



DEVELOPMENT SERVICES DEPARTMENT
 ENVIRONMENTAL COORDINATOR
 450 110th Ave NE., P.O. BOX 90012
 BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 15-107322-WG and 15-113284-LO

Project Name/Address: Jackson Pier Reconfiguration/3226 W. Lake Sammamaish Pkwy SE

Planner: Heidi Bedwell

Phone Number: 425-452-4862

Minimum Comment Period: June 29, 2015

Materials included in this Notice:

- Blue Bulletin
- Checklist
- Vicinity Map
- Plans
- Other:

OTHERS TO RECEIVE THIS DOCUMENT:

- State Department of Fish and Wildlife / Stewart.Reinbold@dfw.gov; Christa.Heller@dfw.wa.gov;
- State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
- Army Corps of Engineers Susan.M.Powell@nws02.usace.army.mil
- Attorney General ecyolyef@atg.wa.gov
- Muckleshoot Indian Tribe Karen.Walter@muckleshoot.nsn.us; Fisheries.fileroom@muckleshoot.nsn.us

ENVIRONMENTAL CHECKLIST

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call the Permit Center (425-452-6864) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4) Our TTY number is 425-452-4636.

Background Information

Property Owner: **Scott Jackson**

Proponent: **Gregory W. Ashley - Ashley Shoreline Design & Permitting**

Contact Person: **Gregory W. Ashley - Ashley Shoreline Design & Permitting**
(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: **16412 NE 10th Pl.
Bellevue, WA 98008-3707**

Phone: **(425) 957-9381**

Proposal Title: **Jackson pier repair and extension**

Proposed Location: **3226 W Lk. Samm. Pkwy. SE**
(Street address and nearest cross street or intersection) Provide a legal description if available.

Please attach an 8 1/2" x 11" vicinity map that accurately locates the proposed site.

Give an accurate, brief description of the proposal's scope and nature.

General description: **Add platform to existing pier. Remove every other set of 4x4 piles and caps. Sleeve remaining 4x4 piles with HDPE pipe and fill with concrete. Repair caps and stringers. Replace solid wood-plank decking with Titan grated decking.**

1. Acreage of site: **12,675 SF**
2. Number of dwelling units/buildings to be demolished: **None, does not apply**
3. Number of dwelling units/buildings to be constructed: **None, does not apply**
4. Square footage of buildings to be demolished: **None, does not apply**
5. Square footage of buildings to be constructed: **None, does not apply**
6. Quantity of earth movement (in cubic yards): **None, does not apply**
7. Proposed land use: **Private single-family residence**

Received
MAR 16 2015
Permit Processing

8. Design features, including building height, number of stories and proposed exterior materials: **Does not apply**

9. Other: **Does not apply**

Estimated date of completion of the proposed timing of phasing: **Construction to be carried out during the timing window of July 16 through Dec. 31**

Do you have any plans for future additions, expansions, or further activity related or connected with this proposal? If yes, explain. **No**

List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. **A shoreline-planting plan (SPP) prepared by Cedarock Consultants, Inc.**

Do you know whether applications are pending for government approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. List dates applied for and file numbers, if known? **No**

Please provide one or more of the following exhibits, if applicable to your proposal.
(Please check appropriate box(es) for exhibits submitted with your proposal)

Land Use Reclassification (rezone) Map of existing and proposed zoning.

Preliminary Plat or Planned Unit Development
Preliminary plat map

Clearing & Grading Permit
Plan of existing and proposed grading
Development plans

Building Permit (or Design Review)
Site Plan
Clearing & Grading Plan

Shoreline Management Permit
Site Plan

**Critical Areas Land Use
Permit**

A - ENVIRONMENTAL ELEMENTS

1. EARTH

a. General description of the site (circle one): **flat**; rolling; hilly; steep slopes; mountainous; other:

HMB 5/27/2015

- b. What is the steepest slope on the site (approximately percent slope)? < 1%
- c. What general types of soils are found on the site (for example, clay, sand gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.
Sand & gravel
- d. Are there surface indicators or history of unstable soils in the immediate vicinity? If so, describe.
No
- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
None, does not apply
- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
No, does not apply
- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?
None, does not apply
- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:
None, does not apply

2. **AIR**

- a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
None, does not apply
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
No, does not apply
- c. Proposed measures to reduce or control emissions or other impacts to air, if any:
None, does not apply

3. **WATER**

a. **Surface**

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.
Yes, Lake Sammamish
- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.
Yes, Add platform to existing pier (ass 2' galvanized steel piles). Remove every other set of 4x4 piles and caps (30 piles and 12 6x8 caps). Sleeve remaining 4x4 piles with HDPE pipe and fill with concrete. Repair caps and stringers. Replace solid wood-plank decking with Titan grated decking. Raise bottom of pier to 1.5' above OHWM.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None, does not apply

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose and approximate quantities if known.

No, does not apply

5) Does the proposal lie within a 100-year flood plain? If so, note location on the site plan.

Yes

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No, does not apply

b. Ground

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No, does not apply

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, containing the following chemicals, agriculture; etc.).

None, does not apply

3) Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None, does not apply

c. Water Runoff (including storm water)

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow? Will this water flow into other waters? If so, describe.

None, does not apply

2) Could waste materials enter ground or surface waters? If so, generally describe.

No, does not apply

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

None, does not apply

4. PLANTS

a. Check the types of vegetation found on the site:

Deciduous tree: Alder, Maple, Aspen, other

Evergreen tree: Fir, Cedar, Pine, other

Shrubs

Grass

Pasture

Crop or grain

HMB 5/27/2015

Wet soil plants: Cattail, Buttercup, Bulrush, Skunk Cabbage, other

Water plants: Water Lily, Eelgrass, Milfoil, other

Other types of vegetation

b. What kind and amount of vegetation will be removed or altered?
None

c. List threatened or endangered species known to be on or near the site.
Salmon

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
Native vegetation to be planted along the shore. Scope of planting to be determined by Altmann Oliver Associates, LLC

5. ANIMALS

a. Check or circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

Birds: Hawk, Heron, Eagle, **Songbirds**, other:

Mammals: Deer, Bear, Elk, Beaver, other:

Fish: Bass, **Salmon**, Trout, Herring, Shellfish, other:

b. List any threatened or endangered species known to be on or near the site.
Salmon

c. Is the site part of a migration route? If so, explain
Possibly a Salmon outmigration rout

**Puget Sound Chinook-threatened
Bull trout-threatened**

d. Proposed measures to preserve or enhance wildlife, if any:
Adhere to all regulations and guidelines

6. ENERGY AND NATURAL RESOURCES

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
None, does not apply

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
No, does not apply

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
None, does not apply

7. ENVIRONMENTAL HEALTH

HMB 5/27/2015

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

No

- 1) Describe special emergency services that might be required.

None, does not apply

- 2) Proposed measures to reduce or control environmental health hazards, if any:

None, does not apply

b. Noise

- 1) What type of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None, does not apply

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Construction, Monday through Friday, 8:00 A.M. to 4:30 P.M.

- 3) Proposed measures to reduce or control noise impacts, if any:

Limit time of construction to M-F, 8:00 A.M to 4:30 P.M.

8. LAND USE AND SHORELINE USE

- a. What is the current use of the site and adjacent properties?

Private single-family residence

- b. Has the site been used for agriculture? If so, describe.

No

- c. Describe any structures on the site.

Private single-family residence

- d. Will any structures be demolished? If so, what?

No

- e. What is the current zoning designation of the site?

R-5

- f. What is the current comprehensive plan designation of the site?

**Single Family
High Density**

- g. If applicable, what is the current Shoreline Master Program designation of the site (check with City Planning staff)?

Residential

- h. Has any part of the site been classified an "environmentally sensitive" area? If so, specify.

Yes, the shoreline

Floodplain

- i. Approximately how many people would reside or work in the completed project?

None, does not apply

- j. Approximately how many people would the completed project displace?

None, does not apply

- k. Proposed measures to avoid or reduce displacement impacts, if any?
None, does not apply
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
Adhere to all regulations and guidelines

9. **HOUSING**

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
None, does not apply
- b. Approximately how many units, if any, would be eliminated? Indicate whether high-, middle-, or low-income housing.
None, does not apply
- c. Proposed measures to reduce or control housing impacts, if any:
None, does not apply

10. **AESTHETICS**

- a. What is the tallest height of any proposed structures(s), not including antenna; what is the principal exterior building material(s) proposed?
Approximately 36" above the OHWM, wood
- b. What views in the immediate vicinity would be altered or obstructed?
None
- c. Proposed measures to reduce or control aesthetic impacts, if any:
None

11. **LIGHT AND GLARE**

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
None, does not apply
- b. Could light or glare from the finished project be a safety hazard or interfere with views?
No, does not apply
- c. What existing off-site sources of light or glare may affect your proposal?
None, does not apply
- d. Proposed measures to reduce or control light and glare impacts, if any:
None, does not apply

12. **RECREATION**

- a. What designated and informal recreational opportunities are in the immediate vicinity?
Water sports
- b. Would the proposed project displace any existing recreational uses? If so, describe.
No
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project of applicant, if any:

None

13. HISTORICAL AND CULTURAL PRESERVATION

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

None known

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None known

- c. Proposed measures to reduce or control impacts, if any:

None

14. TRANSPORTATION

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on-site plans, if any.

Does not apply

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Does not apply

- c. How many parking spaces would the completed project have? How many would the project eliminate?

None, does not apply

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No, does not apply

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No, does not apply

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

None, does not apply

- g. Proposed measures to reduce or control transportation impacts, if any:

None, does not apply

15. PUBLIC SERVICES

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No, does not apply

- b. Proposed measures to reduce or control direct impacts on public services, if any.

None, does not apply

16. UTILITIES

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

Does not apply

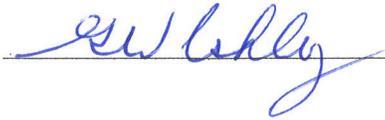
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity, which might be needed.

None, does not apply

SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____



Date Submitted: 3/16/2015

HMB 5/27/2015

**CRITICAL AREAS REPORT
SHORELINE FUNCTIONS EVALUATION
MITIGATION AND MONITORING REPORT**

**JACKSON
PRIVATE DOCK MODIFICATIONS**

**3226 West Lake Sammamish Parkway SE
Bellevue Washington 98008**

Prepared by:

Cedarock Consultants, Inc.
19609 244th Avenue NE
Woodinville, Washington 98077

Prepared for:

Scott and Morgan Jackson
3226 West Lake Sammamish Parkway SE
Bellevue Washington 98008

May 7, 2015

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
1.1 Project Description.....	1
1.2 Purpose of this Report	1
1.3 Report Author	1
2.0 EXISTING CONDITIONS	1
2.1 Lake Sammamish.....	2
2.2 Streams	3
2.3 Wetlands	3
2.4 Geologic Hazard Areas	3
2.5 Species of Local Importance	3
2.6 Flood Hazard Areas	4
3.0 EFFECTS OF THE PROPOSED ACTION ON SHORELINE FUNCTIONS.....	4
3.1 Water Quality.....	7
3.2 Water Quantity	7
3.3 Beneficial Nutrients.....	8
3.4 Temperature & Shade.....	8
3.5 Human Access Control	8
3.6 Woody Debris.....	8
3.7 Bank Stability.....	8
3.8 Shoreline Function Conclusion.....	8
4.0 PROJECT EFFECTS ON CRITICAL AREAS.....	9
4.1 Streams and Lakes.....	9
4.2 Wetlands	10
4.3 Shorelines.....	10
4.4 Steep Slopes	10
4.5 Species of Local Importance	10
4.6 Flood Hazard Areas	10
4.7 Critical Areas Effects Summary	10
5.0 MITIGATION.....	11
5.1 Impact Avoidance.....	11
5.2 Impact Minimization	11
5.3 Compensatory Mitigation	11
6.0 MAINTENANCE.....	12
7.0 MONITORING.....	12
APPENDIX	14

Page

LIST OF TABLES

Table 1. Standard Lake Shoreline Buffer Functions and Analysis of Change6
Table 2. Impact and Mitigation Areas.....7

LIST OF FIGURES

Figure 1. Jackson and neighboring properties on Lake Sammamish2
Figure 2. Shoreline and buffer conditions in December 2014.....2

APPENDIX

Mitigation planting plan

1.0 INTRODUCTION

1.1 Project Description

The applicant is proposing to add a 40 sq.ft. platform to the end of an existing wooden dock on Lake Sammamish. Two new pile will be added. As mitigation, 30 of the existing 48 piles will be removed, all of the solid wood decking will be replaced with open grating, concrete block shoreline armoring will be removed, a creosote timber bulkhead will be removed, and 40 sq.ft. of new native plantings will be added along the shoreline.

Development standards for docks in Lake Sammamish are covered under LUC 20.25E.080.N.1.b. The proposed dock work meets all required standards except the following:

1. LUC 20.25E.080.N.1.b.iv.3.a. *Ells are allowed only over water with depths of nine feet or greater at the landward end of the ell.*

The natural slope of the lake bed in this location would require the dock be extended another approximately 80 feet out into the lake in order to meet the code requirement. The increase in overwater coverage and new pile that would be required to meet code would defeat any environmental benefits of moving the ell further offshore to get to deeper water. Effects of the proposed action as a result of not meeting this development standard are discussed in Section 4.1.

1.2 Purpose of this Report

This report was prepared for following purposes:

1. To evaluate environmental effects of the proposed dock modifications with mitigation on environmental functions within the Lake Sammamish Shoreline environment;
2. To evaluate environmental effects of the proposed modifications on Critical Areas, and;
3. To describe proposed mitigation and monitoring for the new work.

1.3 Report Author

This report was prepared by Carl Hadley, a professional fisheries biologist with over 25 years of experience in western Washington.

2.0 EXISTING CONDITIONS

This section provides a description of shoreline habitat and critical areas on and within 150-feet of the proposed dock area under existing conditions. Critical areas within 150-feet of the work area include Lake Sammamish, the lake's riparian buffer, and habitat associated with species of local, state, and federal importance (Figure 1). Adjoining properties include similar critical areas.

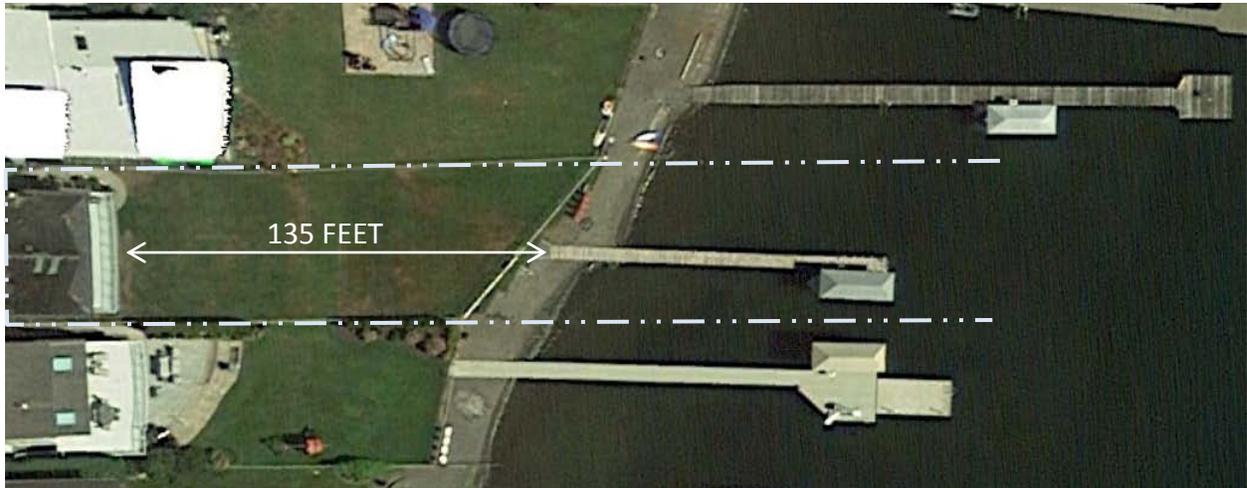


Figure 1. Jackson (center) and neighboring properties on Lake Sammamish.

2.1 Lake Sammamish

A survey of Lake Sammamish in the vicinity of the work area survey was conducted on the morning of December 6, 2014 by a professional biologist. The Jackson property and adjoining properties are highly modified including houses, docks, slope modifications and landscaping (Figure 1). The properties have no banks and very gradual slopes leading away from the water. Significant retaining walls and other bank protection measures are generally absent in this area although the subject property has treated timbers placed along the shore above OHW that provide some erosion protection. The shoreline is characterized by a gravel beach to above OHW (Figure 2). Lawns in the area come down to the beach where a short drop of less than a foot is typically present. Minor armoring is present at the edge of most of the lawns.



Figure 2. Shoreline and buffer conditions in December 2014 looking west (red lines show approximate property boundaries).

Lake Sammamish is a shoreline of the state (classified as a Type S water under the Bellevue land use code LUC 20.25H.075.B.1). The lake in this area consists of open water that continues

uninterrupted offshore for between one and two miles. The gravel dominated substrate drops off slowly to about 9 feet within 190 feet from shore. The east-facing property is not located in an area subject to high wave action during storm events. High water occasionally reaches up to the lawn during winter, and minor erosion has been reported as an ongoing concern.

There is no retaining wall on this property and bank protection measures are minor (Figure 2). The treated timbers and some chunks of concrete placed under the dock have generally been enough to protect the shoreline from significant erosion. Occasional gravel replenishment appears to have occurred based on the size of the gravel across the subject and neighboring lots. Some weedy grasses and small forbs are located below OHW. The remainder of the Lake Sammamish buffer upland of the beach consists of a lawn (Figure 2). The lawn extends from the beach up about 135-feet to the house.

Lake Sammamish has documented fall Chinook, coho, sockeye, and winter steelhead presence. Resident cutthroat trout and various warmwater fish species are also known to use Lake Sammamish year-round. Historic sockeye beach spawning has not been reported on this property. The nearest spawning was reported about 500 feet to the north. No other species have been reported to spawn within or near the project site. Adult salmon migrate through Lake Sammamish to spawning habitat in Issaquah Creek and other tributaries feeding the lake. Vasa Creek, located approximately 775 feet to the south, contains the nearest salmonid spawning habitat with documented kokanee and coho spawning. Steelhead may also use Vasa Creek. Juvenile salmon migrate past the site on their journey to Puget Sound. Chinook and steelhead are protected under the federal Endangered Species Act.

2.2 Streams

Vasa Creek, located approximately 775 feet to the south, is the nearest salmon-bearing stream. Vasa Creek contains documented resident trout, coho, and kokanee use. Steelhead may also use the creek on occasion.

2.3 Wetlands

A cursory examination of the property and a review of public records found no evidence of wetlands on the site. No seeps or wetland plants were noted.

2.4 Geologic Hazard Areas

The property within 150-feet of Lake Sammamish has a very low slope (Figure 2). No steep or unstable areas were noted near the proposed work area.

2.5 Species of Local Importance

The wildlife habitat review consisted of a site-specific survey and consultation with the Washington Department of Fish and Wildlife database¹. The site and surrounding lands have

¹ Washington Department of Fish and Wildlife. 2015. Priority habitat and species map.

been developed mostly as high-density single-unit residential housing. Minimal habitat suitable for terrestrial and avian species is found in the area; the landscape has been significantly modified by past clearing, fragmentation, and introduction of non-native landscaping species (e.g. lawn). There are no significant trees within 150-feet of the dock. The properties have all been fenced. Species that may be expected to be found intermittently on this site are deer, coyote, Douglas and eastern grey squirrels, other assorted rodent species, raptors, and song birds. No terrestrial wildlife species listed by the U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, King County, or City of Bellevue as threatened, endangered, sensitive, critical, candidate or of local importance (LUC 20.25H.150.A) are expected to utilize habitats found within 150 feet of the dock.

Federally protected species including Chinook salmon and steelhead are found in Lake Sammamish. Additional description of aquatic species and habitat is provided in Section 2.1.

2.6 Flood Hazard Areas

Land subject to a one-hundred-year flood is present on the property below elevation 36.1 feet. This includes the entire area in which the dock is located.

3.0 EFFECTS OF THE PROPOSED ACTION ON SHORELINE FUNCTIONS

The effect of the proposed dock modifications on shoreline ecological functions is discussed in this section. Standard shoreline ecological functions include water quality improvements, bank protection, organic material source, and wildlife habitat. Each of these functions is reviewed below for both the pre- and post-redevelopment condition.

In shoreline areas the standard for protection is “no net loss”. No net loss means that, following an action, shoreline ecological functions necessary to sustain shoreline natural resources are equivalent to or greater than ecological functions immediately prior to the action. As noted in Ecology guidelines for the Shoreline Management Act, the “no net loss” standard focuses on shoreline ecological functions “as they currently exist”². In this case “as they currently exist” refers to the conditions with the existing beach, landscaped yard, patio, and lack of native vegetation anywhere within 150 feet of Lake Sammamish. No net loss does not compare to theoretical, perfect, or undisturbed conditions as may have occurred before the area was developed.

Shoreline habitat in its natural condition performs many functions essential to fish survival and productivity. Vegetation in riparian areas can provide shade and helps maintain cool water temperatures needed by most fish native to the Pacific Northwest. Plant roots stabilize banks, help control erosion and sedimentation, and can offer refuge habitat for juvenile fish. Vegetation creates overhanging cover for fish. Where present, trees and shrubs contribute

² See WAC 173-26-201(2)(c) (no net loss focuses on sustaining “existing shoreline natural resources” and protecting shoreline resources “as they currently exist”).

leaves, twigs, and insects to waterbodies, thereby providing basic food and nutrients that support fish and aquatic wildlife. Large trees that fall can create refuge habitat needed by small fish for cover and protection from predators. Riparian vegetation, litter layers, and soils filter incoming sediments and pollutants, thereby assisting in the maintenance of high water quality needed for healthy fish populations³.

Primary ecological functions provided within the Lake Sammamish shoreline on the project site are described below along with an evaluation of the project impact. Shoreline functions and values are based on WDFW guidelines⁴ and other best available science⁵. The discussion is summarized in Table 1.

Existing conditions on the subject property consist of a low-slope gravel-dominated beach (Figure 2), and a low-slope shoreline covered entirely with grass. There are no large trees on the site and no native trees or shrubs are present within 150 feet of the lake on the project site. Vegetation near the shoreline consists of exotic annual and perennial grasses and a few forbs, the extent of which varies from year to year. The nearshore area of Lake Sammamish in this area slopes very gradually offshore and doesn't reach 9-feet before 190 to 200-feet beyond OHW.

The proposed dock work will increase overwater cover over a 40-sq.ft. area of relatively shallow water (about 7-feet) located 100 to 110-feet offshore (Table 2). It will decrease overwater coverage over 440 sq.ft. of shallow water (0 to 7-feet) located between 0 and 110-feet offshore. There will be a new reduction of 28 pile between 0 and 110-feet offshore. No vegetation will be eliminated with dock construction. Proposed mitigation will add 40 sq.ft. of new native landscaping within the shoreline area near OHW.

³ Knutson, K. L. and V. L. Naef. 1997. Management recommendations for Washington's priority habitats: riparian. Washington Department of Fish and Wildlife, Olympia, WA. 181p.

⁴ Ibid.

⁵ For example, see Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas. 2002. Washington State Office of Community Development, Olympia, WA. and City of Bellevue's 2005 Best Available Science (BAS) Review (Herrera 2005).

Table 1. Standard Lake Shoreline Buffer Functions and Analysis of Change

Buffer Function	Description of Function	Current Buffer Function	Buffer Function After Re-Development
Shade	The ability to help maintain low water temperatures and create a cool and humid microclimate.	Non-existent for the project site due to a lack of vegetation (trees and shrubs) overhanging or adjacent to Lake Sammamish.	No change
Beneficial Nutrient Sources	The ability to provide food resources to the Lake in the form of leaf litter, vegetative matter, and terrestrial insects.	Non-existent for the project site due to a lack of native vegetation within more than 100-feet of Lake Sammamish.	Beneficial Effect - 40-square feet of new native vegetation adjacent to OHW will increase nutrients.
Woody Debris Recruitment	The ability to provide large woody debris to Lake Sammamish.	Non-existent for the project site due to a lack of potential recruitment trees.	No change
Sediment and Pollutant Control	The ability to physically filter sediments, chemicals, and nutrients.	Low due to a lack of native vegetation and little surface water running off of, or across the site.	Beneficial Effect with planting of new native vegetation between lake and lawn and removal of the treated wood bulkhead.
Bank Stability and Sediment Recruitment	The ability to maintain bank stability and prevent increased erosion along the shoreline of Lake Sammamish.	Low due to lack of vegetation along shoreline.	Beneficial Effect with planting of new native vegetation adjacent to OHW.
Human Access Control	The ability to reduce or eliminate human disturbance along a sensitive shoreline.	None. Access control is not an issue for this private property.	No change
Wildlife Habitat Suitability	The ability to provide habitat for upland mammals and avian species within the riparian corridor.	Low for the project site. Site consists primarily of lawn with no wildlife function.	Beneficial Effect - 40-square feet of new native vegetation adjacent to Lake Sammamish will increase wildlife forage habitat.

Shoreline Buffer Function: The physical, chemical, and biological processes or attributes of the buffer.

Table 2. Impact and Mitigation Areas

Impact	Mitigation	Description
24 sf		New overwater coverage created by addition of new platform to end of dock (40 sf of 40% open grating material).
	176 sf	Reduction in overwater coverage by replacement of existing solid decking with 40% open grating over 440 sf
2 pile		Two new pile required to support new platform
	30 pile	Number of existing piles on property to be removed
0 sf		Riparian plant disturbance
	40 sf	Addition of new native planting near OHW
Conclusion:		<ul style="list-style-type: none"> • Net reduction of 152 sf of overwater coverage • Net reduction of 28 pile • Net increase of 40 sf of native riparian buffer plantings • Removal of 63 LF of treated wood bulkhead • Removal of ~ 1 cu.yd. concrete scrap under dock

3.1 Water Quality

Vegetation adjacent to a waterbody can improve water quality by filtering pollutants, removing nutrients, and preventing sediment introduction. The water quality function of the existing shoreline area is generally absent. The beach consists primarily of gravel. While the beach area periodically contains non-native forbs, vegetation for the most part is absent or sparse. Soils absorb some rainfall and surface water runoff coming from nearby slopes but wave action and rapid infiltration means that most water landing on the beach ends up in Lake Sammamish relatively quickly. Any foreign material such as silts and landscaping chemicals receive minor filtering action by the soils before water reaches the lake.

The addition of 40-sf of native plantings will slightly improve the quality of runoff from the site assuming chemicals such as fertilizer or herbicides are used on the non-native grasses. It will also add some wildlife habitat and a source of allocthonous material. The removal of the creosote timbers used as a bulkhead along the shoreline will also improve water quality in the area.

3.2 Water Quantity

No increase of impervious surface and no change in upland land use are proposed. Runoff volume from the site will not change.

3.3 Beneficial Nutrients

Native riparian buffers can be important to aquatic habitat productivity being the primary source of leaf litter and insects delivered to fish habitat. When present, overhanging vegetation contributes leaves, vegetative litter, and small woody debris directly to the waterbody.

No trees or shrubs will be removed under the proposed action. The applicant has proposed a native species revegetation effort for the lakefront area as mitigation for effects of the new dock. Native plants will be placed in the beach area between the OHW and the lawn. A small increase in beneficial nutrient delivery will be provided in this area.

3.4 Temperature & Shade

No overhanging vegetation is currently present on the subject property. Construction and presence of the small platform will have no effect on water temperature in Lake Sammamish.

3.5 Human Access Control

One function of buffers in populated areas can be reducing the direct encroachment of humans on the watercourse. This project will be conducted on private property where access control is not an issue.

3.6 Woody Debris

Large and small woody debris consists of downed tree stems and branches and is a functionally important structural component of watercourses and lakes in the Pacific Northwest. There is no vegetation capable of supplying woody debris on the property. The project will have no effect on woody debris contribution.

3.7 Bank Stability

Roots from vegetation growing along waterbodies can help stabilize soils and reduce erosion.

The gravel found along the subject shoreline naturally aggrades and erodes with minimal influence of any native plants along the shoreline. The existing lawn currently located above OHW provides some stability along the upper shoreline area and helps prevent erosion. Planting above OHW will provide additional protection of the shoreline as wave attenuation is provided. Bank stability will be increased to a small degree by the proposed mitigation plantings.

3.8 Shoreline Function Conclusion

The site is currently developed with an existing residence and lawn. The proposed dock work will not disturb any native vegetation or result in any physical change to the upland shoreline area other than removal of treated bulkhead timbers and some concrete chunks. Due to the proposed increase in native vegetation, there will be a small beneficial effect on vegetative functions. No change in the quantity of water leaving the site is proposed and a minor benefit

to water quality is expected. Under the Shoreline Management Act, this level of protection will provide “no net loss” of shoreline ecological functions necessary to sustain shoreline natural resources.

4.0 PROJECT EFFECTS ON CRITICAL AREAS

Critical areas are defined in the City of Bellevue under BCC LUC 20.25H.025. They include streams, wetlands, shorelines, geologic hazards, habitat and species of local importance, flood hazard areas, and buffers. Existing conditions of each critical area on or near the site are described in Section 2.0 of this report. This section describes any actions that will be taken within or near the critical area and any proposed changes to the functions or values that will occur.

4.1 Streams and Lakes

Due to the long distance, the project will have no effect on the functions or values of Vasa Creek located 775-feet to the south, or the area of Lake Sammamish influenced by the watercourse.

The dock is located on Lake Sammamish. The dock will result in new permanent overwater coverage of 40 sq.ft. located 100 feet offshore but in relatively shallow water. To protect migrating juvenile salmonids, it is preferable to locate new overwater coverage away from the shallow nearshore areas where these smaller fish typically swim as a mechanism to avoid predation by larger fish. The agencies charged with protecting fisheries in Washington State (i.e. NOAA/NMFS and WDFW) recommend that dock platforms be a minimum of 30-feet offshore to protect the most critical migratory area⁶. The proposed action greatly exceeds this recommendation. The City of Bellevue additionally requires that piers be constructed over water with depths of nine feet or greater at the landward end of the pier. This is likely required in part to protect the salmonid migratory corridor but also to help prevent shading of the littoral zone and the resultant potential loss of vegetation that grows in this area and provides valuable fish habitat. The natural slope of the lake bed in this location would require the dock be extended another approximately 80 feet out into the lake in order to reach the depth required to meet the code. This would result in increased shading and vertical structure throughout the littoral zone. The increase in structure and shade would defeat any environmental benefits of moving the pier further offshore to get to deeper water. Rather than extending the dock, the applicant has proposed to mitigate impacts to the littoral zone by replacing the existing solid surface dock with open grating, and by removing 30 of the 48 existing piles (63 percent). The net effect will be a 35 percent reduction in overwater shading (from 440 to 280 sq.ft.). This will benefit the area where most young salmon are found by eliminating solid overhead cover and greatly reducing the type of vertical structure often used by salmonid predators.

⁶ Corps of Engineers, United States Department of the Interior, United States Department of Commerce. 2001. Endangered Species Act guidance for new and replacement piers and bulkheads in Lake Washington, Lake Sammamish, and the Ship Canal, including Lake Union.

Construction impacts will be minimized by minimizing inwater work, and working only during the recommended work window for the protection of Chinook salmon and other salmonid species. Only two new piles will require driving, and these will be simply vibrated into place to refusal. There is no need for proofing. No upland grading, welding, or clearing is necessary. The only construction impact will be a short term temporary increase in noise and visual disturbance as work on the dock is completed using primarily hand tools.

Overall, the dock will slightly improve aquatic habitat quality in the immediate area with the reduction in overwater coverage and vertical structure.

4.2 Wetlands

No wetlands, seeps or springs were noted on the site or reported in sensitive areas portfolios.

4.3 Shorelines

Lake Sammamish is a shoreline of the state. Changes to shoreline functions are described in Section 3.0 of this report.

4.4 Steep Slopes

No steep slopes are located in the work area or within more than 150-feet of the work area. The project will have no effect on steep slopes.

4.5 Species of Local Importance

No habitat that may have provided urban wildlife habitat for species of local importance will be affected by work on the dock. No native vegetation will be disturbed and no new human activities will be introduced to the area. The project will slightly increase native habitat with the planting of 00 sq.ft. of native shrubs and forbs along the shoreline. Overall there will be no significant adverse effects on upland wildlife habitat.

Sensitive fish species are found in Lake Sammamish and sockeye spawning has been reported nearby. However, no spawning or other habitat critical to protected salmon life histories is located on the site. The new dock will result in minor improvement of aquatic habitat quality in the immediate area as discussed in Section 4.1. Overall, no significant adverse effects to wildlife habitat are expected.

4.6 Flood Hazard Areas

A flood hazard area is located on the site. No grading or filling is proposed within the floodplain and no change in compensatory flood storage volume will occur.

4.7 Critical Areas Effects Summary

The proposed action will take place almost entirely below the OHW line of Lake Sammamish. There are no streams, wetlands, steep slopes, or areas of natural wildlife habitat in or within

150-feet of the proposed work area. No permanent adverse changes to upland habitat will occur. No significant adverse effects on critical areas are expected. Minor impacts are being mitigated with new native plantings in the buffer.

5.0 MITIGATION

The proposed dock will have a small but beneficial environmental effect on the ecological functions in the immediate area of Lake Sammamish due to the 35 percent reduction in overwater shading and 63 percent reduction in vertical structure. However, some small temporary adverse effects will occur during construction as noise and visual disturbances may preclude fish from using the immediate area of the lake. Mitigation for the project is being provided primarily by avoiding and/or minimizing impacts to sensitive areas. Some additional compensatory mitigation in the form of enhanced native plantings along the shoreline is proposed to help offset longer term impacts.

5.1 Impact Avoidance

The following actions are proposed to avoid impacts:

- No grading and only minor, temporary disturbance is proposed above the ordinary high water mark of Lake Sammamish.
- No work is proposed in wetlands, streams, or geologic hazard areas, or their buffers.
- No fill or grading is proposed within the floodplain.
- No native vegetation will be disturbed.

5.2 Impact Minimization

The following actions are proposed to minimize impacts:

- Work within the Lake Sammamish shoreline buffer and floodplain will be temporary, minimal, and limited only to areas of existing disturbance.
- BMPs recommended by the WDFW and federal fisheries agencies for the design of new docks have been utilized to reduce the effect on fish and aquatic habitat. These include shade and vertical structure minimization measures (see Section 4.1 for more detail).
- The final dock meets recommended size for single family uses.

5.3 Compensatory Mitigation

The following actions are proposed to mitigate for impacts:

- An area of 40 sq.ft. of new native plantings will be added to the Lake Sammamish buffer adjacent to the OHWM (see Planting Plan in Appendix).
- 63 linear feet of creosote timber bulkhead will be removed from along the shoreline.
- Approximately 1 cu.yd. of concrete scraps will be removed from below the existing dock.

6.0 MAINTENANCE

Controlling any non-native species and re-establishing native vegetation are the primary goals of this maintenance plan. Activities required to maintain new plantings include initial watering of the new plants, and periodic removal of non-native vegetation (weeding) within the buffer area.

- New plantings shall be watered from May through mid-October during the first season. A temporary irrigation system is allowed. A potable water source is available for this use.
- Due to the aggressively invasive habit of non-native species and the existence of nearby seed sources, control efforts shall be completed for five years following initial plant installation. Establishment of native plantings over the five year time period will create a well established native habitat lessening the chance for non-native vegetation invasion. The control of invasive weeds (competing grasses and herbs) shall be mechanically provided at the base of each plant at a minimum of twice per year, or more, should additional weeding be deemed necessary. The optimal season for weed control occurs in April thru September.
- The use of herbicides and pesticides after new planting operations is strictly prohibited unless given written permission by the City of Bellevue.
- All work shall be performed by hand with the lightest possible equipment.

7.0 MONITORING

Due to the small size and uncomplicated nature of the proposed planting area, and lack of wetland involvement, the planting area shall be self-maintained and self-monitored by the homeowner for five years. Vegetation monitoring shall consist of plant inspection to determine the health and vigor of each plant. All planted material in the buffer shall be inspected once a year for five years to determine the health of each specimen. Dead or dying material shall be replaced the following fall unless plant crowding is believed to be a problem. Plant species substitutions may be made if site conditions are believed responsible for plant mortality. Replacement species must be approved by the City.

Annual monitoring reports shall be submitted to the City of Bellevue, Attn: Environmental Planning Manager by October 31st in each of the five years. Photos of the mitigation plantings will be included in the monitoring reports to document conditions. The following schedule and performance standards apply and will be evaluated in the report for each year:

Year 1 (from date of plant installation)

- 100% survival of all installed plants and/or replanting in following dormant season to reestablish 100% of original plantings
- Less than 10% coverage of invasive plants in planting area.

Year 2 (from date of plant installation)

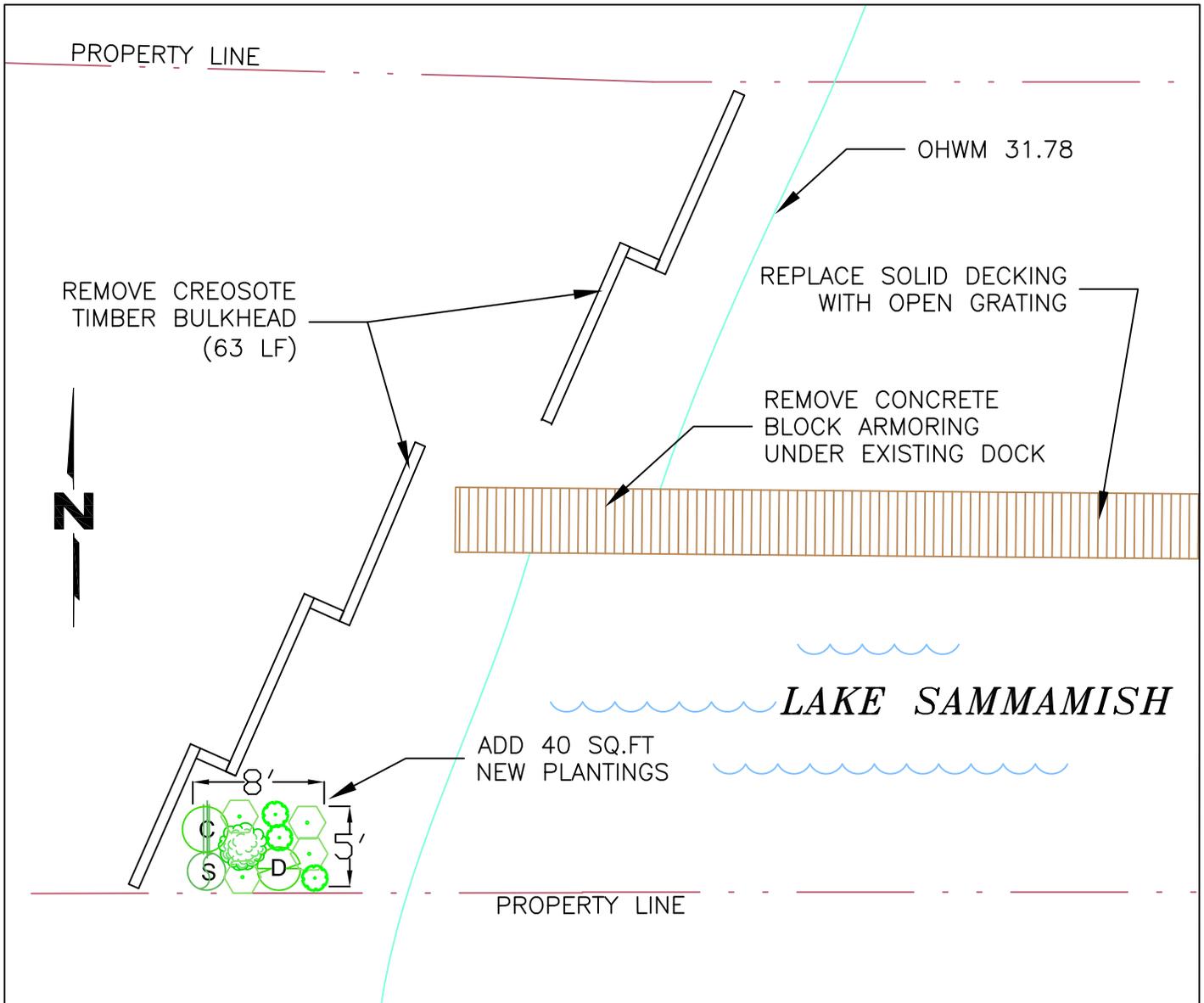
- At least 90% survival of all installed material
- Less than 10% coverage of planting area by invasive species or non-native/ornamental vegetation.

Year 3, 4, & 5 (from date of plant installation)

- At least 85% survival of all installed material
- At least 35% (Yr3), 50% (Yr4), 70% (Yr5) coverage of the planting area by native plants in each year respectively.
- Less than 10% coverage by invasive species or non-native/ornamental vegetation.

APPENDICES

Mitigation Planting Plan



PLANT NAME AND SPECIES	SIZE	#
SMALL FRUITED BULRUSH (<i>Scirpus microcarpus</i>)	1-GAL	3
SLOUGH SEDGE (<i>Carex obnupta</i>)	1-GAL	4
DOGWOOD (<i>Cornus sericea</i>)	2-GAL	1
FLOWERING CURRANT (<i>Ribes sanguineum</i>)	2-GAL	1
SNOWBERRY (<i>Symphoricarpos albus</i>)	2-GAL	1
SITKA WILLOW (<i>Salix sitchensis</i>)	2-GAL	1

A total of 40 square feet of area to be planted in one 5' x 8' area located just upland of the OHW. The planting area currently consists of lawn and gravel with no other vegetation.

A total of 10 shrubs/groundcovers (1 plant/4.0 square feet) and one (1) tree shall be planted. See Sheet 2 for planting details.

PLANT INSTALLATION

1. Plant materials shall be nursery grown in the Puget Sound area. Plants shall be normal in pattern of growth, healthy, well-branched, vigorous, with well-developed root systems, and free of pests and diseases. Damaged, diseased, pest-infested, scraped, bruised, dried out, burned, broken, or defective plants will be rejected.
2. If selected species are not available, then similar species may be substituted with approval from owner and City of Bellevue.
3. Planting shall occur during the cool season (September 15 through March 15).
4. Landscaper shall examine soils in the area to determine suitability for selected plants. New topsoil or compost amendment shall be added to a depth of 12" where necessary to support plants.
5. Plant all groundcover plants approximately 18-inches on center.
6. Immediately after planting, plants shall be watered to saturation.
7. Actual planting locations shall be field determined at time of planting by landscape architect or biologist.
8. Provide good quality landscape mulch around all shrubs. This can be omitted around grasses.

LANDSCAPING MAINTENANCE

- Controlling any non-native species and re-establishing native vegetation are the primary goals of this maintenance plan. Activities required to maintain new plantings include initial watering of the new plants, and periodic removal of non-native vegetation (weeding) within the planting area.
2. New plantings shall be watered from May through mid-October during the first season. A temporary irrigation system is allowed. A potable water source is available for this use.
 3. Due to the aggressively invasive habit of many non-native species around Lake Sammamish, and the existence of nearby seed sources, control efforts shall be completed for five years following initial plant installation. Establishment of native plantings over the five year time period will create a well established native habitat lessening the chance for non-native vegetation invasion.
 4. The control of invasive weeds (competing grasses and herbs) shall be mechanically provided throughout the planting area at a minimum of twice per year, or more should additional weeding be deemed necessary. The optimal season for weed control occurs in April thru September. The use of herbicides and pesticides after new planting operations is strictly prohibited unless given written permission by the City of Bellevue. All work shall be performed by hand with the lightest possible equipment.

MONITORING

1) Compliance monitoring consists of evaluating the plants and shoreline planting area immediately after plant installation. The objective is to verify that all design features, as agreed to in the plans, have been correctly and fully implemented, and that any changes made in the field are consistent with the intent of the design. Evaluation of the planting areas after restoration will be done by the homeowner. A brief compliance report will be prepared describing final plant counts and noting any substitutions or movement of plants when compared to the design. Rationale for changes shall be provided. Three photo points will be established giving complete coverage of the buffer area.

2) Long Term Monitoring – New plantings will be monitored in the summer once a year for a five year period. Monitoring will be conducted by the homeowner to quantify the survival, relative health and growth of plant material. An annual monitoring report submitted to the City following each years monitoring visit will describe and quantify the status of the mitigation and provide the three photos from the same locations as the compliance report.

Vegetation monitoring will consist of plant inspection to determine the health and vigor of the installation. All planted material in the buffer will be inspected during each monitoring visit to determine the level of survival of the installation. Each shrub and tree will be rated either as dead, dying, or healthy. Dead or dying material will be replaced the following fall unless plant crowding is believed to be a problem. Plant species substitutions may be made if site conditions are believed responsible for plant mortality. Replacement plants must be approved by the City. Volunteer native, non-invasive species will be included as acceptable components of the mitigation project. Ground covers will be rated as percent ground coverage for each of the major areas covered with these species.

At least three photo points will be established giving complete coverage of the buffer area. Photos will be taken at each point during every monitoring visit and submitted as part of the annual monitoring report.

PERFORMANCE STANDARDS

Year 1 (from date of plant installation)

- 100% survival of all installed plants and/or replanting in following dormant season to reestablish 100% of original plantings
- Less than 10% coverage of invasive plants in planting area.

Year 2 (from date of plant installation)

- At least 90% survival of all installed material
- Less than 10% coverage of planting area by invasive species or non-native/ornamental vegetation.

Year 3, 4, & 5 (from date of plant installation)

- At least 85% survival of all installed material
- At least 35% (Yr3), 50% (Yr4), 70% (Yr5) coverage of the planting area by native plants in each year respectively.
- Less than 10% coverage by invasive species or non-native/ornamental vegetation.

<p>JACKSON MITIGATION PLANTING PLAN</p>	<p>CEDAROCK CONSULTANTS, INC.</p>	<p>3226 West Lake Sammamish Pkwy SE Bellevue WA 98008</p>	
	<p>19609 244th Avenue NE Woodinville, WA 98077 (425) 788-0961</p>	<p>NTS</p>	<p>SHEET 2 OF 2</p>