



US Army Corps  
of Engineers®  
Seattle District

# Notice of Preparation & Clean Water Act Public Notice

Planning Branch  
P.O. Box 3755  
Seattle, WA 98124-3755  
ATTN: Rhonda Lucas (PM-PL-ER)

Public Notice Date: 7 August 2008  
Expiration Date: 22 August 2008  
Reference: PL-08-14  
Project Name: Long Road Levee

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Interested parties are hereby notified that the U.S. Army Corps of Engineers, Seattle District (Corps) plans to prepare, pursuant to the National Environmental Policy Act, an environmental assessment (EA) for a proposed levee repair at the Long Road Levee, along the Chehalis River, Lewis County, Washington.

## AUTHORITY

The proposed levee repair is 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.

## PROJECT LOCATION

Levee repairs are proposed for one site, the Long Road levee near the City of Centralia, Lewis County, Washington. The Long Road levee is 2,100 feet in length and is setback from the right bank of the Chehalis River, between approximately  $\frac{1}{10}$  and  $\frac{1}{4}$  of a mile. The upstream end of the levee ties into high ground at South Street with a spur that ties into the BNSF RR grade. The downstream end of the levee ties into the I-5 embankment. The damaged levee sections are located between river mile 69.0 and 68.0, Section 17, Township 14 North, and Range 2 West.

## BACKGROUND

The levee in existence today was originally completed in 2001. This Federal levee was constructed of earthen material to provide flood protection from periodic recurring flooding from China and Salzer Creeks for Lewis County Diking District 2. It protects approximately 100 acres of residential and commercial structures including a nursing home, utilities and infrastructure. The topwidth is 11-13 feet. The levee is predominantly composed of soft, silty, sandy clay and the entire levee has a good sod cover. The project was originally constructed with typical riverward and landward slopes of 2H:1V to 2.5H:1V. It was designed to provide protection from the 2% flood (45- to 50-year level of protection).

## NEED AND PURPOSE

On 3 to 4 December 2007, rainfall and snowmelt resulted in a 150 to 200 year peak flooding event on the Chehalis River. High flows first inundated the area from the east. As the flow moved west it was restricted downstream and backed up flow in Salzer Creek and caused the area to flood from the south and west due to the overwhelming amount of water. During this event, the Long Road Levee was overtopped and sustained substantial damage.

This levee is integral to protecting life, safety, and property. The Corps has determined that if the Long Road levee is not repaired before the next flood event, damaged segments of the levee would present an imminent threat of loss of life, as well as private and/or public property.

The flood season in the Chehalis River basin typically begins November 1 of each year. It is important to ensure that the levee meets its design standards 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 of portions of the Long Road levee that were damaged in the December 2007 flood event.

## DESCRIPTION OF DAMAGE

During the December 2007 flood event, the levee sustained damage from overtopping flows which resulted 1,500 linear feet of headcutting damage along the east side of the levee, station 0+00 to 15+00. The high flow overtopped the levee first from the south and then from the west during the peak event. Additional slumping occurred as the river rapidly receded from the peak water surface elevation. In its current condition the levee provides protection from approximately a maximum 5-year flood.

## PROPOSED ACTION

Multiple alternatives are being considered, including the No-Action Alternative, the Non-Structural Alternative, and the Repair to Pre-Flood Condition 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. This alternative has high potential for flood damage to the protected structures and lands behind the levee in the Long Road, Centralia vicinity.

The Non-Structural Alternative would relocate all existing residences, commercial and retail structures, utilities, and public facilities. Relocation of infrastructure prior to the coming flood season is impractical, even if willing sellers were identified. Because 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 to Pre-Flood Condition Alternative would be to cut the existing Long Road levee down to embankment level and reconstruct it in order to restore its pre-flood level of protection. The levee slopes would be re-established and the overall footprint would expand landward to accommodate 2.5H:1V to 3H:1V earthen slopes (riverward and landward), with a 12-foot crown. The levee prism would consist of a laid-back slope and resulting increased footprint, with the existing levee cut down to just above native ground surface elevation and then reconstructed, extending the repaired toe of the levee outward on the landward (western) side and increasing the top width of the levee to facilitate a wider turning radius at the bend of the levee in the southeastern corner. This proposal represents an expanded footprint from the pre-flood condition and is non-uniform along the length of the levee. The point of intersection of the riverward face and ground surface elevation would remain fixed along the length of the levee. The point of intersection of the landward face and ground surface elevation would encroach landward, varying in a range of 0 to 19 feet. This footprint extension would directly impact wetlands located at the site. An updated, sloped-back design, taking into account information from recent flood events and new technologies, would reduce the effects of overtopping damage, including headcutting and scour, during future high water events. The laid-back slope and resulting increased footprint would adjust for observed failures of the pre-flood design due to recent infrastructure development in the area. This Repair to Pre-Flood Condition alternative would restore the level of protection of the Long Road levee to the original level of service provided by the levee after initial construction.

The repaired slopes would be hydroseeded with native grass seed mix to prevent erosion after construction. Similar construction methods and materials as the original construction would be used in order to achieve a final repair. In-water work for this alternative would be completely avoided since the levee proposed for repair is setback approximately 600 feet from the nearest river bank. Corps biologists anticipate approximately 0.27 acres (12,000 sq feet) of wetlands would be filled as a result of this alternative.

An updated design, taking into account information from recent flood events and new technologies, will reduce the effects of overtopping damage, including headcutting and scour, during future high water events. This preferred alternative will return Long Road levee to pre-flood level of protection.

### ANTICIPATED IMPACTS

The Corps' preliminary analyses of effects of the Repair to Pre-Flood Condition Alternative are summarized below. Both long and short term effects of the overall 2008 Long Road levee rehabilitation project are expected to be less than significant.

#### Water Quality

Repair work on this levee may cause short-term impacts to off-site waters if transportation of sediments occurs during rainfall events. Fill placement and soil disruption from construction activities may temporarily increase turbidity in the Chehalis

River if sediment runoff enters into the main river channel through culverts running under I-5. Sediment runoff from the construction area would be controlled to minimize water quality impacts. Materials for construction would be obtained off-site from an established borrow pit and rock quarry. No contaminants are known or suspected to be present in the construction materials. No long-term impacts to water quality are anticipated under the proposed project alternative. No in-water work is anticipated.

#### Fish and Wildlife

When completed, this repair would not be intended or expected to generate appreciable change in habitat conditions as compared with conditions pre-existing the flood event. Repair construction work on this levee may cause temporary impacts to wildlife during construction. Nesting birds or other animals utilizing nearby vegetated habitat directly east and outside of the project area may be minimally affected by noise or dust. Excavation, transportation, and placement of embankment materials would require the use of heavy construction equipment whose presence and/or dust may displace some species at both the off-site borrow pit and construction site. Impacts due to noise are not expected to be significant due to the proximity of I-5, the urban development in the area, and the other existing noise conditions in the project area. Construction work would be conducted with efforts to minimize effects to the local environment. Because no perennial drainages or fish habitat are present in the immediate project area vicinity, salmonid species or their habitat would unlikely be affected by the work. No long-term impacts to fish or wildlife are anticipated under the proposed project alternative.

#### Threatened and Endangered Species

Bull trout, which are listed as threatened, may occur in the Chehalis River 700 feet northeast of the project; however no listed species are likely to occur within the construction area boundary. Designated critical habitat for bull trout does not extend upstream as far as the Chehalis-Centralia area.

#### Wetlands and Woody Vegetation

The Repair to Pre-Flood Condition Alternative would result in the loss of or impacts to wetlands in construction areas because wetlands are found to be present at the landward levee toe, comprising a portion of the footprint extension made necessary to accommodate the updated, sloped-back design. Potentially impacted wetlands in this area consist of open fields interspersed with hydric soils, wetland vegetation and hydrology, which are presently characterized as low-grade, Category IV wetlands. Functions associated with these wetlands include groundwater recharge and discharge, floodwater storage, and wildlife habitat. Any fill placement, ground disturbance or construction activities within the wetland boundary could constitute a considerable impact and would require evaluation consistent with Section 404 of the Federal Clean Water Act. Based on current design drawings, it is estimated that approximately 0.27 acres (12,000 square feet) of wetland lie within the repair footprint and would be impacted by the Repair to Pre-Flood Condition Alternative repairs.

Impacts to riparian vegetation or any wetlands located east or south of the levee are not anticipated, because these habitats fall outside the alternative footprint; there is no woody riparian vegetation present within the proposed construction area.

### Cultural Resources

As part of the original Long Road Section 205 project, the area of potential effects (APE) for the proposed levee repairs was subjected to a systematic archaeological survey with subsurface testing by a Corps staff archaeologist on 2 May 1996. The archaeologist located no historic properties eligible for listing in the National Register of Historic Places (NRHP) and recommended no further work. These findings were provided with a determination of No Historic Properties Affected request for concurrence to the State Archaeologist; concurrence was granted on 10 July 1996 (Department of Archaeology and Historic Preservation Log Number 070996-08). This information has been incorporated into a historic properties assessment report addressing the proposed 2008 levee restoration projects in the Chehalis/Centralia area and coordinated with the State Historic Preservation Officer (SHPO) and affected tribes. On 23 July 2008, the Corps received concurrence from the Washington State Historic Preservation Officer with a finding of “No Historic Properties Affected” conditioned upon implementation of best management practices approved by SHPO.

### Recreation

This section of levee is not considered to be a formal recreational area; however, local walkers may occasionally use the levee. Their long term access will not be affected by the project.

### Air Quality and Climate

Use of heavy equipment during construction 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 on climate change are considered negligible and insignificant. Emissions generated by the construction activity would be expected to fall below the *de minimis* threshold.

### Cumulative Effects

The Repair to Pre-Flood Condition Alternative would comprise the first Corps repair to this levee. The baseline condition, a levee adjacent to open fields and wetland habitat, would not be significantly altered due to the proposed alternative. All construction actions would be accomplished away from perennial water, so deleterious effects to fish species would not be anticipated. Any effects to wildlife would be temporary and primarily occur during construction. Approximately 0.27 acres of Category IV wetlands are present within the Repair to Pre-Flood Condition Alternative construction footprint. Impacts to or loss of wetlands adjacent to levees could be considered a substantial and cumulative impact and would require mitigation.

To provide compensatory mitigation for the adverse impacts to wetlands resulting from the Repair to Pre-Flood Condition Alternative, wetland mitigation banking credits would be procured from the North Fork Newaukum Mitigation Bank in Lewis County at a ratio of one universal credit for each acre of anticipated wetland impact (0.27 acres). Additionally, newly constructed levee slopes would be reseeded with a native plant seed mix appropriate for wetland vegetation in the region to compensate for any short-term loss of vegetation during construction.

## EVALUATION –CORPS

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 has reviewed the work for substantive compliance with the Clean Water Act (CWA). The proposed Repair to Pre-Flood Condition Alternative work at Long Road levee would involve a discharge of fill material into wetlands that does not precisely meet the parameters of the CWA exemption for reconstruction of levee structures. The Repair to Pre-Flood Condition Alternative would be evaluated for substantive compliance with guidelines promulgated by the Environmental Protection Agency under authority of Section 404(b)(1) of the CWA. The Corps anticipates that the procurement of mitigation bank universal credits at a 1:1 ratio would provide full and effective compensatory mitigation for the wetlands impacts of the Repair to Pre-Flood Condition Alternative. In accordance with Section 401 of the CWA, the Corps has requested a certification that the project provides reasonable assurance of compliance with the Water Quality Standards of Washington State. The Washington Department of Ecology is reviewing this work for compliance with the applicable water quality standards pursuant to Section 401 of the CWA.

In accordance with Section 7(a)(2) of the Endangered Species Act, the Corps has made a determination that there will be no effect to listed species or designated critical habitat.

The Corps has reviewed the latest published version of the National Register of Historic Places (NRHP), lists of properties deemed eligible, and other sources of information. The following is the current state of knowledge regarding the presence or absence of historic properties and the effects of the undertaking upon the properties: No Historic Properties Affected.

In preparation of the environmental documentation for this project, coordination has been conducted or is ongoing with the following public agencies: Lewis County, the Chehalis Tribe, the Cowlitz Tribe, the Washington State Historic Preservation Officer (SHPO), the Washington State Department of Transportation (WSDOT), and the Washington Department of Ecology (Ecology).

The decision whether to conduct the project will be based on an evaluation of the probable impact on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered; among these are: conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership and, in general, the needs and welfare of the people.

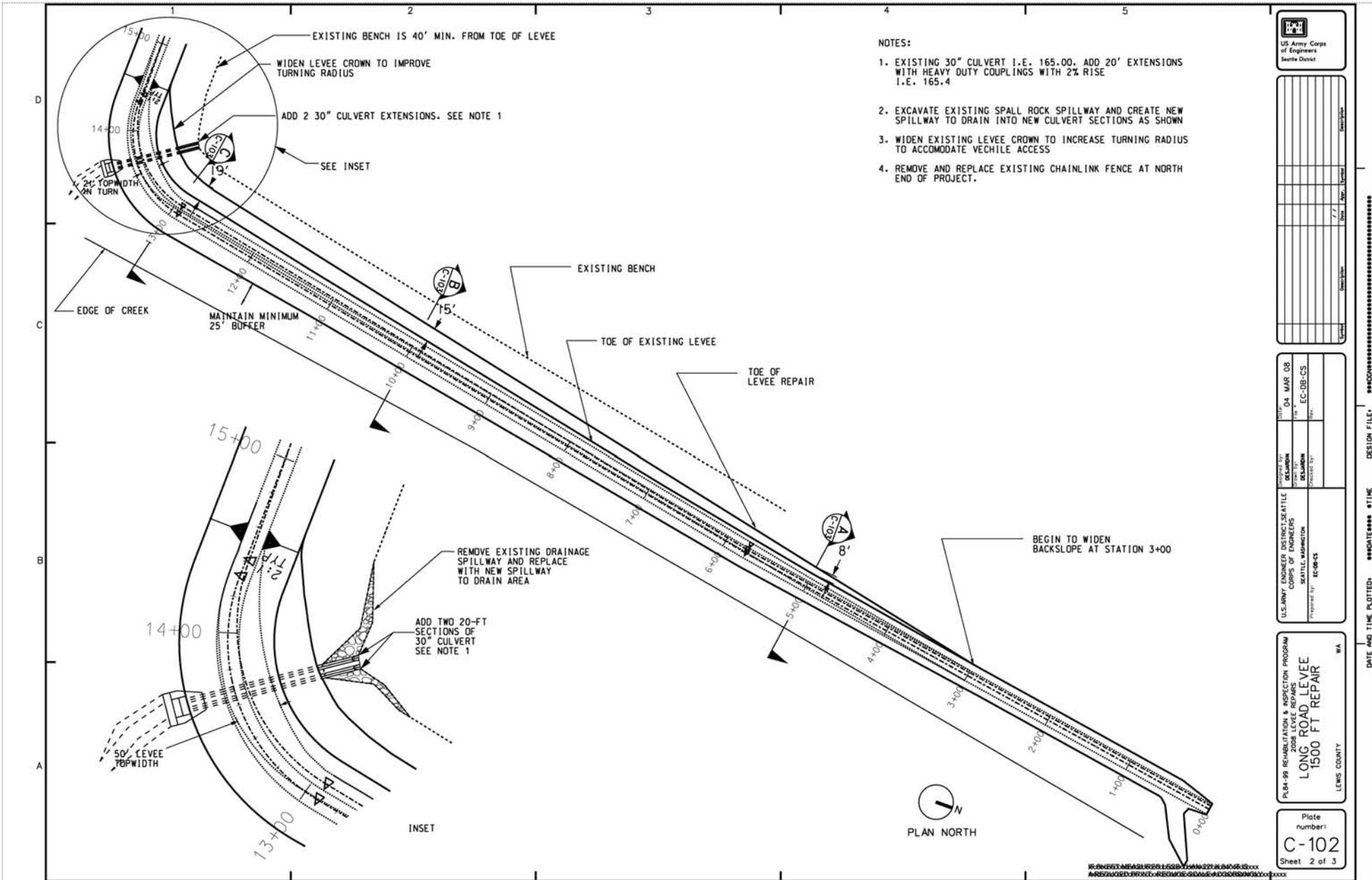
Any person who has an interest that may be affected by this disposal of fill or dredged material may request a public hearing. The request must be submitted in writing to the District Engineer within the comment period of this notice, and must clearly set forth the following: the interest that may be affected, the manner in which the interest may be affected by this activity, and the particular reason for holding a public hearing regarding this activity.

The Corps invites submission of comment on the environmental impact of the proposal. Comments will also be considered in determining whether it would be in the best public interest to proceed with the proposed project. 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 appropriate public participation opportunities attendant to an EIS, if significant effects on the quality of the human environment are identified and cannot be mitigated.

Submit comments to this office, Attn: Environmental Resources Section no later than the closing date of this public notice to ensure consideration. Requests for information concerning the project should be directed to Ms. Rhonda Lucas, (206) 764-3512, rhonda.s.lucas@usace.army.mil

Deborah Johnston  
Chief, Environmental Resources Section





- NOTES:
1. EXISTING 30" CULVERT I.E. 165.00. ADD 20' EXTENSIONS WITH HEAVY DUTY COUPLINGS WITH 2% RISE I.E. 165.4
  2. EXCAVATE EXISTING SPALL ROCK SPILLWAY AND CREATE NEW SPILLWAY TO DRAIN INTO NEW CULVERT SECTIONS AS SHOWN
  3. WIDEN EXISTING LEVEE CROWN TO INCREASE TURNING RADIUS TO ACCOMMODATE VEHICLE ACCESS
  4. REMOVE AND REPLACE EXISTING CHAINLINK FENCE AT NORTH END OF PROJECT.

 US Army Corps of Engineers Seattle District	
Project No. 04 MAR 08 EC-08-CS	Date Plotted: 7/7 Scale: 1"=40'
Prepared by: EC-08-CS Checked by:	Design File:
U.S. ARMY ENGINEER DISTRICT, SEATTLE CORPS OF ENGINEERS SEATTLE, WASHINGTON	EC-08-CS
PL-84-99 REHABILITATION & INSPECTION PROGRAM 2008 LEVEE REPAIRS <b>LONG ROAD LEVEE          1500 FT REPAIR</b> LEWIS COUNTY WA	Plate number: <b>C-102</b> Sheet 2 of 3

