

Toward a Natural Resources Asset Management Plan for Kitsap County Workshop #4 Agenda

Date: November 20, 2023, 10:00-12:00 pm PT

Goals: Discuss the final interim Desired Levels of Service (DLOS) for pilot watersheds, review status of final deliverables, and discuss 2024 anticipated next steps.

10:00 am	Welcome and Introductions – Dana Stefan and Elizabeth McManus (Ross Strategic, Facilitators)
10:10 am	Updated interim DLOS mapping for pilot watersheds - WCA <ul style="list-style-type: none"> - Discuss an updated mapping application with interim DLOS in pilot watersheds reflecting the Core Team’s initial input from the October workshop. - Review an initial mapping application with interim DLOS across the County, with more work to follow in 2024.
11:20 am	Wrapping up 2023 Milestones & 2024 Anticipated Next Steps <ul style="list-style-type: none"> - Brief updates on 2023 milestones: KNRAMP Implementation Plan, Public Engagement Approach Memo – WCA, Ross Strategic - Overview of the 3-year Habitat Strategic Initiative Lead (HSIL) grant and anticipated 2024 milestones – Brittany Gordon - Update on Kitsap County Comprehensive Plan update process – Jim Rogers - Final Lessons Learned – WCA
11:45 am	Updates from Partners - All <ul style="list-style-type: none"> • Suquamish Tribe • Port Gamble S’Klallam Tribe • Kitsap County
12:00 pm	Adjourn

Kitsap Natural Resources Asset Management Program

Core Team Workshop #4

November 20, 2023, 10:00-12:00 pm



Welcome – Agenda & Goals

Goals: Discuss the final interim Desired Levels of Service (DLOS) for pilot watersheds, review status of final deliverables and 2024 anticipated next steps.

Time	Agenda Item
10:00 AM	Welcome and Introductions
10:10 AM	Updated interim DLOS mapping for pilot watersheds & Initial DLOS mapping across Kitsap County <ul style="list-style-type: none">• Discuss an updated mapping application with interim DLOS in pilot watersheds reflecting the Core Team's initial input from the October workshop• Review an initial mapping application with interim DLOS across the County, with more work to follow in 2024
11:20 AM	Wrapping up 2023 Milestones & 2024 Anticipated Next Steps <ul style="list-style-type: none">• Brief updates on 2023 milestones: KNRAMP Implementation Plan, Public Engagement Approach Memo• Overview of the 3-year Habitat Strategic Initiative Lead (HSIL) grant and anticipated 2024 milestones• Update on Kitsap County Comprehensive Plan update process• Final Lessons Learned
11:45 AM	Updates from Partners <ul style="list-style-type: none">• Suquamish Tribe• Port Gamble S'Klallam Tribe• Kitsap County
12:00 PM	Adjourn



Updated Interim DLOS Mapping for Pilot Watersheds & Initial DLOS Mapping Across Kitsap County

See separate slides



Wrapping up 2023 Milestones & 2024 Anticipated Next Steps

2023 Milestones

Initial Activities

- Setting up 2023 grant extension and NEP funding
- Identifying asset management approaches across Kitsap County through conversations with County divisions
- Developing memo with asset management approaches across Kitsap County
- Developing initial outline for KNRAMP Implementation Plan for discussion with the core team

Workshop 1

Timeframe: May 3

Discuss

- Asset management approaches across Kitsap County
- KNRAMP Implementation Plan Components
- KNRAMP working definitions
- KNRAMP pilots: initial discussion and scope

Next Steps

- Develop initial draft KNRAMP Implementation Plan
- Update asset management memo with application to natural resources
- Research science-based options for setting DLOS

Workshop 2

Timeframe: July 17

Discuss

- Initial draft KNRAMP Implementation Plan
- Asset management application to natural resources
- Initial options for setting DLOS for pilots

Next Steps

- Update draft KNRAMP implementation plan
- Refine memo with science-based options for DLOS
- Engage with core team on setting interim DLOS for pilot watersheds

Final Products

- KNRAMP Implementation Plan
- Asset Management Approaches across Kitsap County
- Asset management approaches for natural resources
- Public Engagement Plan
- Science-based options for interim DLOS for pilot watersheds
- Mapping application with interim DLOS across County
- Final lessons learned

Workshop 4

Timeframe: November 20

Discuss

- Updated interim DLOS mapping for pilot watersheds
- Initial mapping application with interim DLOS in pilot watersheds
- Final KNRAMP Implementation Plan
- Public Engagement Approach
- Anticipated 2024 milestones
- Lessons learned

Next Steps

- Final lessons learned

Workshop 3

Timeframe: October 4

Discuss

- Updated draft KNRAMP Implementation Plan
- Interim DLOS in pilot watersheds
- Draft public engagement approach

Next steps

- Finalize KNRAMP implementation plan
- Finalize memo with science-based options for DLOS
- Finalize Asset Management Application to Natural Resources memo
- Draft public engagement plan

2024-2026 NEP HSIL Grant Work at a Glimpse

2024

January-June

Project Fact Sheets, Plans

Pilot Watersheds: refine LOS, projects, programs, policies in priority areas, landowner outreach for stream mapping

County-Wide: Develop DLOS

July-December

Core Team Workshops

Pilot Watersheds: Implement; stream surveys (ongoing)

County-Wide: Update Implementation Plan and priority projects, programs, policies

2025

January-June

Core Team Workshops

Pilot Watersheds: Stream surveys; Updates & Adaptive Management

County-Wide: Implement; Project Updates & Adaptive Management

July-December

Core Team Workshops

Pilot Watersheds: Stream surveys; Updates & Adaptive Management

County-Wide: Implement; Project Updates & Adaptive Management

2026

January-June

Core Team Workshops

Pilot Watersheds: Stream surveys; Updates & Adaptive Management

County-Wide: Implement; Project Updates & Adaptive Management

July-December

Pilot Watersheds: Stream survey data submission; GIS stream maps complete

County-Wide: Project Reports

Lessons Learned

Toward a Natural Resources Asset Management Program for Kitsap County *Summary of Accomplishments and Lessons Learned*

OVERVIEW

Kitsap County is home to many small, forested watersheds that provide clean drinking water and habitat for salmon and steelhead and maintain longstanding cultural practices for surrounding communities. The region has experienced rapid growth and is expected to continue growing. Innovative ways for considering ecosystem services will be critical for protecting essential natural resources while keeping up with growing development pressures.

In Fall 2018, Kitsap County, the Port Gamble S'Klallam Tribe, the Suquamish Tribe, and Washington Environmental Council came together to develop and put in place a natural asset management program for Kitsap County (KNRAMP) focused on streams, forests, and marine shorelines. Although natural assets provide essential public and ecosystem services, establishing levels of service for natural assets is a new and innovative concept that draws from standard asset management approaches that local governments already use to manage gray infrastructure such as roads and pipes and applies best available science and monitoring information.

Natural asset management places ecosystem services at the center of decision-making to ensure that natural assets and ecosystem recovery goals are prioritized and integrated into local planning. Implementing the program will help the county monitor asset condition, make strategic investments, and support progress towards local policy goals.

The goals of the KNRAMP are to:

- Apply traditional asset management concepts to natural assets;
- Explore options to assess the current and preferred levels of service for Kitsap County streams, forests, and marine shorelines;
- Enable the county to balance the impacts of land use decisions with protecting the functions of natural assets;
- Provide a prioritization planning tool for implementing Kitsap County's policy goals, including the Comprehensive Plan.



This diagram provides a simplified overview process for developing, implementing, and adaptively managing a Natural Asset Management Plan.

- 2022 Summary
- 2023 – what are your thoughts? Draft in December

- <https://jamboard.google.com/d/1rmPmzq6w1niF3YyvqBkEC6L4YbBRXaO1TuvP-PbIMno/edit?usp=sharing>

LESSONS LEARNED

The following lessons learned will be a useful reference for Kitsap County to define its next phases of work, and potentially useful for other jurisdictions working on natural asset management.

1. *A phased approach is necessary when developing a natural asset management plan.* This is particularly true for small jurisdictions with limited resources. A first step in the process is identifying the natural asset(s) that the plan should focus on. Once developed, the plan could be replicable and expanded to additional natural assets as needed. KNRAMP focused on streams, marine shorelines, and forests in Kitsap County.
2. *Determining the preferred framework of the asset management plan is important before building out the details.* There are different ways to structure the levels of service framework depending on suitability and preference across jurisdictions. Municipalities must choose a format that is compatible with the jurisdiction's existing planning frameworks and



Core Team Updates

- Suquamish Tribe
- Port Gamble S’Klallam Tribe
- Kitsap County



Thank you!

Updated Options for establishing Desired Level of Service for forests, streams, shorelines

<https://abcnews.go.com/GMA/Living/video/artist-creates-stunning-portraits-made-pebbles-103507512>

Your Feedback

- Added a 5th category for overall OCI score.
 - Very High
 - High
 - Medium
 - Low
 - Very Low
- Aggregating MUs
- DLOS should aim higher
- Single Attribute DLOS are more helpful for specific actions
- Fish Passage Barrier attribute needs to evolve



Where we have been: how do we quantify services for forests, streams, shorelines?



Attribute	Indicator	Condition Rating				
		Very Low	Low	Medium	High	Very High
F1. Forest Cover	% forest cover in MU	<40%	41-55%	56-70%	71-85%	>85%
F2. Succession Class	% late succession in MU	<1%	1-25%	26-50%	51-75%	>75%



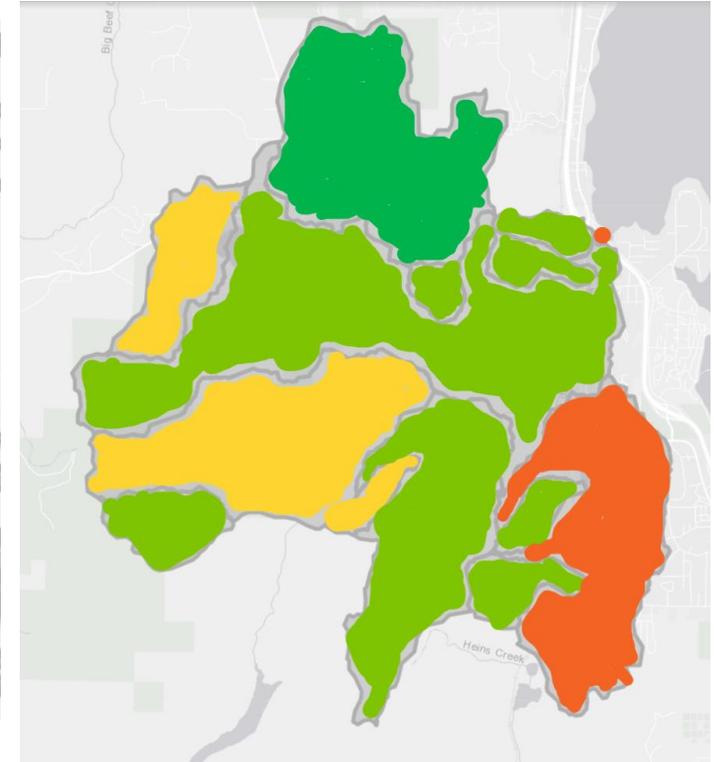
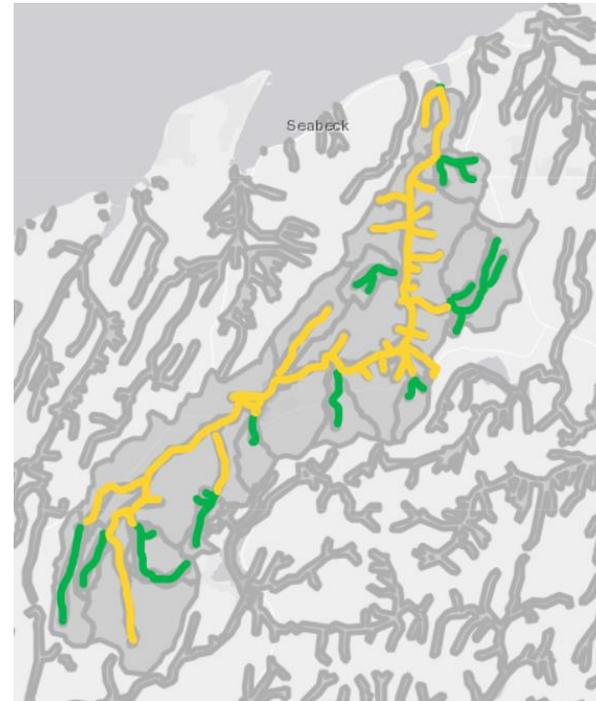
Attribute	Indicator	Condition Rating				
		Very Low	Low	Medium	High	Very High
S1 Riparian Vegetation	% forest cover in MU	<40%	41-55%	56-70%	71-85%	>85%
S2. Biological condition (B-IBI)	Aggregated B-IBI score for stream	≤ 20	21-40	41-60	61-80	81-100
S3. Water Quality	Performance of stream against bacteria standard	Fails standard	NA	Meets first, fails second	NA	Meets standard
S4. Fish Passage	Barrier presence/absence in MU	NA	Yes	NA	NA	No



Attribute	Indicator	Condition Rating				
		Very Low	Low	Medium	High	Very High
M1. Shoreline Armoring	% armor in MU	>75%	51-75%	26-50%	1-25%	<1%
M2. Riparian Vegetation	% forest cover in MU	<40%	41-55%	56-70%	71-85%	>85%
M3. Water Quality	SGA Classification status in MU	Prohibited	Prohibited & cond./appr.	Conditional	Conditional & appr.	Approved

Where we have been: how do we map current services using Kitsap County's Cartegraph?

Condition Rating Score Category	OCI Score within Cartegraph	
Very High	80-100	
High	60-80	
Medium	40-60	
Low	20-40	
Very Low	0-20	

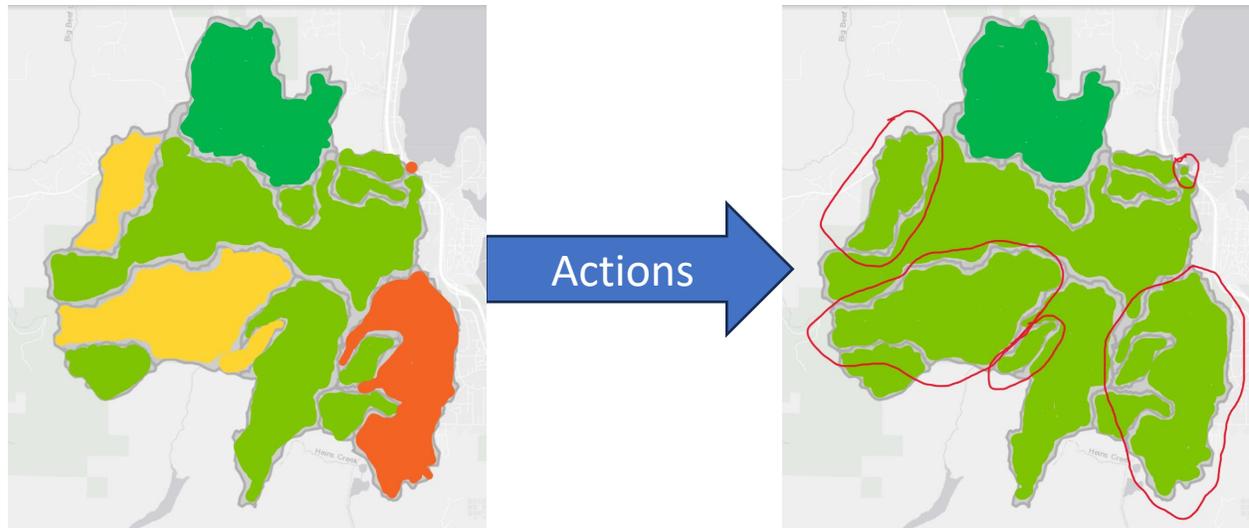


Using Chico and Big Beef Creek watersheds, how would different future conditions look?

Option 1: All management units (MUs) with services currently high and very high stay (no losses) and all very low, low, and medium improve to at least high

Feedback:

- What works for this option that we should keep?
 - What needs to evolve?
-
- Chico and Big Beef Crk examples
 - Forests, streams, shorelines, all
 - *Science- and GIS-based rules as we move toward County wide*



Tell us ...

- What do you like about the options?
- What needs to evolve and how?

→ *Moving into 2024, what actions can we take to achieve these DLOS?*

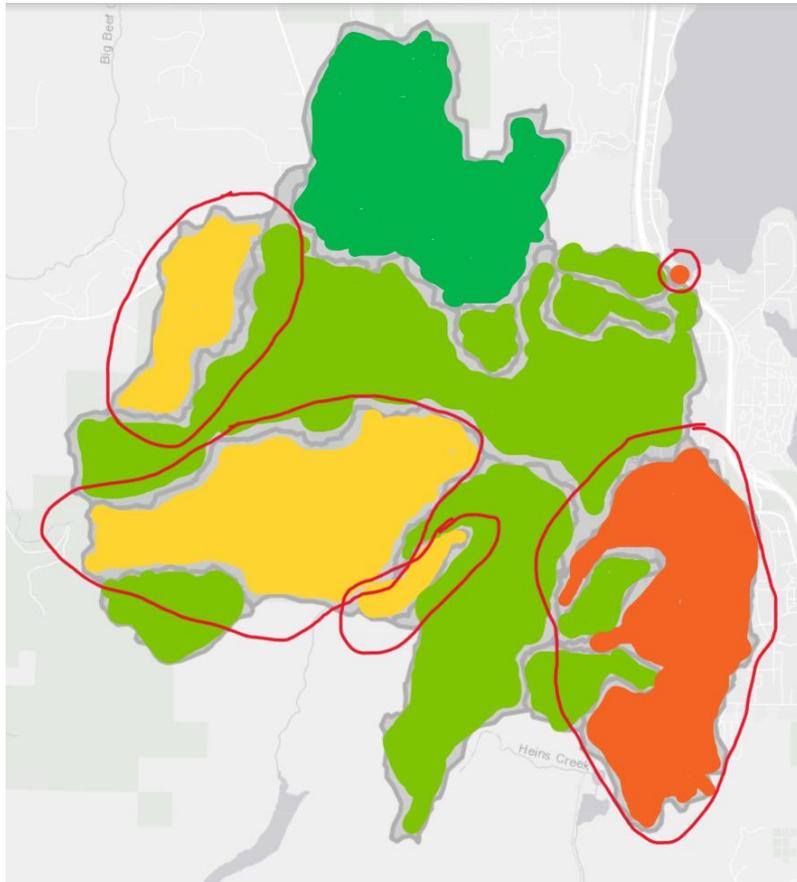


Chico Forests – Option 1 (Updated): All MUs with services currently high and very high stay high and very high (no net loss) and all MUs medium, low, and very low improve to at least high.

Attribute	Indicator	Condition Rating				
		Very Low	Low	Medium	High	Very High
F1. Forest Cover	% forest cover in MU	<40%	41-55%	56-70%	71-85%	>85%
F2. Succession Class	% late succession in MU	<1%	1-25%	26-50%	51-75%	>75%
		IMPROVE			PROTECT	

Science basis for thresholds between categories ...

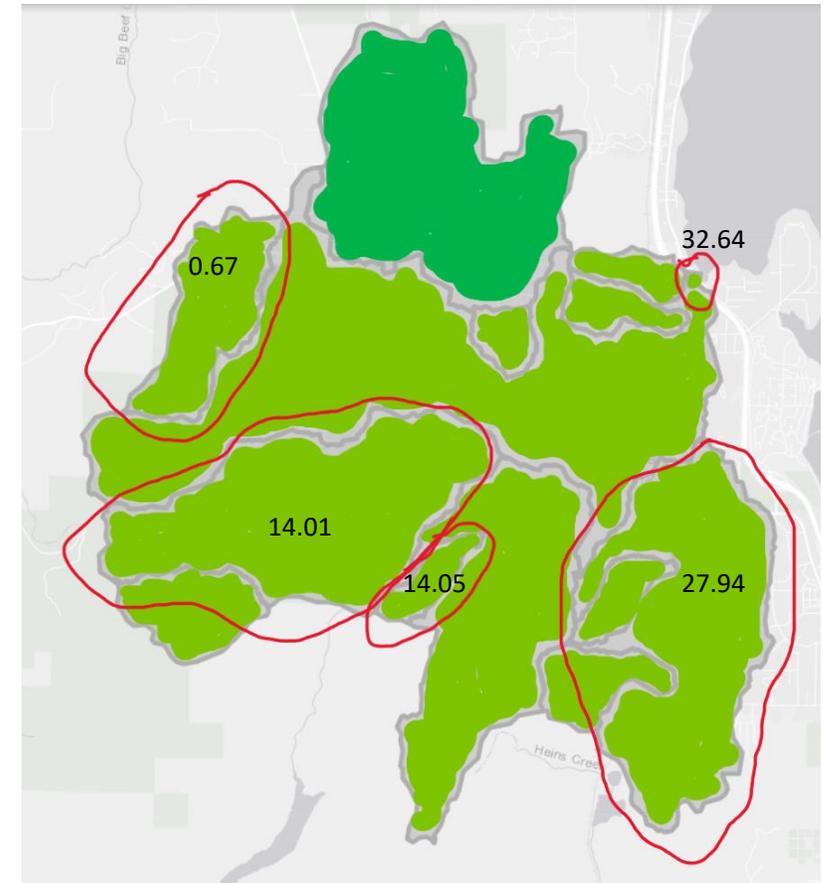
Chico Forests – Option 1a (Updated): All MUs with services currently high and very high stay at least high and very high (no net loss) and all MUs very low, low, and medium improve to at least high.



Feedback:

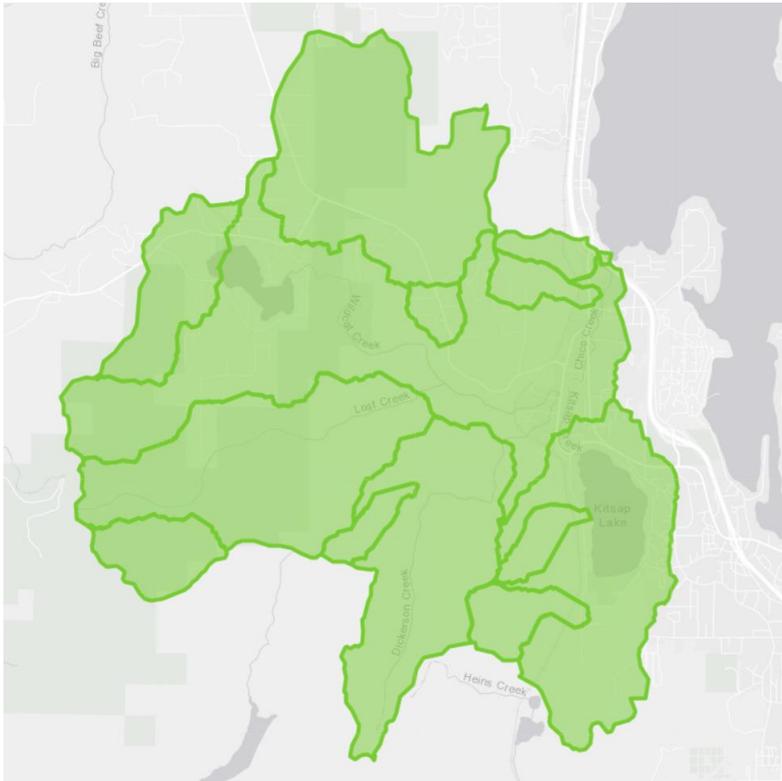
What works for this option that we should keep?

What needs to evolve?



Note: no MUs with “very low” forest LOS

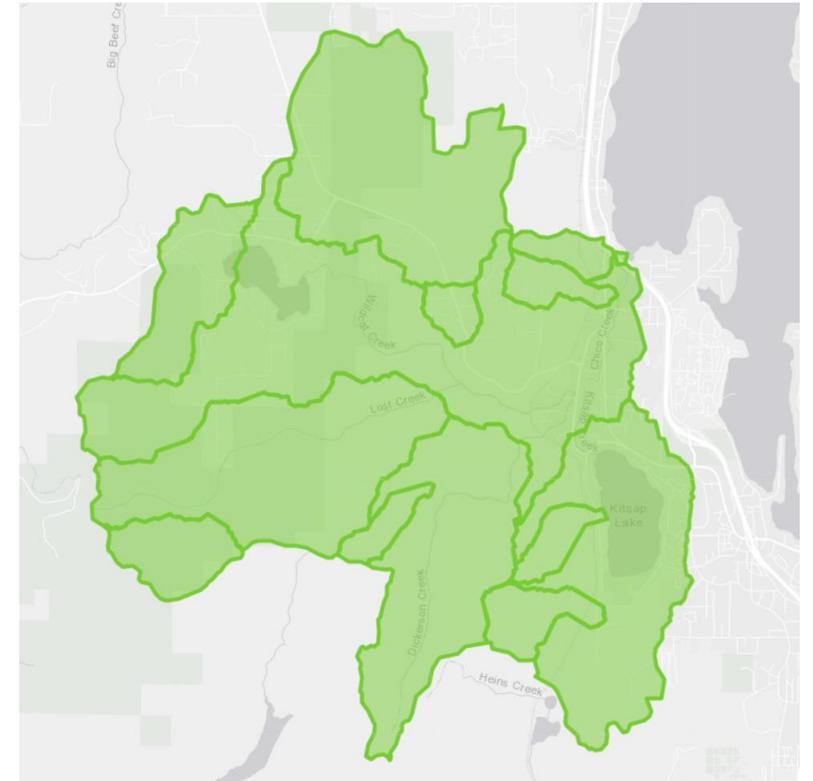
Chico Forests – Option 2 (Updated): Aggregate to watershed; any watershed currently high and very high stay high and very high (no losses) and all watersheds very low, low, and medium improve at least high.



Feedback:

What works for this option that we should keep?

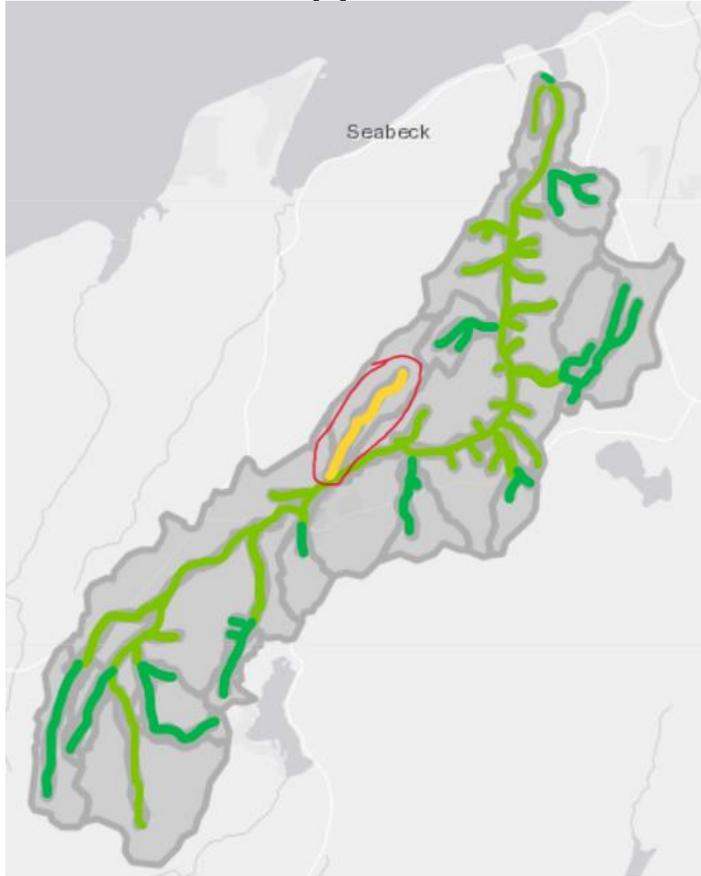
What needs to evolve?



Big Beef Creek Streams – Option 1 (Updated): All MUs with services currently high and very high stay high and very high (no net loss) and all MUs very low, low, and medium improve to at least high.

Attribute	Indicator	Condition Rating				
		Very Low	Low	Medium	High	Very High
S1 Riparian Vegetation	% forest cover in MU	<40%	41-55%	56-70%	71-85%	>85%
S2. Biological condition (B-IBI)	Aggregated B-IBI score for stream	≤ 20	21-40	41-60	61-80	81-100
S3. Water Quality	Performance of stream against bacteria standard	Fails standard	NA	Meets first, fails second	NA	Meets standard
S4. Fish Passage	Barrier presence/absence in MU	NA	Yes	NA	NA	No
<i>Science basis for thresholds between categories ...</i>						
IMPROVE				PROTECT		

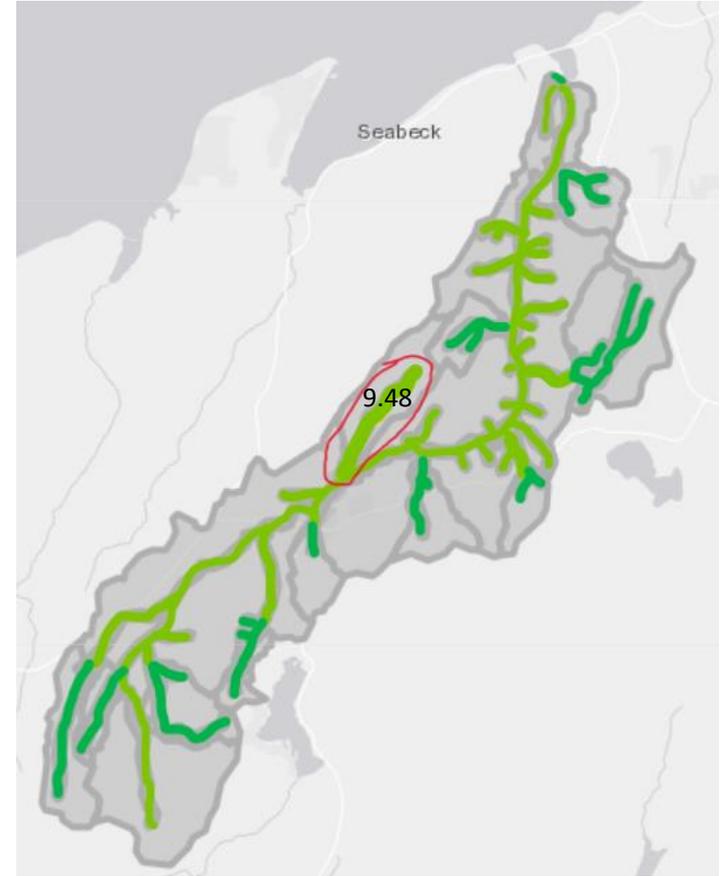
Big Beef Streams – Option 1 (Updated): All MUs with services currently high and very high stay high and very high (no net loss) and all MUs very low, low, and medium improve to at least high.



Feedback:

What works for this option that we should keep?

What needs to evolve?

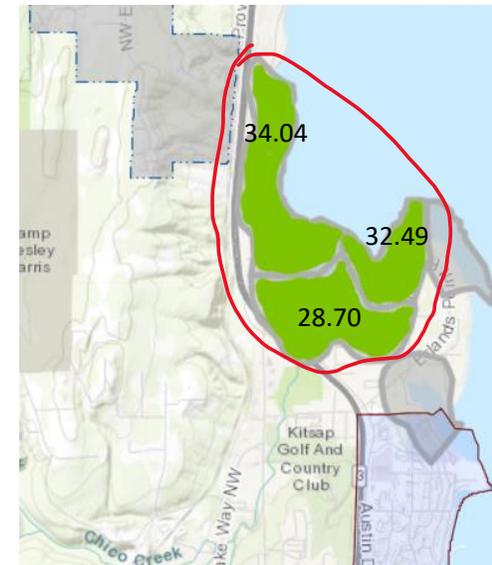
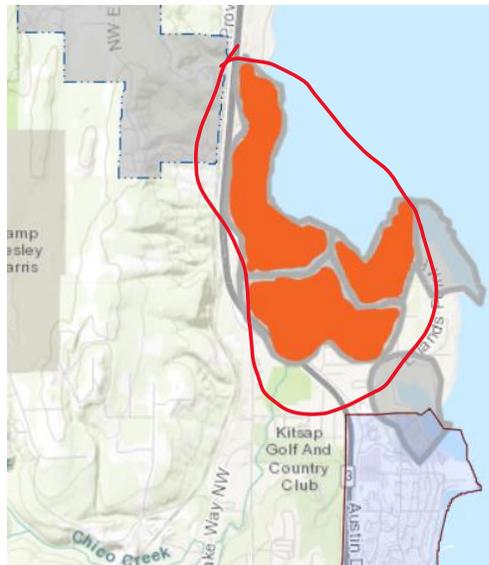
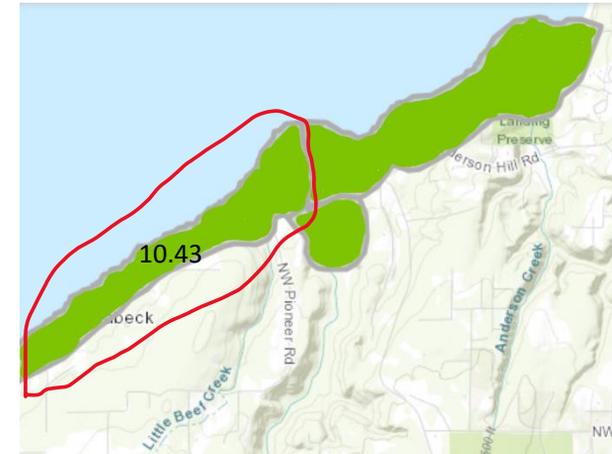
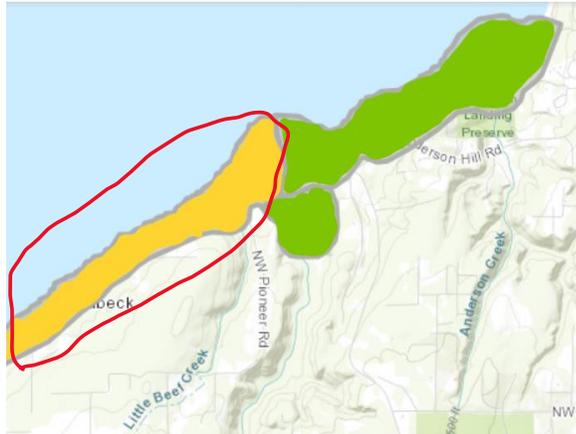


Note: no MUs with “very low” or “low” stream LOS

Shorelines – Option 1 (Updated): All MUs with services currently high and very high stay high and very high (no net loss) and all MUs very low, low, and medium improve to at least high.

Attribute	Indicator	Condition Rating				
		Very Low	Low	Medium	High	Very High
M1. Shoreline Armoring	% armor in MU	>75%	51-75%	26-50%	1-25%	<1%
M2. Riparian Vegetation	% forest cover in MU	<40%	41-55%	56-70%	71-85%	>85%
M3. Water Quality	SGA Classification status in MU	Prohibited	Prohibited & cond./appr.	Conditional	Conditional & appr.	Approved
<i>Science basis for thresholds between categories ...</i>						
		IMPROVE			PROTECT	

Shorelines – Option 1 (Updated): All MUs with services currently high and very high stay high and very high (no net loss) and all MUs very low, low, and medium improve to at least high.



Feedback:

What works for this option that we should keep?

What needs to evolve?

Discussion

- Thoughts on how these have evolved?
- Is anything missing from their current state?
- How can these options help inform decision in the next step?
- Remember – these aren't set in stone!

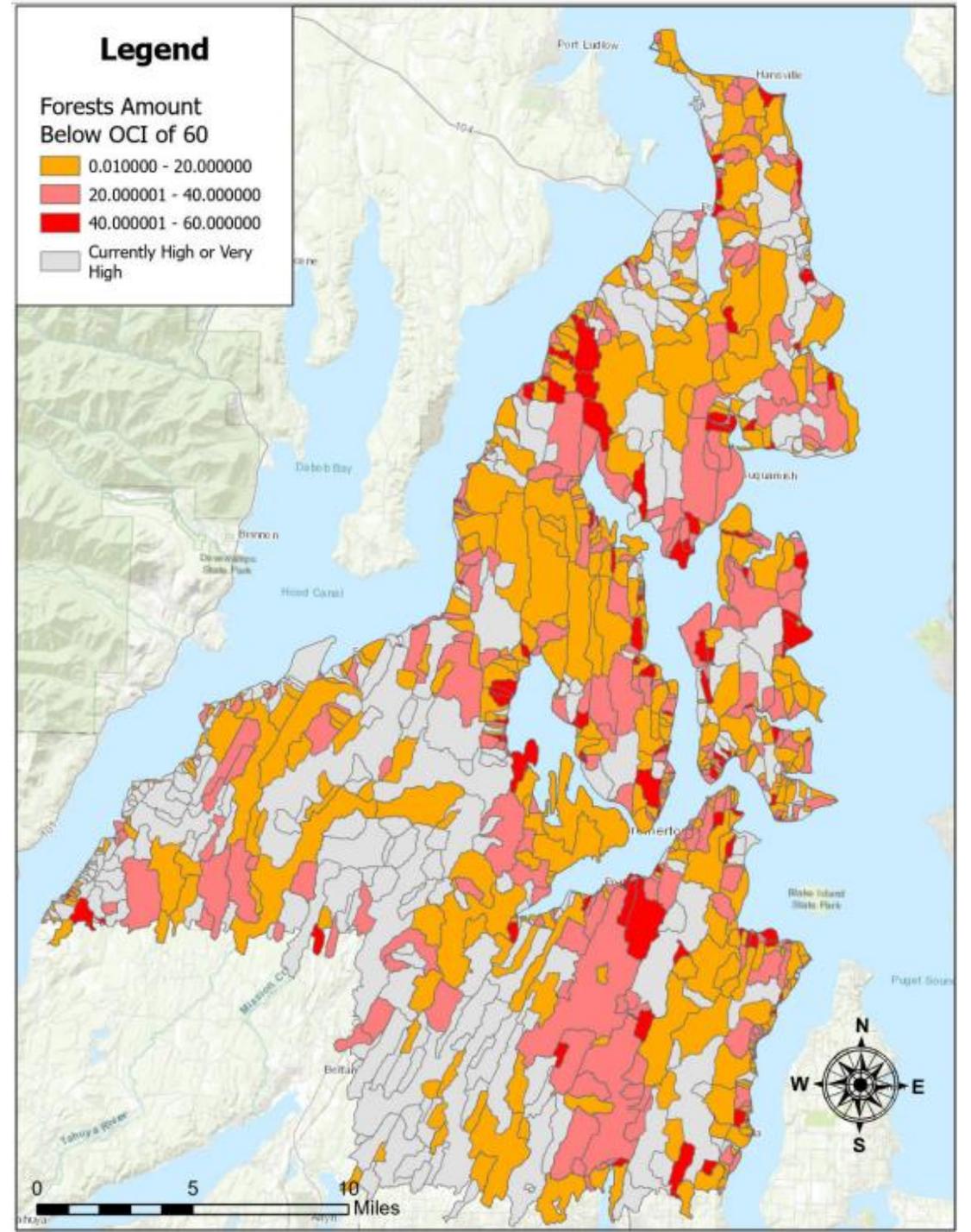


Snapshots of entire County

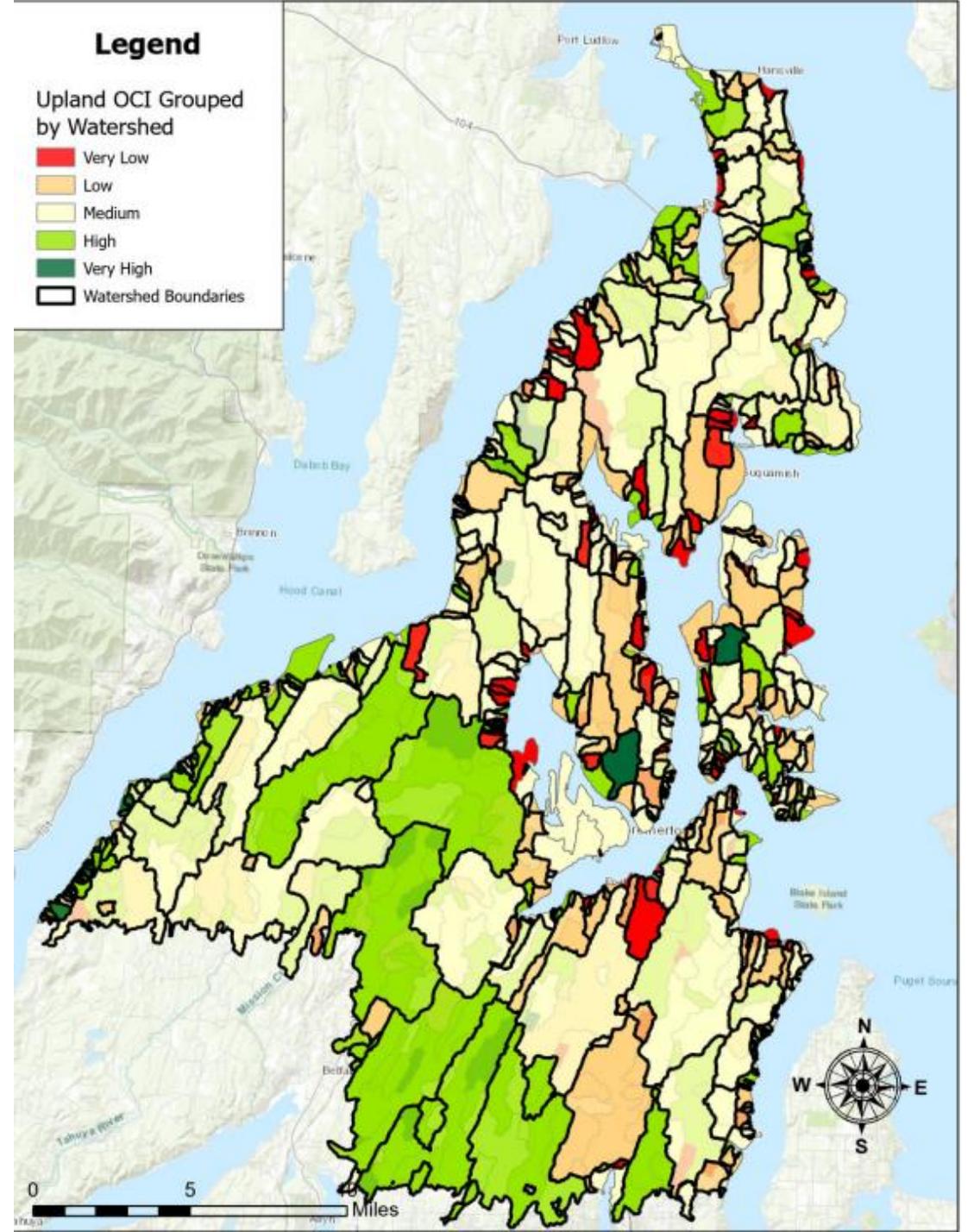
- Initial Reactions
- Rorschach test – what do you see in these maps?
- What areas stick out to you?
- Is there anything that surprised you?



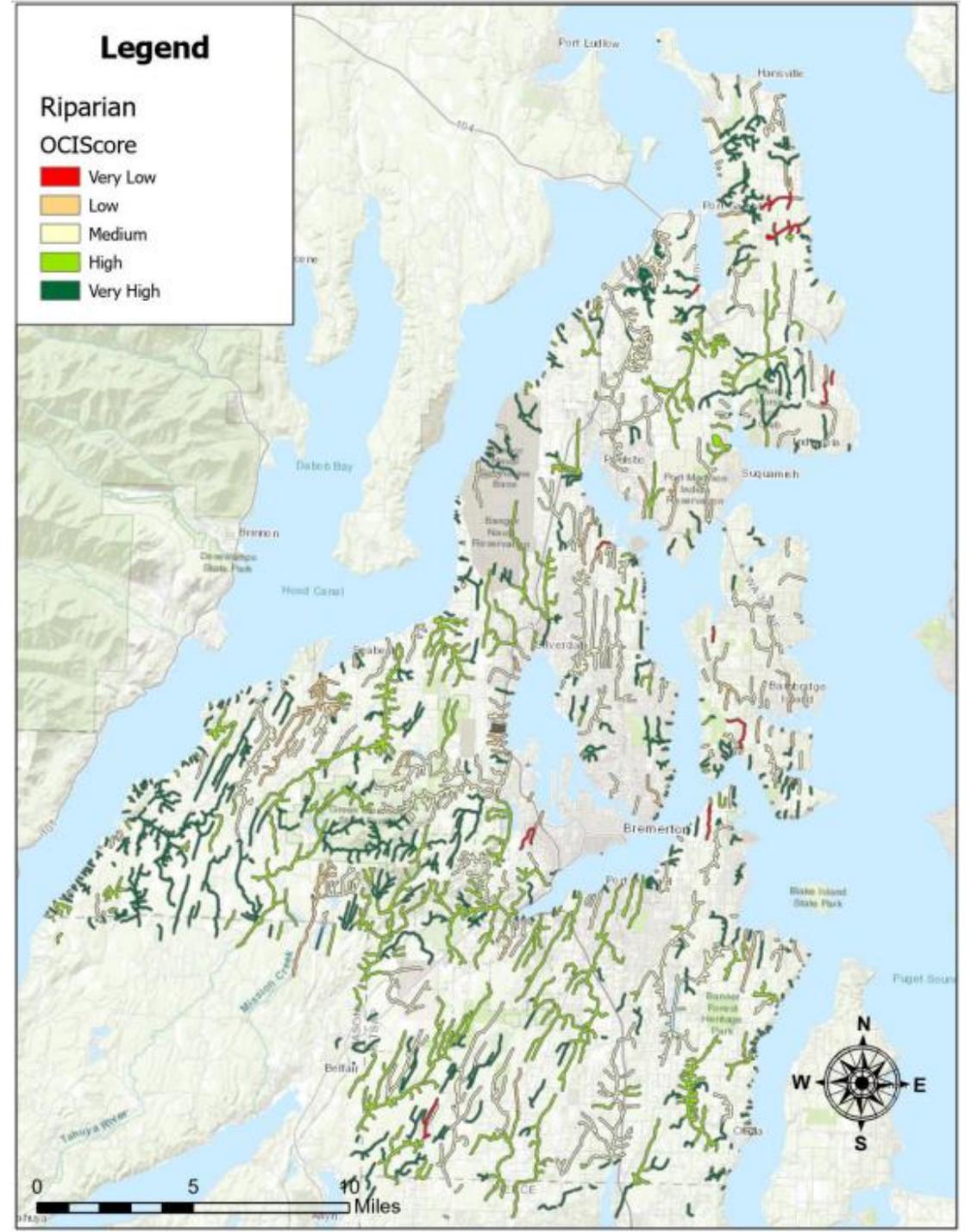
DLOS Gap – Forests



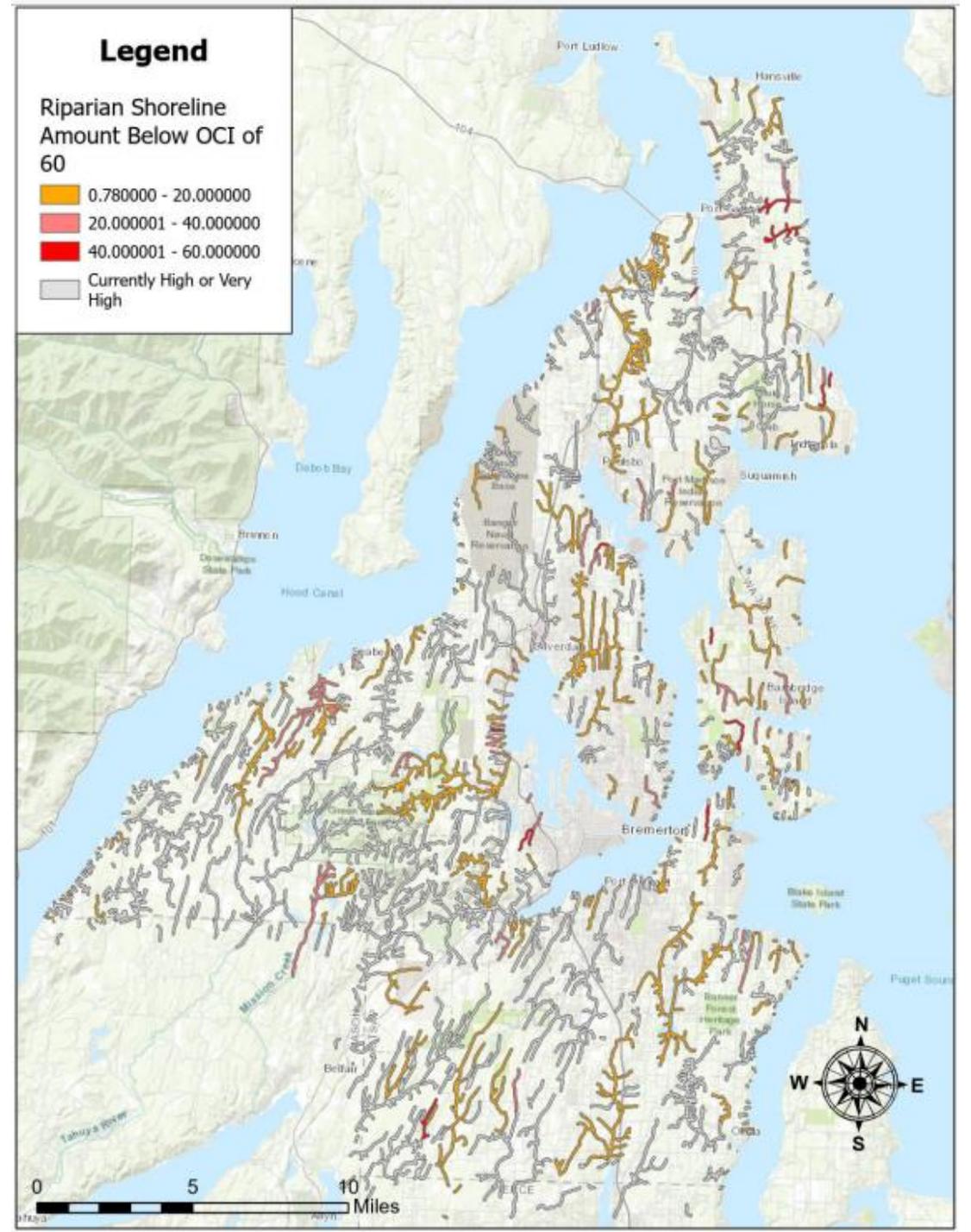
Current LOS – Forests at Watershed Level



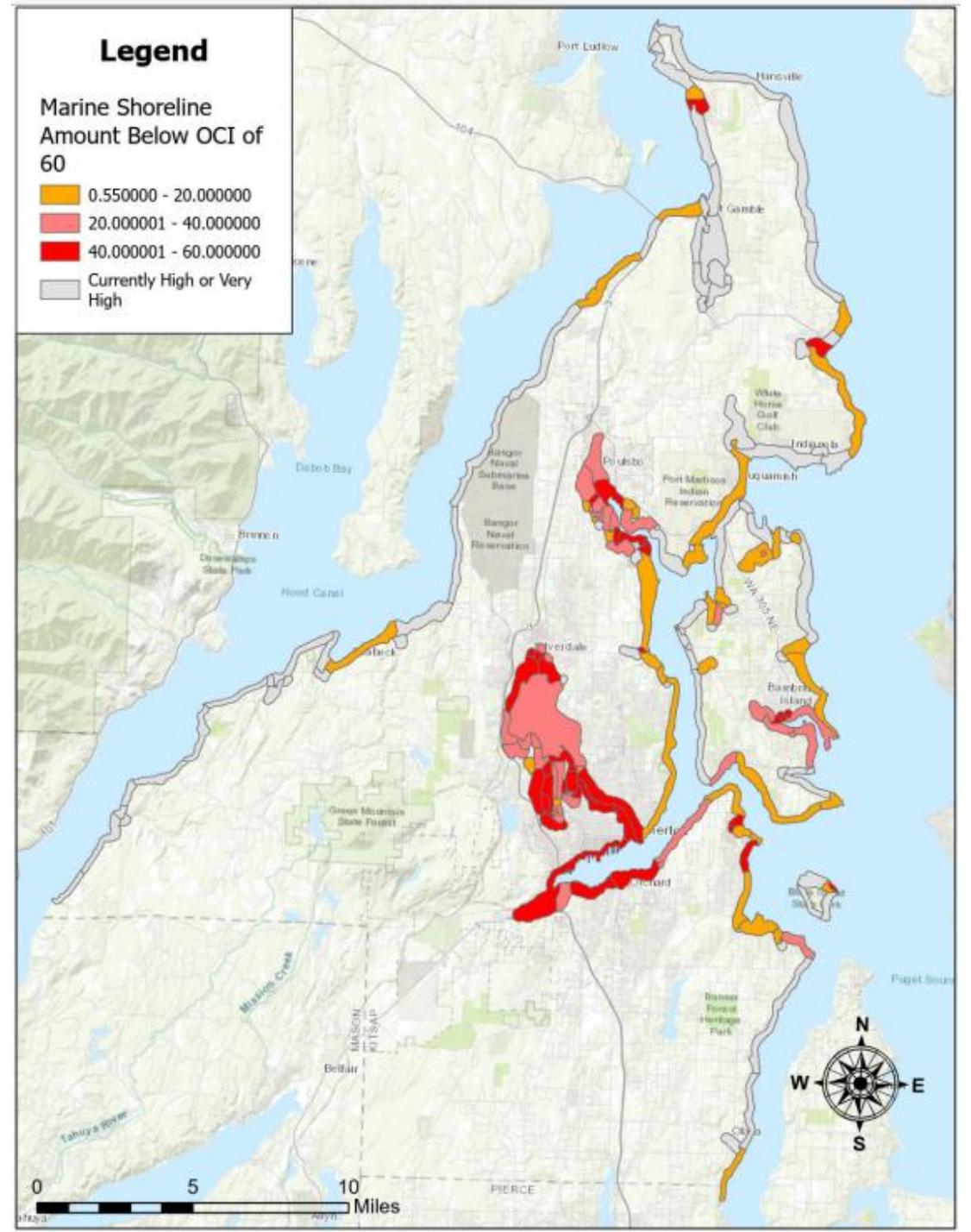
Current LOS – Streams



LOS Gap – Streams



LOS Gap – Shorelines



Discussion

- Initial Reactions
- Did you notice anything interesting?
- Is there anything that surprised you?
- Where do you see areas of concern?

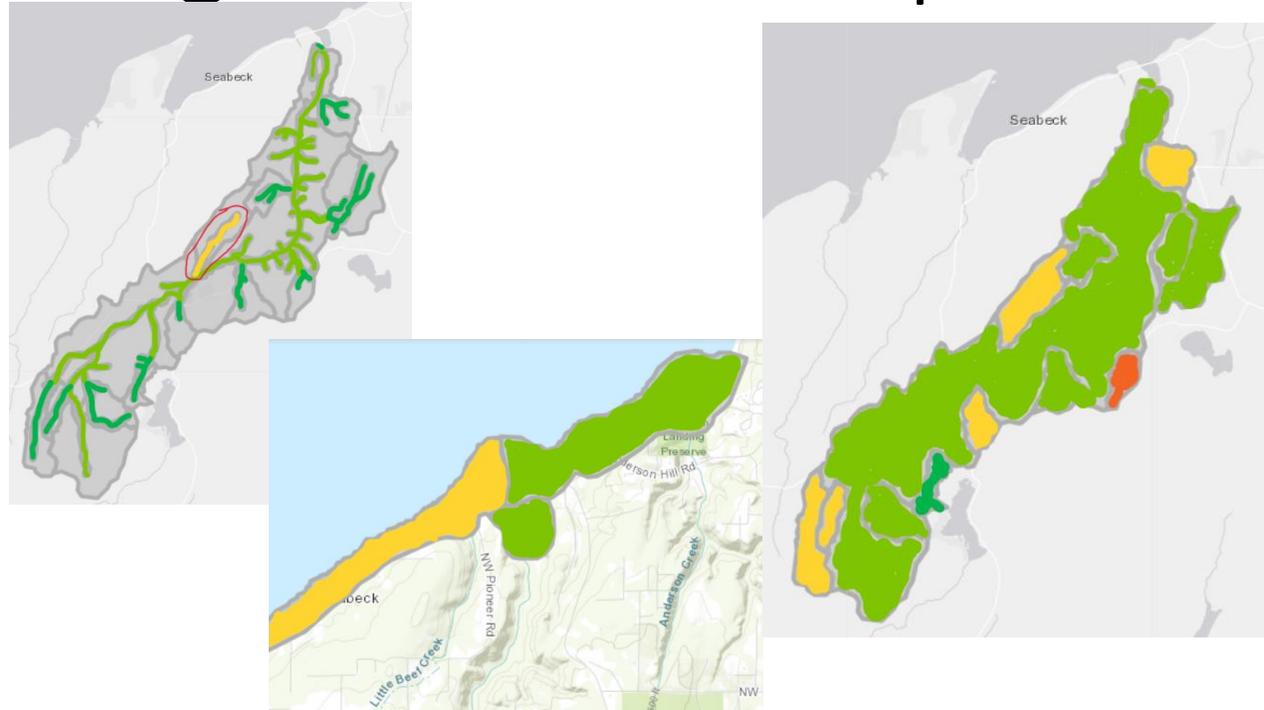


Looking Ahead to 2024

- If we adopt these DLOS for the pilot watersheds, what sort of actions help achieve these goals?
- How do we prioritize the work?
- How do we adaptively manage these goals?



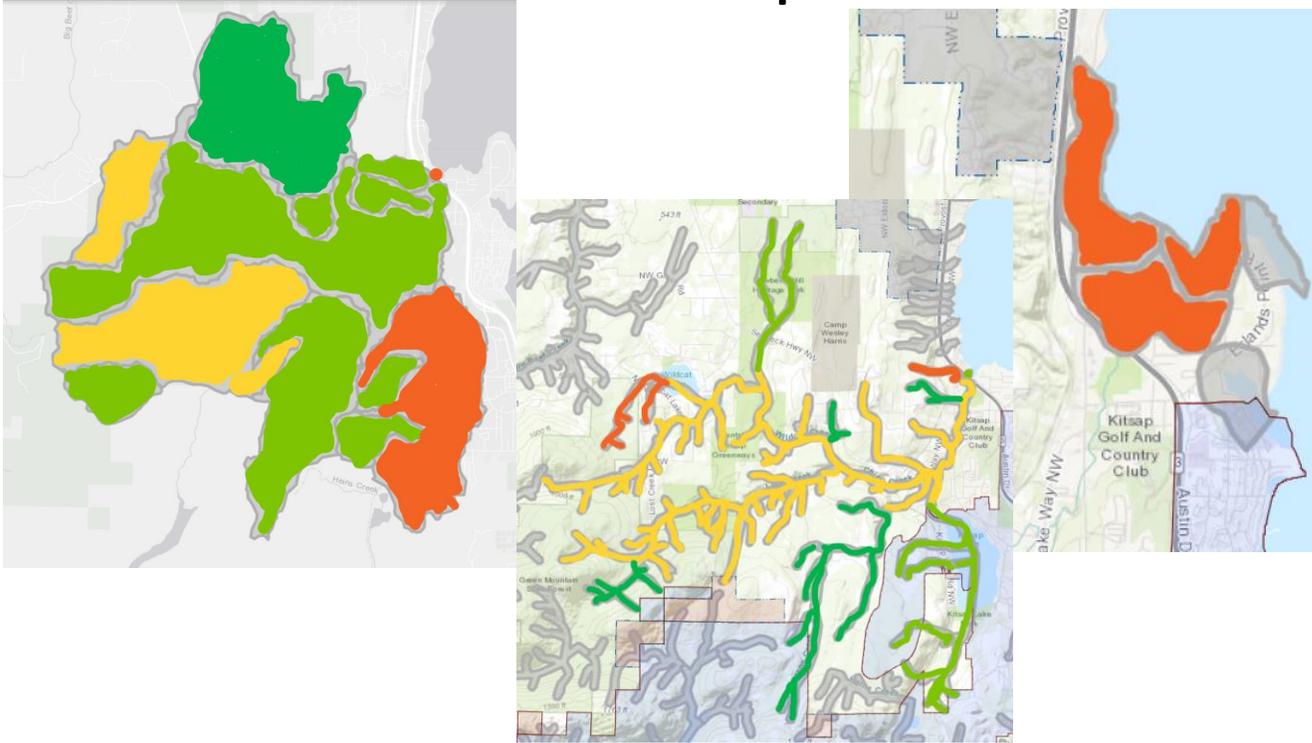
Big Beef Creek implementation action examples



- Forests – for 4 MUs with low Forest LOS, projects that increase forest cover (attribute F1) and track forest cover every two years to assess NNL on watershed scale (with adaptive management as needed)
- Streams – for 14 MUs with medium and high Stream LOS, threat assessment of projects that would decrease riparian forest cover (attribute S1) and connect with Kitsap Public Health District on water quality issues related to septic systems (crosswalk with Shorelines LOS).
- Shorelines – for 1 MU with low LOS, assess options for reducing shoreline armoring (attribute M1) through Shore Friendly focus work and shellfish bed water quality threats with KPHD/DOH (attribute M3, crosswalk with Streams LOS).

MUs	Forests	Streams	Shorelines
Very High	1	12	0
High	7	1	2
Medium	5	1	1
Low	1	0	0
Very Low	0	0	0

Chico Creek implementation action examples



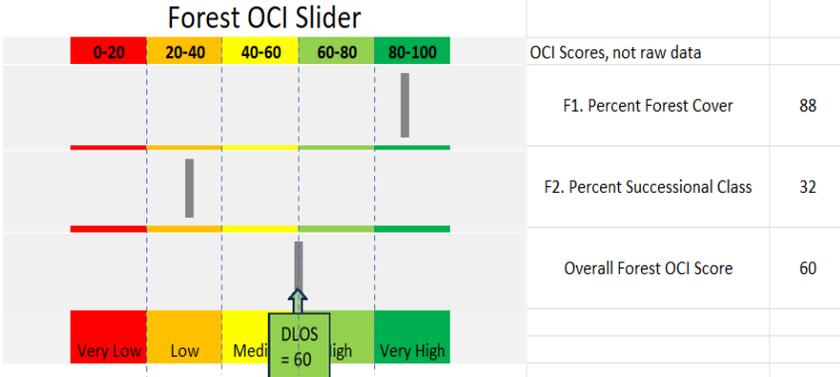
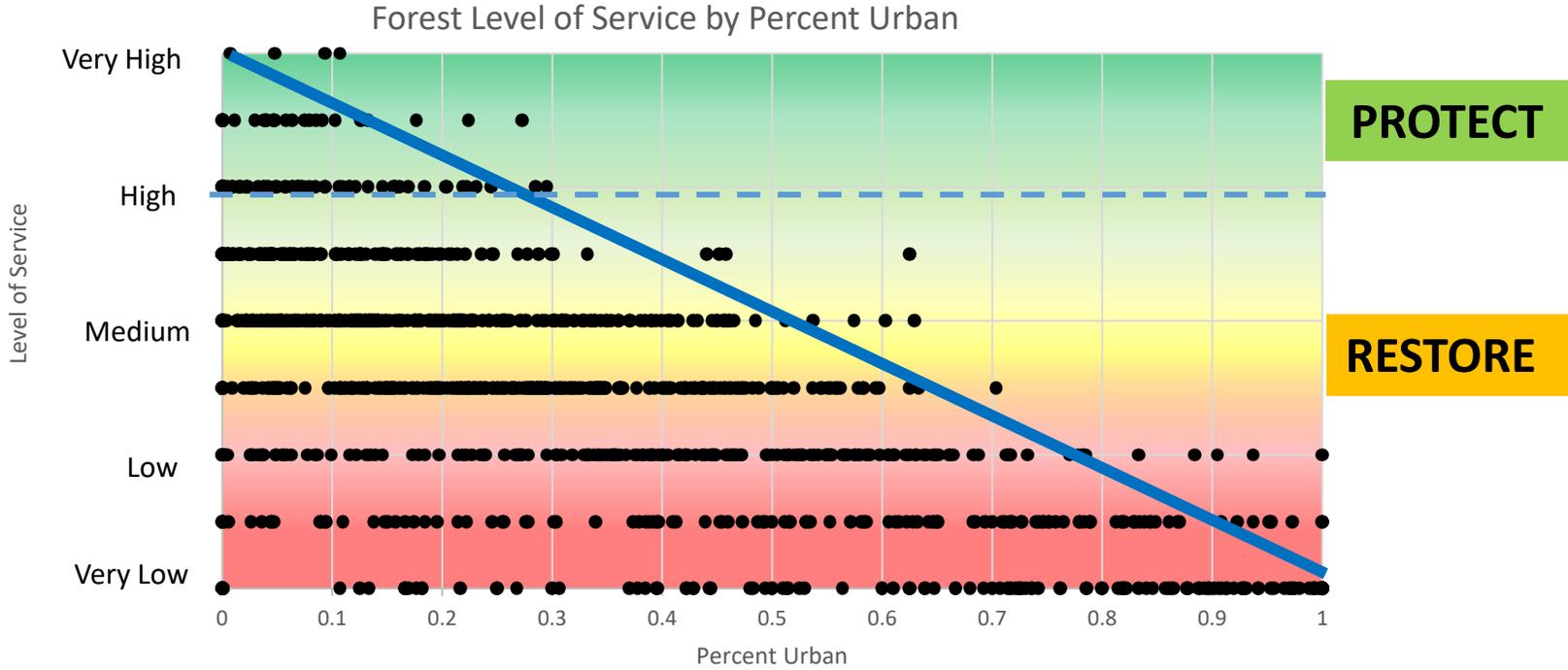
Forests – for Lost Creek MU with low Forest LOS, projects that increase forest cover and track forest cover annually to assess NNL on watershed scale (with adaptive management as needed) and if on DNR lands, approach about conservation easement or trustland transfer

Streams – with Hwy 3 barrier removal underway, next highest priority barriers for removal (factor S4) and connect with Kitsap Public Health District on water quality issues related to septic systems (crosswalk with Shorelines LOS, Streams S3 water quality which uses the two tests for E. coli)

- Shorelines – for 3 MUs with low LOS, assess options for reducing shoreline armoring through Shore Friendly focus work and shellfish bed water quality threats with KPHD (crosswalk with Streams LOS)

MUs	Forests	Streams	Shorelines
Very High	1	5	0
High	8	5	0
Medium	3	2	0
Low	2	2	3
Very Low	0	0	0

How to decide on which actions to take



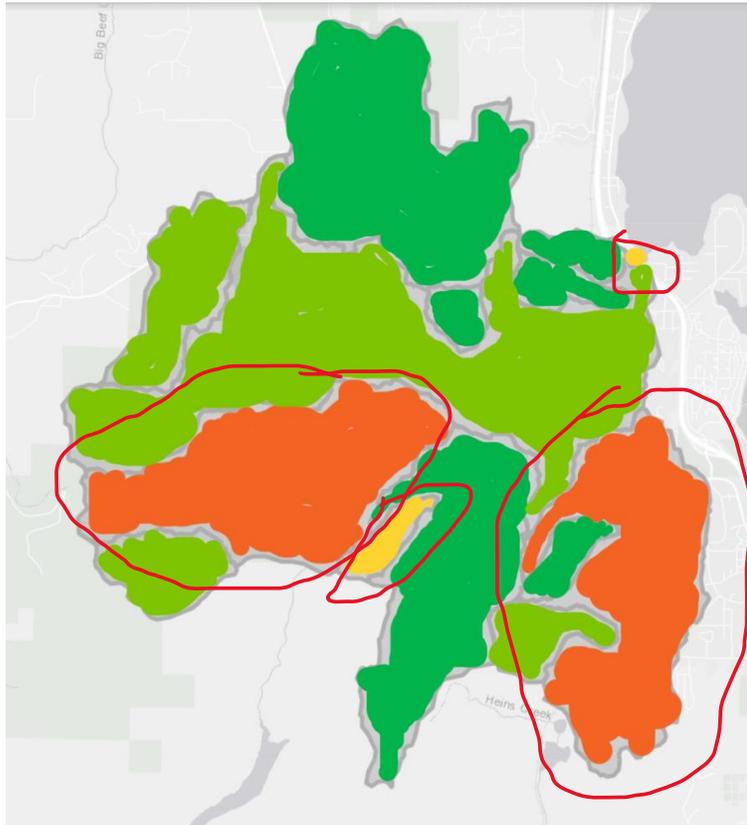
Chico Forests – Option 3 (Updated): Focus on attribute F1. Any MUs with very low, low, and medium forest cover must increase to at least high.

Attribute	Indicator	Condition Rating				
		Very Low	Low	Medium	High	Very High
F1. Forest Cover	% forest cover in MU	<40%	41-55%	56-70%	71-85%	>85%
F2. Succession Class	% late succession in MU	<1%	1-25%	26-50%	51-75%	>75%

IMPROVE

PROTECT

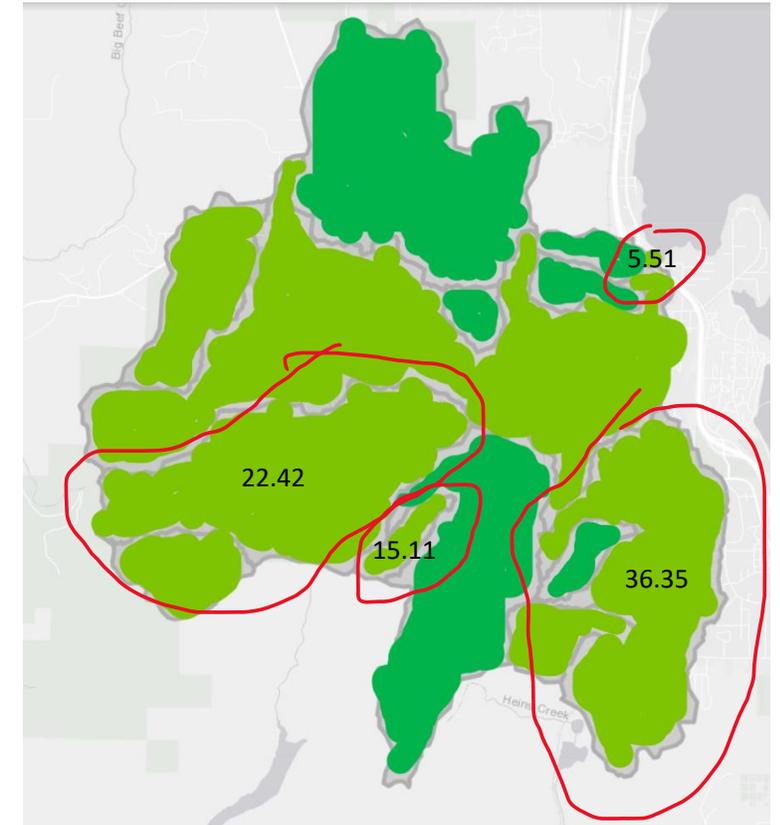
Chico Forests – Option 3 (Updated): Focus on attribute F1. Any MUs with low or very low forest cover must increase to at least 70%.



Feedback:

What works for this option that we should keep?

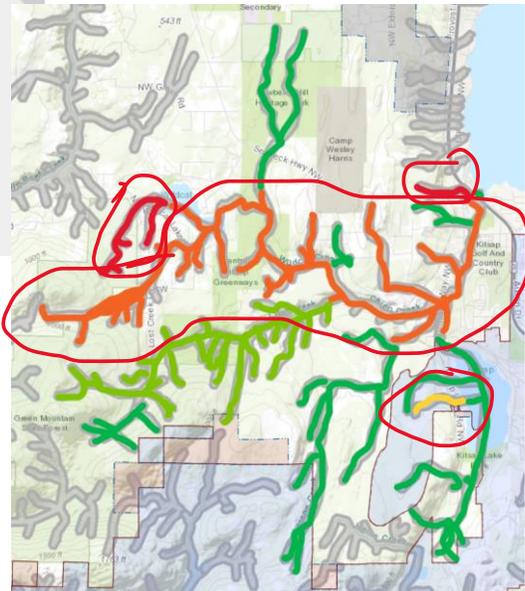
What needs to evolve?



Big Beef Streams – Option 3a (Updated): Focus on attribute S1. Any MUs with high and very high must stay high and very high (NNL). Any MU with very low, low, and medium S1 must improve to at least high.

Attribute	Indicator	Condition Rating				
		Very Low	Low	Medium	High	Very High
S1 Riparian Vegetation	% forest cover in MU	<40%	41-55%	56-70%	71-85%	>85%
S2. Biological condition (B-IBI)	Aggregated B-IBI score for stream	≤ 20	21-40	41-60	61-80	81-100
S3. Water Quality	Performance of stream against bacteria standard	Fails standard	NA	Meets first, fails second	NA	Meets standard
S4. Fish Passage	Barrier presence/absence in MU	NA	Yes	NA	NA	No
		IMPROVE			PROTECT	

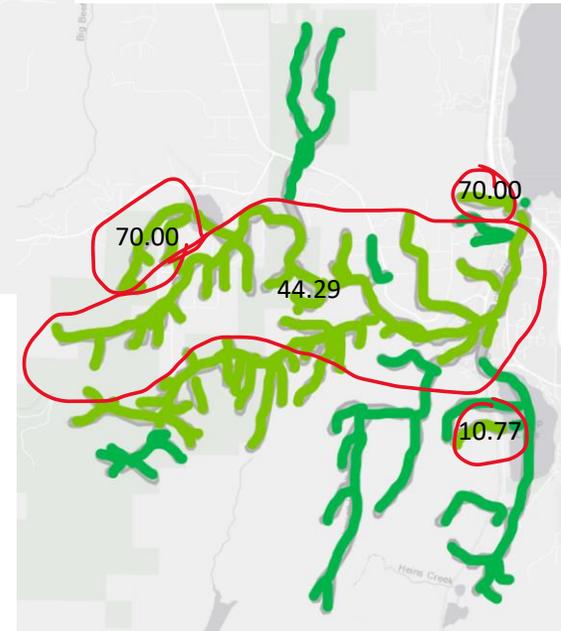
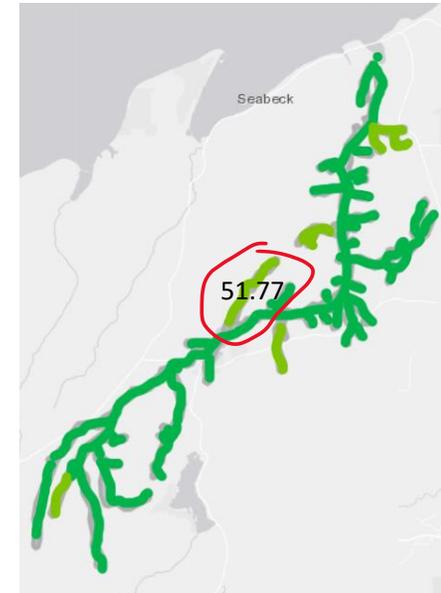
Big Beef Streams – Option 3a (Updated): Focus on attribute S1.
Any MUs with very low, low, and medium riparian vegetation must increase to at least high. Any MU with high and very high riparian vegetation must remain at least high and very high (NNL)



Feedback:

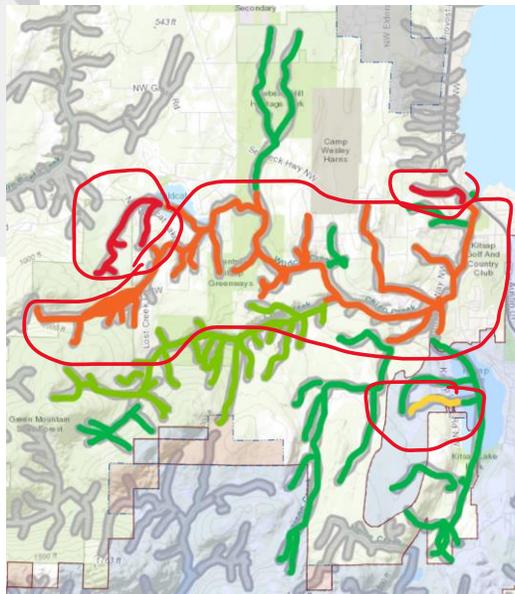
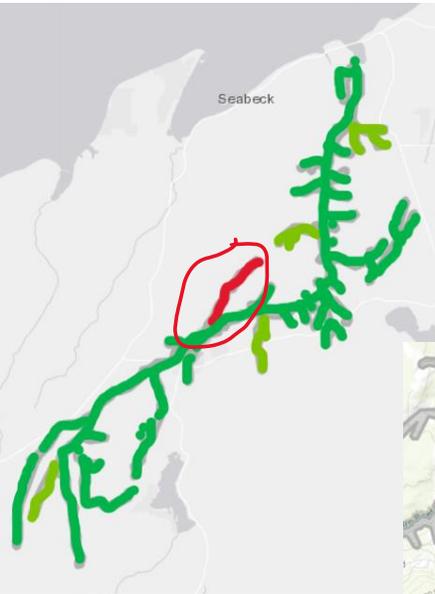
What works for this option that we should keep?

What needs to evolve?



Streams – Option 3b (Updated): Focus on attribute S1. What if all MUs with >70% riparian vegetation increase to 70%?

Attribute S1 only



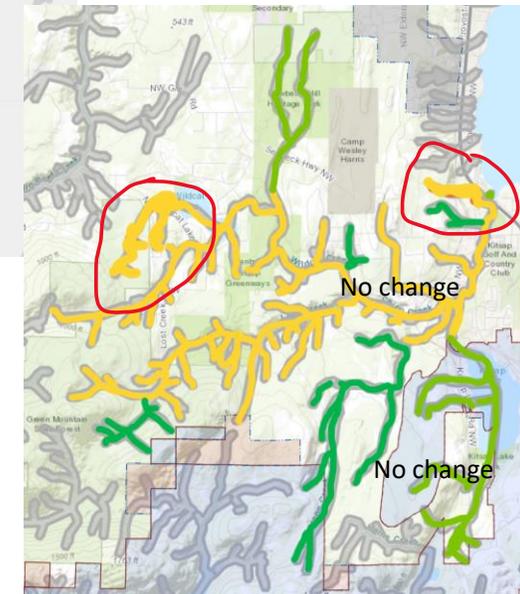
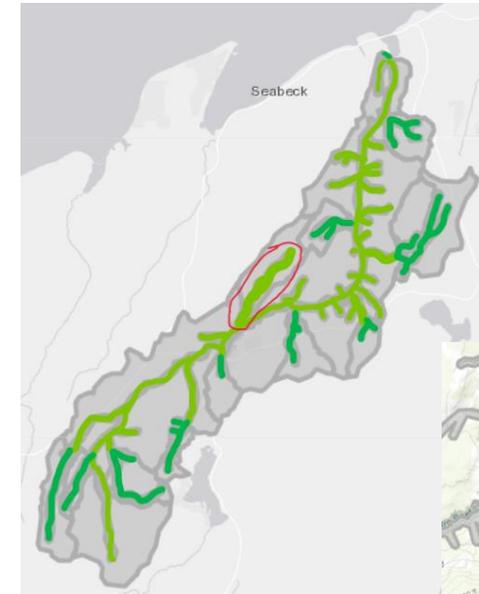
What if riparian vegetation (S1) improved to OCI of 60? How would that affect the overall OCI for that MU?

Feedback:

What works for this option that we should keep?

What needs to evolve?

Overall LOS



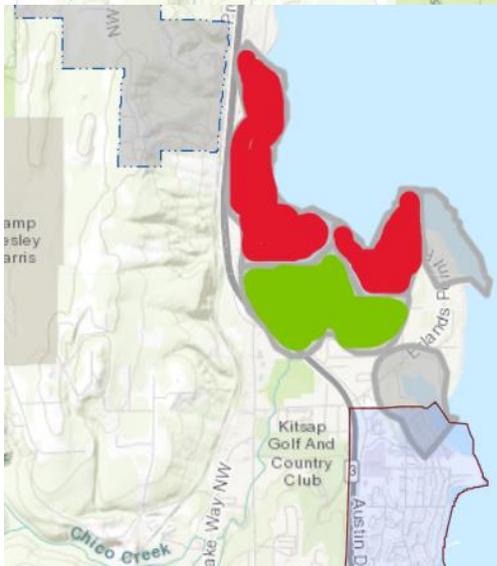
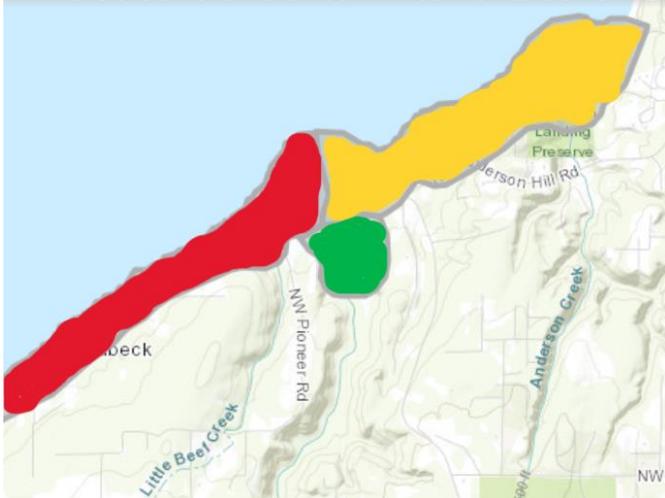
Shorelines – Option 3 (Updated): Focus on attribute M1. Any MUs with >25% shoreline armoring must decrease armoring to <25% (increase service)

Attribute	Indicator	Condition Rating				
		Very Low	Low	Medium	High	Very High
M1. Shoreline Armoring	% armor in MU	>75%	51-75%	26-50%	1-25%	<1%
M2. Riparian Vegetation	% forest cover in MU	<40%	41-55%	56-70%	71-85%	>85%
M3. Water Quality	SGA Classification status in MU	Prohibited	Prohibited & cond./appr.	Conditional	Conditional & appr.	Approved

Science basis for thresholds between categories ...

IMPROVE | **PROTECT**

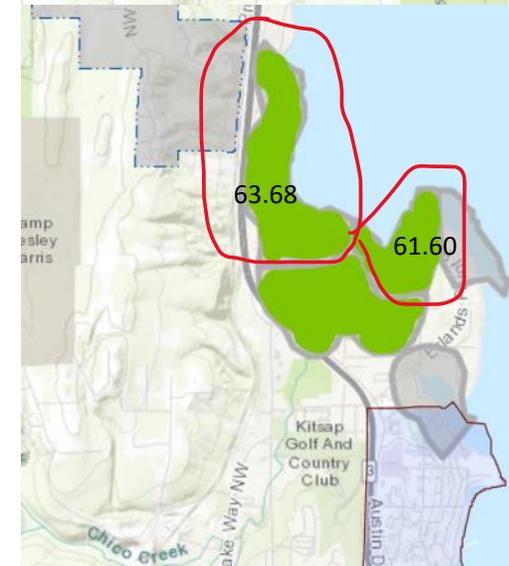
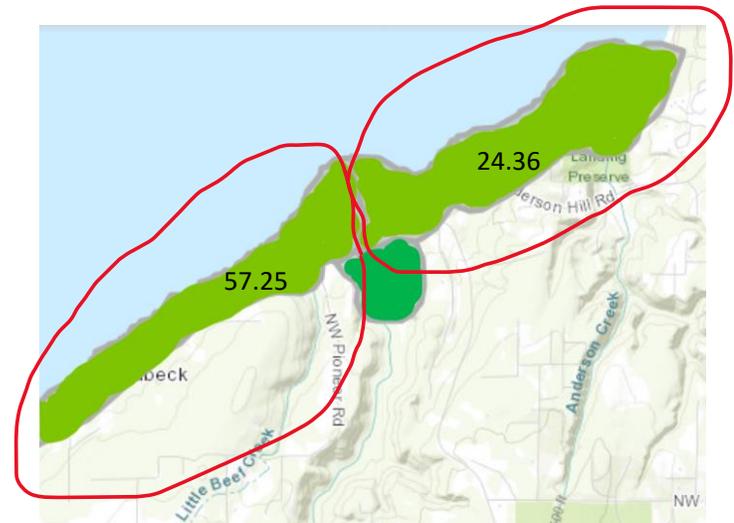
Shorelines – Option 3a (Updated): Focus on attribute M1. Any MUs with >25% shoreline armoring must decrease armoring to <25% (increase service)



Feedback:

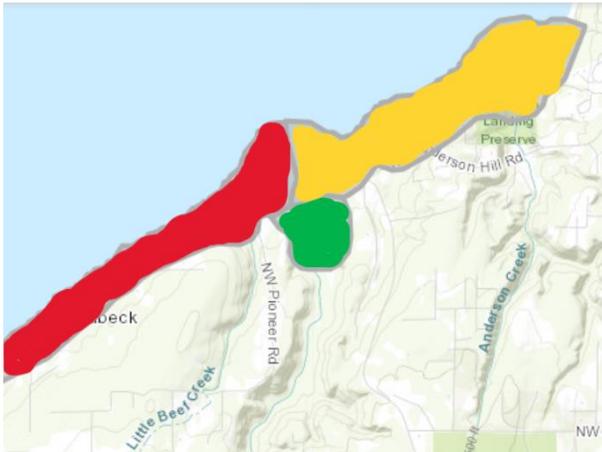
What works for this option that we should keep?

What needs to evolve?



Shorelines – Option 3b (Updated): Focus on attribute M1. What if all MUs with >25% shoreline armoring dropped to <25% - LOS?

Attribute M1 only

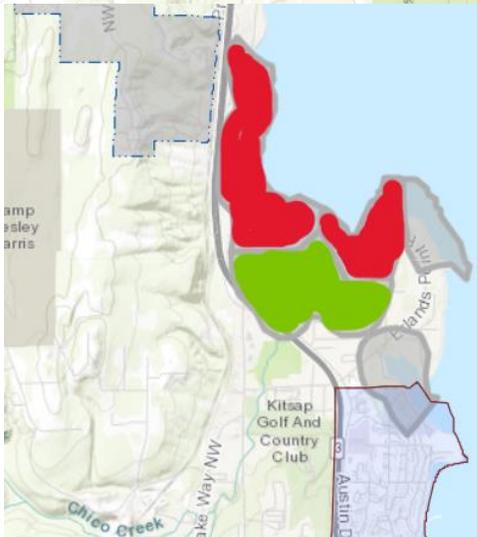


What would happen if armoring OCI improves to 60?

Feedback:

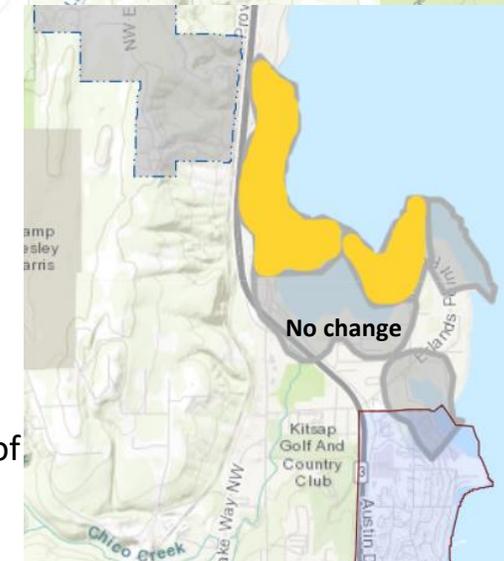
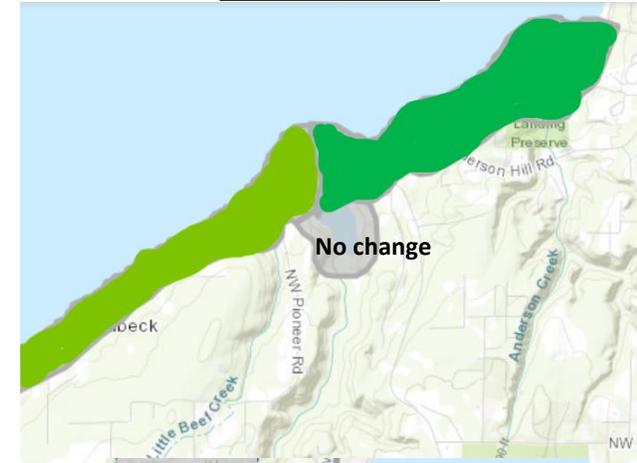
What works for this option that we should keep?

What needs to evolve?



Reducing shoreline armoring in all 3 MUs to <25% would increase 2 of 3 MUs from LOW to MEDIUM.

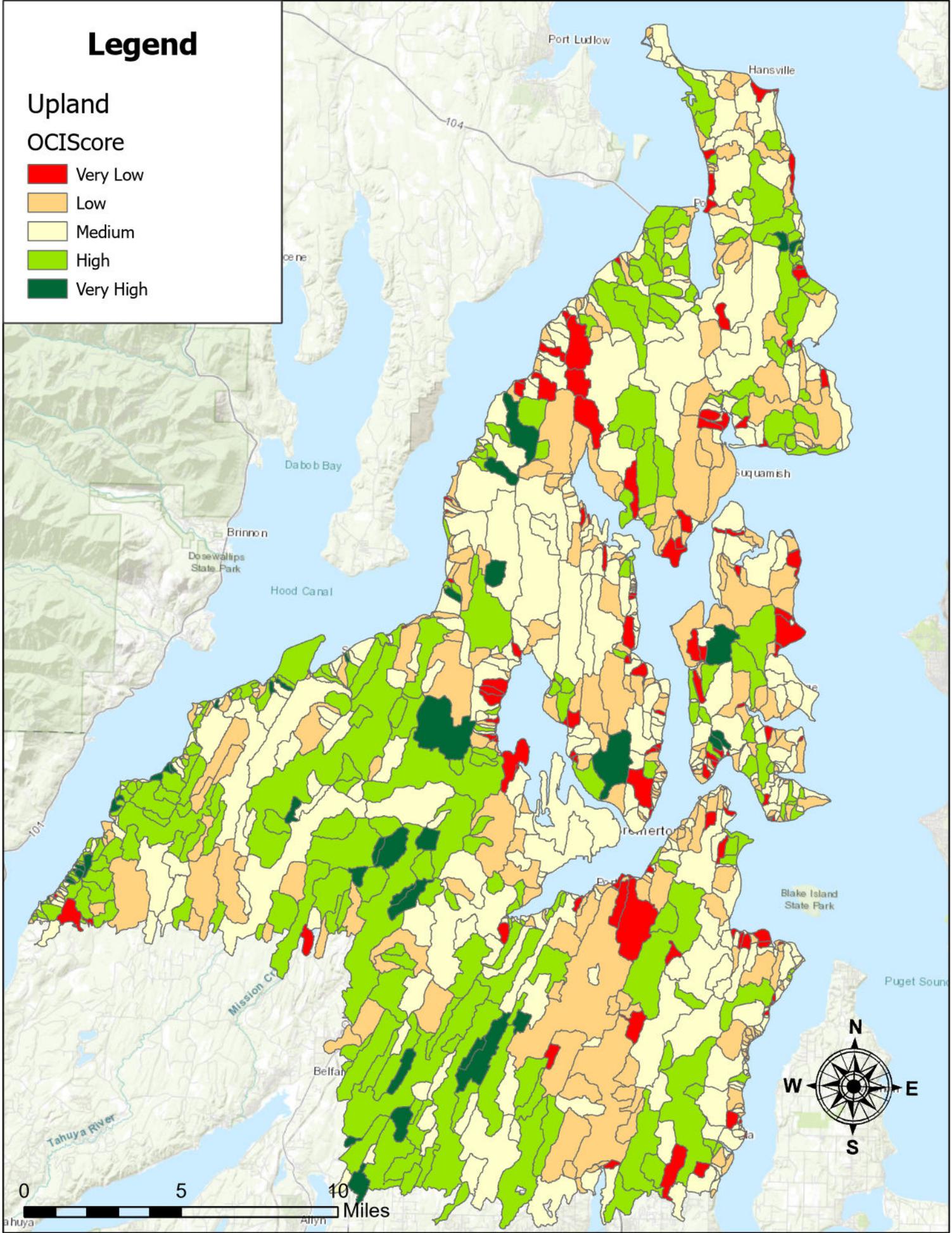
Overall LOS



Legend

Upland
OCIScore

- Very Low
- Low
- Medium
- High
- Very High



Legend

Upland

OCIScore

 Very Low

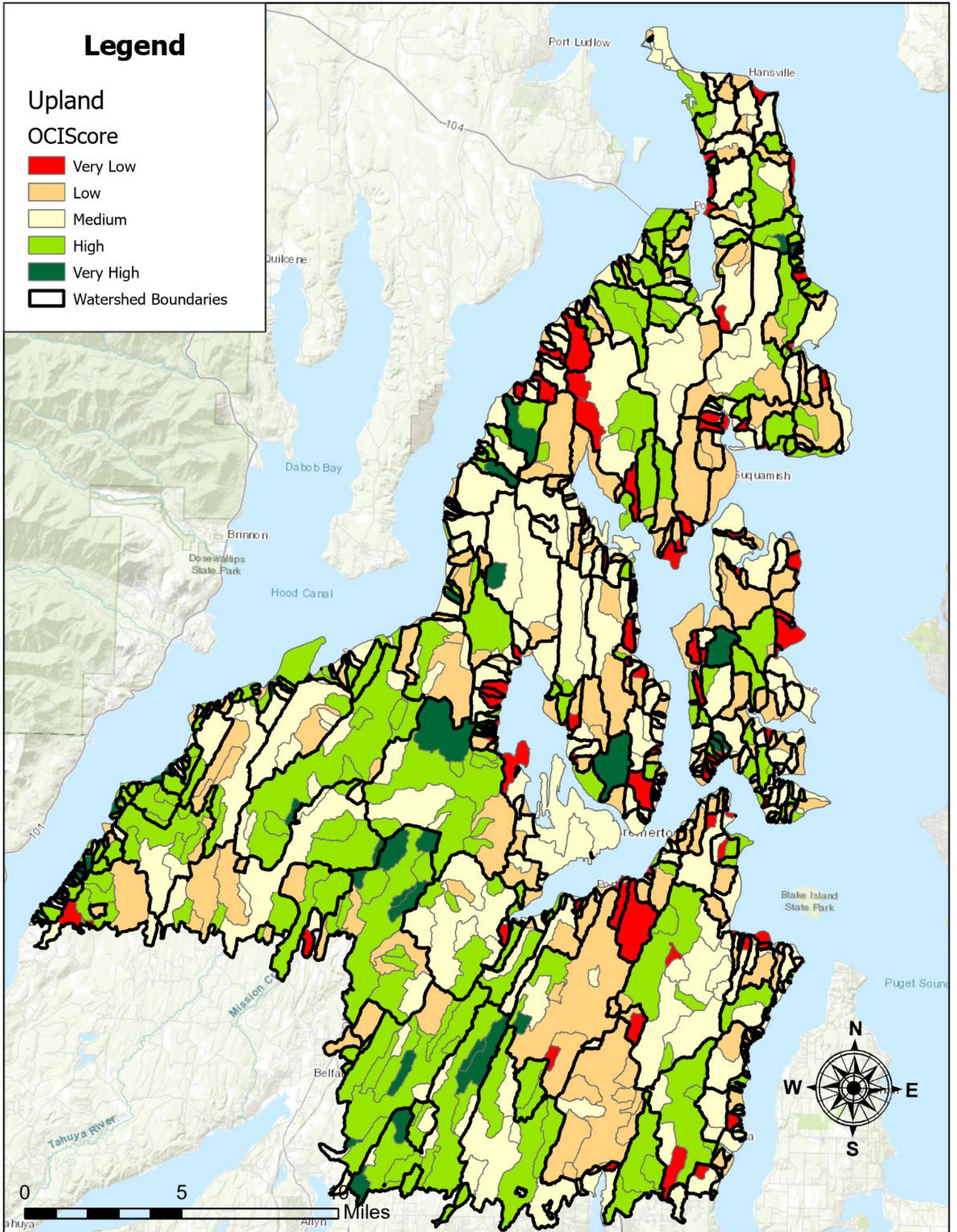
 Low

 Medium

 High

 Very High

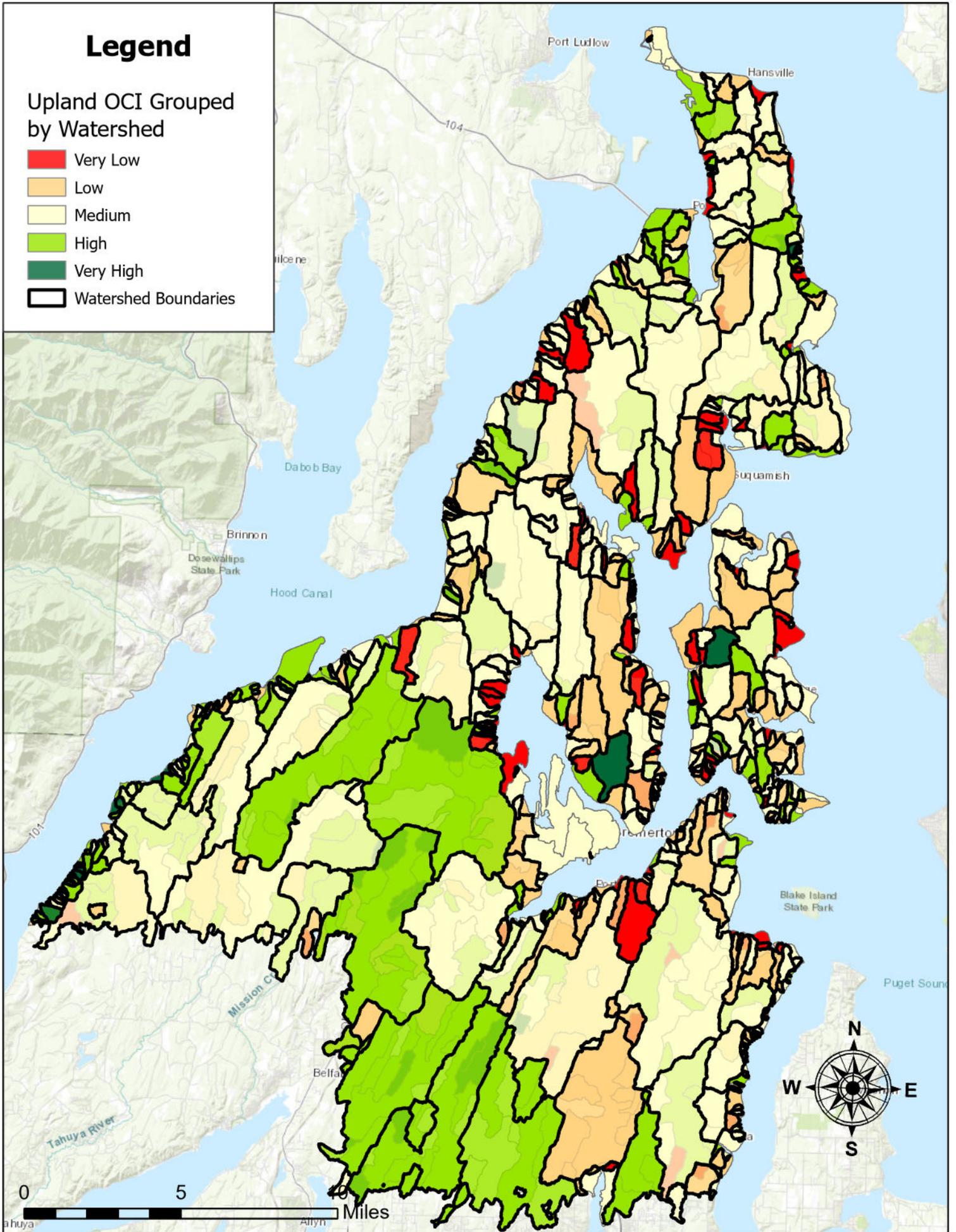
 Watershed Boundaries



Legend

Upland OCI Grouped by Watershed

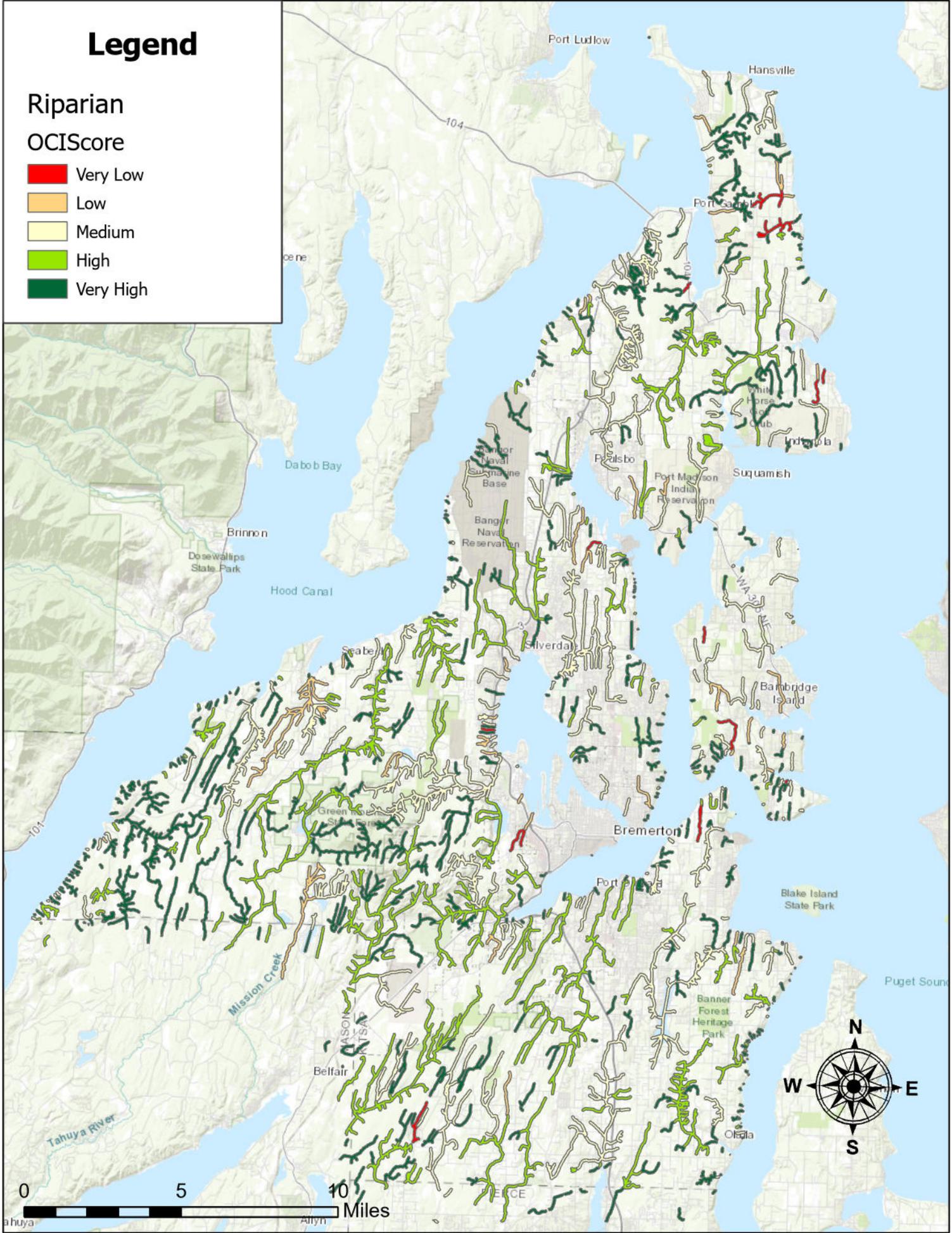
- Very Low
- Low
- Medium
- High
- Very High
- Watershed Boundaries



Legend

Riparian OCIScore

- Very Low
- Low
- Medium
- High
- Very High

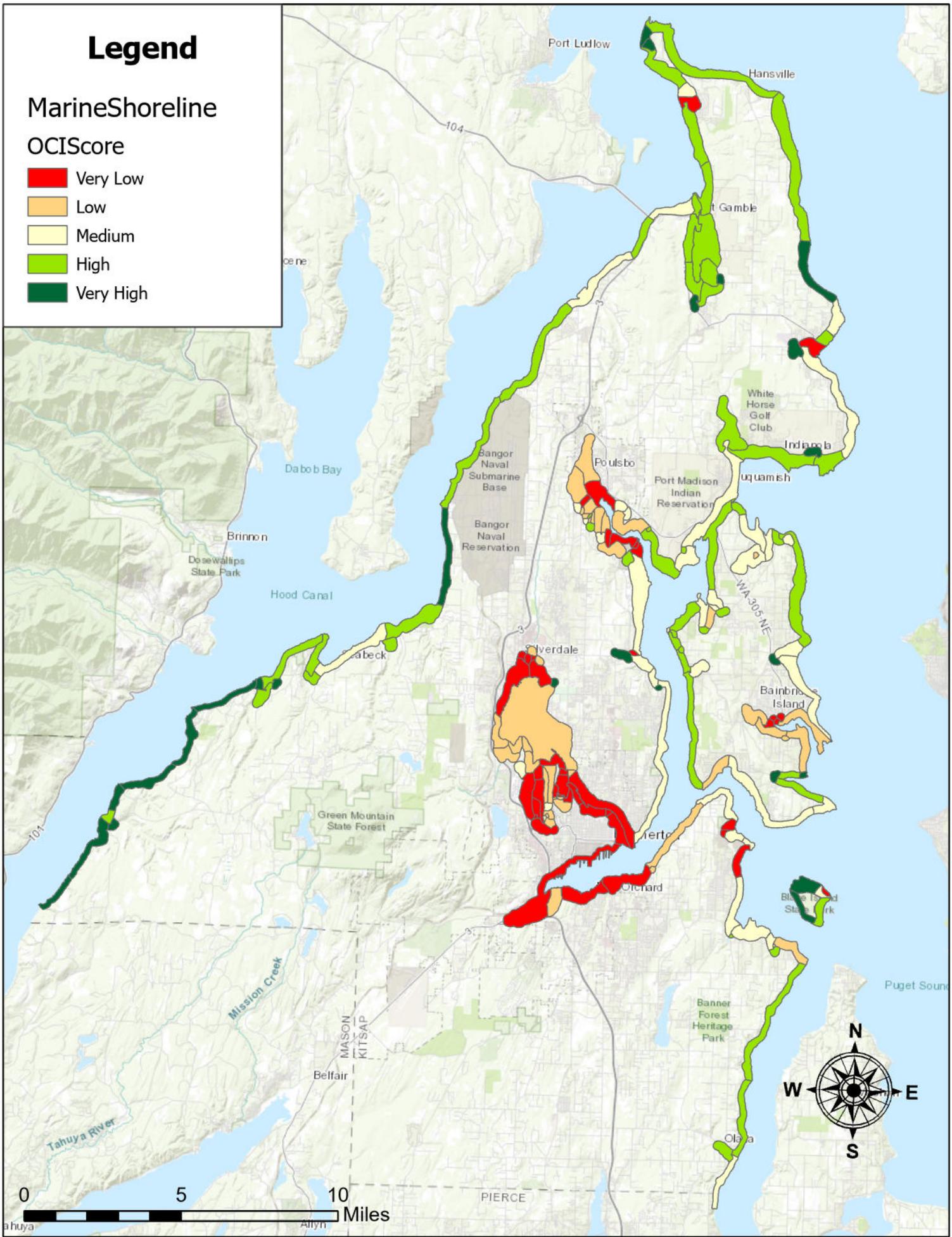


Legend

MarineShoreline

OCIScore

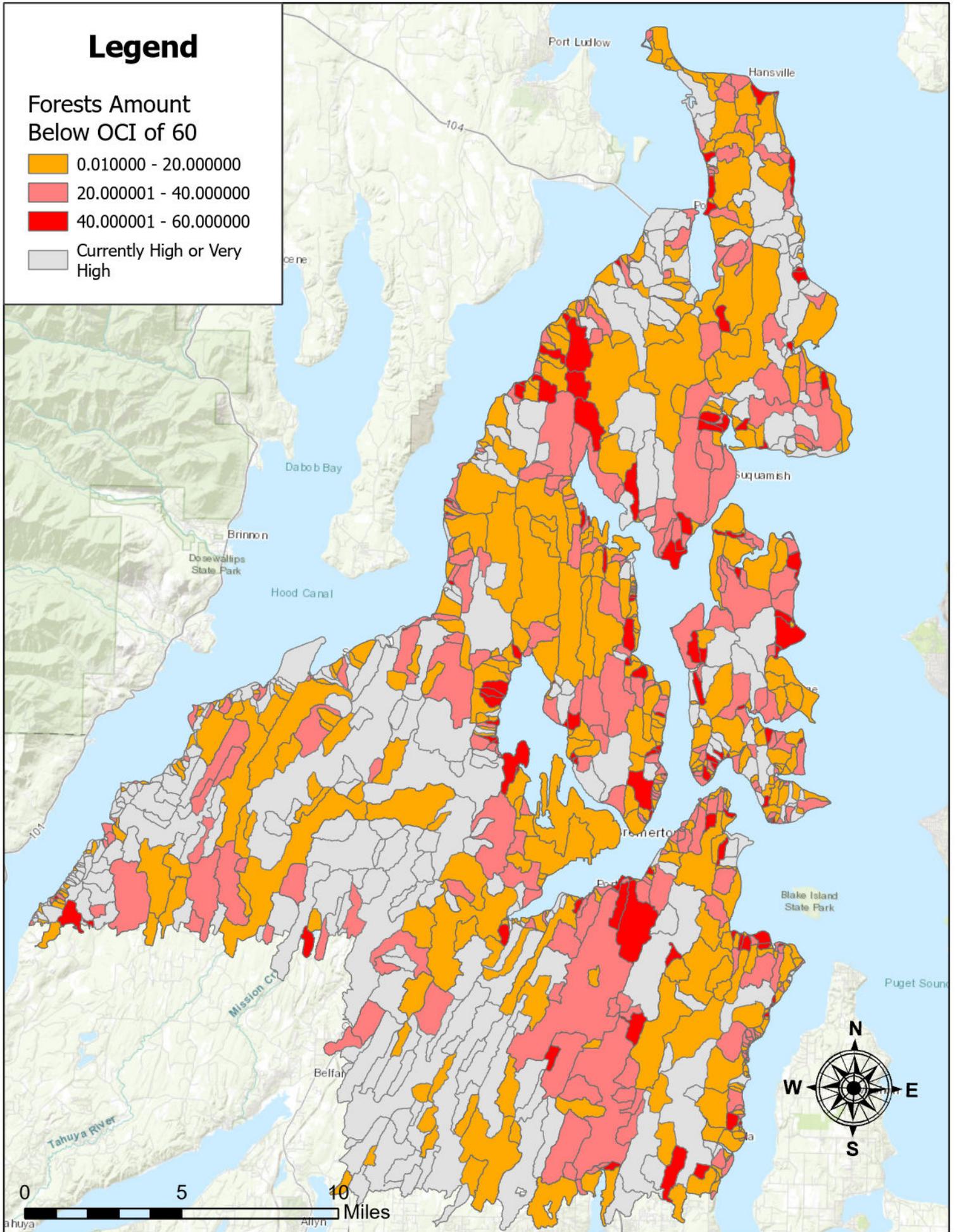
- Very Low
- Low
- Medium
- High
- Very High



Legend

Forests Amount Below OCI of 60

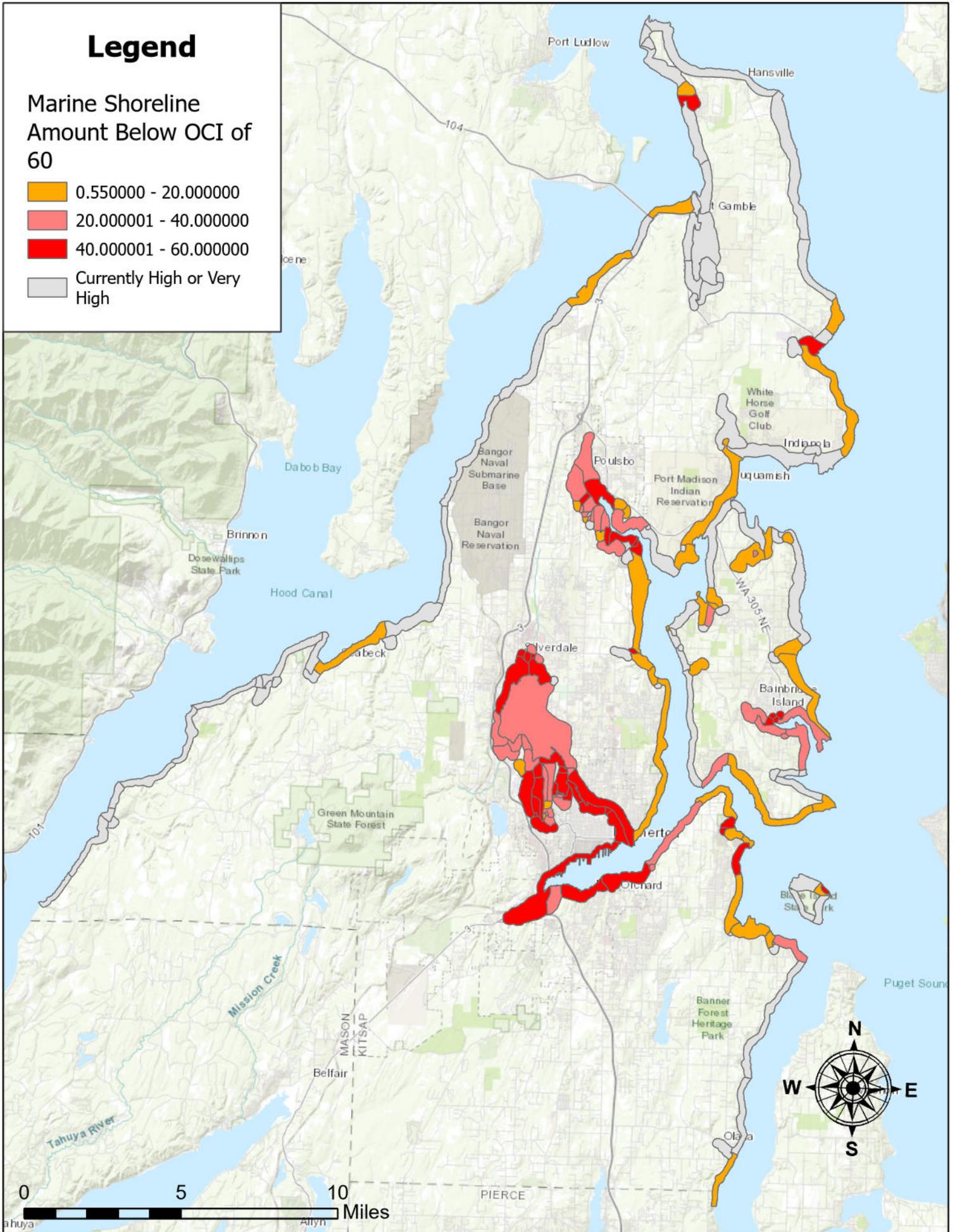
- 0.010000 - 20.000000
- 20.000001 - 40.000000
- 40.000001 - 60.000000
- Currently High or Very High



Legend

Marine Shoreline
Amount Below OCI of
60

- 0.550000 - 20.000000
- 20.000001 - 40.000000
- 40.000001 - 60.000000
- Currently High or Very High



Legend

Riparian Shoreline
Amount Below OCI of
60

- 0.780000 - 20.000000
- 20.000001 - 40.000000
- 40.000001 - 60.000000
- Currently High or Very High

