



US Army Corps  
of Engineers  
Seattle District

## APPLICATION FORM

### For Impacts to Listed Species and Designated Critical Habitat from Shoreline Protection in Lake Washington



**TO BE COMPLETED BY THE CORPS**

Corps Reference Number \_\_\_\_\_

- The proposed work meets all of the conditions of the “*Programmatic Biological Evaluation for Shoreline Protection Alternatives in Lake Washington.*”
- The proposed work does not meet all of the conditions of the programmatic. This form constitutes a Reference Biological Evaluation. Application will be submitted to NMFS and FWS for consultation.

**1. Proposed Activity:** Shoreline Protection

**Alternative:**

- a.** Cut Beach, Place Gravel Fill and Re-vegetate

Remove existing riprap or concrete bulkhead and cut into the existing bank across the maximum width of the property to attain a shallow shoreline grade and further reduce the effects of scouring wave action. Plant native riparian vegetation ten feet deep across at least 50% of the width of the shoreline. Plant emergents in areas where wave action is suitable for growth. Place gravel beach fill grading slope to range of 1Vertical (V):4 Horizontal (H) or less steep. The design target for the slope is 1V:7H. More than 2 cubic yards of gravel fill per lineal foot at or below the 21.85 foot elevation will need additional review and consent by COE. Typically, gravel size should range from 1/8 inch to 2 inches. Add emergent plants in areas where wave action is suitable for growth. For higher energy areas shoreline logs may be partially buried within the new substrate at the water’s edge. The area behind the logs will be planted with willows and/or emergent vegetation. Section F gives the COE web site for work windows at various locations around the lake. Best management practices including installation of silt fences for water quality control must be used. This method may be most appropriate for shallow-sloped shorelines with lawns. Site specific engineering may be needed depending on location and scale of project.

- b.** Gravel Fill Beach and Re-vegetate

Where option #1 cannot be done, because of site conditions, place gravel beach fill in front of existing bulkhead (covering the rip rap) or remove riprap across the maximum width of the property possible and replace with gravel beach fill. Plant native riparian vegetation ten feet deep across more than 50% of the width of the shoreline. Place gravel beach fill grading slope to range of 1V:4H or flatter. Design target for the slope is 1V:7H. Typically gravel size should range from 1/8 inch to 2 inches. More than 2 cubic yards of gravel fill per lineal foot at or below the 21.85 foot elevation will need additional review by COE. Add emergent plants in areas where wave action is suitable for growth. For higher energy areas shoreline logs may be partially buried within the new substrate at the water’s edge. The area behind the logs will be planted with willows and/or emergent vegetation. Section F gives the COE web site for work windows at various locations around the lake. Best management practices including installation of silt fences for water quality control must be used. This method may be suited for those properties with a structure close to the shoreline and/or on a steep-sloped shoreline. Site specific engineering may be needed depending on location and scale of project.

- c.** Re-vegetated Armored Banks (only for bulkheads within 25 feet of residence)

Where existing riprap cannot be removed because of very close proximity to an existing residential or commercial structure (25 feet or less from 21.85 foot elevation), vegetation can be added to restore some

functions. Willow stakes must be planted into replacement riprap (or other material) with soil amendment or provide design with similar functional vegetation benefit in front of bulkhead. Gravel beach fill may be added in front of the bulkhead to provide some shallow water. More than 2 cubic yards of gravel fill per lineal foot at or below the 21.85 foot elevation will need additional review by COE. Section F gives the COE web site for work windows at various locations around the lake. Overhanging riparian plantings must be added along the entire length of the riprap bulkhead. Best management practices including installation of silt fences for water quality control must be used. *Limited use of this shoreline treatment may only be allowed by COE depending on site specific constraints making alternatives #1 or #2 impossible.*

**2. Drawings - See attached Drawings.**

**3. Date:**

**4. Applicant:**

Address:

City: State: Zip:

**5. Agent:**

Address:

City: State: Zip:

**6. Project Name:**

**7. Location(s) of Activity:**

Section: Township: Range:  
Latitude: Longitude: GPS Coordinates:  
Waterbody: Lake Washington County: King

**8. Description of Work:**

*Describe the proposed project.*

**9. Construction Techniques:**

*Describe methods and timing of construction to be employed in the bank stabilization. Discuss construction techniques associated with any interdependent or interrelated projects.*

*Address the following:*

- A. Construction sequencing and timing of each stage (duration and dates):
- B. Site preparation:
- C. Equipment to be used:
- D. Construction materials to be used:
- E. Work corridor:

- F. Staging areas and equipment wash outs:
- G. Stockpiling areas:
- H. Running of equipment during construction:
- I. Soil stabilization needs / techniques:
- J. Clean-up and re-vegetation:
- K. Storm water controls / management:
- L. Source location of any fill used:
- M. Location of any soil disposal:
- N. New Pier or Replacement Pier Activities anticipated within 10 years on the property:

**10. Action Area**

Action area is Lake Washington, 0.5 miles surrounding the project site.

**11. Species Information:**

Listed species in Lake Washington include chinook salmon, steelhead trout and bull trout.

**12. Existing Environmental Conditions:**

Provide color photographs of local area, shoreline conditions and proposed project site.

Existing environmental conditions are described in the “*Programmatic Biological Evaluation for Shoreline Protection Alternatives in Lake Washington*” dated December 13, 2007.

**13. Effects Analysis:**

Effects analysis is provided in the “*Programmatic Biological Evaluation for Shoreline Protection Alternatives in Lake Washington*” dated December 13, 2007.

If your project doesn’t meet all the programmatic conditions, please describe any impacts from your project that are not covered:

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#### 14. Conservation measures:

Conservation measures are measures that would reduce or eliminate adverse impacts of the proposed activity.

- establish in-water work window using the table below

<b>Specific Area in Lake Washington</b>	<b>Allowable Work Window</b>
<b>South of I-90</b>	
---within 1 mile of Mercer Slough or Cedar River	July 16-July 31 <i>and</i> November 16-December 31
---further than 1 mile from Mercer Slough or Cedar River	July 16-December 31
<b>Between I-90 &amp; SR 520 July 16-April 30</b>	July 16-April 30
<b>North of SR 520</b>	
----Between SR 520 & a line drawn due west from Arrowhead Point	July 16-March 15
----North of a line drawn due west from Arrowhead Point	July 16-July 31 <i>and</i> November 16- February 1

- establishing construction timing restrictions near known species feeding, or spawning habitat,

Please describe any known salmonid feeding or spawning habitat in the project vicinity. An example is sockeye spawning habitat. \_\_\_\_\_

- ensuring the restoration of functions is achieved through project planning and post construction monitoring, and

Applicant agrees to the following monitoring protocol:

- A. Post-Construction: Establishment of photo-points, Submittal of As-Built drawings, and the establishment of any other benchmarks that will be used during the monitoring period.

B. Years One through Five: monitoring will occur within three (3) months of the completion of the project and will occur annually until five (5) monitoring events have been completed and the monitoring reports submitted to the Corps.

- use of silt curtains and other best management practices to minimize the amount of sediment and other materials from entering the water during construction.

Please describe best management practices not discussed in the construction techniques section

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**15. Determination of Effect:**

Determination of effect is covered in the “*Programmatic Biological Evaluation for Shoreline Protection Alternatives in Lake Washington:*”

- Chinook salmon: may affect, likely to adversely affect*
- Steelhead trout: may affect, not likely to adversely affect*
- Bull trout: may affect, not likely to adversely affect*

**16. EFH Analysis**

This project will not adversely affect essential fish habitat.

Applicant/Agent	Date
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TO BE COMPLETED BY THE CORPS IF PROJECT DOESN'T MEET ALL CONDITIONS:

Project doesn't meet the following programmatic conditions:

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