Kitsap County Natural Resources Asset Management Program

2025 STATE OF THE NATURAL ASSETS REPORT

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Program Overview

Kitsap County's Natural Resources Asset Management Program (KNRAMP) is a county-wide effort to protect and restore the natural assets that support community well-being and deliver environmental, social, cultural, and economic benefits. These assets provide clean air and water, support healthy salmon and steelhead populations, reduce erosion, store carbon, and sustain shellfish harvests and recreation that connect people to place.

KNRAMP is one of the first programs of its kind in the country run by a local government to proactively manage natural assets like other forms of public infrastructure, treating forests, marine shorelines, and streams as essential assets that require ongoing care and investment. The program is meant to provide a structured framework to help the County and partners make informed, long-term decisions about where to invest in natural asset protection and restoration.

By measuring and tracking the condition or "level of service" of these natural assets, KNRAMP provides a consistent way to measure progress and gives the County a clear picture of where action is needed most. The desired level of service represents the long-term goal for the condition and performance of natural assets, defined by measurable attributes that reflect healthy ecosystem functions based on the best available science such as percent forest cover, shoreline armoring, or water quality.

KNRAMP supports existing statutory environmental requirements and works to move beyond a "no net loss" approach to achieve net ecological gain over time, improving the health and resilience of natural systems so they continue to serve both current and future generations. Collaboration is central to the program's success: the program is meant to work closely with County partners including tribal governments, state and local agencies, nonprofits, and community partners to align strategies and advance shared priorities for watershed health and climate resilience. It also is built to be adaptively managed, meaning that data and processes will continue to be refined as the program is implemented.

KNRAMP assesses three natural asset types: streams, marine shorelines, and forests, using available county-wide data. Each asset is evaluated through measurable attributes that describe the natural services it provides.

STREAMS	Riparian Vegetation (%)
	B-IBI Score
	Water Quality (tests)
	Fish Passage Barriers
FORESTS	Forest Cover (%)
	Mature Forests (%)
MARINE SHORELINES	Shoreline Armoring (%)
	Shoreline Vegetation (%)
	Shellfish Growing Areas (commercial classification)

Assets are assessed based on levels of service as:

- **Very High:** Exceptional level of service
- **High:** Meets desired level of service
- **Medium:** Slightly degraded level of service
- **Low:** Degraded level of service
- **Very Low:** Highly degraded level of service

ABOUT THE REPORT

The State of the Natural Assets Report is the first in an annual series providing a snapshot of the condition of Kitsap County's natural assets. While not intended to make specific recommendations, it serves as a decision-support tool for County departments and partners, helping integrate natural asset needs and opportunities into planning, maintenance, and investment decisions.

This report highlights example focus areas and priority watersheds for restoration and preservation identified by the program team based on current needs and opportunities across the County. It is not an exhaustive list but a starting point for coordination. The program team includes Kitsap County, the Port Gamble S'Klallam Tribe, the Skokomish Indian Tribe, and the Suquamish Tribe. Over time, this report aims to guide collective efforts toward a shared goal: healthy natural systems that continue to provide lasting benefits for people, the economy, and the environment.

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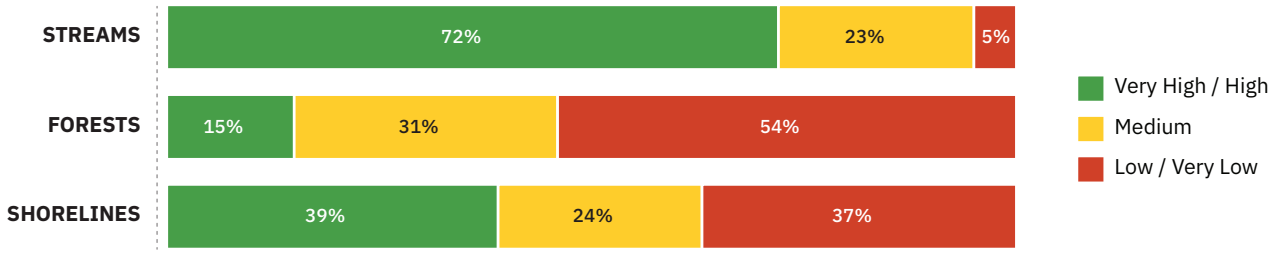
Condition of Natural Assets Across the County

Across Kitsap County, the condition of natural assets shows both areas of strength and opportunities for focused improvement. Streams are the County's healthiest asset, with 72% at very high and high level of service, particularly in the northern and western watersheds where some ecosystems remain mostly intact. These streams continue to support fish habitat, water quality, and recreation, though localized pressures from development in central and eastern areas are beginning to affect some watersheds and fish passage barriers remain a major issue County-wide.

Marine shoreline conditions vary across the County, with 39% at high or very high level of service, especially along the western and northern coasts where natural shorelines and healthy vegetation persist. More than one-third (37%) of shoreline segments are degraded near urban and industrial areas (e.g., Bremerton, Port Orchard, and Sinclair Inlet) where shoreline armoring and runoff have reduced natural function.

Condition of Natural Assets at a Glance

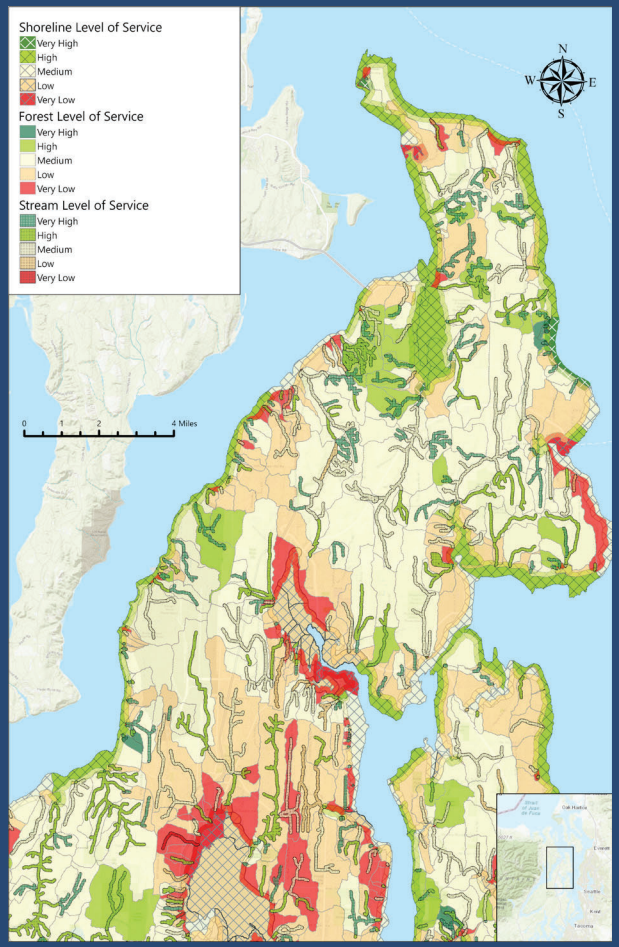


Forests are the most stressed asset, with only 15% at high or very high level of service and more than half (54%) at low or very low level of service, concentrated in southern and central Kitsap and areas under development or active timber harvest. These degraded forests are losing canopy and habitat connectivity, while another 31% at medium level of service represent a critical opportunity for proactive management and restoration before further decline.

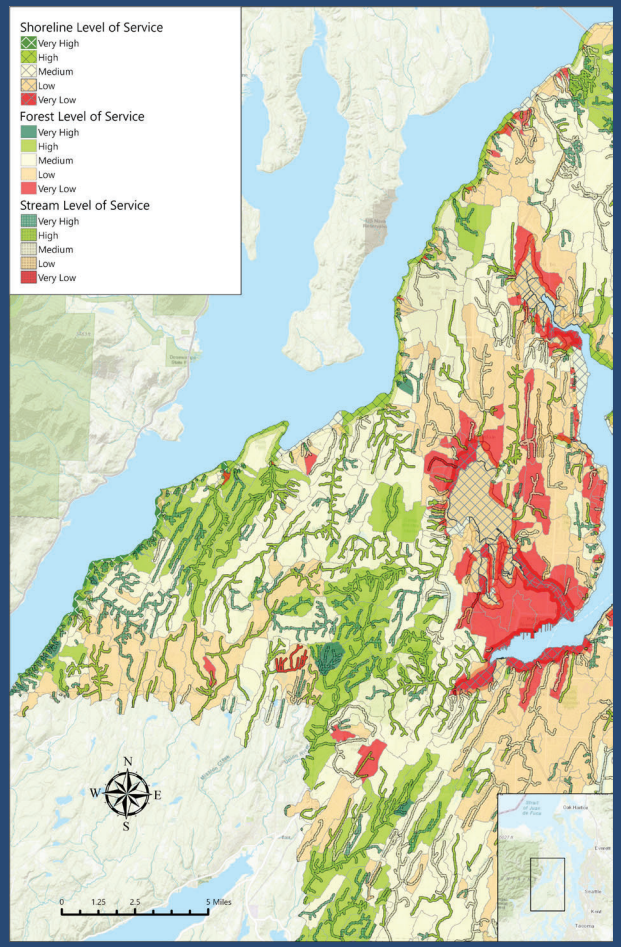
These levels of service show that while the County retains critical natural assets, land use and urbanization remain key drivers of natural asset condition. Maintaining and improving the level of service of these assets will require a balanced approach: protecting high-functioning areas, restoring degraded areas, and managing transitional zones in medium condition to prevent further loss.

Condition of Natural Assets Across County Regions

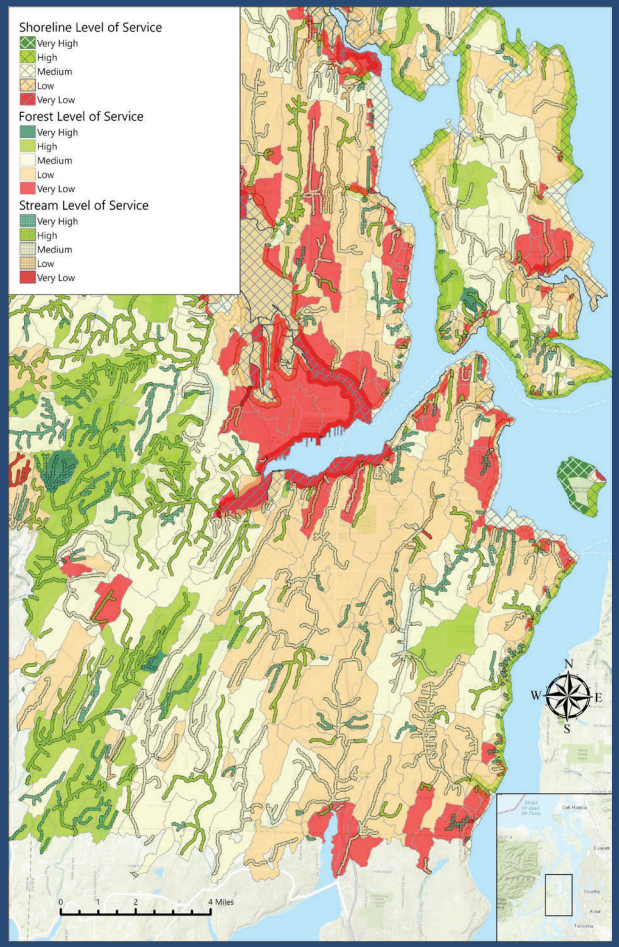
NORTH



CENTRAL



SOUTH



STREAMS

Kitsap County is home to many healthy streams, with the highest concentrations found in the northern and western parts of the County. However, localized pressures are impacting specific streams, especially near urbanized areas. Fish passage barriers continue to impact stream health throughout the County even in streams at high and very high level of service.

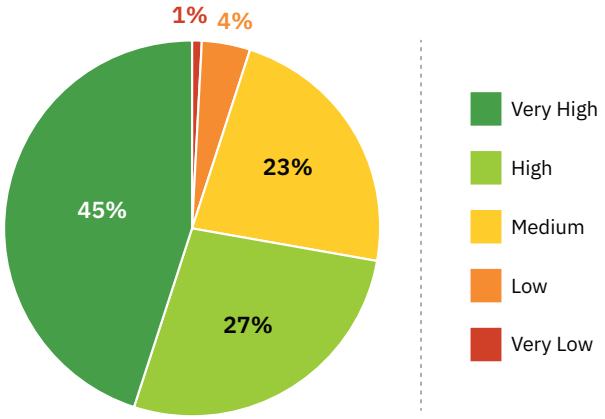
The County's dense network of streams is central to the health of the region. These waterways provide critical habitat for fish species such as chum, coho, Chinook, and pink salmon, as well as steelhead and cutthroat trout that sustain the County's local ecosystems, cultural traditions, and economy. Healthy streams also help recharge groundwater supplies and naturally manage stormwater and floodwater. **Across the county, 72% of streams have high (27%) and very high (45%) level of service**. These streams generally have high water quality, support healthy riparian areas, and provide good habitat for fish and wildlife.

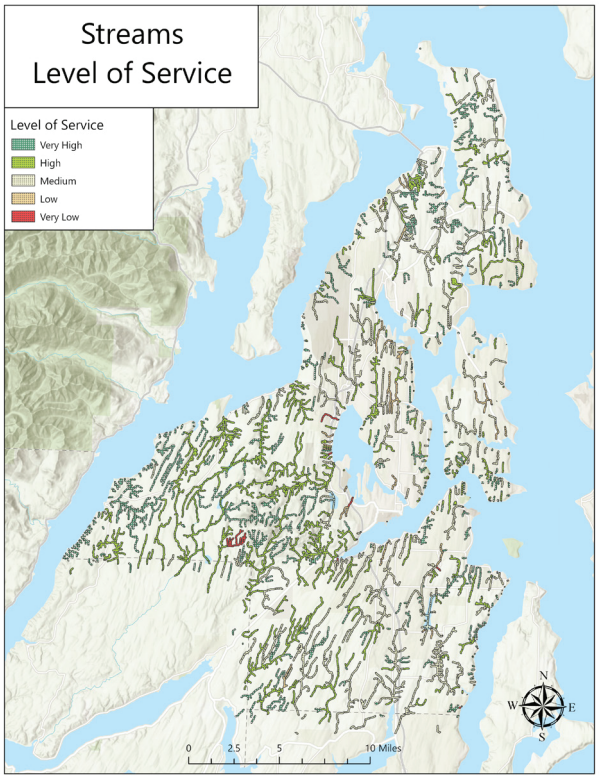
The strongest concentrations of streams with good and very good level of service are found in northern and western Kitsap County, where watersheds remain relatively intact and resilient. **Streams with medium level of service account for 23%** and are concentrated in localized areas, particularly in central, eastern, and northern Kitsap. **Streams with low (4%) and very low (1%) level of service are relatively limited (5%) but remain significant**. Rather than being distributed evenly across the county, they appear in discrete clusters, with the largest concentration of very low level of service streams located in central Kitsap. These are mostly small tributaries to main stems and their condition reflects pressures from low or very low riparian vegetation and the presence of fish passage barriers. For some of these streams, B-IBI and/or water quality survey data are not available. The top three watersheds with very low level of service based on impacted acres are: Mission Creek (230 acres), Koch Creek (70 acres), and Ostrich Bay (30 acres).

MANAGEMENT APPROACH

Protection is generally the recommended strategy for streams across the County to maintain their function. In more urbanized and industrial areas that have streams at very low, low, and medium level of service, targeted restoration will be needed. Even streams at high and very high level of service are not without issues: many still face fish passage barriers, limited large woody debris, disconnected floodplains, invasive plants, or riparian forests that are not functioning as well as they could. These streams will still require monitoring and a mix of restoration and protection actions.

Level of Service for Streams





STREAMS ATTRIBUTES

Water Quality

Good water quality supports salmon and trout populations, protects shellfish beds, and makes waterways safe for recreation. Water quality is influenced by both point sources (sewer overflows, effluent discharges) and non-point sources (stormwater runoff). Approximately 55% of surveyed streams currently meet state water quality standards (passes both WA State Department of Ecology testing criteria), while 45% do not. 63% of stream management units are not surveyed by KPHD's water quality testing.

> **EXAMPLE AREAS:** *Watersheds in southeast Kitsap including Olalla, Burley, Blackjack, Beaver, and the Union River all fail both freshwater tests conducted by KPHD (as of April 2025).*

Fish Passage

Fish passage barriers remain a major challenge County-wide. Undersized water crossings impact stream hydrology, floodplain connectivity, channel complexity, sediment transport, and more. Removing barriers restores fish access to spawning and rearing habitat, reconnects streams, and supports thriving salmon populations. Barriers like culverts are one of the main challenges to salmon recovery in Kitsap County. There are approximately 231 impassable documented fish passage barriers (0% passable) barriers across County streams, with the highest concentrations in central and southeastern Kitsap. 54% of stream management units have at least one fish passage barrier (does not describe passability).

> **EXAMPLE AREAS:** *Large river basins and watersheds with very low fish passage level of service include Gorst, Blackjack, Curley, Olalla, Burley, Seabeck, Minter, and the Union River.*

Riparian Vegetation

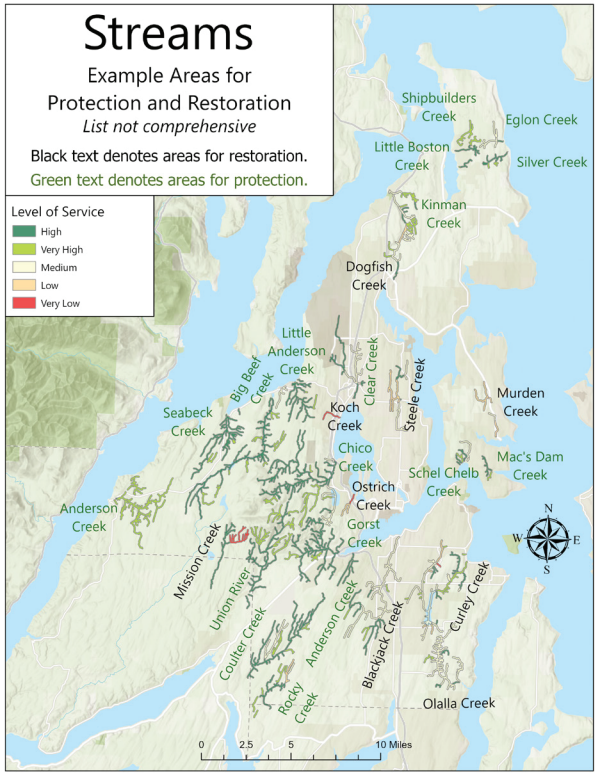
Healthy riparian vegetation provides shade and keeps water cool for fish, stabilizes streambanks, regulates sediment processes, filters pollutants before they enter streams, contributes organic matter, and offers habitat for wildlife. These areas also supply large wood that creates complex stream habitat and helps sustain beaver populations, which play a critical role in shaping healthy stream and watershed function. Some streams across the County exceed temperature criteria which can stress fish populations and indicate degraded riparian buffers.

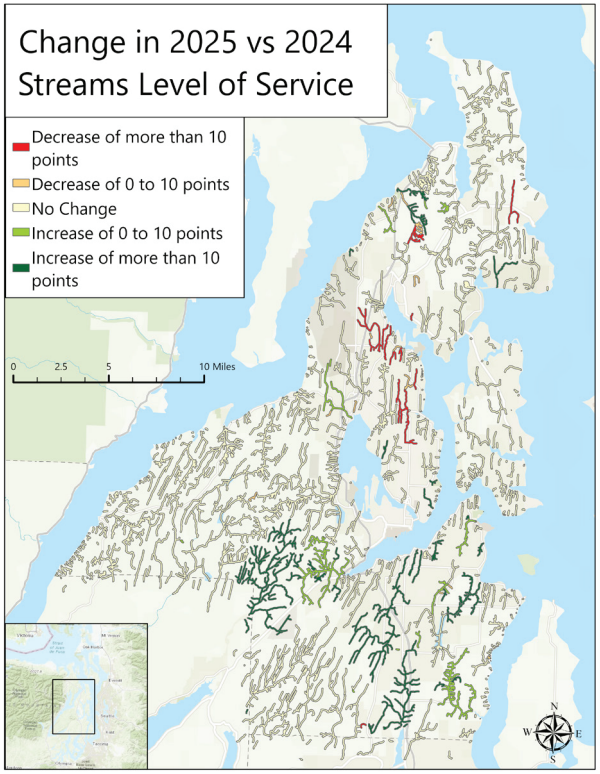
> **EXAMPLE AREAS***: Headwaters of Mission Creek, Tahuya, and Barker Creek have either low or very low riparian cover.*

Biological Condition (B-IBI score)

Biological condition uses the Benthic Index of Biological Integrity (B-IBI) score to provide a measure of overall stream health and indicate water quality, habitat condition, and watershed stress. High B-IBI scores indicate healthy, functioning streams. B-IBI is a measure of benthic invertebrates, or stream bugs, which are sensitive to poor water quality and symbolize the productivity and biological health of the stream. 58% of streams are in good or very good biological condition, 37% are in medium condition, and 5% are in low or very low condition. 82% of stream units have not had B-IBI testing done through survey testing.

> **EXAMPLE AREAS:** *Clear Creek and Murden Creek on Bainbridge Island have low or very low B-IBI scores.*





FORESTS

Kitsap County's forests are under notable stress, with just 15% achieving high or very high level of service and nearly half (54%) at low or very low level of service. The remaining 31% have medium level of service and will be critical for proactive management to prevent further decline and restore them to a high level of service.

Forests play a critical role in water filtration, soil stabilization, and stream flow regulation. They provide habitat for diverse wildlife, store carbon, and strengthen climate resilience. Forests also offer opportunities for recreation and cultural activities. **Only 2% of forested areas (just 24 units county-wide) have very high level of service and 13% high level of service** primarily in pockets across Western and Central Kitsap, indicating that preserving these units should be a high priority. Forests at high and very high level of service are supported by a mix of protected and managed lands across the County. These include WDFW and DNR lands along the Hood Canal in central Kitsap, Great Peninsula Conservancy properties in Seabeck, near Boyce Creek, and within the Newberry Community Forest, and the Keta Legacy Foundation in central Kitsap, as well as privately managed forests such as the Clyde Tree Farm and Ueland Tree Farm in west and central Kitsap. Several cities also maintain high-quality forest such as the City of Bremerton and Bainbridge Island, helping preserve canopy cover and habitat within more developed areas.

Forests with very high level of service based on numbers of acres are listed below. In most cases, this does not encompass the whole watershed, but includes specific management units within a watershed and proximity). **Forests with medium level of service represent 31%**, showing that they are vulnerable to degradation and that proactive management could prevent further decline and reduce future restoration costs. Some watersheds are close to the high level of service (Coulter and Rocky) and could be improved with less effort than other watersheds.

The majority of the County's forests have low (32%) and very low (22%) level of service, with large, contiguous areas of lower-condition forest concentrated in southern and central Kitsap, as well as along several eastern shoreline areas. Some of these forested areas face pressures from development, agriculture, mineral resource extraction, industrial timber harvest, noxious weeds and invasive species that have reduced canopy cover and disrupted habitat connectivity. In southwest Kitsap, industrial logging contributes to lower levels of service, while in south Kitsap, expanding residential development and agricultural use have also fragmented forests. In East Bremerton, former agricultural lands are transitioning to residential development and continue fragmenting the forest landscape.

MANAGEMENT APPROACH

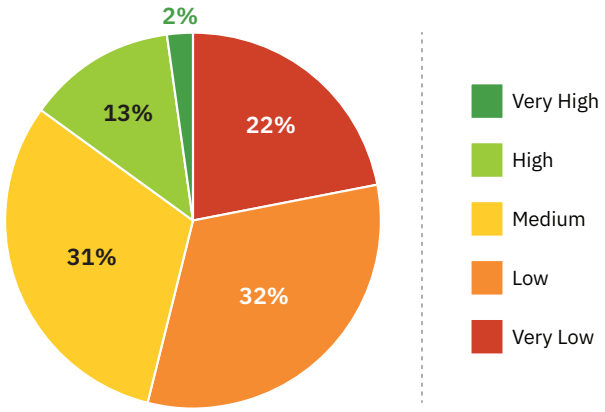
Restoration is generally the recommended strategy across the County to restore forests that have very low, low, and medium level of service. Forests pose a management challenge because unlike streams and marine shorelines, many forests are outside regulated critical areas and their buffers and are thus not directly protected by local regulations. Additionally, desired level of service would be difficult to achieve in all urban areas while still accommodating required urban densities in the Growth Management Act (GMA).

In 2024, the Core Team decided that forest desired level of service should be established for each stream watershed, rather than for each forest management unit. This allows the County additional flexibility to balance forest health with GMA requirements and the needs of urban communities. Creative approaches to protection and restoration, such as landowner incentives, voluntary stewardship, land acquisition, and multi-benefit strategies are needed. Collaborative strategies are especially important in shared watersheds that span County and city boundaries, such as Blackjack Creek (City of Port Orchard) and Anderson Creek (City of Bremerton).

Other general strategies include controlling noxious and invasive weeds and implementing active forest management practices, including restorative thinning in areas with high forest cover but lower age class. Preserving and restoring forests within urban growth areas is pursued through existing regulations and multi-benefit strategies.

Key efforts in UGAs should focus on protecting and restoring regulatory wetland and riparian buffers, enforcing the County's new tree canopy ordinance, and implementing current urban planning guidance from the County's Parks, recreation, and Open Space (PROS) Plan on how far urban residents should reside from green space. Outside urban growth areas, additional strategies include protecting and expanding forest land acquisitions.

Level of Service for Forests



FOREST ATTRIBUTES

Forest Cover

Percent forest cover is correlated with multiple land cover metrics, including impervious cover and disturbance. Forests regulate water flow, including retaining water to recharge aquifers and preventing downstream flooding. Aquifer recharge contributes to groundwater supplies, which are essential for sustaining potable water resources needed for growth and development, as well as streamflow for fish.

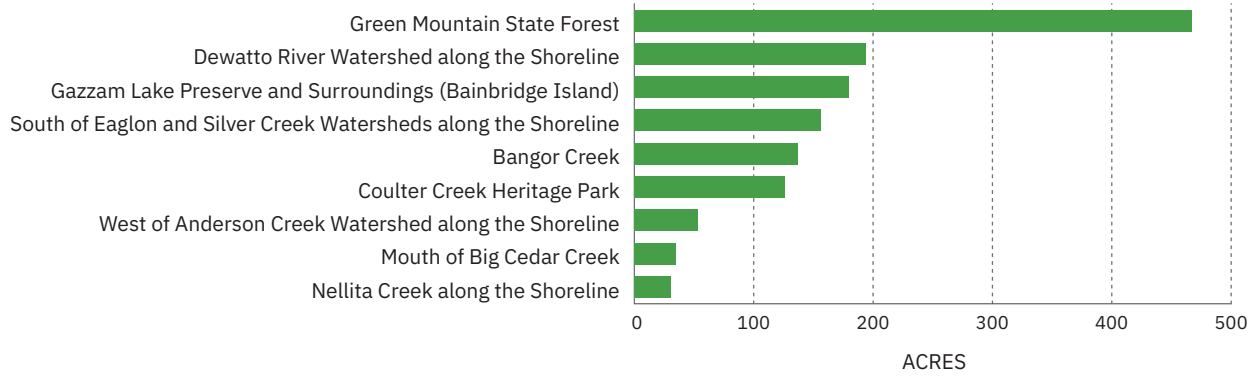
EXAMPLE AREAS: *Some of the areas with the largest patches of forest cover are in southwest Kitsap along the Hood Canal and some with the lowest forest cover are in the Bremerton urban growth area east of Dyes Inlet. Overall forest cover level of service is very high in the headwaters of Gorst, Chico, and the Union River in central Kitsap, in Stavis, Seabeck, and Boyce creek along the Hood Canal, and units overlapping the Port Gamble Forest Heritage Park.*

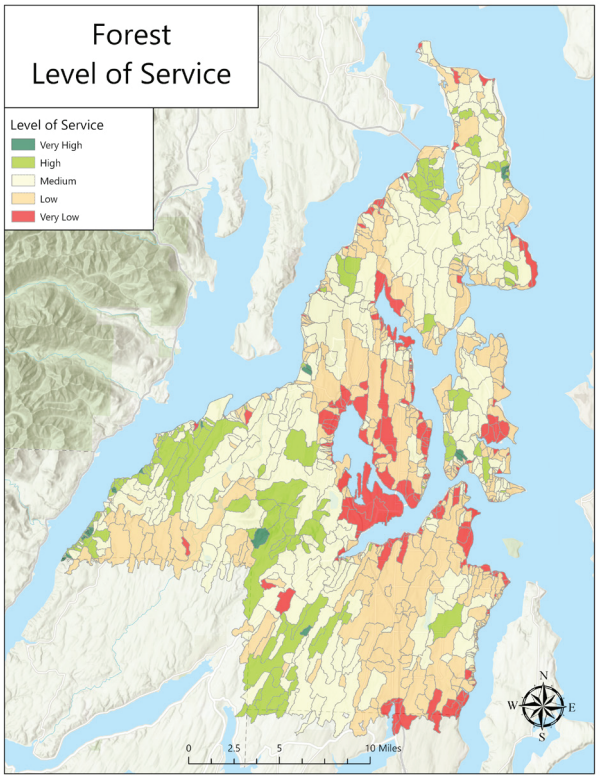
Mature Forests

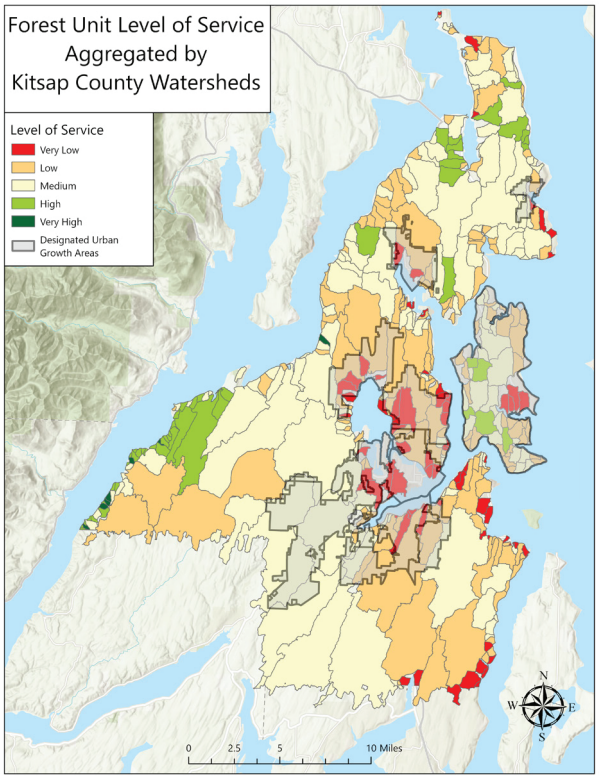
Older forests provide greater ecosystem services and cannot be replaced within a human lifetime. They support the hydrologic cycle, sustain habitats for salmon and other wildlife, and provide cultural resources for Tribes. Some species depend on mature forests during key stages of their lives. Forests with a mix of tree ages and species are healthier and better able to withstand disease, wildfire, and climate change. Once lost, mature forests cannot be replaced within a human lifetime.

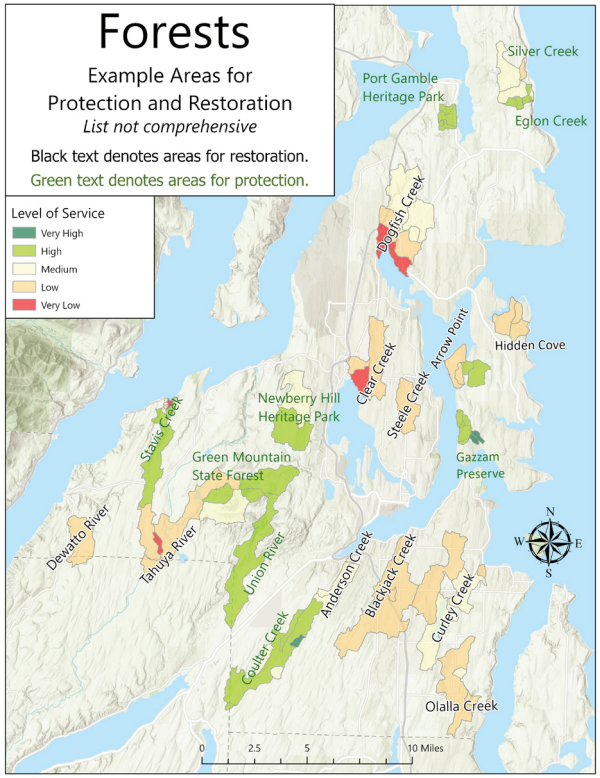
EXAMPLE AREAS: *Patches of mature forest at high and very high level of service are limited, but generally found in central and south Kitsap. Similar to overall forest cover, percent mature forest is lowest in developed areas of Bremerton and Port Orchard. Some of the largest areas at high or very high level of service for mature forest include the headwaters of Rocky and Coulter Creek, and portions of the headwaters of the Union River and Tahuya River watersheds.*

Forests in very high condition








Forests
Example Areas for
Protection and Restoration
List not comprehensive
Black text denotes areas for restoration.
Green text denotes areas for protection.
Level of Service
Very High
High
Medium
Low
Very Low
Silver Creek
Port Gamble
Heritage Park
Eglon Creek
Dogfish Creek
Hidden Cove
Arrow Point
Clear Creek
Steele Creek
Newberry Hill
Heritage Park
Stavis Creek
Green Mountain
State Forest
Gazzam
Preserve
Dewatto River
Tahuya River
Union River
Anderson Creek
Blackjack Creek
Curley Creek
Coulter Creek
Olalla Creek
N
W
E
S
0
2.5
5
10 Miles

MARINE SHORELINES

Kitsap County's marine shorelines include a mix of well-functioning and stressed shoreline segments, with 39% at very high and high, 24% medium, and 37% at low and very low level of service.

Healthy marine shorelines support natural erosion and sediment transport; filter stormwater runoff before it reaches marine waters; provide habitat for forage fish, shellfish, birds, and marine mammals; and support eelgrass beds that are vital for salmon and herring.

Shorelines also offer opportunities for recreation, education, shellfishing, and cultural activities. Marine shoreline conditions vary widely across the County, with **large stretches of areas at high (30%) and very high (9%) level of service**, particularly the western shoreline facing Hood Canal, and segments along the northern and eastern coasts. **Shorelines with medium level of service (24%)** are transitional zones where development, shoreline armoring, or limited vegetation have partially degraded natural function. **Low (25%) and very low (12%) level of service shorelines** are concentrated near urbanized and industrial waterfronts, ferry terminals, and altered shorelines where armoring, overwater structures, or stormwater inputs have reduced natural function, particularly in and around Bremerton, Port Orchard, and the Dyes/Sinclair Inlet area plus Liberty Bay. In areas such as ferry and shipyard zones, opportunities for significant restoration remain limited, but surrounding areas should be protected and targeted for restoration.

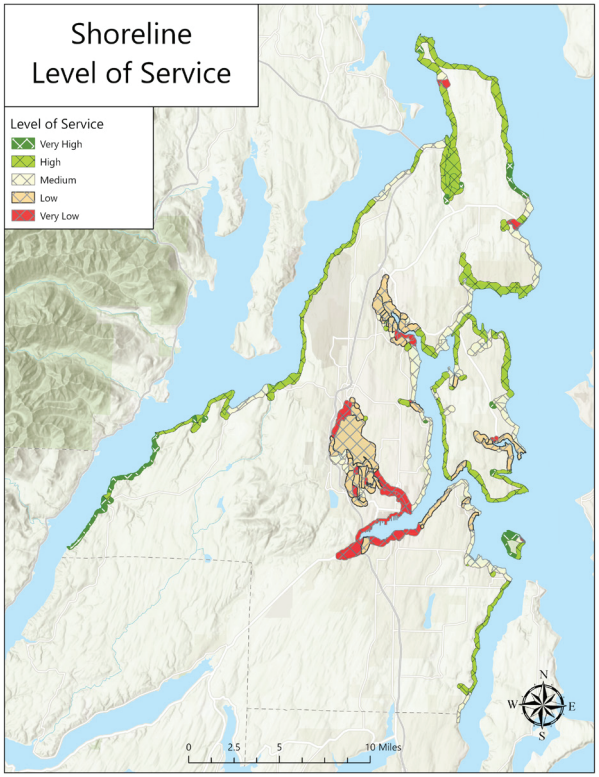
MANAGEMENT APPROACH

A mix of restoration and protection will be needed for marine shorelines. Areas that offer high and very high levels of service should be protected, while areas in medium condition should be monitored and managed for restoration but also to prevent further degradation.

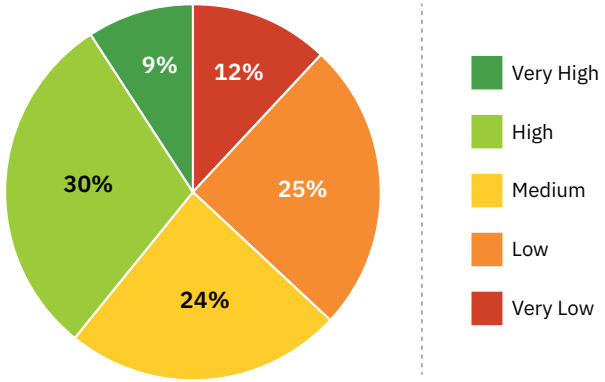
Restoration efforts will be needed on some urban and developed areas, particularly around Bremerton, Port Orchard, and Sinclair Inlet, where actions such as bulkhead removal, shoreline vegetation planting, addressing old and failing on-site sewage systems, and improved stormwater management can enhance habitat and water quality. Within urban growth areas, some unarmored shoreline segments still provide valuable habitat and should be protected as refuge areas, especially for juvenile fish including beach spawning forage fish. The County should work with local, state, and federal agencies to continue improving the effectiveness of shoreline permits and regulations, including mitigation strategies. Where shoreline armoring is necessary, softer shoreline protection methods should be considered to balance infrastructure needs with habitat preservation.

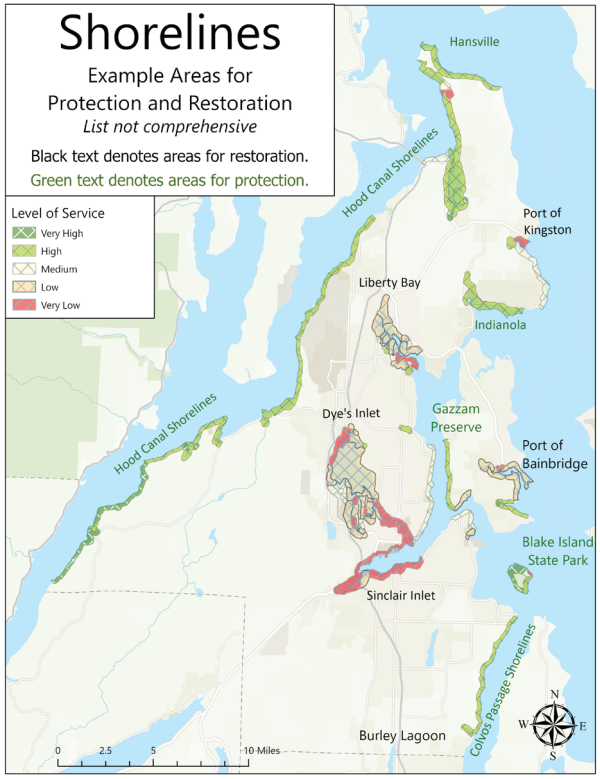
Kitsap County owns many built assets on marine shorelines, including roadways with shoreline armor, culverts and bridges, sewer pipes, stormwater outfalls, parks, and more. Kitsap County departments should inventory these assets, assess condition, and assess the feasibility of removal, relocation, or conversion to more natural solutions. Kitsap County should work with other public landowners to encourage similar work. Relocating public facilities further from the shoreline will allow for shoreline restoration and also improve the long-term resilience of those facilities.

Kitsap County should continue working with programs like Shore Friendly, Regional Fisheries Enhancement Groups, and land trusts to provide education/outreach, resources, and incentives to private shoreline landowners that encourage voluntary stewardship, shoreline protection, and restoration.



Level of Service for Marine Shorelines





MARINE SHORELINES ATTRIBUTES

Shoreline Armoring

Removing shoreline armoring improves shoreline functionality, sediment transport, and forage fish habitat.

> **EXAMPLE AREAS:** *Some areas that have high armoring include Dyes Inlet and Sinclair Inlet, though several restoration efforts in Dyes Inlet, such as at Lions Park, the outlet of Clear Creek, and Anna Smith Park, have already improved shoreline condition. The east side of Dyes Inlet, which remains largely unarmored, represents a key area for continued protection.*

Shoreline Vegetation

Improving shoreline vegetation improves nearshore ecosystems which support forage fish and juvenile salmon by providing organic debris and shade along the mid to upper beach zone.

> **EXAMPLE AREAS:** *Most of the Hood Canal south of Bangor, as well as the western side of Bainbridge Island have high or very high shoreline vegetation.*

Shellfish Growing Areas

Improving water quality improves the ability to harvest shellfish.

> **EXAMPLE AREAS:** *Large sections of Dyes Inlet and Sinclair Inlet are currently classified as prohibited. Other closed areas include the mouth of Chico Creek and Burley Lagoon. Some example areas for continued protection that are approved for harvest include Olalla Bay and the shoreline from Olalla to Curley, most of Hood Canal, Port Gamble Bay, Miller Bay, and portions of the East Bremerton shoreline along Enetai and Illahee. Waters north of Brownsville toward Keyport include areas for both restoration and protection.*

KNRAMP Focus Areas

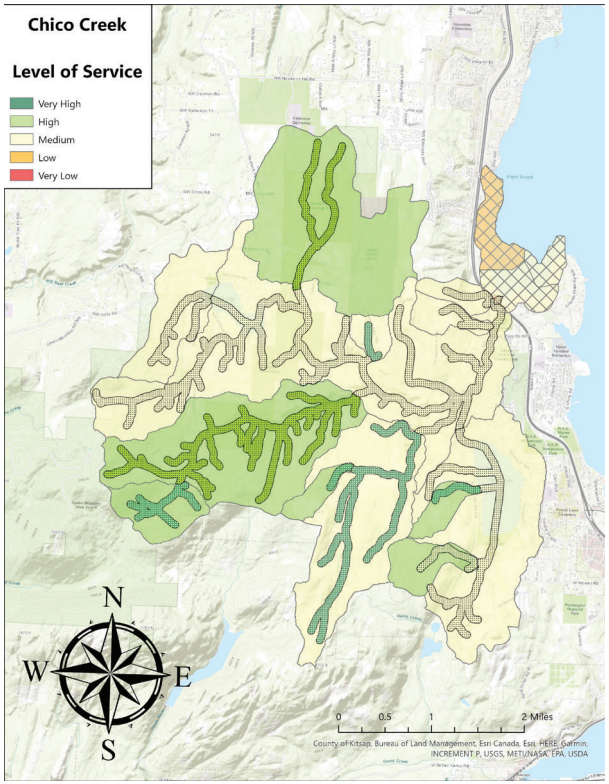
The KNRAMP program, now in its second year of implementation, uses a focus area approach, in which specific watersheds are selected to identify actions needed for restoration and preservation. In 2024, KNRAMP piloted efforts in two watersheds, Big Beef Creek and Chico Creek. Building on that progress, in 2025 the program team selected two more focus areas: Kinman Creek and Curley Creek watersheds.

Each watershed currently faces challenges including fish passage barriers, loss of forest, shoreline armoring, and pollution sources that degrade water quality. In addition, the County must address population growth and development, prioritization of other built assets, and funding limitations that can make it challenging to address these barriers. The Kitsap County Comprehensive Plan provides guidance to align County departments on a shared vision of protecting natural assets. To overcome challenges, Kitsap County and partners will need to work together and align management practices to restore areas with low levels of service and protect areas with high levels of service. Actions in each watershed are conducted in collaboration with partners and landowners.

CHICO CREEK

Chico Creek, located in west-central Kitsap County, is a vital salmon-bearing stream system that flows into Dyes Inlet. This estuary provides essential habitat for young salmon as they transition from freshwater to saltwater. Chico Creek is one of the most productive salmon streams on the Kitsap Peninsula supporting large populations of chum, coho, steelhead, and coastal cutthroat trout. The estuary and surrounding areas are open to the public, offering opportunities for fishing, bird watching, and educational tours.

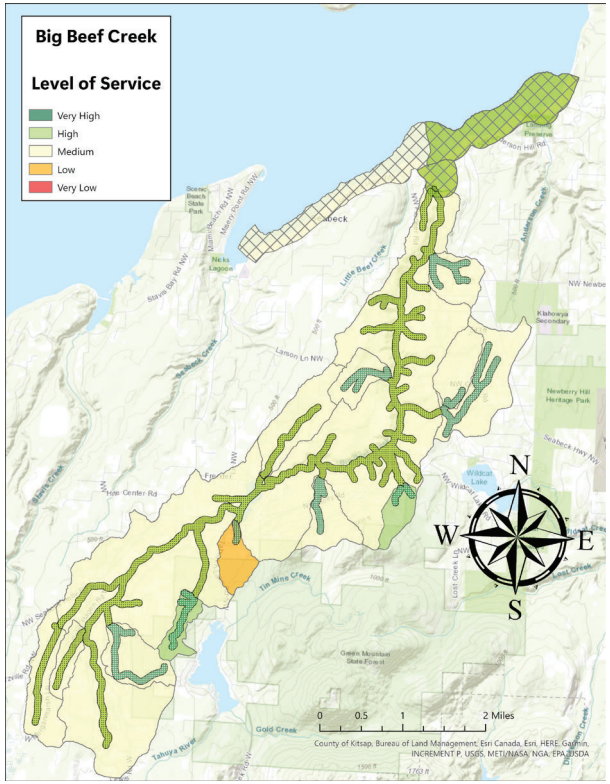
Challenges in Chico Creek include fish passage barriers and some loss of riparian vegetation, water quality limitations in shellfish growing areas, shoreline armoring affecting natural processes and estuarine habitat, and limited forest cover and mature forests in some areas.



GOALS	RECOMMENDED LONG-TERM ACTIONS & IMPROVEMENTS
Streams	
Improve stream connectivity	• Remove 6 fish passage barriers on tributaries of Chico Creek and Wildcat Creek (three of which are County-owned). *Achievements: Four County-owned fish passage barriers are under consideration for correction in Dickerson Creek.*
Increase riparian vegetation	• Restore 105.5 acres of riparian habitat along the main stem of Chico Creek and into Wildcat Lake.
Forests	
Protect mature forests	• Protect 2,615 acres of mature forests (successional class).
Increase forest cover	• Expand forest cover restoration by restoring 494 acres of forest.
Marine Shorelines	
Improve marine shoreline water quality	• Improve water quality in Chico Bay and improve the status of the shellfish harvest growing area from “prohibited” to “approved”. *Achievements: The Kitsap Public Health District has been active in the Chico Bay area and recent water quality improvements may support reclassifying the shellfish growing area to “approved” in the near future.*
Increase shoreline vegetation	• Utilize the Pollution Identification Program (PIC) to identify and correct sources of pollution. • Plant 2,937 feet of shoreline vegetation.
Decrease shoreline armoring	• Focus outreach to remove 2,886 feet of shoreline armoring to improve shoreline ecological function, improve forage fish habitat, and the ability to harvest shellfish. *Achievements: In partnership with the Suquamish Tribe, the County removed a wharf along the shoreline north of the Chico Creek outlet into Dyes Inlet.*

BIG BEEF CREEK

Big Beef Creek, located in west-central Kitsap, is home to diverse salmon populations and a variety of natural assets that make it a key area for restoration and protection. The creek has been a long-term habitat restoration site and a place for environmental research, providing valuable data that can inform future management efforts. The area also supports recreation such as fishing and kayaking and continues to be used for timber production. Challenges in Big Beef Creek include fish passage barriers, need for mature forest protection, particularly due to commercial timber harvest, and some loss of riparian vegetation. There are water quality limitations in shellfish growing areas, especially with the presence of shoreline armoring, affecting natural processes and estuarine habitat.

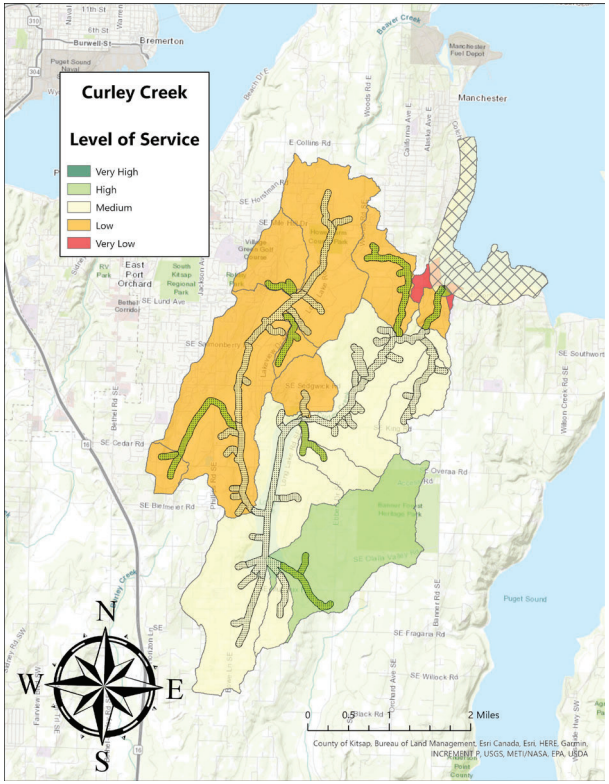


GOALS	RECOMMENDED LONG-TERM ACTIONS & IMPROVEMENTS
Streams	
Improve stream connectivity	• Remove 2 full blockage fish passage barriers on tributaries to Big Beef Creek (none are County-owned). These barriers do not include the WDFW fish weir.
Increase riparian vegetation	• Plant 70.3 acres of riparian habitat in a tributary off Lake Symington.
Forests	
Protect mature forests	• Protect 1,491 acres of existing forest stands by acquiring land and working with partners. *Achievements: WDFW added 451 acres transferred from DNR to the South Puget Sound Wildlife Area to protect forest cover as well as in-stream, floodplain, wetland, and riparian habitats.*
Marine Shorelines	
Remove shoreline armoring	• Remove half of the shoreline armoring (4,021ft) by working with other Kitsap County departments and partners and conducting outreach to private landowners (partially owned by Kitsap County along Seabeck Highway). *Achievements: KNRAMP has worked with Shore Friendly to conduct targeted outreach to shoreline homeowners with armoring along this stretch of Hood Canal.*
Improve shoreline water quality status	• Plant shoreline vegetation in areas where shoreline armor is removed. • Work with partners to ensure water quality standards reflect current data and determine if shellfish harvesting classification can be improved from "prohibited" to "conditional." • If needed, utilize the Pollution Identification Program (PIC) to identify and remove pollution sources. *Achievements: Engagement with the Washington State Department of Health (DOH) confirmed that Big Beef Bay is not monitored for shellfish harvest as there has not been a desire to harvest shellfish commercially in this bay. Hood Canal Salmon Enhancement Group (HCSEG) has a vested interest in updating Seabeck Highway to improve water access and cycling from hood canal into Big Beef Bay, which could open the bay for shellfish harvesting.*

CURLEY CREEK

Curley Creek, located in east-central Kitsap, is an important stream to coho, fall and summer chum, cutthroat trout, steelhead, and Chinook salmon. The broader watershed is habitat to many species including ducks, shorebirds, and eagles. Shorelines are important shellfish harvesting resources.

Challenges in Curley Creek include several fish passage barriers that prevent salmon from reaching healthy tributaries further up the watershed to spawn. Curley creek also lacks riparian cover on segments of Long Lake and Salmonberry Creek. This creek in particular faces high water temperatures, e-coli, and phosphorous issues.



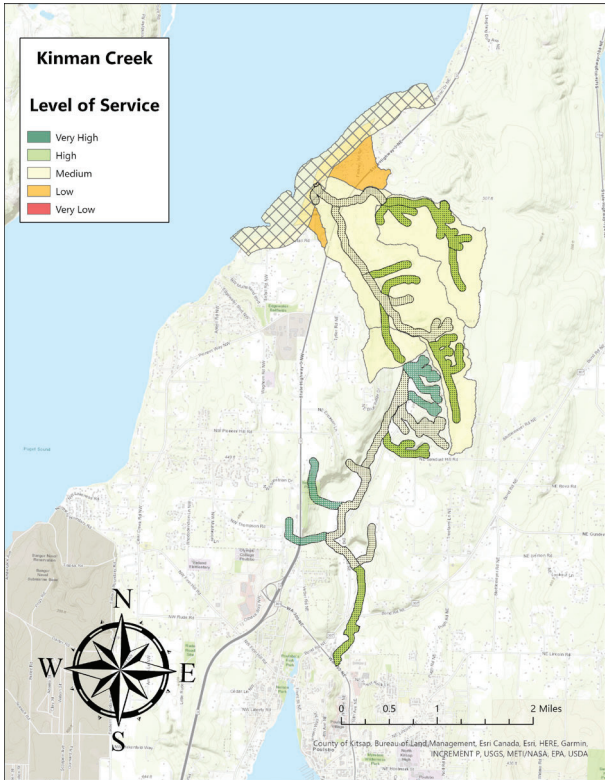
GOALS	RECOMMENDED LONG-TERM ACTIONS & IMPROVEMENTS
Streams	
Improve stream connectivity	• Remove 3 fish passage barriers in Salmonberry Creek (all three County-owned).
Increase riparian vegetation	• Plant 6,400 feet of riparian vegetation over four management units in Salmonberry Creek.
Forests	
Protect mature forests	• Protect 757 acres of mature forests around Salmonberry Creek.
Increase forest cover	• Expand forest cover by 216 acres to increase habitat connectivity around Salmonberry Creek.
Marine Shorelines	
Remove shoreline armoring	• Focus outreach to remove 10,200 feet of shoreline armoring across two management units by working with partners and incentivizing and educating landowners.

KINMAN CREEK

Kinman Creek, located in north-central Kitsap County, provides essential habitat for young salmon as they transition from freshwater to saltwater. Its surrounding shoreline areas also have strong potential for shellfish harvesting.

Challenges in Kinman Creek include fish passage barriers, loss of riparian vegetation and mature forests, and shoreline armoring that limits the ability of shellfish to thrive.

GOALS	RECOMMENDED LONG-TERM ACTIONS & IMPROVEMENTS
Streams	
Improve stream connectivity	• Remove 11 full blockage fish passage barriers across six management units in Kinman Creek and the headwaters of Dogfish Creek (three of which are County-owned).
Forests	
Protect mature forests	• Protect and/or acquire 215 acres of forest land to improve mature forest cover.
Increase forest cover	• Plant and/or protect 171 acres of forest land to increase overall forest cover and habitat connectivity.
Marine Shorelines	
Remove shoreline armoring	• Focus outreach to remove 3,200 feet of shoreline armoring in one management unit by working with partners and incentivizing and educating landowners.



Lessons Learned

Adaptive management is essential as KNRAMP evolves. Close coordination with Kitsap County Departments, Tribes, and other partners is at the core of KNRAMP, since many are already advancing related work, and KNRAMP aims to strengthen collaboration and amplify these efforts. KNRAMP's goals are included in the County's Comprehensive Plan and will guide how departments can work together to manage natural resources.

Key lessons learned:

- Clearly defining goals and use cases up front (monitoring, prioritization, planning) will determine the approach for building the program.
- Developing the details is an iterative process.
- Coordination across County departments and other partners takes time but is critical to the program's long-term success.
- Collaboration with partners supports shared learning and accelerates progress.
- Defining the scale of the asset management plan should be done in the early stages.
- Using an asset management software is useful to monitor the data and calculate levels of service.
- Managing natural assets must be adaptive.

Data

KNRAMP went through many discussions and decisions on which data sources to use in the development of the program. The team chose using data that was readily available across the County, hosted by a reliable source, and updated periodically. Because KNRAMP does not collect field data, it relies on remote sensing data; as a result, some attributes and metrics serve as proxies for other habitat conditions.

The first set of KNRAMP maps with the condition of natural assets was created in 2024 based on the most current data available. The only data sources that have been updated in 2025 are found in the stream asset. Kitsap County collects and updates freshwater quality and B-IBI data on an annual basis, which is reflected in KNRAMP's data at the end of each calendar year. In 2025, the KNRAMP team updated the freshwater quality testing and B-IBI scores for streams. Some data sources do not have scheduled updates. In these cases the team is considering pivoting to other, more consistently updated, data sources that have been vetted and are used by partners. This is pivotal to the program continuing to evolve and adhering to adaptive management practices. The Core Team will meet annually to update and improve the report as part of ongoing adaptive management.

More Information

Partners and County departments can continue to engage by reaching out to the County's Department of Community Development to learn more about KNRAMP, discuss focus areas, and coordinate on protection and restoration efforts across the County.

For more information, please contact Brittany Gordon (BGordon@kitsap.gov).

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