



US Army Corps
of Engineers®
Seattle District

Notice of Preparation / Clean Water Act Public Notice

Planning and Project Management Division
Environmental and Cultural Resource Branch
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Seattle, WA 98124-3755
ATTN: Bobbi Jo McClain (PM-ER)

Public Notice Date: 27 February 2012
Expiration Date: 28 March 2012
Reference: PM-ER-12-1

Name: Yakima Authorized Levee Rehabilitation Project

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 (NEPA) Section 102(C), an environmental assessment (EA) for proposed and previously completed levee repairs on the Yakima River near the City of Yakima, Yakima County, Washington. Repairs were conducted, and are intended, to address damage to flood control works caused by flooding. Emergency work was completed in May 2011, and ongoing additional emergency work is scheduled for completion in February 2012; further repair is expected to be conducted in 2012.

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 level of protection exhibited by the flood control work prior to the damaging event. The local sponsor for this project is Yakima County.

NEED

Flooding occurred on the Yakima River in January 2009 with a 40-year flood event occurring at the Parker gage. Flooding again occurred in May 2011 with the river rising 2 ft above flood stage and further damaging the levee. In both events, intense rainfall and rapid snowmelt from a high velocity jet stream, a common weather pattern experienced in this region, resulted in the river exceeding flood stage. High velocity flows damaged the right and left bank levees of the Yakima Authorized Project in six non-contiguous locations. Damage included toe scour, bank sloughing, and piping. Without damage the levees provide 100-year level of protection, however in the current damaged condition, the levee is estimated to offer a 20-year level of protection.

PURPOSE

The purpose of the project is to repair and restore the damaged levees to the 100-year level of flood protection as found prior to the January 2009 flood event in order to protect lives and property from subsequent flooding.

PROPOSED ACTION

Emergency repairs were completed during flood fight activities on 16-17 May 2011. During the flood event the Corps determined that immediate repairs were required to protect the integrity of the levee at two locations. At the NC Machinery site, 1383 tons of Class V riprap were placed over approximately 650 feet of the riverward bank and toe. At Buchanan Lake, 473 tons of spalls were used to build two seepage berms on the landward side of the levee, separated by approximately 90 feet. The upstream (north) segment is 275 feet long by 30 feet wide and the downstream (south) segment is 293 feet long with a varying width averaging approximately 30 feet. Work was also completed to stabilize the riverward face of the levee. Approximately 310 feet of riverward bank was stabilized with Class V riprap. Inspections following the flood have shown that the work done during the floods has restored the flood protection levels at these sites and no further work is required.

Due to the severity of damage from the 2011 flood event at the Sportsman's Park site, the determination was made that emergency repair was necessary at this site prior to the spring flood season. The repair includes a 3,870 linear-foot setback and the excavation of embankment fill material for the setback at a proposed borrow site. Construction began on 5 January 2012 and is anticipated to be completed by 15 February 2012. The setback levee is approximately 10 feet high with a crown width of 16 ft and a bottom width up to 95 ft. The riverward face is armored with Class 5 riprap, and a buried toe was established to the predicted scour depth. The upstream end of the setback was tied into the existing stable levee without in-water work. The setback orientation allows restoration of approximately 20 acres of floodplain area. The downstream end of the setback levee ties into the downstream non-Federal levee. An existing cross dike (the old Highway 24 road bed) was modified (width decreased, height increased, and face armored) and incorporated into the federal project. Partial removal of the downstream end of the original Federal levee (350 ft), as well as removal of the outboard end of the cross dike, were completed to allow the egress of any flood waters from the setback area. The setback construction required no in-water work in the Yakima River. A setback alignment was selected because an in-place repair would have required in-water work, which would have generated an adverse effect on listed species and their critical habitat outside of the designated work window. Only work at an alignment removed from the river's edge would have satisfied the need to effect repairs prior to the 2012 spring flood season.

A borrow site was excavated to provide material for the Sportsman's Park setback levee. The borrow site included two non-Federal levees (one riverward levee that is non-functioning and a second functioning levee known as Marsh Road Levee) and its adjacent field. The levees within the borrow site were removed to the adjacent ground level or one of three terracing levels: 2 feet, 4 feet and 6 feet above the bank full elevation.

Multiple alternatives for prospective work are being considered as follows.

- No Action. No levee repairs would be done.
- Repair In Kind. This alternative repairs the levee by returning it to the pre-flood condition with minimal or no change to the character, scope, or size of the levee. This alternative maintains the status quo of the river and levee at the repair location as existed prior to the flood damage.
- Setback Levee. This alternative removes all or part of the existing levee and builds a new levee landward of the existing location. This alternative maintains the level of flood protection but increases floodplain access for the river.

- Nonstructural. This alternative would include no repairs to the damaged levee and would instead relocate all existing structures, utilities and infrastructure protected by the levee beyond the flood inundation zone.

Final selection of the preferred alternative and finalization of the design for the remaining repair sites would occur during the NEPA process and before construction. At this time, the proposed action at the three remaining damage sites is a combination of the setback and repair in kind alternatives as detailed below by site.

Preferred Alternatives by site:

- Boise Cascade: The damage at this site is to a revetment riverward of the Federal levee. Analysis has shown that the armoring to the levee is inadequate if the revetment fails. The proposed repair is to reinforce the armor along 1,100 ft of the Federal levee to guard against potential future damage. The levee in this location is set back from the river at a varying distance, from approximately 60 feet to 450 feet along the repair alignment. This repair will include placement of a 2 foot deep blanket of class 3 riprap along the riverward face and construction of a 6 foot deep buried toe.
- Railroad Bridge: Repair in kind by replacing the weighted toe and riprap armor on 200 feet of the levee face to restore flood protection. The riverward toe and face would be set back by 8 to 10 feet from the original location to minimize in-water work. The face would be re-sloped at a 2H:1V grade, blanketed with quarry spalls and Class IV riprap, and tied into the existing structure up and downstream of the repair site. The riverward face would be anchored by a 5-foot by 10-foot launchable toe. Environmental features would include a single willow lift planted along the riverward face at ordinary high water. Repaving of the access road/trail would be necessary after construction.
- Kiwanis Playground: Repair in kind by replacing the weighted toe and riprap armor on 275 feet of the revetment to return flood protection. The 5-foot by 8-foot launchable toe of the levee would begin at the current vertical embankment line, landward of the original location to minimize in-water work. The riverward face would be graded to a 2H:1V slope, and covered with a blanket of quarry spalls and Class IV riprap. Environmental features would include a single willow lift planted along the riverward face at ordinary high water. Repaving of the access road/trail would be necessary after construction.

ANTICIPATED AND COMPLETED IMPACTS

Impacts from the completed flood fights and emergency repairs, and impacts anticipated from the proposed repairs are discussed below.

Wetlands.

- Boise Cascade: There are no wetland impacts anticipated.
- Railroad Bridge: There are no wetland impacts anticipated.
- Kiwanis Playground: There are no wetland impacts anticipated.
- Sportsman's Park: The construction of the final setback alignment did not impact wetlands. However during design, an impact was anticipated to 0.013 acres of wetlands and to 1.1 acres of an isolated pond such that mitigation measures were coordinated and designed. At the time of construction, the footprint was able to be shifted slightly to avoid wetland impacts. The construction did impact the isolated pond. While the pond

did not meet the definition of a wetland it did perform water quality functions. To offset these impacts, 1.1 acres of upland have been excavated on the west edge of Blue Slough and native plantings are planned. The establishment of dense herbaceous vegetation and shrubs will replace lost water quality functions by providing shade, filtration, and nutrient input to the system.

- Wetlands are also present adjacent to the borrow site used for this repair. No impacts to these wetlands occurred from the work at this site.
- Buchanan Lake: The landward side of the levee contains emergent and scrub-shrub wetlands that have been preliminarily determined to be jurisdictional under Sec. 404 of the Clean Water Act. Delineations have shown that no impacts to this apparent wetland from the flood fight action occurred.
- NC Machinery: There were no wetland impacts from this flood fight action.

Biological Resources. The following species, listed as threatened under the Endangered Species Act, and their associated critical habitat are located in the project area:

- Middle Columbia River summer steelhead
- Columbia Basin bull trout

The Yakima River provides spawning and rearing habitat for coho salmon, spring Chinook, summer steelhead, bull trout, rainbow trout, cutthroat trout, and several other species. The Middle Columbia River summer steelhead population is currently depressed in the project reach. Columbia Basin bull trout would be expected to be in the Yakima River near the project area during the winter only, as summer water temperatures are too high. Other listed species in Yakima County are northern spotted owl, marbled murrelet, showy stickseed, grizzly bear, and gray wolf. Several candidate species are also found in Yakima County including yellow-billed cuckoo, greater sage grouse, mardon skipper, and North American wolverine. However, each of these species is not expected to be present in the project area due to specialized habitat requirements, lack of tolerance for human activity, or both.

To minimize impacts to salmonids, the in-water work window for this area is 1 June – 15 September. Proposed inwater repairs at the remaining repair sites would be done during this work window. There was no inwater work at the Sportsman's Park site. Inwater work occurred at the Buchanan Lake and NC Machinery sites as a part of the flood fight efforts in May 2011, outside the work window. Both sites had ongoing erosion at the time of the repair due to high velocity flows along the banks. Under these circumstances, it is expected that the locations would not have provided refuge habitat to fish during the floods and that any turbidity increase was insignificant in comparison to background levels. Impacts from the emergency repairs during high-velocity flow conditions would have been minimal.

Although bald eagle was delisted on June 28, 2007, they continue to be protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. These acts require some measures to continue to prevent bald eagle "take" resulting from human activities. Impacts to bald and golden eagles will be considered as a part of the NEPA process.

Repair construction work may result in short-term impacts to fish and wildlife. If present, adult and juvenile salmonids may be or may have been temporarily displaced from the project areas. Construction noise may temporarily disturb any wildlife in the project area. No long-term negative effects to fish and wildlife are expected.

Water Quality. There may be a temporary increase in turbidity due to construction and fill placement into the river. Best management practices such as the use of clean rock and individual placement of rock minimize such impacts. Further practices such as the installation of compost socks (as used at Sportsman's Park and the borrow site) prevent runoff from construction sites. No turbidity increases during the flood fights or at Sportsman's Park were noted. At a minimum, visual turbidity monitoring occurs during all inwater construction. If turbidity plumes are noted, measurements are taken to assess the level of impact. If turbidity exceeds state standards, construction would be halted and construction methods altered to avoid further exceedances. Impacts to water temperature from loss of shade-producing vegetation are expected to be minimal. No long-term impacts to water quality are expected.

Cultural Resources. In October 2011, a Corps archaeologist conducted a cultural resources survey of the project area to determine whether there is a potential for the proposed repairs to cause effects to historic properties. A National Historic Preservation Act Section 106 compliance report was finalized in December 2011 for all proposed levee repairs with a determination of No Historic Properties Affected, pending archaeological monitoring during construction. An inadvertent discovery clause will apply when an archaeological monitor is not present. A concurrence letter from the State Historic Preservation Officer was received on December 7, 2011.

Air Quality. Construction vehicles and heavy equipment did and would temporarily and locally generate gasoline and diesel exhaust fumes, carbon dioxide (CO₂), carbon monoxide, and dust on roadways. These emissions would be exempt from the conformity requirements under the Clean Air Act, because the project constitutes a routine facility repair activity generating an increase in emissions that is clearly *de minimis*, under 40 CFR 93.153(c)(2)(iv). Unquantifiable but insignificant exacerbation of effects of CO₂ emissions on global climate change is also anticipated.

Noise. Temporary local increases in noise have or would occur as a result of construction activities. Private residences are very close to some of the work sites. Work for most sites would be done during daylight hours to minimize the adverse effects of noise on businesses and residents. Work at the borrow site and at Sportsman's Park was conducted 24 hours a day for the first two weeks of construction in order to expedite construction before the onset of flood season.

Recreation. The top of the levee at all sites is a paved trail that is used by walkers, runners, and cyclists. For safety, recreational access at the repair locations was or would be disrupted during construction. Upcoming repairs include the peak summer months for recreation. Access to the Kiwanis playground would also be affected. If it is safe to do so, access to these areas may be rerouted so that the areas would not be totally unavailable to the public. All trails and access points have or would reopen after construction of the repairs was completed.

Traffic. Construction-related traffic may cause disruption of local traffic during construction. Efforts would be made to minimize disturbances to local traffic patterns through signage, notifications, and proper traffic controls.

Cumulative Effects. Construction of the Yakima Authorized Levee was authorized by the Act of June 28, 1938 (75th75th Cong., 3d Sess., Ch. 795). The project created or built upon existing earthen levees to protect the city of Yakima, including 25,000 ft of levee on the right bank and 10,700 ft of levee on the left bank. Construction of the authorized project was initiated in July 1947 and completed in March 1948, however floods occurred soon after and many repairs were

required in the following year and a half. Between 1969 and 1977 the Corps completed 22 repairs to the levee. The Corps also completed repairs in 1978 (670 ft on the left bank), in 1982 (500 feet of the left bank), in 1996 (450 ft on the right bank and 950 feet of the left bank), and in 1997 (1100 feet of the left bank and 200 feet of the right bank). The Corps has also completed work during flood fight efforts, including extensive work in 1996 on both banks.

The County is responsible for annual operation and maintenance of the Yakima Authorized Levees. Maintenance includes mowing, vegetation removal, small repairs, removal of burrowing animals, etc. The County in partnership with other federal and state agencies has long-range plans to complete multiple setbacks of the levees along the river. The SR-24 bridge was replaced by the state Department of Transportation in 2006 with a wider span that allows such setback efforts. The setback of the levee at Sportsman's Park is compatible with this long range planning effort.

Cumulative effects will be assessed during the development of the EA to determine whether the incremental contribution of the Yakima Authorized levee repair projects to the overall past, present, and future environmental impacts would be significant.

COMPLIANCE WITH OTHER LAWS AND REGULATIONS

In accordance with Section 7(a)(2) of the Endangered Species Act, the Corps will draft a Biological Evaluation (BE) and will seek consultation with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS), regarding the impact of the project on listed species and designated critical habitat.

The Corps worked closely with NMFS and USFWS in coordination of the Sportsman's Park setback. A Biological Evaluation (BE) of the impacts of the Sportsman's Park setback was sent on 18 November 2011. The addition of the borrow site to the project occurred after this date. Preliminary information on the borrow site was sent to the Services via email on 22 November 2011 and as an addendum to the BE on 9 December 2011. A concurrence letter from the USFWS for the setback work at Sportsman's Park was received on 30 November 2011. A concurrence letter from NMFS for both the setback and the borrow site work was signed on 6 December 2011. The removal of the downstream 200 ft of the abandoned levee at Sportsman's Park was added to the design after the consultation. Information about this design change was forwarded to both USFWS and NMFS on 19 December 2011. NMFS has indicated that the removal of a 200-ft section of the levee does not alter the concurrence previously issued (Sean Gross email of 19 December 2011).

The Corps expects to complete a supplemental BE that will include the effects of the other five repair sites on listed species. This report will be submitted to the NMFS and USFWS for consultation. In light of the additional 20 acres of floodplain opened as a result of the Sportsman's Park repair and the steps taken to minimize inwater impacts, the Corps has made a preliminary determination that the project may affect but is not likely to adversely affect Columbia Basin bull trout and may affect but is not likely to adversely affect Mid-Columbia River steelhead. Similarly, the Corps has also made a preliminary determination that the project is not likely to adversely affect designated critical habitat for both species.

An evaluation will be made as to any possible adverse effect to Essential Fish Habitat under the Magnuson-Stevens Fishery Conservation and Management Act.

Elements of the project involve discharges of fill material into waters of the United States that will be evaluated for substantive compliance with guidelines promulgated by the Environmental

Protection Agency under authority of Section 404(b)(1) of the Clean Water Act (CWA). The May 2011 repairs at the NC Machinery site involved discharge of fill material into the River, and the 2012 repairs at the Railroad Bridge and Kiwanis Playground sites are also expected to include in-water discharges. The Sportsman Park site repairs in January-February 2012 involved discharges into other waters of the U.S. The Corps will seek Certification under CWA Section 401 from the Washington Department of Ecology that the project provides a reasonable assurance of compliance with State water quality standards.

Yakima County does not fall within the Washington State Coastal Zone, and the project is not reasonably anticipated to generate effects on the uses and resources of the Coastal Zone, so no consistency determination is required.

The project is not anticipated to cause violations of any standards under the Clean Air Act.

EVALUATION

The Corps has made a preliminary determination that the environmental impacts of the proposal can be adequately evaluated under the NEPA through preparation of an EA. Preparation of an EA addressing potential environmental impacts associated with the proposed action is currently underway.

In preparation of the environmental documentation for this project, coordination has been conducted or is ongoing with the following public agencies:

- (1) U.S. Fish and Wildlife Service
- (2) National Marine Fisheries Service;
- (3) Environmental Protection Agency;
- (4) Washington Department of Fish and Wildlife;
- (5) Washington Department of Ecology;
- (6) Yakama Nation;
- (7) State Historic Preservation Office.

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.

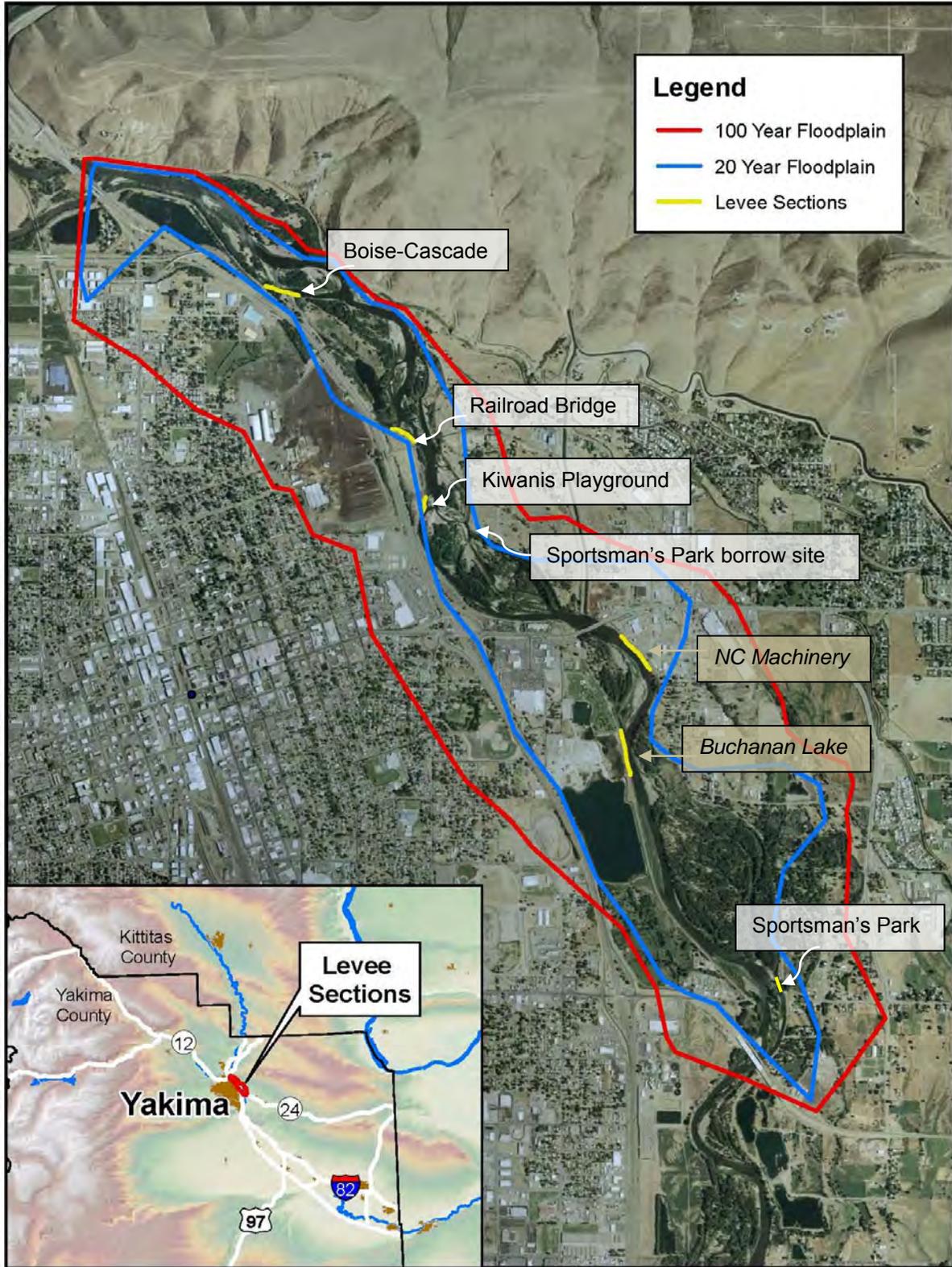
The decision whether to conduct the project will be based on an evaluation of the probable impact on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, 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.

The Corps invites submission of comments on the environmental impact of the proposed project. 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 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 (address at top), not later than 20 days from the date of this notice in order to ensure consideration. Requests for additional information should be directed to Brian Nelson, Project Manager, at 206-764-3786, or the Environmental Coordinator, Bobbi Jo McClain, at 206-764-6968, or bobbi.j.mcclain@usace.army.mil.

PROJECT LOCATION MAPS AND DESIGNS



Location map for the Boise Cascade site.



Photos of damage at the Boise-Cascade site.

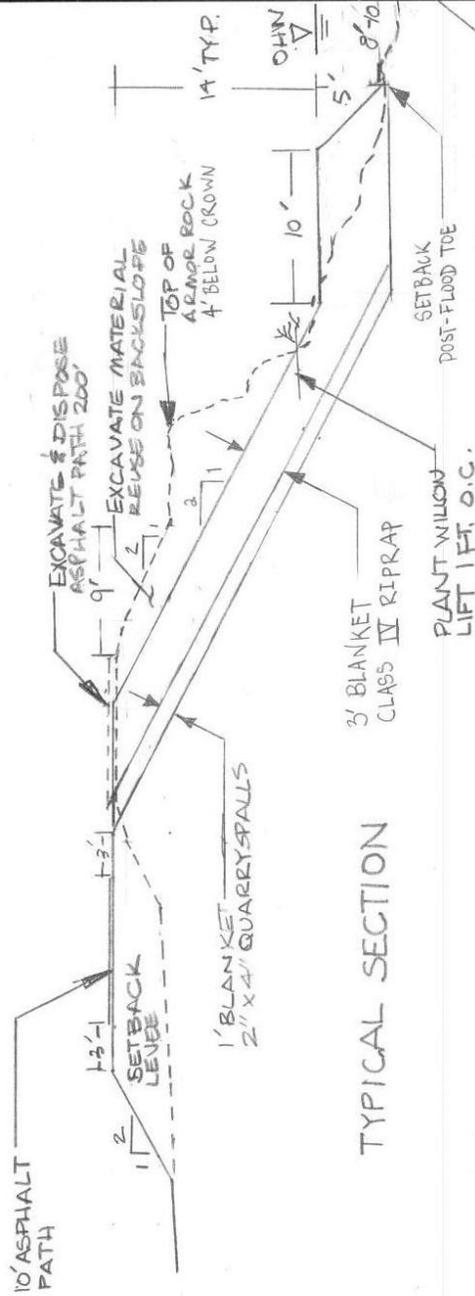


Design for the Railroad Bridge site.

ENGINEERING DESIGN SHEET

OFFICE SYMBOL: CEN WS-EN-GB-SS

PROJECT 2009 YAKIMA AUTHORIZE	COMPUTED BY DESJARDIN	DATE: 07 MAR 2009
LEVEL REPAIRS	CHECKED BY	SHEET: 2 OF: 6
SUBJECT RAILROAD BRIDGE		PART: 3



TYPICAL SECTION

- NOTES:
1. LENGTH OF INWATER WORK = 180 FT. TIE-IN SETBACK LEVEE UPSTREAM & DOWNSTREAM LENGTH TO TIE-IN = APPROXIMATELY 200'
 2. PLACE LAUNCHABLE TOE AS SHOWN. REUSE EXCAVATED MATERIAL FROM RIVERWARD FACE TO CREATE SETBACK LEVEE. COMPACT PER EM110-2-1913 TABLE 7.1 CATEGORY II
 3. INCORPORATE WILLOW LIFT.

Location map and photo of damage at the Railroad Bridge site.

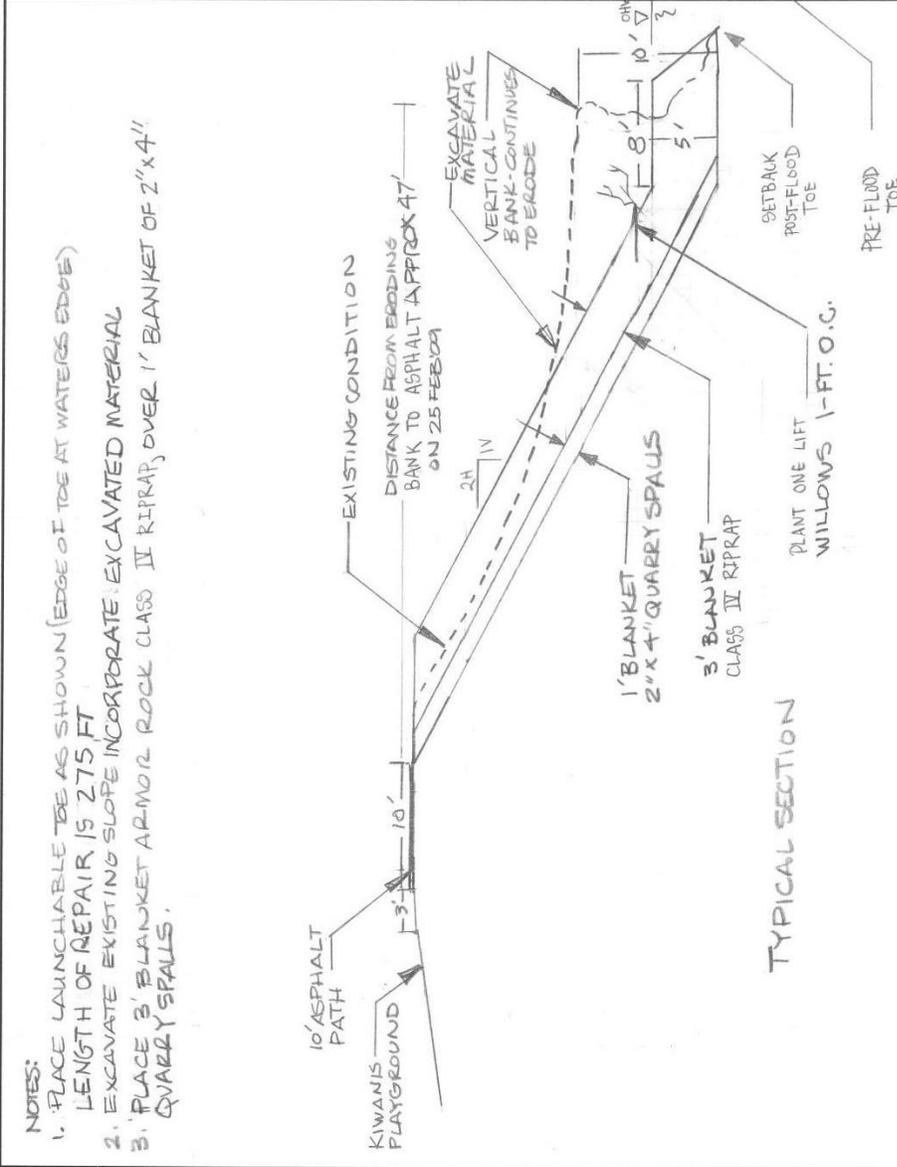


Design for the Kiwanis Playground site

ENGINEERING DESIGN SHEET

OFFICE SYMBOL: CENWS-EN-GB-55

PROJECT 2009 YAKIMA AUTHORIZED LEVEE REPAIRS	COMPUTED BY DESJARDIN	DATE: 07MAR09 SHEET: 3 OF: 6
SUBJECT KIWANIS PLAYGROUND	CHECKED BY	PART: 2



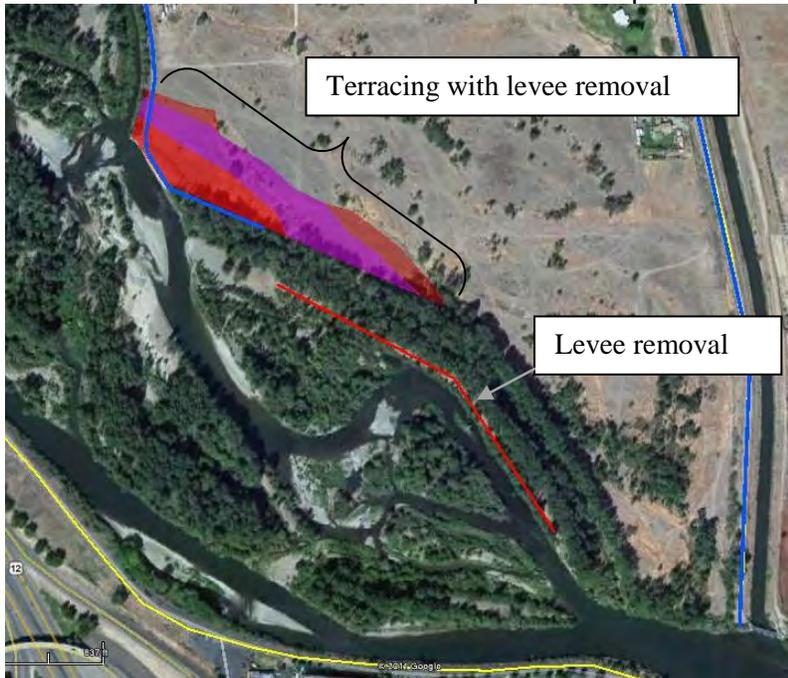
Location map and photo of damage at the Kiwanis Playground site.



Photos of damage and construction at the Sportsman's Park site.



Plans for the borrow site created as part of the Sportsman's Park project



Photos of the riverward non-functioning levee before and after removal (photos are not taken at the exact same location).





August 2011 photo of completed repair at NC Machinery



August 2011 photo of completed seepage berm at Buchanan Lake