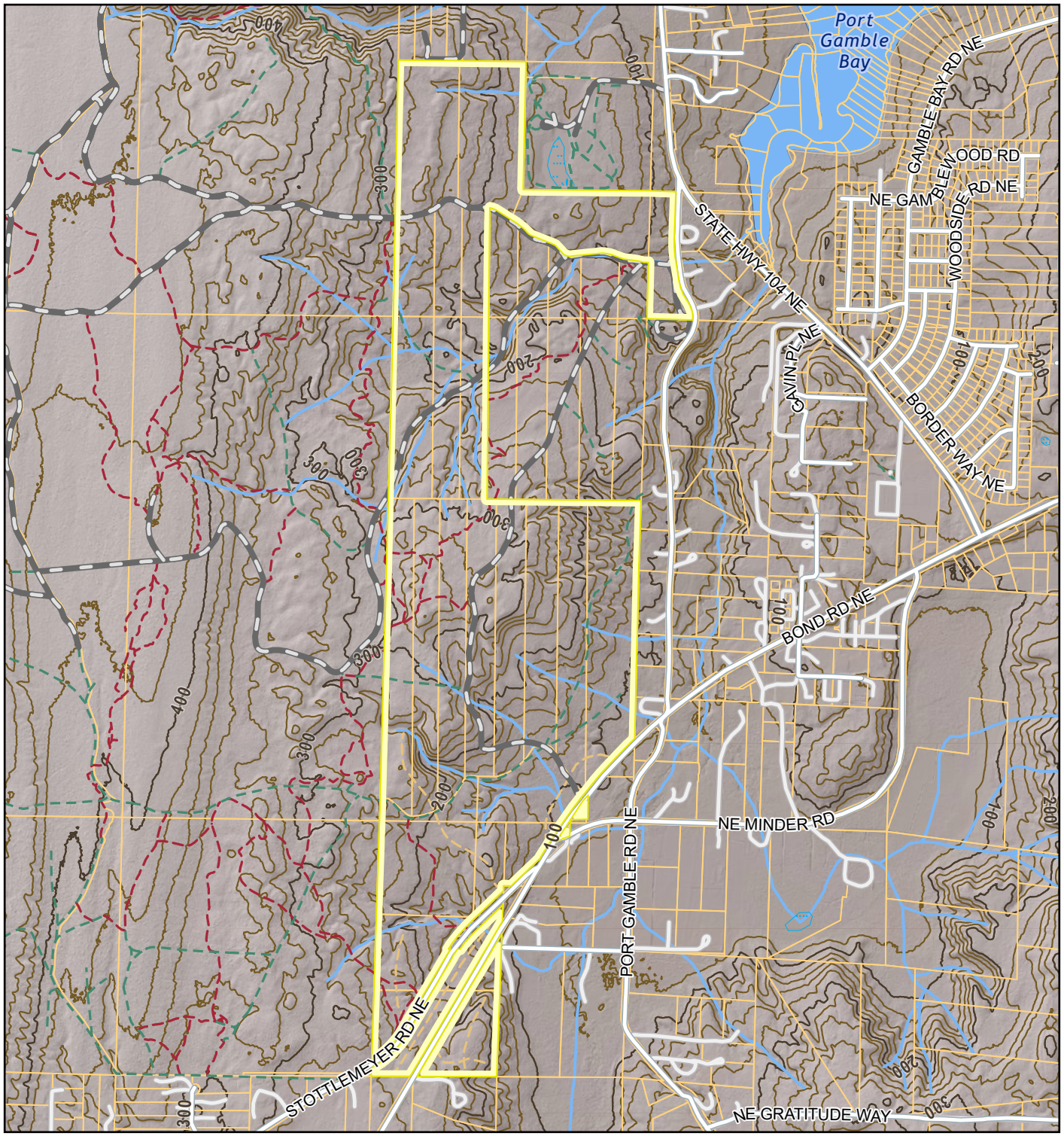


LEGEND

- SITE
- ROAD
- SERVICE ROAD
- FOOT PATH; TRAIL
- MOUNTAIN BIKE TRAIL
- TRAIL CLEARING 07/23
- PARCEL
- CONTOUR 100 FT
- CONTOUR 20 FT

DATA SOURCES/REFERENCES: KITSAP COUNTY: ROADS, PARCELS (6/22), OPENSTREETMAP: TRAILS (9/23) WA DOE: WATERBODIES (3/19), STREAMS (5/19). WA DNR LIDAR: KITSAP_COUNTY_OPSW_2018, ACQUIRED 12/17 & 2/18, 3' CELL SIZE. CONTOURS DERIVED FROM LIDAR.

N

0 1,500

FEET

LOCATION AND DISTANCES SHOWN ARE APPROXIMATE.

BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION.

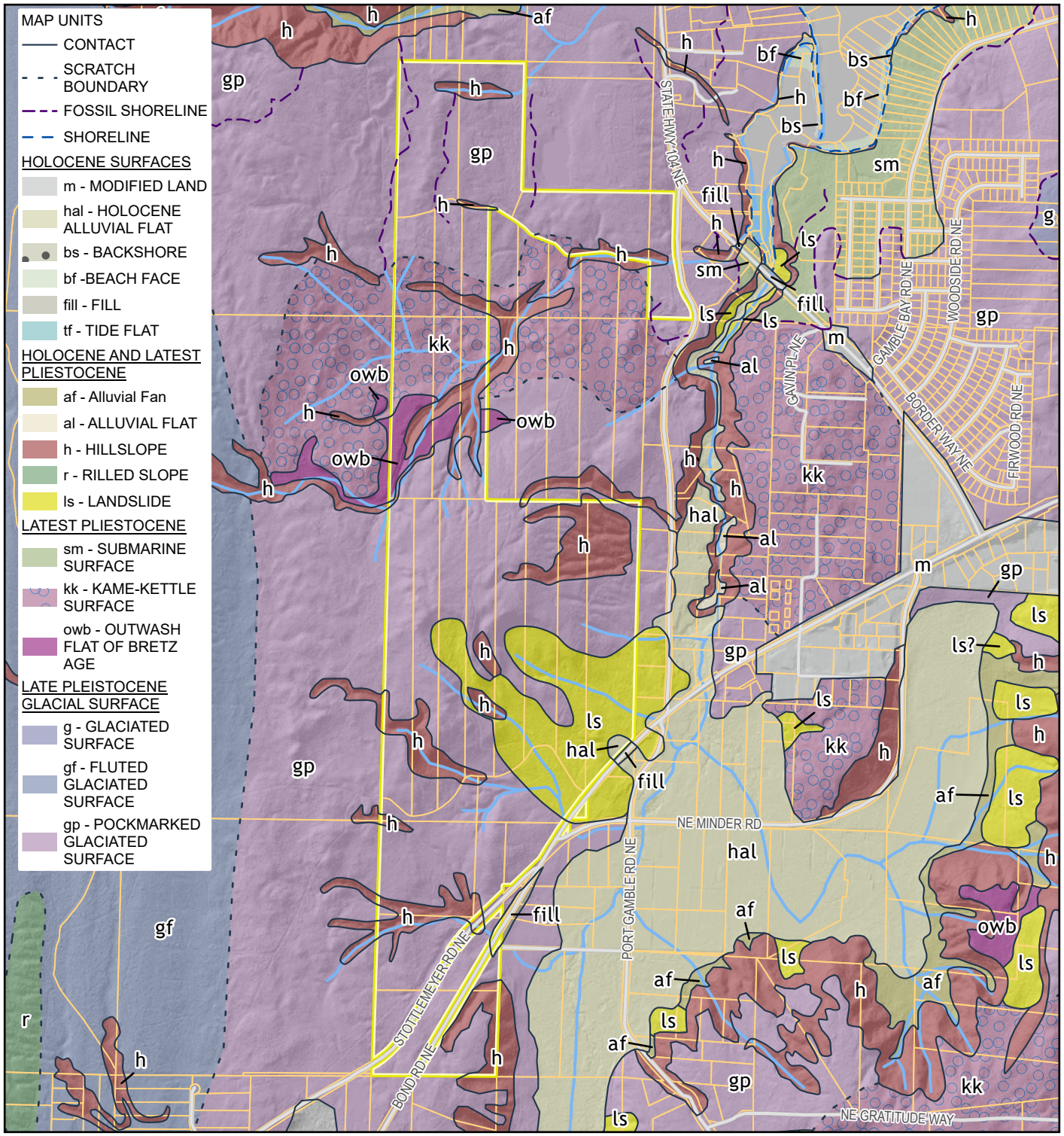
associated earth sciences incorporated

TOPOGRAPHY

NORTH KITSAP UNITED
KITSAP COUNTY, WASHINGTON

PROJECT NO.	DATE	FIGURE
20230264H001	11/23	2

G:\GIS_Projects\2023\230264 North Kitsap United_aprx\H001\20230264H001 F2 TOPO_NKU.aprx | 20230264H001 F2 TOPO_NKU | 2023-11-16 | nfink



LEGEND

SITE

PARCEL

N

0 1,500

FEET

LOCATION AND DISTANCES SHOWN ARE APPROXIMATE.

BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION.

DATA SOURCES/REFERENCES: USGS PRELIMINARY GEOMORPHIC MAP OF THE KITSAP PENINSULA, 2009. KITSAP COUNTY: ROADS, PARCELS (6/22), OPENSTREETMAP: TRAILS (9/23) WA DOE: WATERBODIES (3/19), STREAMS (5/19). WA DNR LIDAR: KITSAP_COUNTY_OPSW_2018, ACQUIRED 12/17 & 2/18, 3' CELL SIZE.

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GEOMORPHOLOGY

NORTH KITSAP UNITED
KITSAP COUNTY, WASHINGTON

PROJECT NO.	DATE	FIGURE
20230264H001	11/23	3

G:\GIS_Projects\20230230264 North Kitsap United_aprx\H001\20230264H001 F3 GeoMorph_NKU.aprx | 20230264H001 F3 Geomorph_NKU | 2023-11-16 | nflink

Obs. No.	Type	Description
1	Culvert	No Water
2	Stream	Stream To Port Gamble - Moderate Flow
3	Drainage	No Flow - Thick Vegetation
4	Culvert	No Flow
5	Drainage	No Flow
6	Culvert	No Flow
7	Culvert	No Flow
8	Drainage	No Flow
9	Culvert	No Flow
10	Drainage	No Flow - No Culvert Observed
11	Road Cut	Sand
12	Culvert	No Flow
13	Drainage	No Flow
14	Drainage	No Flow
15	Silty Sand	
16	Road Cut	Silty Sand (some Coarse Sand and Gravel)
17	Culvert	No Flow
18	Culvert	No Flow

LEGEND

- SITE
- EXPLORATION BORING MUD BAY GEOTECHNICAL 2020
- EXPLORATION PIT (TOTAL DEPTH)

FIELD OBSERVATION (10/23)

- CULVERT
- DRAINAGE
- ROAD CUT
- SILTY SAND
- STREAM
- ROAD
- SERVICE ROAD
- FOOT PATH; TRAIL
- MOUNTAIN BIKE TRAIL
- TRAIL CLEARING 07/23
- TRAILHEAD PARKING
- CROSS-SECTION

N

0 1,000

FEET

DATA SOURCES/REFERENCES:
KITSAP COUNTY: ROADS, PARCELS. WA DOE: WATERBODIES (3/19), STREAMS (5/19). WA DNR LIDAR: KITSAP_COUNTY_OPSW_2018, ACQUIRED 12/17 AND 2/18, 3' CELL SIZE. CONTOURS DERIVED FROM LIDAR. OPENSTREETMAP: SECONDARY ROADS AND TRAILS.

BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION. LOCATION AND DISTANCES SHOWN ARE APPROXIMATE.

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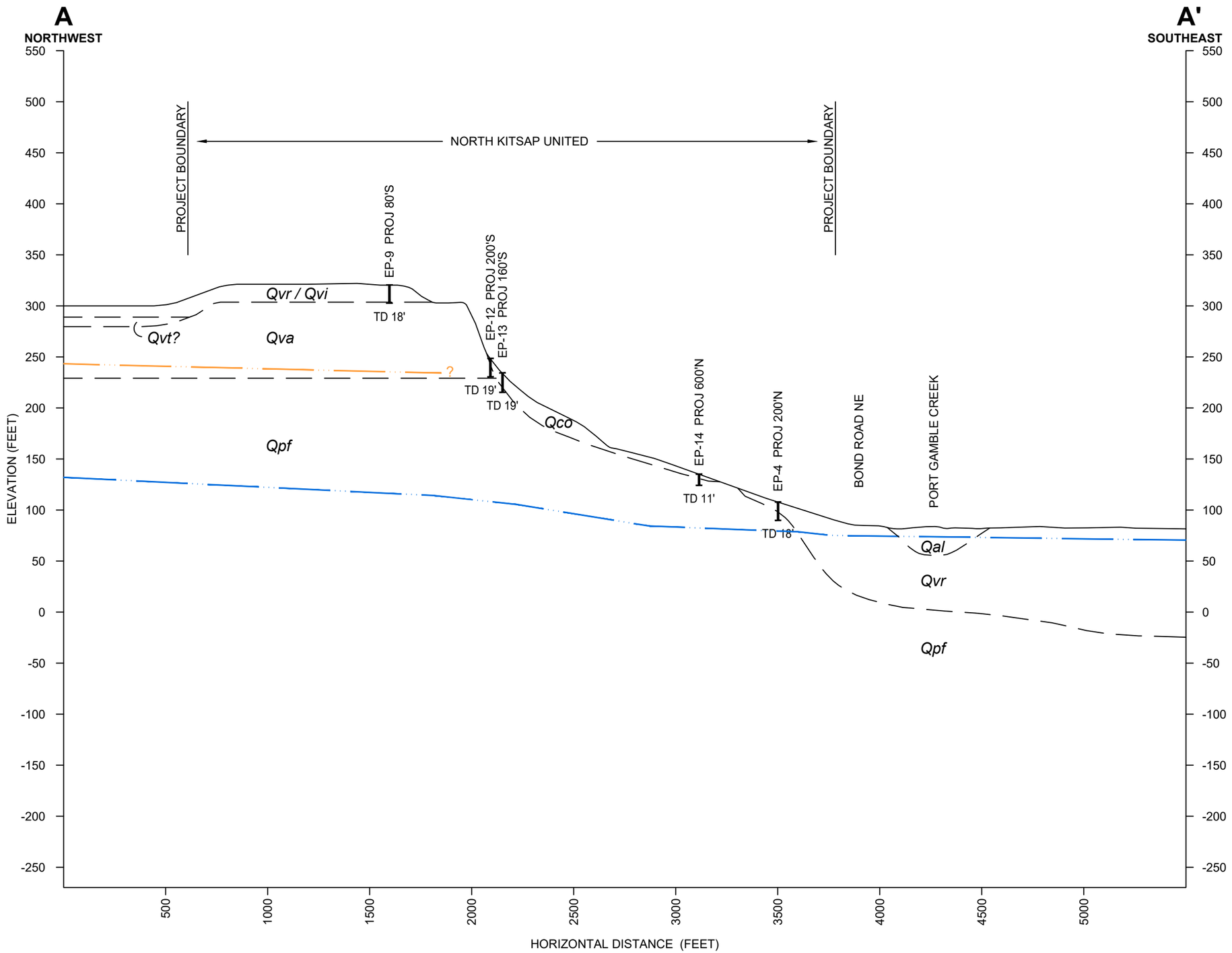
EXISTING SITE AND EXPLORATION PLAN

NORTH KITSAP UNITED
KITSAP COUNTY, WASHINGTON

PROJECT NO.	DATE	FIGURE
20230264H001	12/23	4

G:\GIS_Projects\20230264 North Kitsap United_aprx\H001\20230264H001 F4 ESsouth_NKU.aprx | 20230264H001 F4 ESsouth_NKU | 2023-12-06 | mtrop



LEGEND:

Qal	ALLUVIUM
Qco	COLLUVIUM
Qvr	VASHON RECESSIONAL OUTWASH
Qvi	VASHON ICE CONTACT
Qvt	VASHON LODGEMENT TILL
Qva	VASHON ADVANCE OUTWASH
Qpf	PRE-FRASER DEPOSITS

EXPLORATION

TD TOTAL DEPTH OF EXPLORATION

GEOLOGIC CONTACT

INFERRED GROUNDWATER ASSUMED FROM OFFSITE INFORMATION

POTENTIAL GROUNDWATER SURFACE BASED ON GEOLOGIC CONTACT AND OFFSITE INFORMATION

VERTICAL EXAGGERATION = 5X

NOTE: LOCATION AND DISTANCES SHOWN ARE APPROXIMATE

NOTES:

1. THE SUBSURFACE CONDITIONS PRESENTED IN THIS GEOLOGIC CROSS-SECTION ARE BASED ON AN INTERPRETATION OF CONDITIONS ENCOUNTERED IN WIDELY SPACED EXPLORATIONS COMPLETED AT THE SUBJECT SITE AND RELEVANT SITE INFORMATION DEVELOPED AND PROVIDED BY OTHERS. THE SUBSURFACE INTERPRETATIONS PRESENTED IN THIS GEOLOGIC CROSS-SECTION SHOULD NOT BE CONSTRUED AS A WARRANTY OF ACTUAL SUBSURFACE CONDITIONS AT THE SITE. OUR EXPERIENCE HAS SHOWN THAT SOIL AND GROUNDWATER CONDITIONS CAN VARY SIGNIFICANTLY OVER SMALL DISTANCES.

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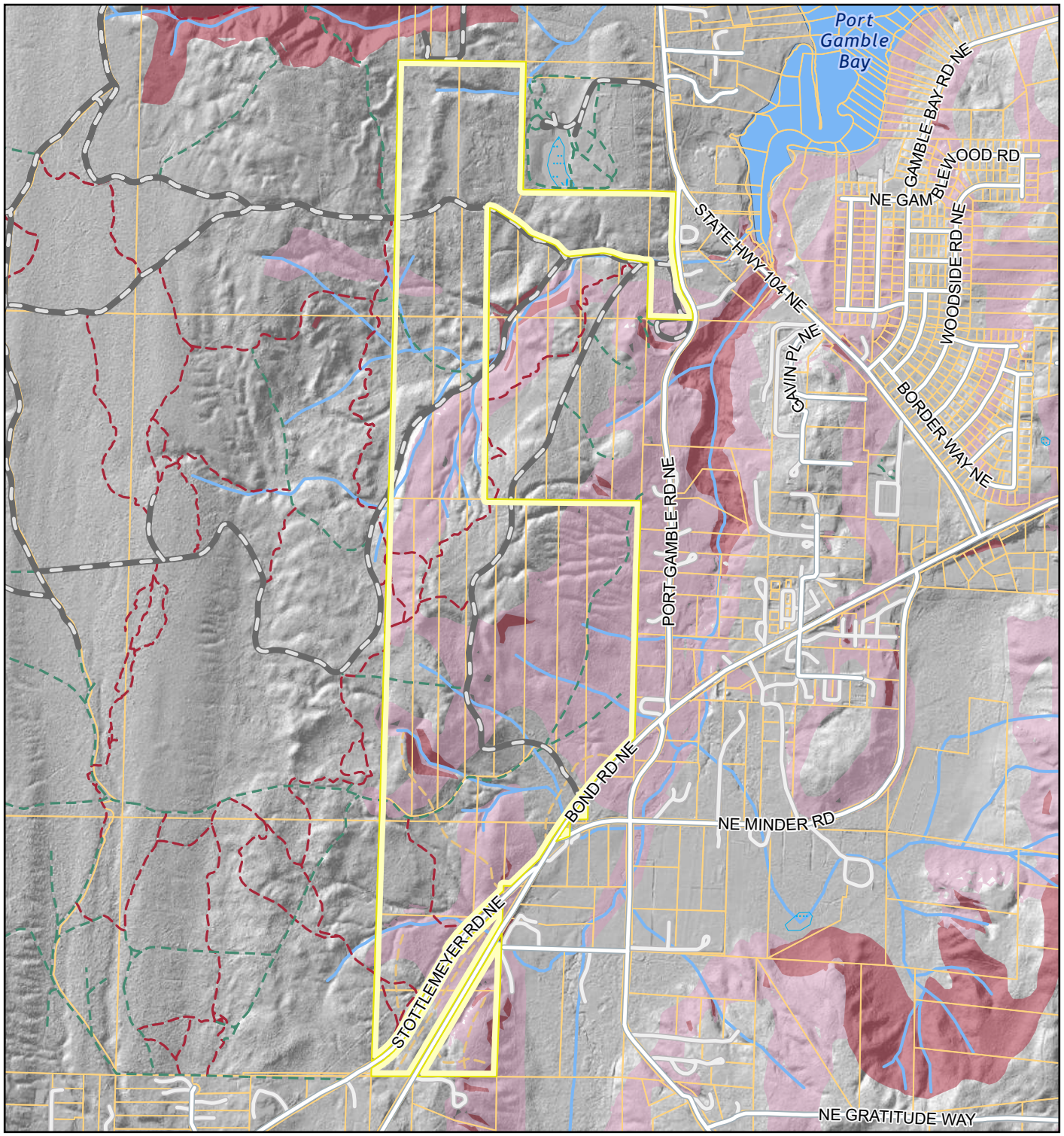
SCHEMATIC HYDROGEOLOGIC CROSS-SECTION A - A'

NORTH KITSAP UNITED
KITSAP COUNTY, WASHINGTON

PROJ NO.	DATE:	FIGURE:
20230264H001	12/23	5

2023 \ 20230264 NKU \ 20230264 GeoSects.dwg LAYOUT: H001 F5 Sect A-A



LEGEND

- SITE
- ROAD
- SERVICE ROAD
- FOOT PATH; TRAIL
- MOUNTAIN BIKE TRAIL
- TRAIL CLEARING 07/23
- PARCEL

GEOLOGICALLY HAZARDOUS AREAS

- HIGH HAZARD AREA
- MODERATE HAZARD AREA

DATA SOURCES/REFERENCES: KITSAP COUNTY: GEOLOGICAL HAZARD AREAS 2ND EDITION (WEB), ROADS , PARCELS, PARKS (6/22), OPENSTREETMAP: TRAILS (9/23) WA DOE: WATERBODIES (3/19), STREAMS (5/19). WA DNR LIDAR: KITSAP_COUNTY_OPSW_2018, ACQUIRED 12/17 &

N

0 1,500

FEET

LOCATION AND DISTANCES SHOWN ARE APPROXIMATE.

BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION.

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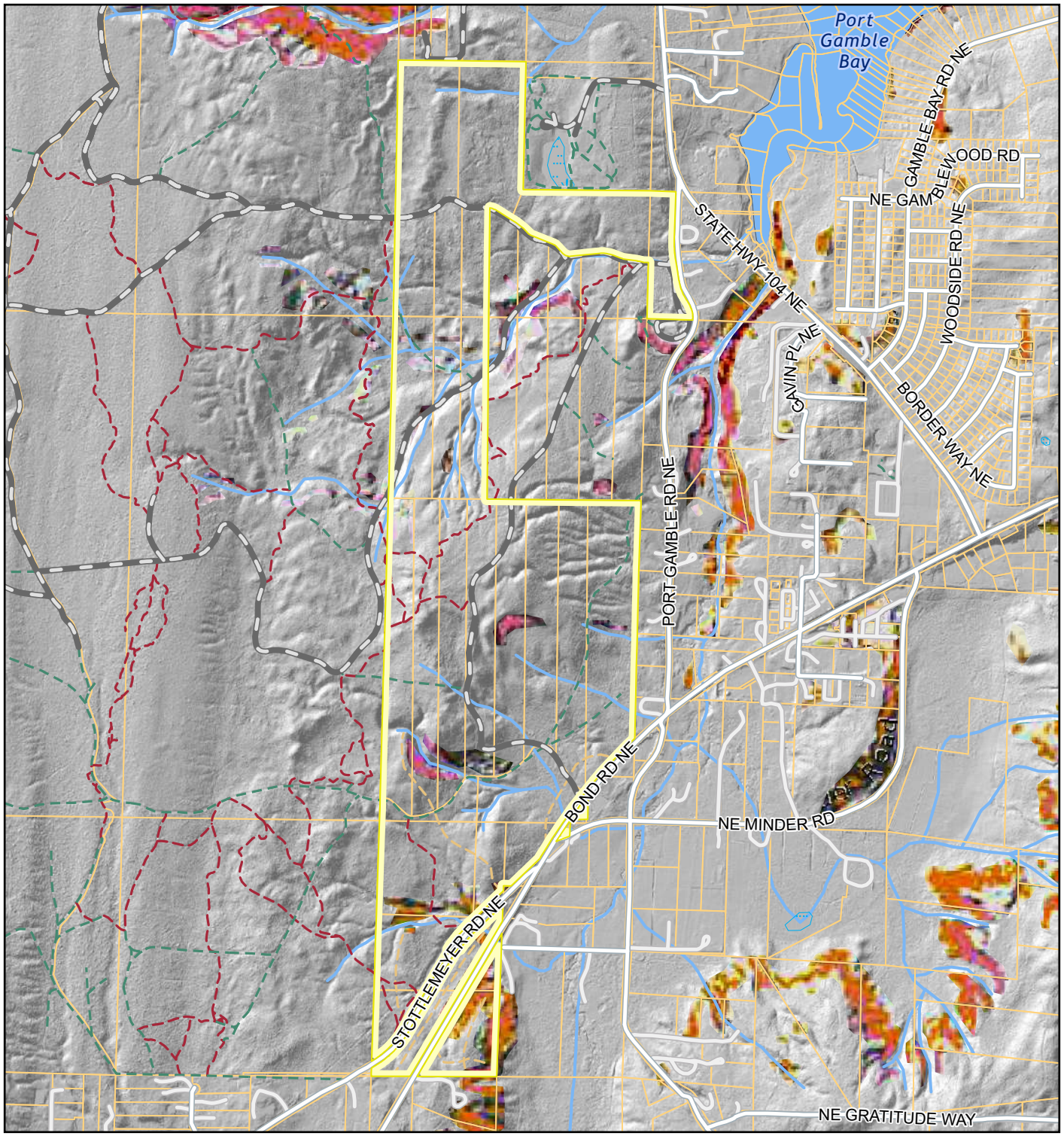
CRITICAL AREA EROSION

NORTH KITSAP UNITED
KITSAP COUNTY, WASHINGTON

PROJECT NO.	DATE	FIGURE
20230264H001	11/23	6

G:\GIS_Projects\20231230264 North Kitsap United_aprx\H001\20230264H001 F6 CAEro_NKU aprx | 20230264H001 F6 CAEro_NKU | 2023-11-16 | nflink



LEGEND

- SITE
- ROAD
- SERVICE ROAD
- FOOT PATH; TRAIL
- MOUNTAIN BIKE TRAIL
- TRAIL CLEARING 07/23
- PARCEL

DEEP LANDSLIDE HAZARD
- HIGH
- MODERATE

SHALLOW LANDSLIDE HAZARD
- HIGH
- MODERATE

DATA SOURCES/REFERENCES: KITSAP COUNTY: LANDSLIDE HAZARD PDF MAP (2/17), ROADS , PARCELS, PARKS (6/22), OPENSTREETMAP: TRAILS (9/23) WA DOE: WATERBODIES (3/19), STREAMS (5/19). WA DNR LIDAR: KITSAP_COUNTY_OPSW_2018, ACQUIRED 12/17&2/18, 3' CELL SIZE.

N

0 1,500

FEET

LOCATION AND DISTANCES SHOWN ARE APPROXIMATE.

BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION.

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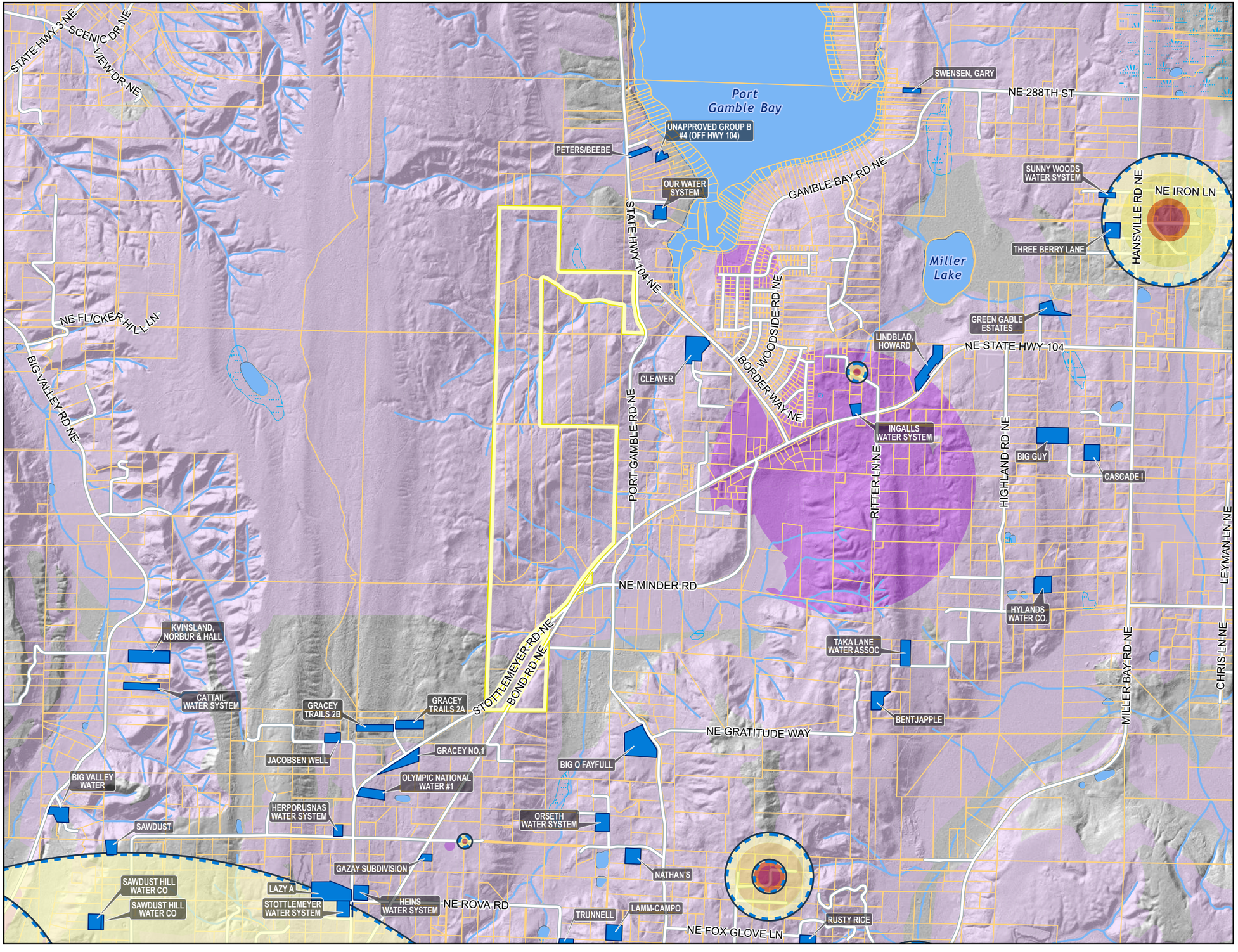
CRITICAL AREA LANDSLIDE

NORTH KITSAP UNITED
KITSAP COUNTY, WASHINGTON

PROJECT NO.	DATE	FIGURE
20230264H001	11/23	7

G:\GIS_Projects\2023\230264 North Kitsap United_aprx\H001\20230264H001 F7 CALs_NKU.aprx | 20230264H001 F7 CALs_NKU | 2023-11-16 | nflink



LEGEND

- SITE
- GROUP B WATER SYSTEMS

DOH WELLHEAD PROTECTION AREAS

- 10 YEAR TIME OF TRAVEL
- 5 YEAR TIME OF TRAVEL
- 1 YEAR TIME OF TRAVEL
- 6 MONTH TIMT OF TRAVEL

CRITICAL AQUIFER RECHARGE AREA

- CATEGORY I
- CATEGORY II
- PARCEL

N

0 2,000

FEET

DATA SOURCES/REFERENCES:
KITSAP COUNTY: CRITICAL AQUIFER RECHARGE AREAS (WEB), GROUP B WATER SYSTEMS (WEB) ROADS , PARCELS, PARKS (6/22), OPENSTREETMAP: TRAILS (9/23) WA DOE: WATERBODIES (3/19), STREAMS (5/19). WA DNR LIDAR: KITSAP_COUNTY_OPSW_2018, ACQUIRED 12/17 & 2/18, 3' CELL SIZE.

BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION. LOCATION AND DISTANCES SHOWN ARE APPROXIMATE.

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CRITICAL AQUIFER RECHARGE AREA

NORTH KITSAP UNITED
KITSAP COUNTY, WASHINGTON

PROJECT NO.	DATE	FIGURE
20230264H001	11/23	8

G:\GIS_Projects\2023\230264 North Kitsap United_aprx\H001\20230264H001 F8 CARA_NKU.aprx | 20230264H001 F8 CARA_NKU | 2023-11-16 | nfink

APPENDIX A

Exploration Logs

Coarse-Grained Soils - More than 50%[1] Retained on No. 200 Sieve	Gravels - More than 50%[1] of Coarse Fraction Retained on No. 4 Sieve	≤5% Fines[2]	GW	Well-graded gravel and gravel with sand, little to no fines
			GP	Poorly-graded gravel and gravel with sand, little to no fines
		≥12% Fines[2]	GM	Silty gravel and silty gravel with sand
			GC	Clayey gravel and clayey gravel with sand
	Sands - 50%[1] or More of Coarse Fraction Passes No. 4 Sieve	≤5% Fines[2]	SW	Well-graded sand and sand with gravel, little to no fines
			SP	Poorly-graded sand and sand with gravel, little to no fines
		≥12% Fines[2]	SM	Silty sand and silty sand with gravel
			SC	Clayey sand and clayey sand with gravel
Fine-Grained Soils - 50%[1] or More Passes No. 200 Sieve	Silts and Clays Liquid Limit Less than 50		ML	Silt, sandy silt, gravelly silt, silt with sand or gravel
			CL	Clay of low to medium plasticity; silty, sandy, or gravelly clay, lean clay
			OL	Organic clay or silt of low plasticity
	Silts and Clays Liquid Limit 50 or More		MH	Elastic silt, clayey silt, silt with micaceous or diatomaceous fine sand or silt
			CH	Clay of high plasticity, sandy or gravelly clay, fat clay with sand or gravel
			OH	Organic clay or silt of medium to high plasticity
Highly Organic Soils			PT	Peat, muck and other highly organic soils

Terms Describing Relative Density and Consistency

	Density	SPT[3] blows/foot
Coarse-Grained Soils	Very Loose	0 to 4
	Loose	4 to 10
	Medium Dense	10 to 30
	Dense	30 to 50
	Very Dense	>50
	Consistency	**SPT[3] blows/foot**
Fine-Grained Soils	Very Soft	0 to 2
	Soft	2 to 4
	Medium Stiff	4 to 8
	Stiff	8 to 15
	Very Stiff	15 to 30
	Hard	>30

Test Symbols

G = Grain Size
M = Moisture Content
A = Atterberg Limits
C = Chemical
DD = Dry Density
K = Permeability

Component Definitions

Descriptive Term	Size Range and Sieve Number
Boulders	Larger than 12"
Cobbles	3" to 12"
Gravel	3" to No. 4 (4.75 mm)
Coarse Gravel	3" to 3/4"
Fine Gravel	3/4" to No. 4 (4.75 mm)
Sand	No. 4 (4.75 mm) to No. 200 (0.075 mm)
Coarse Sand	No. 4 (4.75 mm) to No. 10 (2.00 mm)
Medium Sand	No. 10 (2.00 mm) to No. 40 (0.425 mm)
Fine Sand	No. 40 (0.425 mm) to No. 200 (0.075 mm)
Silt and Clay	Smaller than No. 200 (0.075 mm)

[4] Estimated Percentage

Component	Percentage by Weight
Trace	<5
Some	5 to <12
Modifier (silty, sandy, gravelly)	12 to <30
Very *modifier* (silty, sandy, gravelly)	30 to <50

Moisture Content

Dry - Absence of moisture, dusty, dry to the touch
Slightly Moist - Perceptible moisture
Moist - Damp but no visible water
Very Moist - Water visible but not free draining
Wet - Visible free water, usually from below water table

Symbols

Sampler Type and Description

- Blows/6" or portion of 6"
- Split-Spoon Sampler (SPT)
- California Sampler
- Ring Sampler
- Continuous Sampling
- Grab Sample
- Portion not recovered

Groundwater depth

- ATD At time of drilling
- Static water level (date)

- Cement grout surface seal
- Bentonite seal
- Filter pack with blank casing section
- Screened casing or Hydrotip with filter pack
- End cap

Classifications of soils in this report are based on visual field and/or laboratory observations, which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field or laboratory testing unless presented herein. Visual-manual and/or laboratory classification methods of ASTM D-2487 and D-2488 were used as an identification guide for the Unified Soil Classification System.

(1) Percentage by dry weight
(2) Combined USCS symbols used for fines between 5% and 12%
(3) (SPT) Standard Penetration Test (ASTM D-1586)
(4) In General Accordance with Standard Practice for Description and Identification of Soils (ASTM D-2488)

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EXPLORATION LOG KEY

FIGURE: A1

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Exploration Pit EP-1

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/26/2023	Logged By: DW
20230264E001	Total Depth (ft): 15	Approved By: JHS

Elev.: 145 ft NAVD88

Depth (ft)	Description	USCS
0	**Vashon Recessional Outwash** Loose, slightly moist, brown, silty, fine SAND, some medium sand, trace gravel; some rootlets (less than 1/2 inch in diameter) (SM).	
2.5	Gradationally becomes gray and brown (weathered to 3.5 feet).	
5	Medium dense, slightly moist, gray with light brown mottling, silty, SAND, trace fine round gravel; massive (SM).	
7.5	Medium dense, slightly moist, light brownish gray, silty, SAND; thinly bedded with gradational contacts; few thin beds of fine to medium sand with gravel and sandy, silt (SM). Medium dense, slightly moist, brownish gray, fine SAND; mainly massive with faint laminations of mafic minerals (SP). Heavy caving undermining materials above.	
10	Trace round gravel (less than 1 inch in diameter), rare granitic cobble, heavy caving.	
12.5	**Pre-Fraser Fine Grained Sediments** Dense, slightly moist, dark brownish gray, fine SAND, trace medium sand and round cobble; clasts of gray, silt with occasional laminations (SP/ML).	
15	No seepage. Heaving caving 9 to 12 feet.	
17.5		
20		

12/7/2023

20230264E001

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Exploration Pit EP-2

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/27/2023	Logged By: DW
20230264E001	Total Depth (ft): 16	Approved By: JHS

Elev.: 200 ft NAVD88

Depth (ft)	Description	USCS
0	**Vashon Advance Outwash**	
	Loose to medium dense, slightly moist, yellowish gray with brownish yellow mottling, silty, fine SAND, some round gravel (less than 1 inch in diameter); trace granitic cobble; abundant rootlets; some pinhole voids; moderately weathered (SM).	
2.5	Medium dense to dense, dry to slightly moist, grayish brown, silty, fine SAND; no rootlets or gravel observed; massive with zones of faint laminations (SM).	
5		
7.5	Dense, slightly moist, grayish brown, fine SAND, trace medium sand; discontinuous thin lenses (≈1 inch thick) of very fine sandy, silt; some oxidized beds (SP).	
	Rare boulder (≈24 inches).	
10		
	Dense, slightly moist, grayish brown, silty, fine SAND, trace medium sand, trace granitic gravel; pockets of oxidation; fragments of sandy, silt clasts (up to 6 inches in diameter) with oxidized rims; rare rootlets in clasts (SM).	
12.5		
	Pre-Fraser Fine Grained (?)	
15	Dense, moist, dark brownish gray, fine to medium SAND; massive with few lenses of oxidized fine sand (SP).	
	No seepage. No caving.	
17.5		
20		

12/7/2023

20230264E001

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Exploration Pit EP-3

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/27/2023	Logged By: DW
20230264E001	Total Depth (ft): 10	Approved By: JHS

Depth (ft)	Description	USCS
	Elev.: 205 ft NAVD88	
0	Vashon Advance Outwash	
	Loose, slightly moist, light brown, silty, fine SAND, trace round gravel (less than 1/4 inch in diameter); some rootlets (SM).	
	Loose to medium dense, slightly moist, brownish gray, silty, fine SAND, some round gravel (SM).	
	Sand becomes fine to medium, no gravel.	
	Sand has gradationally become fine to medium, some gravel, decrease in fines.	
2.5	Medium dense to dense, slightly moist, gray, silty, fine SAND; wavy beds of fine sand dipping (5 to 10 deg) to the east; some beds of oxidized faint laminations (SM).	
5		
	Becomes dense; beds become thinner and less defined, zones (less than 3/4 inch thick) with some gravel.	
7.5		
	Dense, slightly moist, gray, silty, fine SAND; laminations of very fine sand and mafic minerals; rare pockets of fine gravel (SM).	
10	No seepage. No caving.	
12.5		
15		
17.5		
20		

12/7/2023

20230264E001

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Exploration Pit EP-4

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/27/2023	Logged By: DW
20230264E001	Total Depth (ft): 18	Approved By: JHS

Elev.: 85 ft NAVD88

Depth (ft)	Description	USCS
0	**Vashon Recessional Outwash** Loose, slightly moist, light brown, silty, fine SAND, trace coarse sand; trace rootlets; thin lenses of soil; moderately weathered with pinhole voids (SM),	
	Gradational color change to gray with yellowish brown mottling.	
2.5	Medium dense, dry, light brownish gray, silty, fine SAND; trace rootlets; sequential beds (1 to 3 inches thick) of very fine to fine sand and fine to coarse sand with gravel (SM).	
	Dry dusty digging.	
5		
	Beds become thinner and less defined, zones (less than 3/4 inch thick) with some gravel.	
	Dense, dry, gray with light brownish gray mottling, silty, fine SAND; faint discontinuous oxidized lenses; trace rootlets (SM).	
7.5	**Pre-Fraser Fine Grained Sediments** Dense, slightly moist, dark brownish gray, fine SAND, trace subrounded to round gravel; rare mica; massive (SP).	
10		
12.5	Thin beds of fine sand with increased density.	
15	Lenses of gravel.	
	Slight increase in grain size.	
17.5	No seepage. No caving.	
20		

12/7/2023

20230264E001

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Exploration Pit EP-5

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/27/2023	Logged By: DW
20230264E001	Total Depth (ft): 10	Approved By: JHS

Elev.: 115 ft NAVD88

Depth (ft)	Description	USCS
0	**Quaternary Colluvium** Loose to medium dense, slightly moist, light brown with orangish brown mottling, silty, fine SAND, trace rootlets; moderately weathered; trace pinhole voids; chaotic texture (SM).	
	Becomes slightly weathered, some gray coloring; decomposing organics.	
2.5	Medium dense, slightly moist, gray with brownish yellow mottling, silty, fine SAND; slight increase in pinhole void abundance; chaotic texture (SM).	
	Vashon Recessional Outwash Medium dense, slightly moist, gray, silty, very fine to fine SAND, some round gravel; increased rootlet abundance and pinhole voids (SM).	
5	Medium dense, dry, dark brownish gray, fine SAND; faint laminations within sand texture; thin oxidized beds of decreased grain size and increased density; rare boulder (16 inches) (SP).	
7.5	Medium dense, slightly moist, dark brownish gray, fine SAND; massive with few faint beds of fine to medium sand (SP).	
10	No seepage. No caving.	
12.5		
15		
17.5		
20		

12/7/2023

20230264E001

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Exploration Pit EP-6

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/27/2023	Logged By: DW
20230264E001	Total Depth (ft): 11.5	Approved By: JHS

Depth (ft)	Description	USCS
	Elev.: 110 ft NAVD88	
0	Vashon Recessional Outwash	
	Loose, slightly moist, brown, silty, fine SAND, some round gravel (less than 1/4 inch diameter); some rootlets; moderately weathered (SM).	
	Medium dense, slightly moist, gray with yellowish brown mottling, silty, very fine to fine SAND; some roots (less than 1 inch in diameter); trace pinhole voids; massive (SM).	
2.5		
	Medium dense, dry, brownish gray, silty, fine SAND; few oxidized thin lenses; faint laminations in sand texture; minor caving (SM).	
5		
7.5	Medium dense, slightly moist, brownish gray, silty, fine SAND; few oxidized beds of finer sand (SM).	
10	Becomes gray, massive; minor caving.	
	No seepage. Minor caving 4 to 10 feet.	
12.5		
15		
17.5		
20		

12/7/2023

20230264E001

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Exploration Pit EP-7

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/27/2023	Logged By: DW
20230264E001	Total Depth (ft): 17	Approved By: JHS

Elev.: 110 ft NAVD88

Depth (ft)	Description	USCS
0	**Vashon Advance Outwash** Medium dense to dense, slightly moist, gray with light gray and yellowish brown mottling, silty, fine SAND, trace gravel, some rootlets; trace pinhole voids (SM).	
2.5	Gradationally becomes gray, increased gravel abundance and size (less than 1 inch in diameter), pockets of very fine silty, sand with oxidized rims.	
	Pre-Fraser Fine and Coarse Grained Sediments Dense, slightly moist, dark brownish gray, fine to coarse SAND, some round gravel (less than 1 inch in diameter); faint laminations in sand texture (SM). Dense, slightly moist, gray, silty, very fine to fine SAND and stiff, slightly moist, gray, sandy, SILT (SM/ML).	
5	Stiff to very stiff, slightly moist, gray, silty, very fine SAND and sandy, SILT; faint wavy laminations (ML). Dense, slightly moist, dark brownish gray, silty, fine sand, trace gravel and cobble; massive (SM).	
7.5	Dense, slightly moist, dark brownish gray, fine SAND; massive with few thin oxidized beds (0.5 to 1 inch thick) of decreased grain size and silt (SP).	
10		
12.5	Dense, moist, dark brownish gray, gravelly, fine to coarse SAND, trace cobble; massive; some consolidated clasts; varying gravel abundance with depth (SW).	
15	Medium dense to dense, moist, dark grayish brown, silty, fine SAND, trace gravel; massive (SM).	
17.5	No seepage. No caving.	
20		

12/7/2023

20230264E001

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Exploration Pit EP-8

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/27/2023	Logged By: DW
20230264E001	Total Depth (ft): 11.5	Approved By: JHS

Elev.: 97 ft NAVD88

Depth (ft)	Description	USCS
0	**Vashon Recessional Outwash** Loose to medium dense, slightly moist, grayish brown with orangish brown mottling, silty, fine SAND, trace medium sand and gravel; massive; slightly weathered; pockets of oxidation (SM).	
	Gradationally becomes gray, less weathered, slight increase in gravel abundance.	
2.5	Medium dense, slightly moist, brown, silty, very fine to fine SAND; massive; trace rootlets and pinhole voids (SM).	
	Gradational increase in sand grain size, becoming grayish brown, trace gravel.	
	Medium dense, slightly moist, grayish brown, gravelly, fine to coarse SAND, some round gravel (less than 1/5 inches in diameter) (SM).	
5	Dense, dry, dark brownish gray, silty, fine to medium SAND, some coarse sand; massive with few lenses of varying gravel abundance (SM).	
	Increased gravel abundance, fine to coarse sand, subround to round cobbles (up to 4 inches in diameter) and rare cobbles (up to 10 inches in diameter).	
7.5	Varying coarse sand, gravel and cobble abundance to 10 feet.	
10		
	Pre-Fraser Fine Grained Dense, slightly moist, gray, fine SAND; massive with very faint laminations of mafic minerals (SP).	
	No seepage. No caving.	
12.5		
15		
17.5		
20		

12/7/2023

20230264E001

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Exploration Pit EP-9

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/26/2023	Logged By: DW
20230264E001	Total Depth (ft): 18	Approved By: JHS

Elev.: ??? ft NAVD88

Depth (ft)	Description	USCS
0	**Fill, Undocumented**	
	Loose, slightly moist, brown, silty, fine SAND, trace medium sand, some round gravel (up to 1 inch in diameter); some roots (up to 1 inch in diameter) (SM).	
	Buried log.	
2.5	**Vashon Advance Outwash**	
	Loose to medium dense, slightly moist, yellow and gray, silty, fine SAND, some rounded gravel (less than 1/2 inch in diameter); some rootlets and pinhole voids (SM).	
	Becomes light gray with yellow mottles, massive with faint wavy texture.	
5		
	Becomes dense, fine sand with some rounded gravel (up to 1 inch in diameter), some rootlets, some faint oxidation around clasts, pockets of fine to medium sand.	
	Sand becomes fine to medium grained.	
7.5		
	Dense, slightly moist, yellowish brown, silty, fine SAND; thin beds (≈1 inch thick) of dense oxidized fine sand; thin beds of fine to medium sand; minor caving (SM).	
10		
	Some round gravel and cobble.	
	Dense, moist, light brown, fine to medium sand, trace gravel and cobbles; massive; till-like rip-up clasts (SP).	
12.5		
15	Thin beds of fine sand with silt.	
	Dense, moist, dark brownish gray, silty, fine SAND; stratified beds with faint cross bedding interbedded with fine-grained sand beds with no gravel (SM).	
17.5		
	No seepage. Minor caving 9 feet.	
20		

12/7/2023

20230264E001

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Exploration Pit EP-10

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/26/2023	Logged By: DW
20230264E001	Total Depth (ft): 18	Approved By: JHS

Elev.: 290 ft NAVD88

Depth (ft)	Description	USCS
0	Vashon Advance Outwash	
	Loose to medium dense, moist, reddish brown, silty, fine SAND, some roots and rootlets (up to 1/2 inch in diameter); massive (SM).	
2.5	Gradational color change to yellowish gray, trace subround to round gravel (≈1/4 inch in diameter); material faintly breaks along 45 deg structure, medium dense, trace subangular 3 inch granitic clasts.	
	Wavy thin beds of very fine to fine sand with silt.	
5		
	Dense, slightly moist, yellowish brown with yellowish gray mottling, silty, fine SAND, trace medium sand and fine round gravel; faint wavy laminations; few beds (1/2 to 1 inch thick) of dense oxidized silty, sand with downward coarsening sequence between beds (SM).	
7.5		
	Dense, slightly moist, yellowish brown, silty, fine SAND, trace gravel; faint laminations; slight downward coarsening sequences (SM).	
10		
	Operator calls out easy digging.	
	Massive, no gravel observed.	
12.5		
15		
	Slight decrease in sand grain size, slight increase in moisture, faint wavy laminations.	
17.5		
	No seepage. No caving.	
20		

12/7/2023

20230264E001

Associated Earth Sciences, Inc.

associated earth sciences incorporated

Exploration Pit EP-11

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/26/2023	Logged By: DW
20230264E001	Total Depth (ft): 18	Approved By: JHS

Elev.: 128 ft NAVD88

Depth (ft)	Description	USCS
0	Vashon Recessional (?) Outwash Loose, slightly moist, brown, silty, fine SAND, some round gravel (1/4 inch in diameter); abundant rootlets; trace roots (SM). Loose, slightly moist to moist, gray with brownish yellow mottling, silty, fine SAND, some fine round gravel; trace pinhole voids (SM).	
2.5	Gradationally becomes medium dense, slightly moist, less mottled, no gravel, no voids, trace rootlets, massive with few thin discontinuous oxidized lenses. Gradationally becomes gray.	
5	Medium dense, slightly moist, light brownish gray, fine SAND, some silt; massive with some faint laminations (SP-SM).	
7.5		
10	Medium dense, slightly moist, light brownish gray, silty, fine SAND; faint laminations; few thin beds of well graded sand; minor caving (SM).	
12.5	Medium dense, slightly moist, light brownish gray, silty, very fine to fine SAND; massive with rare sandy, silt bed (SM).	
15		
17.5	Trace fine gravel.	
	No seepage. Minor caving 10 feet.	
20		

12/7/2023

20230264E001

Associated Earth Sciences, Inc.

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Exploration Pit EP-12

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/26/2023	Logged By: DW
20230264E001	Total Depth (ft): 19	Approved By: JHS

Elev.: 210 ft NAVD88

Depth (ft)	Description	USCS
0	**Quaternary Colluvium** Medium dense, slightly moist, light brown, silty, fine to medium SAND, some round gravel (less than 1/4 inch in diameter); some roots and rootlets (less than 1/2 inch in diameter); moderately weathered; coarsening downward (SM).	
2.5	**Vashon Advance Outwash** Medium dense, slightly moist, grayish brown, silty, fine to coarse SAND, some subround to round gravel (up to 3 inches in diameter); rootlets; continous bed around test pit (SM). No gravel, sand gradationally becomes very fine; increase in rootlet abundance to 3 feet.	
5	Medium dense to dense, slightly moist, gray with some yellowish gray, silty, fine SAND; massive (SM).	
7.5	Dense, slightly moist (increase from above), gray, fine SAND; laminated to thinly bedded and wavy beds (SM).	
10	Wavy beds, faint cross bedding, some cross cutting of cross bedding stratification, trace fine-grained mica.	
12.5	Dense, slightly moist, brownish gray, fine SAND; massive, decrease in silt abundance with depth (SP-SM).	
15		
17.5	Faint laminations.	
	No seepage. No caving.	
20		

12/7/2023

20230264E001

Associated Earth Sciences, Inc.

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Exploration Pit EP-13

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/26/2023	Logged By: DW
20230264E001	Total Depth (ft): 19	Approved By: JHS

Elev.: 220 ft NAVD88

Depth (ft)	Description	USCS
0	**Quaternary Colluvium** Loose to medium dense, slightly moist, yellow, silty, fine SAND, trace round gravel (less than 1/4 inch in diameter); some roots and rootlets; buried organics; trace pinhole voids; pockets of stiff, gray, sandy, silt with gravel; faint chaotic texture (SM).	
2.5	Increased abundance of gray, sandy, silt with very fine sand, increased rootlet abundance.	
	Vashon Advance Outwash Dense, slightly moist, yellowish brown, silty, fine to coarse SAND, some fine gravel (SM).	
5	Becomes light gray, very fine sand; faint wavy laminations, trace thin oxidized beds.	
7.5	Dense, slightly moist, light gray, silty, very fine to fine SAND; faint wavy laminations; subvertical infilled fracture with oxidized planes; infilled with white very fine sand; healed fracture extends the length of the excavator bucket (SM).	
10	Dense, slightly moist, light gray, SILT and silty, very fine SAND; discontinuous thin oxidized lenses; increased material weight from above (ML-SM).	
12.5	Slight increase in sand grain size.	
15	Slight increase in moisture, trace thin dense beds (1.5 inches thick) with laminations.	
	Oxidized lenses.	
17.5	No seepage. No caving.	
20		

12/7/2023

20230264E001

Associated Earth Sciences, Inc.

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Exploration Pit EP-14

North Kitsap United — Sheet: 1 of 1

Kitsap County, WA	Date: 10/27/2023	Logged By: DW
20230264E001	Total Depth (ft): 11	Approved By: JHS

Elev.: 118 ft NAVD88

Depth (ft)	Description	USCS
0	**Quaternary Colluvium** Medium dense, moist, grayish brown with gray mottling, silty, fine SAND, trace round gravel (less than 1 inch in diameter); pockets of organics; chaotic texture (SM).	
	Stiff, moist, gray with grayish brown mottling, sandy, SILT, some gravel (ML).	
	Pre-Fraser Fine Grained	
2.5	Medium dense, to dense, slightly moist, dark brownish gray, silty, fine SAND, trace round gravel (less than 1/2 inch thick in diameter); massive; few thin oxidized lenses of decreased sand grain size (SM).	
5		
7.5	Dense, slightly moist, dark brownish gray, fine to coarse SAND, some round gravel (less than 1 inch in diameter); moderate caving (SW).	
	Dense, slightly moist, dark brownish gray, gravelly, SAND, some subround to round gravel; trace cobble (SW).	
10	Dense, slightly moist, dark brownish gray, fine to medium SAND, trace coarse sand, trace subround to round gravel (less than 1.5 inches in diameter); massive; increased abundance of felsic minerals from above (SP).	
12.5	No seepage. Moderate caving 7 feet.	
15		
17.5		
20		

12/7/2023

20230264E001

Appendix C: Site Sensitive Areas Study

Sensitive Areas Study (Ecological Land Services)

CRITICAL AREAS RECONNAISSANCE

November 11, 2023

NK United
Kingston, Washington

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SIGNATURE PAGE

The information in this report was compiled and prepared under the supervision and direction of the undersigned.

Joanne Bartlett
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INTRODUCTION

Ecological Land Services, Inc. (ELS) completed this Critical Areas Reconnaissance Report for the NK United project proposed on 400 acres that borders the east side of the Port Gamble Heritage Park (PGHP). The 400 acres are comprised of 20 properties ranging in size from 19.77 acres to 33.18 acres (Kitsap County Tax Parcel Nos. **192702**-4-003-2001, -4-004-2000, -4-005-2009, -3-005-2008, **302702-1**-013-2000, -1-012-2002, -1-011-2006, **302702-4**-009-2000, -4-010-2007, -4-011-2006, -4-012-2005, 4-013-2004, -4-014-2003, -4-015-2002, -4-016-2001, -4-017-2000, and **312702-1**-022-2008, -1-004-2000, -1-023-2007, 1-024-2006). These properties are in Section 19, 30, and 31, Township 27 North, Range 2 East of the Willamette Meridian. ELS biologists conducted a series of site reconnaissance site visits on October 10, 12, 18, 19, and 24, 2023.

STUDY AREA DESCRIPTION

The roughly 400-acre study area is active forestland composed mostly of unharvested coniferous forest with large areas of harvested forested upland located west of Stottlemeyer Road on the south half and Port Gamble Road on the north half. The Port Gamble Heritage Park lies across the entire west edge of the study area (Figure 2). The topography is composed of a high ridge on the west side that slopes moderately down to the east (Figure 2). There are ravines and topographic troughs that have formed in the east slope that end at the east boundary of the study area (Figures 2, 2a, 2b, and 2c). The east end of the property is essentially the bottom of the bowl that forms the west side of the Gamble Creek Valley, which is primarily east of Bond Road (SR 307).

Logging and service roads provide access to most of the study area and are drivable to a certain degree. Many of these roads have become little more than hiking trails that cross these properties, and several are continuation of trails on the Port Gamble Heritage Park. The properties are oriented north to south beginning at residentially developed lots on the north adjacent properties and ending at the Stottlemeyer trailhead, which lies at the south end. The orientation lends the study area designation for discussion of onsite conditions (Figure 2). There are three smaller segments that include:

- North Segment is at the north end and is located on the west and north sides of the excluded parcels to be used as a sand mine (Figure 2a). This area is primarily composed of unharvested upland forest with harvested forest (harvested in 2018, 2022, and 2023) areas at the north end. This portion borders Port Gamble Road and there is a service road entering near the northeast corner. This road represents access to the harvested areas and will be used as access to the sand mine properties.
- Central Segment is as the name implies in the central portion of the study area (Figure 2b). It is located south of the excluded sand mine properties and is west of homes along Port Gamble Road. The southeastern portion borders Bond Road and is accessed via a service road that is gated to prevent unauthorized access. Most of this segment is also composed of unharvested forest with harvested forest (harvested in 2018) in the southeastern portion.
- South Segment is located at the south end and includes properties on both sides of Stottlemeyer Road and most of it is bordered by Bond Road on the east edge (Figure 2c). It includes an area east of Bond Road that is accessed from Stevens-Uhler Road. The trailhead to the Port Gamble Heritage Park is located on the east side of Stottlemeyer Road.

The trails in this segment cross mostly through unharvested forest with the area of harvested forest extending on the northeast corner where it is continuous with the harvested forest on the Central Segment.

METHODOLOGY

WETLAND IDENTIFICATION METHODOLOGY

The study area was evaluated for the presence of wetlands using the Routine Determination Method according to the U.S. Army Corps of Engineers' 1987 Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers' Wetland Delineation Manual (Environmental Laboratory 1987); Western Mountains, Valleys, and Coast Region (Version 2.0) (Corps 2010). The Routine Determination Method and defining wetland criteria are discussed further in Appendix A. Wetlands are regulated as "Waters of the United States" by the U.S. Army Corps of Engineers (Corps) and as "Waters of the State" by the Washington Department of Ecology (Ecology), and locally by Kitsap County.

STREAM IDENTIFICATION METHODOLOGY

Streams are defined by the State of Washington as "…a) Any body of running water that moves under gravity to progressively lower levels, in a relatively narrow but clearly defined channel on the ground surface, in a subterranean cavern, or beneath or in a glacier and transports sediments and dissolved particles. b) A term used in quantitative geomorphology interchangeably with channel. c) A natural waterway that is defined as first to third order. d) (under the Shoreline Management Act) A naturally occurring body of periodic or continuous flowing water where: (1) The mean annual flow is greater than twenty cubic feet per second; and (2) The water is contained with a channel." (Anderson et. al. 2016).

The KCC title 19 defines a stream as an "…an area where surface water flow is sufficient to produce a defined channel or bed. Such areas demonstrate evidence of the passage of water and included but aren't limited to, bedrock channels, gravel beds, sand and silt beds, and defined-channel swales. The channel or bed need not contain water throughout the year to be considered a stream."

The stream identification methodology was conducted by examining conditions within the mapped streams to determine if there were characteristics bed and banks were present to indicate the action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation. In essence, the presence of streams was determined by assessing three main criteria: 1) the presence or evidence of hydrology, 2) the soil, substrate, and/or geomorphological changes, and 3) changes in vegetation (Appendix B).

ELS conducted five site visits in October 2023 to ascertain whether streams were present within the areas mapped by various critical area mapping sources. Prior to conducting the site visit, ELS reviewed current and historic aerial photographs of the study area, and consulted online databases for soil, wetland, topography, priority habitat, and historic stream conditions. During the reconnaissance visits, ELS examined the mapped streams as well as the topographic indicators of potential streams across the study area. As part of the reconnaissance, data and photos were

collected in these locations to document conditions and confirm the absence of stream indicators including the lack of defined channels and banks, separated gravels indicating water flow, and dense upland plant species in each of the mapped streams. The data will be compiled onto data forms for the final report for the NK United project.

Reconnaissance Observations and Data Collection Overview

Vegetation

Unharvested Forest Areas

The forest that has not been harvested was dominated by Douglas fir (*Pseudotsuga menziesii*, FACU), western red cedar (*Thuja plicata*, FAC), western hemlock (*Tsuga heterophylla*, FACU), red alder (*Alnus rubra*, FAC), salmonberry (*Rubus spectabilis*, FAC), red elderberry (*Sambucus racemosa*, FACU), Oregon grape (*Mahonia nervosa*, FACU), salal (*Gaultheria shallon*, FAC), evergreen huckleberry (*Vaccinium ovatum*, FACU), holly (*Ilex aquifolium*, FACU), red huckleberry (*Vaccinium parvifolium*, FACU), sword fern (*Polystichum munitum*, FACU), stinging nettle (*Urtica dioica*, FAC), and trailing blackberry (*Rubus ursinus*, FACU). Most of the areas sampled within the unharvested forest were composed of bare ground beneath the dominant tree and/or shrub cover above. The vegetation dominance ranged from FAC to FACU with FACU species dominating throughout, including within the mapped stream areas. See Appendix A for plant indicator status definitions.

Harvested Forest Areas

The harvested areas were vegetated by a mixture of native and invasive plant species including Douglas fir saplings, salmonberry, scotch broom (*Cytisus scoparius*, FACU), red flowering currant (*Ribes sanguineum*, FACU), black cap (*Rubus leucodermis*, FACU), red huckleberry, bull thistle (*Cirsium vulgare*, FACU), hairy cat's ear (*Hypochaeris radicata*, FACU), common groundsel (*Senecio vulgaris*, FACU), sword fern, foxglove (*Digitalis purpurea*, FACU), fireweed (*Chamerion angustifolium*, FACU), trailing blackberry, Himalayan blackberry (*Rubus bifrons*, FAC), evergreen blackberry (*Rubus laciniatus*, FACU), velvet grass (*Holcus lanatus*, FAC), bedstraw (*Galium aparine*, FACU), pearly everlasting (*Anaphalis margaritacea*, FACU), wall lettuce (*Mycelis muralis*, NL), common nipplewort (*Lapsana communis*, FACU), bracken fern (*Pteridium aquilinum*, FACU), and lady fern (*Athyrium filix-femina*, FAC). These areas were dominated by similar species prior to the harvesting of the trees but had become dominated by a mixture of pioneer weed species along with native tree, shrub, and herbaceous species that were planted or recovering on their own. Most of the species in the harvested areas were species that grow predominantly within upland.

The vegetation data collected throughout the NK United study area revealed that there was no coverage by potential wetland plant species (OBL through FAC).

SOILS

The Natural Resources Conservation Service (NRCS) maps the soils within the study area as (NRCS 2023A; Figure 3). Table 1 provides an overview of the soil types mapped on the study area along with whether they are hydric and the segments in which they are present.

Table 1. Web Soil Survey Mapping

Soil Map Unit	Hydric?	North Segment	Central Segment	South Segment
28 Kitsap silt loam, 2 to 8 percent slopes	No	--	--	X
29 Kitsap silt loam, 8 to 15 percent slopes	No	--	X	--
40 Poulsbo gravelly sandy loam, 6 to 15 percent slopes	No	X	X	X
43 Poulsbo-Ragnar complex, 6 to 15 percent	No	X	--	--
44 Ragnar fine sandy loam, 0 to 6 percent slopes	No	X	X	--
45 Ragnar fine sandy loam, 6 to 15 percent slopes	No	X	--	X
46 Ragnar fine sandy loam, 15 to 30 percent slopes	No	X	X	X
47 Ragnar-Poulsbo complex, 15 to 30 percent slopes	No	X	--	X

- Kitsap formed on terraces from lacustrine depositions with volcanic ash in the upper part. Moderately well drained; depth to water table 18 to 30 inches.
- Poulsbo formed on terraces and moraines from basal till with volcanic ash in the upper part. They are moderately well drained with a water table between 12 and 30 inches below ground.
- Ragnar formed on terraces from glacial outwash with some volcanic ash in the upper part. Well drained; depth to water table more than 80 inches.
- Sinclair formed on till plains from basal till. Moderately well drained; depth to water table 18 to 29 inches.

These soil map units are not classified as hydric because they are moderately well to well drained and the depth to water table is below 18 inches. The soil data collected at the test plot locations within the ravines and mapped stream did not exhibit positive indicators for hydric soils.

HYDROLOGY

Streams are natural bodies of water that move under gravity to progressively lower layers and when periodic or continuous flowing water is present would exhibit a defined channel on the ground surface. A channel would also have sorted gravels and water flow would maintain openings in the culverts. Water was not present during the reconnaissance visits and there was no evidence of periodic flowing water based on the absence of defined channels, sorted gravels, and riparian plant communities.

CRITICAL AREA INVENTORIES[1]

NATIONAL WETLANDS INVENTORY

The U.S. Fish and Wildlife Services (USFWS) National Wetlands Inventory (NWI 2023) indicates a series of streams across the study area in the same locations and configuration as those indicated on Figure 2 (Figure 5). No wetlands were mapped along the streams or elsewhere on the properties, which was confirmed during the field reconnaissance field visits.

WASHINGTON STATE AND KITSAP COUNTY CRITICAL AREAS INVENTORIES

Table 2 lists the critical areas found in the three segments of NK United. The inventories were obtained from the websites of the Washington Department of Fish and Wildlife (2023), Washington State Department of Natural Resources (2023), Statewide Integrated Fish Distribution (2023), and the Kitsap County GIS Critical areas mapping (2023). The table lists streams and wetlands in each segment as mapped by the websites. As noted below, the Washington Department of Fish and Wildlife and Statewide Integrated Fish Distribution maps show the same streams, and the Washington Department of Natural Resources and Kitsap County maps show the same area of streams. None of the maps indicated wetlands. Maps obtained from each of these websites are provided in Appendix C.

Table 2. Critical Areas Mapping

	North Segment	Central Segment	South Segment
Washington Department of Fish and Wildlife Priority Habitats and Species			
Streams	Type N	Type F (mostly across the excluded properties)	None
Wetlands	None	None	None
Washington Department of Natural Resources, Forest Practices Mapping Application Tool			
Streams	None	Type F (2) Type N (2) Unknown* (3)	Type F (1) Type N (2) Unknown (1)
Wetlands	None	None	None
Statewide Integrated Fish Distribution			
Streams	None	Type F (same mapping as WDFW PHS map)	None
Wetlands	None	None	None

[1] The critical areas maps should be used with discretion because they are used to gather general wetland and stream information about a regional area and therefore are limited in accuracy for smaller areas because of their large scale.

	North Segment	Central Segment	South Segment
Kitsap County Critical Areas			
Streams	Type N	Type F (2) Type N (2) Unknown (3)	Type F (1) Type N (2) Unknown (1)
Wetlands	None	None	None

*Unknown streams are denoted on the maps as a dashed line or with a U.

CRITICAL AREAS RECONNAISSANCE SUMMARY

STREAMS

The critical areas maps obtained for this project including the Kitsap County GIS map indicate the presence of a number of streams within the study area. These streams have been mapped because the ravines that crosses eastern slopes of the study area. However, upon examination, none of these mapped streams met the definition of a stream in Kitsap County Code, Section 19.150.650[2]. During the reconnaissance, streams were not observed and are not present as mapped because:

- There were no defined-channel swales or defined banks in any of the ravines to indicate periodic water flow at any time of the year.
- There were no bedrock channels, gravel beds, or sand and silt beds observed within any of the mapped streams.
- The absence of water flow is further indicated by the culverts that are half filled with soil culverts under the onsite logging and service roads and Stottlemeyer Road.
- The mapped stream and topographic ravines contained dense groundcover vegetation that would not be present if there was water flow at any time of the year.
- The observation of no surface water channels or streams is consistent with the geologic investigation performed for the study area that have indicated the presence of highly permeable soils that quality the area as a critical aquifer recharge area.

A water type modification to remove the streams from the critical areas maps will be prepared as part of the next phase of the critical areas reconnaissance. The modification forms to be filled out will be reviewed by the Washington Department of Natural Resources, Washington Department of Fish and Wildlife, the Suquamish Indian Tribe, and Kitsap County Department of Community development. These agencies will conduct field visits to confirm the absence of the mapped streams.

WETLANDS

Wetlands were not observed on most of the study area because as revealed at the test plots, the vegetation was dominated by upland species (FACU to UPL), the soils did not exhibit hydric soil characteristics, and there was no hydrology or evidence of wetland hydrology. A single wetland was found in the north segment lying adjacent to a service road (Figure 2a). This wetland was not formally delineated but was determined to be a wetland because of the dominance by wetland plant

[2] KCC Section 19.150.600 stream definition "Streams mean those areas in Kitsap County where the surface water flows are sufficient to produce a defined channel or bed. A defined channel or bed is an area which demonstrates clear evidence of the passage of water and includes but is not limited to bedrock channels, gravel beds, sand and silt beds, and defined-channel swales. The channel or bed need not contain water year-round. This definition is not meant to include irrigation ditches, canals, storm or surface water runoff devices or other artificial watercourses unless they are used by fish or used to convey streams naturally occurring prior to construction.

species (OBL, FACW, and FAC) species. Hydrology was also observed within the wetland. The wetland will be delineated during the critical area delineation phase of the project. The absence of wetlands on the study area is also consistent with the geologic reconnaissance, which indicated the presence of highly permeable soils that facilitate percolation rather than detention/retention of water.

LIMITATIONS

ELS bases this report's determinations on standard scientific methodology and best professional judgment. In our opinion, local, state, and federal regulatory agencies should agree with our determinations. However, the information contained in this report should be considered preliminary and used at your own risk until it has been approved in writing by the appropriate regulatory agencies. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report.

REFERENCES

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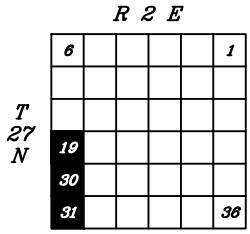
FIGURES AND PHOTOPLATES

WASHINGTON

47.7999° Latitude
-122.5951° Longitude

LOCATION MAP



PROJECT VICINITY MAP

NOTE:
Quadrangle topographic map from USGS.

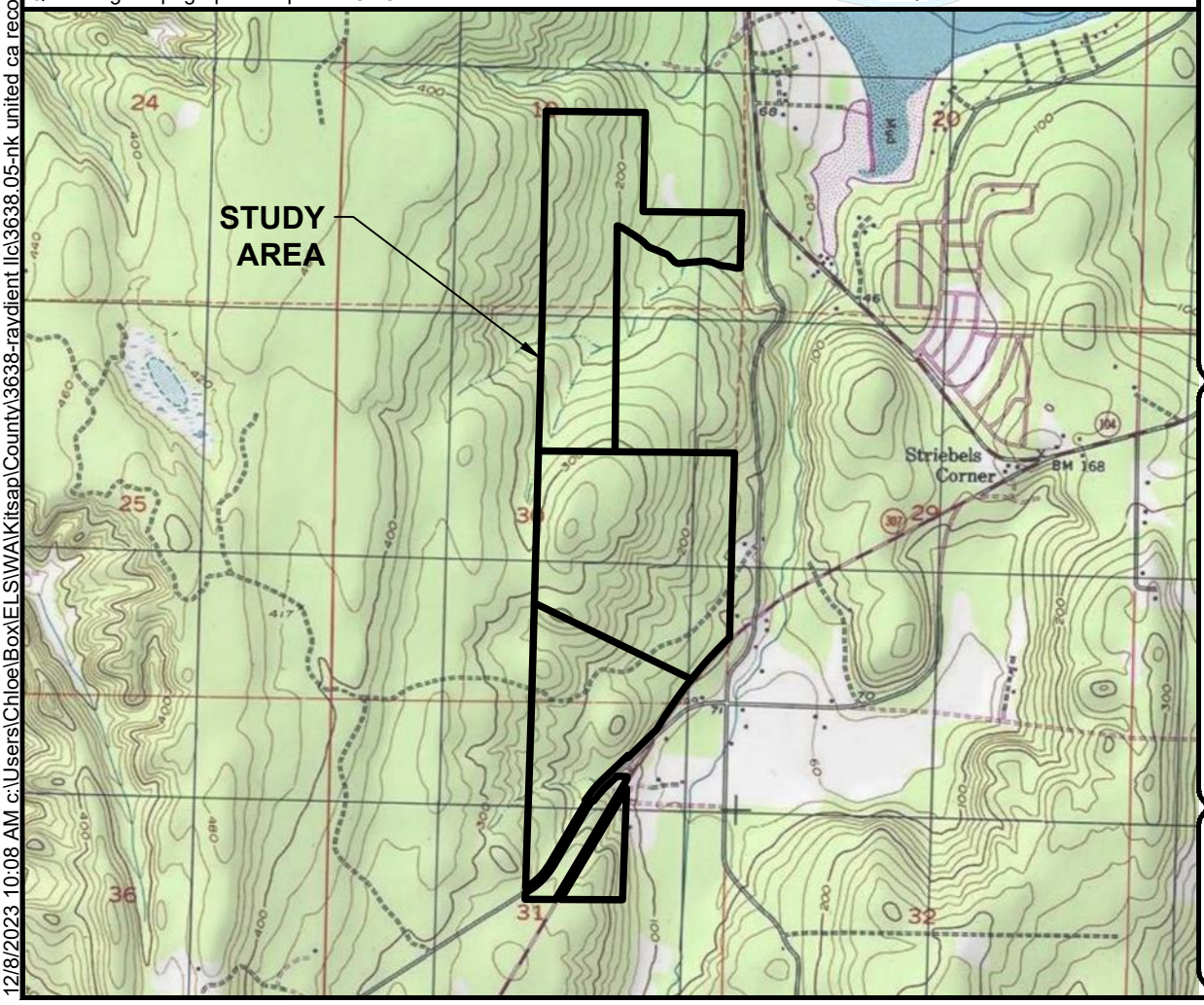


Figure 1
VICINITY MAP
Critical Areas Reconnaissance
Raydient/NK United
Kitsap County, Washington
Section 19, 30 & 31, Township 27N, Range 02E, W.M.

DATE: 12/8/23
DWN: CB
REQ. BY: JB
PRJ. MGR: JB
CHK:
PROJECT NO: 3638.05

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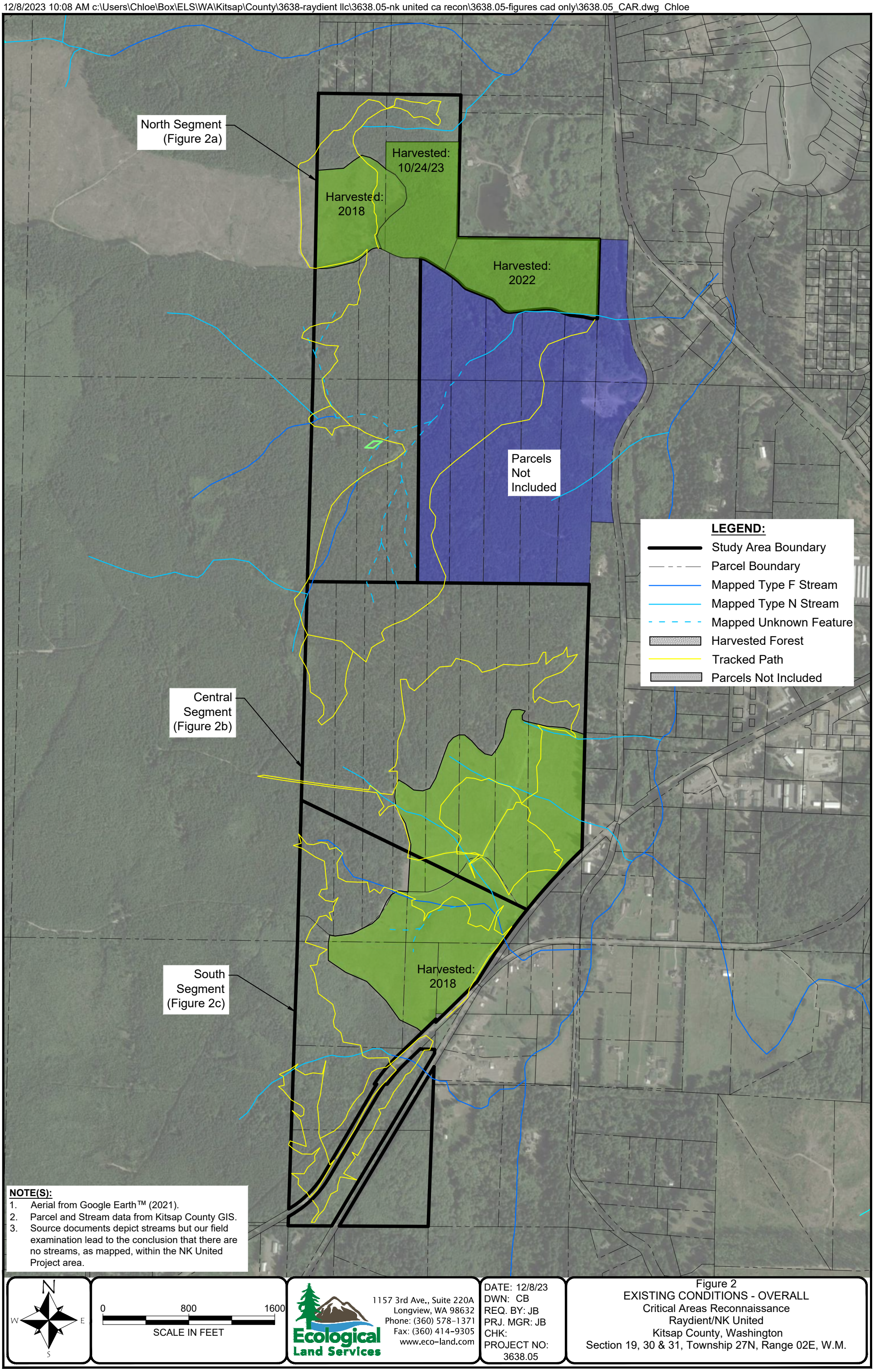

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Figure 2
EXISTING CONDITIONS - OVERALL
Critical Areas Reconnaissance
Raydient/NK United
Kitsap County, Washington
Section 19, 30 & 31, Township 27N, Range 02E, W.M.

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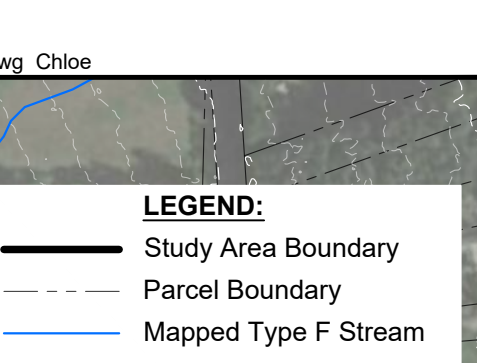
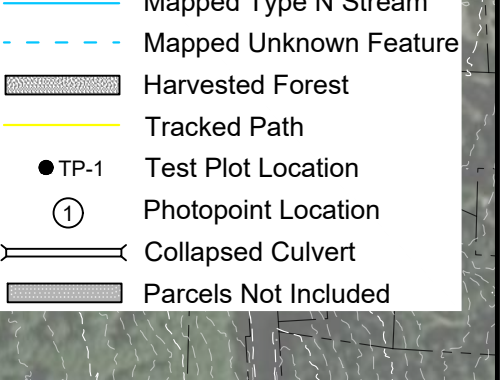
LEGEND:

- Study Area Boundary
- Parcel Boundary
- Mapped Type F Stream
- Mapped Type N Stream
- Mapped Unknown Feature
- Harvested Forest
- Tracked Path
- TP-1 Test Plot Location
- (1) Photopoint Location
- Collapsed Culvert
- Parcels Not Included

TP-43
TP-42
TP-41
PP
Harvested: 10/24/23
Harvested: 2018
Harvested: 2022
TP-44
TP-45
TP-46
TP-47
TP-51
TP-50
Forested Wetland
Trail, Typ
Parcels Not Included





NOTE(S):

1. Aerial from Google Earth™ (2021).
2. Wetland and test plots located using handheld GPS capable of submeter accuracy.
3. Parcel data from Kitsap County GIS.
4. Source documents depict streams but our field examination lead to the conclusion that there are no streams, as mapped, within the NK United Project area.

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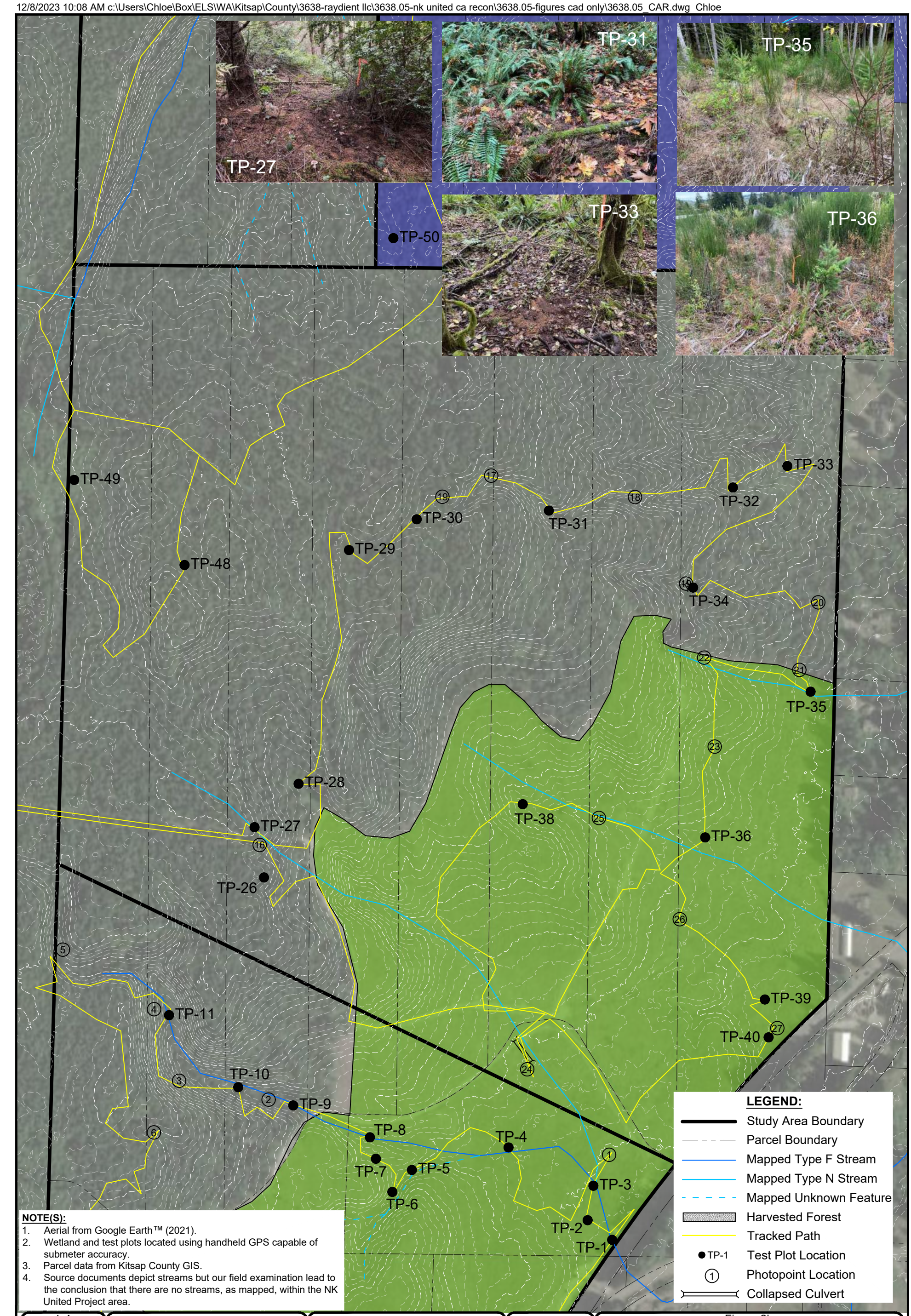
Figure 2a
EXISTING CONDITIONS - NORTH SEGMENT
Critical Areas Reconnaissance
Raydient/NK United
Kitsap County, Washington
Section 19, 30 & 31, Township 27N, Range 02E, W.M.



NOTE(S):

1. Aerial from Google Earth™ (2021).
2. Wetland and test plots located using handheld GPS capable of submeter accuracy.
3. Parcel data from Kitsap County GIS.
4. Source documents depict streams but our field examination lead to the conclusion that there are no streams, as mapped, within the NK United Project area.

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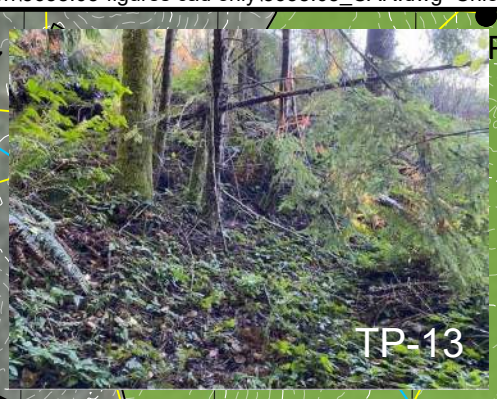
PROJECT NO: 3638.05

Figure 2b
EXISTING CONDITIONS - CENTRAL SEGMENT
Critical Areas Reconnaissance
Raydient/NK United
Kitsap County, Washington
Section 19, 30 & 31, Township 27N, Range 02E, W.M.



P-38
T
25
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TP-11
TP-10
TP-9
TP-8
TP-4
TP-7
TP-5
TP-6
TP-3
TP-2
TP-1
TP-12
TP-13
TP-14
TP-15
TP-16
TP-16a
TP-18
TP-17
TP-20
TP-21
TP-22
TP-19
TP-23
TP-24

LEGEND:

- Study Area Boundary
- Parcel Boundary
- Mapped Type F Stream
- Mapped Type N Stream
- Mapped Unknown Feature
- Harvested Forest
- Tracked Path
- TP-1 Test Plot Location
- 1 Photopoint Location
- Collapsed Culvert

NOTE(S):

1. Aerial from Google Earth™ (2021).
2. Wetland and test plots located using handheld GPS capable of submeter accuracy.
3. Parcel data from Kitsap County GIS.
4. Source documents depict streams but our field examination lead to the conclusion that there are no streams, as mapped, within the NK United Project area.

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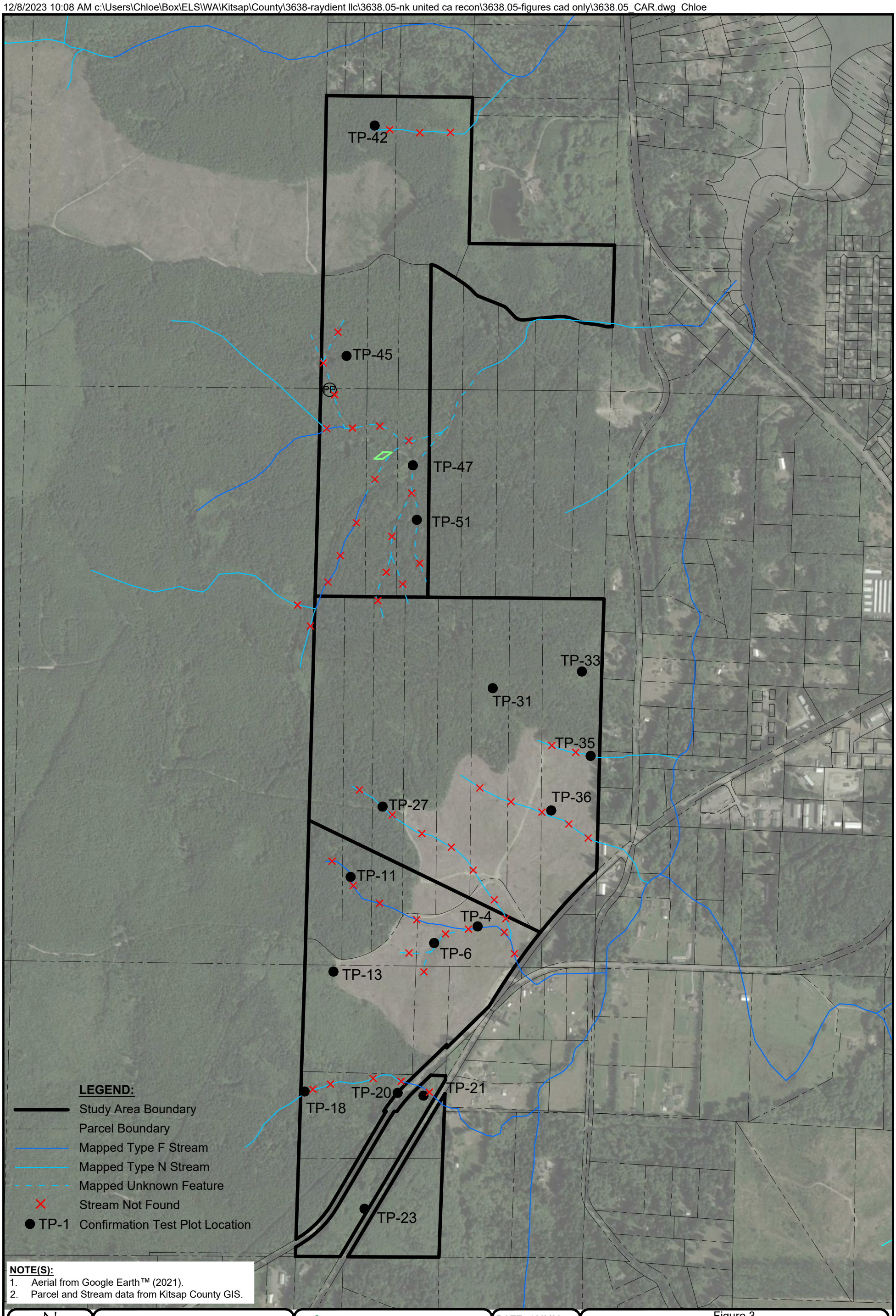
Figure 2c
EXISTING CONDITIONS - SOUTH SEGMENT
Critical Areas Reconnaissance
Raydient/NK United
Kitsap County, Washington
Section 19, 30 & 31, Township 27N, Range 02E, W.M.



NOTE(S):
1. Aerial from Google Earth™ (2021).
2. Parcel and Stream data from Kitsap County GIS.

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Figure 3
CRITICAL AREAS RECONNAISSANCE RESULTS
Critical Areas Reconnaissance
Raydient/NK United
Kitsap County, Washington
Section 19, 30 & 31, Township 27N, Range 02E, W.M.

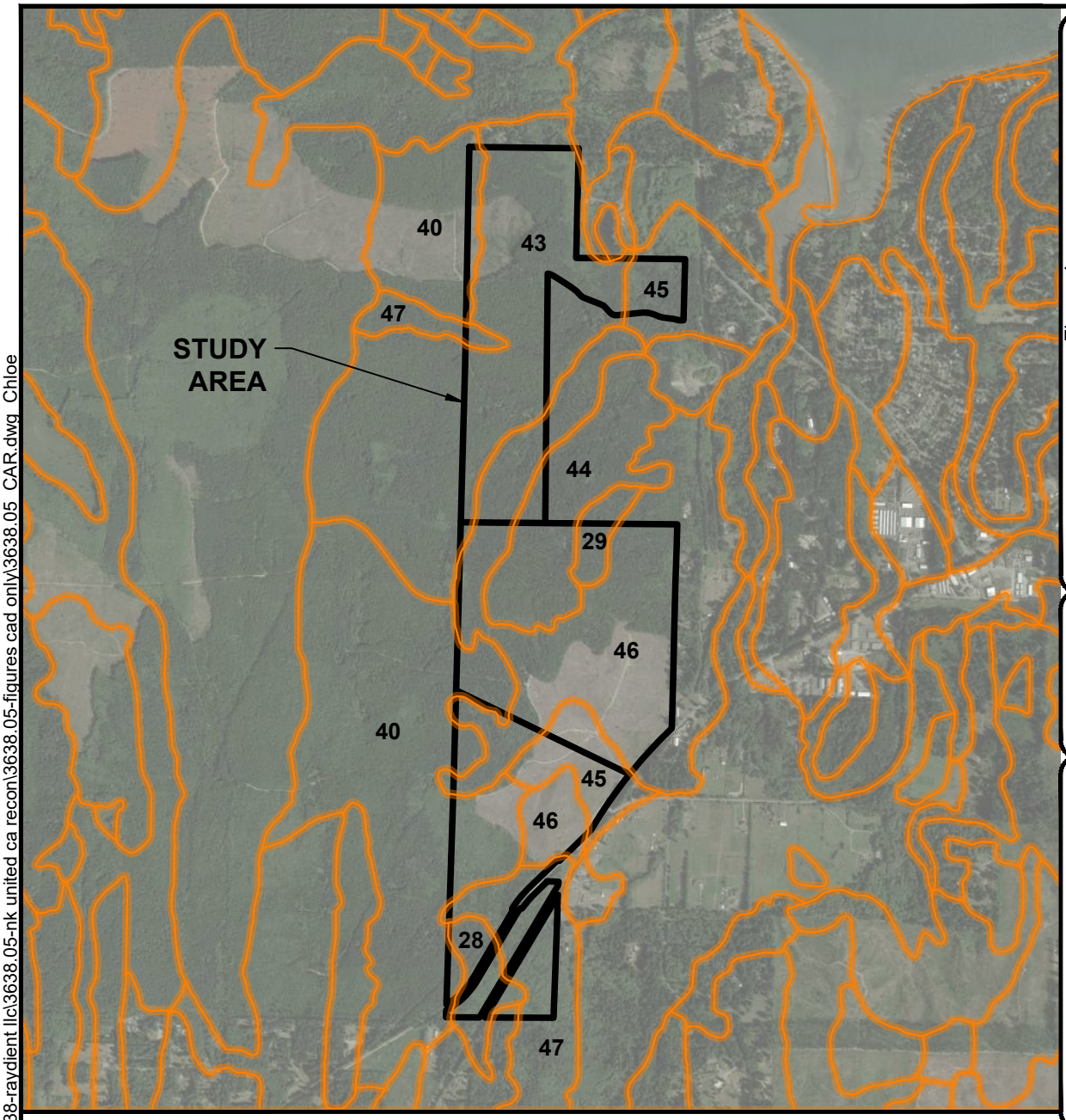

Figure 4
NRCS SOIL SURVEY
Critical Areas Reconnaissance
Raydient/NK United
Kitsap County, Washington
Section 19, 30 & 31, Township 27N, Range 02E, W.M.

DATE: 12/8/23
DWN: CB
REQ. BY: JB
PRJ. MGR: JB
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LEGEND:

- Study Area Boundary
- NRCS Soil Boundary

28	Kitsap silt loam, 2 to 8 percent slopes. Not hydric.
29	Kitsap silt loam, 8 to 15 percent slopes. Not hydric.
40	Poulsbo gravelly sandy loam, 6 to 15 percent slopes. Not hydric.
43	Poulsbo-Ragnar complex, 6 to 15 percent slopes. Not hydric.
44	Ragnar fine sandy loam, 0 to 6 percent slopes. Not hydric.
45	Ragnar fine sandy loam, 6 to 15 percent slopes. Not hydric.
46	Ragnar fine sandy loam, 15 to 30 percent slopes. Not hydric.
47	Ragnar-Poulsbo complex, 15 to 30 percent slopes. Not hydric.

NOTE(S):
1. Map provided on-line by NRCS at web address: *http://websoilsurvey.nrcs.usda.gov/app/*

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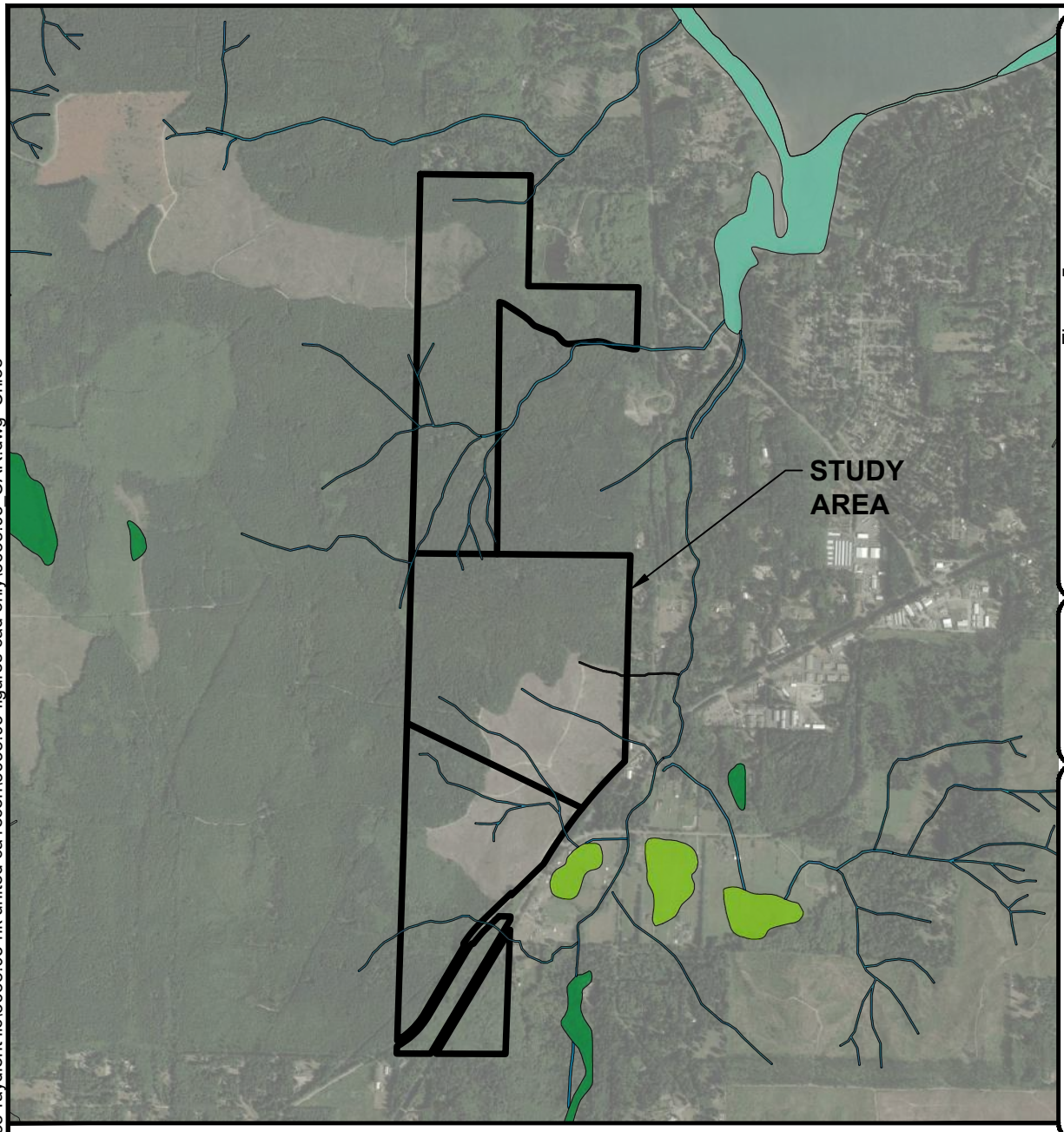

Figure 5
USFWS NATIONAL WETLANDS INVENTORY
Critical Areas Reconnaissance
Raydient/NK United
Kitsap County, Washington
Section 19, 30 & 31, Township 27N, Range 02E, W.M.

DATE: 12/8/23
DWN: CB
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LEGEND:

- Study Area Boundary

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

NOTE(S):

1. Map provided on-line by US Fish & Wildlife Service at web address: *https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper*

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Photo 1-Test Plot 3 within the lower end of mapped stream in South Segment. No stream channel this location.

Photo 2-Test Plot 3 looking east toward Bond Road/SR 307 along the mapped stream.

Photo 3-Test Plot 8 in the middle segment of the mapped stream within the South Segment. Upland vegetation and no stream channel.

Photo 4-Test Plot 8 looking upslope and west along the mapped stream. No stream channel and presence of upland vegetation.

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PROJ.#: 3638.05

Photoplate 1-Test Plots 3 and 8
Critical Areas Reconnaissance
NK United /Raydient
Poulsbo, Washington

Photo 5-Test Plot 11 conducted in southernmost mapped stream in South Segment. No stream observed**.**

Photo 6-Test Plot 11 looking east down the ravine in which the stream is mapped. Dense ferns throughout and no channel observed**.**

Photo 7-Test Plot 18 located at the western extent of the onsite stream in South Segment. Bare ground but no channel observed.

Photo 8-Test Plot 18 looking east down the sloping ravine. No stream channel or evidence of water flow.

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Photoplate 2-Test Plots 11 and 18
Critical Areas Reconnaissance
NK United /Raydient
Poulsbo, Washington

Photo 9-Test Plot 20 conducted at the east end of a ravine parallel to Stottlemeyer Road. Not mapped as a stream and none observed.

Photo 10-Test Plot 20 looking north toward culvert under Stottlemeyer Road. Bare ground with no evidence of water flow.

Photo 11-Test Plot 21 (east of Stottlemeyer Road) in the southernmost stream in South Segment. Along path cleared for easy access.

Photo 12-Test Plot 21 looking east toward Bond Road (SR 307). Dense vegetation with no channel observed within the mapped area.

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Photoplate 3-Test Plots 20 and 21
Critical Areas Reconnaissance
NK United /Raydient
Poulsbo, Washington

Photo 13-Test Plot 35 in the mapped stream at northern edge of harvested forest within the Central Segment.

Photo 14-Test Plot 35 looking downslope and easterly along mapped stream.

Photo 15-Test Plot 38 in topographic trough where stream is mapped. No channel observed and no evidence of water flow.

Photo 16-Test Plot 38 looking southeasterly down the topographic trough. No stream channel or evidence of water flow.

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Photoplate 4-Test Plots 35 and 38
Critical Areas Reconnaissance
NK United /Raydient
Poulsbo, Washington

Photo 17-Test Plot 30 located within a ravine where a stream has not been mapped. No stream or evidence of water flow observed.

Photo 18-Test Plot 30 looking downslope and easterly within the topographic trough.

Photo 19-Test Plot 44 in topographic trough with no mapped stream. Downslope of a large slash pile within the trough.

Photo 20-Test Plot 44 looking downslope and north into trough. No stream or water flow indicators present.

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Photoplate 5-Test Plots 30 and 44
Critical Areas Reconnaissance
NK United /Raydient
Poulsbo, Washington

Photo 21-Photo Point 5 looking east to document site conditions. A stream was not observed within this area.

Photo 22 Photo Point 5 south looking downslope where there is dense vegetation cover not indicative of stream conditions.

Photo 23-Photo Point 10 is located along a topographic trough that lies west of Stottlemeyer Road. Non mapped stream/no stream.

Photo 24-Photo Point 10 west shows another area of the topographic trough where no stream was observed during the 10/23 site visits.

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Photoplate 6-Photo Points 5 and 10
Critical Areas Reconnaissance
NK United /Raydient
Poulsbo, Washington

Photo 25-Photo Point 13 looking north along a topographic trough at the northern tip of South Segment between Stottlemeyer and Bond Roads.

Photo 26 Photo Point 13 looking south along the low area along Bond Road.

Photo 27-Photo Point 18 looks easterly down a topographic trough where no stream was mapped in the Central Segment.

Photo 28-Photo Point 18 looks westerly up the topographic trough across the north end of the Central Segment. No stream observed.

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Photoplate 7-Photo Points 13 and 18
Critical Areas Reconnaissance
NK United /Raydient
Poulsbo, Washington

Photo 29-Photo Point 13 looking north along a topographic trough at the northern tip of South Segment between Stottlemeyer and Bond Roads.

Photo 30 Photo Point 13 looking south along the low area along Bond Road.

Photo 31-Photo Point 18 looks easterly down a topographic trough where no stream was mapped in the Central Segment.

Photo 32-Photo Point 18 looks westerly up the topographic trough across the north end of the Central Segment. No stream observed.

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Photoplate 8-Photo Points 13 and 18
Critical Areas Reconnaissance
NK United /Raydient
Poulsbo, Washington

Photo 33-Shows the inlet of the culvert under Stottlemeyer Road, which is at the end of the non mapped stream just west of the road.

Photo 34 shows the culvert under Bond Road in the upland between Bond and Stottlemeyer Roads in the south segment.

Photo 35 shows the culvert under Bond Road at the north end of the South Segment.

Photo 36 shows a culvert under one of the service road. It appears that the culvert was installed during construction of logging roads.

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Photoplate 9-Culverts
Critical Areas Reconnaissance
NK United /Raydient
Poulsbo, Washington

APPENDIX A

ROUTINE DETERMINATION METHOD AND PLANT INDICATOR RATING DEFINITIONS

Routine Determination Method

The Routine Determination Method is defined according to the U.S. Army Corps of Engineers' 1987 *Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers' Wetland Delineation Manual* (Environmental Laboratory 1987)*; Western Mountains, Valleys, and Coast Region (Version 2.0)* (Corps 2010). The Routine Determination Method examines three parameters – vegetation, soils, and hydrology – to determine if wetlands exist in a given area. Hydrology is critical in determining what is a wetland, but if often difficult to assess because hydrologic conditions can change periodically (hourly, daily, or seasonally). Consequently, it is necessary to determine if hydrophytic vegetation and hydric soils are present, which would indicate that water is present for a long enough duration to support a wetland plant community. By definition, wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Vegetation Indicator Status

The indicator status, following the scientific names of plant species, indicates the likelihood of the species to be found in wetlands according to the *National Wetland Plant List Indicator Rating Definitions* (Corps 2012). Listed from most likely to least likely to be found in wetlands, the indicator status categories are:

- **OBL** (obligate wetland) - occur almost always under natural conditions in wetlands.
- **FACW** (facultative wetland) - usually occur in wetlands, but occasionally found in non-wetlands.
- **FAC** (facultative) - equally likely to occur in wetlands or non-wetlands.
- **FACU** (facultative upland) - usually occur in non-wetlands, but occasionally found in wetlands.
- **UPL** (obligate upland) - occur almost always under natural conditions in non-wetlands.
- **NI** (no indicator) - insufficient data to assign to an indicator category.

APPENDIX B

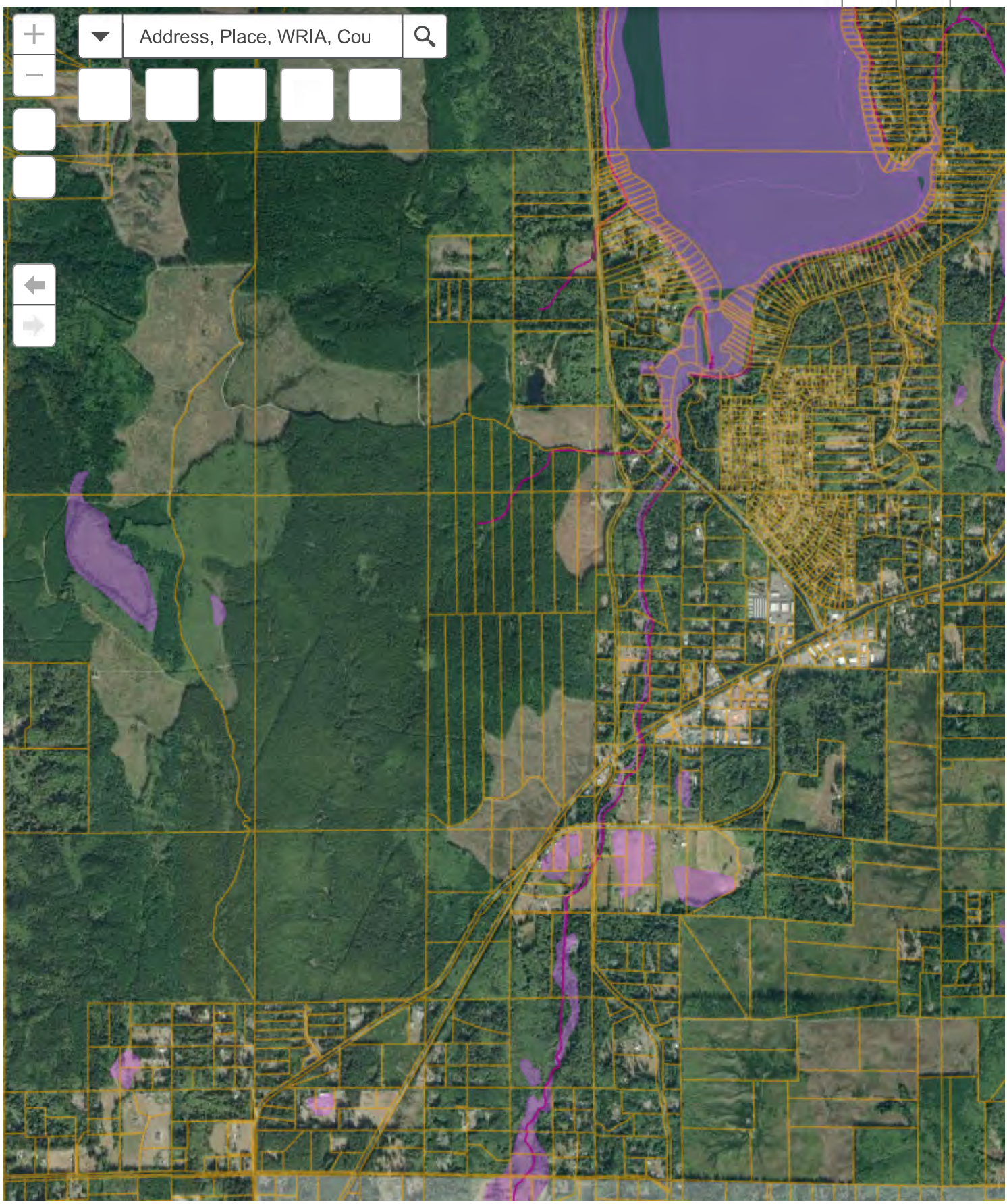
ORDINARY HIGH WATER MARK DELINEATION METHODOLOGY

OHWM Methodology

The ordinary high water mark (OHWM) of the one onsite streams were determined according to guidance from RCW 90.58.030 and Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State (Ecology 2016). OHWM is defined as a mark "on all lakes, streams, and tidal waters . . . found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation" (Anderson et. al. 2016). In essence, the OHWM is determined by assessing three main criteria: 1) the presence or evidence of hydrology, 2) the soil, substrate, and/or geomorphological changes, and 3) changes in vegetation. Indicators for each criterion differ depending on the environment (lake, stream, tidal). The main indicators used to discern the OHWM onsite were change in vegetation, breaks in topography, and changes in soil and substrate.

APPENDIX C

WASHINGTON STATE AND KITSAP COUNTY CRITICAL AREAS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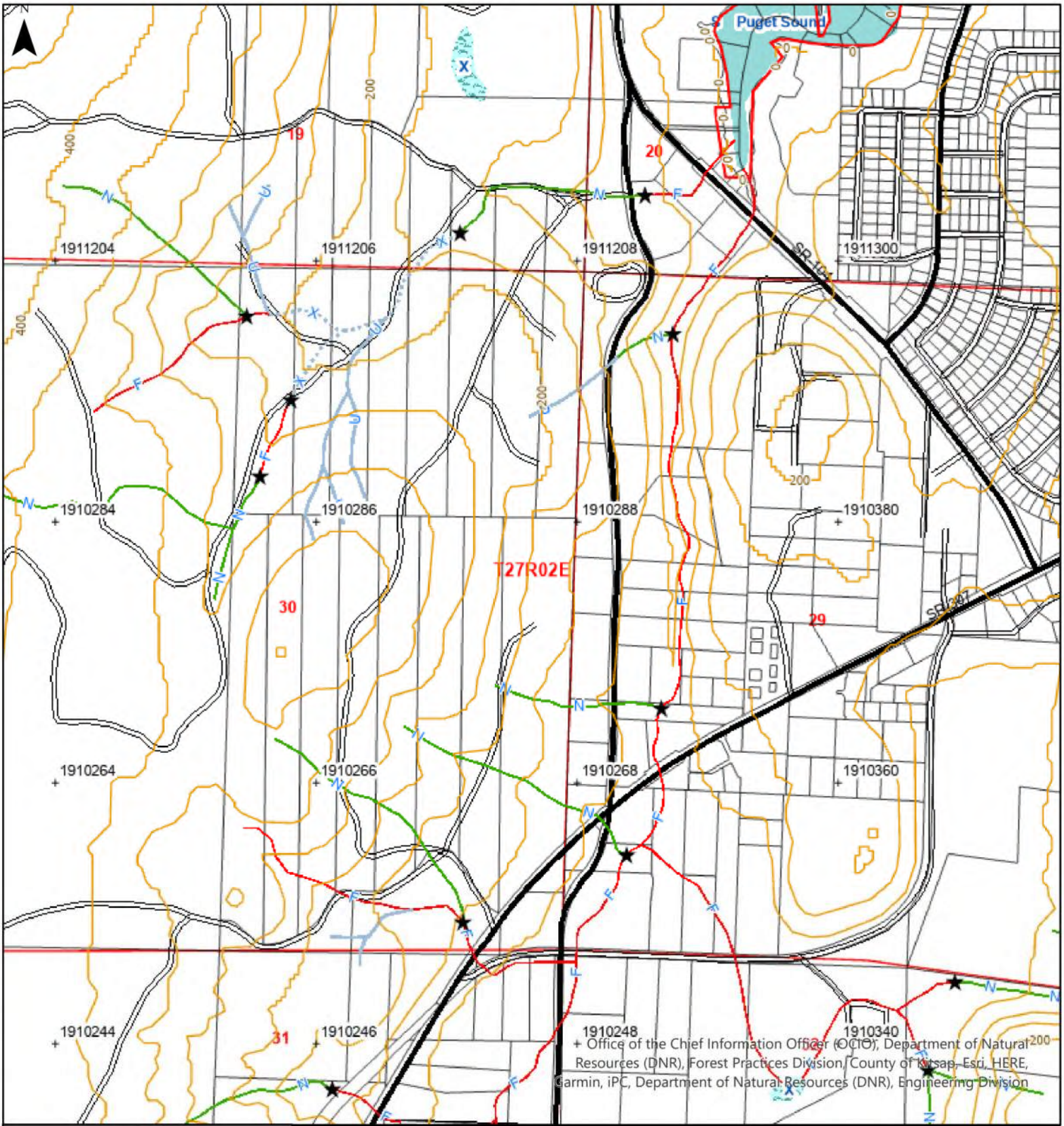
Forest Practices Activity Map - Application #_____



Map Symbols

- Harvest Boundary
- Road Construction
- Stream
- RMZ / WMZ Buffers
- Rock Pit
- Landing
- Waste Area
- Clumped WRTS/GRTS
- Existing Structure

Additional Information

Legal Description

S19 T27.0N R02.0E, S20 T27.0N R02.0E, S32 T27.0N R02.0E, S29 T27.0N R02.0E, S30 T27.0N R02.0E, S31 T27.0N R02.0E

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Extreme care was used during the compilation of this map to ensure its accuracy. However, due to changes in data and the need to rely on outside information, the Department of Natural Resources cannot accept responsibility for errors or omissions, and therefore, there are no warranties that accompany this material.

Approximate Scale : 1:12,000

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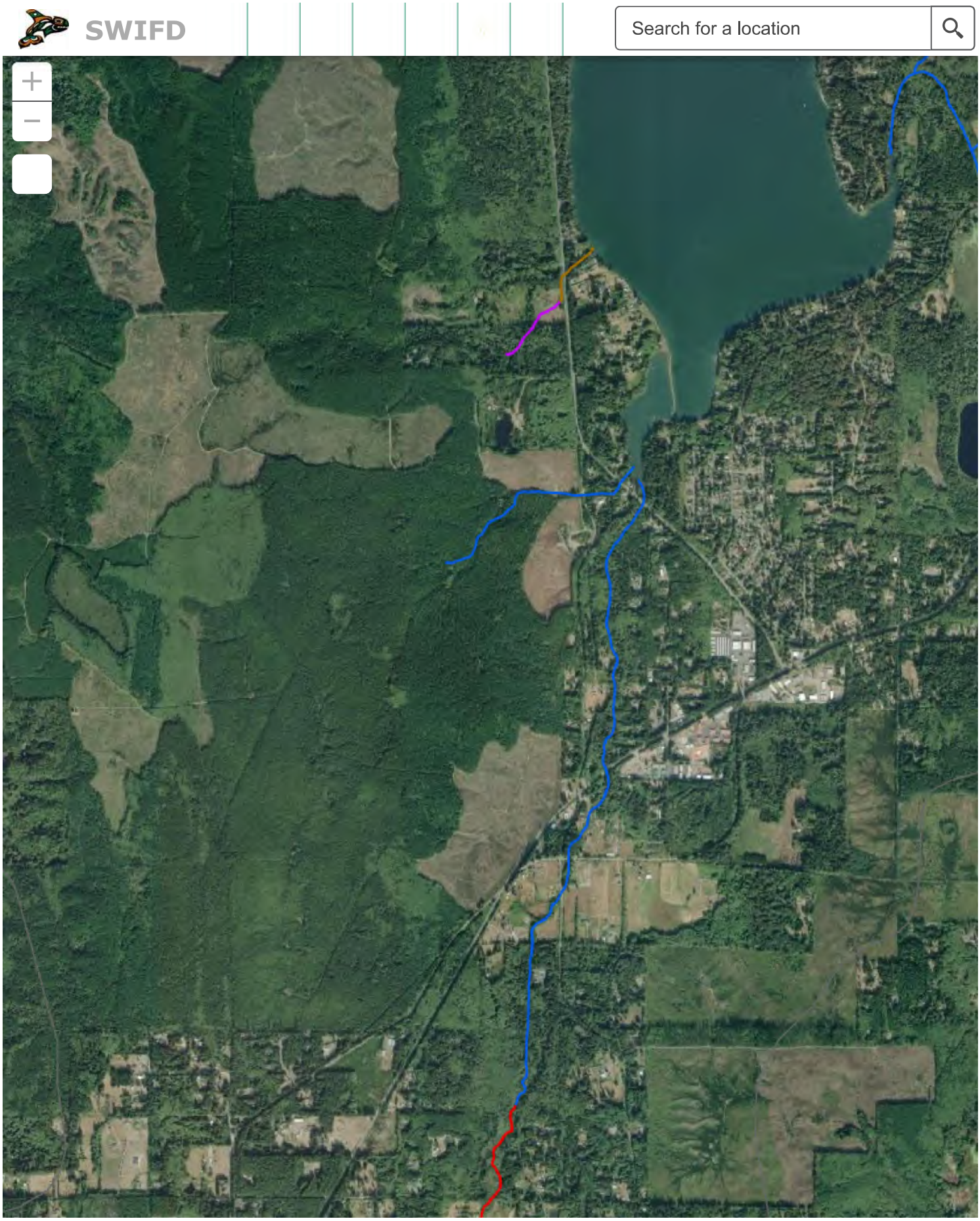
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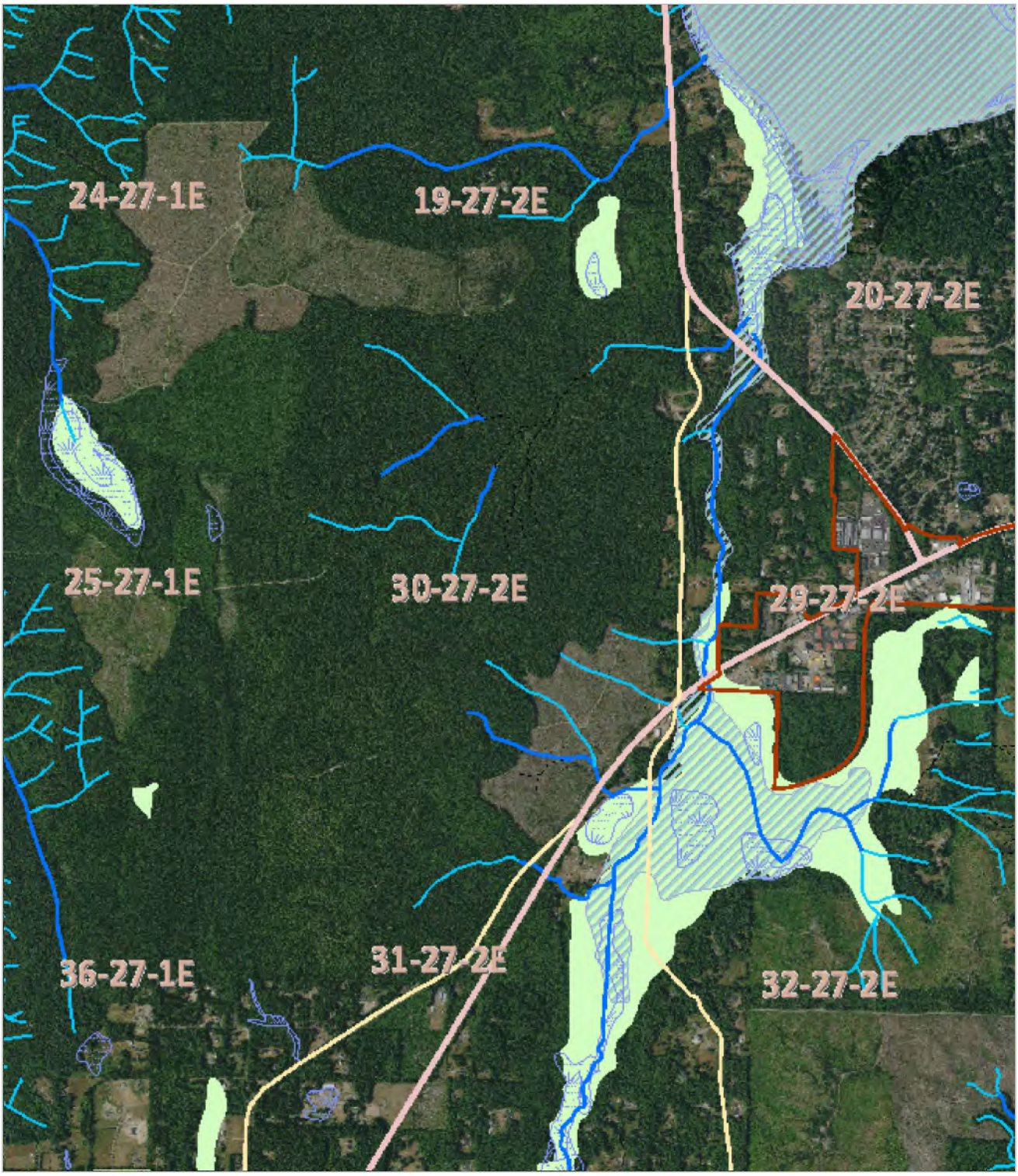

** This map is not a substitute for field survey **

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Comments

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Appendix D: Site Cultural Resources Report

Cultural Resources (Westland Resources)

Cultural Resources Assessment for the North Kitsap United Project, Kitsap County, Washington

Raydient, LLC

Prepared by:
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Reviewed and submitted by:
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Cultural Resources Report No. 2023-242
WestLand Project No. 11393

November 10, 2023

STATEMENT OF CONFIDENTIALITY

Disclosure of the locations of historic properties to the public may be in violation of both federal and state laws. Applicable United States laws include, but may not be limited to, Section 304 (54 U.S.C. §307103) of the National Historic Preservation Act and the Archaeological Resources Protection Act (16 U.S.C. §470hh). Archaeological sites are protected under Washington State law (RCW 27.53) and their locations are exempt from public disclosure (RCW 42.56.300).

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ABSTRACT

Management Summary: WestLand Engineering & Environmental Services (WestLand) conducted a cultural resources assessment for the North Kitsap United Project. The cultural resources assessment included background and archival research of the Area of Potential Effects (API) and everything within 0.5 miles of the API. This assessment revealed that no cultural resources have been previously documented within 0.5 miles of the API. WestLand's background research indicates that there is a moderate potential for encountering historic period cultural resources and a low potential for encountering precontact cultural resources in the API. WestLand recommends that a cultural resources survey of the entire API should be conducted prior to initiation of the project.

Report Title: Cultural Resources Assessment for the North Kitsap United Project, Kitsap County, Washington

Report Date: October 26, 2023

Project Sponsor: Raydient, LLC

Description of Proposed Undertaking: Raydient, LLC (Raydient) proposes to construct a residential development on a 418.8-acre parcel of land (Project Area/API) south of the city of Port Gamble, in north Kitsap County, Washington. The proposed development will include 80 residential lots possibly with ADU's, park, trails, open spaces, and a gravel pit. Raydient is conducting due diligence to facilitate anticipated permitting, administrative, and legal requirements in the future. Raydient therefore contracted WestLand to conduct a cultural resources desktop assessment of the API and everything within a half-mile buffer to identify any existing or potential cultural (e.g., archaeological, tribal, historical, architectural) resources in the API and its immediate vicinity.

Project Location: Kitsap County, Washington parcels 192702-4-003-2001, 192702-4-004-2000, 192702-4-005-2009, 202702-3-005-2008, 302702-1-011-2002, 302702-1-012-2001, 302702-1-013-2000, 302702-4-009-2000, 302702-4-010-2007, 302702-4-011-2006, 302702-4-012-2005, 302702-4-013-2004, 302702-4-014-2003, 302702-4-015-2002, 302702-4-016-2001, 302702-4-017-2000, 312702-1-004-2000, 312702-1-022-2008, 312702-1-023-2007, and 312702-1-024-2006

Project Locator UTM: NAD83 UTM Zone 10 T: E 530660, N 5294210

Legal Description: Portions of Sections 19, 20, 30, and 31 of Township 27 North, Range 2 East

USGS 7.5′ Quadrangle(s): Port Gamble, Washington

Total Acres: 418.8 acres

Applicable Regulations: None; this is a preemptive due diligence exercise

Lead Agency: Not applicable

Other Involved Agencies: Not applicable

Funding Source: Private

Land Jurisdiction: Private

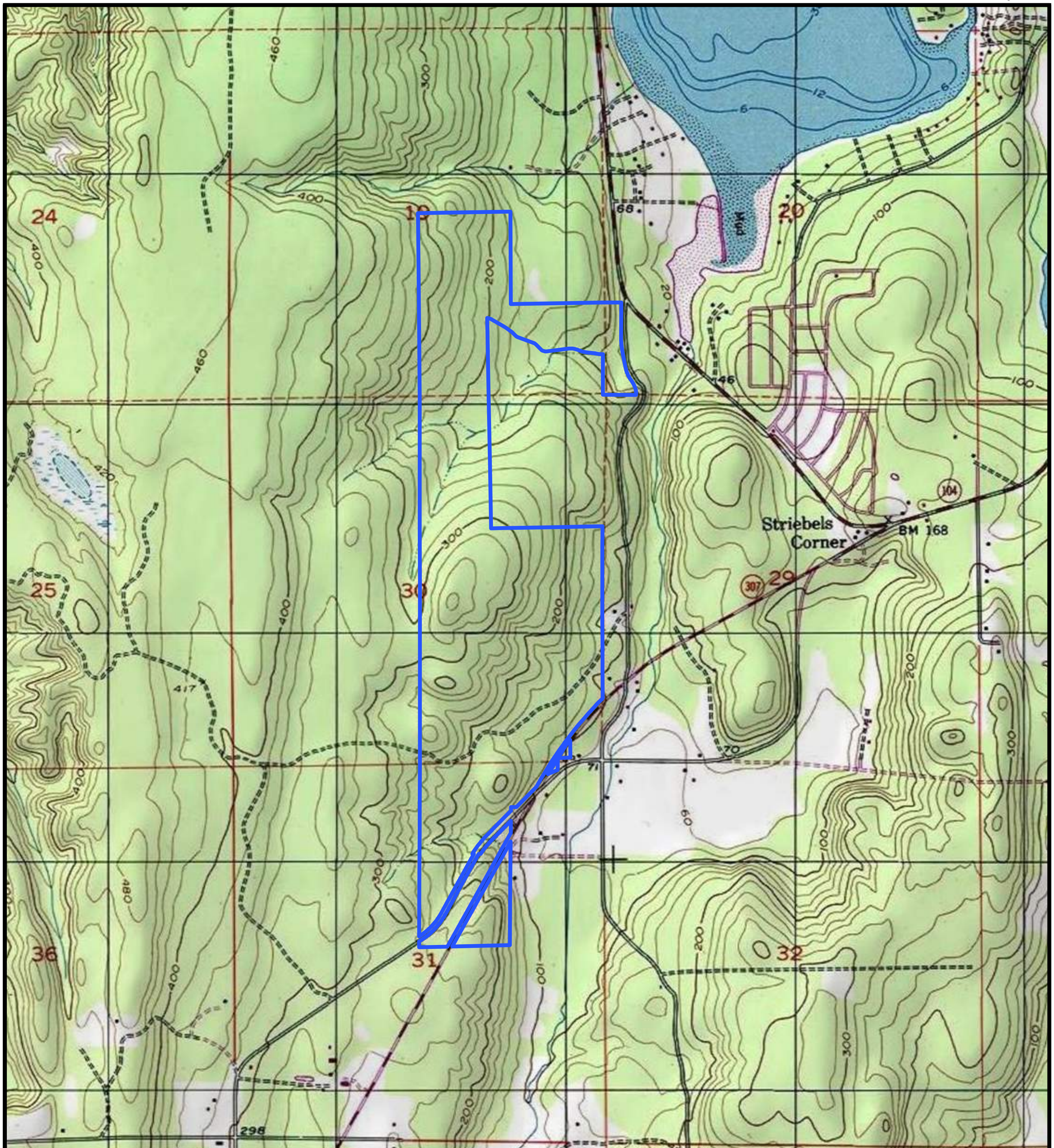
Project Area/Area of Potential Impacts: The Project Area/API consists of the entirety of the project parcels.

INTRODUCTION AND PROJECT BACKGROUND

Raydient, LLC (Raydient) proposes to construct a residential development on a 418.8-acre parcel of land (Project Area) in north Kitsap County, Washington (project). The project is located approximately 2.5 miles south of the city of Port Gamble in portions of Sections 19, 20, 30, and 31 in Township 27 North, Range 2 East, Willamette Meridian, as depicted on the United States Geological Survey (USGS) Port Gamble Dam 7.5-minute topographic quadrangle map **(Figure 1)**.

The proposed development will include between 80 and 100 homes, a park, trails, open spaces, and a gravel pit within a 418.8-acre area consisting of multiple parcels (see **Abstract** for parcel numbers) located mostly northwest of Bond Road. The Project Area is nearly contiguous; however, two major thoroughfares, Bond Road and Stottlemeyer Road, which are excluded from the Project Area, run through the southern portion of the Project Area, splitting it into multiple small, noncontiguous portions. This Project Area is the same as the Area of Potential Impacts (API) **(Figure 2)**.

Raydient is conducting due diligence to facilitate anticipated permitting, administrative, and legal requirements in the future. Raydient therefore contracted WestLand Engineering & Environmental Services (WestLand) to conduct a cultural resources desktop assessment of the API and everything within a half-mile buffer of the API to identify any existing or potential cultural (e.g., archaeological, tribal, historical, architectural) resources in the API and its immediate vicinity. The purpose of this review is to determine the presence or likelihood of cultural resources within or near the proposed project in order to develop future avoidance, assessment, or mitigation measures.



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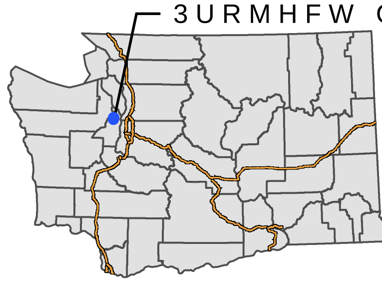

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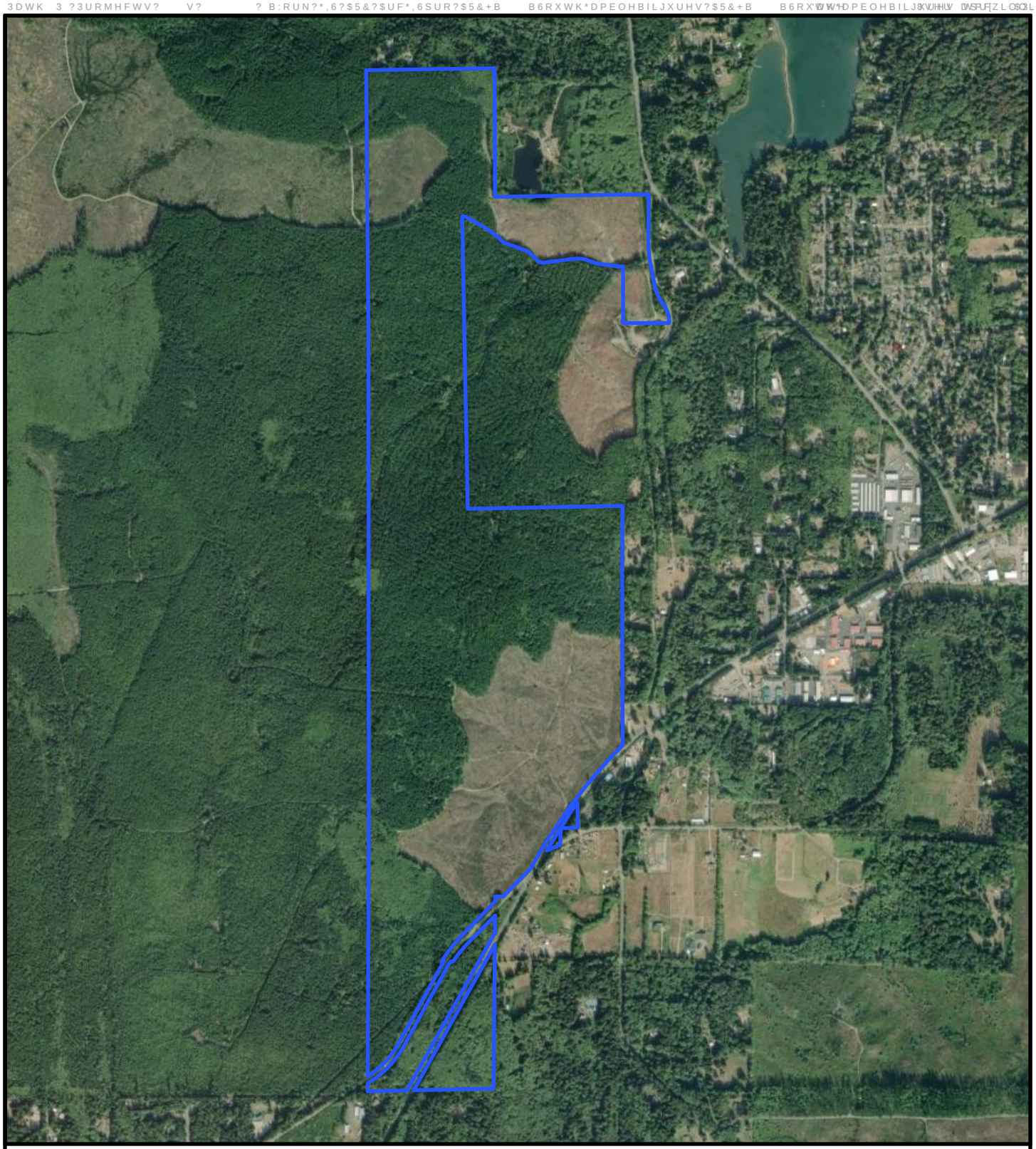

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BACKGROUND RESEARCH

Sources Consulted

For the following sections, WestLand archaeologists consulted the Department of Archaeology and Historic Preservation's (DAHP's) Washington Information System for Architectural & Archaeological Records Data (WISAARD) database, the Washington State Department of Natural Resources, the United States Department of Agriculture online soil survey, ethnographic and historical sources containing accounts of Native American occupation and land use before and after Euroamerican settlement, and documents, historic maps, and historic aerial photographs available in the public record.

Archival Research Results

Research revealed that one previous cultural resources survey has been conducted within the API, and three additional cultural resources surveys have been completed within 0.5 miles of the API **(Table 1)**. No previously recorded archaeological sites are present within the API, and no recorded precontact sites, historic period sites, Washington or National Register of Historic Places–listed properties, or cemeteries are present within 0.5 miles of the API.

Table 1. Previous cultural resources surveys within 0.5 miles of the API

NADB	Report Title	Reference	Distance and Direction from API
1350738 1	A Cultural Resources Survey for State Highways Safety Project, XL 2645, Clallam, Jefferson, and Kitsap Counties, Washington	Bundy 2007	Within API (survey consists of two discrete polygons)
1687270 2	Cultural Resources Survey, SR 307 Gamble Creek Fish Barrier Removal Project, Kitsap County, Washington	Kiers 2015	0.15 mi E
1351652 3	Cultural Resources Survey for SR 307/SR104 Safety Corridor Study, Kitsap County, Washington	Kiers 2008	0.1 mi E
1685402 4	Cultural Resource Report for the Port Gamble Bay Derelict Debris Removal, Kitsap County, Washington	Wisniewski 2014	0.15 mi NE

Other archival resources reveal potential historic period resources within 0.5 miles of the API. A General Land Office (GLO) plat from 1860 depicts the "Trail from Pt. Madison to Pt. Gamble" running south to north about 0.25 miles east of the API **(Table 2)**. USGS topographic quadrangles from 1937 and 1940 depict several historic period resources near the API, including Poulsbo Road (which appears to follow the same route as modern-day Stottlemeyer Road) and a transmission line substation **(see Table 2)**. A historic aerial

photograph from 1951 also depicts Poulsbo Road transecting, but not intersecting, the south end of the API (Historic Aerials 1951) **(see Table 2)**. In addition to Poulsbo Road, historic aerial photographs and USGS topographic quadrangles from this period (i.e., the 1950s) onward depict numerous other historic period resources within 0.5 miles of the API, including Port Gamble Road (just east of the API) and other unnamed roads and buildings. However, all the features that fall within the API on these maps and in the aerial photographs are unnamed and undeveloped trails.

Table 2. Historic resources identified in archival resources within 0.5 miles of the API

Resource Description	Reference	Distance and Direction from API
Historic trail: "Trail from Pt. Madison to Pt. Gamble"	GLO 1860	About 0.25 mi E
Paved thoroughfare: Poulsbo Road	USGS 1937, 1940; Historic Aerials 1951	Cuts through API but is not included
Unnamed/undeveloped trails	USGS 1937, 1940	Within API
"Transmission Line Sub Station"	USGS 1937, 1940	Adjacent to API near intersection of Bond Rd and NE Minder Rd

PROJECT AREA CONTEXT

Environmental Context

The API is located in a wooded area in the north-central portion of the Kitsap Peninsula that rises about 200–400 feet above Hood Canal to the east and Puget Sound to the west. The surrounding landscape was formed by multiple glacial advances during the Pleistocene before 17,000 years ago, which deposited huge quantities of glacial till and drift that now comprise the uplands in and around the Project Area (Washington Geologic Information Portal 2023). Soils within the API and the surrounding vicinity are mapped primarily as Poulsbo and Ragnar loams, ranging between fine sandy loam and gravelly sandy loam, on 0–15 percent slopes (Natural Resources Conservation Service 2023). These soils are derived primarily from glacial outwash but have some volcanic ash nearer the surface. The Puget Lowland is characterized by a maritime climate with frequent winter rain, arid summers, and mild temperatures year-round.

The API is within the western hemlock (*Tsuga heterophylla*) vegetation zone forest, which is characterized by western red cedar (*Thuja plicata*), western hemlock, and Douglas-fir (*Pseudotsuga menziesii*), with dense forest understories of shrubs and herbaceous species (Franklin and

Dyrness 1988). The precontact and historic period environment of the northern Kitsap Peninsula provided foraging and breeding habitats for a wide range of terrestrial and aquatic mammals such as sea lions (*Zalophus californianus*), orcas (*Ornicus orca*), sea otters (*Enhydra lutris*), marmots (*Marmota* spp.), black bears (*Ursus americanus*), Canadian timber wolves (*Canis lupus occidentalis*), elk (*Cervus canadensis*), and many others (Franklin and Dyrness 1988).

Cultural Context

Precontact Period

Archaeological evidence suggests that soon after the land emerged from the last glacial retreat, Native populations moved into the tundra-like environment in pursuit of now-extinct megafauna while also opportunistically hunting small game and gathering plant resources (Kopperl et al. 2016; Waters et al. 2011). It is largely accepted within the archaeological community that pre-Clovis populations were present in North America south of the glacial ice between 15,500 and 13,050 years ago (Potter et al. 2021).

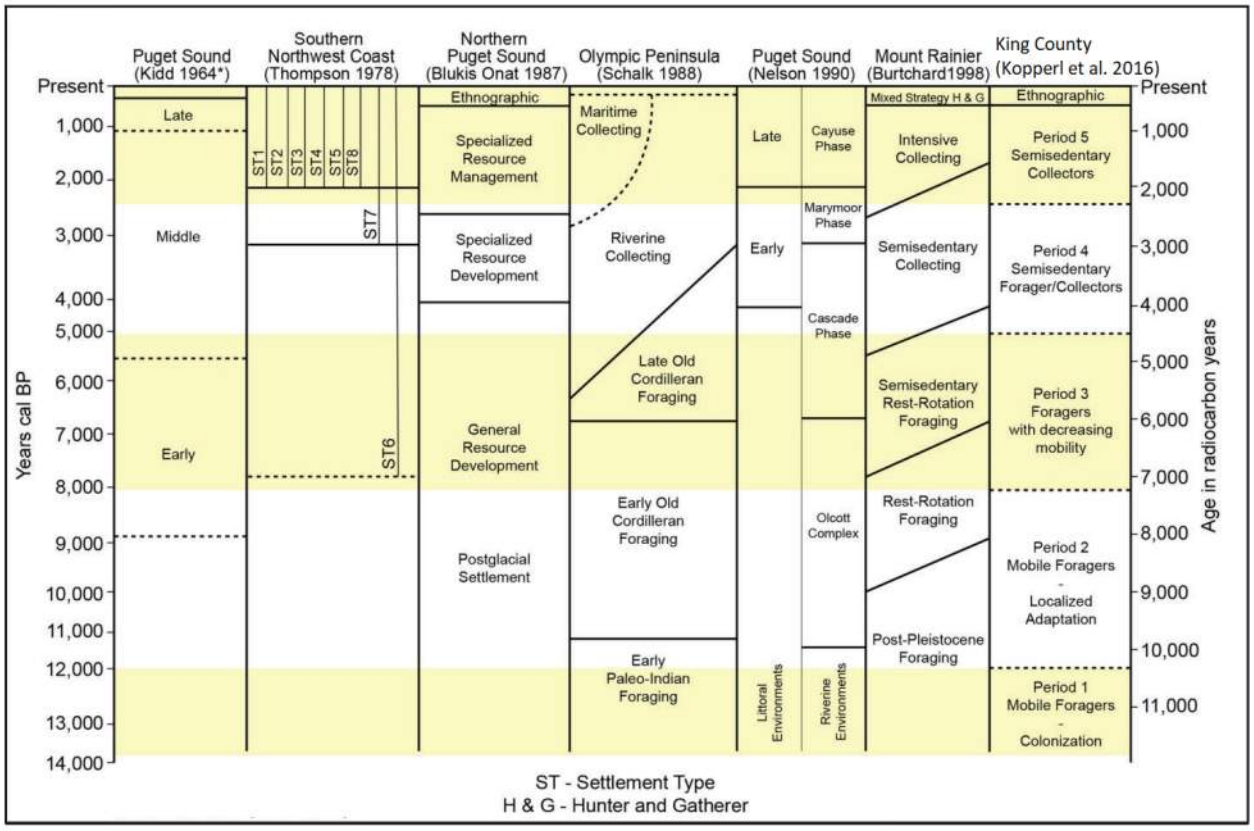
Early residential base camp sites dating to between 8000 and 5000 B.P. (or 6000 and 3000 BC, also referred to as the Middle Period) are commonly found on glacial outwash surfaces in the Puget Lowland, northwest Washington, and inland western Washington foothill valleys (Kidd 1964; Mattson 1985). The people occupying the sites formed highly mobile settlements, repeatedly occupying one locus and occupying others only briefly on one occasion (Chatters et al. 2011). This pattern may have persisted for more than 6,000 years, with the end of this time period marked by an increased reliance on marine and riverine resources.

As the climate and sea level stabilized after about 5000 B.P. (or 3000 BC), local populations increased and utilized a diverse array of landforms and resources. Native populations became more reliant on marine resources and anadromous fish, gradually shifting to semisedentary subsistence patterns marked by the seasonal round (Carlson and Dalla Bona 1996; Matson and Coupland 1995). Development of marine- oriented cultures is apparent around 2500 B.P (or 500 BC). Archaeological sites from this Late Period (post- 2500 B.P.) include village sites, residential base camps, field camps, and special-use sites. Residential village sites represent the winter village described by early ethnographers. These sites are often recognized by large shell middens near the modern shoreline or inland at river confluences. Port Gamble Bay, a resource-rich area and sheltered inland location, would have been a natural draw to local populations.

Table 3 presents a synthesis of archaeological chronologies commonly used in the API and western Washington. This synthesis and additional context applicable to Puget Sound archaeology can be found in *The Archaeology of King County, Washington: A Context Statement for Native American Archaeological Resources* (Kopperl et al. 2016).

Several precontact sites have been recorded in the project vicinity, though none within the API. These shell midden sites are important in understanding the extensive precontact use of the area. These sites include 45KP21 (the Little Boston site) across the water from Port Gamble to the east at Point Julia, which produced radiocarbon dates of circa 1310 AD, and 45JE364 and 45JE365, which are approximately 1.5 miles to the northwest of Port Gamble at Termination Point on the west side of Hood Canal. No carbon dates were derived from these latter two sites. All of these sites contained similar artifact types, including FMR, lithics, charcoal, shell, and other faunal remains. Taken together, these sites indicate ongoing utilization of the nearshore environment by indigenous populations for minimally 1,500 years.

Table 3. Comparative chronological sequences for western Washington (after Kopperl et al. 2016)



Indigenous Populations in the Contact Period

The API lies within the traditional territory of the S'Klallam (Clallam) people. The Port Gamble townsite location to the north of the API was a summer residence of the S'kllalam, who also resided in the Hood Canal region. Port Gamble bay was at the intersection of several tribal territories, and the area was within the interaction sphere of the S'Klallam with the nearby Chemakum, Skokomish (Twana), and Suquamish (Lushootseed) groups (Indian Claims Commission 1974:363, 380b; Riley 1974:63).

Surrounded by water, canoe transportation favored interaction and exploration along the many beautiful bays and inlets along the Kitsap and Hood Canal shorelines. Teekalet Bluff connects Port Gamble to Salsbury Point and the Hood Canal overland. Trails also connected traditional Suquamish territory to Hood Canal via Port Madison to the Port Gamble Bay (General Land Office 1860a, 1860b; Gunther 1927:212; Miller 1999:106; Riley 1974:63; Snyder 1968:134, map).

Ethnographers of the early twentieth century recorded multiple dialects of Indigenous place-names in the Port Gamble Bay vicinity, corroborating the idea that this was shared territory. Ethnographic sources approximate each group's core territories as follows.

Clallam-speaking S'Klallam territory follows the northern shores of the Kitsap and Olympic Peninsulas along the Strait of Juan de Fuca (Gunther 1927:177; Miller 1999:106; Spier 1936:32). The S'Klallam name for the settlements at Port Gamble and Little Boston was *Nukay'it* (Elmendorf 1992:55; Lambert 1992:23; Sharley 2010; Wray 2002:17).

"Chemakum"-speaking Chemakum territory is recorded as stretching along the northwestern shores of the Olympic Peninsula, from the modern location of Port Townsend to Port Ludlow and as far south as Port Gamble (Elmendorf 1990:439; Powell 1877:177; Spier 1936:32).

Twana-speaking Skokomish territory extended from Teekalet Bluff and Hood Canal south along the canal to Tahuya and Skokomish, Washington, near Shelton. Skokomish winter villages were reported at Dabob and Quilcene bays (Castile 1985:15; Elmendorf 1992:1, Map II; Powell 1877:178; Spier 1936:32; Swindell 1942:236). Skokomish villages are reported at Tahuya and Union City, Washington (Gunther 1927:195). Twana place-names include *Duxwk'élat* for the Port Gamble/Little Boston area and *Bcsc'ä5wał* ("black bear") and *Sivei-ei'he* for Salsbury Point, approximately one mile west of Port Gamble (Elmendorf 1992:55; Skokomish Culture and Art Committee 2002:67).

Lushootseed-speaking Suquamish territory included the northern and eastern shores of the Kitsap Peninsula extending northward toward the San Juan Islands. Teekalet is a transliteration of the

Lushootseed word *Texq3e'ultx* ("skunk cabbage") for Teekalet Bluff. The town of Port Gamble itself was called *Q3qla'xad* ("fence, stockade"); Port Gamble Bay was called *Stce'yûx* ("bay"); and the historic-period village Little Boston across Port Gamble bay was called *Sdeu'wap* ("noon, broad daylight") (Waterman et al. 2001:189, 190, 193).

As they had for millennia, Indigenous people made their homes along marine waterways or major rivers, which served as transportation corridors while also providing a diverse and resource-rich brackish near-shore environment. The Indigenous peoples of the region viewed the land communally, and resources were shared between and stewarded by allied tribes and extended families (Miller 1999:144, 150; Riley 1974:78).

Trade, marriage, and mutual ceremonies created bonds between neighboring groups that otherwise retained political autonomy (Castile 1985; Suttles and Lane 1990). Substantial split-plank buildings made up permanent village sites, while temporary camps are indicative of seasonal fishing, hunting, and gathering forays.

Port Gamble Bay was known as a summer fishery where the S'Klallam, Suquamish, and others camped for the season. The S'Klallam had permanent residences at Hood Canal, where they resided during the prime fishing season from August through early December or later. The S'Klallam, Suquamish, and Chemakum groups traveled regularly to Hood Canal for fishing, shrimp and shellfish harvest, berry picking, collecting basketry materials, visiting relatives, religious devotions, and trade (Gunther 1927:195, 212; Lane 1977:19; Miller 1999:106; See-Hem-Itza 1992:70; Swindell 1942:136, 237, 240).

Hood Canal vicinity campsites were sometimes occupied through the winter. The Hamma Hamma River and Brinnon areas were reported as favorite S'Klallam camping areas (Gunther 1927:195).

The first documented Indigenous and European contact occurred in May 1792, when British captain George Vancouver led a small exploratory party south through Hood Canal. They reported a peaceful encounter with Indigenous people near Port Ludlow. No further encounters between Europeans and Native peoples are recorded in the historical record in the subsequent 35 years. Europeans did not become a permanent presence in the region until the establishment of trading posts in Fort Langley in 1827, Fort Nisqually on southern Puget Sound in 1833, and Fort Victoria on Vancouver Island in 1843.

In 1853, William Talbot arrived at Port Gamble Bay to establish a sawmill for the Puget Mill Company, which led to the founding of a town called Teekalet (a name which was later changed to Port Gamble in 1868). The townsite of Teekalet/Port Gamble, lying just west of the mouth of Gamble Bay, was already inhabited by the S'Klallam as discussed above. The town of Port Gamble grew around the sawmill, drawing many

local S'Klallam and other Native Americans, as well as immigrants from all over the United States, Europe, Russia, and China.

Almost all of the API and adjacent land (including the mill at Port Gamble) was purchased in 1925 by Charles McCormick, owner of the Charles R. McCormick Lumber Company (Metsker 1926; Wilma 2003). He purchased the land and assets (i.e., the Puget Mill Company) from Pope and Talbot, Inc. Poor management and overspending led to foreclosure by Pope and Talbot, who retook control of the company in 1938. The API was logged at some point during this time span between 1925 and 1938.

Historical topographic quadrangles from 1937 onward depict limited development within the API (USGS 1937, 1940). Currently, several recreational trails are present, some of which could be remnants of logging roads. Photograph layers in Google Earth (2023) depict the project area as having been largely cleared in 1985 and 1990 **(Figures 3 and 4)**.

Figure 3. Google Earth 1985 aerial photo of the API

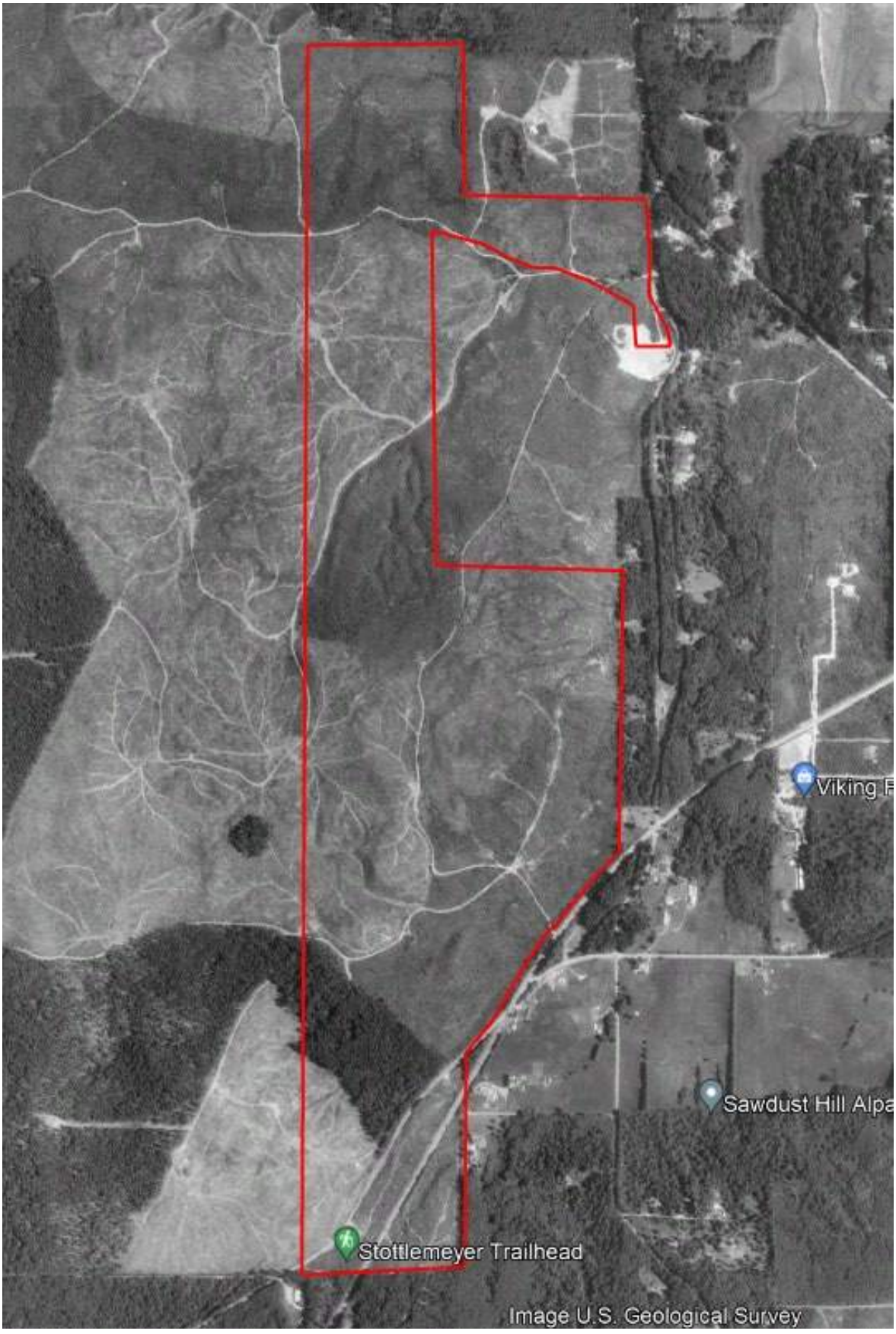


Figure 4. Google Earth 1990 aerial photo of the API

ANTICIPATED FINDS

DAHP's probability model predicts a low to high probability of precontact and historic cultural resources throughout the API; the likelihood increases in the north and east portions of the API, near drainages and Gamble Bay. Based on additional review, WestLand considers there to be a moderate probability for historic period resources to be found, as indicated by archival evidence for historic period structures near the API and some limited development within the API.

There are no known precontact resources within 0.5 miles of the API; however, relatively few cultural resources surveys have been conducted in or near the API, so the potential for identifying precontact resources here is not well understood, as precontact resources are unlikely to be identified in the absence of cultural resources surveys.

A growing body of evidence suggests that North America has been inhabited for upwards of 20,000 years (e.g., Bennett et al. 2021; Pigati et al. 2023; Smith and Barker 2017); nonetheless, there is no potential for finding cultural materials in the API from earlier than 17,000 years ago, prior to the last glacial advance that deposited the glacial tills and drifts that comprise the API and its surrounding landscape. The thickness of the glacial deposits in the API is not definitively documented but is likely in the order of tens of meters (or scores of feet) deep. The project impacts will not penetrate the mudflow deposit to reach soils older than 17,000 years.

Any precontact deposits would be present at or near the surface (due to the lack of soil development which would have buried cultural deposits), and most of the surface has been disturbed multiple times by logging and clearing. The probability of finding intact precontact resources is therefore considered low. However, it cannot be ruled out that archaeological materials may be present at or near the surface that were not disturbed by previous clearing efforts.

CONCLUSIONS AND RECOMMENDATIONS

WestLand's cultural resources assessment included background and archival research of the API and everything within 0.5 miles. This assessment revealed that no cultural resources have been previously documented within 0.5 miles of the API. As discussed in the **Anticipated Finds** section above, background research indicates that there is a moderate potential for encountering historic period cultural resources and a low potential for encountering precontact cultural resources in the API.

This cultural resources assessment revealed that very little of the API has been surveyed previously; based on the results of the assessment, there is a potential for extant cultural resources in the API. Therefore, WestLand recommends that a cultural resources survey of the entire API should be conducted. This should include 100 percent pedestrian survey of the API and shovel testing in areas and on landforms with a higher likelihood of encountering cultural resources, to be determined based on field observations. If project plans change in ways that would require ground disturbance in areas not reviewed in this document, additional cultural resources desktop review would be recommended.

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Appendix E: Access

Transportation Report (Transpo Group)

Preliminary Transportation Assessment

NORTH KITSAP UNITED (SOUTH GAMBLE)

Prepared for:
Raydient Inc. and DEA Inc.

December 2023

Prepared by:

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Kirkland, WA 98034-7120
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Executive Summary

The North Kitsap United development proposal could include a variety of land uses from residential, retail, and recreational that would attract local and regional visitors to the area. This analysis provides a preliminary assessment of the primary transportation issues to consider when redeveloping the site. The analysis in this report includes an evaluation of existing conditions as well as future forecasted conditions without and with development of the site.

A specific site plan has not been developed; however, a preliminary development plan was assumed to include the following uses:

- Residential – 80 residential lots with and without a detached accessory dwelling unit (ADU) as permitted in the Rural Residential Zone.
- YMCA regional facility - 80,000 square-feet (sf)
- 6-12 fields as well as supportive uses such as baseball, tennis, pickleball, etc.
- Restaurant - 2,000-4,000 sf anticipated to be high turnover sit down
- Retail – 2,000-4,000 of small-scale retail

The south end of the site abuts Stottlemeyer Road NE as well as Bond Road (SR 307), which was assumed to provide all of the access to the site. Stottlemeyer Road NE is a local County road whereas Bond Road (SR 307) is classified as a Highway of Statewide Significance and is a Managed Class 2 Highway by Washington State Department of Transportation (WSDOT). The vast majority of traffic would be traveling to and from Bond Road. Access to any private development is typically preferred to occur with lower classified County roads such as Stottlemeyer Road rather than direct driveway access to a State Route facility.

Through evaluation of existing conditions, the volumes of traffic along Bond Road (SR 307) were high enough that stop controlled side streets with full access could only accommodate nominal levels of traffic before degrading below operational standards. Most of the stop controlled side streets in the area are at or near capacity. This includes the stop controlled intersections of Stottlemeyer and Minder along Bond Road that are immediately adjacent to the site. The level of development being contemplated for this site would require more than stop controlled traffic control at locations where the majority of traffic would access Bond Road (SR 307).

Through the operations analysis and preliminary coordination with WSDOT, the most ideal locations for access to Bond Road (SR 307) would be to realign Stottlemeyer Road NE with NE Minder Road and/or consider an access location toward the southern end of the site. Access locations at either one of these locations would require a higher level of traffic control such as a traffic signal or roundabout in order to provide safe and efficient operations. This would require further coordination with WSDOT and the County and require an Intersection Control Evaluation (ICE) and other WSDOT permitting.

The evaluation of off-site signalized intersections at SR 104 and NE Gunderson Road showed that although there is capacity to accommodate additional growth and development in the area, they are near level of service thresholds.

Further analysis and coordination would be necessary with the County and WSDOT in order to fully evaluate access alternatives and the potential for off-site mitigation

Introduction

This report provides a preliminary evaluation of potential transportation-related impacts associated with the development of the proposed North Kitsap United (NKU) South Gamble project located in Kitsap County. This included preliminary coordination with WSDOT regarding access to Bond Road (SR 307).

Project Description

The proposed NKU South Gamble development site is located west of the State Route (SR) 104/ Bond Road (SR 307) intersection in Kitsap County and generally bounded by Port Gamble Road NE and north of and Stottlemeyer Road NE (see Figure 1). The specific land use sizes and quantities have not been determined at this point nor has a specific site plan been developed. In general, the development team is interested in exploring the development of some single-family residential homes, a YMCA, a sports field recreation complex and potentially supportive commercial spaces that could include restaurants and/or retail space. To gauge levels of impact, the follow range of land use assumptions were used.

- Residential – 80 residential lots with and without a detached accessory dwelling unit (ADU) as permitted in the Rural Residential Zone.
- YMCA regional facility - 80,000 square-feet (sf)
- 6-12 fields as well as supportive uses such as baseball, tennis, pickleball, etc.
- Restaurant – 2,000-4,000 sf anticipated to be high turnover sit down
- Retail – 2,000-4,000 sf of small-scale retail

The residential is anticipated to be located centrally within the site with the remaining uses located more proximate to Bond Road (SR 307). Access is reviewed in greater detail below but is anticipated to be via Stottlemeyer Road NE to the south. The site extends to the north with frontage along a portion of Port Gamble Road. However, access was not assumed to occur to the north or via Port Gamble Road in this analysis to provide for a more conservative analysis of impacts. A specific site plan has not been developed at this point; however, the site area is outlined in Figure 1.

Study Scope

The following study intersections were reviewed during the weekday PM peak hour to access the traffic impacts associated with the proposed development.

1. SR 104/Bond Road (SR 307)
2. NE Minder Road (East)/Bond Road (SR 307)
3. Port Gamble Rd NE/Bond Road (SR 307)
4. Bond Road (SR 307)/NE Minder Road (West)
5. Bond Road (SR 307)/Stottlemeyer Road NE (North)
6. Bond Road (SR 307)/NE Gunderson Road/Stottlemeyer Road (South)

This report includes a review of the surrounding street system, existing and future (2028)[1] without-project weekday peak hour traffic volumes, traffic operations, and traffic safety. Future (2028) with-project conditions were estimated by adding site-generated traffic to future without-project volumes. The project's impacts on the surrounding transportation system were identified by comparing the future with-project conditions to the future without-project conditions.

[1] Note that the development timing is not determined at this time and for purposes of the initial traffic impact assessment, a 5-year horizon year was evaluated.

Site Vicinity and Study Intersections

FIGURE 1

NKU South Gamble

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Existing and Future Without-Project Conditions

This section describes both existing and future (2028) without-project conditions within the identified study area. Characteristics are provided for the roadway network, traffic volumes, traffic operations, and traffic safety.

Roadway Network

The following section describes the existing street network within the vicinity of the proposed project and anticipated changes resulting from planned improvements.

Existing

The primary roadways within the study area and their characteristics near study intersections are illustrated in Figure 2. As shown in the figure, Bond Road (SR 307) is classified as a Highway of Statewide Significance and is also a Managed Class 2 Highway by WSDOT with a posted speed limit of 50 miles per hour (mph) and an average daily traffic (ADT) of 14,500 vehicles. A Managed Class 2 Highway favors mobility over access and has additional access and operational restrictions.

The other adjacent roadways are classified as major or local sub collectors or local roadways.

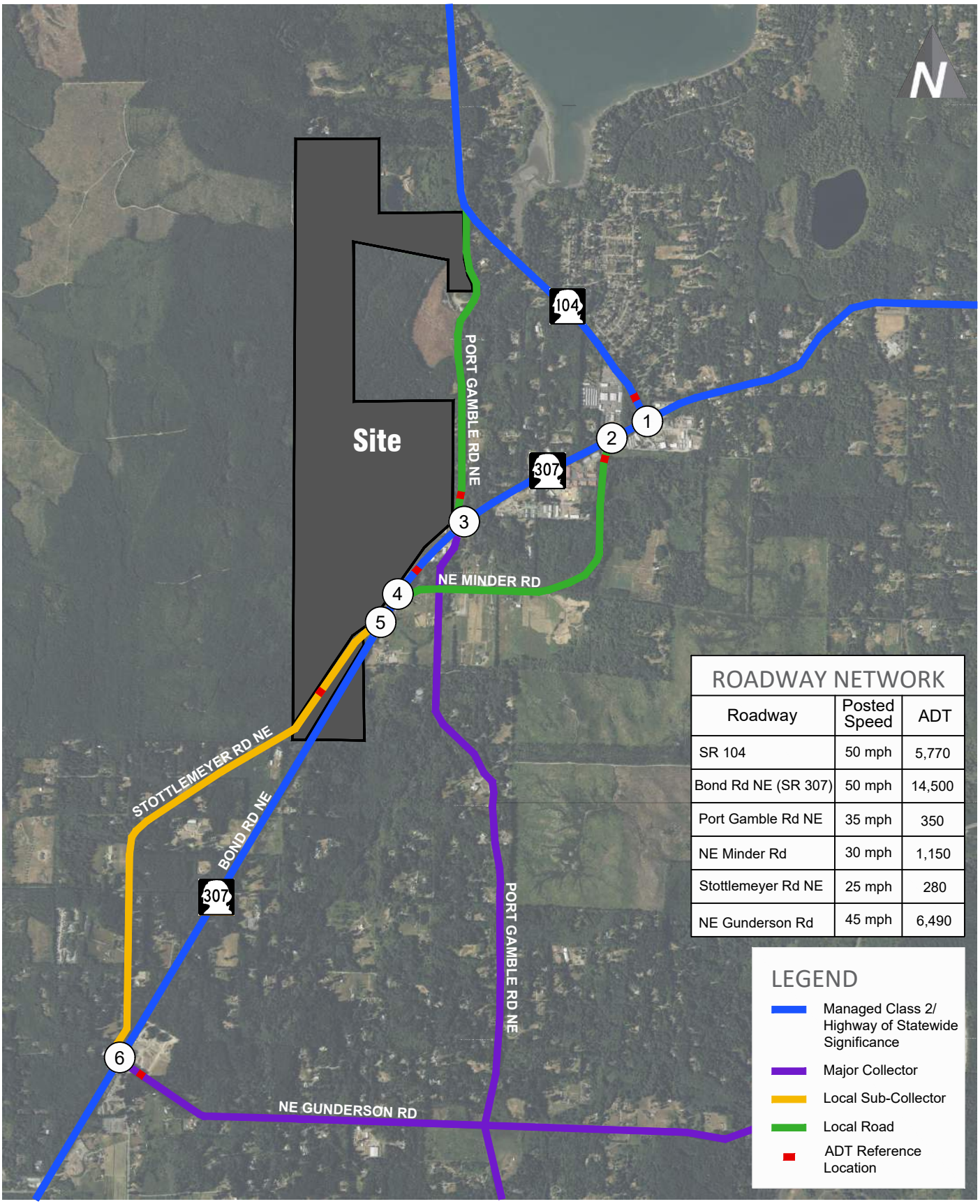
The majority of the roadways are side street stop controlled with the exception of the 2 existing traffic signals within the study area along Bond Road (SR 307) at SR 104 east of the site and at Gunderson Road/Stottlemeyer Road NE (south) southwest of the site.

The spacing of the roadways in the vicinity of the site along SR 307 are illustrated on Figure 3.

Planned Improvements

No specific planned improvements were identified based on a review of WSDOT's Statewide Transportation Improvement Program (STIP).

The installation of a westbound right turn lane at the SR 104/Bond Rd NE (SR 307) intersection is anticipated to mitigate impacts from the future development anticipated at Port Gamble. This is assumed to be completed prior to the 2028 horizon year and assumed in the future conditions analysis.



ROADWAY NETWORK

Roadway	Posted Speed	ADT
SR 104	50 mph	5,770
Bond Rd NE (SR 307)	50 mph	14,500
Port Gamble Rd NE	35 mph	350
NE Minder Rd	30 mph	1,150
Stottlemeyer Rd NE	25 mph	280
NE Gunderson Rd	45 mph	6,490

LEGEND

- Managed Class 2/ Highway of Statewide Significance
- Major Collector
- Local Sub-Collector
- Local Road
- ADT Reference Location

Roadway Classification and Characteristics

FIGURE 2

NKU South Gamble

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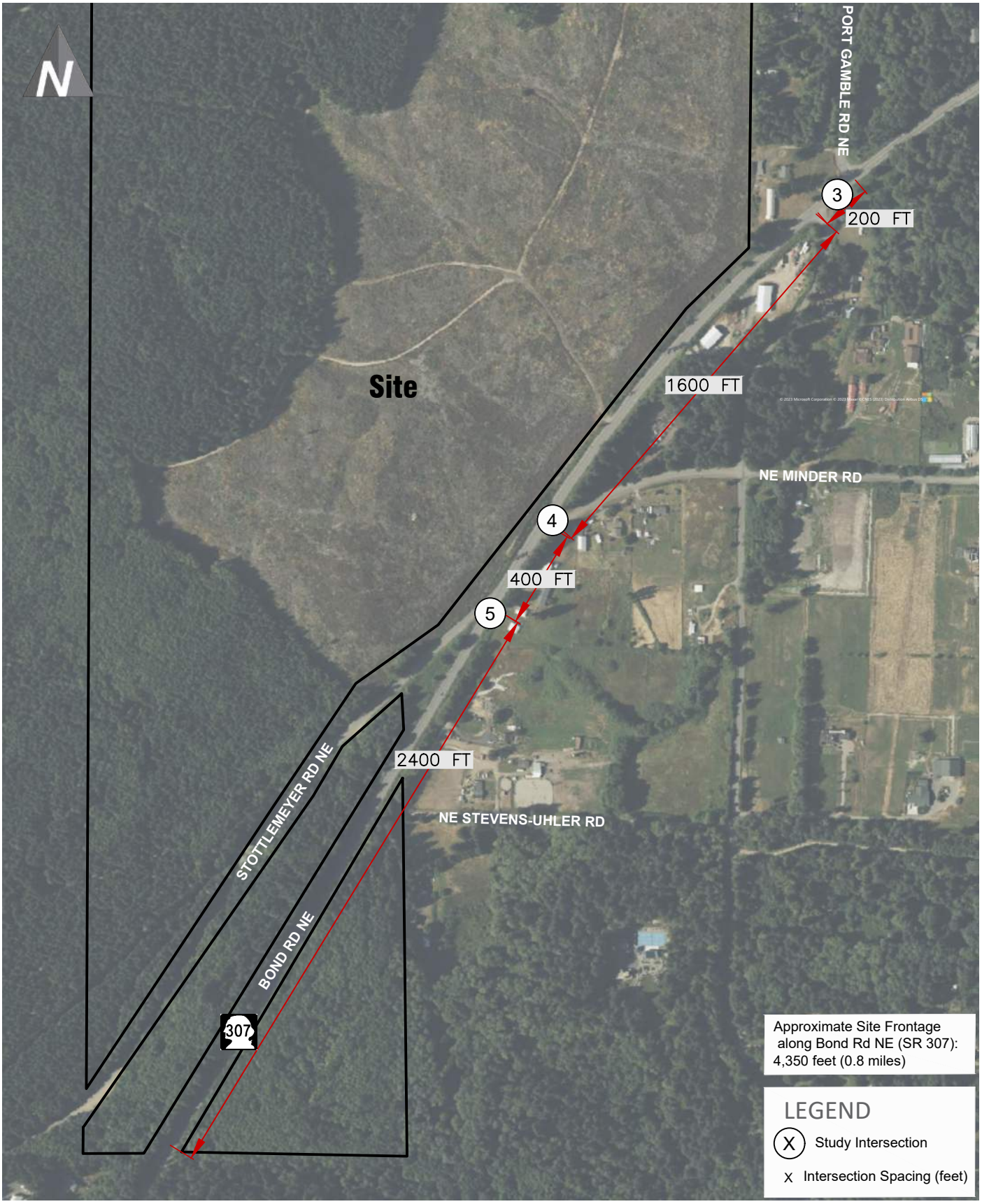

Existing Intersection Spacing

NKU South Gamble

FIGURE 3

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Traffic Volumes

The following sections summarize existing and future (2028) without-project traffic volumes within the study area.

Existing

Existing weekday PM peak period (4-6 p.m.) traffic volumes were collected in October 2023. The estimated existing weekday PM peak hour traffic volumes are shown on Figure 5. Note that due to the low volumes of the side streets, the traffic volumes were not rounded. Additionally, there were a limited number of illegal movements seen in the observations which were not included in the analysis (e.g. northbound and southbound through movements at the Port Gamble Road/SR 307 intersection which is restricted to RIRO).

In addition to the intersection turning movement counts, 7-day 24-hour traffic counts were conducted along Stottlemeyer Road, west of SR 307 and SR 307 east of Minder Road. The counts showed ADT of 280 vehicles and 14,500 vehicles along Stottlemeyer Road and SR 307, respectively. Detailed traffic counts are provided in Appendix A. The hourly weekday volume trends throughout the week are illustrated in Figure 4 below for SR 307.

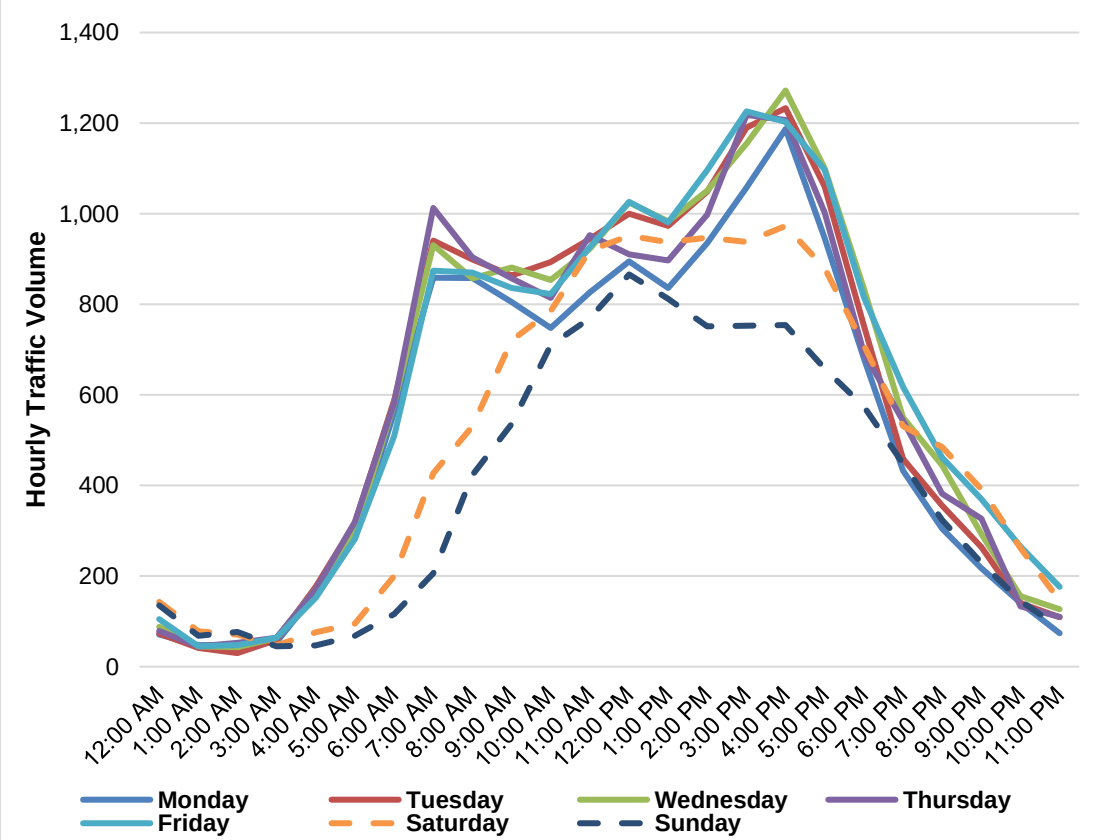
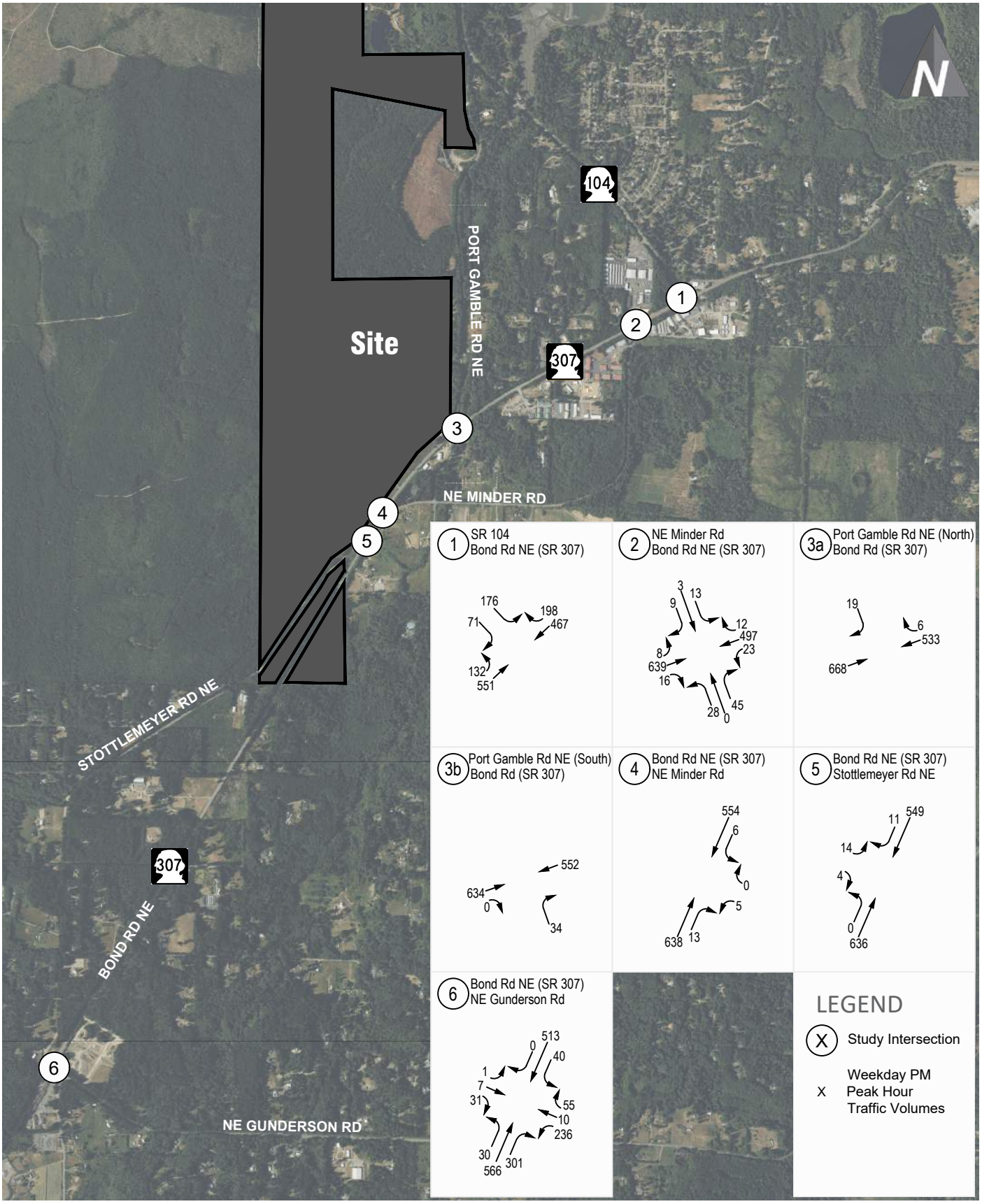


Figure 4. Bond Road (SR 307) 7-Day Hourly Volumes (based on October 2023 Traffic Counts)

As shown in Figure 4, the weekday PM peak hour volumes represent the highest peak hour volumes throughout the week, with the highest occurring midweek on a Wednesday which is consistent with the focus of the operational analysis (weekday PM peak hour).



Existing Weekday Peak Hour Traffic Volumes

FIGURE **5**

NKU South Gamble

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The seasonal variation in the vicinity was reviewed also reviewed based on WSDOT's Permanent traffic recorder located along SR 307 west of Gunderson. The monthly ADT for 2022 is illustrated in Figure 6. The counts conducted in October 2023 are shown to reflect average (typical) conditions and no seasonal adjustment was applied.

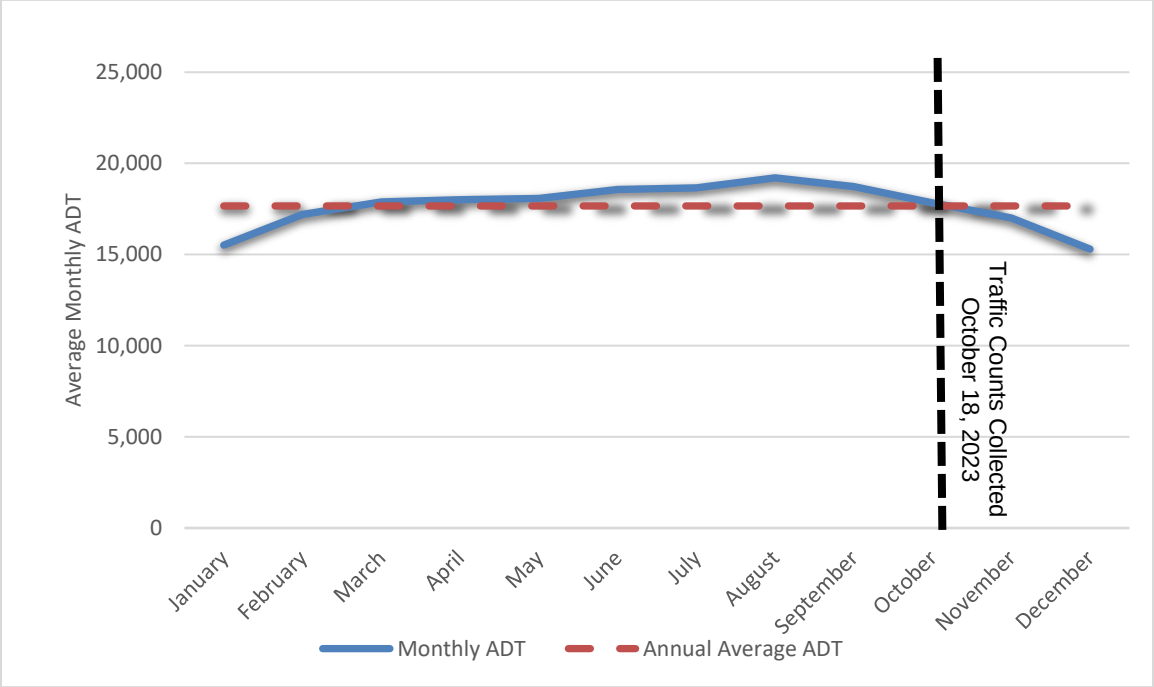
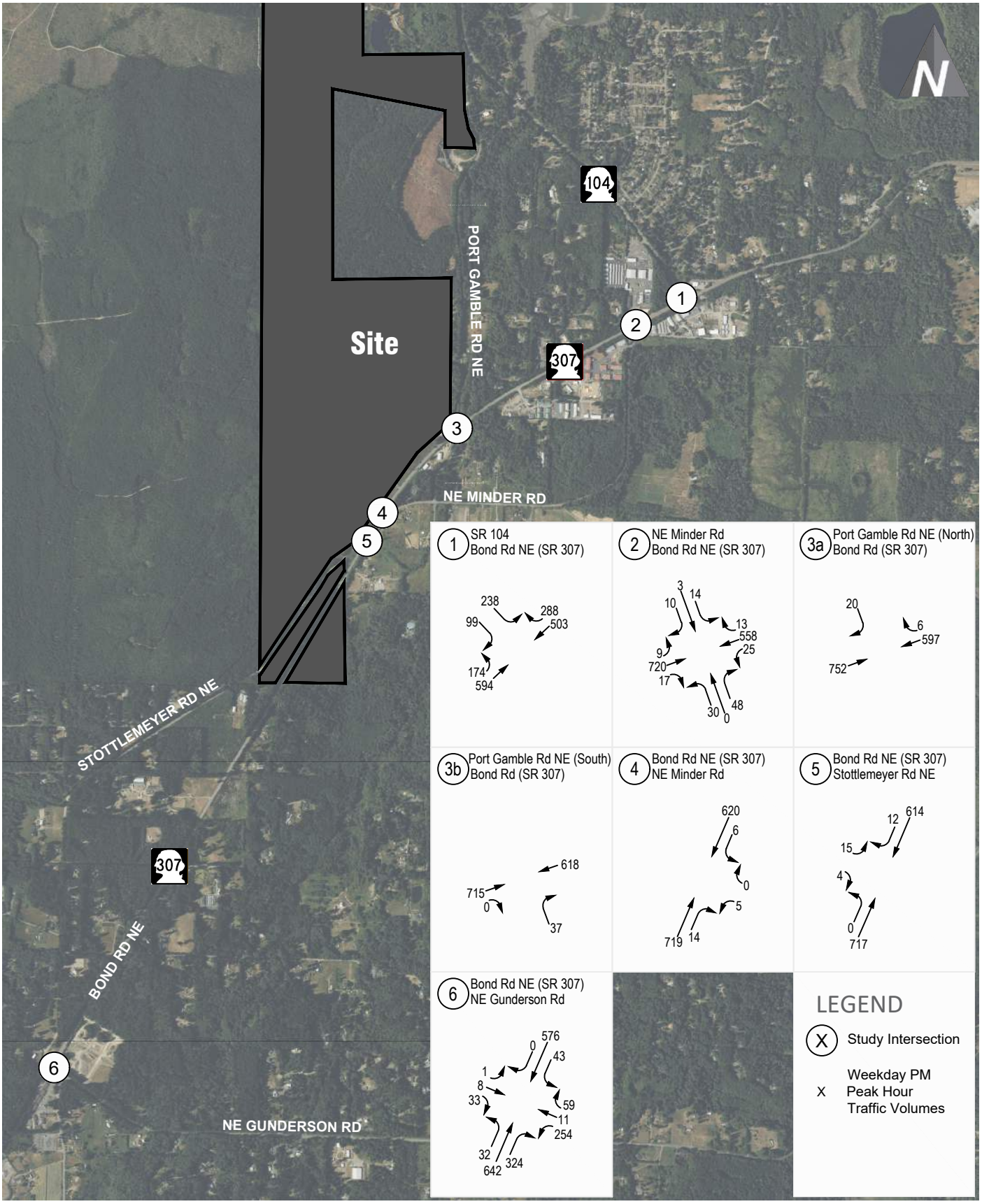


Figure 6. SR 307 Seasonal Variation (based on WSDOT Traffic Count Database, 2022)

Future Without-Project Traffic Volumes

Future (2028) without-project traffic volumes are developed based on applying an annual background traffic growth rate of 1.5 percent consistent with other projects in the vicinity and confirmed based on historical growth in the vicinity. Additionally, the Port Gamble residential development pipeline development traffic was included in the analysis. The forecast future (2028) without-project weekday peak hour traffic volumes are shown in Figure 7.



Future (2028) Without-Project Weekday Peak Hour Traffic Volumes

FIGURE 7

NKU South Gamble

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Traffic Operations

The operational characteristics of an intersection are determined by calculating the intersection level of service (LOS). At signalized intersections, LOS is measured in average control delay per vehicle and is reported using the intersection delay. At two-way stop controlled (TWSC) intersections, delay is reported for the worst movement. Traffic operations and average vehicle delay can be described qualitatively with a range of levels of service (LOS A through LOS F), with LOS A indicating free-flowing traffic and LOS F indicating extreme congestion and long vehicle delays. Appendix B contains a detailed explanation of LOS criteria and definitions. WSDOT defines an LOS C intersection standard at the study intersections.

Existing signal timing was provided by WSDOT and assumed for the analysis of existing conditions. Analysis parameters such as lane channelization and signal timing were maintained for future (2028) without-project conditions from existing conditions with the exception of the planned improvement at the SR 307/SR 104 intersection as described above. Weekday PM peak hour traffic operations for existing and future (2028) without-project conditions were evaluated based on the procedures identified in the *Highway Capacity Manual* (HCM 7th Edition) using *Synchro 12*. *Synchro 12* is a software program that uses *HCM* methodology to evaluate intersection LOS and average vehicle delay. Results for the existing and future without-project operations analyses are summarized in Table 1. Detailed LOS worksheets for each intersection analysis are included in Appendix C.

Table 1. Existing and Future (2028) Without-Project Weekday PM Peak Hour LOS Summary

Intersection	Traffic Control	Existing			2028 Without-Project		
		LOS[1]	Delay[2]	WM[3]	LOS	Delay	WM
1. SR 104/Bond Rd NE (SR 307)	Signal	B	14	-	B	19	-
2. NE Minder Rd/Bond Rd NE (SR 307)[4]	TWSC	**D**	**28**	**SB**	**E**	**36**	**SB**
		D	**26**	**NB**	**E**	**36**	**NB**
3A. Port Gamble Rd NE (N of SR 307)/SR 307	TWSC	B	12	SB	B	13	SB
3B. Port Gamble Rd NE (S of SR 307)/SR 307	TWSC	B	14	NB	B	15	NB
4. Bond Rd NE (SR 307)/NE Minder Rd	TWSC	**D**	**25**	**WB**	**D**	**30**	**WB**
5. Bond Rd NE (SR 307)/Stottlemeyer Rd NE (North)	TWSC	C	23	EB	**D**	**28**	**EB**
6. Bond Rd NE (SR 307)/Stottlemeyer Rd NE (South)/NE Gunderson Rd	Signal	C	22	-	C	24	-

Note: TWSC = two-way stop controlled. Bold text indicates not meeting the LOS standard.
1. Level of Service (A – F) as defined by the *Highway Capacity Manual* (TRB, 7th Edition)
2. Average delay per vehicle in seconds
3. Worst Movement shown for stop controlled intersections. EB = eastbound approach, WB = westbound, NB = northbound, SB = southbound.
4. Note that both the north and south stop controlled approaches of this intersection are operating below standard so both are included in the table.

As shown in Table 1, the study intersection generally meeting the operational LOS C standard under existing conditions during the PM peak hour with the exception of the NE Minder Road (eastern and western intersections) along Bond Road (SR 307) are operating below standard at LOS D. These are generally low volume side street stop-controlled approaches with limited gaps for left-turning movements onto the major road (Bond Rd NE (SR 307)). Under future (2028) conditions, the Stottlemeyer Road NE (north) intersection also degrades to operating below standard at LOS D due to the increase in forecast traffic along Bond Road NE (SR 307).

Traffic Safety

The five most recent years of collision records (January 1, 2018 to December 31, 2022) provided by the Washington State Department of Transportation (WSDOT) were reviewed within the study area to identify any existing traffic safety issues in the study area. Figure 7 illustrates the collisions and their severity that have been reported during the study period. As illustrated in the figure, approximately 70 percent of the collisions occurred at the intersections with the remaining collisions occurring along the roadway segments in the study area. Additionally, the figure illustrates that the majority of the reported collisions were property damage only.

Additionally, a summary of the total and average annual number of reported collisions at the study intersections are provided in Table 2.

Table 2. Five-Year Collision Summary (2018-2022)

Location	Number of Collisions					Total	Annual Average
	2018	2019	2020	2021	2022		
1. SR 104/Bond Rd NE (SR 307)	10	7	2	5	6	30	6.0
2. NE Minder Rd/Bond Rd NE (SR 307)	1	2	0	4	3	10	2.0
3A. Port Gamble Rd NE (N of SR 307)/SR 307	1	1	1	0	0	3	0.6
3B. Port Gamble Rd NE (S of SR 307)/SR 307	0	0	0	2	0	2	0.4
4. Bond Rd NE (SR 307)/NE Minder Rd	0	0	1	0	4	5	1.0
5. Bond Rd NE (SR 307)/Stottlemeyer Rd NE (North)	0	0	0	0	0	0	0.0
6. Bond Rd NE (SR 307)/Stottlemeyer Rd NE (South) /NE Gunderson Rd	5	2	2	3	8	20	4.0

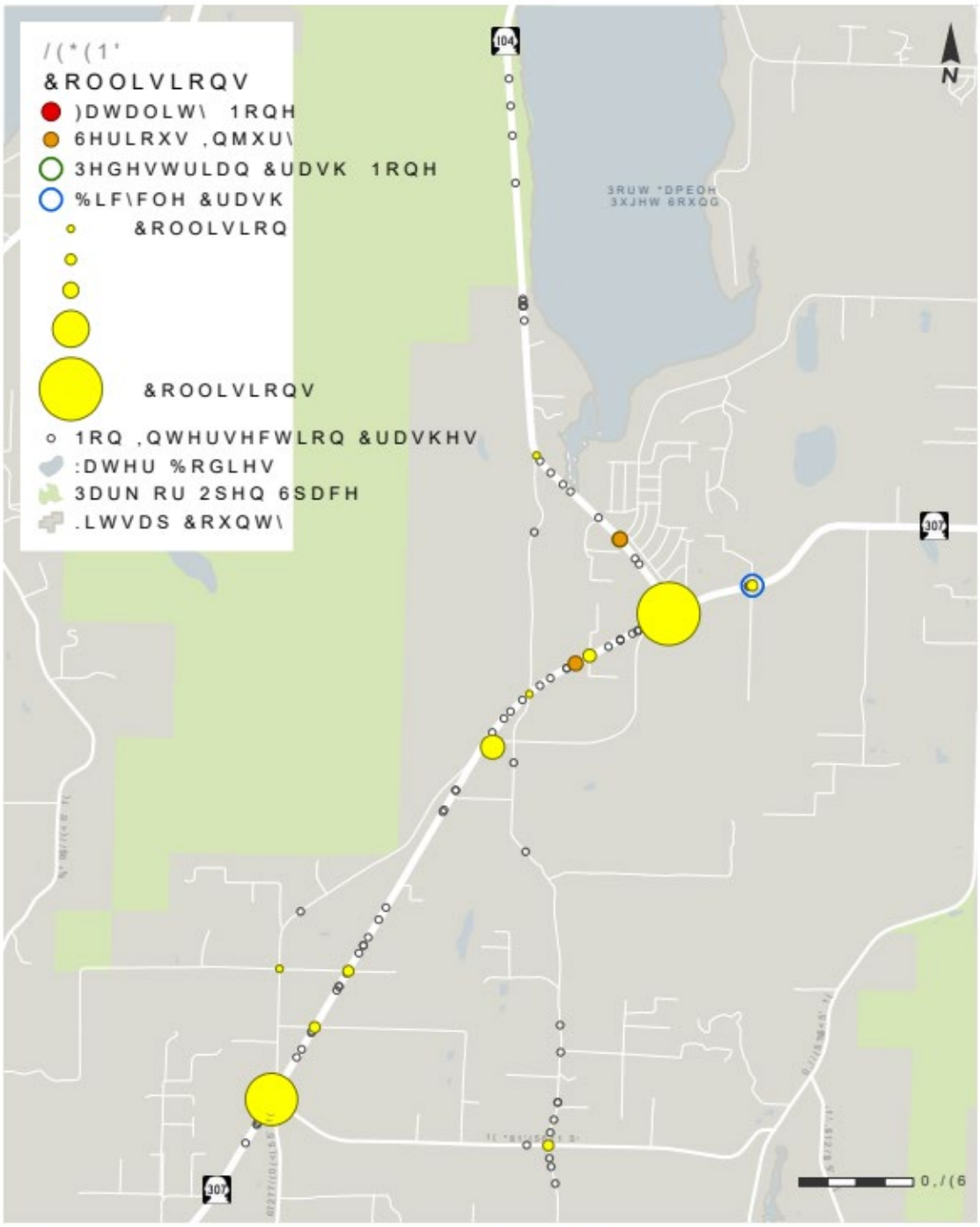
Source: WSDOT September 2023

As shown in Table 2, most of the collisions at the study intersections over the five-year review period occurred at the signalized intersections of SR 104 and Stottlemeyer Rd NE/NE Gunderson Rd along Bond Rd NE (SR 307) with an annual average of approximately 6 collisions and 4 collisions, respectively. The most common collision type experienced at both of these intersections were rear end collisions, which primarily resulted in property damage only. Rear-end collisions are typical at signalized locations along State Routes.

Along the project site's frontage on Bond Rd NE (SR 307), 4 collisions were reported over the last five-year period, unrelated to any intersections. The project frontage along Port Gamble Road NE had no reported collisions over the last five-year period.

There were no reported fatalities nor collisions involving either a pedestrian or bicyclist at or between the study intersections during the review period.

Overall, there were no patterns of collisions that would indicate significant safety issues.



Five-Year Collision Summary (2018-2022)

FIGURE 8

NKU South Gamble

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Project Impacts

The following sections summarize the proposed project's impacts on the surrounding street system. First, traffic volumes generated by the proposed project are estimated and then distributed and assigned to adjacent roadways within the study area. Next, project trips are added to future without-project traffic volumes and the potential impact to traffic operations are identified. Site-specific items are also discussed.

Trip Generation

The trip generation for the project was estimated based on data provided in Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). As identified above, the trip generation was estimated assuming a range of development options. The high-end and low-end development options are summarized below along with the assumed ITE land uses.

Low Estimate Land Use Assumptions:

- 80 Residential Lots (LU 210)
- High Turnover Sit Down Restaurant (LU 932) – 2,000 sf
- Strip Retail Plaza (<40k) (LU 822) – 2,000 sf
- Soccer Complex (LU 488) – 6 fields
- YMCA - Recreational Community Center (LU 495) – 80,000 sf

High Estimate Land Use Assumptions:

- 80 Residential Lots (LU 210)
- 80 Accessory Dwelling Units (LU 210)[2]
- High Turnover Sit Down Restaurant (LU 932) – 4,000 sf
- Strip Retail Plaza (<40k) (LU 822) – 4,000 sf
- Soccer Complex (LU 488) – 12 fields as well as 60,000 sf Recreational Community Center (LU 495)
- YMCA - Recreational Community Center (LU 495) – 80,000 sf

Adjustments for both pass-by and internal capture were included in the analysis based on the methodology as outlined in ITE's *Trip Generation Handbook* (3rd Edition). Land uses with pass-by rates in ITE's *Trip Generation Manual* (11th Edition) included High Turnover Sit Down Restaurant (LU 932) and Strip Retail Plaza (<40k) (LU 822). Note that it is anticipated that the soccer complex and YMCA land uses would also have pass-by related trips; however, specific data was not identified at this time and therefore no pass-by reductions were assumed for these uses in the analysis providing a conservative analysis at the off-site intersections. The weekday daily and peak hour trip generation is summarized in Table 3 for both options. Appendix D includes the detailed trip generation.

As shown in the table, the primary weekday daily trips are estimated to range from approximately 3,546 trips to 6,472 trips with between 225 and 407 trips occurring during the weekday AM peak hour and 371 to 690 trips occurring during the weekday PM peak hour. For purposes of the traffic analysis below and for estimating impacts, the high trip generation estimate was assumed.

[2] The 80 ADU's were conservatively assumed to accompany the 80 residential lots as permitted in rural residential zone.

Table 3. Estimated Weekday Vehicle Trip Generation

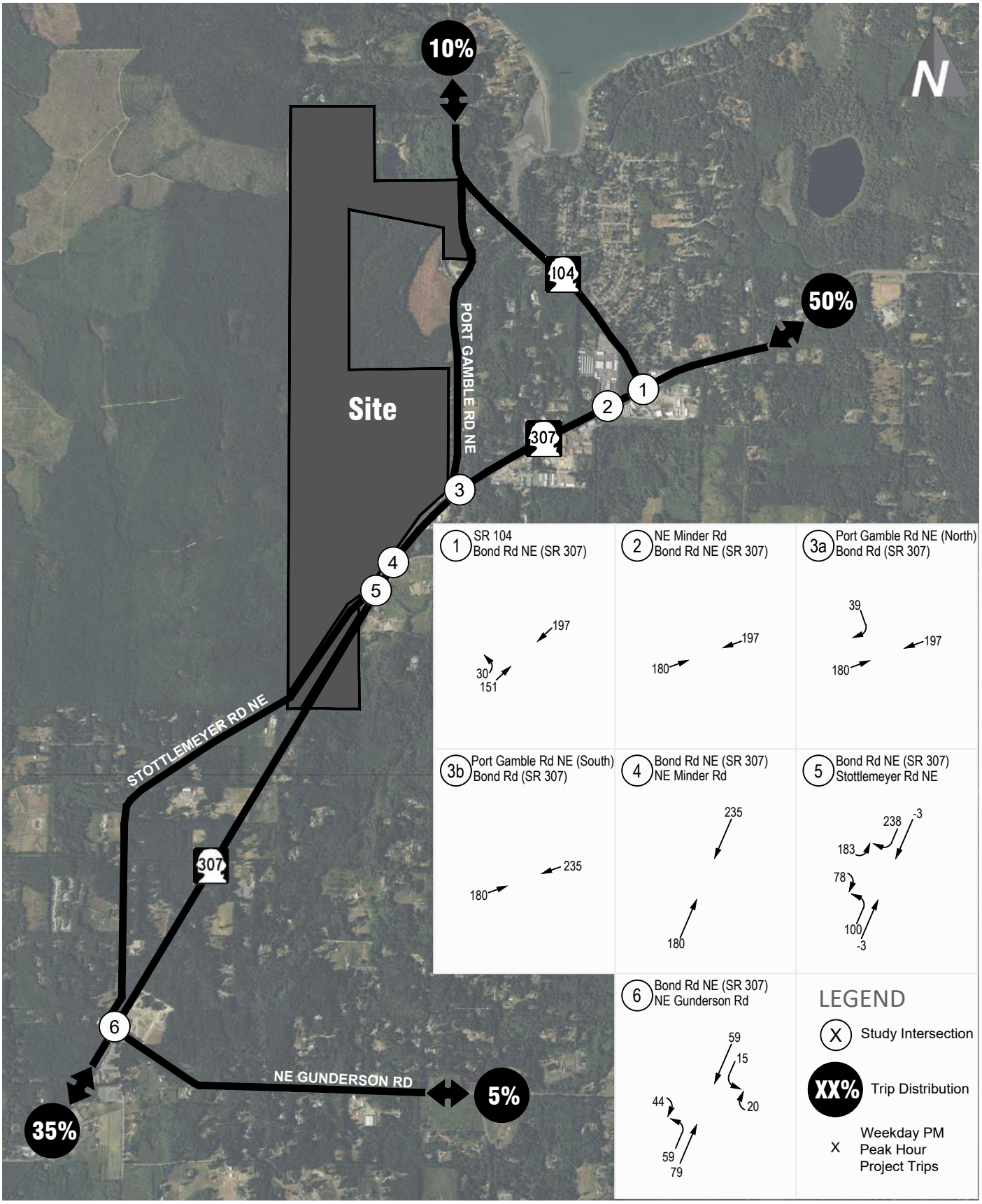
Trip Generation Scenario	Land Use	Daily Trips[1]	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
High End Estimate	Residential	1,390	26	79	105	85	51	136
	YMCA	2,282	101	52	153	93	103	196
	Sports Complex	2,568	83	44	127	200	142	342
	Commercial	402	20	18	38	19	9	28
	Passby	*-170*	*-8*	*-8*	*-16*	*-6*	*-6*	*-12*
	Total New Trips	**6,472**	**222**	**185**	**407**	**391**	**299**	**690**
Low End Estimate	Residential	700	14	40	54	42	25	67
	YMCA	2,288	101	52	153	93	104	197
	Sports Complex	428	4	2	6	65	34	99
	Commercial	224	11	11	22	10	4	14
	Passby	*-94*	*-5*	*-5*	*-10*	*-3*	*-3*	*-6*
	Total New Trips	**3,546**	**125**	**100**	**225**	**207**	**164**	**371**

1. The trip generation for the project was estimated based on data provided in Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021).

Trip Distribution and Assignment

Trip distribution patterns for the proposed uses to and from the site were based on existing travel patterns in the vicinity and proposed location of site functions. The trip distribution for the proposed project is shown in Figure 9.

The net new peak hour project trips were assigned to the study intersections based on the anticipated distribution for the proposed project and the assumed site access point in the area of Stottlemeyer Road NE and Bond Road NE (SR 307). The resulting trip assignment is shown in Figure 9.The future (2028) with-project traffic volumes were forecast by adding the weekday PM peak hour project trips to the future (2028) without-project traffic volumes. The resulting future (2028) with-project weekday PM peak hour traffic volumes are shown in Figure 10.



Project Trip Distribution and Assignment

FIGURE 9

NKU South Gamble

transpogroup

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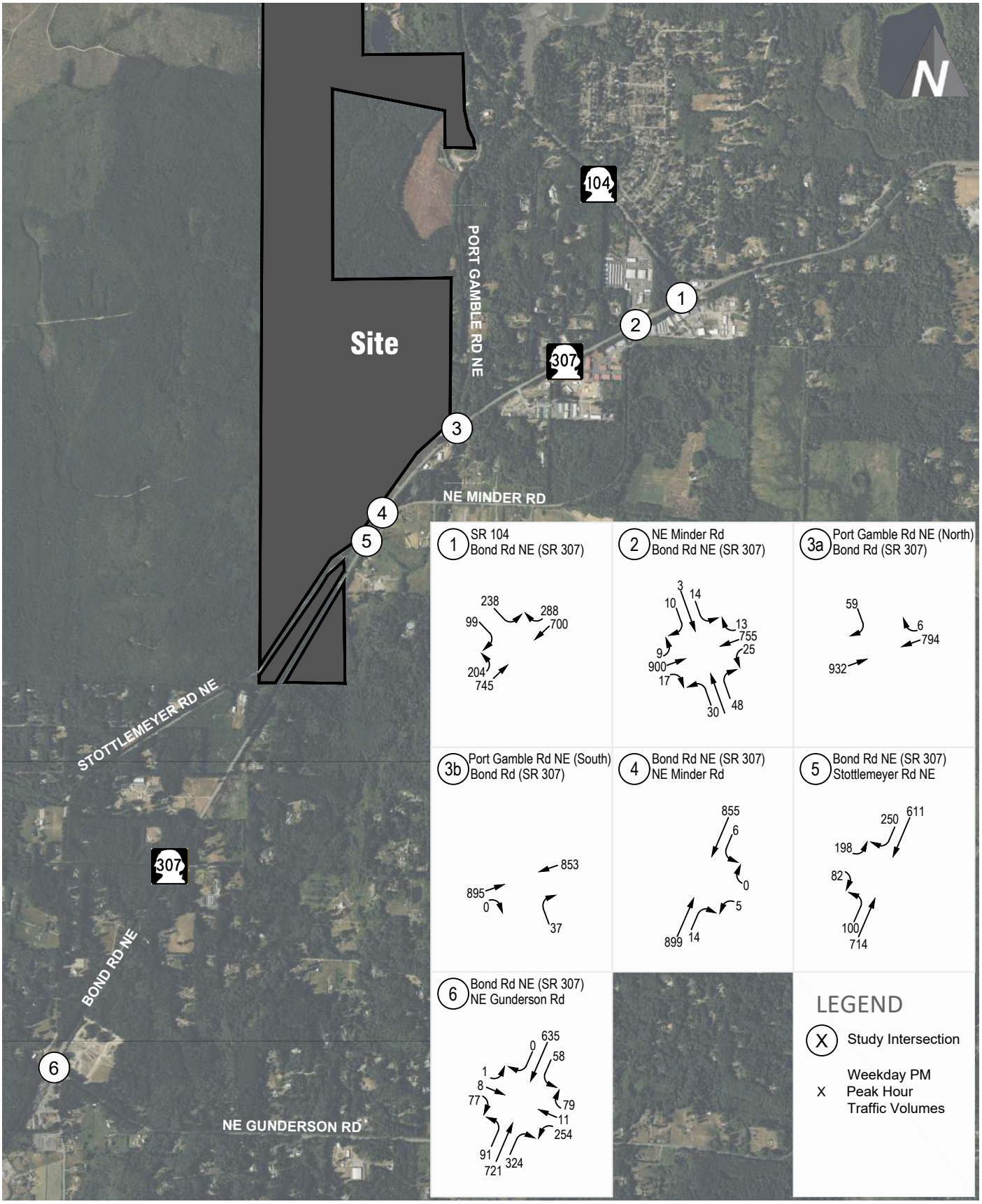


Future (2028) With-Project Weekday Peak Hour Traffic Volumes

FIGURE **10**

NKU South Gamble

transpogroup

Dec 07, 2023 - 9:57am lilyh M:\23\1.23310.00 - NKU South Gamble\Graphics\DWG\Graphics_23310.dwg Layout: Future With-Proj Vols

With-Project Traffic Operations

A future (2028) with-project level of service analysis was conducted for the weekday peak hour to analyze traffic impacts of the proposed project. The same methodologies were applied as described for existing and future without-project conditions. All intersection parameters such as channelization, intersection control, and signal timing were consistent with those used in the evaluation of future without-project conditions. A comparison of future (2028) without-project and with-project weekday peak hour traffic operations is summarized in Table 4. Detailed LOS worksheets are provided in Appendix C.

Table 4. Future (2028) Without and With-Project Weekday PM Peak Hour LOS Summary

Intersection	Traffic Control	2028 Without-Project			2028 With-Project		
		LOS[1]	Delay[2]	WM[3]	LOS	Delay	WM
1. SR 104/Bond Rd NE (SR 307)	Signal	B	19	-	C	24	-
2. NE Minder Rd/Bond Rd NE (SR 307)[4]	TWSC	**E**	**36**	**SB**	**F**	**78**	**SB**
		E	**36**	**NB**	**F**	**95**	**NB**
3A. Port Gamble Rd NE (N of SR 307)/SR 307	TWSC	B	13	SB	C	17	SB
3B. Port Gamble Rd NE (S of SR 307)/SR 307	TWSC	B	15	NB	C	18	NB
4. Bond Rd NE (SR 307)/NE Minder Rd	TWSC	**D**	**30**	**WB**	**F**	**54**	**WB**
5. Bond Rd NE (SR 307)/Stottlemeyer Rd NE (North)	TWSC	**D**	**28**	**EB**	**F**	**1,003**	**EB**
6. Bond Rd NE (SR 307)/Stottlemeyer Rd NE (South)/NE Gunderson Rd	Signal	C	24	-	C	33	-

Note: TWSC = two-way stop controlled. Bold text indicates not meeting the LOS standard.
1. Level of Service (A – F) as defined by the *Highway Capacity Manual* (TRB, 7th Edition)
2. Average delay per vehicle in seconds
3. Worst Movement shown for stop controlled intersections. EB = eastbound approach, WB = westbound, NB = northbound, SB = southbound.
4. Note that both the north and south stop controlled approaches of this intersection are operating below standard so both are included in the table.

As shown in Table 4, with the addition of project generated traffic, the NE Minder Road (eastern and western intersections) along Bond Road (SR 307) degrade to operate at a LOS F, under PM peak hour conditions with no improvements. These are generally low volume side street stop-controlled approaches with limited gaps for left-turning movements onto the major road (Bond Road). The Stottlemeyer Road NE (north) intersection also degrades compared to future 2028 without-project conditions to operating at LOS F, failing to meet standard.

Site Access Assessment

The site has frontage along Stottlemeyer Road NE, Port Gamble Road NE and Bond Road NE (SR 307). The majority of the development is anticipated to be developed along the southern portion of the site along Bond Road (SR 307) as well as Stottlemeyer Road NE with most traffic anticipated to travel to and from Bond Road (SR 307).

Typically access to a development of this size would occur through a County roadway that would then have access to Bond Road (SR 307). Stottlemeyer Road NE is currently the only option for this type of access; however, it connects to Bond Road (SR 307) at an obtuse angle that makes left turning maneuvers and sight lines more challenging than a typical right-angle intersection. In addition, the travel volumes on Bond Road (SR 307) are high enough that any moderate level of traffic on the side street would have enough delay to exceed the LOS C operational standards WSDOT has for Bond Road (SR 307).

As described above, SR 307 is a Managed Class 2 roadway. The WSDOT design manual section 540.03(2) defines key characteristics of this road type including:

- Mobility favored over access
- Intersection spacing of a 1/2 mile is desired. Less spacing may be allowed when no reasonable alternative access exists
- Only 1 access connection is allowed for an individual parcel unless the highway frontage exceeds 1,320 feet and it can be shown the additional access will not adversely affect the desired function of the state highway. The site has approximately 4,350 feet of frontage along Bond Road (SR 307).

Access in the preliminary traffic analysis was assumed via Stottlemeyer (north) connecting to Bond Road (SR 307). It is possible that the project may include a northern road connection directly onto Port Gamble Road, but this access was not assumed as the single access provides a more conservative impact at the Bond/Stottlemeyer/Minder Road intersections.

As shown in the operational summary above, assuming the existing traffic control and channelization, the Bond Rd NE (SR 307)/Stottlemeyer Rd NE (North) intersection degrades to operating below standard under future conditions both without and with the project. Additionally, the NE Minder Road (eastern and western) intersections along Bond Road (SR 307) degrade to operate at a LOS F, under PM peak hour conditions.

Improvement options were reviewed at the 3 intersections identified to operate below standard. This initially considered adding turn lanes or refuge lanes to the existing configurations; however, this only resulted in operational improvement to LOS standards at the Bond Rd NE (SR 307)/NE Minder Rd (western) intersection. The level of traffic generated by the development that would need to access Bond (SR 307) would require a traffic signal or roundabout for traffic control.

A number of conditions were considered based on safety, traffic operations, intersection spacing, and other WSDOT requirements. Through these considerations, relocating Stottlemeyer Road NE through the site to align with NE Minder Road was identified as an option to explore further. Aligning these two intersections and providing traffic control such as a traffic signal or roundabout would provide acceptable operations and improve accessibility to Bond Road (SR 307) for areas both north and south of Bond Road (SR 307).

The resulting forecast future (2028) with-project weekday PM peak hour traffic volumes are shown in Figure 11.

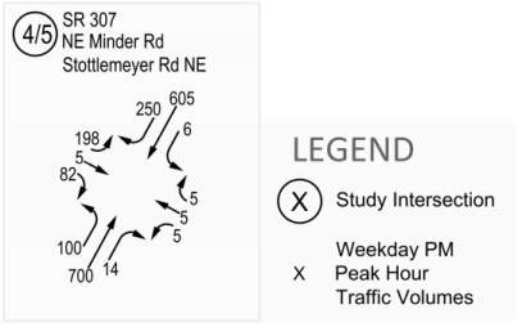


Figure 11. Future (2028) With-Project Traffic Volumes Aligning Bond Rd NE (SR 307)/Stottlemeyer Rd NE/Minder Rd

The resulting traffic operations are summarized in Table 6. Only a traffic signal or roundabout under the aligned configuration resulted in the intersection operations meeting the LOS standards.[4] **Note that further review of design feasibility of the traffic signal and roundabout options needs to be completed. This would also include working with WSDOT to complete an Intersection Control Evaluation and obtain approval permits for this to occur.**

Table 5. Future (2028) With-Project Weekday PM Peak Hour LOS Summary – Improvement Options

Intersection	Traffic Control	2028 With-Project			2028 With-Project (Improvement Option)		
		LOS[1]	Delay[2]	WM[3]	LOS	Delay	WM or v/c ratio[4]
Maintain existing configuration (3-leg) with added TWLTL							
2. NE Minder Rd/Bond Rd NE (SR 307)	TWSC	**F**	**78**	**SB**	**F**	**74**	**SB**
		F	**95**	**NB**	**F**	**89**	**NB**
4. Bond Rd NE (SR 307)/NE Minder Rd	TWSC	**F**	**54**	**WB**	C	22	WB
5. Bond Rd NE (SR 307)/Stottlemeyer Rd NE (North)	TWSC	**F**	**1003**	**EB**	**F**	**163**	**EB**
Align Minder and Stottlemeyer (4-leg):							
4/5. Bond Rd NE (SR 307)/Stottlemeyer Rd NE/Minder Rd	TWSC	-	-	-	**F**	**1,530**	**EB**
	TWSC (with added TWLTL)	-	-	-	**F**	**1,307**	**EB**
	Signal[6]	-	-	-	C	30	-
	RAB	-	-	-	A	8.2	0.81

Note: TWSC = two-way stop controlled. RAB = Roundabout, TWLTL = two-way left-turn lane. Bold text indicates not meeting the LOS standard.
1. Level of Service (A – F) as defined by the *Highway Capacity Manual* (TRB, 7th Edition)
2. Average delay per vehicle in seconds
3. Worst Movement shown for stop controlled intersections. EB = eastbound approach, WB = westbound, NB = northbound, SB = southbound.
4. Volume to capacity (v/c) ratio reported for roundabouts.
5. Roundabout analysis assumes an environmental factor (i.e. driver confusion factor) of 1.1, typical of opening year.
6. Signal warrants were met. See Appendix E.

[4] A signal warrant analysis was performed per Manual on Uniform Traffic Control Devices (MUTCD, 2009 Edition) four-hour and eight-hour signal warrants (Warrants 1-2, respectively per Chapter 4C). Hourly traffic volumes were developed using the future (2028) weekday PM peak hour with-project aligned traffic volumes at the Stottlemeyer/Minder/SR 307 intersection and applying the hourly distribution from the National Cooperative Highway Research Program (NCHRP) Report 365 Travel Estimation Techniques for Urban Planning to evaluate Warrants 1 and 2 using the HCS2023 Software. The signal warrants are included in Appendix E. A traffic signal should not be installed unless one or more of the signal warrants are met, though the satisfaction of a traffic signal warrant or warrants does not itself require the installation of traffic control signal. Both the four-hour nor eight-hour signal warrants were met.

Summary of Findings

General findings of the preliminary transportation assessment for the NKU South Gamble development include:

Land Use Assumptions – For purposes of the transportation assessment the following range of development was reviewed:

- Residential – 80 residential lots with and without a detached accessory dwelling unit (ADU) as permitted in the Rural Residential Zone.
- YMCA regional facility - 80,000 square-feet (sf)
- 6-12 fields as well as supportive uses such as baseball, tennis, pickleball, etc.
- Restaurant - 2,000-4,000 sf anticipated to be high turnover sit down
- Retail – 2,000-4,000 sf strip mall

Trip Generation – The primary weekday daily trips are estimated to range from approximately 3,546 trips to 6,472 trips with between 225 and 407 trips occurring during the weekday AM peak hour and 371 to 690 trips occurring during the weekday PM peak hour.

Traffic Operations – The existing full access side street stop-controlled intersections along Bond Road (SR 307) are shown to operate below the LOS C standard by future (2028) conditions without the project during the weekday PM peak hour due to the high volumes along Bond Road (SR 307). The traffic signals are shown to operate acceptably with additional project traffic, although they are near level of service thresholds.

Access – Access in the preliminary traffic analysis was assumed via Stottlemeyer (north) connecting to Bond Road (SR 307), consistent with where the majority of the traffic generated by the project will desire to travel. Stottlemeyer Road NE currently travels through the site and accesses Bond Road (SR 307); however, occurs at an obtuse angle and operations would fail with just a two way stop controlled intersection. Advanced traffic control such as a traffic signal or roundabout would be necessary. Locating a traffic signal or roundabout along Bond Road (SR 307) needs to be evaluated further in coordination with WSDOT. Initial thoughts would be to further explore aligning Stottlemeyer Road NE with NE Minder Road into one intersection or consider shifting Stottlemeyer Road further south or west of its current location. Note that it is possible that the project may include a northern road connection directly onto Port Gamble Road, but this access was not assumed as the single access provides a more conservative impact at the Bond/Stottlemeyer/Minder Road intersections.

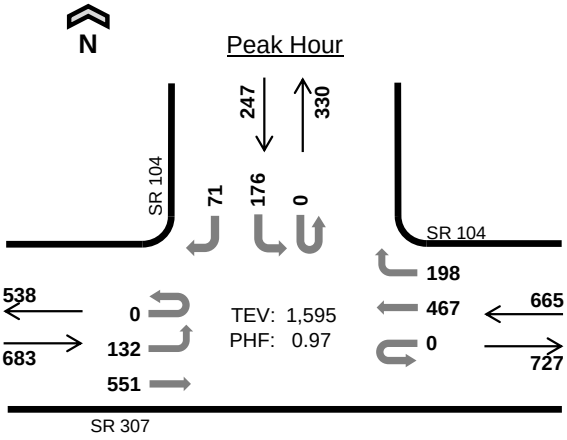
Next Steps/Additional Considerations –

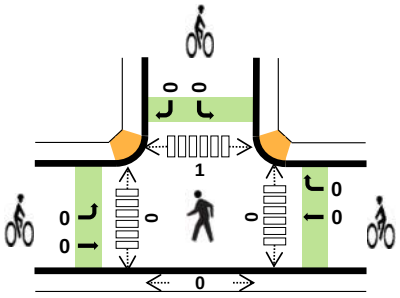
- Explore access alternatives through on-going coordination with WSDOT and design review. This would likely include evaluating options for realigning NE Stottlemeyer Road to either align with NE Minder Road or shifting the Stottlemeyer Road intersection further south.
- Seasonal impacts – the current analysis reflects average (typical) conditions. Higher seasonal impacts during summer months could result in increased delay and additional impacts.
- The above analysis focuses on the weekday PM peak hour condition. Given the proposed recreational field uses which may have peaking conditions outside of the typical weekday PM peak hour condition (e.g. Fridays and/or weekends), additional review of these non-typical periods may be necessary. This could identify the need for event management strategies to address traffic and/or parking concerns.

Appendix A: Traffic Counts

SR 104
SR 307

Date: 10/18/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	2.2%	0.88
WB	2.4%	0.89
NB	-	-
SB	1.6%	0.95
TOTAL	2.2%	0.97

Two-Hour Count Summaries

Interval Start		SR 307 Eastbound				SR 104 Westbound				0 Northbound				SR 104 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	22	148	0	0	0	129	56	0	0	0	0	0	15	0	18	388	0
4:15 PM		0	35	133	0	0	0	109	31	0	0	0	0	0	43	0	12	363	0
4:30 PM		0	28	147	0	0	0	121	36	0	0	0	0	0	52	0	10	394	0
4:45 PM		**0**	**36**	**141**	**0**	**0**	**0**	**123**	**48**	**0**	**0**	**0**	**0**	**0**	**47**	**0**	**16**	**411**	1,556
5:00 PM		**0**	**29**	**164**	**0**	**0**	**0**	**107**	**35**	**0**	**0**	**0**	**0**	**0**	**50**	**0**	**10**	**395**	1,563
5:15 PM		**0**	**39**	**109**	**0**	**0**	**0**	**100**	**66**	**0**	**0**	**0**	**0**	**0**	**43**	**0**	**22**	**379**	1,579
5:30 PM		**0**	**28**	**137**	**0**	**0**	**0**	**137**	**49**	**0**	**0**	**0**	**0**	**0**	**36**	**0**	**23**	**410**	**1,595**
5:45 PM		0	12	110	0	0	0	88	33	0	0	0	0	0	41	0	8	292	1,476
Count Total		0	229	1,089	0	0	0	914	354	0	0	0	0	0	327	0	119	3,032	0
Peak Hour	**All**	**0**	**132**	**551**	**0**	**0**	**0**	**467**	**198**	**0**	**0**	**0**	**0**	**0**	**176**	**0**	**71**	**1,595**	**0**
	HV	**0**	**2**	**13**	**0**	**0**	**0**	**13**	**3**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**35**	**0**
	HV%	**-**	**2%**	**2%**	**-**	**-**	**-**	**3%**	**2%**	**-**	**-**	**-**	**-**	**-**	**2%**	**-**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	11	0	1	*12*	0	1	0	0	*1*	0	0	0	0	*0*
4:15 PM	3	6	0	4	*13*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	4	7	0	2	*13*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	**5**	**4**	**0**	**1**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**5**	**3**	**0**	**1**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**4**	**3**	**0**	**1**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:30 PM	**1**	**6**	**0**	**1**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
5:45 PM	2	6	0	1	*9*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	24	46	0	12	*82*	0	1	0	0	*1*	0	0	1	0	*1*
Peak Hr	**15**	**16**	**0**	**4**	***35***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	SR 307 Eastbound				SR 104 Westbound				0 Northbound				SR 104 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	5	6	0	0	0	0	0	0	0	1	12	0
4:15 PM	0	0	3	0	0	0	4	2	0	0	0	0	0	3	0	1	13	0
4:30 PM	0	1	3	0	0	0	7	0	0	0	0	0	0	2	0	0	13	0
4:45 PM	**0**	**2**	**3**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**10**	48
5:00 PM	**0**	**0**	**5**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**9**	45
5:15 PM	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**8**	40
5:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**4**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**8**	**35**
5:45 PM	0	0	2	0	0	0	5	1	0	0	0	0	0	1	0	0	9	34
Count Total	0	3	21	0	0	0	34	12	0	0	0	0	0	10	0	2	82	0
Peak Hour	**0**	**2**	**13**	**0**	**0**	**0**	**13**	**3**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**35**	**0**

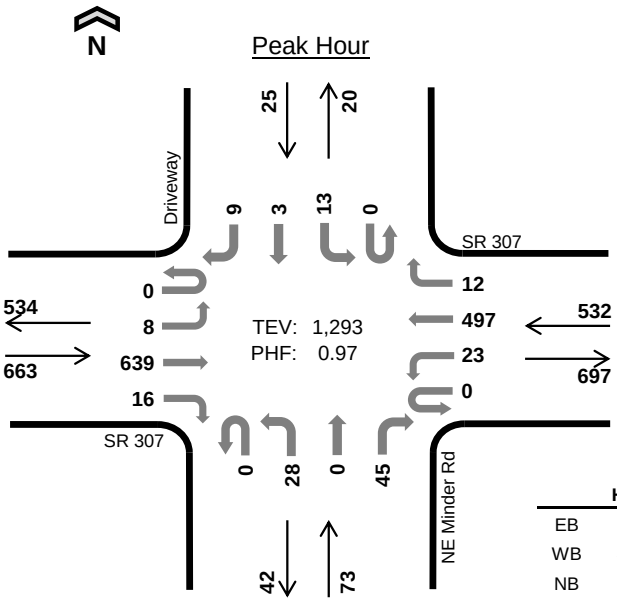
Two-Hour Count Summaries - Bikes

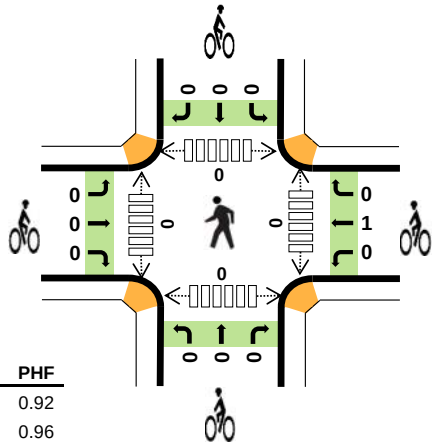
Interval Start	SR 307 Eastbound			SR 104 Westbound			0 Northbound			SR 104 Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

NE Minder Rd
SR 307

Date: 10/18/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	1.8%	0.92
WB	4.1%	0.96
NB	1.4%	0.76
SB	4.0%	0.63
TOTAL	2.8%	0.97

Two-Hour Count Summaries

Interval Start		SR 307 Eastbound				SR 307 Westbound				NE Minder Rd Northbound				Driveway Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**2**	**175**	**3**	**0**	**9**	**126**	**2**	**0**	**5**	**0**	**6**	**0**	**3**	**0**	**3**	**334**	0
4:15 PM		**0**	**3**	**151**	**2**	**0**	**5**	**113**	**4**	**0**	**12**	**0**	**11**	**0**	**5**	**3**	**2**	**311**	0
4:30 PM		**0**	**1**	**144**	**3**	**0**	**4**	**131**	**4**	**0**	**9**	**0**	**15**	**0**	**4**	**0**	**1**	**316**	0
4:45 PM		**0**	**2**	**169**	**8**	**0**	**5**	**127**	**2**	**0**	**2**	**0**	**13**	**0**	**1**	**0**	**3**	**332**	**1,293**
5:00 PM		0	1	176	1	0	4	110	2	0	10	0	10	0	4	1	4	323	1,282
5:15 PM		0	3	135	1	0	8	116	1	0	1	1	3	0	2	1	2	274	1,245
5:30 PM		0	2	151	1	0	9	147	4	0	1	0	7	0	3	2	5	332	1,261
5:45 PM		0	7	125	0	0	3	93	3	0	0	0	7	0	1	1	1	241	1,170
Count Total		0	21	1,226	19	0	47	963	22	0	40	1	72	0	23	8	21	2,463	0
Peak Hour	**All**	**0**	**8**	**639**	**16**	**0**	**23**	**497**	**12**	**0**	**28**	**0**	**45**	**0**	**13**	**3**	**9**	**1,293**	**0**
	HV	**0**	**0**	**9**	**3**	**0**	**1**	**21**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**36**	**0**
	HV%	**-**	**0%**	**1%**	**19%**	**-**	**4%**	**4%**	**0%**	**-**	**0%**	**-**	**2%**	**-**	**0%**	**0%**	**11%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**0**	**6**	**1**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:15 PM	**1**	**5**	**0**	**1**	***7***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**6**	**8**	**0**	**0**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**5**	**3**	**0**	**0**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:00 PM	4	4	1	0	*9*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	1	2	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	1	4	0	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	1	4	0	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	19	36	2	1	*58*	0	1	0	0	*1*	0	0	0	0	*0*
Peak Hour	**12**	**22**	**1**	**1**	***36***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

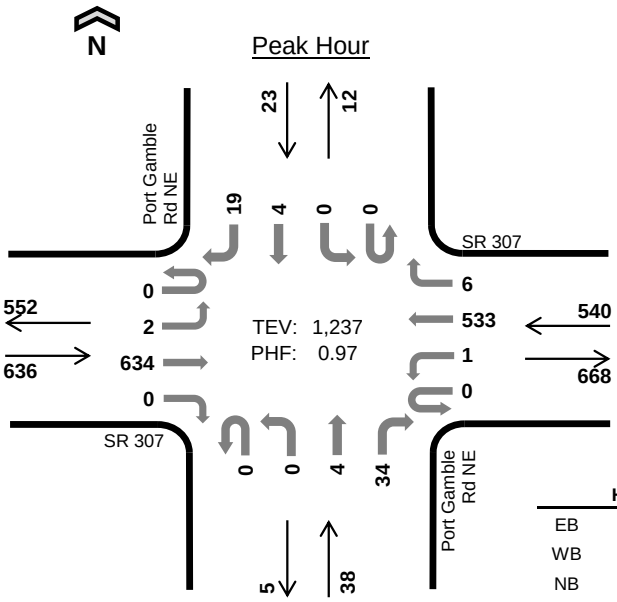
Interval Start	SR 307 Eastbound				SR 307 Westbound				NE Minder Rd Northbound				Driveway Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**7**	0
4:15 PM	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	0
4:30 PM	**0**	**0**	**4**	**2**	**0**	**1**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	0
4:45 PM	**0**	**0**	**4**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**36**
5:00 PM	0	0	4	0	0	0	4	0	0	0	0	1	0	0	0	0	9	38
5:15 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	34
5:30 PM	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	5	25
5:45 PM	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	5	22
Count Total	0	0	16	3	0	1	35	0	0	0	0	2	0	0	0	1	58	0
Peak Hour	**0**	**0**	**9**	**3**	**0**	**1**	**21**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**36**	**0**

Two-Hour Count Summaries - Bikes

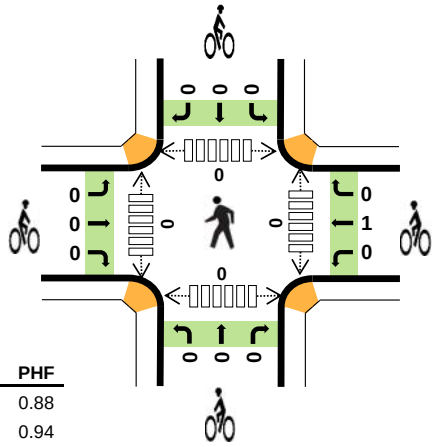
Interval Start	SR 307 Eastbound			SR 307 Westbound			NE Minder Rd Northbound			Driveway Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Port Gamble Rd NE
SR 307



Date: 10/18/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	2.8%	0.88
WB	3.9%	0.94
NB	7.9%	0.68
SB	8.7%	0.82
TOTAL	3.6%	0.97

Two-Hour Count Summaries

Interval Start		SR 307 Eastbound				SR 307 Westbound				Port Gamble Rd NE Northbound				Port Gamble Rd NE Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	158	0	0	0	141	3	0	0	1	4	0	0	1	4	312	0
4:15 PM		**0**	**0**	**143**	**0**	**0**	**0**	**129**	**2**	**0**	**0**	**1**	**11**	**0**	**0**	**2**	**3**	**291**	0
4:30 PM		**0**	**0**	**157**	**0**	**0**	**0**	**144**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**7**	**313**	0
4:45 PM		**0**	**1**	**154**	**0**	**0**	**0**	**137**	**2**	**0**	**0**	**1**	**13**	**0**	**0**	**1**	**4**	**313**	1,229
5:00 PM		**0**	**1**	**180**	**0**	**0**	**1**	**123**	**2**	**0**	**0**	**2**	**5**	**0**	**0**	**1**	**5**	**320**	**1,237**
5:15 PM		0	0	136	0	0	0	129	2	0	0	1	6	0	0	0	4	278	1,224
5:30 PM		0	1	142	0	0	0	151	0	0	0	0	17	0	0	1	6	318	1,229
5:45 PM		0	0	121	0	0	0	93	0	0	0	1	4	0	0	0	5	224	1,140
Count Total		0	3	1,191	0	0	1	1,047	11	0	0	7	65	0	0	6	38	2,369	0
Peak Hour	**All**	**0**	**2**	**634**	**0**	**0**	**1**	**533**	**6**	**0**	**0**	**4**	**34**	**0**	**0**	**4**	**19**	**1,237**	**0**
	HV	**0**	**0**	**18**	**0**	**0**	**0**	**20**	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**44**	**0**
	HV%	**-**	**0%**	**3%**	**-**	**-**	**0%**	**4%**	**17%**	**-**	**-**	**0%**	**9%**	**-**	**-**	**0%**	**11%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	6	0	1	*7*	0	0	1	0	*1*	0	0	0	0	*0*
4:15 PM	**2**	**6**	**1**	**0**	***9***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**6**	**7**	**1**	**2**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**5**	**5**	**0**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**5**	**3**	**1**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:15 PM	2	2	0	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	1	3	1	0	*5*	0	1	0	0	*1*	0	0	0	0	*0*
5:45 PM	2	4	0	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	23	36	4	3	*66*	0	2	1	0	*3*	0	0	0	0	*0*
Peak Hour	**18**	**21**	**3**	**2**	***44***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	SR 307 Eastbound				SR 307 Westbound				Port Gamble Rd NE Northbound				Port Gamble Rd NE Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	6	0	0	0	0	0	0	0	1	0	7	0
4:15 PM	**0**	**0**	**2**	**0**	**0**	**0**	**5**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**9**	0
4:30 PM	**0**	**0**	**6**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**16**	0
4:45 PM	**0**	**0**	**5**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	42
5:00 PM	**0**	**0**	**5**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**9**	**44**
5:15 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	39
5:30 PM	0	0	1	0	0	0	3	0	0	0	0	1	0	0	0	0	5	28
5:45 PM	0	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	6	24
Count Total	0	0	23	0	0	0	35	1	0	0	0	4	0	0	1	2	66	0
Peak Hour	**0**	**0**	**18**	**0**	**0**	**0**	**20**	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**44**	**0**

Two-Hour Count Summaries - Bikes

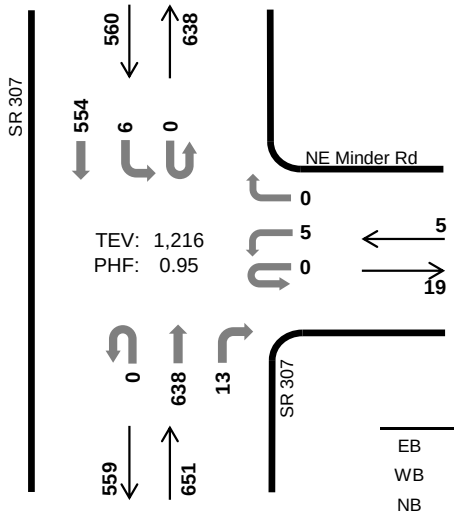
Interval Start	SR 307 Eastbound			SR 307 Westbound			Port Gamble Rd NE Northbound			Port Gamble Rd NE Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	2	0	0	1	0	0	0	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

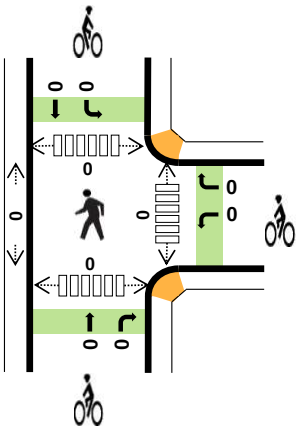
SR 307
NE Minder Rd

Date: 10/18/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM

Peak Hour



	HV %:	PHF
EB	-	-
WB	0.0%	0.42
NB	2.5%	0.86
SB	3.4%	0.91
TOTAL	2.9%	0.95



Two-Hour Count Summaries

Interval Start	0				NE Minder Rd				SR 307				SR 307				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	2	0	0	0	0	161	4	0	4	142	0	313	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**143**	**4**	**0**	**1**	**130**	**0**	**278**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**154**	**1**	**0**	**4**	**150**	**0**	**312**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**158**	**2**	**0**	**1**	**145**	**0**	**307**	1,210
5:00 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**183**	**6**	**0**	**0**	**129**	**0**	**319**	**1,216**
5:15 PM	0	0	0	0	0	2	0	0	0	0	133	2	0	1	128	0	266	1,204
5:30 PM	0	0	0	0	0	1	0	0	0	0	145	3	0	2	154	0	305	1,197
5:45 PM	0	0	0	0	0	1	0	0	0	0	124	0	0	0	102	0	227	1,117
Count Total	0	0	0	0	0	11	0	0	0	0	1,201	22	0	13	1,080	0	2,327	0
Peak Hour All	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**638**	**13**	**0**	**6**	**554**	**0**	**1,216**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**1**	**0**	**0**	**19**	**0**	**35**	**0**
Peak Hour HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**-**	**-**	**-**	**2%**	**8%**	**-**	**0%**	**3%**	**-**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	6	*6*	0	0	0	1	*1*	0	0	0	0	*0*
4:15 PM	**0**	**0**	**3**	**4**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**0**	**5**	**8**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**0**	**4**	**5**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:15 PM	0	0	2	2	*4*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	0	1	3	*4*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	0	2	3	*5*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	0	21	33	*54*	0	0	0	1	*1*	0	0	0	0	*0*
Peak Hr	**0**	**0**	**16**	**19**	***35***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

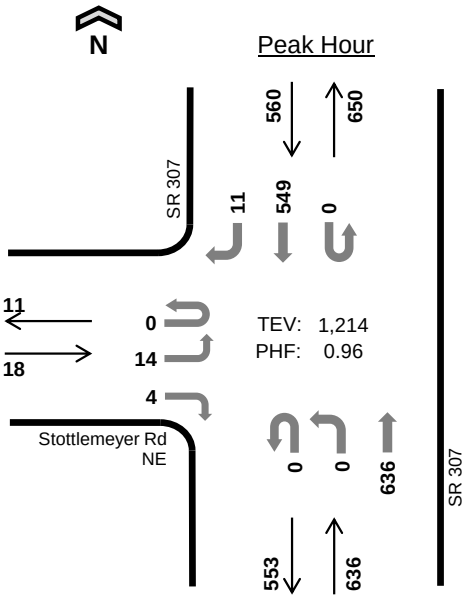
Interval Start	0				NE Minder Rd				SR 307				SR 307				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**4**	**0**	**7**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**8**	**0**	**13**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**9**	35
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	**35**
5:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	32
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	23
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	19
Count Total	0	0	0	0	0	0	0	0	0	0	20	1	0	0	33	0	54	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**1**	**0**	**0**	**19**	**0**	**35**	**0**

Two-Hour Count Summaries - Bikes

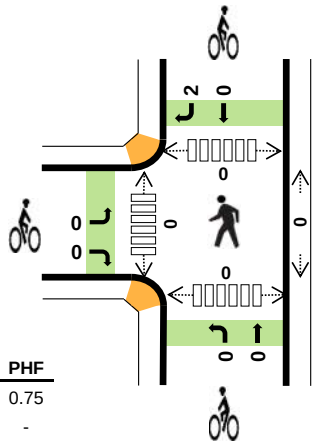
Interval Start	0			NE Minder Rd			SR 307			SR 307			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

SR 307
Stottlemeyer Rd NE



Date: 10/18/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	5.6%	0.75
WB	-	-
NB	3.0%	0.85
SB	3.2%	0.92
TOTAL	3.1%	0.96

Two-Hour Count Summaries

Interval Start		Stottlemeyer Rd NE Eastbound				0 Westbound				SR 307 Northbound				SR 307 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	4	0	0	0	0	0	0	0	1	161	0	0	0	136	5	307	0
4:15 PM		**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**145**	**0**	**0**	**0**	**125**	**5**	**280**	0
4:30 PM		**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**153**	**0**	**0**	**0**	**150**	**3**	**310**	0
4:45 PM		**0**	**5**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**152**	**0**	**0**	**0**	**147**	**3**	**308**	1,205
5:00 PM		**0**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**186**	**0**	**0**	**0**	**127**	**0**	**316**	**1,214**
5:15 PM		0	2	0	0	0	0	0	0	0	0	137	0	0	0	120	6	265	1,199
5:30 PM		0	1	0	0	0	0	0	0	0	0	143	0	0	0	151	6	301	1,190
5:45 PM		0	0	0	1	0	0	0	0	0	0	123	0	0	0	101	5	230	1,112
Count Total		0	21	0	5	0	0	0	0	0	1	1,200	0	0	0	1,057	33	2,317	0
Peak Hour	**All**	**0**	**14**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**636**	**0**	**0**	**0**	**549**	**11**	**1,214**	**0**
	HV	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**0**	**0**	**17**	**1**	**38**	**0**
	HV%	**-**	**7%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**-**	**3%**	**-**	**-**	**-**	**3%**	**9%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	1	8	*9*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	**1**	**0**	**4**	**4**	***9***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**0**	**3**	**9**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**0**	**6**	**5**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**0**	**0**	**6**	**0**	***6***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***
5:15 PM	0	0	4	2	*6*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	0	2	3	*5*	0	0	0	1	*1*	0	0	0	0	*0*
5:45 PM	0	0	1	3	*4*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	1	0	27	34	*62*	0	0	0	3	*3*	0	0	0	0	*0*
Peak Hr	**1**	**0**	**19**	**18**	***38***	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Stottlemeyer Rd NE				0				SR 307				SR 307				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	8	0	9	0
4:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**4**	**0**	**9**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**9**	**0**	**12**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**4**	**1**	**11**	41
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**6**	**38**
5:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	6	35
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	28
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	21
Count Total	0	1	0	0	0	0	0	0	0	0	27	0	0	0	33	1	62	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**0**	**0**	**17**	**1**	**38**	**0**

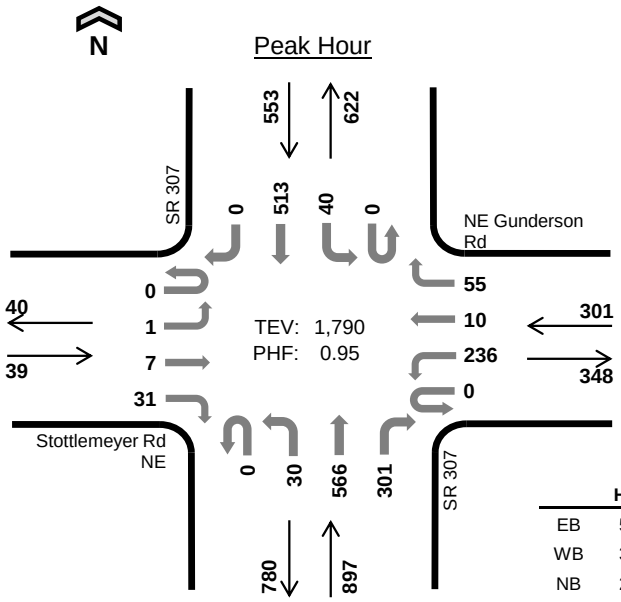
Two-Hour Count Summaries - Bikes

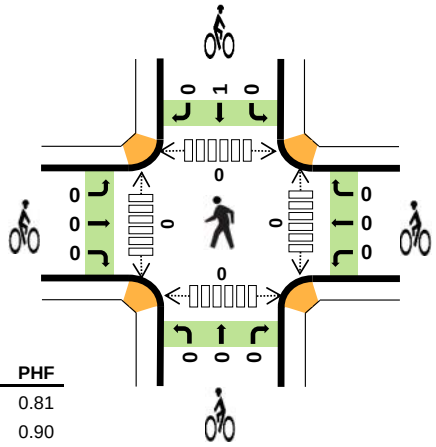
Interval Start	Stottlemeyer Rd NE			0			SR 307			SR 307			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**2**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	0	0	0	0	0	0	0	3	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

SR 307
NE Gunderson Rd

Date: 10/18/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	5.1%	0.81
WB	3.0%	0.90
NB	2.1%	0.88
SB	4.2%	0.90
TOTAL	3.0%	0.95

Two-Hour Count Summaries

Interval Start		Stottlemeyer Rd NE (Eastbound)				NE Gunderson Rd (Westbound)				SR 307 (Northbound)				SR 307 (Southbound)				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**0**	**3**	**6**	**0**	**57**	**2**	**15**	**0**	**10**	**150**	**96**	**0**	**9**	**119**	**0**	**467**	0
4:15 PM		**0**	**0**	**0**	**7**	**0**	**62**	**4**	**7**	**0**	**8**	**125**	**60**	**0**	**7**	**134**	**0**	**414**	0
4:30 PM		**0**	**1**	**2**	**9**	**0**	**69**	**1**	**14**	**0**	**7**	**133**	**71**	**0**	**12**	**119**	**0**	**438**	0
4:45 PM		**0**	**0**	**2**	**9**	**0**	**48**	**3**	**19**	**0**	**5**	**158**	**74**	**0**	**12**	**141**	**0**	**471**	**1,790**
5:00 PM		0	1	1	2	0	58	3	13	0	2	160	66	0	9	117	0	432	1,755
5:15 PM		0	0	4	6	0	77	1	12	0	1	129	77	0	18	102	1	428	1,769
5:30 PM		0	0	2	4	0	50	1	8	0	7	121	66	0	15	136	0	410	1,741
5:45 PM		0	0	3	4	0	36	2	13	0	11	113	66	0	8	97	2	355	1,625
Count Total		0	2	17	47	0	457	17	101	0	51	1,089	576	0	90	965	3	3,415	0
Peak Hour	**All**	**0**	**1**	**7**	**31**	**0**	**236**	**10**	**55**	**0**	**30**	**566**	**301**	**0**	**40**	**513**	**0**	**1,790**	**0**
	HV	**0**	**0**	**0**	**2**	**0**	**1**	**2**	**6**	**0**	**2**	**10**	**7**	**0**	**6**	**17**	**0**	**53**	**0**
	HV%	**-**	**0%**	**0%**	**6%**	**-**	**0%**	**20%**	**11%**	**-**	**7%**	**2%**	**2%**	**-**	**15%**	**3%**	**-**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**1**	**4**	**5**	**6**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:15 PM	**1**	**2**	**4**	**5**	***12***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**0**	**6**	**7**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**3**	**4**	**5**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:00 PM	1	3	4	3	*11*	1	1	0	0	*2*	0	0	0	0	*0*
5:15 PM	0	1	4	2	*7*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	2	1	4	*7*	1	0	0	0	*1*	0	0	0	0	*0*
5:45 PM	0	2	4	3	*9*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	3	17	32	35	*87*	2	1	0	1	*4*	0	0	0	0	*0*
Peak Hour	**2**	**9**	**19**	**23**	***53***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Stottlemeyer Rd NE				NE Gunderson Rd				SR 307				SR 307				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**3**	**0**	**0**	**1**	**4**	**0**	**2**	**4**	**0**	**16**	0
4:15 PM	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**1**	**3**	**0**	**0**	**2**	**3**	**0**	**12**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**0**	**0**	**1**	**6**	**0**	**13**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**3**	**0**	**1**	**4**	**0**	**12**	**53**
5:00 PM	0	0	1	0	0	3	0	0	0	0	4	0	0	0	3	0	11	48
5:15 PM	0	0	0	0	0	1	0	0	0	0	2	2	0	0	2	0	7	43
5:30 PM	0	0	0	0	0	2	0	0	0	0	1	0	0	0	4	0	7	37
5:45 PM	0	0	0	0	0	1	0	1	0	0	2	2	0	0	3	0	9	34
Count Total	0	0	1	2	0	8	2	7	0	2	19	11	0	6	29	0	87	0
Peak Hour	**0**	**0**	**0**	**2**	**0**	**1**	**2**	**6**	**0**	**2**	**10**	**7**	**0**	**6**	**17**	**0**	**53**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Stottlemeyer Rd NE			NE Gunderson Rd			SR 307			SR 307			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	1	1	0	1	0	0	0	0	0	1	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Appendix B: LOS Definitions

Highway Capacity Manual 7th Edition

Signalized intersection level of service (LOS) is defined in terms of a weighted average control delay for the entire intersection. Control delay quantifies the increase in travel time that a vehicle experiences due to the traffic signal control as well as provides a surrogate measure for driver discomfort and fuel consumption. Signalized intersection LOS is stated in terms of average control delay per vehicle (in seconds) during a specified time period (e.g., weekday PM peak hour). Control delay is a complex measure based on many variables, including signal phasing and coordination (i.e., progression of movements through the intersection and along the corridor), signal cycle length, and traffic volumes with respect to intersection capacity and resulting queues. Table 1 summarizes the LOS criteria for signalized intersections, as described in the *Highway Capacity Manual* 7th Edition (Transportation Research Board, 2023).

Table 1. Level of Service Criteria for Signalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)	General Description
A	≤10	Free Flow
B	>10 – 20	Stable Flow (slight delays)
C	>20 – 35	Stable flow (acceptable delays)
D	>35 – 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 – 80	Unstable flow (intolerable delay)
F[1]	>80	Forced flow (congested and queues fail to clear)

Source: *Highway Capacity Manual 2010 and 6th Edition*, Transportation Research Board, 2010 and 2016, respectively.
1. If the volume-to-capacity (v/c) ratio for a lane group exceeds 1.0 LOS F is assigned to the individual lane group. LOS for overall approach or intersection is determined solely by the control delay.

Unsignalized intersection LOS criteria can be further reduced into two intersection types: all-way stop and two-way stop control. All-way stop control intersection LOS is expressed in terms of the weighted average control delay of the overall intersection or by approach. Two-way stop-controlled intersection LOS is defined in terms of the average control delay for each minor-street movement (or shared movement) as well as major-street left-turns. This approach is because major-street through vehicles are assumed to experience zero delay, a weighted average of all movements results in very low overall average delay, and this calculated low delay could mask deficiencies of minor movements. Table 2 shows LOS criteria for unsignalized intersections.

Table 2. Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (seconds/vehicle)
A	0 – 10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F[1]	>50

Source: *Highway Capacity Manual 2010 and 6th Edition*, Transportation Research Board, 2010 and 2016, respectively.
1. If the volume-to-capacity (v/c) ratio exceeds 1.0, LOS F is assigned an individual lane group for all unsignalized intersections, or minor street approach at two-way stop-controlled intersections. Overall intersection LOS is determined solely by control delay.

Appendix C: LOS Worksheets

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	132	551	467	198	176	71
Future Volume (veh/h)	132	551	467	198	176	71
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	568	481	204	181	73
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	180	1111	764	647	235	95
Arrive On Green	0.10	0.59	0.41	0.41	0.19	0.19
Sat Flow, veh/h	1781	1870	1870	1583	1221	493
Grp Volume(v), veh/h	136	568	481	204	255	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1583	1721	0
Q Serve(g_s), s	4.0	9.4	10.9	4.7	7.5	0.0
Cycle Q Clear(g_c), s	4.0	9.4	10.9	4.7	7.5	0.0
Prop In Lane	1.00			1.00	0.71	0.29
Lane Grp Cap(c), veh/h	180	1111	764	647	331	0
V/C Ratio(X)	0.75	0.51	0.63	0.32	0.77	0.00
Avail Cap(c_a), veh/h	852	1906	1906	1613	1430	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.3	6.3	12.6	10.7	20.4	0.0
Incr Delay (d2), s/veh	5.7	0.9	2.0	0.7	4.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.1	3.7	1.3	2.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	29.0	7.2	14.6	11.4	25.0	0.0
LnGrp LOS	C	A	B	B	C	
Approach Vol, veh/h		704	685		255	
Approach Delay, s/veh		11.4	13.6		25.0	
Approach LOS		B	B		C	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.9	27.5			37.4	15.9
Change Period (Y+Rc), s	4.5	5.7			5.7	5.7
Max Green Setting (Gmax), s	25.5	54.3			54.3	44.3
Max Q Clear Time (g_c+I1), s	6.0	12.9			11.4	9.5
Green Ext Time (p_c), s	0.3	8.8			8.4	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	14.4
HCM 7th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	639	16	23	497	12	28	0	45	13	3	9
Future Vol, veh/h	8	639	16	23	497	12	28	0	45	13	3	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	4	4	4	1	1	1	4	4	4
Mvmt Flow	8	659	16	24	512	12	29	0	46	13	3	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	525	0	0	675	0	0	1245	1256	667	1241	1258	519
Stage 1	-	-	-	-	-	-	684	684	-	566	566	-
Stage 2	-	-	-	-	-	-	561	572	-	675	692	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.11	6.51	6.21	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.509	4.009	3.309	3.536	4.036	3.336
Pot Cap-1 Maneuver	1042	-	-	907	-	-	152	172	461	150	169	553
Stage 1	-	-	-	-	-	-	441	451	-	505	504	-
Stage 2	-	-	-	-	-	-	514	506	-	440	442	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1042	-	-	907	-	-	139	164	461	128	161	553
Mov Cap-2 Maneuver	-	-	-	-	-	-	139	164	-	128	161	-
Stage 1	-	-	-	-	-	-	435	445	-	487	486	-
Stage 2	-	-	-	-	-	-	483	487	-	391	437	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.1	0.39	26.19	27.77
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	244	22	-	-	77	-	-	184
HCM Lane V/C Ratio	0.308	0.008	-	-	0.026	-	-	0.14
HCM Control Delay (s/veh)	26.2	8.5	0	-	9.1	0	-	27.8
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	1.3	0	-	-	0.1	-	-	0.5

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	668	533	6	0	19
Future Vol, veh/h	0	668	533	6	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	4	4	9	9
Mvmt Flow	0	689	549	6	0	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	553
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.381
Pot Cap-1 Maneuver	0	-	-	-	0	520
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	520
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	520
HCM Lane V/C Ratio	-	-	-	0.038
HCM Control Delay (s/veh)	-	-	-	12.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	634	0	0	552	0	34
Future Vol, veh/h	634	0	0	552	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	4	4	8	8
Mvmt Flow	654	0	0	569	0	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	654
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.372
Pot Cap-1 Maneuver	-	-	0	-	0	456
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	456
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	13.54
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	456	-	-	-
HCM Lane V/C Ratio	0.077	-	-	-
HCM Control Delay (s/veh)	13.5	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	0	638	13	6	554
Future Vol, veh/h	5	0	638	13	6	554
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	3	3	3
Mvmt Flow	5	0	672	14	6	583

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1274	678	0	0	685	0
Stage 1	678	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.227	-
Pot Cap-1 Maneuver	186	455	-	-	904	-
Stage 1	508	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	184	455	-	-	904	-
Mov Cap-2 Maneuver	184	-	-	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	549	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	25.11	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	184	19	-
HCM Lane V/C Ratio	-	-	0.029	0.007	-
HCM Control Delay (s/veh)	-	-	25.1	9	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

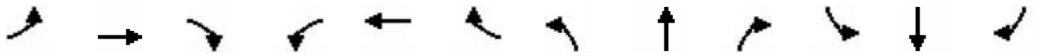
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	4	0	636	549	11
Future Vol, veh/h	14	4	0	636	549	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	6	6	3	3	3	3
Mvmt Flow	15	4	0	663	572	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1240	578	583	0	-	0
Stage 1	578	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.13	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.227	-	-	-
Pot Cap-1 Maneuver	190	508	986	-	-	-
Stage 1	553	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	190	508	986	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	553	-	-	-	-	-
Stage 2	505	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	22.84	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	986	-	220	-	-
HCM Lane V/C Ratio	-	-	0.085	-	-
HCM Control Delay (s/veh)	0	-	22.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	7	31	236	10	55	30	566	301	40	513	0
Future Volume (veh/h)	1	7	31	236	10	55	30	566	301	40	513	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	1	7	33	248	11	58	32	596	317	42	540	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	3	3	3	2	2	2	4	4	4
Cap, veh/h	2	13	60	308	45	236	71	747	633	84	750	0
Arrive On Green	0.05	0.05	0.05	0.17	0.17	0.17	0.04	0.40	0.40	0.05	0.41	0.00
Sat Flow, veh/h	39	272	1282	1767	257	1355	1781	1870	1585	1753	1841	0
Grp Volume(v), veh/h	41	0	0	248	0	69	32	596	317	42	540	0
Grp Sat Flow(s),veh/h/ln	1593	0	0	1767	0	1612	1781	1870	1585	1753	1841	0
Q Serve(g_s), s	1.8	0.0	0.0	9.4	0.0	2.6	1.2	19.7	10.5	1.6	17.2	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	9.4	0.0	2.6	1.2	19.7	10.5	1.6	17.2	0.0
Prop In Lane	0.02		0.80	1.00		0.84	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	75	0	0	308	0	281	71	747	633	84	750	0
V/C Ratio(X)	0.55	0.00	0.00	0.81	0.00	0.25	0.45	0.80	0.50	0.50	0.72	0.00
Avail Cap(c_a), veh/h	330	0	0	619	0	564	369	1425	1208	363	1402	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.6	0.0	0.0	27.8	0.0	24.9	32.8	18.5	15.8	32.5	17.4	0.0
Incr Delay (d2), s/veh	5.5	0.0	0.0	4.5	0.0	0.4	4.0	2.4	0.7	4.1	1.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	4.0	0.0	0.9	0.6	7.4	3.3	0.7	6.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.1	0.0	0.0	32.3	0.0	25.3	36.9	20.9	16.5	36.6	19.0	0.0
LnGrp LOS	D			C		C	D	C	B	D	B	
Approach Vol, veh/h		41			317			945			582	
Approach Delay, s/veh		38.1			30.8			20.0			20.2	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	34.6		8.8	8.3	35.2		17.7				
Change Period (Y+Rc), s	5.5	6.7		5.5	5.5	6.7		5.5				
Max Green Setting (Gmax), s	14.5	53.3		14.5	14.5	53.3		24.5				
Max Q Clear Time (g_c+I1), s	3.6	21.7		3.8	3.2	19.2		11.4				
Green Ext Time (p_c), s	0.0	6.3		0.1	0.0	4.1		0.8				

Intersection Summary												
HCM 7th Control Delay, s/veh			22.3									
HCM 7th LOS			C									

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	174	594	503	288	238	99
Future Volume (veh/h)	174	594	503	288	238	99
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	179	612	519	297	245	102
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	226	1116	758	642	291	121
Arrive On Green	0.13	0.60	0.41	0.41	0.24	0.24
Sat Flow, veh/h	1781	1870	1870	1583	1210	504
Grp Volume(v), veh/h	179	612	519	297	348	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1583	1719	0
Q Serve(g_s), s	6.8	13.8	16.0	9.6	13.5	0.0
Cycle Q Clear(g_c), s	6.8	13.8	16.0	9.6	13.5	0.0
Prop In Lane	1.00			1.00	0.70	0.29
Lane Grp Cap(c), veh/h	226	1116	758	642	414	0
V/C Ratio(X)	0.79	0.55	0.68	0.46	0.84	0.00
Avail Cap(c_a), veh/h	648	1449	1449	1226	1086	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.7	8.5	17.1	15.3	25.3	0.0
Incr Delay (d2), s/veh	5.6	1.0	2.6	1.2	5.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	4.0	6.1	3.1	5.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	35.3	9.5	19.7	16.5	30.9	0.0
LnGrp LOS	D	A	B	B	C	
Approach Vol, veh/h		791	816		348	
Approach Delay, s/veh		15.3	18.5		30.9	
Approach LOS		B	B		C	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.4	34.1			47.5	22.6
Change Period (Y+Rc), s	4.5	5.7			5.7	5.7
Max Green Setting (Gmax), s	25.5	54.3			54.3	44.3
Max Q Clear Time (g_c+I1), s	8.8	18.0			15.8	15.5
Green Ext Time (p_c), s	0.3	10.4			9.1	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	19.4
HCM 7th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	720	17	25	558	13	30	0	48	14	3	10
Future Vol, veh/h	9	720	17	25	558	13	30	0	48	14	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	4	4	4	1	1	1	4	4	4
Mvmt Flow	9	742	18	26	575	13	31	0	49	14	3	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	589	0	0	760	0	0	1398	1410	751	1394	1412	582
Stage 1	-	-	-	-	-	-	770	770	-	634	634	-
Stage 2	-	-	-	-	-	-	628	640	-	761	778	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.11	6.51	6.21	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.509	4.009	3.309	3.536	4.036	3.336
Pot Cap-1 Maneuver	987	-	-	843	-	-	119	139	412	118	137	509
Stage 1	-	-	-	-	-	-	395	412	-	464	470	-
Stage 2	-	-	-	-	-	-	472	471	-	395	404	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	987	-	-	843	-	-	107	131	412	97	128	509
Mov Cap-2 Maneuver	-	-	-	-	-	-	107	131	-	97	128	-
Stage 1	-	-	-	-	-	-	389	405	-	443	449	-
Stage 2	-	-	-	-	-	-	439	450	-	342	397	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.1	0.39	35.5	35.79
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	196	22	-	-	75	-	-	144
HCM Lane V/C Ratio	0.41	0.009	-	-	0.031	-	-	0.193
HCM Control Delay (s/veh)	35.5	8.7	0	-	9.4	0	-	35.8
HCM Lane LOS	E	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	1.8	0	-	-	0.1	-	-	0.7

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	752	597	6	0	20
Future Vol, veh/h	0	752	597	6	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	4	4	9	9
Mvmt Flow	0	775	615	6	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	619
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.381
Pot Cap-1 Maneuver	0	-	-	-	0	476
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	476
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	476
HCM Lane V/C Ratio	-	-	-	0.043
HCM Control Delay (s/veh)	-	-	-	12.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	715	0	0	618	0	37
Future Vol, veh/h	715	0	0	618	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	4	4	8	8
Mvmt Flow	737	0	0	637	0	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	737
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.372
Pot Cap-1 Maneuver	-	-	0	-	0	409
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	409
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	14.72
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	409	-	-	-
HCM Lane V/C Ratio	0.093	-	-	-
HCM Control Delay (s/veh)	14.7	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	0	719	14	6	620
Future Vol, veh/h	5	0	719	14	6	620
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	3	3	3
Mvmt Flow	5	0	757	15	6	653

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1429	764	0	0	772	0
Stage 1	764	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.227	-
Pot Cap-1 Maneuver	150	407	-	-	839	-
Stage 1	463	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	148	407	-	-	839	-
Mov Cap-2 Maneuver	148	-	-	-	-	-
Stage 1	463	-	-	-	-	-
Stage 2	509	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	30.19	0	0.09
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	148	17	-
HCM Lane V/C Ratio	-	-	0.036	0.008	-
HCM Control Delay (s/veh)	-	-	30.2	9.3	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	4	0	717	614	12
Future Vol, veh/h	15	4	0	717	614	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	6	6	3	3	3	3
Mvmt Flow	16	4	0	747	640	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1393	646	652	0	-	0
Stage 1	646	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.13	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.227	-	-	-
Pot Cap-1 Maneuver	153	465	930	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	461	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	153	465	930	-	-	-
Mov Cap-2 Maneuver	153	-	-	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	461	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	27.69	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	930	-	178	-	-
HCM Lane V/C Ratio	-	-	0.111	-	-
HCM Control Delay (s/veh)	0	-	27.7	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	8	33	254	11	59	32	642	324	43	576	0
Future Volume (veh/h)	1	8	33	254	11	59	32	642	324	43	576	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	1	8	35	267	12	62	34	676	341	45	606	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	3	3	3	2	2	2	4	4	4
Cap, veh/h	2	14	59	319	47	244	71	811	688	83	813	0
Arrive On Green	0.05	0.05	0.05	0.18	0.18	0.18	0.04	0.43	0.43	0.05	0.44	0.00
Sat Flow, veh/h	36	290	1269	1767	261	1351	1781	1870	1585	1753	1841	0
Grp Volume(v), veh/h	44	0	0	267	0	74	34	676	341	45	606	0
Grp Sat Flow(s),veh/h/ln	1596	0	0	1767	0	1612	1781	1870	1585	1753	1841	0
Q Serve(g_s), s	2.2	0.0	0.0	11.6	0.0	3.1	1.5	25.5	12.4	2.0	21.8	0.0
Cycle Q Clear(g_c), s	2.2	0.0	0.0	11.6	0.0	3.1	1.5	25.5	12.4	2.0	21.8	0.0
Prop In Lane	0.02		0.80	1.00		0.84	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	75	0	0	319	0	291	71	811	688	83	813	0
V/C Ratio(X)	0.59	0.00	0.00	0.84	0.00	0.25	0.48	0.83	0.50	0.54	0.75	0.00
Avail Cap(c_a), veh/h	290	0	0	543	0	496	324	1251	1060	319	1231	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.2	0.0	0.0	31.5	0.0	28.0	37.4	20.0	16.3	37.1	18.5	0.0
Incr Delay (d2), s/veh	6.5	0.0	0.0	5.3	0.0	0.4	4.5	3.4	0.7	4.9	1.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	5.0	0.0	1.2	0.7	10.0	3.9	0.9	8.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.7	0.0	0.0	36.8	0.0	28.4	41.9	23.4	16.9	42.0	20.2	0.0
LnGrp LOS	D			D		C	D	C	B	D	C	
Approach Vol, veh/h		44			341			1051			651	
Approach Delay, s/veh		43.7			35.0			21.9			21.7	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	41.3		9.2	8.7	41.9		19.9				
Change Period (Y+Rc), s	5.5	6.7		5.5	5.5	6.7		5.5				
Max Green Setting (Gmax), s	14.5	53.3		14.5	14.5	53.3		24.5				
Max Q Clear Time (g_c+I1), s	4.0	27.5		4.2	3.5	23.8		13.6				
Green Ext Time (p_c), s	0.0	7.0		0.1	0.0	4.7		0.8				

Intersection Summary			
HCM 7th Control Delay, s/veh		24.4	
HCM 7th LOS		C	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	204	745	700	288	238	99
Future Volume (veh/h)	204	745	700	288	238	99
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	210	768	722	297	245	102
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	252	1197	837	708	279	116
Arrive On Green	0.14	0.64	0.45	0.45	0.23	0.23
Sat Flow, veh/h	1781	1870	1870	1583	1210	504
Grp Volume(v), veh/h	210	768	722	297	348	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1583	1719	0
Q Serve(g_s), s	10.1	22.1	30.6	11.2	17.2	0.0
Cycle Q Clear(g_c), s	10.1	22.1	30.6	11.2	17.2	0.0
Prop In Lane	1.00			1.00	0.70	0.29
Lane Grp Cap(c), veh/h	252	1197	837	708	397	0
V/C Ratio(X)	0.83	0.64	0.86	0.42	0.88	0.00
Avail Cap(c_a), veh/h	395	1728	1218	1031	924	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	36.8	9.7	21.9	16.5	32.6	0.0
Incr Delay (d2), s/veh	8.6	0.6	4.6	0.4	6.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	7.9	13.6	4.0	7.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	45.4	10.3	26.5	16.9	38.9	0.0
LnGrp LOS	D	B	C	B	D	
Approach Vol, veh/h		978	1019		348	
Approach Delay, s/veh		17.8	23.7		38.9	
Approach LOS		B	C		D	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	16.9	45.1			62.0	26.0
Change Period (Y+Rc), s	4.5	5.7			5.7	5.7
Max Green Setting (Gmax), s	19.5	57.3			81.3	47.3
Max Q Clear Time (g_c+I1), s	12.1	32.6			24.1	19.2
Green Ext Time (p_c), s	0.3	6.8			7.0	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	23.5
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	900	17	25	755	13	30	0	48	14	3	10
Future Vol, veh/h	9	900	17	25	755	13	30	0	48	14	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	4	4	4	1	1	1	4	4	4
Mvmt Flow	9	928	18	26	778	13	31	0	49	14	3	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	792	0	0	945	0	0	1787	1798	937	1783	1801	785
Stage 1	-	-	-	-	-	-	955	955	-	837	837	-
Stage 2	-	-	-	-	-	-	831	843	-	946	964	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.11	6.51	6.21	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.509	4.009	3.309	3.536	4.036	3.336
Pot Cap-1 Maneuver	829	-	-	718	-	-	64	80	323	63	79	390
Stage 1	-	-	-	-	-	-	312	338	-	358	379	-
Stage 2	-	-	-	-	-	-	365	381	-	311	331	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	829	-	-	718	-	-	54	73	323	49	72	390
Mov Cap-2 Maneuver	-	-	-	-	-	-	54	73	-	49	72	-
Stage 1	-	-	-	-	-	-	304	330	-	335	355	-
Stage 2	-	-	-	-	-	-	330	356	-	257	323	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.09	0.32	95.06	77.58
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	111	17	-	-	57	-	-	76
HCM Lane V/C Ratio	0.723	0.011	-	-	0.036	-	-	0.366
HCM Control Delay (s/veh)	95.1	9.4	0	-	10.2	0	-	77.6
HCM Lane LOS	F	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	3.9	0	-	-	0.1	-	-	1.4

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	932	794	6	0	59
Future Vol, veh/h	0	932	794	6	0	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	4	4	9	9
Mvmt Flow	0	961	819	6	0	61

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	822
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.381
Pot Cap-1 Maneuver	0	-	-	-	0	364
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	364
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	16.88
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	364
HCM Lane V/C Ratio	-	-	-	0.167
HCM Control Delay (s/veh)	-	-	-	16.9
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.6

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	895	0	0	853	0	37
Future Vol, veh/h	895	0	0	853	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	4	4	8	8
Mvmt Flow	923	0	0	879	0	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	923
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.372
Pot Cap-1 Maneuver	-	-	0	-	0	319
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	319
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	17.82
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	319	-	-	-
HCM Lane V/C Ratio	0.12	-	-	-
HCM Control Delay (s/veh)	17.8	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	0	899	14	6	855
Future Vol, veh/h	5	0	899	14	6	855
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	3	3	3
Mvmt Flow	5	0	946	15	6	900

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1866	954	0	0	961	0
Stage 1	954	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.227	-
Pot Cap-1 Maneuver	81	317	-	-	712	-
Stage 1	377	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	79	317	-	-	712	-
Mov Cap-2 Maneuver	79	-	-	-	-	-
Stage 1	377	-	-	-	-	-
Stage 2	388	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	53.57	0	0.07
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	79	13	-
HCM Lane V/C Ratio	-	-	0.066	0.009	-
HCM Control Delay (s/veh)	-	-	53.6	10.1	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	144.2

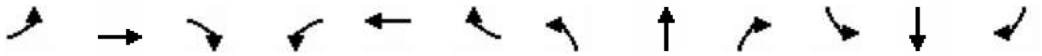
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	198	82	100	714	611	250
Future Vol, veh/h	198	82	100	714	611	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	6	6	3	3	3	3
Mvmt Flow	206	85	104	744	636	260

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1719	767	897	0	-	0
Stage 1	767	-	-	-	-	-
Stage 2	952	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.13	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.227	-	-	-
Pot Cap-1 Maneuver	~ 96	396	753	-	-	-
Stage 1	451	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 74	396	753	-	-	-
Mov Cap-2 Maneuver	~ 74	-	-	-	-	-
Stage 1	345	-	-	-	-	-
Stage 2	369	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	$ 1003.02	1.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	221	-	97	-	-
HCM Lane V/C Ratio	0.138	-	3.018	-	-
HCM Control Delay (s/veh)	10.5	0	$ 1003	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.5	-	28.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	8	77	254	11	79	91	721	324	58	635	0
Future Volume (veh/h)	1	8	77	254	11	79	91	721	324	58	635	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1856	1856	1856	1870	1870	1870	1841	1841	1841
Adj Flow Rate, veh/h	1	8	81	267	12	83	96	759	341	61	668	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	3	3	3	2	2	2	4	4	4
Cap, veh/h	1	10	102	310	36	246	123	858	728	88	810	0
Arrive On Green	0.07	0.07	0.07	0.18	0.18	0.18	0.07	0.46	0.46	0.05	0.44	0.00
Sat Flow, veh/h	17	140	1414	1767	203	1401	1781	1870	1585	1753	1841	0
Grp Volume(v), veh/h	90	0	0	267	0	95	96	759	341	61	668	0
Grp Sat Flow(s),veh/h/ln	1571	0	0	1767	0	1603	1781	1870	1585	1753	1841	0
Q Serve(g_s), s	5.4	0.0	0.0	14.0	0.0	5.0	5.1	35.3	14.2	3.3	30.4	0.0
Cycle Q Clear(g_c), s	5.4	0.0	0.0	14.0	0.0	5.0	5.1	35.3	14.2	3.3	30.4	0.0
Prop In Lane	0.01		0.90	1.00		0.87	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	113	0	0	310	0	282	123	858	728	88	810	0
V/C Ratio(X)	0.79	0.00	0.00	0.86	0.00	0.34	0.78	0.88	0.47	0.69	0.82	0.00
Avail Cap(c_a), veh/h	238	0	0	453	0	411	270	1044	885	266	1027	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	43.6	0.0	0.0	38.2	0.0	34.5	43.7	23.5	17.8	44.6	23.5	0.0
Incr Delay (d2), s/veh	10.8	0.0	0.0	10.4	0.0	0.6	9.3	8.2	0.6	8.4	4.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.0	6.7	0.0	1.9	2.4	15.5	4.7	1.6	12.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.4	0.0	0.0	48.6	0.0	35.1	53.1	31.8	18.4	53.0	28.2	0.0
LnGrp LOS	D			D		D	D	C	B	D	C	
Approach Vol, veh/h		90			362			1196			729	
Approach Delay, s/veh		54.4			45.1			29.7			30.3	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	50.5		12.4	12.1	48.8		22.3				
Change Period (Y+Rc), s	5.5	6.7		5.5	5.5	6.7		5.5				
Max Green Setting (Gmax), s	14.5	53.3		14.5	14.5	53.3		24.5				
Max Q Clear Time (g_c+I1), s	5.3	37.3		7.4	7.1	32.4		16.0				
Green Ext Time (p_c), s	0.1	6.5		0.2	0.1	4.8		0.8				

Intersection Summary												
HCM 7th Control Delay, s/veh			33.1									
HCM 7th LOS			C									

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	900	17	25	755	13	30	0	48	14	3	10
Future Vol, veh/h	9	900	17	25	755	13	30	0	48	14	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	4	4	4	1	1	1	4	4	4
Mvmt Flow	9	928	18	26	778	13	31	0	49	14	3	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	792	0	0	945	0	0	1787	1798	937	1783	1801	785
Stage 1	-	-	-	-	-	-	955	955	-	837	837	-
Stage 2	-	-	-	-	-	-	831	843	-	946	964	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.11	6.51	6.21	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.509	4.009	3.309	3.536	4.036	3.336
Pot Cap-1 Maneuver	829	-	-	718	-	-	64	80	323	63	79	390
Stage 1	-	-	-	-	-	-	312	338	-	358	379	-
Stage 2	-	-	-	-	-	-	365	381	-	311	331	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	829	-	-	718	-	-	57	77	323	51	75	390
Mov Cap-2 Maneuver	-	-	-	-	-	-	57	77	-	51	75	-
Stage 1	-	-	-	-	-	-	308	334	-	346	366	-
Stage 2	-	-	-	-	-	-	340	367	-	261	327	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.09	0.32	88.71	73.53
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	115	829	-	-	718	-	-	79
HCM Lane V/C Ratio	0.699	0.011	-	-	0.036	-	-	0.352
HCM Control Delay (s/veh)	88.7	9.4	-	-	10.2	-	-	73.5
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	3.7	0	-	-	0.1	-	-	1.3

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	0	899	14	6	855
Future Vol, veh/h	5	0	899	14	6	855
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	3	3	3
Mvmt Flow	5	0	946	15	6	900

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1866	954	0	0	961	0
Stage 1	954	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.227	-
Pot Cap-1 Maneuver	81	317	-	-	712	-
Stage 1	377	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	80	317	-	-	712	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	377	-	-	-	-	-
Stage 2	391	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	22.42	0	0.07
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	212	712	-
HCM Lane V/C Ratio	-	-	0.025	0.009	-
HCM Control Delay (s/veh)	-	-	22.4	10.1	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	23.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	198	82	100	714	611	250
Future Vol, veh/h	198	82	100	714	611	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	6	6	3	3	3	3
Mvmt Flow	206	85	104	744	636	260

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1719	767	897	0	-	0
Stage 1	767	-	-	-	-	-
Stage 2	952	-	-	-	-	-
Critical Hdwy	6.46	6.26	4.13	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.354	2.227	-	-	-
Pot Cap-1 Maneuver	~ 96	396	753	-	-	-
Stage 1	451	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 83	396	753	-	-	-
Mov Cap-2 Maneuver	211	-	-	-	-	-
Stage 1	389	-	-	-	-	-
Stage 2	369	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	62.88	1.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	753	-	244	-	-
HCM Lane V/C Ratio	0.138	-	1.195	-	-
HCM Control Delay (s/veh)	10.5	-	162.9	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.5	-	13.8	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	219.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	198	0	82	5	0	0	100	700	14	6	605	250
Future Vol, veh/h	198	0	82	5	0	0	100	700	14	6	605	250
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	6	6	6	0	0	0	3	3	3	3	3	3
Mvmt Flow	206	0	85	5	0	0	104	729	15	6	630	260

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1710	1725	760	1588	1848	736	891	0	0	744	0	0
Stage 1	773	773	-	945	945	-	-	-	-	-	-	-
Stage 2	938	952	-	643	903	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.1	6.5	6.2	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.5	4	3.3	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 70	87	399	88	75	422	757	-	-	859	-	-
Stage 1	386	403	-	317	343	-	-	-	-	-	-	-
Stage 2	312	333	-	465	359	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 53	65	399	52	57	422	757	-	-	859	-	-
Mov Cap-2 Maneuver	~ 53	65	-	52	57	-	-	-	-	-	-	-
Stage 1	380	397	-	243	262	-	-	-	-	-	-	-
Stage 2	239	254	-	360	353	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	$ 1529.84	81.47	1.29	0.06
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	220	-	-	71	52	12	-	-
HCM Lane V/C Ratio	0.138	-	-	4.132	0.1	0.007	-	-
HCM Control Delay (s/veh)	10.5	0	-	$ 1529.8	81.5	9.2	0	-
HCM Lane LOS	B	A	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.5	-	-	31.1	0.3	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	187.4

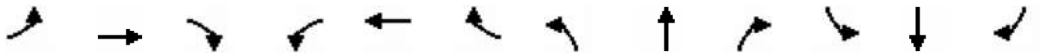
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	198	0	82	5	0	0	100	700	14	6	605	250
Future Vol, veh/h	198	0	82	5	0	0	100	700	14	6	605	250
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	150	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	6	6	6	0	0	0	3	3	3	3	3	3
Mvmt Flow	206	0	85	5	0	0	104	729	15	6	630	260

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1710	1725	760	1588	1848	736	891	0	0	744	0	0
Stage 1	773	773	-	945	945	-	-	-	-	-	-	-
Stage 2	938	952	-	643	903	-	-	-	-	-	-	-
Critical Hdwy	7.16	6.56	6.26	7.1	6.5	6.2	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.16	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.16	5.56	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.554	4.054	3.354	3.5	4	3.3	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 70	87	399	88	75	422	757	-	-	859	-	-
Stage 1	386	403	-	317	343	-	-	-	-	-	-	-
Stage 2	312	333	-	465	359	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 60	74	399	59	65	422	757	-	-	859	-	-
Mov Cap-2 Maneuver	~ 60	74	-	59	65	-	-	-	-	-	-	-
Stage 1	383	400	-	274	296	-	-	-	-	-	-	-
Stage 2	269	287	-	363	356	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	$ 1306.83	71.42	1.29	0.06
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	757	-	-	80	59	859	-	-
HCM Lane V/C Ratio	0.138	-	-	3.661	0.088	0.007	-	-
HCM Control Delay (s/veh)	10.5	-	-	$ 1306.8	71.4	9.2	-	-
HCM Lane LOS	B	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	30.1	0.3	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	0	82	5	0	0	100	700	14	6	605	250
Future Volume (veh/h)	198	0	82	5	0	0	100	700	14	6	605	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1900	1900	1900	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	206	0	85	5	0	0	104	729	15	6	630	260
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	0	0	0	3	3	3	3	3	3
Cap, veh/h	234	0	97	12	0	0	128	1190	24	39	665	273
Arrive On Green	0.20	0.00	0.20	0.01	0.00	0.00	0.07	0.66	0.66	0.54	0.54	0.54
Sat Flow, veh/h	1178	0	486	1809	0	0	1767	1812	37	3	1236	507
Grp Volume(v), veh/h	291	0	0	5	0	0	104	0	744	896	0	0
Grp Sat Flow(s),veh/h/ln	1665	0	0	1810	0	0	1767	0	1849	1746	0	0
Q Serve(g_s), s	16.6	0.0	0.0	0.3	0.0	0.0	5.7	0.0	22.6	9.5	0.0	0.0
Cycle Q Clear(g_c), s	16.6	0.0	0.0	0.3	0.0	0.0	5.7	0.0	22.6	47.5	0.0	0.0
Prop In Lane	0.71		0.29	1.00		0.00	1.00		0.02	0.01		0.29
Lane Grp Cap(c), veh/h	331	0	0	12	0	0	128	0	1215	977	0	0
V/C Ratio(X)	0.88	0.00	0.00	0.43	0.00	0.00	0.81	0.00	0.61	0.92	0.00	0.00
Avail Cap(c_a), veh/h	408	0	0	92	0	0	128	0	1276	1034	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	38.1	0.0	0.0	48.4	0.0	0.0	44.7	0.0	9.6	21.4	0.0	0.0
Incr Delay (d2), s/veh	16.8	0.0	0.0	22.6	0.0	0.0	31.0	0.0	0.8	12.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	0.0	0.0	0.2	0.0	0.0	3.5	0.0	7.2	19.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.8	0.0	0.0	71.0	0.0	0.0	75.7	0.0	10.4	33.5	0.0	0.0
LnGrp LOS	D			E			E		B	C		
Approach Vol, veh/h		291			5			848			896	
Approach Delay, s/veh		54.8			71.0			18.4			33.5	
Approach LOS		D			E			B			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		68.8		23.9	11.6	57.2		5.1				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		67.5		24.0	7.1	55.9		5.0				
Max Q Clear Time (g_c+I1), s		24.6		18.6	7.7	49.5		2.3				
Green Ext Time (p_c), s		5.3		0.8	0.0	3.1		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			30.4									
HCM 7th LOS			C									

MOVEMENT SUMMARY

Site: 4/5 [Int 4_5 Aligned Access (Site Folder: General)]

Aligned Access Future (2028) With-Project PM Peak Hour
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: SR 307														
3	L2	89	3.0	93	3.0	0.786	13.9	LOS B	11.0	282.5	0.85	0.74	0.95	34.9
8	T1	700	3.0	729	3.0	0.786	7.9	LOS A	11.0	282.5	0.85	0.74	0.95	34.8
18	R2	14	3.0	15	3.0	0.786	8.0	LOS A	11.0	282.5	0.85	0.74	0.95	33.8
Approach		803	3.0	836	3.0	0.786	8.6	LOS A	11.0	282.5	0.85	0.74	0.95	34.8
East: NE Minder Rd														
1	L2	5	0.0	5	0.0	0.016	17.0	LOS B	0.1	2.7	0.87	0.72	0.87	32.3
6	T1	1	0.0	1	0.0	0.016	11.0	LOS B	0.1	2.7	0.87	0.72	0.87	32.2
16	R2	1	0.0	1	0.0	0.016	11.1	LOS B	0.1	2.7	0.87	0.72	0.87	31.3
Approach		7	0.0	7	0.0	0.016	15.3	LOS B	0.1	2.7	0.87	0.72	0.87	32.1
North: SR 307														
7	L2	6	3.0	6	3.0	0.741	11.0	LOS B	9.3	237.9	0.64	0.51	0.64	36.0
4	T1	605	3.0	630	3.0	0.741	5.0	LOS A	9.3	237.9	0.64	0.51	0.64	35.9
14	R2	222	3.0	231	3.0	0.741	5.1	LOS A	9.3	237.9	0.64	0.51	0.64	34.8
Approach		833	3.0	868	3.0	0.741	5.1	LOS A	9.3	237.9	0.64	0.51	0.64	35.6
West: Stottlemeyer Rd NE														
5	L2	183	6.0	191	6.0	0.393	14.3	LOS B	2.6	67.4	0.79	0.88	0.80	33.3
2	T1	1	6.0	1	6.0	0.393	8.3	LOS A	2.6	67.4	0.79	0.88	0.80	33.3
12	R2	76	6.0	79	6.0	0.393	8.4	LOS A	2.6	67.4	0.79	0.88	0.80	32.4
Approach		260	6.0	271	6.0	0.393	12.6	LOS B	2.6	67.4	0.79	0.88	0.80	33.1
All Vehicles		1903	3.4	1982	3.4	0.786	7.6	LOS A	11.0	282.5	0.75	0.66	0.79	34.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix D: Trip Generation Calculations

NKU South Gamble (Low)

Proposed Use

Land Use	Setting	Size	Units	Model	Rate	Inbound %	Gross Trips Inbound	Gross Trips Outbound	Gross Trips Subtotal	Land Use Type	Internal Trips In	Internal Trips Out	Internal Trips Total	Internal Trips %	External Trips In	External Trips Out	External Trips Total	Pass-By Trips %	Pass-By Trips In	Pass-By Trips Out	Pass-By Trips Total	Primary Trips Inbound	Primary Trips Outbound	Primary Trips Total
Residential Lots (LU 210)		**80**	du							Residential														
Daily	General Urban/Suburban			Rate	9.43	50%	377	377	754		27	27	54	7%	350	350	700		-	-	-	350	350	700
AM Peak Hour	General Urban/Suburban			Rate	0.70	25%	14	42	56		0	2	2	4%	14	40	54		-	-	-	14	40	54
PM Peak Hour	General Urban/Suburban			Rate	0.94	63%	47	28	75		5	3	8	11%	42	25	67		-	-	-	42	25	67
High Turnover (Sit Down) Restaurant (LU 932)		**2,000**	sf							Restaurant														
Daily	General Urban/Suburban			Rate	107.20	50%	107	107	214		32	32	64	30%	75	75	150	43%	32	32	64	43	43	86
AM Peak Hour	General Urban/Suburban			Rate	9.57	55%	10	9	19		2	0	2	11%	8	9	17	43%	4	4	8	4	5	9
PM Peak Hour	General Urban/Suburban			Rate	9.05	61%	11	7	18		4	5	9	50%	7	2	9	43%	2	2	4	5	0	5
Strip Retail Plaza (<40k) (822)		**2,000**	sf							Retail														
Daily	General Urban/Suburban			Rate	54.45	50%	54	54	108		17	17	34	31%	37	37	74	40%	15	15	30	22	22	44
AM Peak Hour	General Urban/Suburban			Rate	2.36	60%	3	2	5		0	0	0	0%	3	2	5	40%	1	1	2	2	1	3
PM Peak Hour	General Urban/Suburban			Rate	6.59	50%	7	6	13		4	4	8	62%	3	2	5	40%	1	1	2	2	1	3
Soccer Complex (LU 488)		**6**	fields							Cinema/Entertainment														
Daily	General Urban/Suburban			Rate	71.33	50%	214	214	428		0	0	0	0%	214	214	428		-	-	-	214	214	428
AM Peak Hour	General Urban/Suburban			Rate	0.99	61%	4	2	6		0	0	0	0%	4	2	6		-	-	-	4	2	6
PM Peak Hour	General Urban/Suburban			Rate	16.43	66%	65	34	99		0	0	0	0%	65	34	99		-	-	-	65	34	99
Recreational Commuity Center (LU 495)		**80,000**	sf							Cinema/Entertainment														
Daily	General Urban/Suburban			Rate	28.82	50%	1,153	1,153	2,306		9	9	18	1%	1144	1144	2288		-	-	-	1,144	1,144	2,288
AM Peak Hour	General Urban/Suburban			Rate	1.91	66%	101	52	153		0	0	0	0%	101	52	153		-	-	-	101	52	153
PM Peak Hour	General Urban/Suburban			Rate	2.50	47%	94	106	200		1	2	3	2%	93	104	197		-	-	-	93	104	197
Subtotal																								
Daily							1,905	1,905	3,810	Check	85	85	170	4%	1,820	1,820	3,640		47	47	94	1,773	1,773	3,546
AM Peak Hour							132	107	239	Check	2	2	4	2%	130	105	235		5	5	10	125	100	225
PM Peak Hour							224	181	405	Check	14	14	28	7%	210	167	377		3	3	6	207	164	371

Notes:

1. Trip rates based on Institute of Transportation Engineers' (ITE) *Trip Generation* 11th Edition equation and average trip rates as shown above.

			additional trips without internal		
42	25	67	14	40	54
93	104	197	101	52	153
#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
3	3	6	5	5	10
207	164	371	125	100	225

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	NKU South Gamble	**Organization:**	
Project Location:	Kitsap County	**Performed By:**	
Scenario Description:	Low Generating LU	**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0	0	0
Retail				5	3	2
Restaurant				19	10	9
Cinema/Entertainment				159	105	54
Residential				56	14	42
Hotel				0	0	0
All Other Land Uses[2]				0	0	0
Total				239	132	107

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	2	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	239	132	107
Internal Capture Percentage	2%	2%	2%
External Vehicle-Trips[3]	235	130	105
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	0%	0%
Restaurant	20%	0%
Cinema/Entertainment	0%	0%
Residential	0%	5%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	NKU South Gamble
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	3	3	1.00	2	2
Restaurant	1.00	10	10	1.00	9	9
Cinema/Entertainment	1.00	105	105	1.00	54	54
Residential	1.00	14	14	1.00	42	42
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		0	0	0	0
Restaurant	3	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	8	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	2	0	0	0
Retail	0		5	0	0	0
Restaurant	0	0		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	2	0		0
Hotel	0	0	1	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	3	3	3	0	0
Restaurant	2	8	10	8	0	0
Cinema/Entertainment	0	105	105	105	0	0
Residential	0	14	14	14	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	2	2	2	0	0
Restaurant	0	9	9	9	0	0
Cinema/Entertainment	0	54	54	54	0	0
Residential	2	40	42	40	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	NKU South Gamble	**Organization:**	
Project Location:	Kitsap County	**Performed By:**	
Scenario Description:	Low Generating LU	**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0	0	0
Retail				13	7	6
Restaurant				18	11	7
Cinema/Entertainment				299	159	140
Residential				75	47	28
Hotel				0	0	0
All Other Land Uses[2]				0	0	0
Total				405	224	181

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		2	0	2	0
Restaurant	0	3		1	1	0
Cinema/Entertainment	0	0	0		2	0
Residential	0	1	2	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	405	224	181
Internal Capture Percentage	7%	6%	8%
External Vehicle-Trips[3]	377	210	167
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	57%	67%
Restaurant	36%	71%
Cinema/Entertainment	1%	1%
Residential	11%	11%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	NKU South Gamble
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	7	7	1.00	6	6
Restaurant	1.00	11	11	1.00	7	7
Cinema/Entertainment	1.00	159	159	1.00	140	140
Residential	1.00	47	47	1.00	28	28
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		2	0	2	0
Restaurant	0	3		1	1	0
Cinema/Entertainment	3	29	43		11	3
Residential	1	12	6	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	2	2	0
Retail	0		3	41	22	0
Restaurant	0	4		51	8	0
Cinema/Entertainment	0	0	0		2	0
Residential	0	1	2	0		0
Hotel	0	0	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	4	3	7	3	0	0
Restaurant	4	7	11	7	0	0
Cinema/Entertainment	1	158	159	158	0	0
Residential	5	42	47	42	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	4	2	6	2	0	0
Restaurant	5	2	7	2	0	0
Cinema/Entertainment	2	138	140	138	0	0
Residential	3	25	28	25	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NKU South Gamble (High)

Proposed Use

							Gross Trips				Internal Trips				External Trips			Pass-By Trips				Primary Trips		
Land Use	**Setting**	**Size**	**Units**	**Model**	**Rate**	**Inbound %**	**Inbound**	**Outbound**	**Subtotal**	**Land Use Type**	**In**	**Out**	**Total**	**%**	**In**	**Out**	**Total**	**%**	**In**	**Out**	**Total**	**Inbound**	**Outbound**	**Total**
Residential Lots + ADUs (LU 210)		**160**	du							Residential														
Daily	General Urban/Suburban			Rate	9.43	50%	754	754	1,508		59	59	118	8%	695	695	1390		-	-	-	695	695	1,390
AM Peak Hour	General Urban/Suburban			Rate	0.70	25%	28	84	112		2	5	7	6%	26	79	105		-	-	-	26	79	105
PM Peak Hour	General Urban/Suburban			Rate	0.94	63%	95	55	150		10	4	14	9%	85	51	136		-	-	-	85	51	136
High Turnover (Sit Down) Restaurant (LU 932)		**4,000**	sf							Restaurant														
Daily	General Urban/Suburban			Rate	107.20	50%	214	214	428		70	70	140	33%	144	144	288	43%	62	62	124	82	82	164
AM Peak Hour	General Urban/Suburban			Rate	9.57	55%	21	17	38		5	1	6	16%	16	16	32	43%	7	7	14	9	9	18
PM Peak Hour	General Urban/Suburban			Rate	9.05	61%	22	14	36		8	10	18	50%	14	4	18	43%	4	4	8	10	0	10
Strip Retail Plaza (<40k) (822)		**4,000**	sf							Retail														
Daily	General Urban/Suburban			Rate	54.45	50%	109	109	218		52	52	104	47%	57	57	114	40%	23	23	46	34	34	68
AM Peak Hour	General Urban/Suburban			Rate	2.36	60%	5	4	9		1	2	3	33%	4	2	6	40%	1	1	2	3	1	4
PM Peak Hour	General Urban/Suburban			Rate	6.59	50%	13	13	26		8	8	16	62%	5	5	10	40%	2	2	4	3	3	6
Soccer Complex (LU 488)		**12**	fields							Cinema/Entertainment														
Daily	General Urban/Suburban			Rate	71.33	50%	428	428	856		3	3	6	1%	425	425	850		-	-	-	425	425	850
AM Peak Hour	General Urban/Suburban			Rate	0.99	61%	7	5	12		0	0	0	0%	7	5	12		-	-	-	7	5	12
PM Peak Hour	General Urban/Suburban			Rate	16.43	66%	130	67	197		1	2	3	2%	129	65	194		-	-	-	129	65	194
Recreational Commuity Center (LU 495)		**60,000**	sf							Cinema/Entertainment														
Daily	General Urban/Suburban			Rate	28.82	50%	865	865	1,730		6	6	12	1%	859	859	1718		-	-	-	859	859	1,718
AM Peak Hour	General Urban/Suburban			Rate	1.91	66%	76	39	115		0	0	0	0%	76	39	115		-	-	-	76	39	115
PM Peak Hour	General Urban/Suburban			Rate	2.50	47%	71	79	150		0	2	2	1%	71	77	148		-	-	-	71	77	148
Recreational Commuity Center (LU 495)		**80,000**	sf							Cinema/Entertainment														
Daily	General Urban/Suburban			Rate	28.82	50%	1,153	1,153	2,306		12	12	24	1%	1141	1141	2282		-	-	-	1,141	1,141	2,282
AM Peak Hour	General Urban/Suburban			Rate	1.91	66%	101	52	153		0	0	0	0%	101	52	153		-	-	-	101	52	153
PM Peak Hour	General Urban/Suburban			Rate	2.50	47%	94	106	200		1	3	4	2%	93	103	196		-	-	-	93	103	196
Subtotal																								
Daily							3,523	3,523	7,046	Check	202	202	404	6%	3,321	3,321	6,642		85	85	170	3,236	3,236	6,472
AM Peak Hour							238	201	439	Check	8	8	16	4%	230	193	423		8	8	16	222	185	407
PM Peak Hour							425	334	759	Error	28	29	57	8%	397	305	702		6	6	12	391	299	690

Notes:

1. Trip rates based on Institute of Transportation Engineers' (ITE) *Trip Generation* 11th Edition equation and average trip rates as shown above.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	NKU South Gamble	**Organization:**	
Project Location:	Kitsap County	**Performed By:**	
Scenario Description:	High Generating LU	**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0	0	0
Retail				9	5	4
Restaurant				38	21	17
Cinema/Entertainment				280	184	96
Residential				112	28	84
Hotel				0	0	0
All Other Land Uses[2]				0	0	0
Total				439	238	201

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		1	0	1	0
Restaurant	0	0		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	4	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	439	238	201
Internal Capture Percentage	4%	3%	4%
External Vehicle-Trips[3]	423	230	193
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	20%	50%
Restaurant	24%	6%
Cinema/Entertainment	0%	0%
Residential	7%	6%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	NKU South Gamble
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	5	5	1.00	4	4
Restaurant	1.00	21	21	1.00	17	17
Cinema/Entertainment	1.00	184	184	1.00	96	96
Residential	1.00	28	28	1.00	84	84
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		1	0	1	0
Restaurant	5	2		0	1	1
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	17	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	5	0	0	0
Retail	0		11	0	1	0
Restaurant	0	0		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	4	0		0
Hotel	0	0	1	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	1	4	5	4	0	0
Restaurant	5	16	21	16	0	0
Cinema/Entertainment	0	184	184	184	0	0
Residential	2	26	28	26	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	2	2	4	2	0	0
Restaurant	1	16	17	16	0	0
Cinema/Entertainment	0	96	96	96	0	0
Residential	5	79	84	79	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	NKU South Gamble	**Organization:**	
Project Location:	Kitsap County	**Performed By:**	
Scenario Description:	High Generating LU	**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0	0	0
Retail				26	13	13
Restaurant				36	22	14
Cinema/Entertainment				547	295	252
Residential				150	95	55
Hotel				0	0	0
All Other Land Uses[2]				0	0	0
Total				759	425	334

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		4	1	3	0
Restaurant	0	6		1	3	0
Cinema/Entertainment	0	1	1		4	0
Residential	0	1	3	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	759	425	334
Internal Capture Percentage	7%	7%	8%
External Vehicle-Trips[3]	703	397	306
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	62%	62%
Restaurant	36%	71%
Cinema/Entertainment	1%	2%
Residential	11%	7%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	NKU South Gamble
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	13	13	1.00	13	13
Restaurant	1.00	22	22	1.00	14	14
Cinema/Entertainment	1.00	295	295	1.00	252	252
Residential	1.00	95	95	1.00	55	55
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		4	1	3	1
Restaurant	0	6		1	3	1
Cinema/Entertainment	5	53	78		20	5
Residential	2	23	12	0		2
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	3	4	0
Retail	0		6	77	44	0
Restaurant	0	7		94	15	0
Cinema/Entertainment	0	1	1		4	0
Residential	0	1	3	0		0
Hotel	0	0	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	8	5	13	5	0	0
Restaurant	8	14	22	14	0	0
Cinema/Entertainment	2	293	295	293	0	0
Residential	10	85	95	85	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	8	5	13	5	0	0
Restaurant	10	4	14	4	0	0
Cinema/Entertainment	6	246	252	246	0	0
Residential	4	51	55	51	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Appendix E: Traffic Signal Warrant

HCS Warrants Report

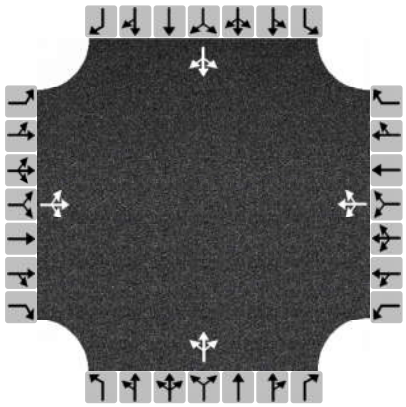
Project Information

Analyst	Transpo Group	Date	12/5/2023
Agency		Analysis Year	
Jurisdiction	Kitsap County	Time Period Analyzed	2028
Project Description			

General

Major Street Direction	North-South	Population < 10,000	Yes
Starting Time Interval	7	Coordinated Signal System	No
Median Type	Undivided	Crashes (crashes/year)	1
Major Street Speed (mi/h)	50	Adequate Trials of Crash Exp. Alt.	No
Nearest Signal (ft)	5490		

Geometry and Traffic



Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Number of Lanes, N	0	1	0	0	1	0	0	1	0	0	1	0
Lane Usage		LTR			LTR			LTR			LTR	
Vehicle Volumes Averages (veh/h)	135	0	56	3	0	0	65	516	10	4	446	163
Pedestrian Averages (peds/h)	0			0			0			0		
Gap Averages (gaps/h)	0			0			0			0		
Delay (s/veh)	0.0			0.0			0.0			0.0		
Delay (veh-hrs)	0.0			0.0			0.0			0.0		

School Crossing and Roadway Network

Number of Students in Highest Hour	0	Two or More Major Routes	No
Number of Adequate Gaps in Period	0	Weekend Counts	No
Number of Minutes in Period	0	5-year Growth Factor (%)	0

Railroad Crossing

Grade Crossing Approach	None	Rail Traffic (trains/day)	0
Highest Volume Hour with Trains	Unknown	High Occupancy Buses (%)	0
Distance to Stop Line (ft)	-	Tractor-Trailer Trucks (%)	10

Volume Summary

Hour	Major Volume	Minor Volume	Total Volume	Peds/h	Gaps/h	1A (70%)	1A (56%)	1B (70%)	1B (56%)	2 (70%)	3A (70%)	3B (56%)	4A (70%)	4B (56%)
07 - 08	1290	204	1498	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
08 - 09	960	152	1115	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
09 - 10	695	110	807	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
10 - 11	855	136	994	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
11 - 12	995	157	1155	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
12 - 13	1304	207	1515	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
13 - 14	1120	177	1300	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
14 - 15	1226	194	1424	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
15 - 16	1591	252	1848	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
16 - 17	1636	259	1900	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
17 - 18	1618	256	1879	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
18 - 19	1196	190	1390	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
Total	14486	2294	16825	0	0	12	12	12	12	12	0	11	0	0

Warrants

Warrant 1: Eight-Hour Vehicular Volume	✔
A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	✓
B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	✓
56% Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	✓
Warrant 2: Four-Hour Vehicular Volume	✔
Four-Hour Vehicular Volume (Both major approaches --and-- higher minor approach)	✓
Warrant 3: Peak Hour	✔
A. Peak-Hour Conditions (Minor delay -- and-- minor volume --and-- total volume) --or--	
B. Peak-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	✓
Warrant 4: Pedestrian Volume	
A. Four Hour Volumes --or--	
B. One-Hour Volumes	
Warrant 5: School Crossing	
Gaps Same Period --and--	
Student Volumes	
Nearest Traffic Control Signal (optional)	✓
Warrant 6: Coordinated Signal System	
Degree of Platooning (Predominant direction or both directions)	
Warrant 7: Crash Experience	
A. Adequate trials of alternatives, observance and enforcement failed --and--	
B. Reported crashes susceptible to correction by signal (12-month period) --and--	
C. 56% Volumes for Warrants 1A, 1B, --or-- 4 are satisfied	✓
Warrant 8: Roadway Network	
A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2, or 3) --or--	
B. Weekend Volume (Five hours total)	
Warrant 9: Grade Crossing	
A. Grade Crossing within 140 ft --and--	
B. Peak-Hour Vehicular Volumes	

Appendix F: Stormwater

Flow Chart for Determining Minimum Requirements for New Development Projects, Kitsap County

Preliminary Infiltration Rates

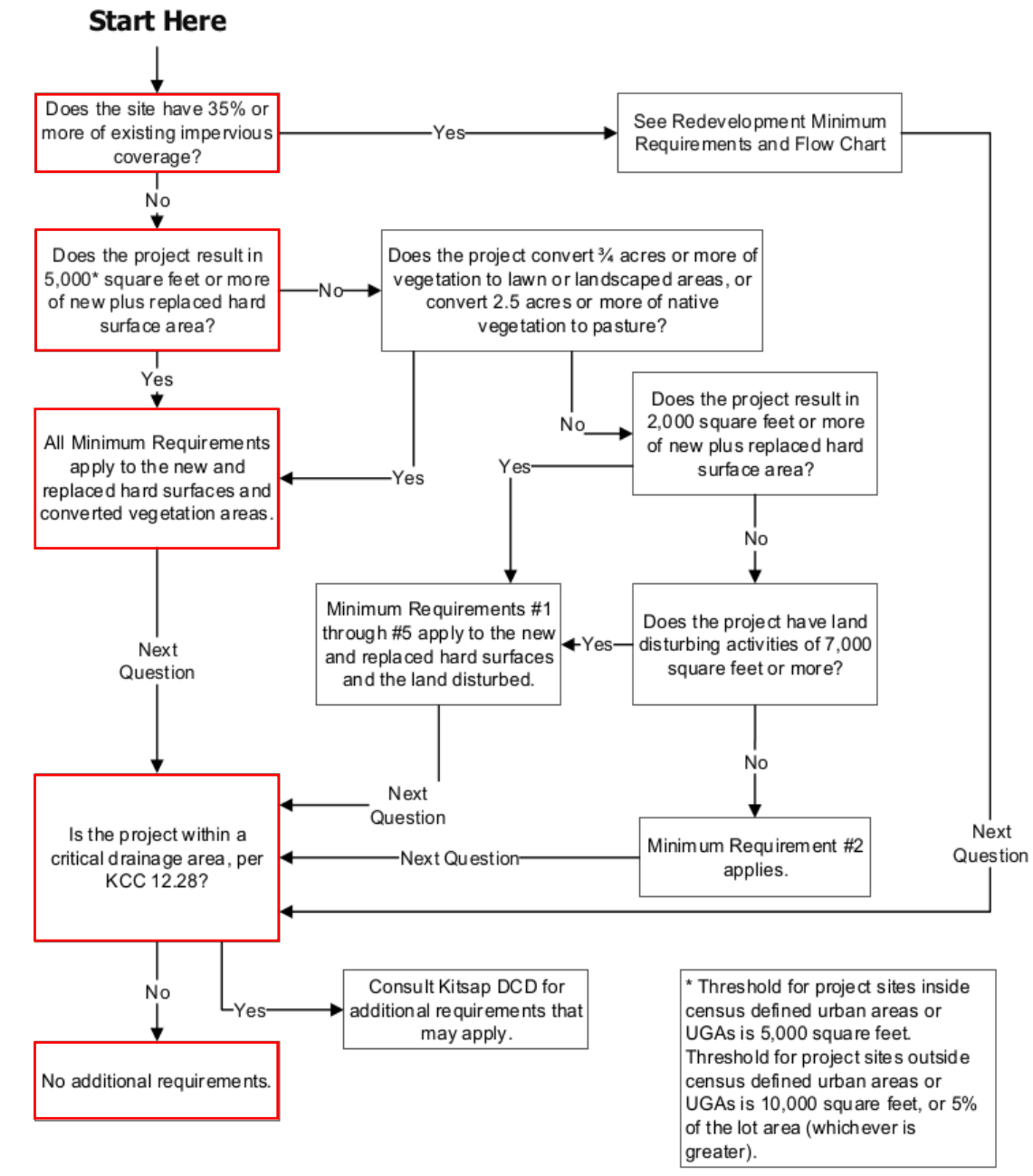
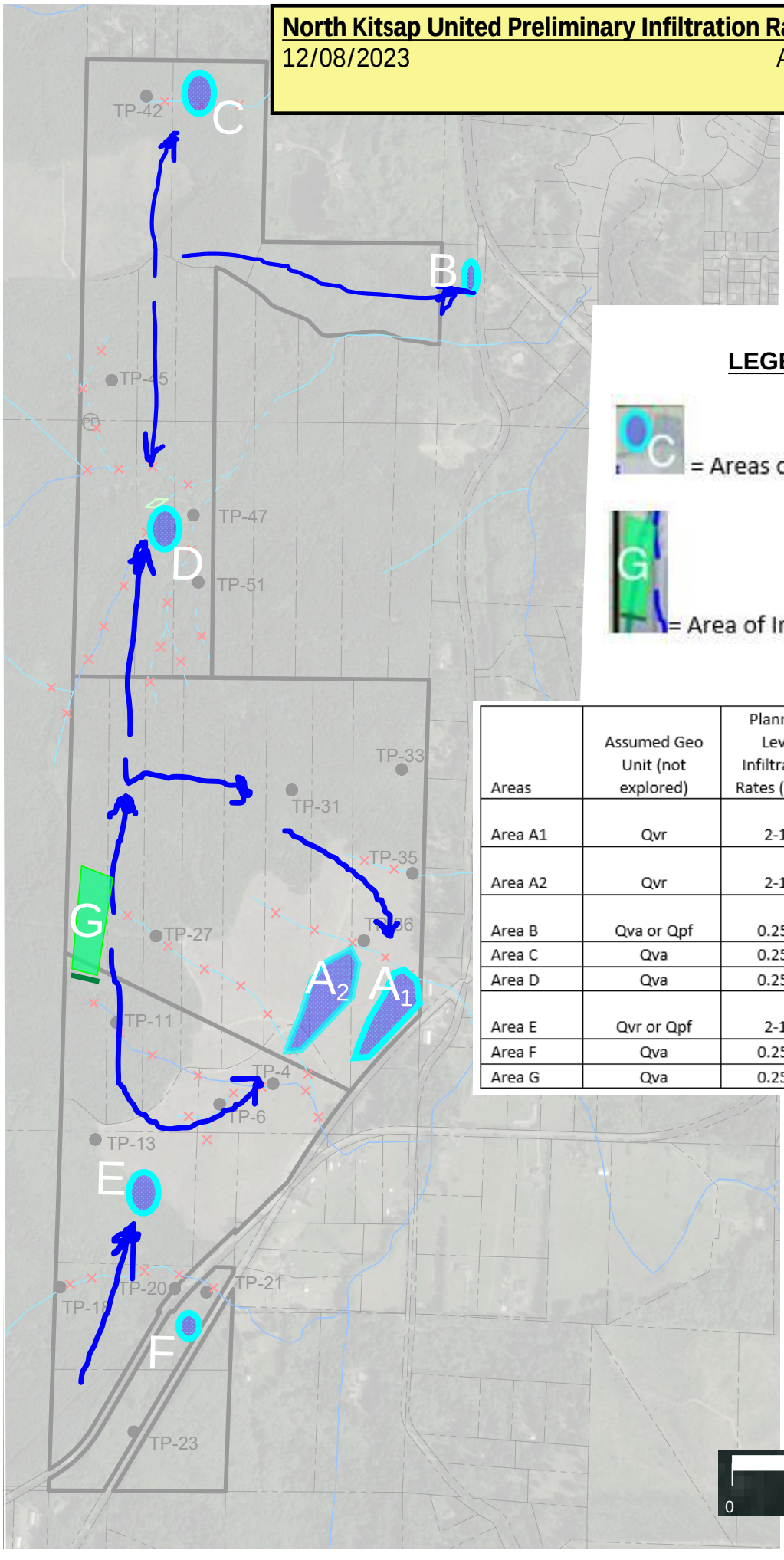


Figure I-4.1. Flow Chart for Determining Minimum Requirements for New Development Projects

July 2021

North Kitsap United Preliminary Infiltration Rates

12/08/2023 AESI



LEGEND

C = Areas of Interest for Infiltration

G = Area of Interest for SS Drainfield

Areas	Assumed Geo Unit (not explored)	Planning Level Infiltration Rates (in/hr)	Comments
Area A1	Qvr	2-10	Pond depth and infiltration rate may be constrained by groundwater
Area A2	Qvr	2-10	Pond depth and infiltration rate may be constrained by groundwater
Area B	Qva or Qpf	0.25-2	Speculative - basing feasibility on proximity to sand pit
Area C	Qva	0.25-2	
Area D	Qva	0.25-2	
Area E	Qvr or Qpf	2-10	Caution: may not be feasible if Qvr is thin and underlying geo is fine-grained.
Area F	Qva	0.25-2	
Area G	Qva	0.25-2	

Appendix G: Water

Kitsap County Water Purveyor Map
KPUD Water Service Exhibit

Water Purveyor Map

KITSAP COUNTY WASHINGTON

Coordinated Water System Plan
Water Service Areas

Legend

Coordinated Water System Plan Adopted May 9, 2005

Water Service Area Type

- City
- Community Water System
- Federal - Navy / Tribal
- Kitsap PUD
- Northwest Water Systems
- Other Private
- Uncontested Overlap
- Washington Water Service Company
- Water District
- Kitsap County Tax Parcel Layer - Satellite Management Area

C.W.S.P. Adopted May 9, 2005
Map Created October 12, 2020

Lambert Conformal Conic Projection
North American Datum 1983
Spheroid: GRS80
State Plane Coordinate System
FIPS Zone 4601
Washington North

Elevation data source:

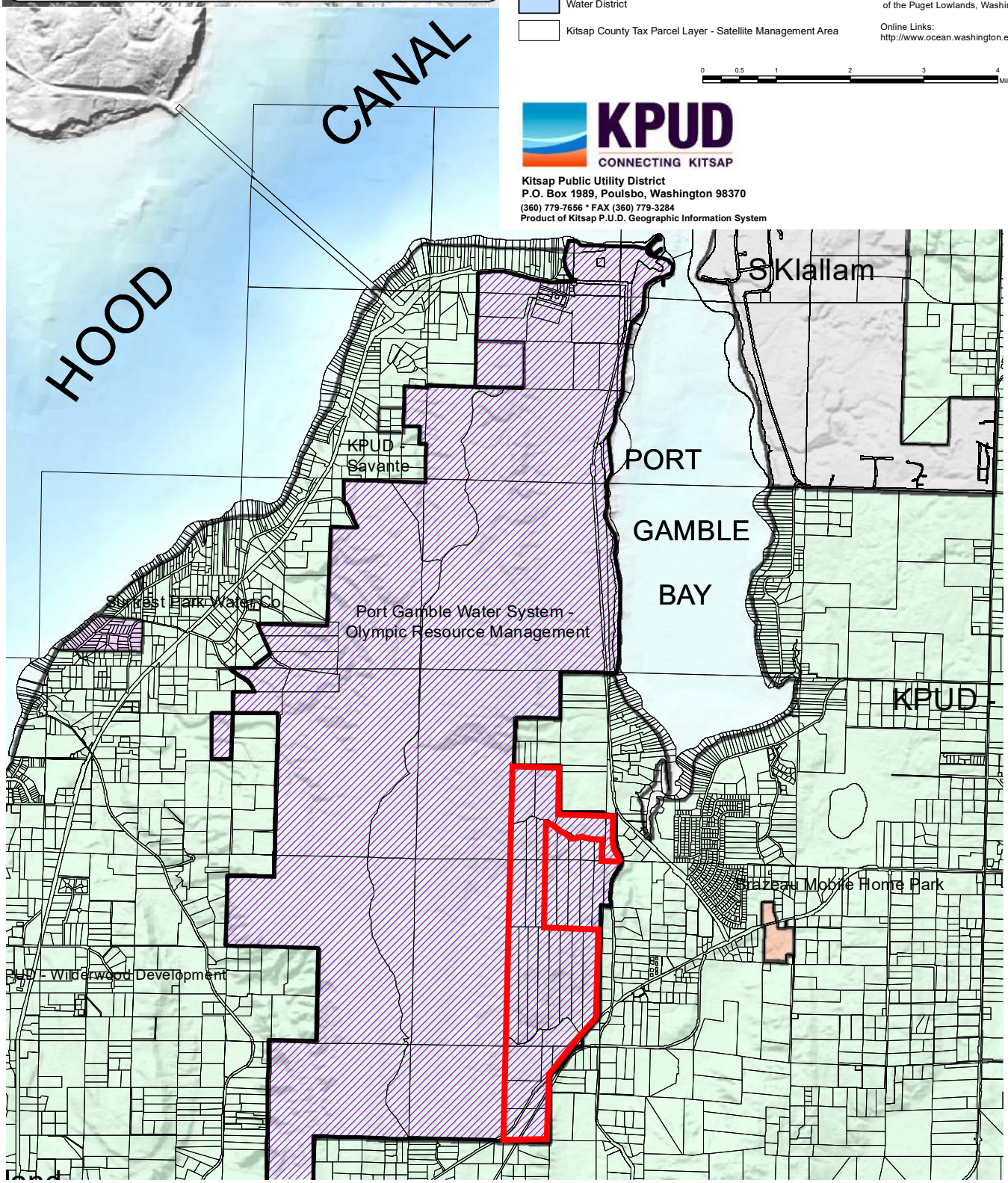
Finlayson, David, 20050124, Combined bathymetry and topography of the Puget Lowlands, Washington State (January 2005).

Online Links:
http://www.ocean.washington.edu/data/pugetsound/

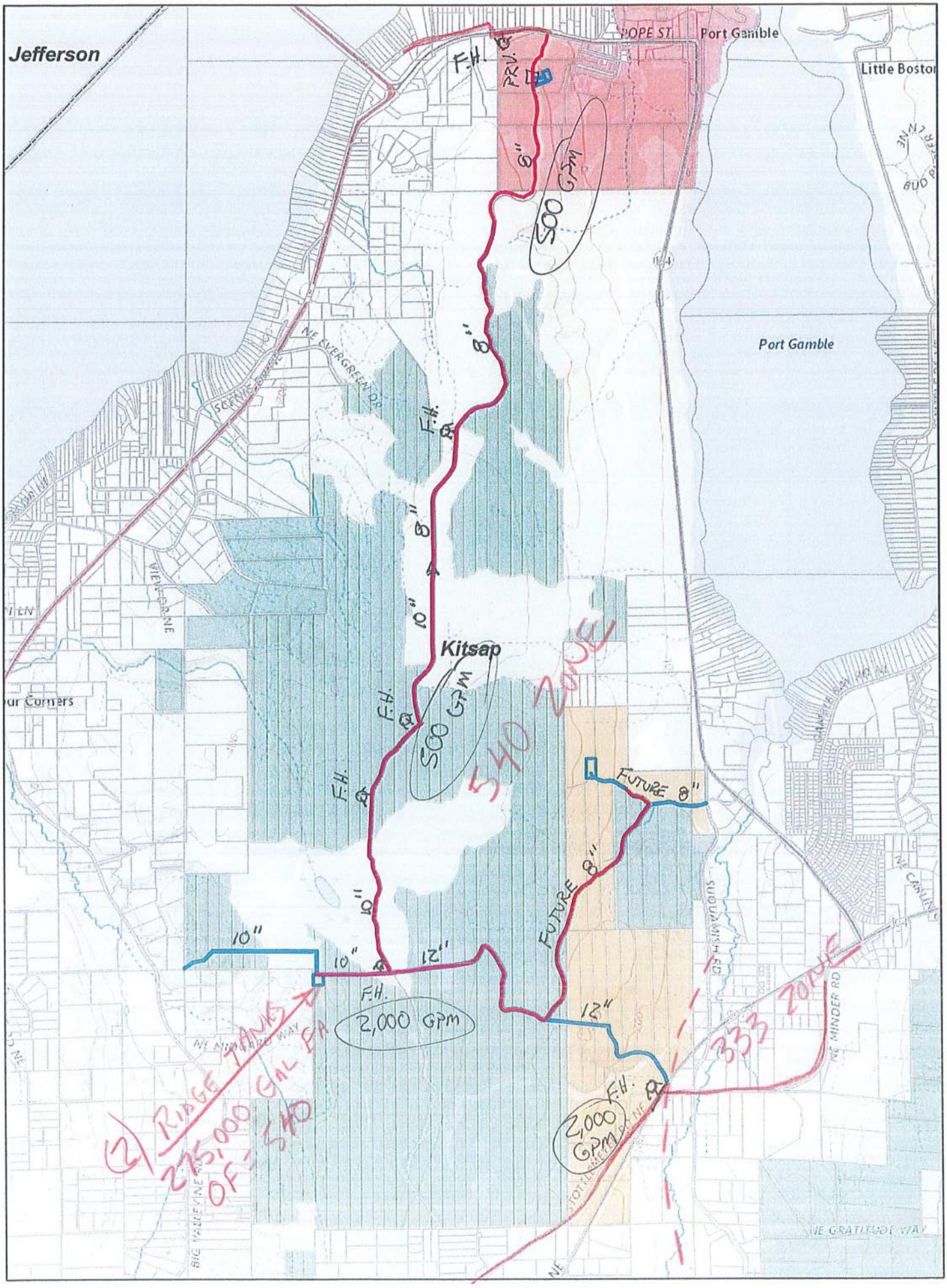
0 0.5 1 2 3 4 Miles

KPUD
CONNECTING KITSAP

Kitsap Public Utility District
P.O. Box 1989, Poulsbo, Washington 98370
(360) 779-7656 * FAX (360) 779-3284
Product of Kitsap P.U.D. Geographic Information System



KPUD Water Service Exhibit



PORT GAMBLE S'KLALLAM TRIBE
NATURAL RESOURCES DEPARTMENT
31912 Little Boston Rd. NE – Kingston, WA 98346

February 26, 2024

Department of Community Development
Planning and Environmental Programs
614 Division St, MS-36
Port Orchard, WA 98366
Email: compplan@kitsap.gov

Subject: Comments on the Draft Environmental Impact Statement (DEIS) for Water Resources

The Port Gamble S'Klallam Tribe appreciates the opportunity to provide additional comments on the DEIS related to water resources in addition to the letter submitted on January 22, 2024.

The draft EIS contains language declaring that "Kitsap County has adequate water resources to meet the need for water supply of expected population growth and allocation under all three alternatives" (3-238). This analysis relies upon the ability of Kitsap PUD to transfer water from relatively larger sources (e.g. the Seabeck aquifer) to regions of the county experiencing elevated demand from population growth. The report also acknowledges the role county agencies in verifying adequate water supply in Type A and B water systems. The judgment for adequate water is based primarily upon sufficient pumping capacity to meet consumptive demand rather than preserving water tables or establishing long-term sustainable groundwater storage. An updated, county-wide groundwater management planning process is needed to establish long-term sustainable rates of groundwater extraction to preserve ecosystem health as well as consumptive uses.

For permit exempt wells, the EIS relies on the unapproved WRIA 15 plan to mitigate for growth, an approach that is flawed:

- Mitigation projects are not guaranteed to be implemented and are instead subject to the future sponsorship of myriad private and public partners. Although the plan evaluates mitigation projects by likelihood of implementation, this raises a concern that certain projects will fail and select subbasins will not be sufficiently addressed.
- Mitigation projects were allocated by broad subbasins in an attempt to prevent overall habitat loss, but not to account for streamflow reduction in smaller watersheds within those subbasins. Reliance on the WRIA 15 plan does not provide for protecting smaller streams from depletion by permit exempt wells.
- The WRIA 15 plan does not provide for monitoring or enforcement necessary to protect smaller stream systems and broadly-distributed shallow aquifers.

The EIS lacks sufficient acknowledgement of climate impacts on shallow aquifer recharge. Changing precipitation patterns are expected to reduce recharge rates independent of development decisions. Together with longer, hotter summer dry periods, this threatens

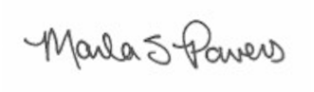
streamflow and the health of riparian ecosystems in a way that is not adequately monitored and cannot be mitigated by Kitsap PUD's water transfers.

The draft EIS does not adequately address key differences between the 3 alternatives in meeting the water resources challenges named above, although it does acknowledge the greater preservation of undeveloped open spaces in Alternative 2. Protection and enhancement of water recharge areas are necessary to sustain county water resources, and these goals are not adequately met by existing plans or the critical areas ordinance.

Considerably more information for water resources and additional topics will be required in the FEIS before the Board can make an informed decision about the impacts and mitigation measures needed to achieve a "no probable significant adverse environmental impacts" decision for the Comprehensive Plan Update.

Thank you for the opportunity to comment. The Tribe looks forward to continuing to work with the County on revisions to the EIS, Comprehensive Plan, Development Regulations, Capital Facilities Plan, and Critical Areas Ordinance Updates. If you have any questions, please contact me directly 360-297-6292 or mpowers@pgst.nsn.us.

Sincerely,



Marla Powers, Environmental Planner
Port Gamble S'Klallam Tribe

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Washington State Department of Transportation

Olympic Region
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P.O. Box 47440
Olympia, WA 98504-7440
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TTY: 1-800-833-6388
www.wsdot.wa.gov

February 26, 2024

Mr. Scott Diener
Kitsap County
Department of Community Development
Planning and Environmental Programs
614 Division Street, MS-36
Port Orchard, WA 98366

Dear Mr. Diener:

The Washington State Department of Transportation (WSDOT) Olympic Region appreciates the opportunity to review the Draft Environmental Impact Statement (DEIS) for the Kitsap County 2024 Comprehensive Plan Update. The following feedback and requests reflect WSDOT's role as a transportation subject matter expert and steward for the statewide transportation system.

WSDOT appreciates the DEIS' organization, thoroughness, and succinctness. WSDOT appreciates the vehicle miles traveled and greenhouse gas analyses and detailed alternatives comparison for these WSDOT priorities.

Phased Review

Recent legislation offers pathways for local jurisdictions to streamline housing development approval, including expansion of Categorical Exemptions under the State Environmental Policy Act (SEPA). Some of these pathways include a requirement for local agencies to demonstrate that proposed housing projects are consistent with the Comprehensive Plan and have completed sufficient environmental analysis to, among other things, identify and mitigate impacts to the state highway system. As such, WSDOT is concerned with Kitsap County's stated intention to rely on phased review (DEIS Section 1.2.3.1). With phased review, Kitsap county proposes to defer investigation and mitigation of probable significant adverse environmental impacts from this non-project EIS to a later project-specific environmental review.

WSDOT acknowledges that State statute and administrative code affords the Lead Agency with discretion in establishing the scope and methodology for SEPA environmental

reviews. However, WSDOT believes that the recent housing legislation signaled legislative intent for more robust SEPA analysis to occur during development of Comprehensive Plan updates. If Kitsap County retains the phased review process, WSDOT would view the DEIS' non-project analysis as being insufficient to meeting the "environmental analysis" requirements for SEPA Categorical Exemptions (RCW 43.21C.229(3)(b)).

Given the legislative intent, WSDOT recommends that Kitsap County amend and expand the EIS' transportation analysis to be consistent with the level of detail typically applied for project-level actions. WSDOT believes that such detail is feasible given that the study boundaries and land use classifications make it possible to develop reasonable assumptions regarding the development intensity throughout the county. At a minimum, WSDOT would expect such a project-level analysis to meet the following characteristics for use in subsequent Categorical Exemptions or middle housing streamlining actions:

- Facility-level impact analysis of all alternatives to ensure acceptable level of service of state facilities.
- Thorough documentation of assumptions, including, but not limited to, the assumed spatial allocation of residential dwelling units throughout the county)
- An appropriate monitoring system to trigger a re-analysis if actual development materially differs from the assumptions.

These steps would address WSDOT's concern about potential impacts to state facilities if actual development patterns differ in intensity or spatial patterns from what is assumed in the DEIS.

Local Roadway Level of Service Standards

DEIS Exhibit 3.2.6.1-4 defines the level of service (LOS) standards and SEPA significance criteria used to identify the significant environmental impacts to county roadways. The DEIS uses an area-based approach that allows the LOS standard to be exceeded on up to 15 percent of county roads. WSDOT is concerned that any exceedance of an LOS standard on a county road, if left unmitigated, has the potential to create a probable significant adverse impact to the state highway system.

The DEIS and Capital Facilities Plan cite Kitsap County Concurrency Ordinance 20.04 as the applicable regulation authorizing use of the area-based approach in the DEIS for the Comprehensive Plan Update. However, the Capital Facilities Plan (Level of Service, Page 110) states "the 15 percent allowance relates to individual development proposals undergoing a concurrency test." The DEIS (Page 3-124) further states: "The Kitsap County Concurrency Ordinance, codified in KCC 20.04, establishes a process for testing whether a development project meets concurrency." WSDOT notes that while Ordinance 20.04 may authorize use of the area-based approach for project-level concurrency determinations after the Comprehensive Plan update has been adopted, the Ordinance does not authorize this approach as a SEPA significance criteria for the actual Comprehensive Plan update. WSDOT believes that the area-based approach, which allows exceedance of the county's

adopted LOS standards as shown DEIS Exhibit 3.2.6.1-4, is inconsistent with RCW 36.70A.070(6)(a)(iii)(d), which requires mitigating impacts to "transportation facilities or services that are below an established multimodal level of service standard."

WSDOT requests that the DEIS transportation analysis be revised using proper application of the county roadway LOS standards shown in DEIS Exhibit 3.2.6.1-4. The revised analysis should identify the specific county roadway segments for each alternative that are forecast to exceed the LOS standard. The analysis should also propose funded mitigations for each significant impact plus any residual impact to the state highway system from these county roadway impacts and mitigations.

Project Funding

For mitigations to significant impacts on the state highway system, WSDOT requests a written acknowledgment of shared responsibility as it pertains to funding when local growth adds traffic volume and impacts on state system. WSDOT asks that this shared role be acknowledged and reflected in the budgeting process.

Thank you again for the opportunity to review the DEIS. We look forward to continuing our productive partnership.

Sincerely,

George Mazur, P.E.
Multimodal Planning Manager

Return to Comment Matrix