



US Army Corps  
of Engineers®

Seattle District

# Notice of Preparation

Emergency Management Branch  
P.O. Box 3755  
Seattle, WA 98124-3755  
ATTN: Major Karl Jansen (DD)

Public Notice Date: 6 May 2008  
Expiration Date: 5 June 2008  
Reference: PL-08-07  
Name: Snoqualmie River Levee Repairs

---

Interested parties are hereby notified that the U.S. Army Corps of Engineers, Seattle District (Corps) plans to prepare, pursuant to Sec. 102(C) of the National Environmental Policy Act (43 U.S. Code Secs. 4321-4370e), an environmental assessment (EA) for proposed levee repairs at four sites in the Snoqualmie River Basin, in King County, Washington. These sites incurred damage during flooding that occurred as a result of a major rainstorm in November 2006. This heavy rain caused peak flows of 67,000 cfs in the Snoqualmie River. Several levees along the Snoqualmie River and one of its tributaries, the Raging River, were damaged as a result of these floods.

## AUTHORITY

The proposed levee repairs are authorized by Public Law 84-99 (33 U.S. Code Section 701n). Corps rehabilitation and restoration work under this authority is limited to flood control works damaged or destroyed by floods. The statute authorizes rehabilitation to the condition and level of protection exhibited by the flood control work prior to the damaging event. The levee segments proposed to be repaired were not built by and are not maintained by the Corps.

## BACKGROUND

The South, Middle, and North Forks of the Snoqualmie River begin in the Cascade mountains and merge to form the mainstem Snoqualmie River near the town of Snoqualmie, in King County at the base of the foothills of the Cascade Mountains. It flows northward to near Monroe in Snohomish County to join the Snohomish River, which flows westward to empty into Puget Sound. A major portion of the Snoqualmie River system is lined with levees. These levees serve to reduce the risk of flooding of the surrounding agricultural and suburban areas including the towns of North Bend, Snoqualmie, Fall City, Carnation, and Pleasant Hill. Due to the dynamic process of rivers and heavy storm events, damages caused by erosion to levees and other structures are cumulative unless addressed through repair efforts.

## NEED AND PURPOSE

A heavy rainstorm during November 2006 created flooding in many river basins in western Washington. That in turn caused damage to a number of levee sites, including four in the Snoqualmie River basin in King County, Washington, which will be addressed in the Environmental Assessment. The sites requiring rehabilitation

constitute relatively minor segments of the lengthy reaches of locally constructed levees in the Snoqualmie Basin. These levees are integral to protecting life, safety, and property, including private residences, public facilities, and farmland, in floodplains along the river. The Corps has determined that if the four segments of the Snoqualmie River levees are not adequately addressed before the next flood event, each segment would present an imminent threat to life and/or property. The flood season in the Snoqualmie Basin typically begins November 1 of each year. It is essential to ensure that the levees match their pre-existing condition at each of the four described locations before November, in order to minimize chances of increased levee damage and possible breaching, which could have major consequences to life, health, safety, and property.

The purpose of the project is to restore the pre-existing level of flood protection, at certain Snoqualmie River levees that were damaged in the November 2006 flood event.

### DESCRIPTION OF DAMAGE LOCATIONS

The following addresses the four individual sites proposed for repair.

#### McElhoe-Pearson

The McElhoe-Pearson levee project is located on the right bank of the Snoqualmie River near Carnation (T25N, R07E, Sec. 09) from about river mile (RM) 23.40 to RM 23.75. The levee project protects residential, agricultural and public use land. The levee is constructed with earthen material and is armored with riprap on both the riverward and landward sides. The November 2006 flood event resulted in approximately 750 linear feet (lf) of damaged landward levee slope and lost armor rock in two different sites on both the levee crest and landward levee slope due to overtopping. The damage is spread over two distinct sites along the levee; the landward levee slope scour extends approximately 11 feet vertically above the apparent levee toe elevation at one of the sites and the other site experienced loss of riprap and fill material across the top of the levee.

#### Raging River Bridge to Mouth Right Bank

The Raging River Bridge to Mouth Right Bank levee project is located on the right bank of the Raging River extending from RM 0.0 to RM 0.45 near the town of Fall City (T24N, R07E, Sec. 14). It is at the corner of the confluence of the Raging River and the Snoqualmie River. The November 2006 flood event resulted in severe degradation of a 100' section of levee resulting from breaching and overtopping, and extending from the riverward toe across the crown and including backslope erosion. During the event, the local landowner moved materials into the site in an attempt to reinforce the levee.

#### Mason Thorson Ells

The Mason Thorson Ells levee project is located on the left bank of the Middle Fork Snoqualmie River extending from about RM 46.8 to RM 47.2, near the town of North Bend (T23N, R08E, Secs. 03, 10). The November 2006 flood event resulted in approximately 400 lf of damaged toe and lost armor rock on the riverward bank. The

damage is continuous along the levee and the scour extends approximately 17 feet vertically above the apparent toe elevation.

### Mason Thorson Extension

The Mason Thorson Extension levee project is on the left bank of the Middle Fork Snoqualmie River extending from about RM 46.2 to RM 46.4, near the town of North Bend (T 23N, R 08E, Sec. 03). There are approximately 150 lf of damaged toe and lost armor rock along the riverward bank. Damage consists of general riprap undermining and some slope sloughing with the larger riprap rolling to the base of the levee. The damage is along the levee and the scour extends approximately 16 feet vertically above the apparent toe elevation.

## ALTERNATIVES

Multiple alternatives are being considered, including the No-Action Alternative, the Non-Structural Alternative, and the Repair the Damage Alternative. In order for any alternative to be acceptable for consideration, it must meet certain objectives. The alternative must afford flood protection similar to the rest of the levee segment, it must be economically justified, it should be environmentally acceptable, and it should minimize costs for both the public sponsor and the Federal government.

The No-Action alternative must be fully considered under NEPA. It would leave the levee in its current damaged condition. Preliminary analysis indicates that this alternative has high potential for flood damages to the protected structures and lands behind these levees in the Snoqualmie valley.

The Non-Structural alternative would relocate all existing residences, utilities, and public facilities. Relocation of residences prior to the coming flood season appears impractical, even if willing sellers were identified. Because it appears the costs associated with flood proofing or relocating the structures in the potential inundation area would significantly exceed the cost of repairing the levee, the non-structural alternative will likely not be considered further.

The Repair-the-Damage alternative would be to restore the levees to pre-flood level of protection. Under this alternative, individual projects would be addressed as follows:

### McElhoe-Pearson

The proposed repair would restore the levee to pre-flood conditions by repairing the crest and landward slope damage for approximately 750 lf. Site 1 requires repairing 200 lf of damage due to overtopping and restoring a driving surface on the crown of the levee. Site 2 requires re-grading of 550 lf of landward slope and restoring armor protection.

For both repair sites in-water work for this project would be completely avoided since the repair would be restricted to the crown and landward face of the levee. USACE biologists determined that there would be no wetland impacts due to the repair. All work would be conducted within the pre-existing levee structure footprint using similar

construction methods and materials as the original construction in order to achieve a final repair with a profile and orientation the same as the pre-flood condition.

The proposed repair at Site 1 would be accomplished in three phases:

Phase I (Site Preparation): This phase consists of excavating the eroded portions of the levee crown in order to provide a clean cavity that allows the placement of a 3-foot blanket of riprap. Approximately 25 young sapling cottonwoods and sparse shrub vegetation are growing on the eroded portion. Roughly 1500 ft<sup>2</sup> of the levee crown would be removed.

Phase II (Crown Repair): The excavated crown portion from Phase I would be replaced with riprap. Riprap material would be placed into excavated cavity in a manner to achieve the most inter-locked and compacted placement possible. Replacement would extend vertically to an elevation approximately level with the undamaged levee crown.

Phase III (Finish Work / Environmental Feature Installation): A 6" minimum blanket of 6"-minus quarry spalls and 1¼" crushed gravel would be placed on the levee crown to provide a driving surface. Trees would be planted parallel to the levee, between the landward face and the extent of King County's levee easement (30' landward from the riverward crown edge). USACE biologists would determine the species and planting density prior to contract solicitation.

The proposed repair at Site 2 would be accomplished in two phases:

Phase I (Site Preparation): This phase consists of re-grading the landward face of the levee to achieve an approximate 2H:1V slope to provide continued stability and to allow a minimum 24" blanket of riprap armor protection. Trees within the damaged area would be worked around during the course of repair.

Phase II (Armor Protection): The re-graded face from Phase I would be armored with compacted ballast rock consistent with Class I riprap specifications.

### **Raging River Bridge to Mouth Right Bank**

The proposed repair at this location would include removal of the materials moved into position by the landowner and re-establishment / reconstruction of the levee approximately ten feet landward of the present location over a length of approximately 100 lf. The eastern end of the setback levee would tie into the existing Raging River levee and the existing 4-foot diameter culvert; the western end would tie in to the existing Snoqualmie River levee. New material would be brought in for the toe due to flood erosion of pre-existing toe.

In-water work for this project would be completely avoided since the proposed repair is set back approximately 10 feet from the pre-existing condition. USACE biologists determined that there would be no wetland impacts due to the repair. Similar construction methods and materials as the original construction would be used in order

to achieve a final repair with a profile and orientation the same as the pre-flood condition. The repair effort would encompass a footprint no greater than the pre-existing footprint on the riverward side and below the ordinary high water line; it would extend the levee footprint on the landward side through the set-back, but would not encroach on existing wetland areas.

The proposed repair at this site would be accomplished in five phases:

Phase I (Site Preparation): This phase consists of removing materials placed by the landowner and grading the footprint of the setback levee. Little vegetation exists within the proposed setback footprint; further, no vegetation would be removed outside of the setback footprint.

Phase II (Environmental Feature Installation): This phase consists of preparing (possible tilling and soil amending) and planting trees within the pre-setback levee footprint area, approximately 1,500 ft<sup>2</sup>. USACE biologists would determine the species and planting density prior to contract solicitation.

Phase III (Riverward Toe and Face Installation): This phase includes placing Class V riprap in the toe cavity and extending vertically forming the levee face. The levee face would be constructed at an approximate 2H:1V slope to an elevation approximately seven feet above the existing base elevation, accommodating a 48" thick blanket of Class V riprap armor protection. As the face progresses upward, it would be backfilled with compacted core material consisting of well graded sand and gravel.

Phase IV (Landward Face / Levee Core Installation): This phase includes building up the landward levee face with Class V riprap on a 2H:1V slope, backfilling with compacted core material. Core material would fill the void between the riverward and landward slopes until the two intersect which results in an approximate horizontal surface atop the newly constructed levee (crown).

Phase V (Finish Work): This phase includes placing a lift of Class I riprap along the levee crown followed by a lift of combined pit-run material and 1¼"-minus crushed gravel in order to tie in with the existing surface of the adjacent Raging and Snoqualmie River levees.

### **Mason Thorson Ells**

The proposed repair would consist of restoring the grading of 150 lf of the riverward toe-to-crown slope to pre-flood dimensions, replacing toe material to reestablish toe protection, incorporating two lifts of native riparian vegetation and replacing riverward riprap armor

Work would be conducted below the ordinary high water (OHW) line. In-water work would be avoided to the extent possible, but may be necessary based on river levels at the time of construction. USACE biologists determined that there would be no wetland impacts due to the repair. All work would be conducted within the pre-existing levee structure footprint using similar construction methods and materials as the original

construction in order to achieve a final repair with a profile and orientation the same as the pre-flood condition.

The proposed repair would be accomplished in five phases:

Phase I (Site Preparation): This phase consists of excavating sloughed material from the toe of the levee and re-grading the face of the levee to achieve an approximate 2H:1V slope. Excavation at the toe of the levee would be conducted in order to allow a buried toe that does not encroach beyond the current riverward extent. To do so, the toe would be excavated vertically and the face would be excavated horizontally in the landward direction in order to provide the appropriate size cavity. The re-grading would be conducted to a depth that would accommodate a minimum 48" blanket of riprap armor protection. Vegetation located within the repair area, approximately 20 medium sized deciduous trees and 6,000 ft<sup>2</sup> of shrub cover, would be removed during construction.

Phase II (Toe Replacement): The excavated toe portion from Phase I would be replaced with Class V riprap. Riprap material would be placed into the toe area with use of a hydraulic excavator in order to achieve the most inter-locked and compacted placement possible. Replacement would extend vertically to an elevation approximately 1 foot above the OHW line, based upon on-site observations, such that a horizontal surface is formed.

Phase III (Environmental Feature Installation): A minimum 6" lift of soil would be placed on the horizontal surface formed in Phase II. One row of willows or another designated species of riparian vegetation would be planted horizontally atop the lift of soil at a density of approximately two cuttings per foot in accordance with planting guidance provided by Corps biologists to idealize growing conditions to the extent possible. An approximate 6" lift of soil would be placed on top of the plantings, completing the environmental feature installation.

Phase IV (Armor Protection): A minimum 48"-thick blanket of Class V riprap material would be placed on top of the willow lift and would extend at least 3 feet vertically up the re-graded 2H:1V slope in order to prevent further erosion and scour. A horizontal surface would be formed at this elevation and another lift of willows and/or red osier dogwood (Phase III procedure) would be placed. Following emplacement of the second environmental feature, armoring would continue until flush with the crown of the levee.

Phase V (Finish Work): A combination of pit-run material and 1¼"-minus crushed gravel would be placed on the horizontal portion of exposed Class V riprap along the top of the levee crown in order to tie in with the existing driving surface.

### **Mason Thorson Extension**

The proposed repair would consist of grading 150 lf of the riverward toe-to-crown slope to pre-flood dimensions, replacing toe material to reestablish toe protection, incorporating two lifts of native riparian vegetation and replacing riverward riprap armor.

Work would be conducted below the OHW line. In-water work would be avoided to the extent possible, but may be necessary based on river levels at the time of construction. USACE biologists determined that there would be no wetland impacts due to the repair. All work would be conducted within the pre-existing levee structure footprint using similar construction methods and materials as the original construction in order to achieve a final repair with a profile and orientation the same as the pre-existing condition.

The proposed repair would be accomplished in five phases:

Phase I (Site Preparation): This phase consists of excavating sloughed material from the toe of the levee and re-grading the face of the levee to achieve an approximate 2H:1V slope. Excavation at the toe of the levee would be conducted in order to allow a buried toe that does not encroach beyond the current riverward extent. To do so, the toe would be excavated vertically and the face would be excavated horizontally in the landward direction in order to provide the appropriate size cavity. The repair footprint on the levee face is sparsely populated with young shrubs that would be removed as a result of construction. The re-grading would be conducted to a depth that would accommodate a minimum 48" blanket of riprap armor protection.

Phase II (Toe Replacement): The excavated toe portion from Phase I would be replaced with Class V riprap. Riprap material would be placed into the toe area with use of a hydraulic excavator in order to achieve the most inter-locked and compacted placement possible. Replacement would extend vertically to an elevation approximately 1 foot above the OHW line, based upon on-site observations, such that a horizontal surface is formed.

Phase III (Environmental Feature Installation): A minimum 6" lift of soil would be placed on the horizontal surface formed in Phase II. One lift of willows and/or red osier dogwood would be planted horizontally atop the lift of soil at a density of approximately two cuttings per foot in accordance with planting guidance provided by Corps biologists to idealize growing conditions to the extent possible. An approximate 6" lift of soil would be placed on top of the plantings, completing the environmental feature installation.

Phase IV (Armor Protection): A minimum 48" thick blanket of Class V riprap material would be placed above the willow lift and would extend at least 3 feet vertically up the re-graded 2H:1V slope in order to prevent further erosion and scour. A horizontal surface would be formed at this elevation and another vegetation lift (Phase III procedure) would be placed. Following emplacement of the second environmental feature, armoring would continue until flush with the crown of the levee.

Phase V (Finish Work): A combination of pit-run material and 1¼"-minus crushed gravel would be placed on the horizontal portion of exposed Class V riprap along the top of the levee crown in order to tie in with the existing driving surface.

## ANTICIPATED IMPACTS

The Corps' preliminary analysis of effects of the actions is summarized below. Due to the scheduled timing of the two projects for which work may extend below the then-existing water surface (within the period July 15 to October 31 for sites above Snoqualmie Falls [Mason Thorson Ells and Mason Thorson Extension]) and the design of the levees, no long-term impacts to the environment are anticipated from this federal action. Overall effects, both adverse and favorable, are anticipated to be insignificant.

### Water Quality

Warming of the river, primarily in summer, may occur due to loss of shade from removed vegetation at McElhoe-Pearson and Mason Thorson Ells. Vegetation removal at McElhoe-Pearson would consist of small trees that provide little shade so resulting temperature increases would likely be minor. A substantial number of trees would be removed from Mason Thorson Ells which would impact temperature in the immediate environment and the downstream environment where listed species reside. Two lifts of willows would be planted at this site to compensate for this loss of shade provided by the pre-construction vegetation; however it would take at least 3-10 years before these willows provide the same shade cover as the pre-construction vegetation. There would be little to no vegetation removal at Mason Thorson Extension and Raging River Bridge to Mouth. See "Cumulative Effects", below, concerning possible maintenance-related vegetation removal, to be conducted by the non-Federal sponsor, on elevated temperature.

Excavation below the Ordinary High Water Line would be necessary at Mason Thorson Ells and Mason Thorson Extension, as would individual placement of clean rock. Excavation within the water would be avoided to the extent possible, but may be necessary depending on river levels at the time of construction. Some suspension of solids and turbidity would be likely as a result of any in-water work, as well as from placement of soil for plantings, if it were to rain during construction, at the two sites (see Vegetation, below) which would impact turbidity at both the immediate environment and the downstream environment. Turbidity would be monitored downstream of the repair area and, should monitoring indicate that state water quality maximum standards for turbidity are exceeded, project work would be halted and then modified such that turbidity would not be exceeded. No in-water work would occur at Raging River Bridge to Mouth or McElhoe-Pearson, however minor impacts to turbidity may occur in the event of any rainfall.

Vegetation. Vegetation would need to be removed at each site for repair work, as indicated in the project descriptions above. Any trees or shrubs falling within the repair footprint would need to be removed, with the exception of site 2 at McElhoe-Pearson. In addition, there is vegetation along the adjacent undamaged sections of these levee systems which the non-Federal sponsor, King County, would remove for the levees to remain eligible for Federal assistance under the Corps PL 84-99 program (see Cumulative Effects, below).

Fish and Wildlife. There would be minor and temporary disturbances to fish and wildlife in the project area in the event that in-water construction at two of the sites becomes necessary, as described above, with possible impacts from noise, vibration, and turbidity. Vegetation removal, particularly at Mason Thorson Ells, also has the potential for adverse effects in terms of loss of shade and cooling, input of organic matter and nutrients, and input of terrestrial organisms that provide food for fish both at the immediate environment and the downstream environment. Riparian vegetation also provides shelter, nesting habitat, and movement corridors for small birds and mammals, so its removal would create impacts. All impacts related to removal of vegetation are likely to persist for at least 3-10 years until new vegetation regrows, assuming vegetation is allowed to grow a size that provides functional habitat (see King County maintenance under Cumulative Impacts). Although not expected at this time, if construction is required outside approved in-water construction windows, the Corps will evaluate potential impacts of these construction activities and incorporate the finding into appropriate documentation.

Threatened and Endangered Species. Puget Sound/Coastal bull trout, Puget Sound steelhead, and Puget Sound Chinook salmon, listed as threatened under the Endangered Species Act, are found in the project area, below Snoqualmie Falls (McElhoe-Pearson and Raging River Bridge to Mouth sites). However, actions at the sites above the falls (Mason Thorson Ells and Mason Thorson Extension) could impact the downstream environment where listed species occur. This area below Snoqualmie Falls is also part of designated critical habitat for Chinook and bull trout. There are no documented marbled murrelet or northern spotted owl nests in the area, nor do any of the project areas fall within the designated critical habitat. There is a possibility adult birds may traverse the area in route to nearby preferred habitat, however it is unlikely they will be found directly in the project area as the habitat is not suitable. Below is a table detailing the results of the preliminary effects analysis of the federal action on listed species.

Species/Critical Habitat	Listing Status	Effect (McElhoe-Pearson and Raging River Bridge to Mouth)	Effect (Mason Thorson Ells)	Effect (Mason Thorson Extension)
Puget Sound Bull Trout	Threatened	May effect, not likely to adversely affect	<b>May effect and likely to adversely affect</b>	May effect, not likely to adversely affect
Puget Sound Bull Trout Critical Habitat	n/a	May effect, not likely to adversely affect	<b>May effect and likely to adversely affect</b>	May effect, not likely to adversely affect
Puget Sound Chinook	Threatened	May effect, not likely to adversely affect	<b>May effect and likely to adversely affect</b>	May effect, not likely to adversely affect
Puget Sound Chinook Critical Habitat	n/a	May effect, not likely to adversely affect	<b>May effect and likely to adversely affect</b>	May effect, not likely to adversely affect
Puget Sound Steelhead	Threatened	May effect, not likely to adversely affect	<b>May effect and likely to adversely affect</b>	May effect, not likely to adversely affect
Marbled Murrelet	Threatened	May effect, not likely to adversely affect	May effect, not likely to adversely affect	May effect, not likely to adversely affect
Marbled Murrelet Critical Habitat	n/a	not present	not present	not present
Northern Spotted Owl	Threatened	May effect, not likely to adversely affect	May effect, not likely to adversely affect	May effect, not likely to adversely affect
Northern Spotted Owl Critical Habitat	n/a	not present	not present	not present

Although not expected at this time, if construction is required outside approved in-water construction windows, the Corps will evaluate potential impacts of these construction activities and incorporate the finding into appropriate documentation.

The non-federal vegetation removal would fall among cumulative effects under ESA and NEPA (see below), and may have an adverse effect on those species and on critical habitat (see Fish and Wildlife paragraph above). The incorporation of plantings of trees and shrubs into the design at Raging River Bridge to Mouth could offset potential negative effects of the vegetation loss due to the non-federal sponsor's action to listed species. As further mitigation at that site, the levee would be set back (landward) from its present location by about 10 feet, and existing riparian vegetation would be left in place.

The Corps anticipates that this action would have no effect on bald eagles (protected under the Bald and Golden Eagle Protection Act), as no eagle nests are documented near the project sites and the projects should not have any negative effects to eagle habitat or forage. No effect is anticipated on northern spotted owls or marbled murrelets.

Cultural Resources. To comply with Section 106 of the NHPA, a Corps archaeologist conducted a cultural resources reconnaissance survey of each proposed project's Area of Potential Effect (APE) with negative results. All of the individual project areas have been previously disturbed by levee construction and maintenance. Cultural resource studies conducted for the project included a search of the Washington Department of

Archaeology and Historic Preservation (DAHP) Electronic Historic Sites Inventory Database, a search of the King County Historic Preservation Office Database, and other background and archival research. No properties listed in the National Register of Historic Places (NRHP) and no sites or structures listed in the state inventory were found to have been previously recorded within or closely adjacent to the individual project APEs. The Corps sent letters to the Snoqualmie and Tulalip Tribes on 25 February 2008 soliciting any knowledge or concerns or religious significance for the individual APEs, but has not received any expression of concerns as of 30 April 2008. A Section 106 report is in progress and when finished will be sent to the Washington State Historic Preservation Officer (SHPO) requesting concurrence with the Corps' determination of no historic properties affected. The report will also be sent to the tribes for their review.

Recreation. Short-term access, but not long-term access, for swimming at Mason Thorson Ells may be affected by construction during levee repair. No other effects would be expected as a result of construction activities. The Twin Rivers Golf Course, behind the Raging River Bridge to Mouth Levee at Fall City, would be made less prone to flooding in the long term. Effects overall would be insignificant.

Air Quality and Climate. Use of heavy equipment as well as automobile and truck transportation would result in minor, short-term, insignificant increases in emissions of carbon dioxide and other exhaust components of diesel fuel and gasoline combustion. Effects toward climate change are considered insignificant, but not nonexistent.

Cumulative Effects. This reach of river has had previous levee repair projects, levee upgrades, and dike maintenance over the last twenty-five years. With the exception of vegetation removal at Mason Thorson Ells, the baseline (preflood) condition would not be expected to be significantly altered due to the proposed action. However, there is tree removal adjacent to and outside of the repair location that is being considered by the local sponsor, King County. Such non-federal action, should the sponsor pursue it, would be required to maintain the levee to current standards for continued eligibility for Federal assistance in the Corps of Engineers' Seattle District PL 84-99 program. This could have an adverse effect on fish and wildlife habitat and riparian values (see Fish and Wildlife paragraph above). These effects would be exacerbated if the County removes vegetation on a regular schedule to continue to maintain levees to PL 84-99 standards. The Corps does not anticipate that the incremental contribution of vegetation removal at the four sites would amount to a significant contribution to these cumulative vegetation removal effects. In addition, the presence of the levees themselves creates negative impacts to riparian and aquatic habitat, as well as to floodplain function, that have extended over several decades, and which this proposed work would perpetuate. Climate impacts are associated with emissions of CO<sub>2</sub> from internal combustion engines that would be used in construction of this project. This action adds to a worldwide increase in CO<sub>2</sub> that has contributed to climate change over several decades.

## COMPLIANCE WITH OTHER LAWS AND REGULATIONS

The Corps will coordinate the proposed action with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service concerning anticipated effects on threatened and endangered species and their critical habitat, pursuant to Sec. 7(a)(2) of the Endangered Species Act. If necessary based on anticipated adverse effects, formal consultation will be initiated with a biological assessment.

The Corps has reviewed the work for substantive compliance with the Clean Water Act. Work below the ordinary high water line is planned at the Raging River Bridge to Mouth, Mason-Thorson Ells and Mason-Thorson Extension sites, with in-water work possibly being necessary at the latter two. However, at each of these sites the project is exempt per Section 404(f)(1)(B) of the Clean Water Act, which allows for emergency reconstruction of recently damaged parts of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Therefore, no analysis is planned under Sec. 404(b) (1) of the CWA, and no certification is required under CWA Section 401.

A National Historic Preservation Act Section 106 compliance report will be prepared that includes all of the proposed levee repairs. The report will include the findings of the investigations for each repair site, recommendations for archaeological monitoring during construction, and a determination of effects to archaeological and historic properties. If archaeological monitoring is recommended at some repair locations, the report will include a monitoring plan and protocols to be followed. The Corps' determinations of effects to historic properties, the investigation report, and monitoring plan will be submitted to the Washington State Historic Preservation Officer (SHPO) for concurrence, and the appropriate tribes prior to construction.

A preliminary Coastal Zone consistency determination has been made pursuant to the Coastal Zone Management Act, and will be coordinated with the Washington Dept. of Ecology. The Corps has determined that the proposed rehabilitation activities comply with the policies, general conditions, and activities as specified in the King County Shoreline Master Program adopted in 1975. The proposed action is considered to be consistent to the maximum extent practicable with the State of Washington Shoreline Management Program and policies and standards of the King County Shoreline Master Program.

## EVALUATION

The Corps has made a preliminary determination that the environmental impacts of the proposal can be adequately evaluated under the National Environmental Policy Act through preparation of an environmental assessment (EA). Preparation of an EA addressing potential environmental impacts associated with the levee rehabilitation project is currently underway.

The Corps invites submission of comment on the environmental impact of the proposal. The Corps will consider all submissions received by the expiration date of this notice. The nature or scope of the proposal may be changed upon consideration of the

comments received. The Corps will initiate an Environmental Impact Statement (EIS), and afford all the appropriate public participation opportunities attendant to an EIS, if significant effects on the quality of the human environment are identified and cannot be mitigated.

Comments should reach this office, Attn: Jeff Laufle, Environmental Resources Section, not later than 30 days from the date of this notice to ensure consideration. Requests for additional information should be directed to Major Karl Jansen, Project Manager, at 206-764-3751.