

Toward a Natural Resources Asset Management Plan for Kitsap County

Workshop #3 Agenda

Date: October 4, 2023, 10:00-12:00 pm PT

Goals: Gather feedback on the KNRAMP Implementation Plan Draft and discuss setting DLOS for pilot projects.

10:00 am	Welcome and Introductions – Dana Stefan and Elizabeth McManus (Ross Strategic, Facilitators)
10:10 am	Finalize draft of the KNRAMP Implementation Plan – Kitsap County and Ross Strategic <ul style="list-style-type: none"> • Review the Implementation Plan draft assumptions • Gather feedback and answer questions on draft assumptions and next steps to finalize the plan
10:50 am	Initial Discussion on Setting DLOS for Pilots – WCA <ul style="list-style-type: none"> • Overview of science-based options for setting DLOS for Pilot Watersheds • Review 6.2b memo key points for feedback • Gather input on setting specific DLOS for pilots
11:35 am	Options for Public Engagement – WCA <ul style="list-style-type: none"> • Review contract language • Discuss options for addressing public engagement
11:45 am	Updates from Partners <ul style="list-style-type: none"> • Suquamish Tribe • Port Gamble S’Klallam Tribe • Kitsap County
11:55 am	Wrap-up and Next Steps
12:00 pm	Adjourn

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 (*shared with the core team*)
- Asset management approaches for natural resources
- Science-based options for interim DLOS for pilot watersheds
- Mapping Application with Interim DLOS across County
- Public Engagement Plan
- Final Lessons Learned and Next Steps

Workshop 4

Timeframe: November 20

Discuss

- Final KNRAMP Implementation Plan
- Mapping application with interim DLOS across County
- Lessons learned memo and County review process
- KNRAMP pilots and implementation: next steps

Next Steps

- Final lessons learned and next steps
- Mapping application with interim DLOS across County
- Draft lessons learned memo and County review process

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
- Share Asset Management Application to Natural Resources memo with Core Team
- Draft public engagement plan

ASSET MANAGEMENT APPROACHES WITHIN KITSAP COUNTY

Memo summarizing structures, programs, and asset management processes within Kitsap County (Agreement KC-124-23 Task 6.1b)

Background

Kitsap County actively manages forests, streams, and shorelines through policies, programs, and projects. Aiming to take a more proactive and comprehensive approach to monitoring, protecting, and improving natural resources, and to inform long-term decision-making and priority-setting, the County is working to develop a Natural Resources Asset Management Program (KNRAMP).

To better understand the existing asset management approaches within Kitsap County and how they are integrating within current policies and structures, Kitsap County Department of Community Development (DCD), supported by Washington Conservation Action (WCA) and Ross Strategic, held a series of conversations with the following Kitsap County divisions: Parks, Stormwater, Roads, Solid Waste, Facilities, and the DCD leadership and planning team. These conversations were helpful to identify elements that may be relevant for KNRAMP.

This memo summarizes the asset management approaches within Kitsap County and includes considerations for integrating a natural resources asset management program into the existing County structures. The memo will support the development of an Implementation Plan for KNRAMP to inform next steps.

Working Definitions

The following KNRAMP working definitions were shared with the Kitsap County divisions to support the discussions. These definitions will be further refined in coordination with the KNRAMP core team.

- **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.
- **Levels of Service (LOS)** are measures of quality used to indicate how well natural assets are functioning. This project is defining the levels of service provided by streams, forests and marine shorelines, and establishing level of service standards for them similar to the level of service standards used in capital facilities planning. Methodologies used for calculating Level of Service are based on best available science, per RCW.70A.172, and may require revision over time as additional or improved data become available.
- **Baseline levels of services** – Baseline functional condition of natural assets based on existing data. KNRAMP will look at existing and relevant datasets within and outside the County.
- **Level of Service Standards** are adopted by the County and set the minimum acceptable functionality of an asset. In determining adopted standards for each asset or place, several factors will be considered, including social aspects and baseline data, informing what would be an acceptable and feasible minimum service level for an asset. These would be officially adopted by the County (used to inform funding priorities).
- **Desired levels of service** – Long-term goal and preferred outcome for the level of service to be provided by a natural asset (still to be established). These may be variable across the county – meaning there may be different desired levels of service in different places. In determining desired levels of service for each place, several factors will be considered, including social aspects, baseline data, scientific data informing what would be an appropriate/feasible level of service, and priority areas for the County and its tribal partners.

Asset Management Efforts

Asset management within Kitsap County is formalized for grey/built infrastructure like roads and parks facilities. Some divisions manage green infrastructure as part of their existing plans though there is not a dedicated asset management plan for natural resources, e.g., Parks, Stormwater, DCD Divisions. Overall, there is significant interest within the county for a more proactive management of natural resources given that some divisions manage and/or their activities have implications for green assets, both man-made and natural resources. Some examples include:

- Parks lands that are not intended for recreation but rather restoration and maintenance. About 80% of lands that Parks owns are natural resource management lands not intended for recreation.
- Stormwater assets such as bioretention and detention ponds, outfalls, and catch basins.
- Solid waste as it relates to litter prevention and downstream effects.

There are multiple ongoing efforts that are taking place across the county to develop asset management programs.

- The Stormwater Division recently received a grant to create an asset management program that will allow the division to identify the baseline for the current assets, create appropriate policies and processes, and generate annual reports with asset life expectancy¹.
- The Solid Waste Division held some early conversations about a potential asset management program and found the structure of the Capital Facilities Plan to be useful in guiding conversations as the Plan identifies the mission, goals, policy objectives, and recommended strategies. The Roads division is currently working on updating its 6-Year Transportation Improvement Program (TIP). The division uses the Kitsap County Public Works Transportation Project Evaluation System (2017) to guide its asset management approach that describes the project identification, scoring, ranking, and prioritization process, which ultimately informs the selection of transportation projects for funding in the TIP.
- The Parks Division will use the Capital Facilities Plan to inform management of its park facilities mainly related to grey infrastructure and recreation; the Division does not have a dedicated asset management plan for its natural resources.

Asset management across Kitsap County

Kitsap County Division	Status of asset management approaches		
	Currently in place	Under development	Under consideration
DCD – KNRAMP		●	
Facilities	● ²		
Parks		● ³	
Roads	● ⁴		
Solid Waste			●
Stormwater		● ⁵	

¹ Stormwater Division – Three-year Strategic Plan

² The Comprehensive Plan Update for 2023 will include a list of the facilities/buildings and the level of service.

³ The future Capital Facilities Plan and PROS Plan Update will include information about asset management for the Parks Division as it relates to grey infrastructure only.

⁴ The Transportation Improvement Program (TIP) for the Roads Division is currently under development. The division also uses the Kitsap County Public Works Transportation Project Evaluation System (2017) to guide its asset management approach.

⁵ Ecology grant recently awarded to the Stormwater Division to develop an asset management plan.

Process for Establishing Baseline Asset Conditions

Establishing the baseline (current) conditions of assets often requires observation from the field coupled with data from existing local, state, and federal databases. The field data is generated through regular inspections, where dedicated resources for inspection activities already exist, or through volunteers; one division noted that citizen science efforts could potentially be explored in the future to help with monitoring. Even if data gathering may be an intense process, it was noted that there are synergies and opportunities for data sharing across divisions given the overlap in some areas.

As part of the monitoring process, divisions look at different characteristics of the assets. For example, roads start degrading the day they are constructed, and the Roads division is developing 'degradation scenarios' based on factors such as built date and pavement material. The Stormwater Division is taking a similar approach as part of their current work on an asset management plan, with the Division planning to develop a framework on asset replacement and life expectancy, looking at characteristics such as age and type of pipe materials.

Level of Service Determination

The LOS is the report of the condition and performance of the asset. The LOS helps identify the areas that are in need of restoration and maintenance and determine actions based on the available budget. The LOS can be calculated based on the existing data and observation.

Divisions highlighted that defining LOS is a complex process and differs depending on multiple factors, such as type of asset, contextual factors, and geographic area. Not all divisions have LOS formally defined and most of them are using the current policies that guide their operations to inform the LOS. LOS standards can vary across different geographies, urban vs rural areas, and even across similar types of assets with different built date. Divisions highlighted that for some assets for example, some areas might accept a level C or D before an asset is considered below a level of service standard. The Facilities Division indicated that, given the diverse age of the Kitsap County buildings and different needs for maintenance, they may need to determine the LOS per building.

The Stormwater Division is just starting to develop LOS weights and metrics for prioritization.

Some divisions like Roads have the LOS and a rating system included in current policies. For example, Roads identifies hundreds of projects through internal monitoring/expertise and public engagement that are then scored and narrowed down to a priority list for the year. The division has about twenty categories to be scored with points. Roads have LOS pavement condition scores of 100-0 (100 is perfect condition) and placed into A-F ratings. For example, a road with a score of 100-80 is in good condition, while if it reaches 50-40 it may need to be rehabilitated. Once assessed, the priority list of projects goes to the Commissioners for approval and further input on project prioritization and balancing (budget and regional equity).

With regards to natural resources, it was noted that current permit processes are built around goals of no net loss, and achieving a net ecological gain is currently not required by code. When impacting critical areas or their buffers in particular, permit applicants are required to demonstrate mitigation sequencing that includes efforts to avoid and minimize impacts before considering compensatory mitigation for unavoidable impacts.

Prioritization Criteria to Determine Maintenance or Restoration

Several factors are considered when monitoring and prioritizing an asset for maintenance or restoration, including:

- Basin size (e.g., for stormwater)

- Population and houses served (e.g., for roads)
- Proximity to critical facilities such as hospitals or schools. If an intersection is failing and is next to a culvert that needs replacement, it may get more points because of proximity to each other.
- Improvement of the overall network (e.g., fish passage barrier removal, roundabouts, sidewalk/bike lanes)
- For roads in particular: Traffic counts, bus networks, school locations, and contact with the Fire Marshall are documented to understand what routes have alternative access or should be prioritized. One main consideration is a yearly collision analysis, with areas of highest collisions for vehicles over a past 5-year period.
- Funding availability: particularly for habitat restoration projects on the transportation network that ranked highly and obtained funding through a habitat grant
- Geographical diversity: selected projects should not all be grouped in one area. Usually, the three districts in Kitsap County are monitored (south, central, and north).

Monitoring, Maintenance, and Reporting

Regular monitoring is important to understand if preservation or mitigation efforts are performing to the extent they should. Divisions noted that frequency of monitoring varies, but problematic assets are looked at more often. Some divisions are starting to collaborate on certain monitoring aspects to leverage existing resources, e.g., stormwater and roads. Some examples of monitoring efforts from divisions include:

- For Stormwater, the goal is to maintain each catch basin once, sometimes twice, each year. Stormwater produces an annual report for the Department of Ecology on maintenance, number of facilities maintained, complaints from constituents, responses to concerns, and inspections (including by DCD). While their permits require an 80% maintenance rate, usually 100% full maintenance is met.
- DCD noted that certain types of compensatory mitigation require a monitoring plan with a one-, three-, and five-year timeline.

Public Engagement Approach

Divisions noted that public engagement is crucial to understand customer demand, including suggestions for areas that may need to be elevated for maintenance and restoration. Roads, for example, is gathering public input through public engagement when developing their list of priority assets for the year.

Potential Areas Where KNRAMP Could Be Helpful

The divisions indicated the following areas where there are synergies across departments and divisions or KNRAMP could help, for further exploration:

- Identification of natural assets and areas with high ecological value is needed to have a clearer path for protection, management, and investment of natural resources. Examples include:
 - Public requests for reclassifications of property zoning was open from August to September 2022 as part of the County's Comprehensive Plan Update process. Proposals were reviewed for potential inclusion in land-use alternatives. One alternative focused on increasing density within Urban Growth Areas while another focused on dispersed growth and expansion of Urban Growth Areas. A number of parcels proposed for reclassification consisted of critical areas, shorelines, intact tree canopy cover, wetlands, and other ecologically valuable assets. Currently, each request is reviewed at a parcel-by-parcel scale. The goal is to plan for natural asset at a larger scale the same way planning is done for land use and growth.
 - Land use designations and zoning will be integrated into all parks. Port Gamble took the first step at this. Natural areas will be identified to understand what the land can take. For example, wetland

buffers will be designated as natural areas and only limited passive recreation such as a small trail for educational purposes may be allowed in that area. An example of a land use designation would be a natural or passive recreation area. Active recreation areas would be more appropriate in upland areas.

- Looking at the hydrography aspects of natural resources from a watershed perspective would also be helpful for current stormwater management efforts.
- Monitoring shorelines would be helpful for Parks management of their natural resource areas, especially as more shorelines are acquired and shoreline erosion issues occur.
- Overall monitoring of water quality and downstream effects would be helpful.
- KNRAMP will be helpful to monitor the effectiveness of development regulations, e.g., if the County adopts a tree protection ordinance, KNRAMP could be used to assess levels of service in urban tree canopy.
- There is potential to integrate habitat restoration as part of the annual scoring analysis for roads. Culverts are assets and there has been high interest in fish passage barrier removals. Public Works is working to incorporate WDFW culvert inspection data fields into inspections (e.g., stream type, annual/perennial, barrier, fish presence).

Policies and Programs that Guide Current Formal or Informal Asset Management Approaches

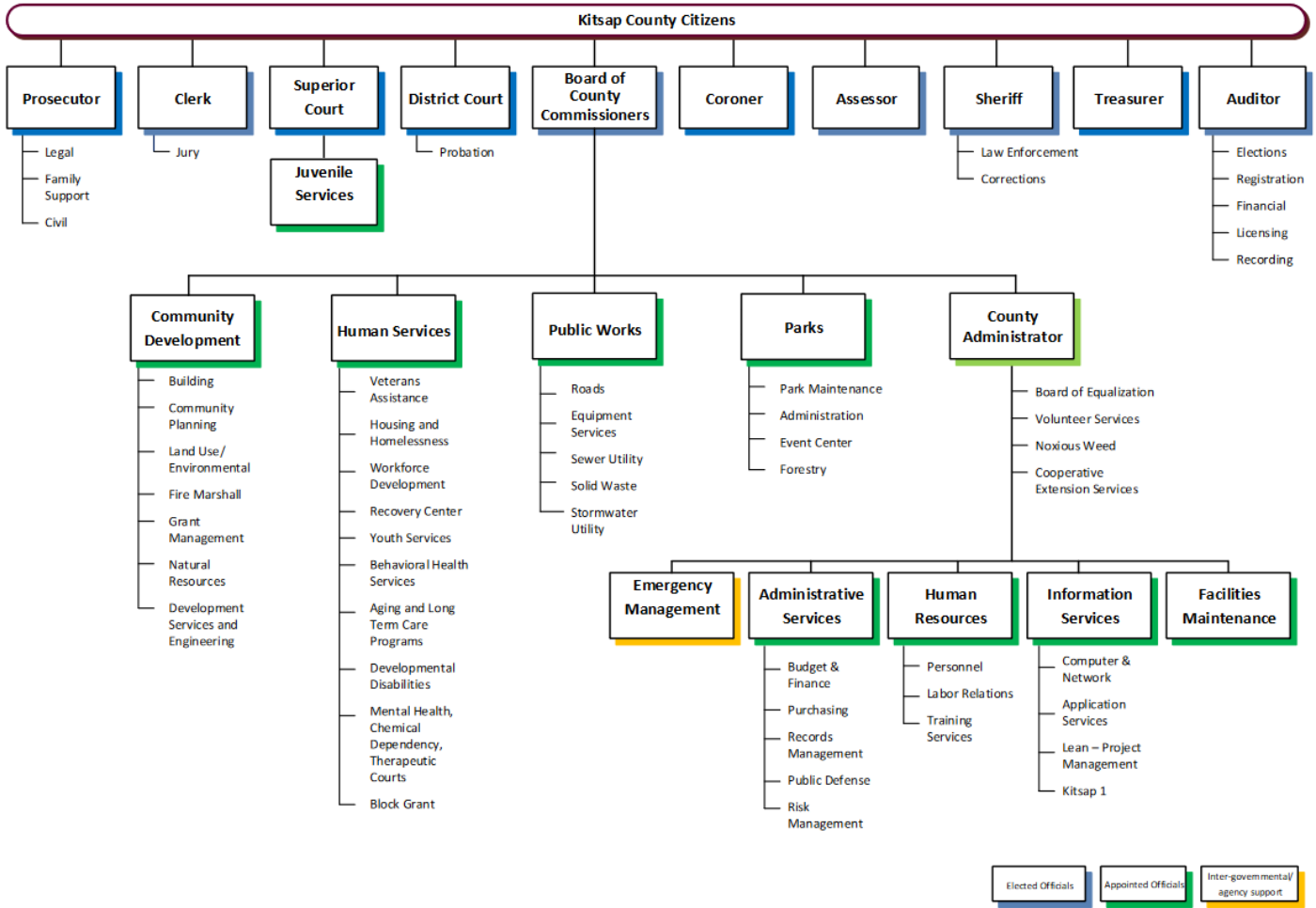
- Public Works: Includes Stormwater, Solid Waste, and Roads divisions.
- Stormwater:
 - o They use [stormwater National Pollutant Discharge Elimination System \(NPDES\) phase 2 permitting requirements](#) as a guiding policy to maintain infrastructure, and to base reports on.
 - o There is a [Stormwater Drainage Code](#) that is Title 12 of the Kitsap County Code that lays out information on the [Stormwater Management Program](#), permits, maintenance, and more.
 - o Water as a Resource Policy is a direct policy to integrate from Kitsap County.
 - o They use Cartegraph to ensure they meet permit requirements.
 - o They integrate guidelines and directives of the [Kitsap County Comprehensive Plan](#).
 - o Many facilities are built with permitting through DCD.
 - o They have a 2023-2028 Stormwater [Capital Facilities Plan](#)
- Solid Waste
 - o They follow the [2022-2027 Solid Waste Capital Facilities Plan](#), which is part of the Kitsap County Capital Facilities Plan, that addresses capacity, repairs, and improvements to Solid Waste facilities. [There is a proposed 2023-2028 Solid Waste Capital Facilities Plan](#).
 - o The Solid and Hazardous Waste Management Plan recommends strategies to manage solid waste.
 - o The Litter Control Program has tracked resources through Cartegraph.
- Roads
 - o The [Kitsap County Public Works Transportation Evaluation System](#) is used for the selection of projects for funding in the County's [Transportation Improvement Program](#). The TIP is a six-year program that prioritizes capital construction projects.
 - o Inspection ratings were developed in the 1990s based on Federal Highway Administration (FHWA) criteria, which is still used along with additional criteria.
 - o Other management plans related to public works and roads include:
 - [Kitsap County Non-Motorized Facility Plan](#)
 - [Road Maintenance and Operations Division](#) maintains and preserves roads with the use of the Pavement Preservation Program, the Vegetation Management Program, Herbicide Spraying, the Snow and Ice Removal Program, and the Green Sweep Program. They follow [Title 136 WAC](#) and [RCW 36.82.070](#).

- Parks:
 - The main guides Parks uses are:
 - The Parks, Recreation, and Open Space Plan (PROS Plan) provides a six-year and twenty-year vision for the County's park system, as well as the steps needed for developing and improving park facilities, the development and acquisition for new park facilities, and expanding recreational opportunities.
 - The Capital Facilities Plan is used for the grey infrastructure managed by Parks.
 - Parks is moving towards transferring from the Brightly asset management software to the Public Works/DCD platform which is Cartegraph.
 - Other management guides and policies used by Parks include:
 - Coulter Creek Park [Draft Resources Management Plan](#)
 - [Forest Stewardship Plan](#)
 - [Newberry Hill Master Plan](#)
 - [Mushroom Harvest Policy Resolution](#)
 - [Kitsap County Integrated Forest Stewardship Policy](#)
 - [Forest Practices Illustrated](#)
- DCD:
 - They use the [Kitsap County Code](#) (including Title 19 on Critical Areas and Title 22 on the Shoreline Master Program) and the [Kitsap County Comprehensive Plan](#) to guide policies.
 - [Water as a resource](#)
- Facilities:
 - [Chapter 11 Capital Facilities Plan](#) within the Kitsap County Comprehensive Plan.

Appendix 1



Kitsap County, Washington Functional Organization Chart - 2020



DRAFT KNRAMP Toward a Natural Asset Management Plan for Kitsap County Workshop Summary

Date: 10/4/23

Attendees: Alison O’Sullivan (Suquamish Tribe), Steve Todd (Suquamish Tribe), Marla Powers (Port Gamble S’Klallam Tribe), Julie Raymond (Port Gamble S’Klallam Tribe), Brittany Gordon (Kitsap County), Ryan Huffman (Kitsap County), Jim Rogers (Kitsap County), Jonathan Raine (Kitsap County), Mindy Roberts (WA Conservation Action), Robinson Low (WA Conservation Action), Elizabeth McManus (Ross Strategic), Dana Stefan (Ross Strategic), Casey Hart (Ross Strategic).

Next Steps

- Ross will share the meeting slides with the Core Team to provide further feedback (*done*).
- Ross will refine and finalize the KNRAMP Implementation Plan and the asset management approaches for natural resources and share with the Core Team.
- WCA will update the DLOS options based on the Core Team’s input and review preferred emergent options at the November KNRAMP workshop.
- WCA will develop a draft KNRAMP public engagement memo and share with the Core Team.
- The Core Team is invited to submit suggestions for KNRAMP strategies and goals that should be included in the Com Plan update.
- Jim Rogers will share the link to this draft with the Core Team when it is available (December 15th) and will point to the sections of integrated KNRAMP strategies.
- Brittany Gordon will provide Steve Todd with a list of fish passage projects the County is undergoing.

Introduction

Ross Strategic welcomed the Core Team and reviewed the 2023 KNRAMP milestones and current progress.

Initial Discussion on Setting DLOS for Pilots

Robinson Low (WCA) and Mindy Roberts (WCA) presented initial options for setting desired levels of service (DLOS) for forests, streams, and shorelines for the Big Beef and Chico Creek pilot projects. The options presented are based on literature review and based available science. The presentation included example visuals with current Kitsap County levels of service. Core Team members provided feedback on the DLOS options and were invited to share additional input after the workshop, including preferred approaches. WCA explained that the November workshop will include discussion on a set of updated DLOS options that incorporate members’ feedback. The DLOS approach will be further tested and refined in 2024 and beyond. The follow-on Strategic Initiative Grant will allow work to continue to 2024. Part of the work during 2024-2026 will be doing work at the county level.

Key discussion highlights and members’ input are included below.

DLOS FOR FORESTS

The following options were discussed:

- Chico Forests Option 1: All Management Units (MUs) with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium
 - o Chico Forests Option 1a: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium

- Chico Forests Option 1b: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium ... except inside UGAs (Kitsap Lake) any MUs very low would improve to low
- Chico Forests Option 1c: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium ... except inside UGA (Kitsap Lake) any MUs must improve one band/step
- Chico Forests Option 2: Aggregate to watershed; any watershed currently medium and high stay medium and high (no losses) and all watersheds very low and low improve to at least medium
- Chico Forests Option 3: Focus on attribute F1. Any MUs with low or very low forest cover must increase to at least 70%.

Core Team perspectives:

- Forest attributes will look at percent forest cover and percent late-stage successional class.
- MUs are based upon the USGS catchment boundaries. In many cases there were small catchment area that were grouped to meet minimum MU area standards (like 100 acres grouping where possible).
- There is a literature review on LOS and attributes available that WCA can pull and send to the Core Team. There were 2021 meeting summaries on forest LOS. The memo on LOS that will be sent to the Core Team was based on work out of the Forest Service and UW based on 20-50 publications.
- The overall goal is to achieve no net loss across Kitsap County, recognizing that natural resources in very low or low condition may need an interim LOS. Overall, there was preference to move very low and low condition natural assets toward at least medium. For example, one option is to have a low to medium increase as an interim LOS and medium to high as a long-term LOS.
- The implementation phase will help determine whether medium for some natural assets is a long term sustainable ecological condition; it will also be important to ask the question: is this sustainable for whom? For example, literature review shows that for forests, a 70% or higher threshold may be considered since studies show that when there is less than 70% forest cover, ecological systems unravel. Members added that we should look beyond thresholds and potentially target 80% forest cover; Tribal communities look at and value seven generations, which is 150 years from now.
- Assets can be treated differently inside and outside of UGAs. Inside UGAs, a balancing approach can be taken to potentially balance a lower DLOS for one asset with a higher DLOS for another.; for example, given the need to manage population growth within UGAs, consider maintaining the current forest cover and balance that with a higher stream/riparian DLOS.
- Specific natural resources within a UGA could be identified for restoration/preservation. For example, a stream condition could increase while forest cover is maintained due to desired development.
- Urban areas have situations where management units do not align with UGAs. There will be some areas where 80% of the ratio are urban, while others may be 20% rural. In these situations, it will be important to assess case by case how to manage and evaluate conditions.
- Even when aggregating at the watershed level, it may make sense to look at certain MUs for an extra layer of consideration, e.g., to see where there are head waters; or Kitsap Lake in UGA may be net loss of forest but from salmon perspective there could be net improvement of forest cover when aggregate (members clarified that Kitsap Lake has one of the very lows condition listed on Ecology' 303(d) list impaired and threatened waters list). Consider a wetland mitigation bank scenario: when UGAs have a decrease in score, they could mitigate other areas to maintain a medium level overall.
- Commenting on the late-stage successional forest attribute, members noted that this is more about timing than control/active management and recommended to consider how much time it takes to invest in allowing a forest to grow. The County has control of policies whether to clear cut a site, but it takes many decades to invest in young forest growing to old forest. This is a large time commitment, and nothing will

be late stage for a long time. Consider a no cut policy: similar to when new pavement is placed, there is a no cut policy of 10 years; consider implementing a no cut/development for 5 or 10 years.

DLOS FOR STREAMS

The following options were discussed:

- Big Beef Streams Option 1: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium
- Big Beef Streams – Option 2: Aggregate to watershed; any watershed currently medium and high stay medium and high (no net loss) and all watersheds very low and low improve to at least medium
- Big Beef Streams – Option 3a: Focus on attribute S4. Any MUs with low (barriers exist) must increase to very high (no barriers)
- Chico Streams – Option 3b: Focus on attribute S4. What if all fish passage barriers were removed – how much would that increase the Level of Service?

Perspectives shared:

- Focusing on fish passage is important, as it is a low hanging fruit relative to some other attributes and one the County has more control over since the County owns some fish passage barriers and is also addressing this issue through regulation. Barriers degrade other functions, so removing them helps with other factors as well as streams. Additionally having an undersized water crossing that is not considered barrier but also causes problems degrading habitat could be considered; suggestion to incorporate this consideration in the fish passage attribute.

DLOS FOR SHORELINES

The following options were discussed:

- Shorelines – Option 1: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium
- Shorelines – Option 2: Aggregate to watershed; any watershed currently medium and high stay medium and high (no net loss) and all watersheds very low and low improve to at least medium
- Shorelines – Option 3: Focus on attribute M1. Any MUs with >25% shoreline armoring must decrease armoring to <25% (increase service)
- Shorelines – Option 3a: Focus on attribute M1. Any MUs with >25% shoreline armoring must decrease armoring to <25% (increase service)
- (increase service)
- Shorelines – Option 3b: Focus on attribute M1. What if all MUs with >25% shoreline armoring dropped to <25% - LOS?

Perspectives shared: No specific perspectives shared, but it was noted that there are only a few shoreline management units in each pilot watershed.

Final considerations shared by WCA:

- Some attributes will be determined/monitored through proxies (e.g., percent forest cover surrounding streams as a proxy for stream temperature).
- The rating scale will be refined in coordination with the County to align with Cartegraph.
- As DLOS is discussed, think about what we will do this year, including protection and restoration activities we can take on, such as specific projects that increase forest cover.
- Consider assessing no net loss every 2 years assess on a watershed scale.

- This process needs to build into an adaptive management strategy. For example, for streams, consider doing an active threat assessment to understand what may impact them over time and how to address those threats.
- If water quality is impacted, the County could potentially work with the health district on septic systems. Consider ways to have state and county to do dedicated work in the watershed.
- There could be a dedicated effort with the Kitsap County shoreline armoring program.
- The two pilot watersheds will continue in 2024 and existing programs at all levels need to be considered to knit all the pieces together.

Next steps: WCA will update the DL0S options based on the Core Team’s input and review preferred emergent options at the November KNRAMP workshop.

Draft KNRAMP Implementation Plan

Brittany Gordon (Kitsap County) reviewed a set of assumptions reflected in the draft KNRAMP Implementation Plan. The purpose of this session was to gather the Core Team’s feedback and finalize the draft KNRAMP Implementation Plan.

The Core Team discussed the Implementation Plan:

- **Potential KNRAMP timeframes for monitoring assets:** The Core Team recommended to maintain both short-term and long-term monitoring timelines for all natural assets and attributes under KNRAMP, acknowledging that improvement changes in some attributes may only be detected within a longer timeframe (e.g., forest cover/class) while changes in other attributes (like water quality, fish passage barriers, invasive species, and shoreline armoring) will be detected on a short-term timeframe. The team indicated that short-term monitoring for all natural assets is important to track any assets that may undergo rapid development/change – for example, regularly tracking canopy cover is important or there could be too great of a loss; it is faster to cut a forest down than grow one.
 - WCA shared as an example that they found a polygon of an older forest that was cut down that had a high level of forest service but 0% cover. There may be variations between what is happening on the ground and how scores are influenced.
 - The team cautioned that often there are gaps in data (e.g., old data, lag in remotely sensed data) that landscape condition is assessed on, that doesn't reflect what is happening in real time. The County indicated that it may explore to add negative and positive impacts into Cartegraph for more frequently updated information.
- **Geographic diversity consideration as part of the overall evaluation considerations:** Past development may have created issues in lowering the geographic diversity considerations. The team recommended keeping geographic diversity as a project evaluation method but focus on development areas first. There may not be equal development distribution across the county but equal distribution across UGAs.
- **Funding:** A workgroup member asked if the County discussed dedicated funding for implementation and what the county is taking regarding funding.
 - The County clarified the intent is to have KNRAMP integrated into existing County programs so that they are inherently funding KNRAMP. For example, if stormwater division uses KNRAMP, they will use their stormwater funds. Kitsap County has Comprehensive Plan funding to consult KNRAMP in decision making. The County already funds these various sources that would in turn fund KNRAMP. Some would be funded through the County while others would be through grant programs. Funding would continue as it is now but KNRAMP would be an additional tool and integrated into long-range, strategic planning and decision making.

- Conservation Futures also identified funding across counties as opportunities to benefit salmon with active restoration. Brittany and Kirvie worked to tailor this program in Kitsap County. If factored correctly, Conservation Futures work could be applied to KNRAMP.
- WCA developed a webpage - [WCA Funding and Financing for Natural Asset Management](#) - compiling different sources of fundings for types of projects in county owned areas and opportunities on private land.
- There may be net ecological gain requirements in the future if there is funding to implement KNRAMP. KNRAMP would put Kitsap County ahead of other counties.

Next steps: Ross Strategic will update the draft KNRAMP Implementation Plan and share with the Core Team.

Options for Public Engagement

WCA shared that public engagement is one component of KNRAMP since its start. There was a public engagement workshop in 2019 with various organizations on the program fundamentals. Covid-19 caused public engagement plans to change. A survey was conducted in 2022 and progress was reported but it was not representative of all Kitsap County communities.

The goal this year is to integrate the KNRAMP objectives in the Comprehensive Plan Update that will be released next year and for which public engagement will be conducted. In parallel, WCA is also working on a memo describing how public engagement was conducted with interested parties over the years; this memo is part of the 2023 KNRAMP milestones and will be shared with the Core Team. WCA also explained that, with the federal grant that KNRAMP is transitioning to, public engagement requires a one-year approval process. This is a procedural challenge, and hence it is more effective to link public engagement to the Comprehensive Plan update.

The Core Team agreed that it is more efficient and timelier to conduct public engagement through the Comprehensive Plan update process, rather than pursuing the one-year approval process.

Next steps: WCA will develop a draft KNRAMP public engagement memo and share with the Core Team.

Updates from Partners

Port Gamble S'Klallam Tribe:

- The Tribe is currently undergoing work on culvert replacements in the Usual and Accustomed Places (U&A), Port Gamble, and Machias Creek. There is a confluence of long-term projects missing their timeline by a year or two. The Tribe applied to a grant on Middle Creek for funding project construction and hopefully this project will be achieved in 5-8 years as it is a fish bearing stream. A new Chairperson will be elected October 24th.

Suquamish Tribe:

- The Tribe has assessed over 250 fish passage barriers on east side of Kitsap in past year. All of this data is being integrated into the DFW database for fish passage. This database is being expanded and updated as best as possible recognizing there are data gaps due to inability to access some private land.
- The Edna Rose Point and Point No Point projects are pilot projects using environmental DNA to look at seasonal use by fish species in small watersheds and how fish may use different habitats within the watershed, recognizing that fish use habitats that may be marginal but are important. There will be pre-restoration effectiveness monitoring in estuaries for Rose Point and biological and physical water quality monitoring. The data will be collected before reconnecting tides. After restoration there will be a couple years of post-restoration data possibly expanding to the Point No Point location depending on funding and timing of the project.

- Landing assessment of forest conditions has been on the radar for a few years. It is a pivotal time to do this using lidar and other remotely sensed tools to assess provision of shade and recruitment of wood to streams. This is salmon habitat focused.

Kitsap County:

- The County is finalizing the design for permitting and right of way for the Harper Estuary Project. Alison O'Sullivan (Suquamish Tribe) saw the layout of the proposed pedestrian path.
- The County is working on fish passage projects with Adam Brown, including the Sacco Lane fish passage.
- The County recently received an Asset Management Grant for Storm Water with Department of Ecology, with work expected to pick up in January.
- The goals/policies/strategies section of the Comprehensive Plan is being updated. The County is working to add the KNRAMP goals and strategies in the Comp Plan update, and specifically in sections on environment, transportation, capital facilities, parks. There will be public review mid-December to see what needs to be restructured. Mindy noted to let WCA know if there is a way to support public review. This may be an opportunity to figure out how to include as much on KNRAMP as possible.

Next steps:

- The Core Team is invited to submit suggestions for KNRAMP strategies and goals that should be included in the Com Plan update.
- Jim will share the link to this draft with the Core Team when it is available (December 15th) and will point to the sections of integrated KNRAMP strategies.

New Terms and Definitions related to KNRAMP

Natural resources asset management refers to treating natural resources as assets that should be managed with the same consideration to costs of services and investment priorities as built infrastructure. In addition to their intrinsic and ecosystem services values, oftentimes natural resources can supply the same services that municipal infrastructure provides; when natural resources are managed properly, municipalities can avoid new costly development of built infrastructure.

Desired Level of Service (DLOS) describes a long-term goal for the condition and function of a natural asset. The natural resources asset management program will define DLOS for natural assets based on existing County/state/federal policies and long-term goals related to natural resources management and climate adaptation and once established the DLOS will inform capital improvement plans and other planning exercises and restoration project priorities for natural assets. DLOS can differ by asset or across locations in the County. For example, the DLOS for a shoreline in a relatively undeveloped part of the County might be different than the DLOS for a shoreline in a developed area. This is a new term for natural resource asset management.

Minimum Level of Service (MLOS) describes the minimum acceptable condition and function for a natural asset. Like DLOS, the MLOS can differ by asset or across locations in the County. The MLOS for natural assets will be determined based on current county policies and priorities. Methodologies used for determining MLOS are based on best available science, per RCW.70A.172, and may require revision over time as additional or improved data become available. The main use of the MLOS is to act as a trigger to indicate when action is more urgently needed to restore/prevent further asset degradation. This is a new term for natural resources asset management.

Levels of service metrics is a rating scale used to compare asset condition and performance to program goals. In its first implementation phase, KNRAMP is defining levels of service metrics for streams, forests and marine shorelines based on current and future needs and assessing and recording the current condition of natural assets using the rating scale.

Kitsap Natural Resources Asset Management Program

Core Team Workshop #3

October 4, 2023, 10:00-12:00 pm



Welcome – Agenda & Goals

Goals: Gather feedback on the KNRAMP Initial Implementation Plan Draft and discuss setting DLOS for pilot projects.

Time	Agenda Item
10:00 AM	Welcome and Introductions
10:10 AM	Finalize draft of the KNRAMP Implementation Plan <ul style="list-style-type: none">• Review the Implementation Plan draft assumptions• Gather feedback and answer questions on draft assumptions and next steps to finalize the plan
10:50 PM	Initial Discussion on Setting DLOS for Pilots <ul style="list-style-type: none">• Overview of science-based options for setting DLOS for Pilot Watersheds• Review 6.2b memo key points for feedback• Gather input on setting specific DLOS for pilots
11:35 AM	Options for Public Engagement <ul style="list-style-type: none">• Review contract language• Discuss options for addressing public engagement
11:45 AM	Updates from Partners <ul style="list-style-type: none">• Suquamish Tribe• Port Gamble S'Klallam Tribe• Kitsap County
11:55 AM	Wrap-Up and Next Steps
12:00 PM	Adjourn

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 (*shared with the core team*)
- Asset management approaches for natural resources
- Science-based options for interim DLOS for pilot watersheds
- Mapping Application with Interim DLOS across County
- Public Engagement Plan
- Final Lessons Learned and Next Steps

Workshop 4

Timeframe: November 20

Discuss

- Final KNRAMP Implementation Plan
- Mapping application with interim DLOS across County
- Lessons learned memo and County review process
- KNRAMP pilots and implementation: next steps

Next Steps

- Final lessons learned and next steps
- Mapping application with interim DLOS across County
- Draft lessons learned memo and County review process

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
- Share Asset Management Application to Natural Resources memo with Core Team
- Draft public engagement plan



KNRAMP Implementation Plan

What KNRAMP is and what KNRAMP is not



What KNRAMP is and what KNRAMP is not

- KNRAMP is not meant to be a regulatory program.
- KNRAMP can inform understanding of regulatory effectiveness and progress towards regulatory program goals.

Example: KNRAMP could be used to understand progress towards no net loss.

- KNRAMP is meant to be a planning tool to help identify natural resources that need to be preserved or restored and inform future investments.
- KNRAMP will be integrated into existing County programs and plans.



KNRAMP and the Comprehensive Plan.

The 2024 Comprehensive Plan will include references to KNRAMP and the need to manage natural resources as County assets.

How will KNRAMP work with County Divisions?



KNRAMP can help identify areas of joint interest across Divisions

KNRAMP can help “identify areas of joint interest”* among County divisions and integrate outcomes of ongoing county division work on natural assets:

Potential examples include:

- *The Parks Division to help monitor shorelines and address shoreline protection in managed parks;*
- *The Roads Division to address fish passage barriers as part of the overall Division’s culvert and transportation management work;*
- *The Stormwater Division to manage water quality;*
- *The Solid Waste Division for understanding and preventing potential downstream impacts of landfills.*



KNRAMP can help Divisions consider green infrastructure

KNRAMP can help divisions see where improving the condition of natural assets could be equally or more effective than development of new gray infrastructure (e.g., flood control, maintaining natural aquifers).

*In line with the County’s objective from the current Comprehensive Plan to “identify areas of joint interest among County programs, state agencies, tribes, conservation land trusts, and federal departments, including Defense, which may facilitate partnerships in data sharing, funding, and stewardship for the environment”.



What data sources will KNRAMP use?



KNRAMP will use existing data sources


KNRAMP will leverage existing County, state, and federal data to assess/monitor LOS for natural assets. The Suquamish and Port Gamble S'Klallam Tribes will play a critical role in sharing data on the condition of natural resources based on their monitoring efforts.

Examples of existing County data: forest and watershed (Parks), water quality, byway retention, and conveyance (Stormwater), culverts and fish passage (Roads), downstream impacts (Solid Waste).



KNRAMP will not conduct field monitoring

At first, KNRAMP will not have dedicated resources for field monitoring; this may change over time based on County resources and priorities.



Project evaluation and prioritization

Evaluation steps

Example:

Roads has a [Transportation Project Evaluation System](#) that documents the overarching objectives for project prioritization (such as implementing the County's Comprehensive plan), as well as primary criteria (e.g., preservation, capacity, safety) and secondary criteria (e.g., environmental/sensitive area impact, local or regional significance). The criteria for Roads was reviewed by a technical committee formed of leaders from across the different Kitsap County divisions.



The KNRAMP core team could develop the prioritization criteria.

- Other County division leaders could also review the criteria and provide input.
- The criteria could be refined after the first implementation year to integrate lessons learned.



Evaluation and selection steps would be similar to other division approaches.

- Identify the candidate projects based on current natural asset conditions and needs identified by the Core Team and the community.
- Identify the criteria for evaluation (e.g., primary, secondary, and overarching criteria).
- Evaluate the project list and score the potential projects for ranking.
- Determine the project shortlist based on available funding.



Natural asset prioritization approach



Data from KNRAMP can help County divisions and collaborative partnerships set priorities

- Protection and restoration project opportunities often exceed resources available; data from KNRAMP can be one part of the information collaborative groups such as the Lead Entity for Salmon Recovery considered when setting project priorities.
- While many assets are important throughout the County, KNRAMP can help show which assets might need to be addressed first, or where action is needed to reverse a downward trend.



Project evaluation and prioritization

Overarching considerations



Overarching considerations for prioritization criteria.

- **Preservation vs restoration** – The first KNRAMP implementation years may focus more on restoration efforts; as the program matures, the focus will be on preservation.
- **Improvement of the overall natural ecosystem network** – For example: fish passage barrier removal.
- **Geographical diversity** - Looking across the County regions (North, South, Central) when considering projects.
- **Land use designations and zoning** – For example, a shoreline area with a port versus in a natural area may have a different approaches.
- **Urban growth areas** - Different levels of service may be established within and outside of the UGAs (e.g., urban and rural areas).
- **Tribal harvesting and cultural sites** - Historical salmon and shellfish harvesting areas should be considered in the prioritization process.
- **Overburdened communities** - Areas with overburdened communities should be prioritized to prevent disproportionate impact.
- **Project costs** – Available funding will help determine the magnitude and the number of projects that KNRAMP can implement over a certain time period.



KNRAMP funding options

- ✓ KNRAMP could pursue County, state, and federal funding, and other grant programs.

County funding (e.g., Conservation Futures)

Grant programs (e.g., Puget Sound Geographic Funds and the Natural Estuary Program Funding)

State and Federal funds focused on salmon and habitat protection and recovery (e.g., the Estuary and Salmon Restoration Program, the Puget Sound Acquisition and Restoration Program and similar programs).



Potential Timeframes



Options for KNRAMP timeframes

- **Monitoring/updating level of service scores** based on condition of natural assets – every 2 years?
- **Minimum Levels of Service (MLOS) - short-term goals** – every 5 years (aligning with the Comp Plan progress reports)?
- **Desired Levels of Service (DLOS) - long-term goals** – every 10 years (aligning with the Comp Plan updates)?



Discussion on Setting DLOS for Pilots

See separate PDF slides



Options for Public Engagement

Verbal update and discussion



Core Team Updates

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



Next Steps

Next Steps

- Next Workshop on November 20.
- Finalize KNRAMP implementation plan
- Finalize memo with science-based options for DLOS
- Finalize asset management application to natural resources memo
- Public engagement approach
- Mapping application with interim DLOS across County
- Draft lessons learned memo and County review process

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>

Tell us ...

What do you like about
the options?

What needs to evolve and
how?

→ ***November workshop
for pilot watersheds and
2024 for more ...***



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



Attribute	Indicator	Condition Rating				
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%



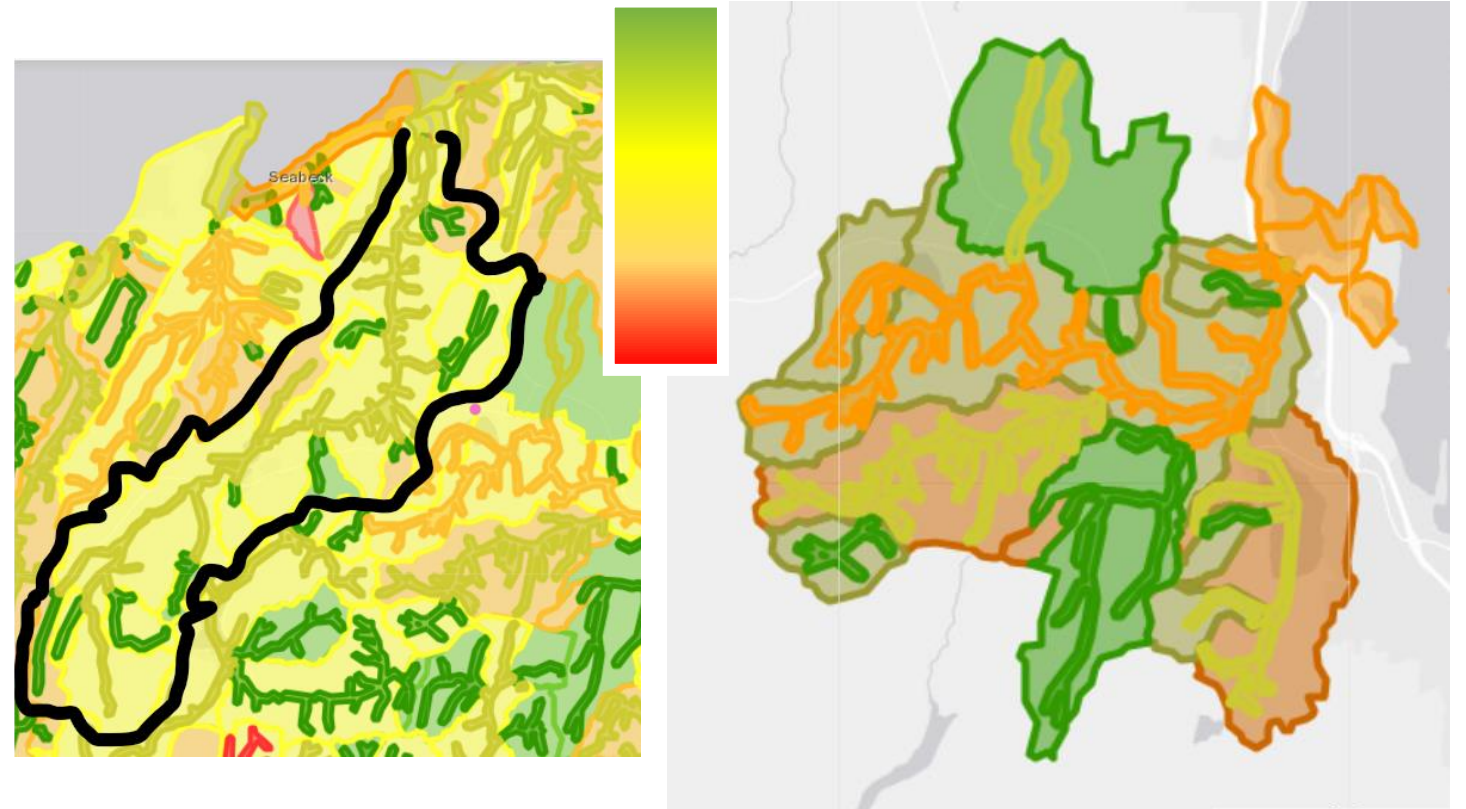
Attribute	Indicator	Condition Rating				
S1. Riparian vegetation	% forest cover in MU	<40%	41%-55%	56%-70%	71%-85%	>85%
S2. Biological condition (B-IBI)	Aggregated B-IBI score for stream	≤20	21-40	41-60	61-80	81-100
S3. Water Quality	Performance of stream against bacteria standard	Fails standard	NA	Meets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



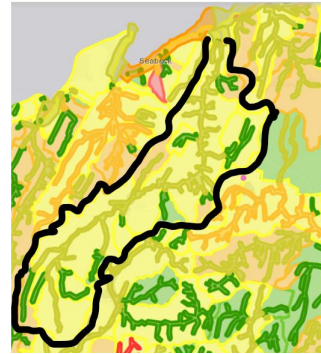
Attribute	Indicator	Condition Rating				
M1. Shoreline armor	% armor in MU	>75%	51-75%	26-50%	1-25%	<1%
M2. Riparian vegetation	% forest cover in MU	<40%	41%-55%	56%-70%	71%-85%	>85%
M3. Water quality	SGA classification status in MU	Prohibited	Prohibited & cond./appr.	Conditional	Conditional & appr.	Approved

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

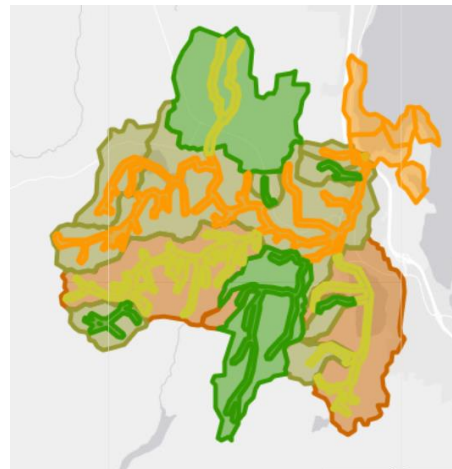
OCI Score on Cartegraph	Roll up Level of Service into Overall Condition Rating Scale (0-4)
HIGH	3.1-4
MEDIUM	2.1-3
LOW	1.1-2
VERY LOW	0-1



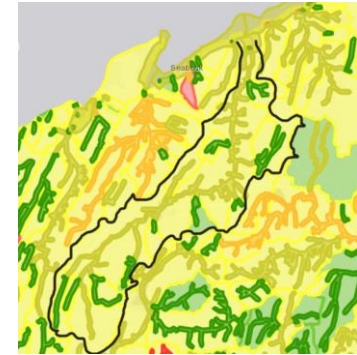
First steps: How to define future services and conditions?



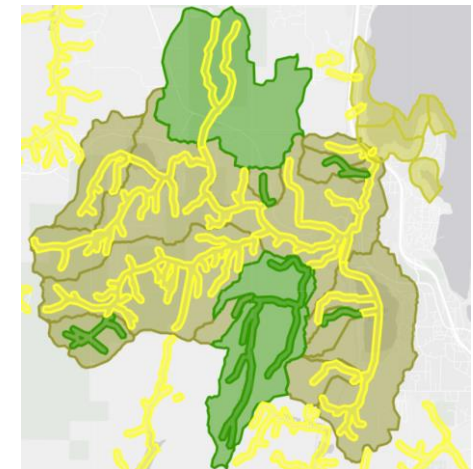
CURRENT



- Action 1
- Action 2
- Action 3



FUTURE



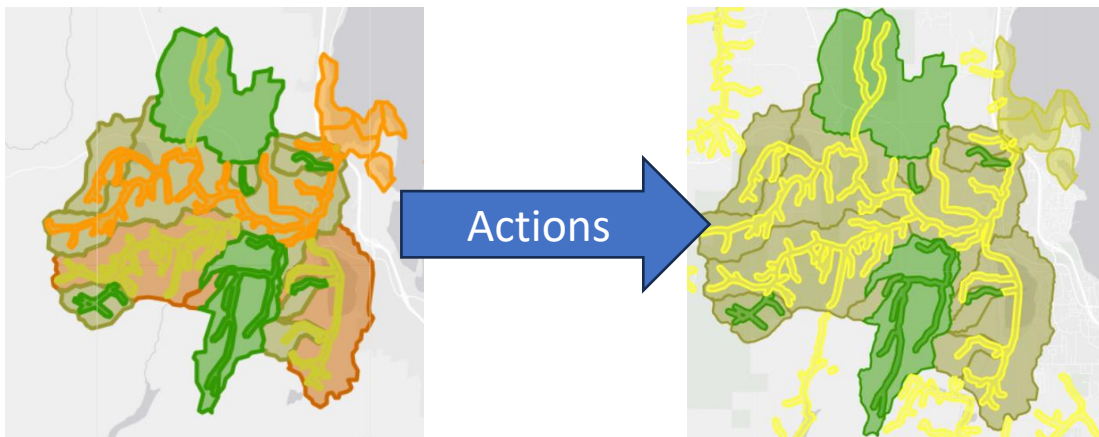
- Projects
- Policy needs
- Program approaches

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

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

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?

→ November workshop for pilot watersheds and 2024 for more

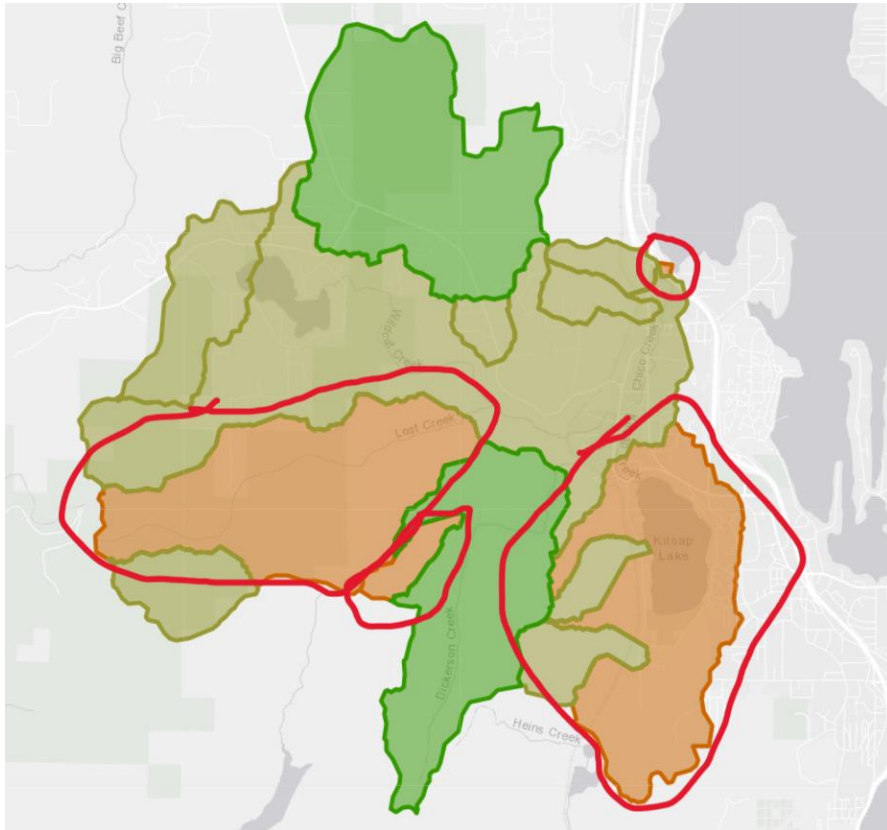


Chico Forests – Option 1: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium

Attribute	Indicator	Condition Rating				
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%

Science basis for thresholds between categories ...

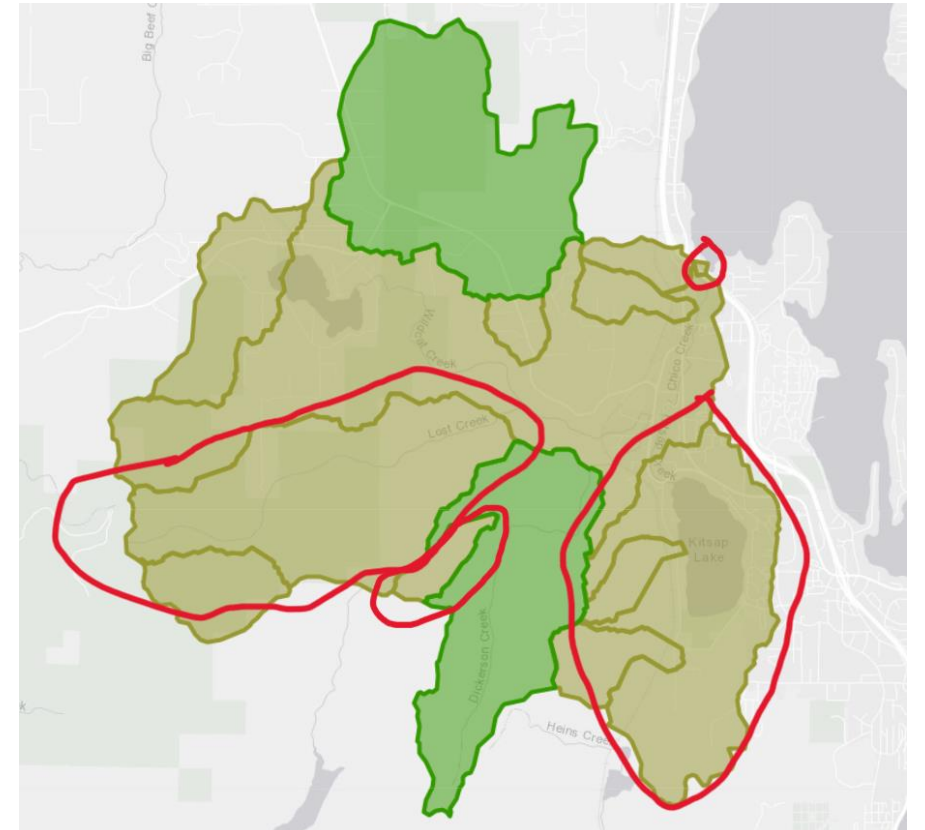
Chico Forests – Option 1a: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium



Feedback:

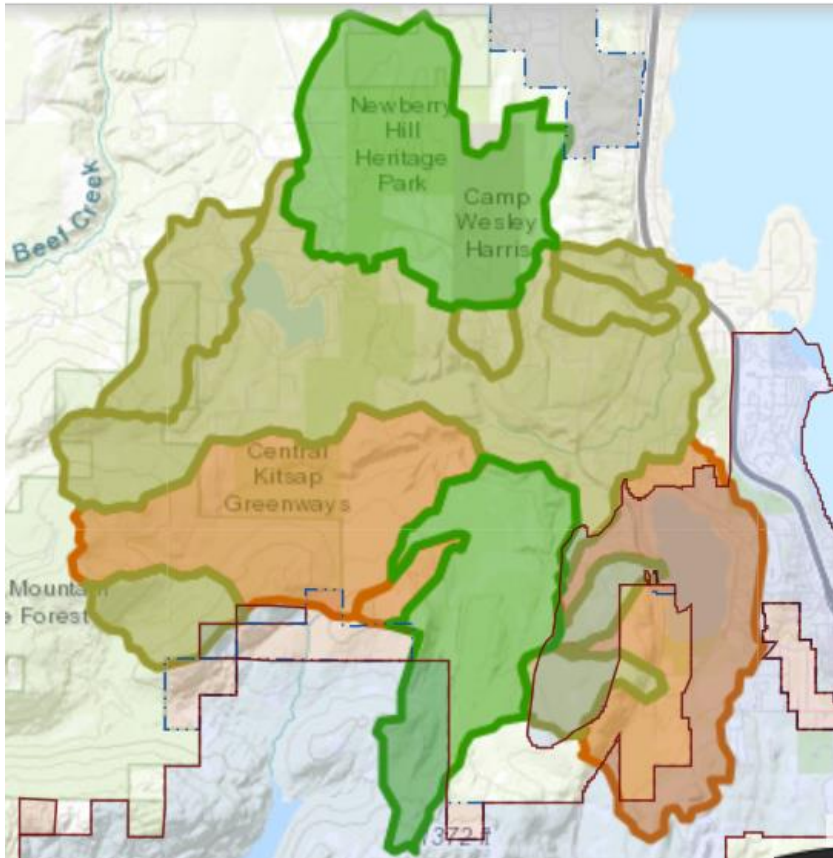
What works for this option that we should keep?

What needs to evolve?



Note: no MUs with “very low” forest LOS

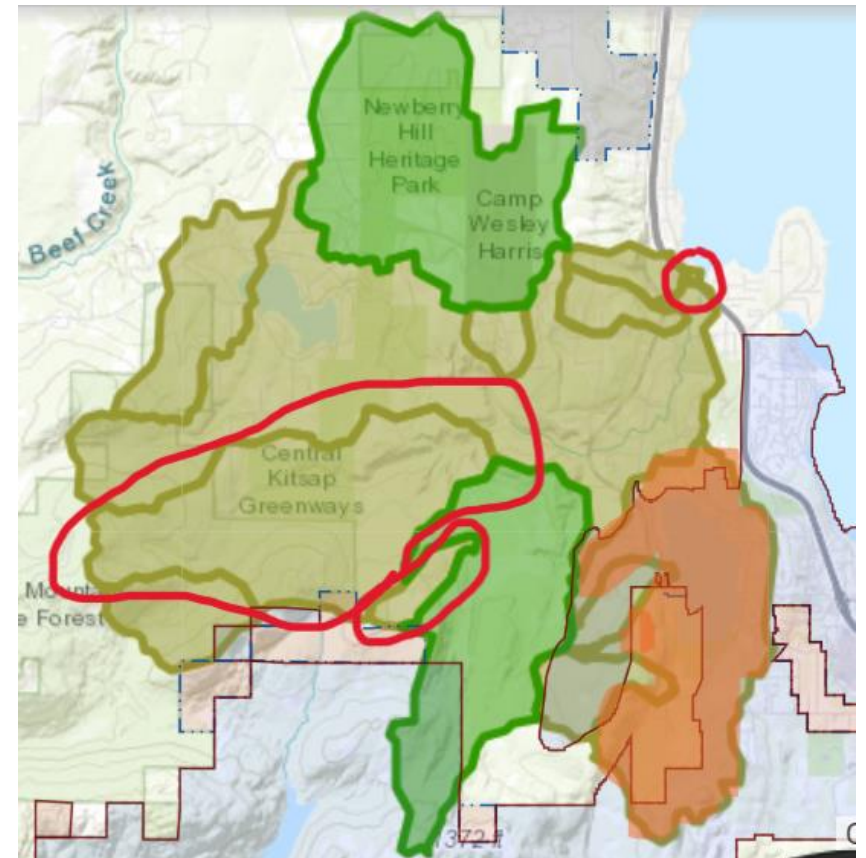
Chico Forests – Option 1b: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium ... **except inside UGAs (Kitsap Lake) any MUs very low would improve to low**



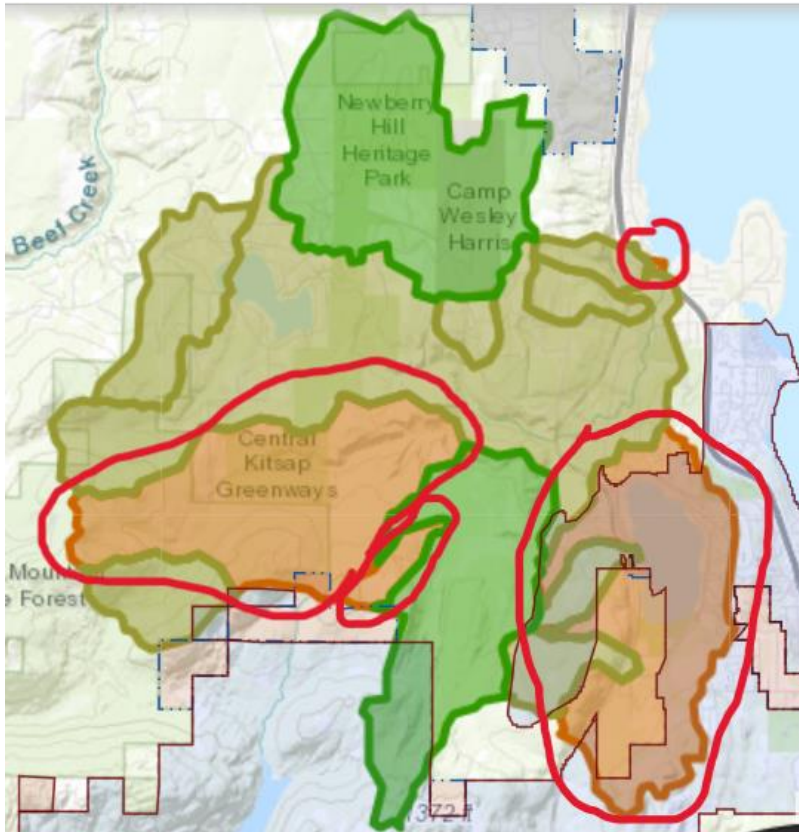
Feedback:

What works for this option that we should keep?

What needs to evolve?



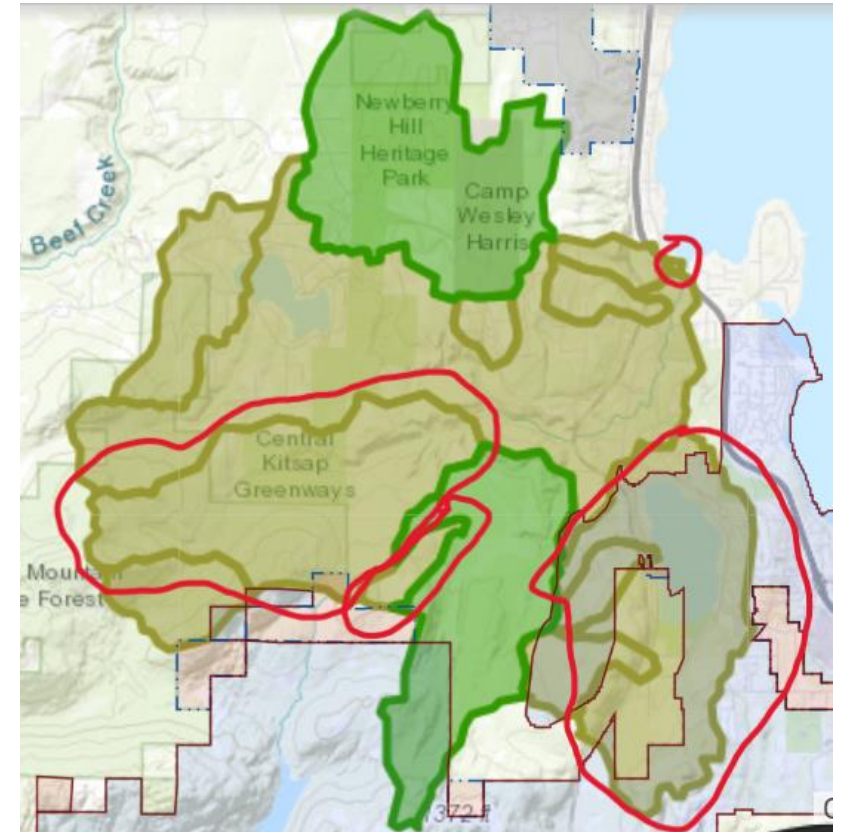
Chico Forests – Option 1c: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium ... **except inside UGA (Kitsap Lake) any MUs must improve one band/step**



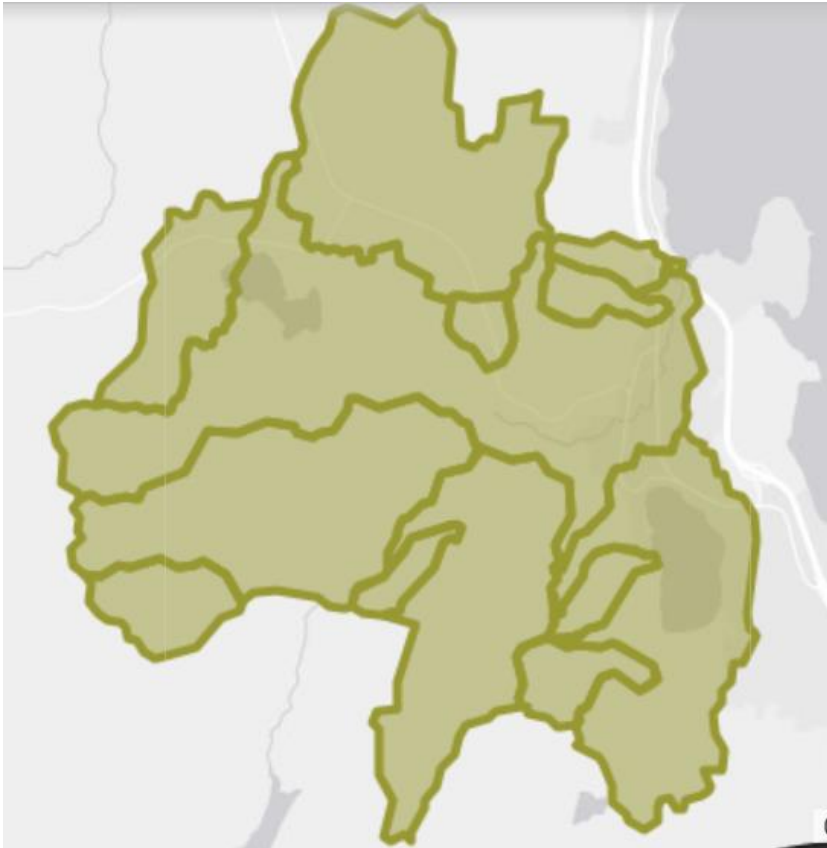
Feedback:

What works for this option that we should keep?

What needs to evolve?



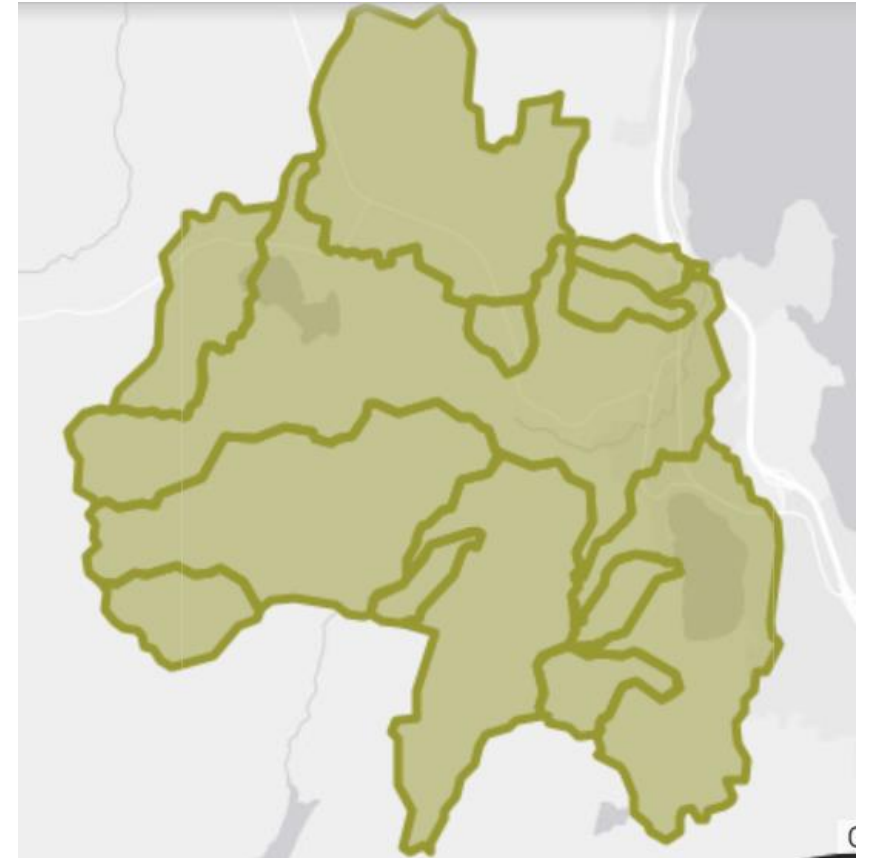
Chico Forests – Option 2: Aggregate to watershed; any watershed currently medium and high stay medium and high (no losses) and all watersheds very low and low improve to at least medium



Feedback:

What works for this option that we should keep?

What needs to evolve?

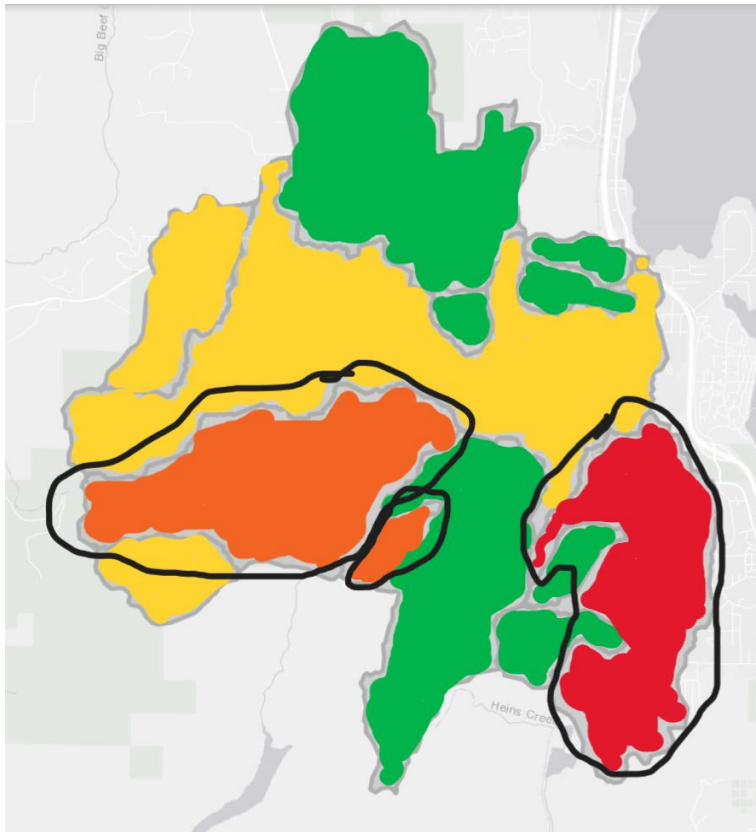


Chico Forests – Option 3: Focus on attribute F1. Any MUs with low or very low forest cover must increase to at least 70%.

Attribute	Indicator	Condition Rating				
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%

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

Attribute F1 Only

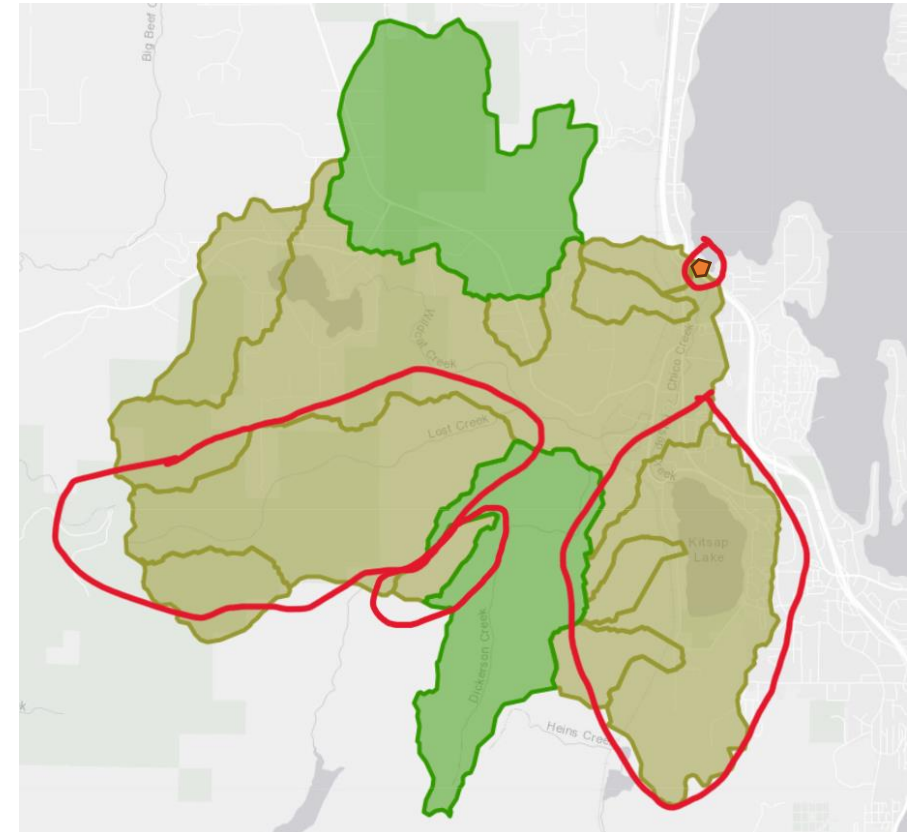


Feedback:

What works for this option that we should keep?

What needs to evolve?

Overall LOS



Tell us ...

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

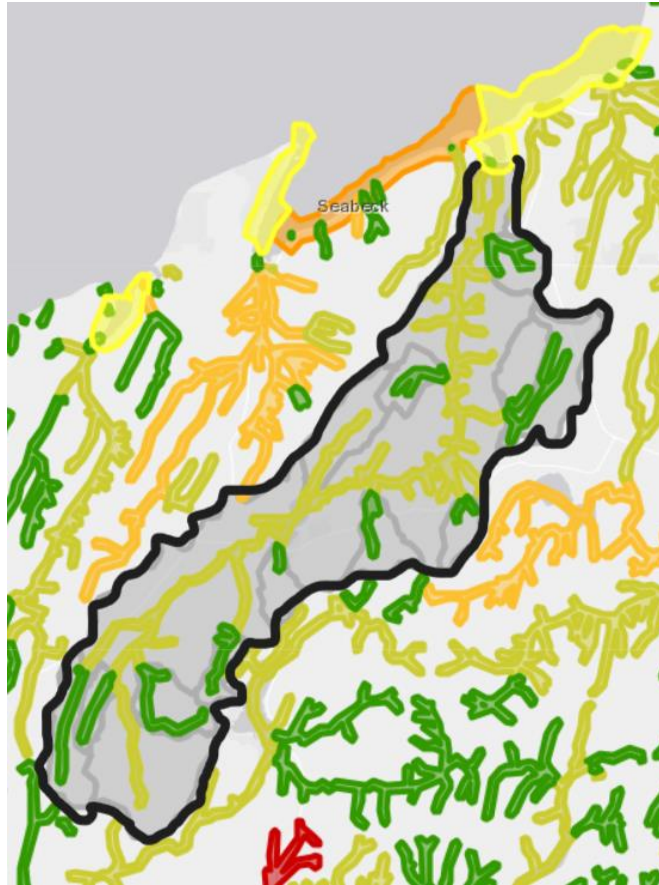
→ November workshop for pilot watersheds and 2024 for more



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

Attribute	Indicator	Condition Rating				
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

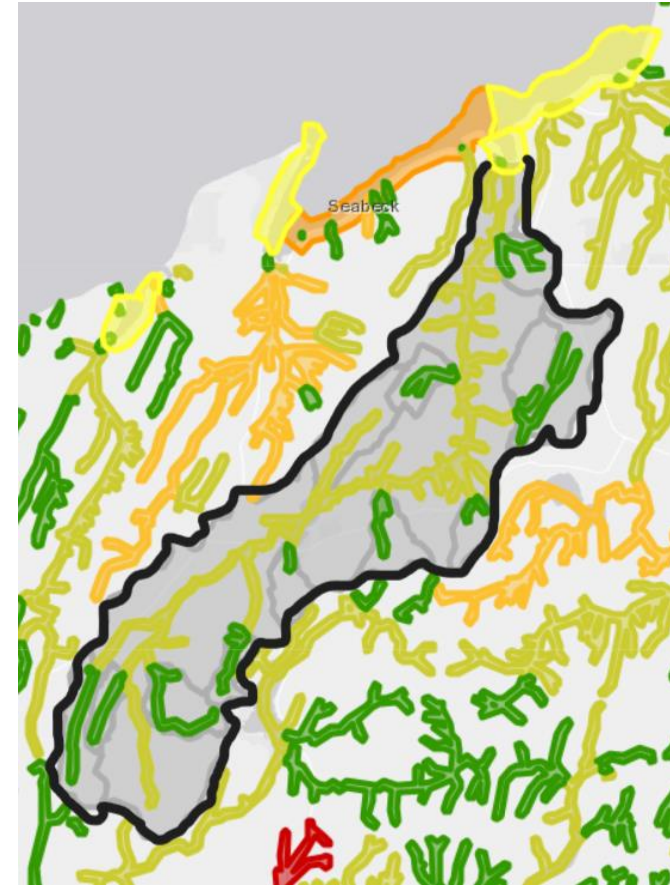
Big Beef Streams – Option 1: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium



Feedback:

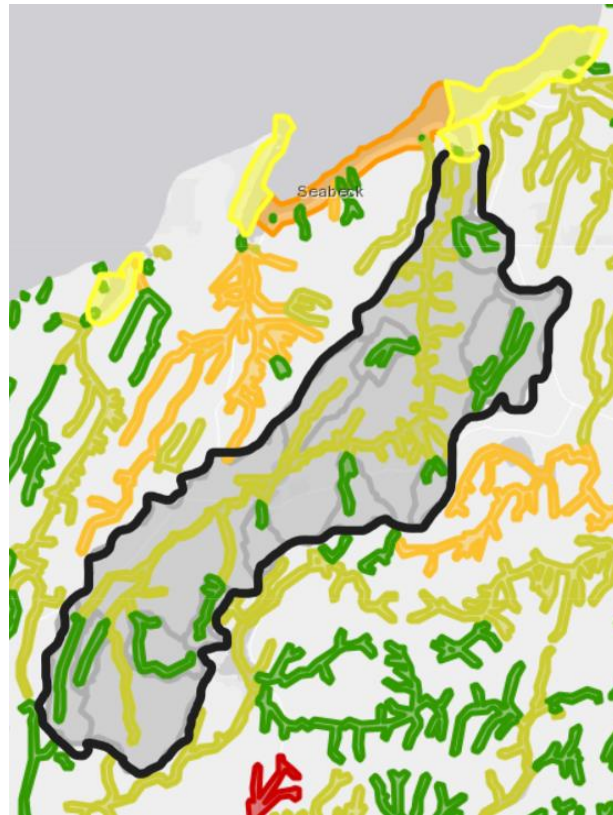
What works for this option that we should keep?

What needs to evolve?



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

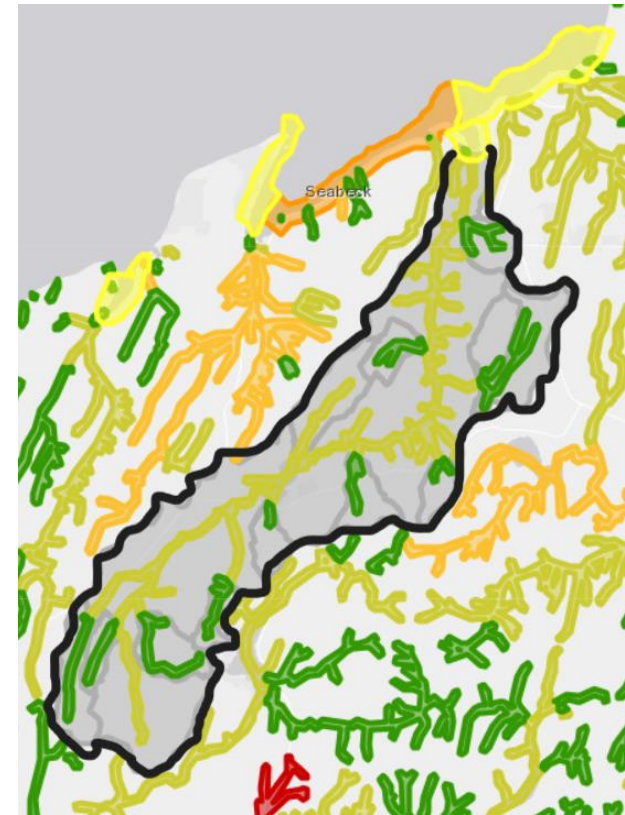
Big Beef Streams – Option 2: Aggregate to watershed; any watershed currently medium and high stay medium and high (no net loss) and all watersheds very low and low improve to at least medium



Feedback:

What works for this option that we should keep?

What needs to evolve?

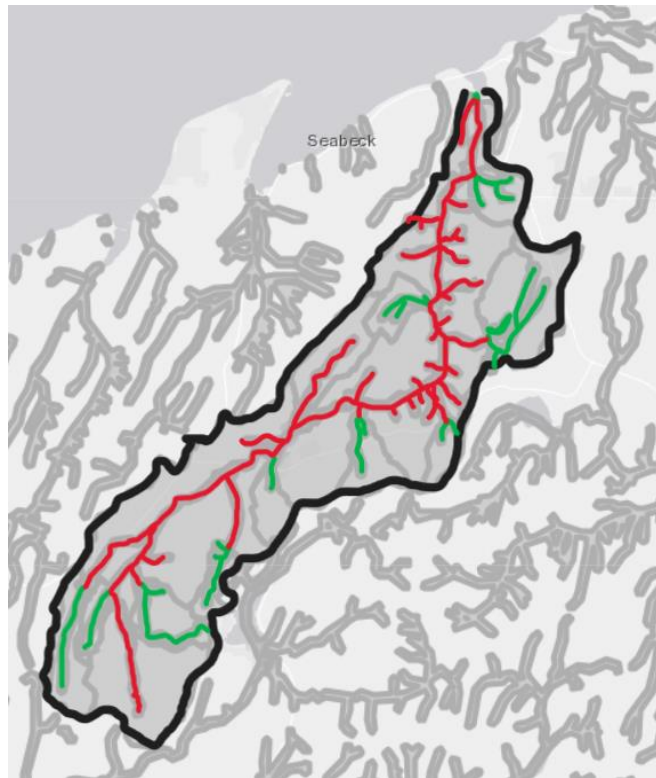


Note: average watershed-wide stream LOS is **medium**

Big Beef Streams – Option 3a: Focus on attribute S4. Any MUs with low (barriers exist) must increase to very high (no barriers)

Attribute	Indicator	Condition Rating				
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

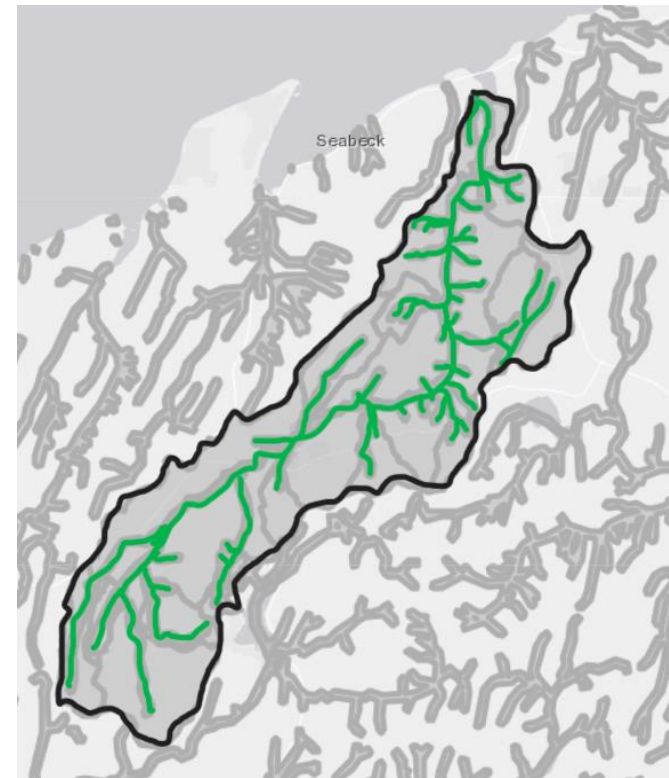
Big Beef Streams – Option 3a: Focus on attribute S4. Any MUs with low (barriers exist) must increase to very high (no barriers)



Feedback:

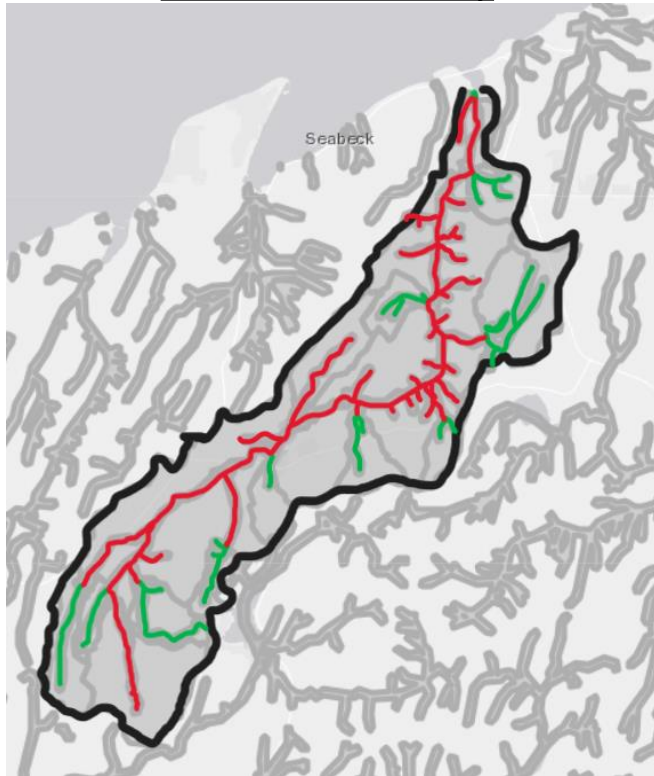
What works for this option that we should keep?

What needs to evolve?



Chico Streams – Option 3b: Focus on attribute S4. What if all fish passage barriers were removed – how much would that increase the Level of Service?

Attribute S4 Only

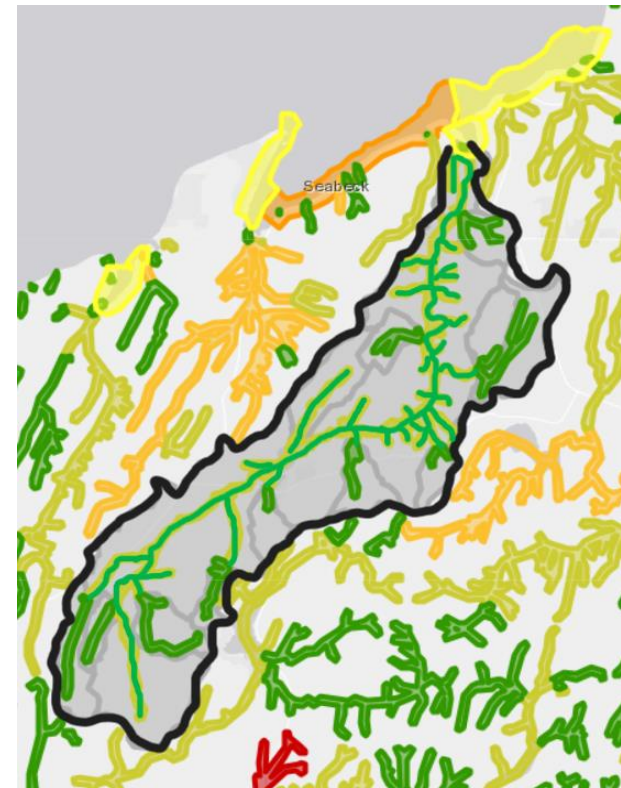


Feedback:

What works for this option that we should keep?

What needs to evolve?

Overall LOS




Tell us ...

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

→ November workshop for pilot watersheds and 2024 for more

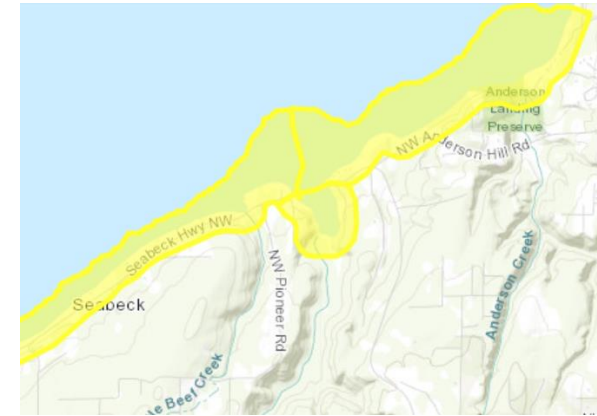
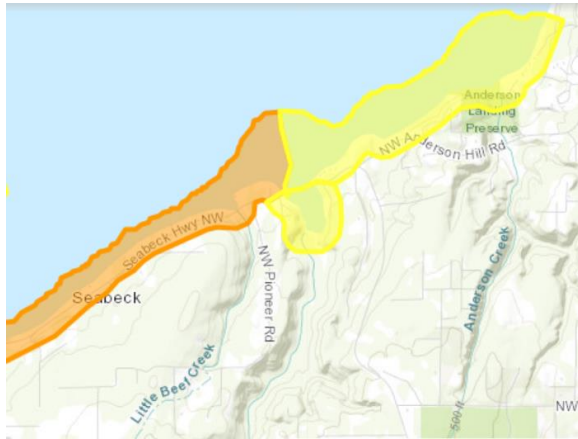


Shorelines – Option 1: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium

Attribute	Indicator	Condition Rating				
						
M1. Shoreline armor	% 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 ...

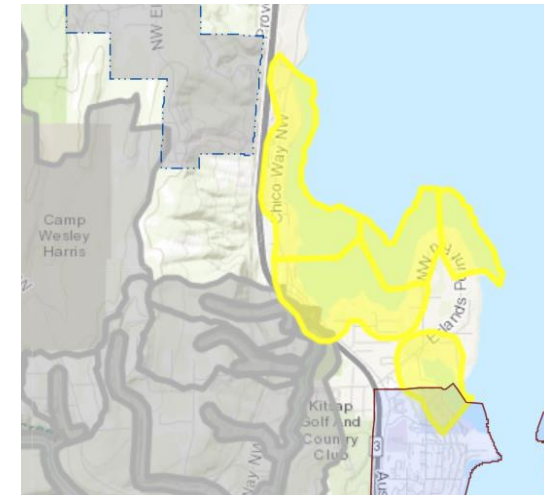
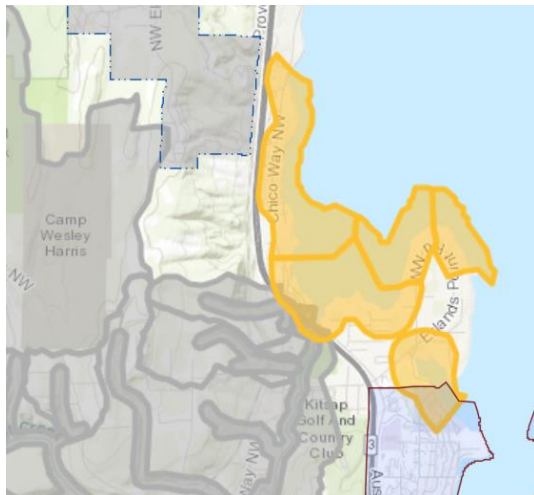
Shorelines – Option 1: All MUs with services currently medium and high stay medium and high (no net loss) and all MUs very low and low improve to at least medium



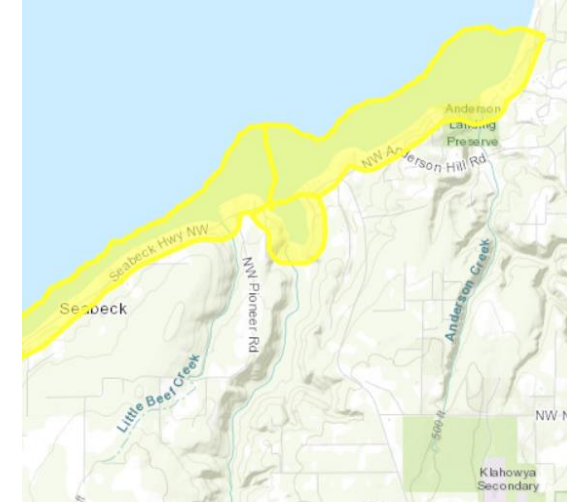
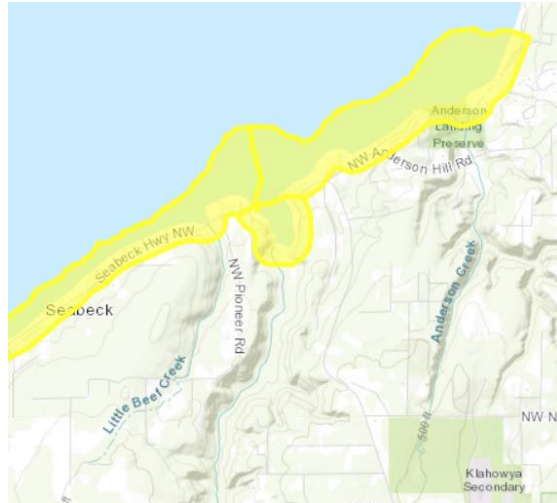
Feedback:

What works for this option that we should keep?

What needs to evolve?



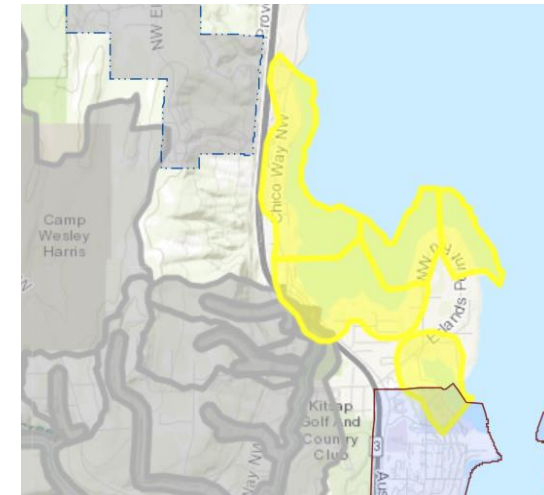
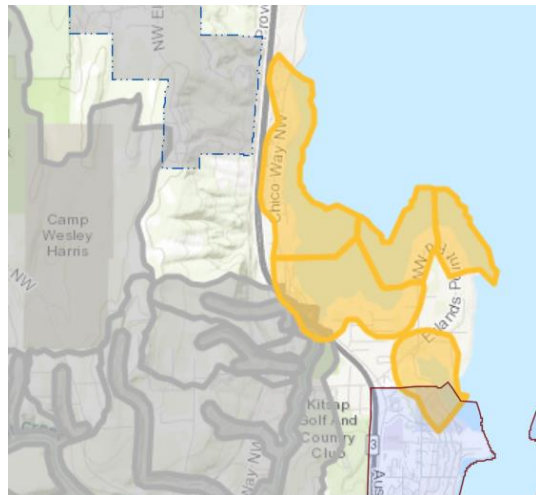
Shorelines – Option 2: Aggregate to watershed; any watershed currently medium and high stay medium and high (no net loss) and all watersheds very low and low improve to at least medium



Feedback:

What works for this option that we should keep?

What needs to evolve?

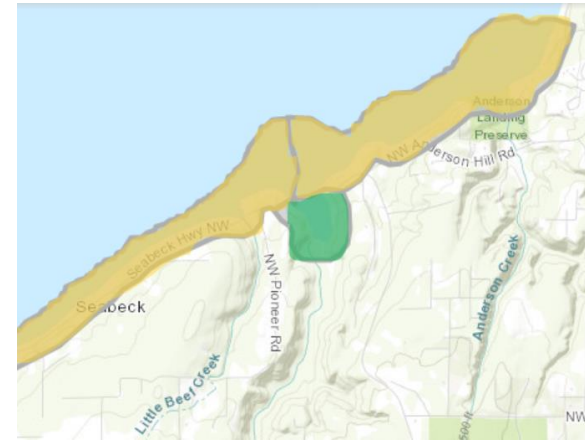
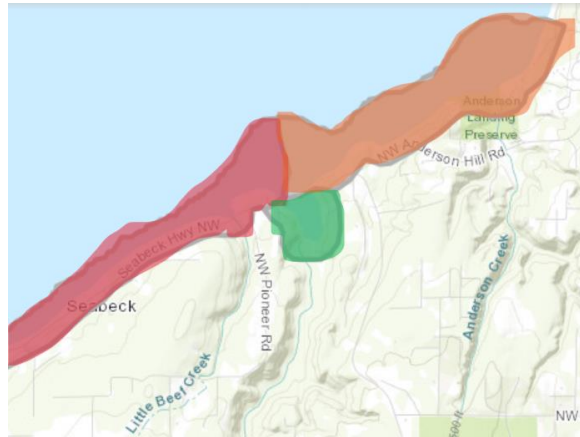


Shorelines – Option 3: Focus on attribute M1. Any MUs with >25% shoreline armoring must decrease armoring to <25% (increase service)

Attribute	Indicator	Condition Rating				
M1. Shoreline armor	% 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 ...

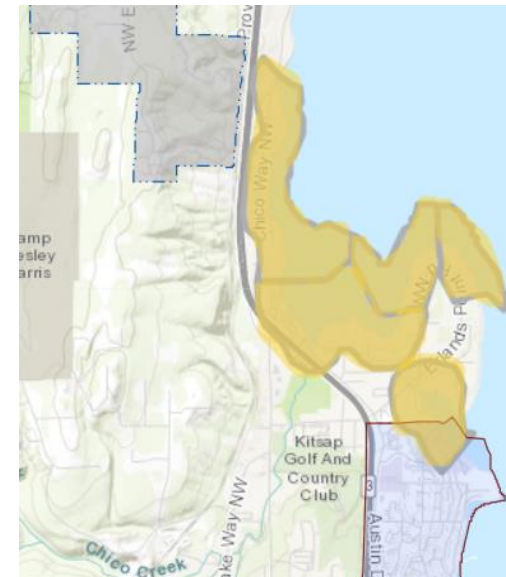
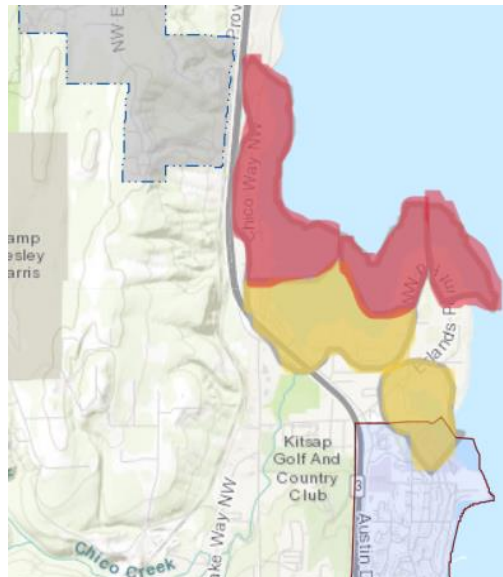
Shorelines – Option 3a: Focus on attribute M1. Any MUs with >25% shoreline armoring must decrease armoring to <25% (increase service)



Feedback:

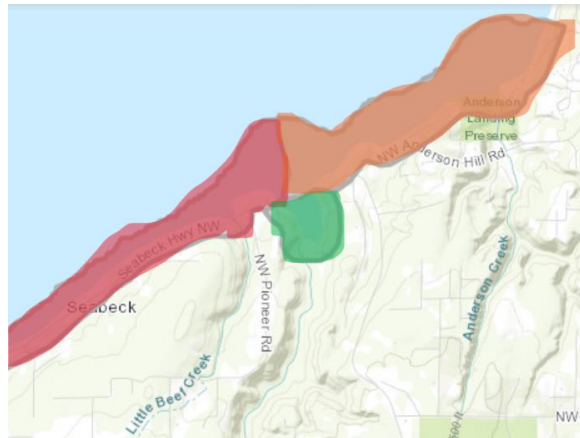
What works for this option that we should keep?

What needs to evolve?



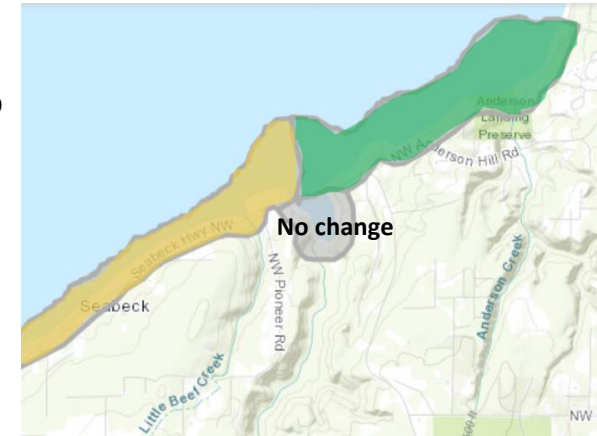
Shorelines – Option 3b: Focus on attribute M1. What if all MUs with >25% shoreline armoring dropped to <25% - LOS?

Attribute M1 only



MU_64 currently rated LOW has high percent shoreline armoring. Removing armoring would improve LOS from LOW to MEDIUM.

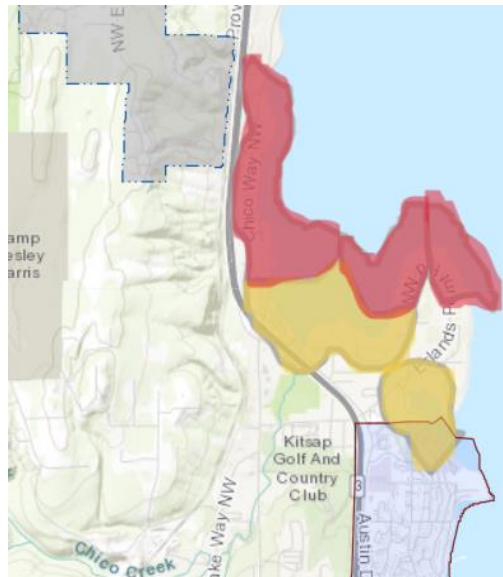
Overall LOS



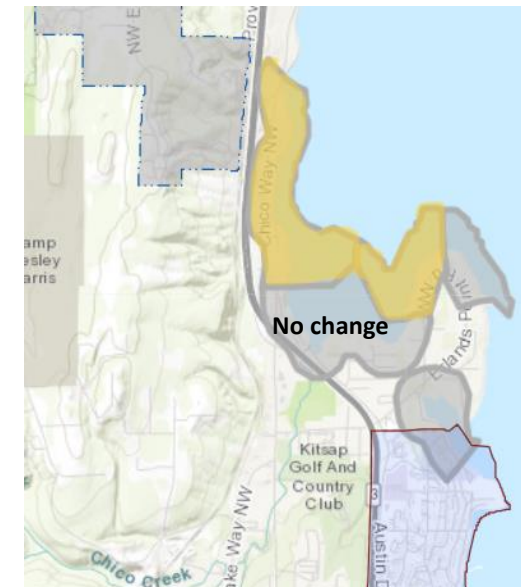
Feedback:

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.



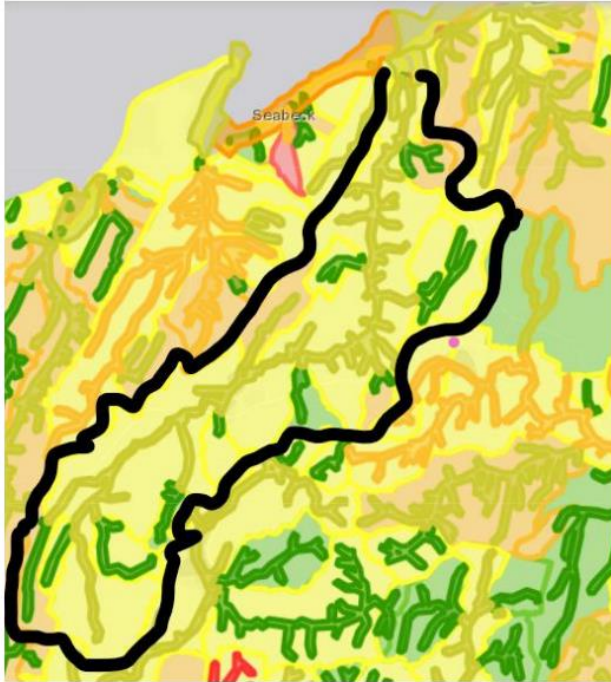
Tell us ...

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

→ November workshop for pilot watersheds and 2024 for more



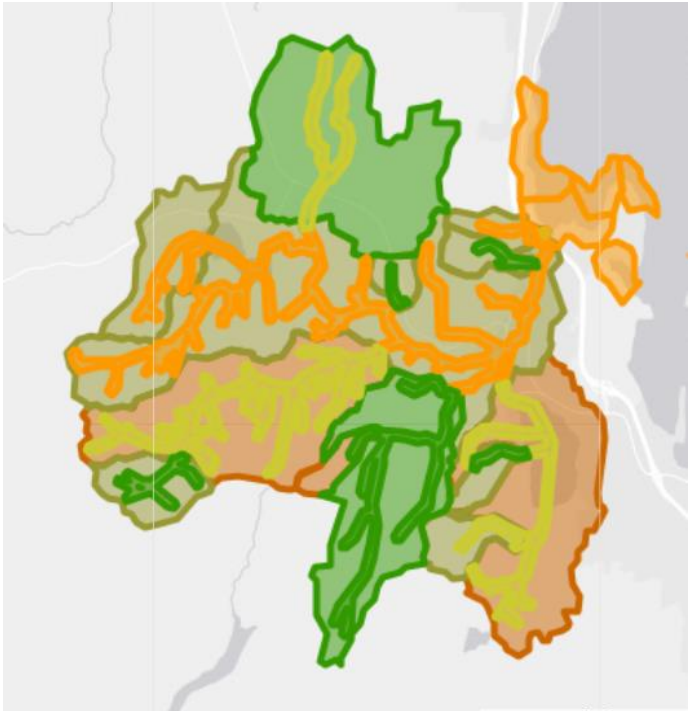
Big Beef Creek implementation action examples



- 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
HIGH	2	12	0
MEDIUM	8	2	2
LOW	4	0	1
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
HIGH	2	6	0
MEDIUM	8	5	0
LOW	4	3	3
VERY LOW	0	0	0

Tell us ...

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

→ November workshop for pilot watersheds and 2024 for more

