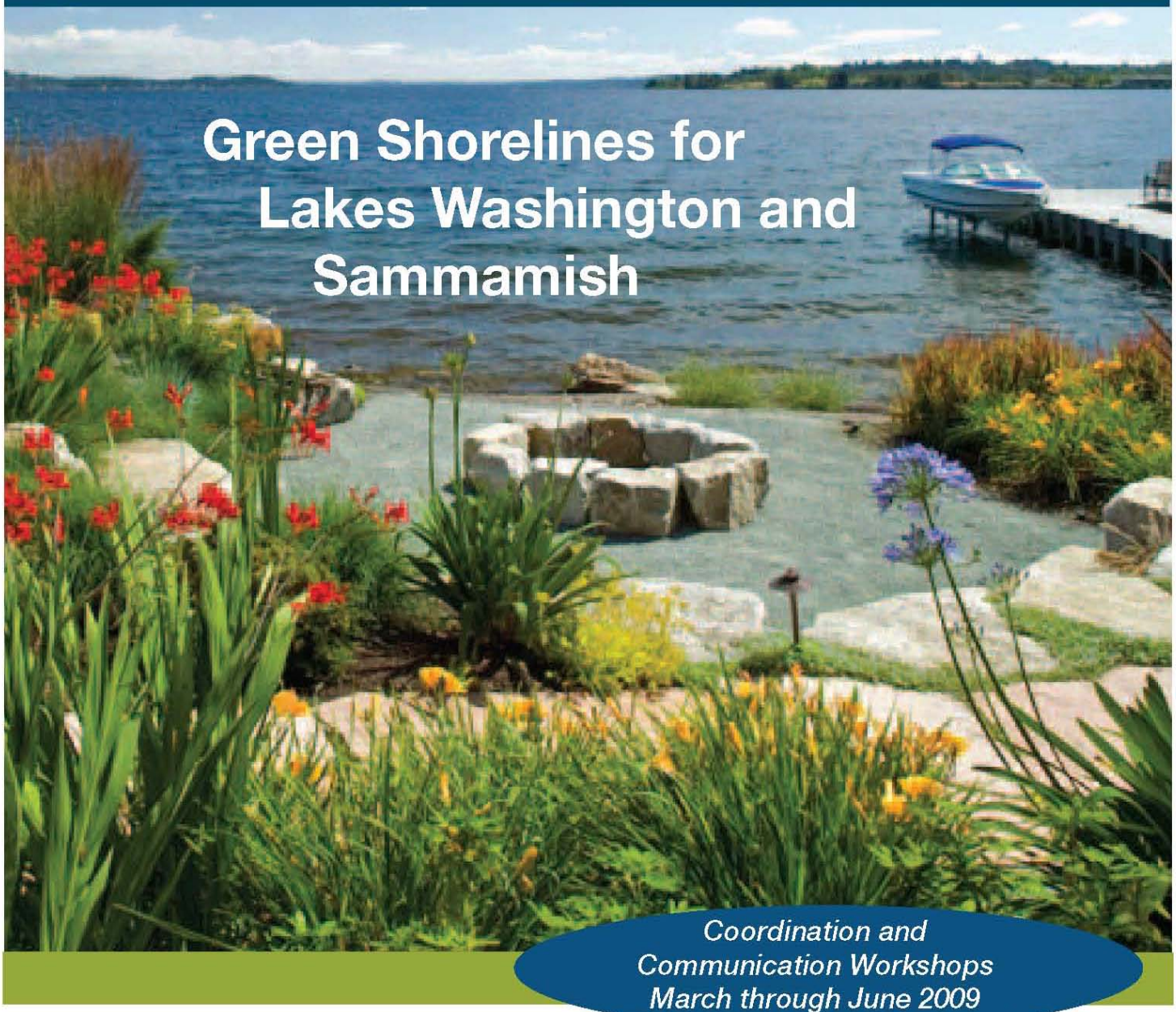
SUMMARY REPORT

Green Shorelines for Lakes Washington and Sammamish



Coordination and Communication Workshops March through June 2009

WASHINGTON STATE Governor's Office of Regulatory Assistance

RESTORE OUR WATERS

LAKE WASHINGTON CEDAR SAMMAMISH WATERSHED

DEPARTMENT OF ECOLOGY State of Washington

NOAA

PugetSoundPartnership
our sound, our community, our chance

City of Seattle

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Executive Summary

Lake Washington and Lake Sammamish are treasured resources in Western Washington. They provide beautiful views and recreational opportunities that attract people to the region. As residential development expanded along the lakeshores, bulkheads and shoreline armoring have diminished many natural processes that provide high quality habitat for fish and wildlife. However, green shoreline alternatives now provide opportunities to improve lakeshore habitat and restore natural processes while at the same time enhancing recreational access and enjoyment for property owners and the public.

The Green Shorelines Workshop Steering Committee was formed in 2008 as a collaborative effort between local, regional, state, and federal agency staff. The Workshops were designed to build on previous shoreline protection and restoration work in the Lake Washington/Cedar/Sammamish watershed (WRIA 8), including the recent City of Seattle document Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington (also referred to as the Green Shorelines Guidebook).

Four Workshops were held between March and June 2009. The first three Workshops focused on better defining green shorelines, examining the permit process, and discussing existing and potential incentives. The fourth Workshop was offered in the evening to make it more accessible to the public and shoreline property owners. The fourth Workshop provided participants with information on green shoreline design, permitting, and incentives and allowed property owners to contribute their ideas regarding potential and existing incentives.

Workshop participants identified several opportunities to encourage green shorelines approaches, including:

- Financial and permitting incentives (*e.g.*, tax breaks, grants, streamlined permitting).
- Technical assistance with the design, installation, and permitting of green shoreline projects.
- Lakeshore demonstration projects.
- Further definition of where and what type of green shoreline techniques are appropriate for site specific conditions.
- More outreach information on lake health, habitat and fish.

The Workshops provided an outlet for communication, coordination, and understanding among the many individuals and agencies involved in permitting, designing, and implementing green shoreline approaches. Presentations and discussions improved the understanding of green shorelines and how this concept could be applied to the shorelines of Lake Washington and Lake Sammamish. Although these Workshops were targeted directly to the shorelines of Lakes Washington and Sammamish, the process and outcomes provide a useful model for other communities with lake or marine shorelines.

Complete information, including presentations, reference materials, contact information, and additional resources can be found at the Green Shorelines website (http://www.ecy.wa.gov/programs/sea/events/greenshorelines.html).

Acknowledgements

The Green Shorelines Steering Committee would like to acknowledge and thank the individuals who made these Workshops possible. We could not have conducted the Workshops without the assistance and contribution from so many wonderful people!

- Thank you to the presenters who shared their knowledge and expertise, which helped us increase our understanding of the issues, challenges, and possibilities regarding green shorelines approaches for Lakes Washington and Sammamish.

- A special thank you to the City of Kirkland for offering the Heritage Hall for the March and April Workshops. We are particularly thankful for the assistance provided by Teresa Swan.

- Thank you to the Puget Sound Partnership for the grant which allowed us to lease larger facilities for the May and June Workshops and to reprint the *Green Shorelines Guidebook.*

- We sincerely thank all the volunteers who pitched in, lending a hand when we needed it - you saved the day! Especially Cindy Avanzino, Geoff Tallent, Jacque Klug, and Jeff Bash.

- A special thank you to student intern, Jeanne Fulcher, who helped organize and keep track of all those important tasks, including registration, which needed to be done.

- Another special thank you goes to Tim Schlender, Department of Ecology, for patiently managing the constant changes and updates to the Green Shorelines website.

- The two graduate student teams from the University of Washington Program on the Environment who set the foundation for the workshops with their earlier work. The Fish Friendly Team included Ruth Howell, Gregg Casad, Dave Fries, Kelli Roberts, Bryan Russo and Angela Wallis and were mentored by Professor Thomas Leschine. The Lake Washington Shoreline Team included Lindsay Chang, Seth Ballhorn, Kelly Stumbaugh, and Martin Valeri and were mentored by Research Professor Charles 'Si' Simenstad.

- We are most grateful to Dave LaClergue of Seattle's Department of Planning and Development who wrote the *Green Shorelines Guidebook*, our primary outreach tool. Also thanks to Holly McCracken and Sarah McKearnan of Seattle Public Utilities who managed the survey of Seattle shoreline owners which further informed development of these workshops.

- Finally, we would like to thank all the participants who attended one or more of the workshops. By sharing your opinions, experiences, and knowledge, we are all enriched

and able to see a larger perspective. We could not have conducted the workshops without your contribution!

Given the daytime format, the Steering Committee acknowledges the difficulty presented to a number of property owners, contractors, and consultants. For those who were able to attend, the Steering Committee recognizes the effort and time donated by these groups. The Steering Committee greatly appreciates the perspective they brought to the process. Their participation clarified the "big picture" and highlighted many of the challenges applicants, consultants, and contractors face with green shorelines.

The following businesses, non-profits, and citizen groups participated in one or more of the Workshops:

- Waterfront Construction
- The Watershed Company
- Herrera Environmental
- Cohabitats
- GGLO
- In Harmony Sustainable Landscapes
- Hendrikus Group
- Anchor QEA, LLC
- EcoPacific Environmental Services
- Reed Middleton, Inc.
- People for Puget Sound
- Shoreline Property Owners and Contractors Association (SPOCA)
- Friends of the Cedar River Watershed
- Sage Environmental
- Marine Restoration and Construction, LLC
- MAKERS Architecture
- SHO
- Bayshore E
- Kinzer Real Estate Services
- RE/MAX Northwest
- Portage Bay Coalition for Clean Water
- Save Lake Sammamish
- West Lake Sammamish Association
- Ashley Shoreline Design & Permitting

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Introduction

In Lake Washington and Lake Sammamish, encouraging alternative development options that result in more ecologically friendly shorelines is considered an essential step for improving fish and wildlife habitat and enriching community shoreline use. Opportunities for green shorelines may present themselves during initial shoreline development or during re-development of existing shoreline uses.

Green Shorelines

The term "green shorelines" is a relatively new term that has many synonyms. Phrases with similar meanings include salmon friendly, eco-friendly, soft engineering, soft shorelines, alternative shoreline design, and living shorelines. For the purposes of this project, the term "green shorelines" was selected in order to be consistent with the shoreline treatment concepts illustrated within the recent City of Seattle document Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington (also referred to as the Green Shorelines Guidebook).

What do Green Shorelines Look Like?

Martha Washington Park
The City of Seattle converted a shoreline armored with rip rap to a more natural gravel beach. Large wood was placed in four areas and the restored area was planted with native ground cover, trees, and shrubs, including vegetation that will overhang the water during summer.
Photo: City of Seattle

Madrona Community Project
The Friends of Madrona Woods used grant funds from the city, county, and federal government and a community foundation to daylight Madrona Creek and create a new wetland cove along Lake Washington that will provide rearing and refuge habitat for young salmon.
http://www.madronawoods.org/
Photo: National Oceanic and Atmospheric Administration

Private Lakeshore Enhancement
This Lake Washington shoreline property owner replaced a portion of armored shoreline with a gently sloping beach cove. Vegetation was planted along the remaining bulkhead, providing shade and a source of insect prey to juvenile Chinook salmon. In addition to improving shallow lakeshore habitat, the beach cove provides improved wading access to the lake.
Design: The Watershed Company
Photo: City of Seattle

Chinook Beach Park
The City of Seattle removed an old marina and bulkhead and graded the shoreline to a gentle slope. Invasive Black locust, clematis, and Himalayan blackberry were removed and the area was replanted with 1,150 native plants including ferns, ground cover, shrubs, and trees. Juvenile Chinook salmon have been found using the site since restoration began in 2006.
Photo: City of Seattle

Project Background and Building on Previous Efforts

Representatives from the City of Seattle, the Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Salmon Recovery Council, the National Oceanic and Atmospheric Administration (NOAA) Restoration Center, the Washington Department of Ecology (ECY), and the Governor's Office of Regulatory Assistance (ORA) formed a Green Shorelines Workshop Steering Committee in December 2008. In spring 2009, a representative from the Puget Sound Partnership (PSP) joined the group.

The intent of the Steering Committee was to build on previous work in WRIA 8 regarding green shorelines and to implement some of the recommendations resulting from this earlier work. In addition, the Steering Committee realized that the Shoreline Master Program (SMP) updates, publication of the City of Seattle's Green Shorelines *Guidebook*, and the implementation of the WRIA 8 Chinook Conservation Plan all provided an opportunity for cross agency communication and coordination.

Scope: Lake Washington and Lake Sammamish

The scope of the Green Shorelines effort is limited to Lake Washington and Lake Sammamish. These lakes are both critical to the survival of Chinook salmon in the Lake Washington/Cedar/Sammamish Watershed. The lakes also provide habitat for many other species of fish and wildlife. Both lakes are highly developed and primarily surrounded by single

family homes. While the geographic scope of the project is limited to these two lake systems, the green shorelines concept may be transferrable to other urban/sub-urban shorelines that cannot be restored to pre-development conditions, but can be naturally enhanced to help enjoy the aesthetics of the shorelines while also improving the habitat and ecosystem functions that they provide.

Recovering Salmon in the Lake Washington/Cedar/Sammamish Watershed

In the Lake Washington/Cedar/Sammamish Watershed, Chinook salmon are listed as threatened under the federal Endangered Species Act. In response to the listing, 27 local governments, businesses, community groups, state and federal agencies have been working together since 2000 to develop and implement a Chinook Salmon Conservation Plan to recover salmon runs in the Lake Washington/Cedar/Sammamish Watershed, also known by its state designation Water Resources Inventory Area 8 (abbreviated as WRIA 8). Research shows that lakeshore habitat in Lakes Washington and Sammamish is important to the survival of juvenile Chinook salmon[1]. Juvenile Chinook salmon rely on high-quality shallow lakeshore habitat to avoid predators and to produce their insect prey. Therefore partners in the WRIA 8 watershed have been working to raise awareness of the importance of lakeshore habitat to salmon and the lakes' ecological health through workshops for property owners, creation of a lakeside living website, and development of the *Green Shorelines Guidebook.*

In 2004, WRIA 8 received a grant from the King Conservation District to conduct workshops for lakeshore property owners in six partner jurisdictions (Seattle, Unincorporated King County, Lake Forest Park, Mercer Island, Sammamish, and Issaquah). The workshops were designed to raise awareness that the shorelines of Lakes Washington and Sammamish are significant habitats for juvenile Chinook salmon and that shoreline maintenance and design affects the quality of this habitat. The workshops also addressed the permitting process and the basis for different permitting requirements. Overall, property owners said that the workshops met or exceeded their expectations; however, many participants wanted more guidance on confusing permitting issues and site specific approaches to lakeshore designs. This feedback suggested that further efforts were needed to address permitting issues and further develop green shoreline design recommendations.

In 2006, NOAA Fisheries teamed up with the University of Washington's Keystone Environmental Management Program (UW) to survey Lake Washington property owners to identify barriers to lakeshore restoration and identify potential incentives for implementing green shorelines. This work complemented and coordinated with a similar survey being conducted by the City of Seattle for property owners in the southern part of Seattle. Both projects collaborated with WRIA 8. The UW and City of Seattle studies found the permitting process and project costs to be the largest barriers to green shorelines. In 2007 the partners teamed up with UW to examine the permitting process, identify particular areas where barriers or constraints exist and make recommendations for improving the process. One recommendation from this report found that because there are so many jurisdictional layers to the permitting process that often regulators do not understand the whole process and that these groups along with contractors and

[1] See Appendix A.

landowners would benefit from increase communication and understanding of the whole process. In addition the entities interviewed by the UW group, including jurisdictions, contractors and landowners, were interested in collaborating to develop appropriate incentives for the voluntary implementation of green shorelines.

Links to more information regarding WRIA 8 salmon recovery efforts and full reports from the UW groups and the City of Seattle are provided in Appendix A.

Shoreline Master Programs

Each local jurisdiction around Lake Washington and Lake Sammamish has its own Shoreline Master Program (SMP) intended to plan for and administer development within a defined management area including all aquatic areas and adjacent 200-feet of upland within each jurisdiction. The SMPs must meet state guidelines; however, specific requirements within each jurisdiction's SMP may vary depending on the degree of existing development and the presence of shoreline resources. Of particular relevance to green shorelines, the state guidelines require updated SMP's to prioritize consideration of softer shoreline solutions prior to either replacement of an existing structure or construction of new hard armoring, which will only be allowed when a clear "demonstrated need" is provided to justify hard structures for protection of an existing structure threatened by shoreline erosion. In addition, SMP requirements need to be consistent with local Critical Areas regulations and work in concert with the Washington Department of Fish and Wildlife (WDFW) implementation of the Hydraulic Code, federal resource agencies' mandates per the Endangered Species Act (ESA), and federal and state Clean Water Act (CWA) regulatory obligations.

It is important to note that the age of existing SMPs vary throughout the WRIA 8 area, with some local SMPs being created more than 30 years ago. Local jurisdictions are currently working with Ecology (ECY) to update their SMPs which are anticipated to result in changes to regulations for future shoreline development.

Goals of the Green Shorelines Workshops

In order to address the findings of the two UW groups and City of Seattle studies, the Steering Committee developed a series of workshops that would help to increase understanding and communication amongst the various groups involved in the permitting process to increase multi-agency permitting efficiency and encourage green shorelines. These workshops would also be a vehicle to vet potential incentives for voluntary green shoreline implementation. The initial Scope of Work developed by the Steering Committee at the start of process is provided in Appendix B.

As part of this initial effort, the following three goals were identified:

- Promote communication and coordination involving as many stakeholders as possible.
- Collect unfiltered feedback from both regulatory and non-regulatory groups.
- Provide a forum to discuss green shorelines and test previous assumptions related to barriers that may influence property owner's decision to choose a green shoreline application.

Workshops

A series of four Workshops were scheduled over a four month period beginning in March and ending in June 2009. The Workshops were targeted towards all those with an interest in the potential for increasing the use of green shorelines approaches - federal, state, and local agency staff and officials; non-profit groups; property owners; contractors and consultants. The first three Workshops focused on how to better define green shorelines, examining the permit process, and discussing existing and potential incentives. The final Workshop was offered in the evening to make it more accessible to the public and shoreline property owners. The fourth Workshop provided participants with information on green shoreline design, permitting, and incentives and allowed property owners to contribute their ideas regarding potential and existing incentives.

Agendas and notes for each Workshop are provided in Appendices C through F.

Workshop 1: Defining Green Shorelines

Different organizations often have different perspectives regarding which actions should be included under green shorelines. In addition, opinions regarding selecting appropriate sites and site selection criteria also vary.

The first Workshop focused on better defining the term "green shorelines" and identifying sites appropriate for implementing this approach. The City of Seattle's document Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington (also referred to as the *Green Shorelines Guidebook*) was used as a starting point for the discussion.

What did you find most useful about the workshop?

"Diversity of people / interests represented. Getting everyone on the same page."
Participant from a regulatory agency after 1st workshop

The Workshop began with three presentations:

- Background and importance of Lakes Washington and Sammamish in salmon recovery.
- Overview of research regarding how juvenile Chinook salmon use the shallow water habitat and small stream mouths in the Lakes to hide from predators and to feed.
- Review of the *Green Shorelines Guidebook* with an emphasis on the decision tree for selecting appropriate sites, as related to definitions of green shorelines.

Following the presentations, a group discussion was conducted to record various perspectives on defining green shorelines. Participants were also asked to consider how the green shorelines approach applies to both re-development of urban shorelines and undeveloped shorelines.

After the group discussion, participants were directed into four facilitated groups to further discuss criteria for selecting appropriate sites. More specifically, the discussions were meant to identify what information we already have that could help inform a green shoreline feasibility assessment and what information we still need to be able to answer this question.

The four questions participants were asked to discuss were:

- What characteristics determine whether or not a site is appropriate for green shorelines techniques?
- What additional information do we need to answer question #1? How do we get it?
- Are there other techniques that can be combined with hard engineering to make projects "greener?"
- How do we prioritize concerns and solutions?

Some key conclusions from the first workshop include:

- There is a spectrum of green shoreline approaches that may be appropriate depending on site specific conditions and landowner interests.
- An improved understanding of erosion risks and ecological benefits associated with different green shoreline techniques would help guide green shoreline implementation and could increase landowner willingness to adopt greener approaches.
- Incentives (e.g. economic or regulatory), research, and demonstration projects are high priorities for increasing the implementation of green shoreline techniques.

Meeting notes and a comments summary are provided in Appendix C.

Workshop 2: Permit Processes

The permitting process for projects involving any work in water, including green shoreline projects, is complicated. A Lake Washington shoreline owner survey conducted in 2006-2007 by the University of Washington's Program on the Environment group cited the permitting process as a common barrier to implementing a green shoreline approach. Focus groups of South Lake Washington property owners in the City of Seattle in 2006 also identified the permitting process as a barrier. The permitting process was also evaluated by the second UW group in 2007[2].

The second Workshop focused on a general review of local, state, and federal permitting processes. In order to identify and discuss further agency coordination and potential incentives or improvements, it was important for participants to have a basic understanding of the complete permitting process. Permit reviewers are often familiar with their own programs and regulations but may not be as well versed with other agency permits.

The Workshop began with the following presentations:

- The U.S. Army Corps of Engineers (Corps) permit process.
- WA Department of Ecology (ECY) process for 401 and Coastal Zone Management (CZM) Certifications.
- WA Department of Fish and Wildlife (WDFW) permits.
- Local City and County permits.
- General information regarding Shoreline Management Program (SMP).
- WA Department of Natural Resources (DNR) aquatic use authorizations.

[2] See Appendix A

Presenters described the permit purpose or mandate, activities that trigger the permit, overall process, connection (if any) to other permits, timeframes, and required mitigation. The intent of the workshop was to focus on how multi-agency coordination could potentially encourage green shoreline projects and approaches. The presenters were asked to make special note of existing incentives and shortcuts for green shorelines projects.

Following the presentations, a panel discussion focused on identifying potential improvements and coordination opportunities regarding permitting.

Some key conclusions from the second workshop include:

- Several opportunities exist in the permitting process to encourage green shorelines approaches, including:
    - Improving coordination of monitoring and reporting requirements among agencies.
    - Streamlining permitting by working with WDFW to determine if the Fish Habitat Enhancement Process can be modified to include lake shorelines restoration projects.
    - Educating landowners, contractors, and consultants about permitting requirements for shoreline work.
- Several participants commented that the workshop was a valuable opportunity because it facilitated communication among staff from different permitting agencies and private consultants.

Meeting notes and a comments summary are provided in Appendix D.

Workshop 3: Incentives for Shoreline Restoration

Various incentives for encouraging green shoreline approaches were proposed in the earlier workshops and in previous outreach efforts with shoreline owners. The third Workshop built on this work and focused on identifying potential new incentives, discussing effectiveness of existing and potential new incentives, and prioritizing the possibilities.

The Workshop began with an overview of existing and proposed incentives. All of the previously identified existing and proposed incentives were posted on the wall. Participants were provided with colored dots, where different colors represented different roles (e.g., regulatory agency staff, non-regulatory agency staff, consultant, contractor, landowner). Participants were encouraged to vote with their dots for the five incentives they felt were the most important or significant.

Three presentations provided examples of existing and proposed incentive programs:

What did you find most useful about the workshop?

"It was all useful but I found the dot exercise illuminating. I also appreciated hearing from a property owner and contractor."
Consultant after 3rd workshop

- Tax incentives through the King County Public Benefit Rating System.
- Grants for restoration available through King County, King Conservation District (KCD), and NOAA.
- Shoreline setback incentives being considered by several jurisdictions as part of the Shoreline Master Program updates.

The presentations portion of the Workshop concluded with two presentations outlining property owner and contractor perspectives on effective incentives.

A group discussion of existing and proposed new incentives followed the presentations.

Key conclusions from the third workshop include:

- Streamlined or flexible permitting, tax breaks, or grants could provide effective incentives for lakeshore landowners.
- Many participants thought that technical assistance with the design, installation, and permitting of green shoreline projects would encourage green shoreline approaches.
- Lakeshore demonstration projects and design criteria would be useful to minimize the perceived risk of green shoreline projects for landowners and demonstrate the ecological benefits of projects to regulators.

Results of the dot survey and a comments summary are presented in Appendix E.

Workshop 4: Greening Your Shorelines – Voluntary Approaches to Improving Shoreline Habitat

The fourth Workshop targeted shoreline owners and other interested parties. The goals of the meeting were to introduce the green shorelines concept, provide an overview of the key information from the first three Workshops, answer questions, and solicit feedback on incentives.

What did you find most useful about the workshop?

"The opportunity to learn about and ask questions regarding very specific parts of this complicated subject."
Property owner after 4th Workshop

The Workshop began with a 30 minute introduction to green shorelines and an overview of previous efforts to date including the three previous Workshops. A summary of existing and proposed incentives was also provided. A list of incentives posted on the wall provided participants the opportunity to vote for the most valuable incentives from a shoreline owner perspective. In addition, attendees were asked to add new ideas for incentives if they felt any were missing.

Participants were directed into five sub-groups for the next 50 minutes. The sub-groups spent 10 minutes at each of following five stations:

- Green Shorelines definitions, approaches and site selection.
- Grants available through NOAA, King County, and KCD.

- Tax incentives through the King County Public Benefit Rating System.
- Existing and potential regulatory incentives at local, state or federal level.
- Technical assistance available to property owners and demonstration projects.

The Workshop concluded with an open house format. Participants were encouraged to ask one-on-one questions from the agency staff and volunteers at each of the stations.

Key conclusions from the fourth workshop include:

- Several participants thought that financial incentives through tax breaks would encourage the implementation of green shoreline projects.
- Many participants were interested in further definition of where green shoreline techniques were appropriate.
- More outreach information on lake health, habitat and fish would be useful.
- Many people thought that permit requirements should be consistent across jurisdictions and/or that green shoreline projects should be exempted from permitting requirements.

Results of the dot survey are presented in Appendix F.

Workshop Funding

In late April, grant funding was secured through the Puget Sound Partnership, to support the remaining Workshops and outreach efforts. Funds were used to lease a larger facility for the 3rd and 4th Workshops, provide refreshments at the 3rd and 4th Workshops, and reprint over 7,000 copies of the City of Seattle Green Shorelines *Guidebook.*

Green Shorelines Workshop Website

The Green Shorelines website functioned as a virtual library for registration, presentations, reference materials, contact information, and additional information (http://www.ecy.wa.gov/programs/sea/events/greenshorelines.html).

Key Findings

The Workshops were successful in bringing together contractors, consultants, property owners, non-regulatory agencies, non-profit groups, planners, and permit writers from local, state, and federal agencies.

> "This Green Shorelines series has received accolades from regulators as well as public/industry. One of the few opportunities to get folks typically on either side of the fence together to work on a solution."
> Participant from a regulatory agency after 3rd workshop.

Attendance increased from 37 at the first Workshop to 58 at the forth Workshop. Participants represented 26 local, state, and federal agencies; 18 private businesses including consultants, contractors, and architects; and six various non-profit organizations and citizen groups (Fig. 1). A number of private citizens also attended, particularly the 4th Workshop (Fig. 1).

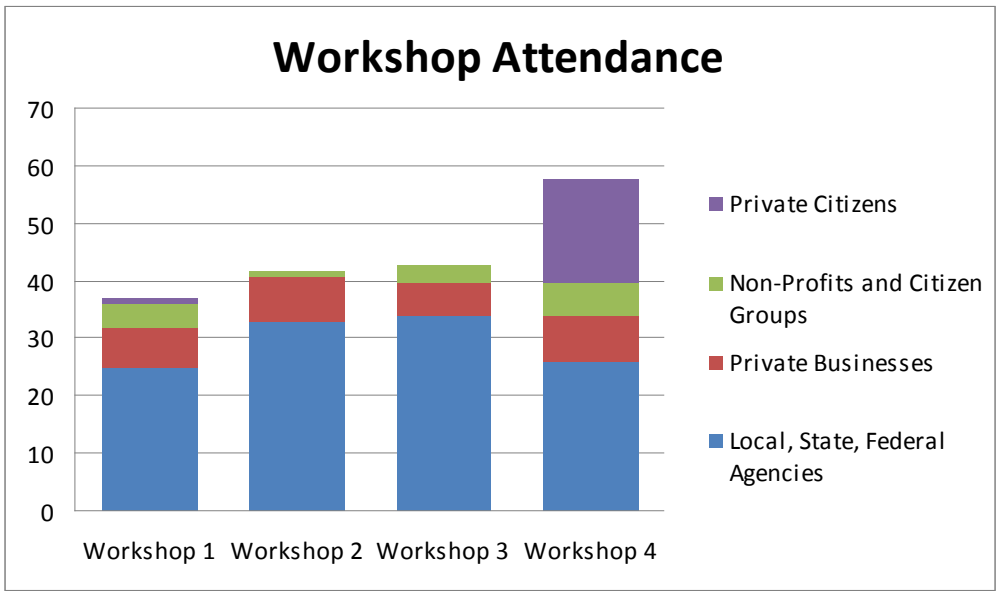


Figure 1. Workshop attendance graph.

The first three daytime workshops gave the fifteen local jurisdictions, three state agencies, and three federal agencies involved in permit review the opportunity to meet with each other and with many of the non-regulatory agencies, contractors and consultants involved with restoring shorelines. These meetings provided a rare opportunity for a diverse group of governmental and non-governmental practitioners to explain their individual interests and discuss potential ways to encourage private property interest in green shorelines. The fourth workshop, which was planned in the evening, directly focused on reaching out to and receiving feedback from lakeshore property owners. This effort was primarily intended to test green shoreline incentives identified

by the practitioner group as well as solicit new ideas that may be attractive enough to a property owner to encourage them to commit to using green shoreline approaches.

Benefits of the workshops included:

- Providing an informal (non-regulatory or non-public hearing) opportunity for contractors, consultants, and property owners to discuss green shoreline issues and concerns with regulatory and non-regulatory agencies.
- Providing an opportunity for cross-agency integration. Agencies were able to go from thinking individually to thinking collectively, especially regarding the permitting process.
- Allowing participants to hear the entire process and see the "big picture." Hearing various perspectives and viewpoints increased understanding of concerns from others.
- Raising the general understanding of green shorelines and how this concept could be applied to the Lake Washington and Lake Sammamish areas.

Key Incentives Identified

Both Workshops 3 and 4 asked participants to prioritize existing and proposed incentives. It should be noted that the proposed incentives are not currently in development, but rather ideas proposed by participants at these Workshops or during earlier outreach events.

Complete results are presented in Appendix E and F.

Incentives Identified at Both Workshops 3 and 4: Incentives receiving five or more votes at both Workshops are listed below:

- Permitting Process.
  - Expedite application and permit review.
  - Create a permit exemption for green shoreline projects.
- More information on where green shorelines techniques are appropriate.

What did you find most useful about the workshop?

"I am so pleased that you are so focused on working together to promote the green shorelines plan. I also believe that you've identified two main areas: cost and the permitting process."
Property owner after 3rd workshop

Incentives Identified at Workshop 3 (receiving five or more votes):

- Financial Incentives.
  - Tax breaks for property loss, installing green shorelines and conservation easements.
  - Grants from federal, state, and local governments and from foundations.
  - Permit exemptions to lower permit costs.
- Technical assistance with design of projects, installation of projects and plantings, and permitting.
- Permitting Process.
  - Streamlined / consolidated / centralized permits.
  - Multi-agency permit team for Lake Washington.
- Education and outreach.

- Demonstration projects and case studies.
- Provide training and certification of consultants, architects, and landscapers.

Incentives Identified at Workshop 4 (receiving five or more votes):

- Financial Incentives.
  - Sales tax breaks for green shoreline projects (idea introduced during 3rd Workshop).
  - Property tax breaks such as the Public Benefit Rating System in King County.
- Permitting Process.
  - Create consistent codes between jurisdictions.
  - Create a shoreline restoration / mitigation bank.
- Education and Outreach.
  - Provide more information on lake health, habitat, and fish.

The important distinction between Workshop 3 and 4 is that Workshop 3 predominantly represents the incentives identified by the practitioner group (agency staff, contractors, and consultants), whereas the incentives identified in Workshop 4 predominately represent citizens, non-profits, and business group preferences. The majority of agency staff did not participate in the dot exercise during Workshop 4.

Even though it was a limited audience at both Workshops, the results provide valuable stakeholder insight from a diverse group of participants. Results from both Workshops identified as high priorities a number of financial incentives, permit process improvements, and more definition of locations appropriate for green shoreline techniques. However, the results should not be interpreted to represent a statistically significant survey. The exercise was conducted to collect participant opinions and help guide future actions, not to conduct a scientifically rigorous evaluation.

Existing Incentives in the Permitting Process

In general, the same permits are required for a shoreline development project whether it is considered a green shorelines approach or one that is not. However, as identified during Workshop 2, there are a few existing incentives in the permitting process that can be used by applicants to streamline their permitting process. These incentives may apply to green shoreline projects if the applicant can meet the design conditions.

Examples include taking advantage of the Regional General Permits, Nationwide Permits, and Programmatic Consultations for Endangered Species Act offered by the U.S. Army Corps of Engineers (Corps) process. The Workshops also enabled the regulatory agencies to discuss and identify ideas for improvement in the permitting process such as the proposal to extend the WDFW Streamlined Fish Habitat Enhancement process to include lake shorelines.

> "Excellent workshop – one of the few I have gone to recently where I have come away with tangible info. Good range of speakers covering different perspectives."
> Participant from a regulatory agency after 3rd workshop

Specific suggestions from participants

Throughout the four workshops, participants identified several specific ideas for improving permitting processes or regulatory pathways. Additionally, several suggestions include voluntary actions such as developing incentive programs and better utilizing existing incentive options. Many of the improvement ideas apply outside the regulatory path.

Regulatory Improvement

- Permit flexibility to encourage landowners to use a green shoreline approach while realizing not everyone will want or be able to use these techniques. In addition, flexible standards may be used as a positive incentive to encourage shoreline owners to remove bulkheads and older, larger piers.
- Consider a pilot project to apply WDFW Streamlined Fish Habitat Enhancement Process to green shoreline projects in Lakes Washington and Sammamish. This could be an opportunity to reduce permitting time and cost applying this existing, streamlined process for projects such as bulkhead removal and shoreline restoration.
- More fully utilize the U.S Army Corps of Engineers Programmatic Consultation for Bank Stabilization Activities for Lake Washington and revise or modify to make more it applicable for green shoreline projects.
- Develop a restoration mitigation bank for smaller projects with limited on-site options.
- Simplify forms and applications by making them more "user friendly" and using language that is easy to understand.

What did you find most useful about the workshop?

"All the different key players together at one workshop, especially having regulators and contractors all together. Excellent workshop! Thanks!"
Consultant after 2nd workshop

Agency Coordination

- Share technical resources among local jurisdictions. For example, technical reports regarding geotechnical information, site and regional biological studies, and landscape designs may apply across jurisdictions. Sharing resources makes it easier for agencies and applicants. Sharing information avoids the scenario of each applicant repeating the same or similar studies and analysis for the same general area. This is especially important for small projects involving single family residences where applicants have limited resources.
- Coordinate efforts with Leadership in Energy and Environmental Development (LEED) programs as a way to integrate green shoreline approaches into industry best practices.

Financial Incentives

- Some larger, less developed lakeshore properties may be eligible for King County's existing tax incentive program (called the Public Benefit Rating System), but the program is not well known by local jurisdictions or property owners. The program could be more widely promoted and could be modified to be more applicable to shoreline properties on Lake Washington and Lake Sammamish.
- New financial incentives such as sales tax exemptions and property tax breaks were proposed.
- Grants and technical assistance specifically targeted toward green shoreline approaches were also proposed.

Stewardship

Lake stewardship was a unifying theme expressed by all participants at the Workshops. Whether one lives along the lakeshore, works on projects in the water year after year, or reviews permits for development projects, concern for the health and viability of the lake ecosystem is high. One of the benefits of the Workshops was to clarify this shared, underlying concern.

There was also an acknowledgement that salmon and habitat are part of the ecosystem. The current condition along the shorelines provides a degraded baseline for salmon habitat. We all need to work together to find ways to live and enjoy the shorelines while still preserving and improving their habitat and ecosystem function. The green shorelines approach provides one option for making incremental improvements to shoreline habitat over time.

Education and Outreach

It is important to recognize there are a number of barriers to implementing green shoreline projects that require different solutions. All four Workshops emphasized this key point and helped highlight next steps for education and outreach, including:

- Provide additional education and outreach with shoreline owners, contractors, and consultants about what voluntary options are available for restoring their shoreline habitat.
- Present green shoreline approaches as a range or gradient of options. Almost every site may have something that can be done but each site has specific features that need to be considered.
- Help shoreline owners determine if and when a green shorelines approach is appropriate at their property. Develop a map highlighting areas where green shorelines are feasible and helpful for salmon.
- Integrate science and outreach. Provide homeowners with information regarding monitoring results from demonstration and test projects over time.
- Develop a strategy to most effectively distribute to key stakeholders the City of Seattle's document *Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington*.

- Continue communication and collaboration between regulatory and non-regulatory agencies.
- Share information presented at the Workshops and the findings with other interested parties.

Future Challenges for Green Shorelines

Throughout the workshops, a number of questions and concerns regarding implementation of green shorelines approaches were raised. Some of the questions and concerns can be most effectively addressed during future education and outreach efforts while other concerns may require more long term monitoring.

Selecting Sites Appropriate for Green Shoreline Approaches

Better definition is needed for how to determine if a site is appropriate for green shoreline techniques. Rather than evaluating properties on a site by site basis, one approach might be to conduct a reach scale analysis to determine areas with high or low priority for green shorelines. Once a determination has been made to screen out difficult sites not appropriate for green shorelines, this information could be provided to landowners. The City of Kirkland recently developed decision tree document based on a reach approach and the *Green Shorelines Guidebook*. An example is provided in Appendix H.

Erosion

- Erosion of property is a major concern for many shoreline owners. It is difficult for many shoreline owners to take the risk of removing a bulkhead and trying a green shoreline approach if they are concerned with erosion. In many cases, this is a misperception, as properly designed green shorelines approaches should minimize erosion. Nevertheless, it may be too much of a risk to remove the bulkhead and try a green shorelines approach unless property owners know the bulkhead can be replaced if erosion becomes a problem.

Identifying and Funding Demonstration Projects

More demonstration projects, particularly on government owned properties, would be useful especially to monitor performance of green shoreline approaches over time and at various settings. One challenge to implementing more demonstration projects is identifying projects on public land that use design approaches similar or applicable to options available on private lakeshore property. Once an appropriate project is identified, funding is needed to implement and publicize the project.

Incentives Effectiveness

Performance of various incentives also needs to be monitored over time to determine long-term effectiveness. For example, monitoring would be useful to determine whether a regulatory incentive, such as reduction of a shoreline setback/buffer in exchange for incorporation of a green shoreline, would result in net ecological improvements.

Agency Challenges

Federal, state, and local agencies that permit green shoreline projects also face a number of challenges that will require more information, coordination, and education efforts. New or innovative ideas, such as green shoreline approaches, are often difficult to review because they don't fit well into the existing regulatory framework. It often takes a considerable amount of time to update the regulations to address these new approaches. In addition, regulations often don't distinguish between a "good" change and a "bad" change. Both are permitted with the same process.

Not all jurisdictions have adequate resources to address new or innovative ideas. Before a new approach can be permitted, agencies have the responsibility to ensure that it will be sufficiently protective over time. However, many agencies do not have the staff and in-house expertise to evaluate the idea or to conduct detailed studies. This often discourages innovative ideas even though they may be a more beneficial option.

Steering Committee Recommendations

The original objective for the Steering Committee in conducting the Workshops focused on sharing information and beginning a dialogue about green shorelines with a diverse group of stakeholders. However, throughout the Workshops, a number of next steps and improvement ideas were presented that deserve further consideration.

The suggestions presented below are a combination of priority recommendations from the Workshops and specific recommendations identified by the Steering Committee as a result of the Workshops. Some will be further investigated by the Steering Committee, while others are good ideas but are currently beyond our capacity. It is hoped that other Workshop participants or others interested in green shorelines are able to pursue these ideas.

Outreach and Communication

- Develop a distribution strategy for reprinted City of Seattle's document *Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington.*
- Promote the Green Shorelines concept through news media outlets such as YouTube, newspapers, magazines, and associations to increase public awareness and support of the green shorelines approach.
- Develop the Green Shorelines website as an easy to understand and useful resource.

Technical Assistance to Homeowners

- Provide step by step instructions for shoreline owners interested in applying a green shorelines approach.
- Explore ways to provide one-on-one assistance with site visits and specific site suggestions for shoreline owners.
- Various options are available that include cross training with other agencies, such as the King Conservation District, applying for grants to train Lake Stewards, or grants for consultant contract.

Coordinate with Industry Design Standards and Best Practices

- Coordinate efforts with existing industry best practices such as the Leadership in Energy and Environmental Development (LEED) program.

Further Utilize Existing Financial Incentives

- A high degree of interest was expressed at both Workshops 3 and 4 for the existing property tax incentive known as the King County Public Benefit Rating System (PBRS).
- Work with King County to determine if the program might be modified to be applicable to more shoreline properties around Lakes Washington and Sammamish.

- Clarify the process of applying for a tax incentive through PBRS and make it easier for cities, property owners and contractors to understand and use.

Provide and Monitor Demonstration Projects

- Increase awareness of existing demonstration projects.
- Promote the development of additional demonstration projects to showcase aesthetics of design, cost, and performance. Consider demonstration projects on publicly owned lands to increase accessibility and reduce individual risk.
- Monitor and report on the long-term performance of green shoreline projects.
- Study the effectiveness of various Green Shoreline techniques in protecting shorelines from erosion and report findings.
- Develop a framework for an interdisciplinary monitoring program to address the effects of green shorelines on salmon, shoreline stability and erosion, and social perceptions.

Identify Sites Appropriate for Green Shorelines Approach

- Further define what parameters or characteristics are needed to evaluate sites.
- Determine which of those parameters are appropriate at both the jurisdiction scale (i.e. city or county) and at the larger regional scale of Lake Washington and Lake Sammamish, as opposed to all of Puget Sound and the state.
- Refine the concepts introduced within the *Green Shorelines Guidebook*, such as the site selection decision tree, with local examples. Create better guidance for local jurisdictions on the parameters unique to their given locations that should be considered and the methodology to follow when conducting analysis within their jurisdiction.
    - Example: City of Kirkland recently developed decision tree document based on the *Green Shorelines Guidebook*. Example provided in Appendix H.

Continue Agency Communication and Coordination

- Continue to create opportunities for cross agency communication and integration of regulatory programs.
- Share information from the Green Shorelines Workshops with local jurisdictions to inform and support their Shoreline Master Program (SMP) updates.
- Share information learned here with other watersheds.
- Collaborate and partner with other groups within and outside of the Lake Washington/Cedar/Sammamish watershed.

Evaluate the Effectiveness of New Dock Designs

- Study the effectiveness of new dock designs in improving habitat for juvenile Chinook salmon and report on the findings.

Mitigation Bank for Shoreline Impacts

- Explore the concept of creating a restoration mitigation bank for smaller projects with limited on-site options.

Ideas for Regulatory Improvement

Documents and Publications

- Develop a resource to clarify and explain existing incentives in the permitting process. These are incentives that applicants can currently take advantage of when using a green shoreline approach.

WDFW Streamlined Fish Habitat Enhancement Process

- Implement a pilot project to apply WDFW Streamlined Fish Habitat Enhancement Process to green shoreline projects for single family residences that improve fish habitat such as bulkhead removal and spawning habitat improvement.
- Another option is to develop a standard "boilerplate" with specific Hydraulic Project Approval (HPA) conditions for green shoreline projects.

U.S. Army Corps of Engineers Programmatic Consultation

- More fully utilize the U.S Army Corps of Engineers Programmatic Consultation for Bank Stabilization Activities for Lake Washington and revise or modify to make more applicable for green shoreline projects.

Legislative Improvement Ideas

Sales Tax Exemption or Rebate

- Provide sales tax exemption for materials and professional services associated with green shoreline projects. Similar to the Renewable Energy Sales and Use Tax Exemption (RCW 82.08.02567 for machinery and equipment used in generating electricity).

SMP Substantial Development Permit Exemption

- For re-development, apply exemption based on net gain or net benefit to site. Need to develop criteria and scoring system but could start with an approach similar to one used by Corps under RGP 6 for wetland mitigation.

Appendices

Appendix A

Links to the websites, full reports, and references from related programs and studies.

1. **University of Washington Environmental Management Keystone Project, 2006-2007; Fish Friendly Shoreline Project**
http://courses.washington.edu/emksp06/NOAAFishFriendlySL/index.shtml

2. **University of Washington Environmental Management Keystone Project, 2007-2008; Lake Washington Shoreline Permitting Process Study**
http://courses.washington.edu/emksp07/NOAA_AltTradShorelines/

3. **City of Seattle Green Shorelines Website**
Website: http://www.seattle.gov/dpd/Planning/Green_Shorelines/Overview/default.asp
Guidebook PDF:
http://www.seattle.gov/dpd/static/Green_Shorelines_Final_LatestReleased_DPDS015777.pdf

4. **WRIA 8 Salmon Habitat Conservation**
http://www.govlink.org/watersheds/8/default.aspx

5. **City of Bellevue Property Owner Survey**
http://www.ecy.wa.gov/programs/sea/events/pdf/bellevue_survey.pdf

6. **Water Quality Information**
Lakes Washington and Sammamish buoy data: http://green.kingcounty.gov/lake-buoy/default.aspx
Lake water quality monitoring: http://green.kingcounty.gov/lakes/map.aspx
Freshwater beach monitoring: http://green.kingcounty.gov/swimbeach/

7. **British Columbia's Green Shore Program**
Website: http://www.greenshores.ca/
Poster: http://www.greenshores.ca/sites/greenshores/documents/media/131.pdf

8. **Chinook Beach Shoreline Restoration**
http://www.ecy.wa.gov/programs/sea/events/pdf/ChinookBeachShorelineRestoration.pdf

9. **Olympic Sculpture Park Monitoring Report**
http://www.ecy.wa.gov/programs/sea/events/pdf/OlympicSculptureParkMonitoring.pdf

10. **Army Corps of Engineers Programmatic for Lake Washington Shoreline Activities**
http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=BankStabLkWash

Selected references on Chinook salmon use of Lakes Washington and Sammamish.

Synthesis of research:

Kahler, T., M. Grassley, and D. Beauchamp. 2000. A Summary of the Effects of Bulkheads, Piers and Other Artificial Structures and Shorezone Development on ESA-listed Salmonids in Lakes. Final Report Prepared for the City of Bellevue. Bellevue, WA. http://kitsapgov.com/dcd/lu_env/cao/bas/wetlands/bellevue_bas.pdf

Seattle Public Utilities and the U.S. Army Corps of Engineers. 2008. Synthesis of salmon research and monitoring, Investigations conducted in the western Lake Washington basin. http://www.govlink.org/watersheds/8/pdf/LWGI_SalmonSyn123108.pdf

Habitat Use:

Celedonia, M.T., R.A. Tabor, S. Sanders, D.W. Lantz, and I. Grettenberger. 2008. Movement and habitat use of Chinook salmon smolts and two predatory fishes in Lake Washington and the Lake Washington Ship Canal, 2004-2005 acoustic tracking studies. Prepared by the U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office, Fisheries Division. Prepared for Seattle Public Utilities. http://www.fws.gov/westwafwo/fisheries/Publications/2004_2005%20Acoustic%20Final%20Report.pdf

Celedonia, M.T., R.A. Tabor, S. Sanders, S. Damm, D.W. Lantz, T.M. Lee, Z. Li, J. Pratt, B.E. Price, and L. Seyda. 2008. Movement and habitat use of Chinook salmon smolts, northern pikeminnow, and smallmouth bass near the SR-520 bridge, 2007 acoustic tracking study. Prepared by the U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office, Fisheries Division. Prepared for the Washington State Department of Transportation. http://www.fws.gov/westwafwo/fisheries/Publications/20081008_Final_Draft_R2.pdf

Koehler, M.E., K.L. Fresh, Beauchamp, D.A., J.R. Cordell, C.A. Simenstad, and D.E. Seiler. 2006. Diet and bioenergetics of lake-rearing juvenile Chinook salmon in Lake Washington. Transactions of the American Fisheries Society 135:1580-1591. http://cat.inist.fr/?aModele=afficheN&cpsidt=18417231

Piaskowski, R.M. and R.A. Tabor. 2001. Nocturnal habitat use by juvenile Chinook salmon in nearshore areas of southern Lake Washington, a preliminary investigation, 2000. Prepared by the U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office, Fisheries Division. http://www.fws.gov/wafwo/fisheries/Publications/FP127.pdf

Tabor, R.A. and R.M. Piaskowski. 2002. Nearshore habitat use by juvenile Chinook salmon in lentic systems of the Lake Washington basin, annual report 2001. Prepared by the U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office, Fisheries Division. Prepared for Seattle Public Utilities. http://www.fws.gov/westwafwo/fisheries/Publications/FP226.pdf

Tabor, R.A., J.A. Scheurer, H.A. Gearns, and E.P. Bixler. 2004. Nearshore habitat use by juvenile Chinook salmon in lentic systems of the Lake Washington basin, annual report 2002. Prepared by the U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office, Fisheries Division. Prepared for Seattle Public Utilities. http://www.fws.gov/westwafwo/fisheries/Publications/FP222.pdf

Tabor, R.A., H.A. Gearns, C.M. McCoy III, and S. Camacho. 2006. Nearshore habitat use by juvenile Chinook salmon in lentic systems, 2003 and 2004. Prepared by the U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office, Fisheries Division. Prepared for Seattle Public Utilities. http://www.seattle.gov/util/stellent/groups/public/@spu/@ssw/documents/webcontent/spu01_002679.pdf

Predation:

Fresh, K.L., D. Rothaus, K. W. Mueller, and C. Waldbillig. Habitat Utilization by Smallmouth Bass in the Littoral Zones of Lake Washington and Lake Union/Ship Canal. Presentation at the 2003 Chinook Workshop. http://www.seattle.gov/util/About_SPU/Management/SPU_&_the_Environment/SalmonFriendlySeattle/SPU01_002680.asp

Footen, B. 2003. Piscivorous Impacts on Chinook (Oncorhynchus tshawytscha) in the Salmon Bay Estuary, the Lake Washington Ship Canal and Lake Sammamish. Presentation at the 2003 Chinook Workshop. http://www.seattle.gov/util/About_SPU/Management/SPU_&_the_Environment/SalmonFriendlySeattle/SPU01_002680.asp

Tabor, R.A., M.T. Celedonia, F. Mejia, R. M. Piaskowski, D. L. Low, B. Footen, and L.Park. 2004. Predation of juvenile chinook salmon by predatory fishes in three areas of the Lake Washington basin. Prepared by the U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office, Fisheries Division. http://www.seattle.gov/util/stellent/groups/public/@spu/@ssw/documents/webcontent/spu01_002676.pdf

Tabor, R.A., B.A. Footen, K.L. Fresh, M.T. Celedonia, F. Mejia, D.L. Low, and L. Park. 2007. Predation of juvenile Chinook salmon and other salmonids by smallmouth bass and largemouth bass in the Lake Washington basin. North American Journal of Fisheries Management 27:1174-1188. http://cat.inist.fr/?aModele=afficheN&cpsidt=19966278

Appendix B

Scope of Work

February 11, 2009

Green Shorelines for Lakes Washington and Sammamish: Coordination and Communication Workshops

Introduction - Improve Coordination and Communication

In Lake Washington and Lake Sammamish, encouraging alternative development options which result in more ecologically friendly shorelines, also known as *green shorelines*, is considered an essential step for salmon recovery. In some cases, opportunities for green shorelines may present during initial development while in other cases, during shoreline re-development.

One of the challenges to encouraging green shorelines is providing a coordinated effort with a consistent message to property owners. Numerous regulatory and non-regulatory entities are involved in the process. Even though Lake Washington is a single geological feature, development along its shoreline is regulated (or permitted) by thirteen local jurisdictions, three state agencies, and three federal agencies. Lake Sammamish provides a similar regulatory framework but with four local jurisdictions. In addition, numerous private citizens, non-profit groups, businesses, and non-regulatory agencies, such as the WRIA 8 Salmon Recovery Council, also advance shoreline and habitat restoration.

With the common goal of restoration of the natural resource, all groups working together can make it easier for property owners to understand and take advantage of the benefits offered by green shorelines.

Green Shorelines

The term "green shorelines" is a relatively new term that has many synonyms. Phrases with similar meanings include salmon friendly, soft engineering, soft shorelines, alternative shoreline design, and living shorelines. For the purposes of this project, the term "green shorelines" was selected in order to be consistent with the recent City of Seattle document *Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington*.

A Series of Four Meetings

The objective of this project is to build on what has already been done and to begin where previous efforts have ended. The Shoreline Master Program (SMP) updates, publication of the City of Seattle's *Green Shorelines* document, and the implementation of the WRIA 8 Chinook Conservation Plan all provide a window of opportunity for cross agency communication and coordination.

A series of four meetings is proposed to be conducted over a four month period beginning in March 2009.

Meeting Goals

- Promote communication and coordination regarding green shorelines around Lake Washington and Lake Sammamish. Create a shared learning environment by presenting the same information to all parties. Encourage new and mutual understanding which may spur new partnerships, tools, and incentives.

- Provide a forum to bring together contractors, consultants, property owners, non-regulatory agencies, planners and permit writers from local, state, and federal agencies.

- Collect unfiltered feedback for both regulatory and non-regulatory groups such as the Lake Washington/Sammamish Shoreline Master Program Update Group, WRIA 8, and federal resource agencies. Inform policy and decision makers while at the same time recognizing that each local jurisdiction has a unique regulatory process including SMP updates.

- Record a range of diverse viewpoints; these meetings are not intended to reach a consensus. They are to learn, discuss, and identify common goals. If possible, document where there is agreement and identify where there are differences.

Meeting Logistics

Each meeting includes a presentation followed by a discussion /comment session. Depending on the topic, each meeting will be 2-4 hours. If possible, meetings will be held at the Kirkland Heritage Hall. Meetings will be facilitated by the Governor's Office of Regulatory Assistance (ORA).

*Note: Appropriate breaks to be added.

1st Meeting – Defining Green Shorelines (3 hours)

Focus on defining "green shorelines" and which activities meet this definition, particularly from various perspectives. Consider how this concept applies to both re-development of urban shorelines and undeveloped shorelines.

Presentations (1 hour) *

Discussion (1 1/2 hours)

1. Is the decision tree presented in the Green Shorelines document an effective tool to use for evaluating and encouraging green shoreline projects? Does it cover all the main activities?
2. What are green shorelines actions that agencies would like to promote? What are green shorelines projects from contractor and property owner perspectives?

Outcomes / Results

1. Discussion of *Green Shorelines* document decision tree and whether it covers all the main categories of green shorelines.
2. Record which activities and actions fall under "green shoreline" concept from various perspectives.

2nd Meeting - Permit Processes (4 hours)

Briefly review local, state, federal permitting processes and how they intersect during project review. Goal is to increase general understanding of permitting and overall knowledge of the process and how it relates to green shorelines. Review purpose / mandate, trigger activity, very general process, connection (if any) to other permits, general timeframes ranges.

Presentations (3 hours)*

Facilitation will assist with linking presentations or roles of agencies. Suggest providing speakers with outline or questions to answer to reduce redundancy and help illustrate links between regulatory incentives.

Panel Discussion with Presenters (1 hour)

1. Add contractor(s) to panel to provide additional perspective on regulatory process.
2. Do current agency permit processes have any tips or recommendation for streamlining review that might apply to green shoreline projects?
3. Are there any existing incentives that might encourage green shoreline projects? (Note: next meeting will focus in detail on existing and potential incentives. Discussion here will be brief. Identify existing incentives and where they fit into the permitting process.)
4. Mitigation. How do "voluntary restoration" or "green shoreline" proposals relate or not relate to compensatory mitigation requirements?

Outcomes / Results

1. Clarify what incentives and shortcuts are already present for green shoreline projects.
2. Clarify how each agency reviews voluntary restoration versus compensatory mitigation.

3rd Meeting - Incentives for Shoreline Restoration (3 hours)

Present examples and provide discussion of incentive programs used by various agencies. Recognize that there are a number of barriers to implementing green shoreline projects that require different solutions.

Provide overview of earlier work identifying potential barriers. *(U of WA Survey, SPU survey, August 15th 2008 meeting)*

Presentations (2 hours)

Discussion and Comments from all participants (1 hour)

1. What type of information, education, and outreach is needed?
2. Other possible incentives for green shorelines.

Outcomes / Results

1. List of possible incentives for green shorelines.

4th Meeting – Placeholder for additional meeting at request of participants

Suggestions:

1. Hold shorter evening meeting to provide summary of previous three workshops to property owners and other interested parties (elected officials, etc.)
2. Next steps / bringing it all together. Did any next steps and potential action items emerge from these meetings?

Project Background

Scope: Lake Washington and Lake Sammamish

Lake Washington and Lake Sammamish have unique ecosystems with unique issues regarding salmon recovery that require similar solutions. Both Lakes have similar geology, limnology, and habitat features. In addition, development around both Lakes is primarily residential. A key factor for survival for Chinook salmon and bull trout within both Lakes is the restoration and protection of habitat. For both Lakes, human activity and development continue to alter the nearshore which is rearing and refuge habitat for a number of species.

Shoreline Master Programs

Each local jurisdiction has its own Shoreline Master Program (SMP) regulations. The SMPs must meet state guidelines; however, specific requirements within each jurisdiction's SMP may vary. In addition, SMPs requirements need to work in concert with the Washington Department

of Fish and Wildlife (WDFW) implementation of the Hydraulic Code, federal resource agencies mandates per the Endangered Species Act (ESA), and federal and state Clean Water Act (CWA) regulatory obligations.

Local jurisdictions are currently working with Ecology (ECY) to update their SMPs which will result in changes to regulations for shoreline development.

Recovering Salmon in the Lake Washington/Cedar/Sammamish Watershed

Chinook salmon, bull trout, and steelhead have been listed as threatened under the federal Endangered Species Act. In response, 27 local governments, businesses, community groups, state and federal agencies have been working together since 2000 to restore salmon runs in the Lake Washington/Cedar/Sammamish Watershed, also known by its state designation Water Resources Inventory Area 8 (abbreviated as WRIA 8). Research shows that lakeshore habitat is critically important to the survival of juvenile Chinook salmon. Therefore partners in the WRIA 8 (including the City of Seattle, the Department of Ecology, NOAA Fisheries, the WRIA 8 team and the University of Washington) watershed have been working to raise awareness of the importance of lakeshore habitat to salmon through workshops for property owners, creation of a lakeside living website, and development of the Green Shorelines Guidebook. The University of Washington's Keystone Program has been an important partner in surveying property owners to identify barriers to lakeshore restoration, and making recommendations to address those barriers, particularly those related to the permitting process and incentives.

http://www.govlink.org/watersheds/8/default.aspx

Appendix C
Agenda and Notes from 1st Workshop

Agenda

Green Shorelines for Lake Washington and Sammamish: Coordination and Communication Meetings

1st Meeting – Defining Green Shorelines

March 25, 2009

Meeting Location	Kirkland Heritage Hall 203 Market Street Kirkland, WA 98033 Phone: 425-587-3342 http://www.ci.kirkland.wa.us/depart/parks/Facility_Rentals/Heritage_Hall.htm
Meeting Goals	1. Discussion of *Green Shorelines Guidance* decision tree and additional details that could help identify sites appropriate for green shorelines approach. 2. Record various perspectives regarding which activities and actions fall under "green shoreline" concept.

Time	Topic	Presenter
10:00 – 10:15	Introductions	Zelma Zieman, ORA
10:15 – 10:35	Background and Importance of Lakes in Salmon Recovery	Jean White, WRIA 8
10:35 – 11:05	Overview of Research and Salmon Recovery in Lakes Washington and Sammamish	Julie Hall, Seattle Public Utilities
11:05 – 11:20	Break	
11:20 – 11:40	Green Shoreline Guidance document and decision tree for shoreline projects.	Dave LaClergue, City of Seattle
11:40 – 12:30	Group Discussion	All. Zelma facilitate
12:30 – 1:00	Lunch	
1:00 – 1:30	Break Out Groups. Perspectives regarding which activities and actions fall under Green Shorelines approach and where they are appropriate.	All
1:30 – 2:00	Group Discussion / Review of Break Out Group Results	All. Zelma facilitate

Meeting Ground Rules

- Follow the common rules of courtesy.
- Share airtime in order to let everyone participate.
- Respect each other by keeping an open mind and being a good listener.
- Use sincere communication. Leave history and hidden agendas behind.
- Help each other stay on track and on schedule.
- Listen to and honor all opinions and concerns. Create a safe place to have and voice a different perspective. However, realize not everyone will agree with you.
- Learn from each other and the discussion. Remember this meeting is about communication and coordination.

Green Shorelines for Lakes Washington and Sammamish: Coordination and Communication Workshops

Workshop 1 – Defining Green Shorelines

Summary of Comments
March 25, 2009

Background

In Lake Washington and Lake Sammamish, encouraging alternative development options that result in "green shorelines" or more ecologically friendly shorelines is considered an essential step for improving fish and wildlife habitat and enriching community shoreline use. Green shorelines use vegetation and natural materials to reduce negative impacts on nearshore habitat for plants, fish, and wildlife while protecting property. (Reference: *Green Shorelines Guidebook* created by City of Seattle - Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington.)

The first of four Workshops focusing on green shorelines for Lakes Washington and Sammamish was held at the Kirkland Heritage Hall on March 25th. A total of 37 representatives from local, state, and federal agencies as well as private citizens, non-profit groups, businesses, and non-regulatory agencies, such as the WRIA 8 Salmon Recovery Council and the King Conservation District, participated in the Workshop.

The first Workshop focused on defining the concept of *green shorelines*. The goal was to record various perspectives regarding which activities and actions fall under a green shorelines approach. In addition, participants were asked to identify additional details that could help identify sites appropriate for a green shorelines approach.

Presentations and General Discussion

The Workshop began with the following three presentations:

- Background and Importance of Lakes in Salmon Recovery, by Jean White, WRIA 8.
- Overview of Research and Salmon Recovery in Lakes Washington and Sammamish, by Julie Hall, Seattle Public Utilities.
- Green Shoreline Guidance Document and Decision Tree for Shoreline Projects, by Dave LaClergue, City of Seattle, Department of Planning and Development.

Presentation slides, video recordings, and additional references can be found on the Green Shorelines webpage: http://www.ecy.wa.gov/programs/sea/events/greenshorelines.html.

A general discussion with all the participants followed the presentations. A summary of the discussion is provided below in the General Discussion Comments section. For ease of reviewing and to emphasize themes, participant comments and questions are arranged by category, not chronologically as provided during the discussion. In addition, a number of comments on the same theme were consolidated. Comments in *italics* were provided for clarification after the meeting.

Break-Out Session

After the presentations and general discussion, participants were divided into four groups. Facilitators in each group asked participants to discuss the same questions:

- What characteristics determine whether or not a site is appropriate for Green Shorelines techniques?
- What additional information do we need to answer question #1? How do we get it?
- Are there other techniques that can be combined with hard engineering to make projects "greener?"
- How do we prioritize concerns and solutions?

A number of common themes emerged from more than one group. For ease of reviewing and to emphasize similar themes, participant comments were consolidated and arranged by category.

General Discussion Comments

Clarification of Green Shoreline Concept

- Overall, many people are not sure how the "green shorelines" approach will work. The concept is a bit fuzzy and needs more details as well as standards and incentives.

- Questions about green shoreline techniques:
    - Energy dissipation of waves – can you keep the bulkhead but add sand and gravel fill material waterward of the bulkhead? Is this considered a green shorelines approach?
    - Can a landowner use a structure to keep sand and gravel fill in a lake in place? For example, if fill is added to create a slope, can side structures or groins be placed to prevent fill from drifting laterally?
    - Can property owners be guaranteed to keep new bulkheads for protection of property under a green shorelines approach? Will rules be changed to allow bulkheads for property protection?
    - Eradication of invasive plant species is often addressed with a patchwork approach. Will the green shorelines approach collaborate or otherwise intersect with this topic?
    - Will a green shorelines approach apply to marine shorelines?

- May need to consider site specific designs on a project by project basis. Depending on the site, the best approach may be bulkhead removal, a hybrid bulkhead system,

redevelopment of a bulkhead (further back or angled), or replacement of a bulkhead. Options for improvement, even while keeping bulkhead, may be there.

Determining Sites Appropriate for Green Shorelines

- A key concern will be how the agencies prioritize the criteria to determine if a property is appropriate for a green shorelines approach.
    - For example, will there be a difference between large versus small lots? One unintended consequence might include reductions in yard space.

- Bellevue offered an example of how they propose reviewing projects requesting bulkheads.
    - New bulkhead applications will be unlikely to be approved. Don't start project design with a bulkhead. If no bulkhead for past 40 years, difficult to demonstrate a need for bulkhead now.
    - Bulkhead repairs will be tightly reviewed.
    - For existing bulkheads, "minor" repairs probably okay.
    - Major bulkhead repairs will probably trigger the criteria for review.

- Government agencies have the opportunity to develop pilot projects on government property. Cities and other government jurisdictions should comply with the same requirements as private property owners. However, city properties may not have the same variables or provide a good laboratory for comparison to private residential properties. Many government/city properties are along parks and open spaces and may not have the same limitations.
    - Luther Burbank Park on Mercer Island is an example of a city shoreline restoration project.
    - Chinook Beach Shoreline Restoration Project near Seward Park is another example of a city sponsored pilot project. *(http://www.ecy.wa.gov/programs/sea/events/pdf/ChinookBeachShorelineRestoration.pdf).*
    - *Purpose of the Chinook Beach Project: To increase the amount and quality of littoral habitat in southern Lake Washington for rearing and migrating juvenile Chinook salmon. Project activities included removal of bank armoring, regrading the banks, removal of in-water debris, improvement of riparian conditions, and converting a defunct marina to prime shallow water habitat.*
    - More monitoring, outreach, and demonstration on these already completed projects would be beneficial.

- Is there a "sweet spot" where someone wants to do action? For example, develop a strategy to distinguish and identify sites appropriate for green shoreline techniques.
    - Many sites are terrible candidates for restoration.
    - On the other hand, there are sites that have bulkheads and don't need them.

Designing Green Shorelines

- Lake Washington and Lake Sammamish are very similar but have significant seasonal differences. Lake Washington has higher elevations in the summer and lower elevations in the winter due to the Ballard Locks. Lake Sammamish is lower in the summer and higher in the winter. This can make a difference when designing a green shorelines approach.

- Trees are particularly beneficial with soft engineering and green shorelines solutions. They provide shading, habitat, and aesthetic enhancement. However, the type of tree can make a difference. How long a tree lives, the root system, and the size should be considerations. Some species, for example, have roots that can be a concern near riprap. In others, a shorter life span may be a concern.

- Priorities between agencies or city departments may differ. For example, Land Use and Planning may want trees planted along the shoreline parks for shading and habitat enhancement. However, Parks and Recreation may be responding to property owners who are concerned that trees will impact views. Solution may need to be a gray area, not a black or white solution.

- Costs to property owners for implementing green shorelines approach are a concern.

- A "geotech" or geotechnical specialist review might add significantly to the cost of a project. In addition, someone with this background may not have the right expertise to make a decision about whether or not a bulkhead is appropriate on a particular site.
    - Will a requirement for a Geotechnical Report be modified or changed in order to keep a bulkhead, especially when there is an obvious need to protect the loss of property?

Erosion / Loss of Property

- Many people are concerned with losing bulkheads that protect their property. In addition, many people don't like being told what they can and cannot do on their own property.

- Loss of land and property is a major concern. Do green shorelines actually protect what the landowner wants to protect? Especially when considering erosion potential, does soft engineering work?

- Sites with a long fetch, narrow lots, and many piers may be difficult to prevent erosion without bulkheads. May need a different approach compared to other properties around the lakes.

- Ecology's requirement of only protecting primary structures doesn't address protection of land and prevent loss of property to erosion.

- More studies on erosion control are needed to address the variability in conditions around the Lakes.

- Julie Hall suggested as a reference the Olympic Sculpture Park project.
  - *(http://www.ecy.wa.gov/programs/sea/events/pdf/OlympicSculptureParkMonitoring.pdf)*
  - *Olympic Sculpture Park: Results from Year 1. Post-construction Monitoring of Shoreline Habitats (SAFS-US-0801, July 2008). Report provides monitoring information at site for first year after construction. Physical sampling looks at beach erosion (later part of report). Monitoring is being repeated this year and will provide more information about the longevity of the beach sediments. The goals of the physical monitoring are to evaluate the stability over time of the restored pocket beach and habitat bench.*

Other

- Streamlining / consolidating permits– any effort to get agencies together on this?
  - (Note: Permitting is main topic for 2nd meeting on April 30th.)

- Any tax breaks for loss of property? Or for property owners willing to do Green Shorelines? (Note: Incentives, including tax incentives, will be the topic of the 3rd meeting on May 20th.)

Break-Out Session Comments

Question 1:
What characteristics determine whether or not a site is appropriate for Green Shoreline techniques?

Physical Considerations

- Geographic orientation to wind and storms.
- Fetch/Wave Energy (direction, height and velocity).
- Boat activity/wakes.
- Water depth.
- Substrate/Porosity of Materials.
- Existing hardening.
- Distance to water/setback/lot depth.
- Setback from bulkhead to structure.
- Frontage.
- Adjacent shoreline / Condition of neighboring properties.
- Site's ability to hold and retain material.

- Gradient / Steepness of slope on the lake bottom (steep slopes might limit availability of options).
- Bathymetry.
- Stratigraphy (geology).
- Height of bank.

Biological Considerations

- Spawning habitat.
- Seepages.
- Wetlands and streams.

Landowner Issues

- Trees and views – preserving view corridors, nothing to block views.
- Perspective that views can include some vegetation.
- Concern with decrease in property values. With loss of lawn, will value decrease?
- Erosion of property depth.
- Level or investment in earlier improvements.
- Bulkhead and filled site – may have been created in response to historic Lake water level manipulation.

Evaluation Methods

Applying a reach scale analysis to help target where and what type of Green Shorelines development is most appropriate (using a coarser scale to define sections of the lakeshore rather than site by site). Examples of different information that could be used to define sections or reaches and their suitability:

- Biological.
- Physical.
- Energy.
- Development pattern.
- Redevelopment opportunity and pressure.
- Public ownership.
- Water quality benefit.
- Sediment and beach maintenance.

Factors above need to be evaluated site by site. Expertise is needed to evaluate risk. What level of risk can landowners live with in regards to erosion?

Question 2:
What additional information do we need to answer question #1? How do we get it?

Additional Information

- Evaluation of bulkheads by appropriate technical experts (such as coastal engineers).
- Technical studies and pilot projects on the effectiveness of erosion control and new dock techniques.
- Site design limitations.

Other Concerns Expressed by Participants

- Acceptance by property owners of various techniques.
- Remove risk for property owners.
- Need regulation that provides flexibility.
- Need flexibility on lost property due to erosion because of a failed structure (the way it is now is a strong disincentive).
- Make information available.
- Need easy-to-read flow charts or maps for owners.
- Should be voluntary – use incentives instead of punitive measures.
- Emphasize importance of pre-application meeting.
- Provide qualified consultant list/recommended expertise.

Possible Metrics for Determining If a Site Is Appropriate for Green Shoreline Techniques

- Establishing specific numbers for many factors is difficult; guidelines may be possible.
- Measure proximity to the water.
- Determine depth of water (shallow water habitats require a different approach).
- Develop quantitative decision tree with set of options rather than requirements.
- Determine if some factors can be evaluated regionally.

Question 3:
Are there other techniques that can be combined with hard engineering to make projects "greener?"

Other Green Shoreline Techniques

- Hybrid techniques such as hybrid bulkheads and vegetation.
- Wood or cobbles – porous materials that dissipate energy.
- Angled bulkheads / Planted bulkheads.
- "Spawning gravel" and nearshore fill.
- Small woody debris on either side of pier.
- Natural yard care/property stewardship in general should be encouraged.
- Low Impact Development (LID) practices and stormwater control.

Other Observations

- Almost every site has something that can be done.
- There needs to be a gradient/range of options.
- Projects should focus on multiple species.

- Natural processes and how this influences habitat functions need to be understood.

Question 4:
How do we prioritize concerns and solutions?

High

- Improving permitting process.
- Providing a reach scale analysis – determine whether reaches are high or low priority.
- Develop a restoration / mitigation bank. Property owners could pay into bank to do restoration elsewhere (where it might be more appropriate).
- Implementing demonstration projects.
- Monitoring.
- Creating financial incentives.
- Sharing technical assistance/resources among local jurisdictions (i.e. Geotechnical, biology, landscape).
- Increasing education.

Low

- Fee in lieu.
- Efforts directed upland (i.e. stormwater).

Other suggestions

- Regulate pesticides/fertilizers used on vegetation in shorelines.
- Prioritize around species trying to protect.
- Prioritize high priority habitat.
- Provide incentives for homeowners.
- Develop creative financing for green shoreline development.
- Look into public/private partnerships.
- Provide options to homeowners, not requirements.
- Provide examples for homeowners of successful green shoreline projects.
- Make it easier for smaller planning departments – guidelines should promote consistency in planning department activities.
- Improve consistency / simplicity / flexibility.
- Recognize improvement made with redevelopment.
- Provide flexibility in regulations between jurisdictions.
- Remove or screen out those difficult sites (where green shorelines are not appropriate).
- Provide information to landowners, so they know whether their land is a candidate for a green shoreline or not.
- Assure landowners they will not be forced but encouraged.

Issues

- Woody debris. Can be a challenge to place in water at depths greater than 2 feet.
- There is a concern that some prescriptions will not work at every site.
- Not everyone will buy-in or accept policies.
- Substrate migration in Lake Washington different from Puget Sound.
- There is concern with maintaining the current degraded baseline condition of Lakes (rather than active improvement of conditions).

Appendix D
Agenda and Notes from 2nd Workshop

Agenda

Green Shorelines for Lake Washington and Sammamish: Coordination and Communication Meetings

2nd Meeting – Permit Processes
April 30, 2009

Meeting Location	Kirkland Heritage Hall 203 Market Street Kirkland, WA 98033 Phone: 425-587-3342 http://www.ci.kirkland.wa.us/depart/parks/Facility_Rentals/Heritage_Hall.htm
Meeting Goals	1. Review local, state, and federal permit processes. 2. Clarify how each agency reviews voluntary restoration versus required mitigation. 3. Identify existing incentives and shortcuts for green shoreline projects. 4. Identify potential improvements and coordination opportunities.

Time	Topic	Presenter
10:00 – 10:15	Introductions	Zelma Zieman, ORA
10:15 – 10:40	U.S. Army Corps of Engineers (Corps) Permit Process	Marcy Reed, Corps
10:40 - 10:55	Ecology 401 Water Quality and Coastal Zone Management Certifications	Rebekah Padgett, Ecology
10:55 – 11:15	Washington Department of Fish and Wildlife (WDFW): Hydraulic Project Approval (HPA) Process	Alisa Bieber, WDFW
11:15 – 11:30	Break	
11:30 – 12:00	Local Permits. SEPA, Shorelines, CAO, grading, and building.	Michael Paine, Bellevue
12:00 – 12:10	Shoreline Management Program (SMP) Updates	Joe Burcar, Ecology
12:10 – 12:30	Department of Natural Resources (DNR): Use Authorizations	DNR
12:30 – 1:00	Lunch	
1:00 – 2:00	Panel Discussion. Question and Answers with presenters about permitting and green shoreline approaches.	All, Zelma facilitate

Meeting Ground Rules

- Follow the common rules of courtesy.
- Share airtime in order to let everyone participate.
- Respect each other by keeping an open mind and being a good listener.
- Use sincere communication. Leave history and hidden agendas behind.
- Help each other stay on track and on schedule.
- Listen to and honor all opinions and concerns. Create a safe place to have and voice a different perspective. However, realize not everyone will agree with you.
- Learn from each other and the discussion. Remember this meeting is about communication and coordination.

Green Shorelines for Lakes Washington and Sammamish: Coordination and Communication Workshops

Workshop 2 – Permitting Processes

Summary of Comments
April 30, 2009

Background

In Lake Washington and Lake Sammamish, encouraging alternative development options that result in "green shorelines" or more ecologically friendly shorelines is considered an essential step for improving fish and wildlife habitat and enriching community shoreline use. Green shorelines use vegetation and natural materials to reduce negative impacts on nearshore habitat for plants, fish, and wildlife while protecting property. (Reference: *Green Shorelines Guidebook* created by City of Seattle - Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington.)

The second of four Workshops focusing on green shorelines for Lakes Washington and Sammamish was held at the Kirkland Heritage Hall on April 30th. A total of 42 representatives from local, state, and federal agencies as well as private citizens, non-profit groups, businesses, and non-regulatory agencies, such as the WRIA 8 Salmon Recovery Council and the King Conservation District, attended the meeting.

Presentation at the second Workshop reviewed the permitting process required for green shorelines projects. Presentations included:

- Corps 404 and Section 10 Permits, by Marcy Reed, U.S. Army Corps of Engineers (Corps).
- Ecology 401 Water Quality Certification and Coastal Zone Management Certifications, by Rebekah Padgett, Ecology (ECY).
- Hydraulic Project Approval (HPA) Process, by Alisa Bieber, Washington Department of Fish and Wildlife (WDFW)
- Local Permits including SEPA, Shorelines, CAO, grading, and building permits, by Michael Paine, City of Bellevue.
- Shoreline Management Program (SMP) Updates, by Joe Burcar, Ecology.
- Use Authorizations, by Lalena Amiotte, Department of Natural Resources (DNR).

During the presentations, agencies were asked to indentify existing incentives, shortcuts, and timesavers for green shoreline projects.

Following the presentation, agency staff participated in a panel discussion and question/answer session. Both the presenters and the audience participants were asked to identify potential improvements and coordination opportunities.

Presentation slides and additional references can be found on the Green Shorelines webpage: http://www.ecy.wa.gov/programs/sea/events/greenshorelines.html.

Permit Presentation Highlights: Existing Incentives, Shortcuts, and Timesavers

U.S. Army Corps of Engineers (Corps)

Tips to expedite the review of your application:

- Review and if possible, meet the criteria of a Programmatic or Regional General Permit (RGP).
- Examples:
- RGP 1 for boatlifts.
- RGP 3 for piers.
- Programmatic 3: Shoreline Protection Alternative for Lake Washington.
- If not able to meet all criteria, provide justification for why each criterion is not being met.
- If not able to meet all criteria, offer extra mitigation.

Other tips:

- Submit complete JARPA.
- Clearly and concisely describe extent and purpose of project.
- Indicate the specific amount of material being placed within area under Corps jurisdiction.
- If possible, avoid impacts to wetlands.
- Obtain wetland or other scientific expertise.
- For large projects, participate in pre-application meeting.

Things that slow down permit process:

- Design that doesn't meet Programmatic or Regional General Permit.
- Poor drawings and incomplete information.
- Changes to project after submittal.
- Cultural resources review.
- ESA Review.
- Constant calls to the project manager at the Corps.

Ecology (ECY) 401 Water Quality and Coastal Zone Management (CZM) Certifications

How to streamline your project:

- If project fits under a Letter of Permission (LOP) issued for a Section 10 permit from Corps, then no additional ECY action.
- If RGP from Corps, then no additional ECY action.
- If Corps issues a NWP and project meets 401/CZM conditions and ECY general conditions then applicant receives a Letter of Verification (LOV) from ECY.

Washington Department of Fish and Wildlife (WDFW) Hydraulic Project Approval (HPA)

Summary

- Bioengineered bulkheads are encouraged by WDFW.
- Green shoreline approaches could be used as possible mitigation for extending a dock.
- Streamlined Fish Habitat Enhancement – can this process be used for green shorelines approaches on lakes?
- 90.58 process - can this process be used for green shorelines approaches on lakes?

Local Permits. (Example Bellevue)

Potential future actions under consideration with SMP updates:

- Provide more specific guidance.
- Construct model projects on public property.
- Reduce permit fees.
- Accelerated review time.

Other Considerations:

- Reconsider work windows. All work currently done now in a narrow time frame.

WA Department of Natural Resources (DNR) Use Authorizations

Save time and money:

- Identify at the start of your project if state owned aquatic lands (SOAL) are present. Don't wait until the end of your process. You want to know before going through permitting with other agencies if DNR will deny lease or use of land at the beginning.
- Determining if SOAL can be difficult in some cases. Also, DNR process is currently being reviewed and may change in near future.
- Take home message: for any project in or over water, check with DNR first.

Panel Discussion: Potential Improvements and Coordination Opportunities

Simplify forms and applications

- Use more "user friendly" or easy to understand language.

Streamlined Fish Habitat Enhancement HPA from WDFW

- May have opportunity to clarify definition of "fish enhancement" related to green shoreline approached and bank stabilization where bioengineering is used.
- Important for communication between WDFW and local jurisdictions during this process to include all local departments. For example: include Land Use and Development departments and well as Building, Capital Improvement, and Public Works.
- Improvement Option: look at developing standard "boilerplate" with specific HPA conditions for green shoreline projects.

City of Bellevue has set a bulkhead limit for loss of land due to erosion.

- If property has less than 25 feet to shoreline, you can potentially qualify for bulkhead to protect primary residence.
- If property has more than 25 feet to shoreline, you'll have to go through process to prove you need bulkhead. May require other options such as bioengineering.

Coordination on monitoring and inspections

- Limitations with agency staffing.
    - DNR Managers average site visits every 3-5 years.
    - Corps currently understaffed and not able to do as much monitoring.
    - Bellevue requires 5 year monitoring for mitigation. Report is due at specific intervals. Can become expensive for homeowner. Burden is on applicant to submit reports. City currently does not have a land use inspector.
    - In the past Corps, ECY, and local agencies have worked together on specific projects for inspections and enforcement.

- Consultants often take on the role for the property owner to:
    - Submit finished products to WDFW.
    - Implement five year monitoring report and submit updates to agencies.

- Opportunities for improvement.
    - SMPs require mechanism for jurisdictions to track monitoring. Trying to address this issue with next SMP update.
    - Recommend agencies consolidate their monitoring reports into one report format to make it easier for the applicant. Suggest accepting the Corps's format.
    - Enlist and train citizen groups as volunteer stewards to review sites from water.
    - Better coordination between agencies to divide up inspections and communicate results back to each other.

- The building permit is usually the last permit issued before a project begins. The last inspection of a site is usually the building permit inspector. Possible opportunity for coordination/communication with other agencies.
- Complaints to Corps often result in a "compliance letter" which triggers an inspection.

Improvements / Repairs to Existing Docks

Is anybody looking at a way to consider existing docks? How do these get upgraded, particularly those that are affecting juvenile salmon?

- Important for agencies to have flexible standards. Flexible standards are the key to getting people to remove older, larger piers.
- Local jurisdictions could take the initiative - set the standard and provide examples by repairing their own piers.
- Illegal dock work:
  - Many times, Corps will receive phone calls if owner is doing dock work without appropriate permit. This can trigger an inspection.
  - City of Bellevue observed that there are typically two reasons people call them about dock work:
    - Concerned with ecological issues.
    - Unfair playing field if neighbor did not go through permitting. Some people will try to avoid requirements even going so far as to build at night. This implies you have enforcement network, although communities often don't have resources.

Are there any jurisdictions leading the way? Any that might be highlighted for best practices? Can jurisdictions learn from each other?

- City of Seattle's Green Shorelines book is a great example.
- ORA workshops are good example of regulatory framework coordination.
- Island County has shore stewards program. They certify people who have done good things with their shoreline.
- Information. Bellevue, Issaquah, Sammamish. All have critical areas and shoreline planning guides.
- Training. Bellevue is providing training for consultants, architects, and homeowners for their own critical areas requirements. Certify those who have gone through training. Offering four different 5-hour sessions.
- Recommend Pre-application meeting for applications. This allows reviewers to see site.
- Municipal Resource Service Center (MRSC) provides guidance and information for local jurisdictions. Good examples can be provided to other jurisdictions through them.

Coordination with LEED standards for development and British Columbia's Green Shores project.

- Leadership in Energy and Environmental Design **(**LEED) is an internationally recognized green building certification. http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1988

- The Green Shores project in British Columbia promotes sustainable use of coastal ecosystems through planning and design. http://www.greenshores.ca/.

Disincentives for someone who wants to implement a green shoreline project.

- Not all local planners have innovative ideas or are accepting of new approaches.
- New or innovative ideas are also tough to review.
- SMA was originally written to protect what is there. There are aspects of regulation that don't address restoration.
- Aspects of regulations often encourage applicant to do nothing. Don't distinguish between a good change and a bad change.
- Right now, we don't know that green shorelines will be sufficiently protective over time.
- We need to look at how people have to hire consultants to do things.
- We (agencies) need to show what really works and set standards that people can strive for.

Other Comments and Questions:

Which agency has controlling authority over clean-up of contaminated sites?

- Depends on level of contamination and other factors. Usually EPA, then ECY.
- If EPA and a listed Superfund site, then there is a Natural Resource Damages Assessment that looks at compensating for lost functions (usually negotiated among resource agencies).

Where is coordination (of Green Shorelines meetings) going from here?

- We don't know yet.
- We need to hear from participants that there is value in discussions today.
- Now that City of Seattle has the *Green Shorelines Guidebook*, excited to see where it goes from here.
- Create these workshops with whole bunch of different players and ideas. Excited to see what we will hear at next meeting regarding incentives.
- Useful to hear how agencies describe their own processes. Workshops make issues clearer and help push ideas. Encourage people to bring concrete/pragmatic suggestions to next meeting. Locals in danger of not getting solutions in time for SMP update timelines. Early coordinated is better for everyone.

Detailed Notes: Permitting Process

U.S. Army Corps of Engineers (Corps)

General Comments:

- The Corps issues permits under two legal mandates:

    - Structures and work in "navigable waters" require a Rivers and Harbors Act Section 10 permit from the Corps.
    - A Clean Water Act 404 permit is required from the Corps for projects that result in "fill" being placed in "waters of the U.S." In some cases, particularly smaller lakes, the Corps will need to make a jurisdictional boundary determination to verify if it has authority under 404.
- Puget Sound, Lake Washington, and Lake Sammamish are all "navigable waters" and "waters of the U.S."
- Types of permits:
    - Standard Individual Permit. (IP)
        - Requires public notice.
    - General Permit.
        - For projects with minimal impacts.
        - Two types:
            - Nationwide Permits (NWP). Apply nationwide.
            - Regional General Permits (RGP). Apply to Northwest region only.
- Before any Corps permit review is complete, it needs to comply with a number of other laws. Because of this, review can be pretty slow.
    - State 401 Water Quality Certification under Clean Water Act.
    - Endangered Species Act (ESA).
    - Tribal Trust responsibilities.

- Endangered Species Act (ESA) Coordination.
    - Corps needs to consult with NOAA National Marine Fisheries Service (NMFS) and U.S. Fish & Wildlife Service (FWS)
- Types of coordination:
    - For "proposed" species, Corps makes determination:
        - No jeopardy. No coordination with NMFS and FWS required.
        - Jeopardy. Formal conference with NMFS and/or FWS required.
    - For "listed" species, two options:
        - No effect. No coordination with NMFS and FWS required.
        - May effect.
        - Not likely to adversely affect. Requires informal consultation.
        - Likely to adversely affect. Requires formal consultation.
- A "Programmatic" or "Programmatic Consultation" has completed the coordination with NMFS and FWS for specific types of projects in advance. **If your project can meet the criteria, using a Programmatic expedites your review process.**
- Currently operating under two types of Programmatic:
    - Phase I – Not Likely to Adversely Affect (NLAA) categories.
        - Nearshore fill for state HPA mitigation requirements.
        - Minor bank stabilization repair activities.
        - Aids to navigation
        - Mooring buoys
        - Temporary recreational structures
        - Replacement of piling
        - Scientific measurement devices.

        - Oil spill containment.
        - Fish and wildlife harvesting.
        - Tideland markers.
    - Phase II – Likely to Adversely Affect (LAA).
        - Removal of fish passage barriers.
        - Stream restoration activities.
- 3rd Programmatic available – Shoreline Protection Alternatives in Lakes Washington and Sammamish.
    - Cut Beach, place gravel fill and re-vegetate.
    - Gravel fill beach and re-vegetate.
    - Re-vegetate armored banks (only for bulkheads within 25 feet of residence).

401 Water Quality and Coastal Zone Management (CZM) Certifications from Ecology (ECY)

General Comments:

- Both certifications issued by Washington Department of Ecology (ECY).
- 401 required if discharge of dredge or fill into "waters of the U.S." which includes wetlands and streams.
- ECY has the authority to issue a 401 for isolated wetlands even if there is no 404 from the Corps (Under WA RCW 90.48).
- 401 Certification Triggers:
    - Corps 404 Individual Permit or NWP.
    - However, if Corps 404 permit is a NWP, in some cases ECY issues a Letter of Verification (LOV) rather than a 401. The LOV is a quick process.
    - There are approximately 50 NWPs. They apply to specific types of projects within specific parameters.

- CZM Consistency is applicable in 15 coastal counties.
    - Triggered by federal action – permit, license, or funding.
    - Example: Corps Section 10 or 404 permit.

Hydraulic Project Approval (HPA) from Washington Department of Fish and Wildlife (WDFW)

General Comments:

- HPA required for any project that affects the bed or flow of "state waters" (per RCW 77.55).
    - Examples include docks, piers, and bulkheads.
- Protection of fish (and shellfish) is the only grounds on which permit is denied or conditioned.
- Permit process:
    - Requires JARPA, complete plans, and mitigation plan.

    - Notice of SEPA compliance (usually from local jurisdiction).
    - WDFW has 45 days to approve or deny.
    - Cost to applicant: $0.
- Bulkheads:
    - Bioengineering is preferred method of bank protection where practicable (WAC 220-110-050).
    - This means WDFW verifies applicant has considered this option.
    - Standard mitigation plan requires planting plan and may require placement of gravel.
    - If bulkhead is above ordinary high water, it still may require HPA from WDFW because structure can still impact bed or flow of state waters.

Possible incentives for bioengineering:

- Flexibility or waiving mitigation requirements.
- Offer as mitigation for larger project, such as for a larger dock.
- Bioengineered bulkheads are an option encouraged by WDFW.

Two existing incentive Programs for HPA:

- Streamlined Fish Habitat Enhancement (RCW 77.55.181).
- If approved by WDFW, waives local government permits and fees.
- Written with stream restoration project in mind.
    - Strict guidelines about projects that qualify.
        - Removal of fish passage barriers.
        - Placement of large woody debris.
        - Restoration with bioengineering and native vegetation.
        - Primary purpose is fish habitat enhancement.
- Possible opportunity – Process is changing. Can this process be used for green shorelines approaches for lakes?
- Process:
    - JARPA.
    - 15 day comment period with local jurisdiction.
    - Must be small enough project not to raise public health/safety concerns.
- RCW 90.58 process.
    - Waives Shoreline Substantial Development permit from local jurisdiction.
    - Does not waive SEPA, clearing and grading permit, building and other local permits.
    - Process:
        - Need letter from WDFW supporting project.
        - Apply for HPA through normal 45 day review.
        - With WDFW letter and HPA, request exemption from substantial development permit from local government.

Local Permits (Example Bellevue)

General Comments:

- Is it restoration or mitigation?
    - Very few properties in Bellevue restore shoreline.
    - Most restorative efforts result of development standards or mitigation.
- Bellevue has adopted the Corps RGP standards for docks into their code.
- Typical local permit required for a green shorelines project:
    - Critical areas land use permits.
    - Critical areas report.
    - Shoreline exemption or Substantial Development Permit (SDP).
    - Grading permit.
    - Building permit.
- Relationship with clients and other agencies.
    - Consultative role with clients.
        - Assist with model planting plans.
        - Staff works with client to ensure success.
        - For riparian restoration, stream team can assist.
        - Client must hire qualified professional in many cases.
- Agencies.
    - With exception of WDFW, rarely much contact.
- Ongoing consultation with Muckleshoot Tribes.

Local incentives:

- Currently no incentives to spur restoration.
    - No reduced permit cost.
    - No accelerated permit review.
    - No coordination with other agencies except on large projects.

Shoreline Management Act (SMA) Updates from Ecology (ECY)

- Updates will start with small cities and counties, and then expand to larger cities and counties.
- Smaller cities are those less than 10,000 populations.
- RCW 90.58 → WAC 173.26 → Local SMP

Use Authorizations from the WA Department of Natural Resources (DNR)

General Comments:

- Marine shorelands ownership:
    - Upland - usually always private ownership.
    - Tideland - public or private ownership.
    - Bedland - public ownership.
- Clarification between Mitigation and Restoration:
    - *Mitigation* is the process of avoiding impacts, then minimizing impacts that can't be avoided, followed by compensation for the remaining impacts.

    - *Restoration* is for restoring lost function.
    - DNR sequence is avoidance---then minimization----then compensation.
- Approval process:
    - Determine if land is publicly or privately owned. Use County records office or DNR survey office.
    - If state owned - contact DNR to determine if project is allowed and if land available for use.
    - Complete and send DNR lease application and JARPA.
    - If not state owned - continue as usual without DNR.

Appendix E
Agenda and Notes from 3rd Workshop

Agenda

Green Shorelines for Lake Washington and Sammamish: Coordination and Communication Meetings

3rd Meeting – Incentives for Shoreline Restoration

May 20, 2009

Meeting Location

Magnuson Park, The Brig, View Ridge Room

6344 NE 74th Street
Seattle, WA 98115
Phone: 206-684-7026
http://www.seattle.gov/Parks/centers/Magnuson.htm

Meeting Goals

1. Discussion of various existing or pending incentive programs.
   - Discussion and create list of other incentives, information, education, and outreach needed for Green Shorelines.

Time	Topic	Presenter
10:00 – 10:15	Introductions	Zelma Zieman, ORA
10:15 – 10:35	What We've Heard So Far - Suggested and Existing Incentives	Jean White, WRIA 8 Kathy Minsch, Seattle
10:35 – 10:55	Shoreline Setback Incentives - Working on Critical Area Ordinance (CAO) and Shoreline Master Program (SMP) Updates	Dan Nickel, Watershed Co.
10:55 – 11:15	Public Benefit Rating System	Ted Sullivan, King County
11:15 – 11:30	Break	
11:30 – 11:50	Grants for Restoration	Polly Hicks, NOAA Ken Pritchard, King County
11:50 – 12:10	Property Owner Perspectives on Effective Incentives	Dick Sandaas
12:10 – 12:40	Lunch	
12:40 – 1:00	Contractor Perspectives on Effective Incentives	Dave Douglas, Waterfront Construction
1:00 – 1:50	Group Discussion. Question and Answers.	All. Zelma facilitates.
1:50 – 2:00	Closing Comments	Steering Committee

Meeting Ground Rules

- Follow the common rules of courtesy.
- Share airtime in order to let everyone participate.
- Respect each other by keeping an open mind and being a good listener.
- Use sincere communication. Leave history and hidden agendas behind.
- Help each other stay on track and on schedule.
- Listen to and honor all opinions and concerns. Create a safe place to have and voice a different perspective. However, realize not everyone will agree with you.
- Learn from each other and the discussion. Remember this meeting is about communication and coordination.

Green Shorelines for Lakes Washington and Sammamish: Coordination and Communication Workshops

Workshop 3 – Incentives for Green Shorelines

Summary of Comments
May 20, 2009

Background

In Lake Washington and Lake Sammamish, encouraging alternative development options that result in "green shorelines" or more ecologically friendly shorelines is considered an essential step for improving fish and wildlife habitat and enriching community shoreline use. Green shorelines use vegetation and natural materials to reduce negative impacts on nearshore habitat for plants, fish, and wildlife while protecting property. (Reference: *Green Shorelines Guidebook* created by City of Seattle - Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington.)

The third Workshops regarding green shorelines for Lakes Washington and Sammamish was held at The Brig at Seattle's Magnuson Park on May 20, 2009. A total of 43 representatives from local, state, and federal agencies as well as private citizens, businesses, and non-regulatory agencies, such as the WRIA 8 Salmon Recovery Council, attended the meeting.

The third workshop focused on incentives for green shorelines projects. Presentations included:

- Incentives for Green Shorelines: What We've Heard So Far, by Jean White from WRIA 8 and Kathy Minsch from City of Seattle.
- Shoreline Setback Incentives, by Dan Nickel, Watershed Company.
- Public Benefit Rating System (PBRS), by Ted Sullivan, King County.
- Community Based Restoration Program (CRP): Lake Washington Opportunities, by Polly Hicks, NOAA.
- King County Grants, by Ken Pritchard, King County.
- Property Owners' Perspectives, by Dick Sandaas, Shoreline Property Owners and Contractors Association (SPOCA).
- Contractor Perspectives, by Dave Douglas from Waterfront Construction.

The presentations explained existing incentives, shortcuts, and timesavers for green shoreline projects and highlighted potential incentives that would be beneficial to shoreline owners. During the general discussion, participants were asked to identify potential incentives, coordination opportunities, and outreach opportunities that would have the greatest impact.

At the start of the Workshop, participants were provided with colored dots in order to take part in an exercise regarding incentives. Participants voted for the top five incentives they thought were the most important or the most significant. Results were tallied for four organization categories:

regulatory agencies; non-regulatory agencies; contractors, construction, or consulting; general public and private property owners; and non-profit organizations.

Even though it was a limited audience, the results provide valuable stakeholder insight. The exercise was conducted to collect participant opinions but not to conduct a scientifically rigorous evaluation. Results are presented in Table 1.

Presentation slides and additional references can be found on the Green Shorelines webpage: http://www.ecy.wa.gov/programs/sea/events/greenshorelines.html.

Group Discussion

Top incentives selected by group

- Tax breaks. (19)
- Technical assistance with design, installation, permitting. (11)
- Demonstration projects / case studies. (10)
- Grants. (9)
- Streamlined permitting. (10)
- Barriers – more definition of green shorelines. (9)

Tax incentives

- Public Benefit Rating System (PBRS).
    - King County may be a good model, could use as a starting place and expand to other interested jurisdictions.
        - King County is not actively promoting their PBRS right now due to staff reductions, but it is an existing tax incentive program. Jurisdictions and other partners would need to promote the program to property owners because it may not be well understood now.
    - City of Seattle is working on point system in concert with King County.
        - For urban areas, it may be important to increase the number of points for restoration under PBRS.
    - Need guidance to see if smaller projects would fit in PBRS system. For example, look at how shoreline specific projects fit into PBRS.
    - PBRS is an existing tool in the toolbox. The scale is key as right now, it works well for larger projects but not so well for smaller shoreline restoration projects.
    - Agencies need assurance that restoration will stay where incentive was provided and not be developed later such as with a new property owner.

- Other tax incentives:
    - One of the most effective ways to modify behavior is to offer financial incentives.
        - We need to learn how to leverage this better.
        - One concern with tax incentives for high assessment waterfront lots is that the burden would be shifted to upland/small lot owners.
        - Important to know how property value is impacted by improvements.
    - Sales tax waiver might be another option. Could amount to ten percent of project costs, rather than property tax such as PBRS breaks.

Streamlining Permitting

- Ecology and Corps permits work together. Streamlined process if project meets Nationwide Permit (NWP), Regional General Permit (RGP), or Programmatic criteria.
- Corps RGP 3 could be revised and improved to be used by more applicants. Corps will work with consultants to discuss improvement ideas.
- A Corps Programmatic for bulkhead removal or replacement with green shoreline techniques would be a good place to start to help local jurisdictions.
- Each agency only understands and acknowledges their own agency requirements.
    - Streamlining permit process helps consultants give clear definition to applicants of time and cost.
    - Eliminating overlap in permitting would give a better idea at the beginning of project of time, money, and final design.
    - It would be a significant legal and financial challenge to combine all the agency review processes together.

- Other streamlining incentives and ideas:
    - One person in each jurisdiction to help expedite permitting process. Might be especially useful for bulkhead replacement or removal projects.
        - Some local jurisdictions apply this single point of contact approach.
    - Beneficial to provide incentives for flexible setbacks. Would probably need to monitor over time for accountability.
    - Complex permitting process may be a significant barrier preventing voluntary restoration.
    - Difficult to provide flexibility and consistency in permitting at the same time.
    - More flexibility may make it more difficult to analyze outcomes.
    - SMP review by Ecology perceived to have more rigid standards which reduce local permitting flexibility.

Green Shorelines Guidebook and additional outreach.

- Provide a suite of options people can do. If x situation, do this; if y situation, do this.
    - Need to better define property types and conditions appropriate for green shorelines.
    - The first step should be to build knowledge about what green shoreline techniques work with different property types.
- More science is needed about long term effectiveness of these approaches.

Leadership in Energy and Environmental Design (LEED)

- LEED is often one step ahead of building standards. Projects still need permits, but they get certified at the end.
- British Columbia's Green Shores program also has a rating system.
- Washington Sea Grant is working on bringing these initiatives into Washington State.

Other incentives

- Another financial incentive might be a reduction of permit fees.
- Look at the definition of substantial development "exemption" for green shoreline projects.
- Need to further build on general knowledge base regarding shoreline processes.

- Reform state government (ECY, DNR, DFW as one). Think in terms of how this will affect permitting.
- Tours completed green shoreline projects by boat. Also, useful to view examples by land.

Education

- Integrate science and outreach. Give homeowners positive evidence of these projects over time.
- Studying demonstration sites over time. This would provide good information for outreach.
- Regulators don't have all the answers. They will also need more education on green shorelines and incentives.
- A forth Workshop to reach out to property owners would be useful.
- Promote Workshop information collected from the first three Workshops.
- Need education and continued collaboration.

Final Comments

- Be flexible and consistent with permit requirements. Many Jurisdictions are trying to do this.
- Determine issues that are most important for shoreline owners when it comes to using a green shoreline approach.
- Puget Sound Partnership's Action Agenda is assessing the regulatory system for shoreline restoration.
- Most true green shorelines projects are anticipated to move quickly through city permitting. Jurisdictions don't want to slow those projects down.
- Need to monitor incentives because they will be there long-term.
- Stormwater Low Impact Development (LID) may be a good model for green shorelines in regards to developing more detailed guidelines.

Appendix E. Table 1: Dot Exercise Results from 3rd Green Shorelines Workshop: Incentives for Shoreline Restoration
May 20, 2009

Reg - Regulatory Agencies
N-Reg – Non-Regulatory Agencies
CCC – Contractors, Construction, Consulting
Public – Public and Private Property Owners
Non-Profit – Non-Profit Organizations

Technical Assistance	**Total**	Reg	N-Reg	CCC	Public	Non-Profit
• Assistance with: – Design of projects. – Installation of projects and plantings. – Permitting.	**11**	6	4		1	
• Templates for shoreline treatments.						
• Sample planting plans.	**2**			2		
• Public/private partnerships (non-regulatory).						

Studies to Address Barriers	**Total**	Reg	N-Reg	CCC	Public	Non-Profit
• Erosion studies.	**2**	2				
• More definition of where Green Shorelines techniques are appropriate.	**9**	7	1	1		
• Effectiveness of new dock designs.						
• Study demonstration projects over time.	**4**	1	2		1	

Financial Incentives	**Total**	Reg	N-Reg	CCC	Public	Non-Profit
• Grants – Federal, State, local, foundations.	**9**	5	3		1	
• Public/private partnerships.	**1**	1				
• Tax breaks - for property loss, for installing green shorelines, conservation easements.	**19**	11	7		1	
• Permit exemptions to lower permit costs.	**5**	2		3		
• Reduce # monitoring reports to save costs.						
• Creative development financing.						

Other	**Total**	Reg	N-Reg	CCC	Public	Non-Profit
• Use Municipal Research and Services Center (MRSC) to guide/inform local jurisdictions.						
• Provide qualified consultant lists.	**1**		1			
• Obtain scientific expertise to evaluate risks.						
• Simplify forms/applications.	**1**	1				
• NEW! More information about value and variety of wildlife species (benefits of living near wildlife).						

Education and Outreach	**Total**	Reg	N-Reg	CCC	Public	Non-Profit
Property Owners						
• Workshops for shoreline property owners.	**1**		1			
• Distribution of Green Shorelines Guidebook.						
• Demonstration projects/ case studies.	**10**	8	1		1	
• More information on the health of the lakes.	**2**	2				
• Train lakeshore stewards.						
• Property owner to property owner outreach.	**4**	2	2			
• Target outreach to property owners most likely to be interested.	**1**	1				
Other Audiences						
• Provide training and certification for consultants, architects, and landscapers.	**6**	1	5			
• Outreach to real estate agents.						
Permitting Process						
• Readily accessible information for applicants.	**2**			2		
• Increase understanding across agencies and jurisdictions.	**2**	1			1	

Permitting Process	**Total**	Reg	N-Reg	CCC	Public	Non-Profit

• Streamlined/consolidated/centralized permits.	**10**	5	3		2	
• Use a two- track permit process.	**1**	1				
• Use SEPA more efficiently.						
• Integrate Hydraulic Project Approval (HPA) w/Shoreline.						
• Use JARPA for consistent documents.	**2**			2		
• Use Corps guidance to streamline (use existing timesavers).	**1**	1				
• Use Streamline Fish Habitat Enhancement from WA Dept of Fish & Wildlife (WDFW).						
• Boilerplate w/specific HPA conditions.						
• Involve WDFW early.	**1**	1				
• Use exemptions to lower time spent permitting good projects.	**1**		1			
• Waive/reduce permit fees.	**2**			2		
• Expedite application review.	**5**	1	1	3		
• Train permit staff.	**2**	1	1			
• Multi-agency permit team for Lake Washington.	**7**	6	1			
Regulatory Fixes	**Total**	Reg	N-Reg	CCC	Public	Non-Profit
• Consistent codes between jurisdictions.	**3**	3				
• Increase communication among all regulatory agencies.						
• Use ORA workshops to coordinate regulatory framework coordination.	**1**				1	
• Allow setback reductions for green shorelines projects.	**4**	2	2			
• Change fill requirements.						
• Flexibility in standards and design.	**4**	3		1		
• Create gradient or range of options.	**1**	1				
• Clear definition of green shorelines: • Strategy to identify appropriate sites. • Clarify definition of “fish enhancement”	**1**	1				

projects.						
• Reach scale analysis to determine priorities. • Prioritize high priority species, habitat.	**1**	1				
• Develop restoration/mitigation bank. • Use green shorelines as mitigation.	**4**	1	1	2		
• More LEED standards for shoreline development.	**1**		1			
• Reconsider work windows.						
• Regulate pesticides/fertilizers.						

• Monitoring requirements:
  • Use SMP updates to add tracking mechanisms.
  • Consolidate agency reports (use Corps format).
	4	3	1			

• Use Corps “compliance letter” to trigger inspection.						

Appendix F
Agenda, Flyer, and Notes from 4th Workshop

Agenda

Greening Your Shorelines:
Voluntary Approaches to Improving Shoreline Habitat
Lakes Washington and Sammamish
June 23, 2009

Meeting Location	Mercer Island Community Center at Mercer View 8236 SE 24th Street Mercer Island, WA 98040 Phone: 206-275-7609 http://www.mercergov.org/Page.asp?NavID=1951
Attend to learn…	• What are "green shorelines"? • What are the benefits of various approaches? • What approaches are right for your property? • What incentives are available for landowners who want to green their shorelines?
Help us understand…	• What about green shorelines is most attractive to you as a shoreline owner? • What incentives would be most valuable to you and your neighbors in considering green shoreline approaches?

Time	Topic	Presenter
5:30 – 6:00	Refreshments and Registration	
6:00 – 6:30	Introduction and Overview • Background • Introduction to Green Shorelines • Overview of Incentives	Zelma Zieman, ORA* Jean White, Watershed Coordinator Dave LaClergue, City of Seattle Kathy Minsch, City of Seattle
6:30 – 7:20	10 Minute Stations: • Green Shorelines • Grants • Tax Incentives • Permitting • Technical Assistance and Demonstration Projects	Participant groups visit each station with facilitators.
7:20 – 7:30	Transition to Incentives Exercise	Group Facilitators
7:30 – 7:50	Incentives Feedback Exercise	

7:50 – 8:00	Closing Comments	Zelma Zieman, ORA Steering Committee
8:00 – 8:30	Open House	Participants welcome to stay and ask questions one-on-one.

*ORA – Governor's Office of Regulatory Assistance

Workshop Ground Rules

- Assume good intentions.
- Follow the common rules of courtesy.
- Share airtime in order to let everyone participate.
- Respect each other by keeping an open mind and listening.
- Help each other stay on track, on topic, and on schedule.
- Listen to and honor all opinions and concerns. Create a safe place to have and voice a different perspective. However, realize not everyone will agree with you.

GREENING YOUR SHORELINES: Voluntary Approaches To Improving Shoreline Habitat

FREE workshop for Lake Washington and Lake Sammamish shoreline owners

When:

Tuesday, June 23, 2009 5:30-6 p.m. meet & greet/light refreshments 6-8 p.m. workshop

Where:

Mercer Island Community Center at Mercer View 8236 SE 24th Street, Mercer Island, WA 98040
Phone: 206-275-7609

Directions: http://www.mercergov.org/page.asp?NavID=1951

The workshop is free, but registration is required and space is limited.

Three ways to register:

1. Contact Jeanne Fulcher at 425-649-4318
2. Send e-mail to jful461@ecy.wa.gov
3. Or register online through the Green Shorelines Workshop Web site: http://www.ecy.wa.gov/programs/sea/events/greenshorelines.html

Attend this free workshop to learn:

- What are "green shorelines?"
- What are the benefits of various green shorelines approaches?
- What green shoreline approaches are right for your property?
- What incentives are available for landowners who want to green their shorelines?

…and help us understand:

- What about green shorelines is most attractive to you as a shoreline owner?
- What incentives would be most valuable to you and your neighbors in considering green shoreline approaches?

Who Should Attend?

- Shoreline property owners from Lake Washington and Lake Sammamish
- Contractors, consultants, federal, state and local agency staff involved in shoreline work, elected officials and others interested in learning more about green shorelines.

Green Shorelines for Lakes Washington and Sammamish: Coordination and Communication Workshops

Workshop 4 – Greening Your Shoreline: Voluntary Approaches to Improving Shoreline Habitat

Summary

June 23, 2009

Background

In Lake Washington and Lake Sammamish, encouraging alternative development options that result in "green shorelines" or more ecologically friendly shorelines is considered an essential step for improving fish and wildlife habitat and enriching community shoreline use. Green shorelines use vegetation and natural materials to reduce negative impacts on nearshore habitat for plants, fish, and wildlife while protecting property. (Reference: *Green Shorelines Guidebook* created by City of Seattle - Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington.)

The fourth and final Workshop was held at the Mercer Island Community Center on the evening of June 23, 2009. A total of 58 property owners and representatives from local, state, and federal agencies, businesses, and non-regulatory agencies, such as the WRIA 8 Salmon Recovery Council, attended the meeting.

The fourth Workshop focused on sharing information learned from the first three Workshops with property owners and the public. In addition, the evening format provided the opportunity to hear more feedback from citizen and local property owners.

The Workshop began with a short, 30 minute overview of efforts completed to date regarding green shorelines. In addition, a list of incentives culled from the earlier workshops was reviewed. For the next 50 minutes, participants were asked to move through a series of five stations: Defining Green Shorelines, Grants, Tax Incentives, Permitting, Technical Assistance and Demonstration Projects.

At the start of the Workshop, participants were provided with colored dots in order to take part in an exercise regarding incentives. Participants voted for the top five incentives they thought were the most important or the most significant for a property owner considering a green shorelines approach.

Even though it was a limited audience, the results provide valuable stakeholder insight. The exercise was conducted to collect participant opinions but not to conduct a scientifically rigorous evaluation. Results are presented in Table 2.

The workshop concluded with an open house. Participants were encouraged to ask questions and talk with the regulatory and non-regulatory staff present at the Workshop.

Presentation slides and additional references can be found on the Green Shorelines webpage: http://www.ecy.wa.gov/programs/sea/events/greenshorelines.html.

Appendix F. Table 1: Dot Exercise Results from 4th Green Shorelines Workshop: Greening Your Shoreline

June 23, 2009

Technical Assistance	**Total**
Existing:	
• Technical assistance for permitting – through Office of Regulatory Assistance.	**3**
• Templates for shoreline approaches.	
• Sample planting plans.	
New Ideas:	
• Design of projects.	
• Installation of projects and plantings.	
• Provide list of qualified consultants.	
Studies to Address Barriers:	
• Erosion studies.	**1**
• More definition of where Green Shorelines techniques are appropriate.	**8**
• Effectiveness of green shoreline practices. • Example: new dock designs.	
• Study demonstration projects over time.	
Added during Workshop:	
• Create a non-specialist, non-consultant track to comply/apply so that not just "rich" people can do Green Shorelines (i.e. we pay the specialists and we also pay the jurisdictions, sometimes by the hour). Avoid this!	**1**

Financial Incentives	**Total**
Existing:	
• Grants.	
• Property tax breaks – Public Benefit Rating System (PBRS), conservation easements.	**13**
New Ideas:	
• Sales tax breaks for green shorelines.	**9**
• Creative financing to encourage green shorelines development.	
Added during Workshop:	
• Funding for public parks where restoration has already occurred.	**1**
• Address upland streams as potential partnership areas.	**2**

Other	**Total**
• Use Municipal Research and Services Center (MRSC) to guide/inform local jurisdictions.	
• Provide qualified consultant lists.	**1**
• Obtain scientific expertise to evaluate risks.	
Added during Workshop:	
• On-going operation / maintenance.	

Education and Outreach	**Total**
Property Owners	
Existing:	
• Workshops for shoreline property owners.	
• Distribution of Green Shorelines Guidebook.	
• Demonstration projects / case studies.	

New ideas:	
• Tours of green shoreline projects by boat.	**1**
• Recognize owners who have green shorelines.	
• Owner to owner outreach.	
• Focus outreach to most interested owners.	**1**
• Provide more information on lake health, habitat, and fish.	**5**
• Provide more information on benefits to wildlife and owners.	**1**
Other Audiences	
New Ideas:	
• Provide training and certification for consultants, architects, and landscapers.	**1**
• Outreach to real estate agents.	**2**

Permitting Process	**Total**
Coordination:	
Existing:	
• Clarify definition of “green shorelines.”	
• Promote agency coordination/communication through on-going workshops.	
New Ideas:	
• Identify single point of contact within each jurisdiction.	
• Create consistent codes between jurisdictions.	**11**
• Identify appropriate/inappropriate green shoreline sites to ensure project success.	
Streamline:	
Existing:	
• Use Corps “Shoreline Protection Alternative” guidance.	
• Use Corps Regional General Permits.	
• Use SEPA and shoreline exemptions more efficiently.	
New Ideas:	
• Create 2 track permit process (Streamline vs. Flexible).	**1**
• Apply (WDFW) Fish Habitat Enhancement process.	

• Create permit exemptions for green shoreline projects.	**11**
Design:	
Existing:	
• Create range of "green shorelines" options to apply to a range of properties.	
• Regulatory incentives (setback reduction, etc.).	
• Use green shorelines as project mitigation.	
New Ideas:	
• Create LEED standards for shoreline development.	**1**
• Create a shoreline restoration / mitigation bank.	**6**
• Increase volume of pre-approved fill for green shorelines.	
Added during workshop:	
• Modification of existing bulkhead shape -add curve to top and bottom of bulkhead.	**3**
Application:	
Existing:	
• Simplify forms / application.	**1**
• Provide added help to complete forms / applications.	
• Use JARPA as a common application form.	
New Ideas:	
• Waive / reduce permit fees (reduce cost).	**1**
• Expedite application review (reduce time).	**12**
• Create centralized multi-agency permit team for Lakes Washington and Sammamish.	**4**

Appendix G

Reference Terms and Acronyms

Prepared for 2nd Workshop: April 30th, 2009.

References:

University of Washington Keystone Study
2007-2008 Project: **Lake Washington Shoreline Permitting Process Study**
(http://courses.washington.edu/emksp07/NOAA_AltTradShorelines/)

Army Corps of Engineers Programmatic for Lake Washington Shoreline Activities
http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=BankStabLkWash

Quick Guide to Terms and Acronyms:

ECY Washington State, Department of Ecology.

ORA Washington State, Governor's Office of Regulatory Assistance.

Corps U.S. Army Corps of Engineers.

SPU Seattle Public Utilities.

WRIA (Water Resource Inventory Area) A system that the Department of Ecology and other state resource agencies use to number and catalog watersheds, streams, and rivers in the state of Washington. WRIAs were formalized under Washington Administrative Code (WAC) 173-500-040 and authorized under the Water Resources Act of 1971, Revised Code of Washington (RCW) 90.54.

WRIA 8 Lake Washington / Cedar / Sammamish Watershed.

Mitigation Countering the negative environmental impacts that developing the land can have on wetlands, rivers, streams, lakes, and other deep-water habitats.

DNR and Aquatic Use Authorization The Department of Natural Resources (DNR) manages areas of the 2.6 million acres of state-owned aquatic lands such as the tidelands and beds of Puget Sound, lakes, and rivers under Chapter 79.105 RCW. Authorizations may include leases for marinas, shellfish beds, rights of way across these watery lands, and a host of other activities.

SEPA (State Environmental Policy Act) SEPA provides the framework for agencies to consider the environmental consequences of a proposal before taking action. It also gives agencies the ability to condition or deny a proposal due to identified likely significant adverse impacts. SEPA was enacted in 1971 and is implemented through the SEPA Rules, Chapter 197-11 WAC.

NEPA (National Environmental Policy Act) The National Environmental Policy Act (NEPA) of 1969, as amended, requires an environmental impact review of federal actions. The State of Washington administers and enforces SEPA, which is similar to the federal NEPA.

SMP (Shoreline Master Program) Under the Shoreline Management Act, local SMPs regulate new development and use of shorelines along larger rivers, lakes over 20 acres and marine waterfronts. Three types of permits issued by local jurisdictions under SMP: Substantial Development, Conditional Use, and Variance. In addition, certain activities that are exempt from the Substantial Development Permit process should be documented with an Exemption Letter.

GMA (Growth Management Act) The GMA requires comprehensive land use planning by counties and cities under Chapter 36.70A RCW. The environmental planning goal is to "protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water" (RCW 36.70A.020).

CAO (Critical Areas Ordinance) The GMA requires counties and cities to include the best available science in developing policies and development regulations to protect the functions and values of critical areas. The designation and protection of "critical areas" is to prevent harm to the community from natural hazards and to protect natural resources. Natural hazards are frequently flooded areas and geologically hazardous areas. Natural resources are wetlands, fish and wildlife habitat conservation areas, and "areas with a critical recharging effect on aquifers used for potable water."

Local Project Review Act It requires all counties and cities to combine permit review and environmental review, and to consolidate administrative appeals of permit and SEPA decisions. Integrated project review provides a more streamlined permit and environmental review process by reducing duplication and paperwork.

JARPA (Joint Aquatic Resource Permit Application) Fill out a JARPA to apply for Hydraulic Project Approvals, Shoreline Management Permits, Water Quality Certifications, and U.S. Army Corps of Engineers Section 404 and Section 10 permits.

Ordinary High Water (OHW) Mark The common and usual presence and action of waters that mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation.

WDFW Washington State Department of Fish and Wildlife

HPA (Hydraulic Project Approval) Any person, organization, or government agency wishing to conduct any construction activity that will use, divert, obstruct, or change the bed or flow of state waters must do so under the terms of a permit (HPA) issued by the Washington State Department of Fish and Wildlife (WDFW) under Chapter 77.55 RCW.

Corps and 404/Section 10 Section 404 of the Clean Water Act requires approval prior to discharging dredged or fill material into the waters of the United States, including special aquatic sites such as wetlands. Section 10 of the Rivers and Harbors Act of 1899 requires approval prior to the accomplishment of any work in, over or under navigable waters of the United States, or which affects the course, location, condition or capacity of such waters.

Regional General Permit A regional general permit (RGP) is a Department of the Army authorization that is issued on a regional (limited geographic scope) basis for a category of activities when those activities are substantially similar in nature and cause only minimal individual and cumulative impacts on the aquatic environment. Each RGP has a number of terms and conditions that must be met in order for an applicant to use an RGP. In most instances,

anyone complying with the terms and conditions of an RGP may receive project specific authorization.

NWP (Nationwide Permit) A permit issued by the Corps of Engineers for projects with minimal impacts. A nationwide permit is a form of general permit which authorizes a category of activities throughout the nation. These permits are valid only if the conditions applicable to the permits are met. If the conditions cannot be met, a regional or individual permit will be required.

Individual Permit Individual permits are usually related to major activities or significant environmental impacts. The permit decision is generally based on the outcome of a public interest balancing process where the benefits of the project are balanced against the detriments. A permit will be granted unless the proposal is found to be contrary to the public interest. Processing time usually takes 60 to 120 days unless a public hearing is required or an environmental statement must be prepared.

Letters of Permission A Letter of Permission is a type of permit issued through an abbreviated processing procedure. This permit is normally used for activities in navigable waters where objections are unlikely, and the activity does not qualify for a General Permit.

Programmatic Permit This is a type of general permit founded on an existing state, local or other federal agency program and designed to avoid duplication with that program. For example, a Programmatic Consultation with the Corps is a process where the required Section 7 consultation is done "ahead of time." So when an application for a programmatic work activity is received, the consultation part of the permit evaluation process has already been completed, thus streamlining the permit process.

ESA (Endangered Species Act) The Endangered Species Act of 1973 protects plant and animal species that are listed by the federal government as “endangered” or “threatened,” as well as critical habitat necessary for the protection of these species. If an ESA listed species is present or ever has been present in the watershed where a project will be located, the project has the potential for affecting them, and it will need to comply with the ESA. For permits issued by the Corps, consultation with NMFS and USFW is referred to as a Section 7 consultation.

NOAA National Oceanic and Atmospheric Administration.

NMFS NOAA National Marine Fisheries Service. Often referred to as “fisheries” or collectively as “the services” with USFWS.

USFW or USFWS U.S. Fish and Wildlife Service.

ECY and 401 (401 Water Quality Certification) Per Section 401 of the Clean Water Act, an applicant for a federal permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States is required to obtain a certification from the state. It allows states to approve, condition, or deny projects proposed to be built in wetlands or in other waters of the United States.

ECY CZM (Coastal Zone Management) Under the federal Coastal Zone Management Act, projects requiring federal permits or approvals must be consistent with the state's Coastal Zone Management Program. An applicant for a federal permit pertaining to activity in a state’s coastal zone must certify that the proposed activity will comply with the state’s coastal zone management (CZM) program.

NPDES (National Pollutant Discharge Elimination System) The Department of Ecology issues this permit to prevent the pollution of the States surface waters. An individual permit is written for a specific discharge at a specific location. The individual permit is highly tailored to regulate the pollutants in the discharge. An individual permit may be an NPDES permit for discharges to surface waters.

RCW (Revised Code of Washington) Current statutes or laws as passed by the state Legislature. You can navigate the statutes by title, chapter, and section.

WAC (Washington Administrative Code) Regulations of executive branch agencies are issued by authority of statutes. The WAC codifies the regulations or rules used by agencies to "fill in the gaps" of legislation. WAC arranges them by subject or agency.

Appendix H

City of Kirkland – Green Shoreline Decision Tree and Shoreline Assessment

In the process of updating its Shoreline Master Plan, the City of Kirkland further developed the shoreline decision tree from *Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington* (Appendix H, Figure 1) by conducting a general assessment of physical shoreline features to indicate the general feasibility (High, Medium, Low) for each shoreline parcel of shoreline armoring restoration potential (Appendix H, Figure 2). The Assessment also depicts "Natural" and "Vacant" shoreline parcels which would not be included in the "Restoration Potential" summary (Appendix H, Figure 2).

The assessment physical shoreline constraints considered the following:

1. Existing primary structure setback.
2. Current armored condition.
3. Shoreline morphology.
4. Shoreline topography to extent known or observable on aerial photograph.
5. Neighboring shoreline conditions.

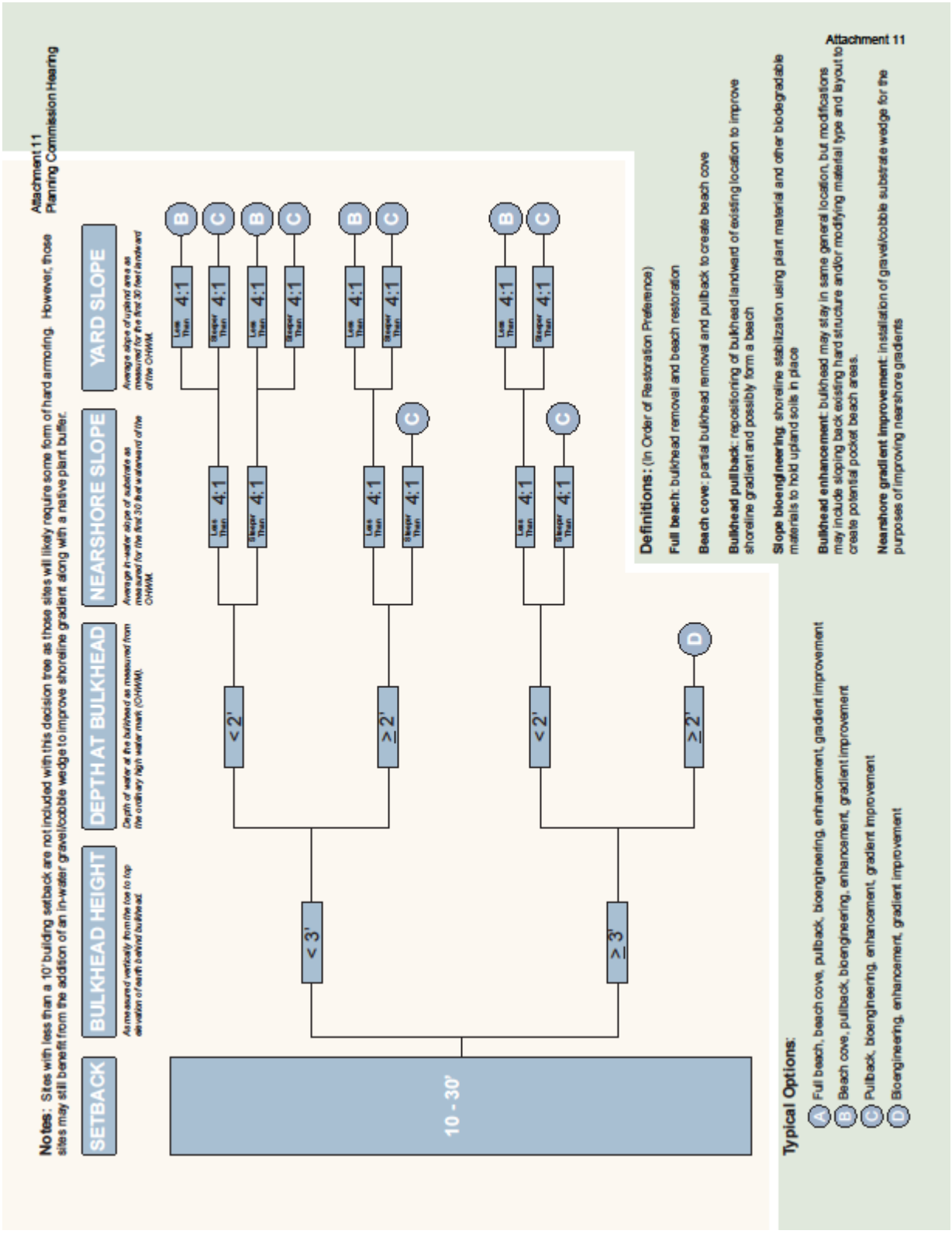
As the analysis is intended to guide potential restoration opportunities and does not involve a site specific survey, major caveats to the assessment include:

1. The actual (site specific) water depth or existing bulkhead height at water's edge is unknown – assumptions were used for this analysis based on aerial photography.
2. "Restoration" means replacement with soft structural stabilization or some other Green Shoreline improvement – The analysis is did not exclusively consider replacement of a bulkhead with only non-structural measures.
3. The analysis did not consider other potential site specific impediments, such as utilities.

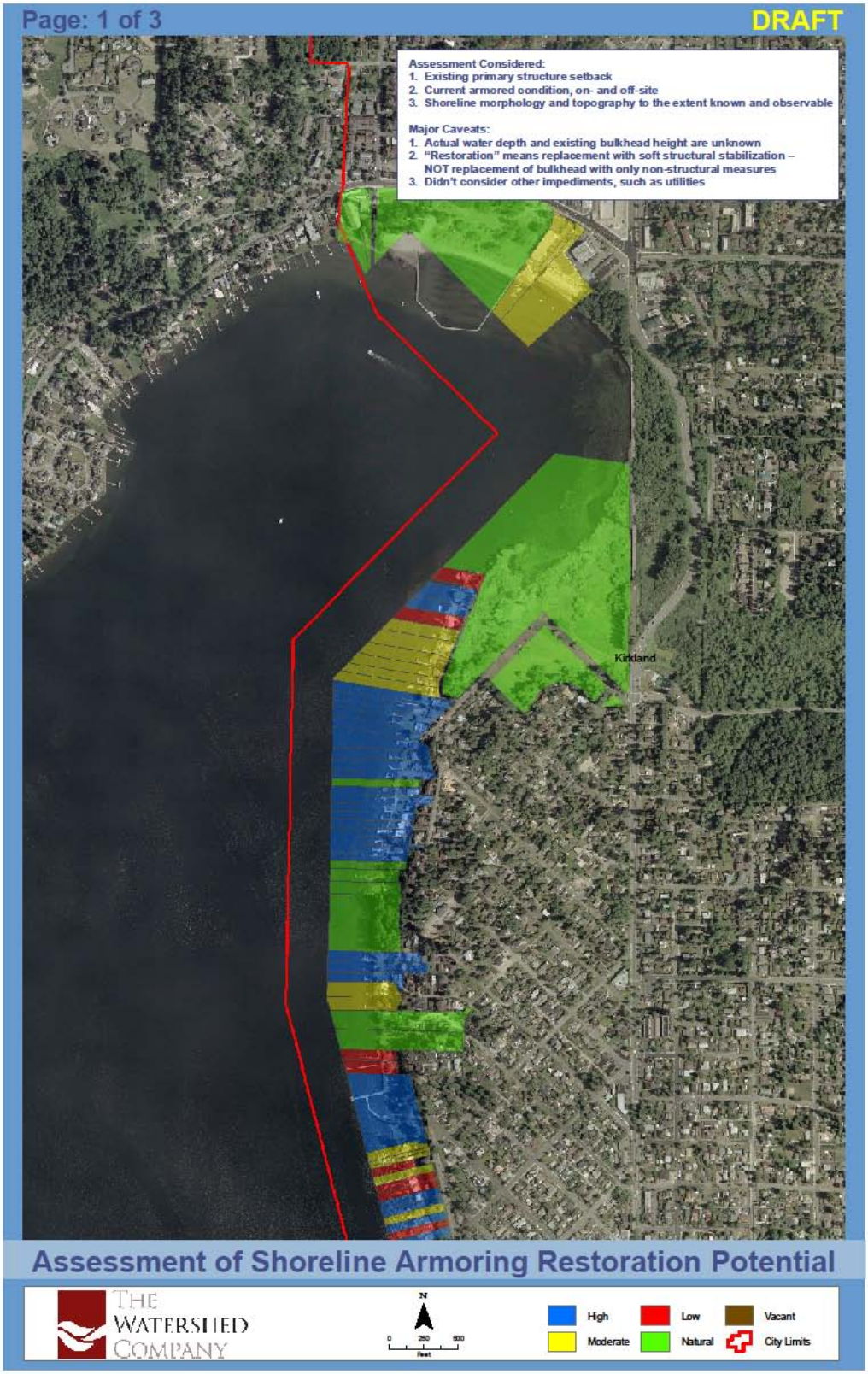
Appendix H. Table 1. Summary of the "Restoration Potential" by shoreline area (# of lots).

		Restoration Potential			
Environment Designation	Natural*	High	Moderate	Low	**TOTAL**
Natural	7	0	0	0	7
Residential - Low	8	53	19	16	96
Residential - Medium/High	7	7	10	33	57
Urban Conservancy	4	6	2	0	12
Urban Mixed	2	0	4	8	14
TOTAL	**28**	**66**	**35**	**57**	**186**

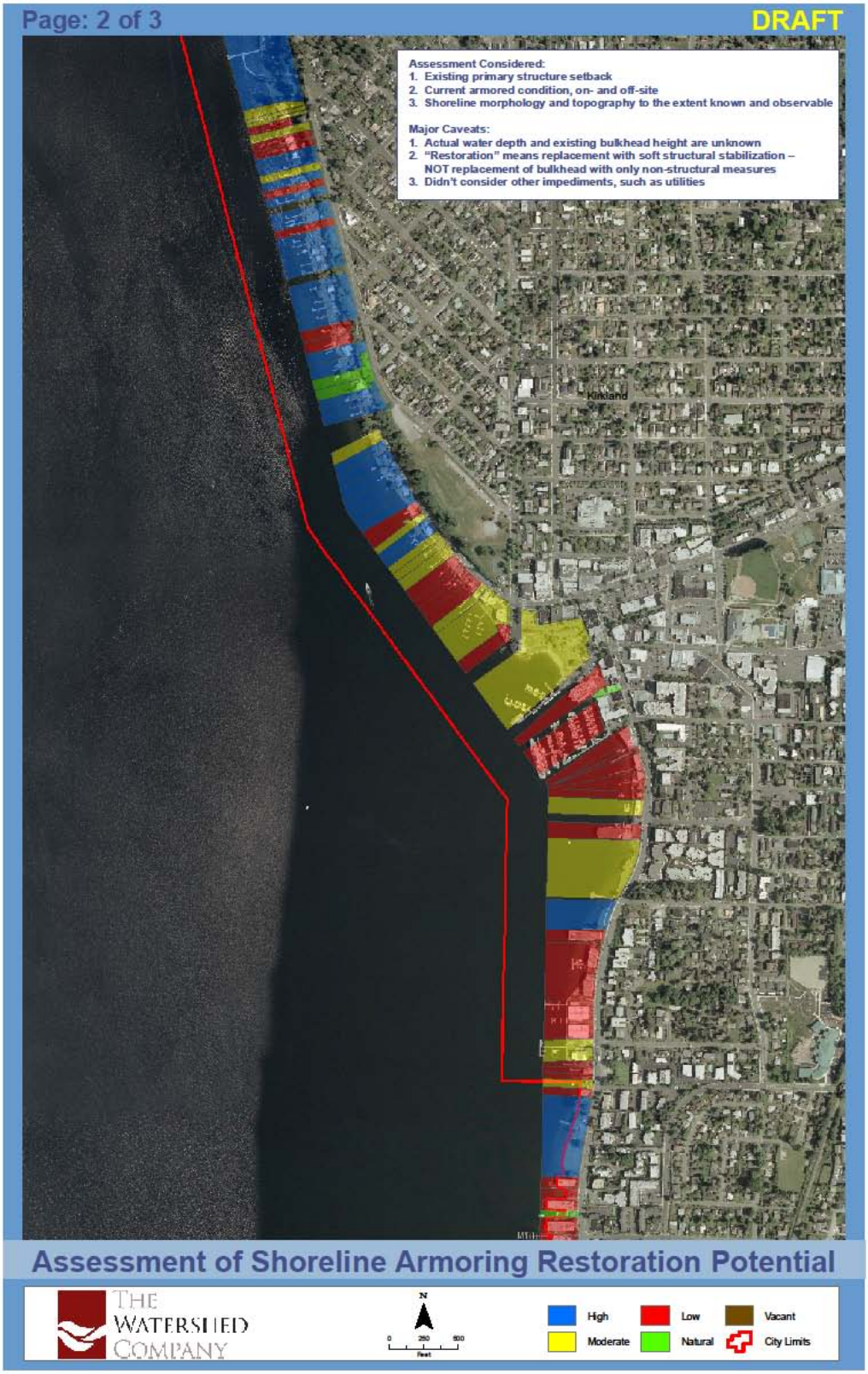
*Natural – no restoration required, already in a semi-natural condition (no shoreline armoring at water's edge).



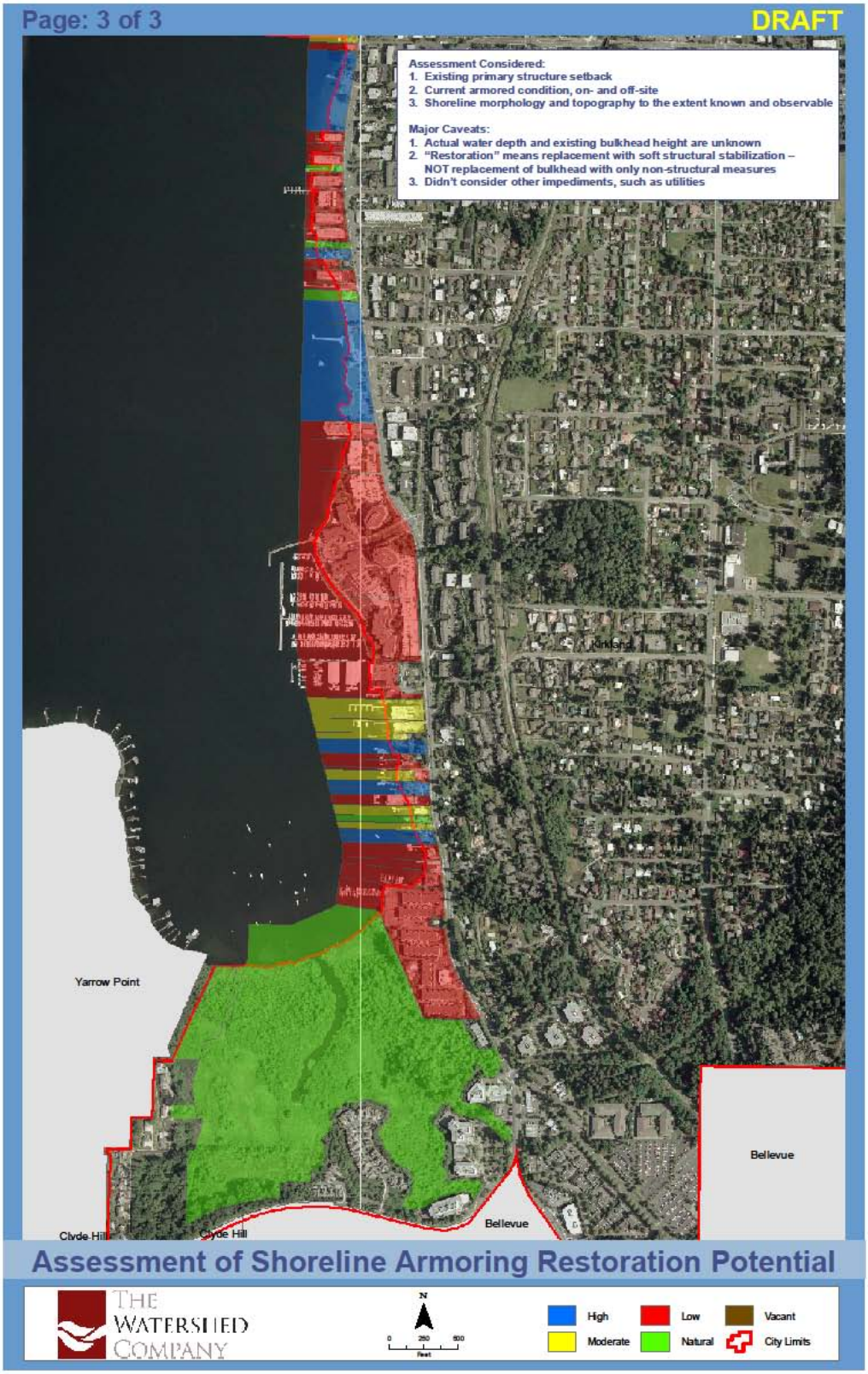
Appendix H. Figure 1a. – Enhanced lakeshore restoration decision tree for the City of Kirkland.



Appendix H. Figure 2a. – Enhanced lakeshore restoration decision tree for the City of Kirkland.



Appendix H. Figure 2b. – Map showing the results of an assessment of shoreline armoring restoration potential in the City of Kirkland.



Appendix H. Figure 2c. – Map showing the results of an assessment of shoreline armoring restoration potential in the City of Kirkland.