

Received Electronically
April 4, 2016



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

Environmental and Cultural Resources Branch

Ms. Loree' Randall
Washington Department of Ecology
PO Box 47600
Olympia, Washington 98504

Dear Ms. Randall:

The U.S. Army Corps of Engineers, Seattle District (Corps) in partnership with Deming Diking District #2 is proposing levee rehabilitation activity to the Sande-Williams Levee near Deming, WA.

On the Nooksack River, two high water events occurred between November 2014 and January 2015 causing flood damage to the levee. During the flood, the Nooksack River transported significant woody debris through this reach of the river and the debris dislodged slope armor along approximately 75 feet of the levee. Flood damages include loss of riverward riprap armor. The proposed action is to repair 300 feet of levee in order to restore the pre-flood level of protection at the damage location.

The proposed levee repair is located within Whatcom County, which is defined in Washington Coastal Zone Management Program as part of the coastal zone. Therefore, a consistency determination is required to evaluate whether the proposed repair will affect Washington's coastal zone or resources.

Enclosed is the Federal Consistency Determination for this proposed project. The Corps has determined that this proposed project will be consistent with enforceable policies of Washington's Coastal Resources Management Program. We request your concurrence with our determination. Please provide written concurrence for our records. If you have any questions, please contact Ms. Bobbi Jo McClain at 206-764-6968.

Sincerely,

A handwritten signature in black ink, appearing to read "Evan Lewis".

Evan Lewis
Chief, Environmental and Cultural
Resources Branch

Coastal Zone Consistency Determination
Nooksack River, 2015 Sande-Williams Levee repair PL 84-99
Whatcom County, WASHINGTON

The proposed levee rehabilitation actions are activities undertaken by a Federal agency; the following constitutes a Federal consistency determination with the enforceable provisions of the Washington Coastal Zone Management Program.

1. INTRODUCTION

The United States Army Corps of Engineers (Corps), with Deming Diking District #2, as the non-federal sponsor, is planning to complete an emergency repair on the Sande-Williams levee near Deming, Whatcom County, Washington. The Sande-Williams levee system was originally designed in the early 1900's by local farmers to protect crops, roads, and structures from periodic, recurring floods. Over the years, separate segments became interconnected to form a contiguous levee segment. The estimated completion of a contiguous segment is prior to 1936 when the Corps performed levee upgrades using Works Progress Administration (WPA) funding. After the WPA upgrades, Corps involvement has been limited to flood fights and levee rehabilitation.

The levee is located along the right bank of the Nooksack River just downstream of the town of Deming, WA, located in Sections 35 and 36, Range 4 East, Township 39 North in Whatcom County, Washington. The levee is constructed of earthen material with a riprap riverward revetment consisting of Class IV to V material. There is gravel/spall rock on the levee crown. The levee protects public infrastructure as well as residential, agricultural, and commercial properties. At the damage location, the levee can contain the 28-year recurrence flood. The damage area is at the outside of a bend, where velocities locally accelerate and super-elevation along the levee face during floods has been observed.

Two high water events occurred between November 2014 and January 2015 causing flood damage to the levee. The gage at Cedarville exceeded flood stage on 28 Nov 2014, peaking at just over a two year recurrence interval discharge (30,800 cubic feet per second [cfs]/147.02 feet [ft]). On 5 January 2015 the river rose and fell sharply, peaked at 26,900 cfs, but did not exceed flood stage. Both events were driven by high intensity precipitation originating from atmospheric river storm events.

During the flood, the Nooksack River transported significant woody debris through this reach of the river and the debris dislodged slope armor along approximately 75 ft of the levee. Flood damages include loss of riverward riprap armor. In the damage condition, the levee will provide a 4-year level of protection (LOP). The damage length is approximately 250 linear feet (LF).

Project Description

The proposed project would restore the levee at the damage location to the pre flood 28-year LOP within the existing alignment. The repair would consist of re-sloping the levee and shifting the crest landward by excavating the existing levee material, replacing levee material with a one foot thick quarry spall layer covered by a 4 foot thick Class V riprap on an approximately 2H:1V

with a 7 foot wide launchable toe with a 1.5H:1V slope. Material quantities are shown in Table 1. The construction length is approximately 300 LF which includes upstream and downstream tie-ins. Up to ten trees (mostly deciduous trees) would be removed. Upon completion, embankment and top of levee material (wearing course) would be replaced. No willow cuttings in the levee face are currently proposed at the ordinary high water (OHW) line during construction due to concerns of erosion of the soil layer due to the expected velocities at the site. Construction is expected to last a few weeks including mobilization and clean up, and occur during summer of 2016 designated fish window (June 15-August 15).

Table 1. Material Quantities

Site	Length (feet)	Embankment Material (CY)	Riprap (CY) Class V	Quarry Spalls (CY)	Wearing Course (CY)
Repair	300	500	2,500	560	35

Construction Sequencing:

- Site cleared
- Stage material on site, per design drawing c-104
- Implement sediment control measures as necessary
- Construct riprap toe, per design drawings
- Place slope rock, per design drawings
- Final grading and sediment control
- Clean up

2. WASHINGTON STATE COASTAL ZONE MANAGEMENT PROGRAM

The Coastal Zone Management Act of 1972, as amended, requires Federal agencies to carry out their activities in a manner that is consistent to the maximum extent practicable with the enforceable policies of the approved state Coastal Zone Management (CZM) Programs. The Shoreline Management Act of 1972 (RCW 90.58) is the core of authority of Washington’s CZM Program. Primary responsibility for the implementation of the SMA is assigned to local government. The applicable local government office responsible for Whatcom County is the Whatcom County Department of Planning and Development Services.

3. WHATCOM COUNTY SHORELINE MANAGEMENT PROGRAM

Whatcom County implemented the SMA through the adoption of goals and policies in the Whatcom County Shoreline Management Program. This coastal zone consistency determination is based on review of applicable policies and standards of the 2007 Whatcom County Shoreline Management Programs (SMP). Applicable portions of the shoreline environment guidelines are presented below, with the Corps consistency indicated in *bold italics*.

Chapter 3 Shoreline Jurisdiction and Area Designations

23.30.01 Shoreline Jurisdiction

The provisions of this Program shall apply to all shorelines of the state in unincorporated Whatcom County including all shorelines of statewide significance (Appendix D) and all shorelands as defined in Chapter 11 and collectively referred to herein as “shorelines”. For the purposes of this Program, jurisdictional shorelines are divided into segments or reaches. Each segment is assigned one or more Shoreline Area Designations pursuant to this Chapter in order to provide for the management of use and development within shorelines.

23.30.09 Conservancy Shoreline Area

23.30.09.1 Conservancy Shoreline Area, Purpose:

The purpose of the Conservancy shoreline area is to retain shoreline ecological functions in areas where important ecological processes have not been substantially degraded by human activities. Conservancy areas are designated outside of urban growth areas. The primary management goal is to preserve shoreline ecological functions and processes by avoiding forms of development that would be incompatible with existing functions and processes, as well as identify and focus restoration efforts in areas where benefits to overall functions and processes can be realized. This policy should be furthered by keeping overall intensity of development or use low, and by maintaining most of the area's natural character.

23.30.09.3 Conservancy Shoreline Area, Policies:

Development within Conservancy shoreline areas shall be consistent with the following policies:

A. Natural ecological processes should be protected, and renewable resources managed so that ecological functions and the resource base are maintained. Non-renewable resources should only be consumed in a manner compatible with conservation of other resources and other appropriate uses.

Consistent, to the maximum extent possible. The Sande-Williams Levee is located in an area designated as Conservancy. The proposed project is a repair of an existing flood control structure and does not change status quo of the area.

B. Permitted uses should be limited to those compatible with each other and with conservation of shoreline ecological processes and resources.

Consistent. The proposed project is a repair of an existing flood control structure and does not change status quo of the area.

C. Shorelines should be protected from harmful concentrations of people, livestock, buildings, or structures.

Consistent. The proposed project will restore the levee to the pre-damage level of protection. The Corps does not anticipate that the repair will result in an increase of population or change in land uses.

D. Opportunities for ecological restoration should be pursued, prioritizing those areas with the greatest potential to restore ecosystem-wide processes and functions.

Consistent, to the maximum extent possible. The proposed project is a repair of an existing flood control structure and would not change status quo of the area.

E. Outstanding recreational or scenic values should be protected from incompatible development.

Consistent, to the maximum extent possible. The proposed project will restore the levee to the pre-damage level of protection. The Corps does not anticipate that the repair will result in an increase or change in use.

23.30.09.5 Conservancy Shoreline Area, Conditional Uses:

The following uses may be permitted as conditional uses subject to the applicable policies and regulations of this Program:

D. Institutional development and essential public facilities, where there is no feasible location outside the shoreline.

Consistent. Proposed project is a repair of an existing flood control structure located in the Conservancy shoreline area. Removal of the flood control structure is infeasible because the proposed project is repairing the existing levee in its current location.

Chapter 4 Shorelines of Statewide Significance

23.40.02 Designation of Shorelines of Statewide Significance

In accordance with the criteria of RCW 90.58.030(2)(e), the legislature designated the following shorelines of unincorporated Whatcom County, including the shorelands and associated wetlands as therein defined, as having statewide significance:

B. Rivers:

1. Nooksack River: its mainstem downstream to Bellingham Bay, its North Fork to the mouth of Glacier Creek and its South Fork to the mouth of Hutchinson Creek.

Consistent. Proposed project is located on the mainstem Nooksack River, a shoreline of statewide significance and will maintain an existing structure.

23.40.03 Policies for Shorelines of Statewide Significance

The statewide interest should be recognized and protected over the local interest in shorelines of statewide significance. To ensure that statewide interests are protected over local interests, the County shall review all development proposals within shorelines of statewide significance for consistency with RCW 90.58.030 and the following policies:

A. Redevelopment of shorelines should be encouraged where it restores or enhances shoreline ecological functions and processes impaired by prior development activities.

Consistent, to the maximum extent possible. The proposed project is a repair of an existing flood control structure and would not change status quo of the area.

B. The Washington Departments of Fish and Wildlife and Ecology, the Lummi Nation, the Nooksack Tribe, and other resources agencies should be consulted for development proposals that could affect anadromous fisheries.

Consistent. As part of the National Environmental Policy Act process and Endangered Species Act consultation, the Tribes, Federal, and State agencies will be consulted regarding this proposed project.

F. Potential short term economic gains or convenience should be measured against potential long term and/or costly impairment of natural features.

Consistent. The proposed project is a repair of an existing flood control structure and would not change status quo of the area.

G. Protection or enhancement of aesthetic values should be actively promoted in design review of new or expanding development.

Consistent. The proposed project is a repair of an existing flood control structure and would not change the aesthetic of the area.

H. Resources and ecological systems of shorelines of statewide significance should be protected. Shorelands and submerged lands should be protected to accommodate current and projected demand for economic resources of statewide importance such as commercial shellfish beds.

Consistent, to the maximum extent possible. The proposed project is a repair of an existing flood control structure and would not change economic resources of statewide importance.

I. Those limited shorelines containing unique, scarce and/or sensitive resources should be protected to the maximum extent feasible.

Consistent, to the maximum extent possible. The proposed project is a repair of an existing flood control structure and would not change status quo of the area.

J. Erosion and sedimentation from development sites should be controlled to minimize adverse impacts on ecosystem processes. If site conditions preclude effective erosion and sediment control, excavations, land clearing, or other activities likely to result in significant erosion should be severely limited.

Consistent. The proposed project is a repair of an existing flood control structure. If the repair does not occur, continued erosion of the damaged area would be expected, especially during high water and flood events.

Chapter 5 Applicability and Non-conforming Uses

23.50.07 Non-conforming Development

The following provisions shall apply to lawfully established uses, buildings and/or structures that do not meet the specific standards of this Program.

D. Non-conforming structures may be maintained, repaired, renovated, or remodeled to the extent that non-conformance with the standards and regulations of this Program is not increased, provided that a non-conforming development that is moved any distance must be brought into conformance with this Program and the Act; provided further, that as a conditional use a non-conforming dock may be modified, reoriented or altered within the same general location to be more consistent with the provisions of this SMP.

Consistent. The original levee at this damaged site was constructed prior the adoption of the CZM regulations. The proposed project does not increase nonconformance with the standards and regulations of the program.

E. Non-conforming structures that are expanded or enlarged must obtain a variance or be brought into conformance with this Program and the Act; provided that, non-conforming single family residences may be expanded without a variance where the provisions of SMP 23.50.07.I apply; and provided further, that non-conforming structures with conforming uses within commercial or mixed-use developments may be expanded or enlarged within the existing building footprint as a conditional use pursuant to Ch 23.100.05.B.1(e).

Consistent. The existing flood control structure will not be expanded or enlarged with this repair action.

F. Non-conforming structures that are destroyed by fire, explosion, flood, or other casualty may be restored or replaced in kind if there is no feasible alternative that allows for compliance with the provisions of this Program; provided that, the following are met: 1. The reconstruction process is commenced within eighteen (18) months of the date of such damage; and

2. The reconstruction does not expand, enlarge, or otherwise increase the nonconformity, except as provided for in subsection (E) above or (H) and (I) below.

Consistent. The original levee at this damaged site prior the adoption of the CZM regulations. The proposed project does not increase nonconformity.

H. Replacement of any non-conforming structures or buildings or portions thereof within the Aquatic shoreline area shall comply with Program requirements for materials that come in contact with the water pursuant to SMP 23.90.04.B.5; provided that, replacement of existing wood pilings with chemically treated wood is allowed for maintenance purposes where use of a different material such as steel or concrete would result in unreasonable or unsafe structural complications; further provided that, where such replacement exceeds twenty percent (20%) of the existing pilings over a ten (10) year period, such pilings shall conform to the standard provisions of this section.

Consistent. No pilings or non-conforming materials will be used.

I. Enlargement or expansion of single family residences by the addition of space to the main structure or by the addition of normal appurtenances as defined in Chapter 11 that would increase the non-conformity and/or encroach further into areas where new structures or developments would not now be allowed under the Program may be approved by conditional use permit if all of the following criteria are met:

1. The structure must be located landward of the ordinary high water mark.

2. The enlargement, expansion or addition shall not extend either further waterward than the existing primary residential structure (not appurtenance), further into the minimum side yard setback, or further into any critical area established by WCC 16.16 than the existing structure. Encroachments that extend waterward of the existing residential foundation walls or further into a critical area, or the minimum required side yard setback require a variance.

3. The area between the non-conforming structure and the shoreline and/or critical area shall meet the vegetation conservation standards of SMP 23.90.06.

4. The remodel or expansion will not cause adverse impacts to shoreline ecological functions and/or processes.

Consistent. The proposed action is not a single family residence.

Chapter 6: Shoreline Permits and Exemptions

23.60.02.2 Exemptions Listed

The following activities shall be considered exempt from the requirement to obtain a shoreline substantial development permit. A statement of exemption, as provided for in SMP 23.60.02.3 of this Program shall be required for those activities listed in SMP 23.60.02.3.B and C.

B. Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. Normal maintenance includes those usual acts to prevent a decline, lapse or cessation from a lawfully established condition. Normal repair means to restore a development to a state comparable to its original condition within a reasonable period after decay or partial destruction except where repair causes substantial adverse effects to the shoreline resource or environment. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to the original structure or development including but not limited to its size, shape, configuration, location and external appearance and the replacement does not cause substantial adverse effects to shoreline resources or the environment.

Consistent. Proposed project is considered normal repair of an existing flood control structure damaged by flooding. The repair would restore the structure to a condition comparable to its pre-damaged conditions and does not incur additional impacts to the shoreline resources.

K. Operation and maintenance of any system of dikes, ditches, drains, or other facilities existing on June 4, 1975 that were created, developed or utilized, primarily as a part of an agricultural drainage or diking system.

Consistent. The project proposes to repair an existing flood control structure that was established prior to 1975.

23.60.02.3 Statements of Exemption

B. Exempt activities related to any of the following shall not be conducted until a statement of exemption has been obtained from the Administrator: dredging, flood control works and instream structures, development within an archaeological or historic site, clearing and ground disturbing activities such as landfill or excavation, dock, shore stabilization, free-standing signs, or any development within an Aquatic or Natural shoreline designation; provided that no separate written statement of exemption is required for the construction of a single family residence when a County building permit application has been reviewed and approved by the Administrator; provided further, that no statement of exemption is required for emergency development pursuant to WAC 173-27-040(2)(d).

C. No statement of exemption shall be required for other uses or developments exempt pursuant to SMP 23.60.02.2 unless the Administrator has cause to believe a substantial question exists as to qualifications of the specific use or development for the exemption or the Administrator determines there is a likelihood of adverse impacts to shoreline ecological functions.

Consistent. The Federal government has not waived sovereign immunity to the County under the shorelines permit process and therefore does not require a statement of exemption prior to conducting flood control projects. As discussed above, the proposed repair is consistent with exemption B defined in 23.60.02.2.

23.60.19 Expiration

A. The following time requirements shall apply to all substantial development permits and to any development authorized pursuant to a variance, conditional use permit, or statement of exemption:

1. Construction shall be commenced or, where no construction is involved, the use or activity shall be commenced within two (2) years of the effective date of a shoreline permit or exemption

or the permit shall expire; provided that, the Hearing Examiner or Administrator, as appropriate, may authorize a single extension for a period of not more than one (1) year based on a showing of good cause if a request for extension has been filed with the Hearing Examiner or

Administrator as appropriate before the expiration date of the shoreline permit or exemption, and notice of the proposed extension is given to parties of record and the Department of Ecology.

Consistent. The proposed project construction is scheduled for the summer of 2016, within the two-year period.

Chapter 9 General Policies and Regulations

23.90.01 Applicability

All use and development activities on shorelines shall be subject to all of the following general policies and regulations in addition to the applicable use policies and regulations of Chapter 10 provided that all use and development that is to be located within the Cherry Point Management Area, as defined in Chapter 11, shall be subject to the policies and regulations found in SMP 23.100.17 and shall not be subject to the policies and regulations found in Chapters 9 and 10 unless otherwise specified.

23.90.02 Land Use

The following land use policies delineate the use preferences of the Act and this Program and are intended to support the goals and objectives of the Program.

23.90.02.A Policies

2. Shoreline uses that are water-dependent or water-related should be given preference (RCW 90.58.020). Such uses should be located, designed, and maintained in a manner that minimizes adverse impacts to shoreline ecological functions and/or processes. Nonwater-oriented development may be allowed, provided that existing water-dependent uses are not displaced and the future supply of sites for water-dependent or water related uses is not compromised.

Consistent. The proposed project is water related and the design minimizes impacts to ecological functions and processes.

23.90.02.B Regulations

5. Shoreline uses and developments should be located, designed, and managed so that other appropriate uses are neither subjected to substantial or unnecessary adverse impacts, nor deprived of reasonable, lawful use of navigable waters, other publicly owned shorelines, or private property.

Consistent. The proposed levee repairs maintain the status quo at the project sites and therefore do not unnecessarily create adverse impacts to ecological function or use of public shorelines.

23.90.03 Ecological Protection and Critical Areas

23.90.03.A Policies

1. Shoreline use and development should be carried out in a manner that prevents or mitigates adverse impacts so that the resulting ecological condition does not become worse than the current condition. This means assuring no net loss of ecological functions and processes and protecting critical areas designated in WCC 16.16, in a manner consistent with all relevant constitutional and other legal limitations on the regulation of private property. Permitted uses

shall be designed and conducted to minimize, in so far as practical, any resultant damage to the ecology and environment (RCW 90.58.020). Shoreline ecological functions that should be protected include, but are not limited to, fish and wildlife habitat, food chain support, and water temperature maintenance. Shoreline processes that should be protected include, but are not limited to, water flow; littoral drift; erosion and accretion; infiltration; ground water recharge and discharge; sediment delivery, transport, and storage; large woody debris recruitment; organic matter input; nutrient and pathogen removal; and stream channel formation/maintenance.

Consistent. The proposed levee repairs maintain the status quo at the project sites and therefore do not create adverse impacts to ecological function or shoreline processes.

2. In assessing the potential for net loss of ecological functions or processes, project specific and cumulative impacts should be considered.

Consistent. Project specific and cumulative impacts are addressed during the NEPA analyses and through other Federal/State/Tribal consultation processes.

23.90.03.B Regulations

1. Mitigation Sequencing - To comply with the policies of SMP 23.90.03.A, a shoreline permit applicant or project proponent shall demonstrate all reasonable efforts have been taken to provide sufficient mitigation such that the activity does not have significant adverse impacts. Mitigation shall occur in the following prioritized order:

a. Avoiding the adverse impact altogether by not taking a certain action or parts of an action, or moving the action.

b. Minimizing adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology and engineering, or by taking affirmative steps to avoid or reduce adverse impacts

7. The cumulative effects of individual development proposals shall be identified and evaluated to assure that no net loss standards are achieved.

Consistent. The proposed action would occur at the damage site, with the length being limited to the minimum needed to restore flood protection. No work will occur in wetlands. The repair will restore the status quo of the site. In-water work will be limited in extent and duration, and is expected to occur during the established in-water fish work window. Best management practices, including working from the top of the bank, refueling landward of the levee, having a fuel spill kit on site during construction, cleaning equipment prior to construction, and checking equipment regularly for drips or leaks. Up to ten trees are expected to be removed for the repair. Cumulative impacts will be addressed during the Endangered Species Act consultation process and during the NEPA process.

23.90.04 Water Quality and Quantity

23.90.04.A Policies

1. The location, construction, operation, and maintenance of all shoreline uses and developments should maintain or enhance the quantity and quality of surface and ground water over the long term.

23.90.04.B Regulation

1. Shoreline use and development shall incorporate measures to protect and maintain surface and ground water quantity and quality in accordance with all applicable laws.

Consistent. The proposed levee repair would maintain the status quo at the project site. No change to water quality or quantity is anticipated.

3. Best management practices (BMPs) for control of erosion and sedimentation shall be implemented for all development in shorelines through an approved temporary erosion and sediment control (TESC) plan, or administrative conditions.

Consistent. The list of BMP's to be implemented during construction to avoid and minimize erosion and sedimentation are as followed:

- ***Equipment that would be used near the water would be cleaned prior to construction.***
- ***Work would occur from the top of the bank.***
- ***Re-fueling would occur a minimum of 100 feet away from the shoreline.***
- ***Vegetable based hydraulic fluid would be used in heavy equipment assigned to work in or near Nooksack River. Construction equipment would be regularly checked for drips or leaks.***
- ***At least one fuel spill kit with absorbent pads would be on-site at all times, and construction personnel would be properly trained in its use.***
- ***Equipment would not be allowed to idle longer than 15 minutes when not in use.***
- ***Individual placement of clean rip-rap (no end dumping) into the water.***

23.90.05 Views and Aesthetics

23.90.05.A Policies

1. Shoreline use and development activities should be designed and operated to minimize obstructions of the public's visual access to the water and shoreline.

2. Shoreline use and development should not significantly detract from shoreline scenic and aesthetic qualities that are derived from natural or cultural features, such as shoreforms, vegetative cover and historic sites/structures.

4. Clearing, thinning, and/or limbing for limited view corridors should only be allowed where it does not adversely impact ecological and/or aesthetic values, and/or slope stability. Vegetation conservation should be preferred over the creation or maintenance of views from property on the shoreline to protect shoreline ecological functions and aesthetics.

Consistent, to the maximum extent possible. The proposed repair is anticipated to have minimal change to the visual access and aesthetics. The repair is to an existing levee; however up to ten trees would be removed along the landward side of the levee. The project lengths and tree removal would limited to the minimum needed for the repair.

23.90.06 Vegetation Conservation

23.90.06.B Regulations

4. Vegetation clearing shall be limited to the minimum necessary to accommodate approved shoreline development.

Consistent. Vegetation removal at Sande-Williams levee will be minimized and limited only to that which is required to reslope the damaged existing levee.

23.90.07 Archaeological, Historic and Cultural Resources

23.90.07.A Policies

1. The County should work with tribal, state, federal and local governments as appropriate to maintain an inventory of all known significant local historic, cultural and archaeological sites in observance of applicable state and federal laws protecting such information from general public disclosure. As appropriate, such sites should be protected, preserved and/or restored for study, education and/or public enjoyment to the maximum possible extent.

Consistent. The Corps will comply with the National Historic Preservation act and as such will consult with SHPO and the appropriate Tribes.

23.90.08 Public Access

23.90.08.A Policies

1. Use and development that provide an opportunity for substantial numbers of the people to enjoy the shorelines of the state are a preferred use.

3. Public access should be provided for water-oriented uses and nonwater-dependent uses and developments that increase public use of the shorelines and public aquatic lands, or that would impair existing, legal access opportunities.

5. Public access area and/or facility requirements should be commensurate with the scale and character of the development and should be reasonable, effective and fair to all affected parties including but not limited to the land owner and the public.

6. Public access design should provide for public safety and minimize potential impacts to private property, individual privacy, and shoreline ecological functions and processes.

7. Shoreline development by public entities, such as local governments, port districts, state agencies, and public utility districts, should provide public access measures as part of each development project, unless such access is shown to be incompatible due to reasons of safety, security, or impact to the shoreline.

Consistent. The project area is not accessible to the public as a recreational area and this condition will be unchanged with the proposed action.

23.90.09 Site Planning

23.90.09.A Policies

1. Development and use should be designed in a manner that directs land alteration to the least sensitive portions of the site to maximize vegetation conservation; minimize impervious surfaces and runoff; protect riparian, nearshore and wetland habitats; protect wildlife and habitats; protect archaeological, historic and cultural resources; and preserve aesthetic values. This may be accomplished by minimizing the project footprint, the use of clustering and other appropriate design approaches.

Consistent. The proposed action would only occur at damage site with the project length limited to the minimum needed to restore flood protection.

5. Shoreline uses should not deprive other uses of reasonable access to navigable waters. Public recreation activities such as fishing, clam digging, swimming, boating, and wading, and water-related recreation should be preserved and enhanced. The rights of treaty tribes to resources within their usual and accustomed areas should be accommodated.

Consistent. The proposed project will not impede U&A rights and will be full coordinated with the appropriate Tribes.

23.90.10 Landfill and Excavation

23.90.10.A Policies

1. Landfill and excavation should only be permitted to the minimum extent necessary to accommodate an approved shoreline use or development and with assurance of no net loss of shoreline ecological functions and processes. Enhancement and voluntary restoration of landforms and habitat are encouraged.

Consistent. Excavation is limited to that amount necessary to repair the levee and restore flood protection.

2. Landfill in water bodies, floodways, and/or wetlands should not be permitted for creation of new uplands, unless it is part of an approved ecological restoration activity. Landfill should be permitted in limited instances to restore uplands where recent erosion has rapidly reduced upland area, to build beaches and protective berms for shore stabilization or recreation, to restore or enhance degraded shoreline ecological functions and processes, or to moderately elevate low uplands to make such uplands more suitable for purposes consistent with this Program.

Consistent. Material placement along the bankline is required to restore the levee prism to the pre-damaged footprint. Rock placement will slow erosion and improve the stability of the levee prism. The project does not constitute fill in waters of the U.S. because the proposed repair below OHW would be conducted within the pre-damaged levee footprint and the character, scope, and size of the resulting structure will not change as compared to the original fill design. The material will not be placed within wetlands or other sensitive habitats.

23.90.10.B Regulations

2. Landfill and excavation within wetlands or waterward of the ordinary high water mark shall only be permitted in limited instances for the following purposes only, with due consideration given to specific site conditions, and only along with approved shoreline use and development activities that are consistent with this Program:

- c. Ecological restoration or enhancement such as beach nourishment, habitat creation, or bank restoration when consistent with an approved restoration plan.
- d. Maintenance of lawfully established development
- e. Development of shore stabilization projects, flood control and instream structures.

4. Landfills or excavation shall not be located where shore stabilization will be necessary to protect materials placed or removed. Disturbed areas shall be immediately stabilized and revegetated, as applicable

6. Landfills, beach nourishment and excavation shall be designed to blend physically and visually with existing topography whenever possible, so as not to interfere with long term appropriate use including lawful access and enjoyment of scenery.

8. A temporary erosion and sediment control (TESC) plan shall be provided for all proposed landfill and excavation activities.

Consistent. The proposed repair is the maintenance of an existing structure. The repair does not change the footprint from its pre-damaged condition. The levee repair would implement appropriate stormwater and runoff controls.

Chapter 10 Shoreline Use Policies and Regulations

23.100.01 Shoreline Use and Development

Shoreline use and development shall be classified by the Administrator and regulated under one or more of the following applicable sections of Chapter 10. Unless otherwise stated, all use and development shall also comply with all of the General Policies and Regulations of Chapter 9 and, if applicable, the policies of Chapter 4.

23.100.06 Flood Control Works and Instream Structures

Flood control works and instream structures in shoreline areas shall be subject to the policies and regulations of this Section and Chapter 9.

23.100.06.A Flood Control Works and Instream Structures – Policies

23.100.06.A.1 Purpose and Need

- a. New or expanding development or uses in the shoreline, including subdivision of land, that would likely require structural flood control works within a stream, channel migration zone, or floodway should not be allowed.
- b. Flood control works and instream structures should be planned and designed to be compatible with appropriate multiple uses of stream resources over the long term, especially in shorelines of statewide significance.
- c. Flood control works should only be allowed in the shoreline if they are necessary to protect existing development and where non-structural flood hazard reduction measures are infeasible.
- d. Flood control works to protect existing development should be permitted only when the primary use being protected is consistent with this Program, and the works can be developed in a manner that is compatible with multiple use of streams and associated resources for the long term, including shoreline ecological functions, fish and wildlife management, and recreation.

Consistent. The proposed project does not encourage development in the floodplain or floodway. Though it may increase the reliability of the flood protection, it would not change the level of flood protection. The proposed repair would not change the status quo of the area. Repair to the Sande-Williams Levee is economically justified and it is infeasible to remove the function this levee provides through buy-outs or other non-structural means.

23.100.06.A.2 Design Considerations

- a. Flood control works should incorporate native vegetation to enhance ecological functions, create a more natural appearance, improve ecological processes, and provide more flexibility for long term shoreline management. Such features include vegetated berms; vegetative stabilization including brush matting and buffer strips; and retention of existing trees, shrubs and grasses on stream banks.
- b. Flood control works and instream structures should be located, designed, constructed and maintained so their resultant effects on geo-hydraulic shoreline processes will not cause significant damage to other properties or valuable shoreline resources, and so that the physical integrity of the shoreline process corridor is maintained.
- c. To minimize flood damages and to maintain natural resources associated with streams, overflow corridors and other alternatives to traditional bank levees, revetments and/or dams

should be considered. Setback levees and similar measures should be employed where they will result in lower flood peaks and velocities, and more effective conservation of resources than with high bank levees.

d. Recognizing the large number of physical variables to be considered in properly locating and designing flood control works and instream structures, such as dams and weirs, and the high probability that poorly located and inadequately designed works will fail and/or adversely affect properties and shore features, such works should be sited and designed consistent with appropriate engineering principles and WCC Title 17.

e. Non-structural and non-regulatory methods to protect, enhance, and restore shoreline ecological functions and processes and other shoreline resources should be encouraged as an alternative to structural flood control works and instream structures. Nonregulatory and non-structural methods may include public facility and resource planning, land or easement acquisition, education, voluntary protection and enhancement projects, or incentive programs.

f. Design of flood control works should incorporate continued long term multiple use of shoreline resources by all appropriate user groups.

g. Design of flood control works should provide access to public shorelines whenever possible, unless it is demonstrated that public access would cause unavoidable public health and safety hazards, security problems, unmitigatable ecological impacts, unavoidable conflicts with proposed uses, or unreasonable cost. At a minimum, flood control works should not decrease public access or use potential of shorelines.

Consistent, to the maximum extent possible. The proposed project would maintain the existing appearance. The action would repair an existing structure with no proposed changes to the footprint and the repairs were designed using appropriate engineering principles. Repair to the Sande-Williams Levee is economically justified and it is infeasible to remove the function this levee provides through buy-outs or other non-structural means. The project area is not accessible to the public as a recreational area; this condition would remain unchanged.

23.100.06.A.3 Coordination

a. In cooperation with other applicable agencies and persons, the County should continue to develop long term, comprehensive flood hazard management plans, such as the Lower Nooksack River Comprehensive Flood Hazard Management Plan, to prevent needless flood damage, maintain the natural hydraulic capacity of floodways, and conserve valuable, limited resources such as fish, water, soil, and recreation and scenic areas.

b. Planning and design of flood control works and instream structures should be consistent with and incorporate elements from applicable watershed management plans, restoration plans and/or surface water management plans.

Consistent. Deming Diking District #2 is the local sponsor. The diking district and Whatcom County are working with a number of agencies on a System-Wide Improvement Framework (SWIF) for their levees. The SWIF is a collaborative process to develop a maintenance and improvement plan for levees in Whatcom County that provides a gain in fish habitat while reducing flood risk. The proposed action maintains the status quo of the levee and is not expected to impede the SWIF process or preclude levee changes at the site if they are deemed appropriate through the SWIF analysis.

23.100.06.B Flood Control Works and Instream Structures – Regulations

23.100.06.B.1 Purpose and Need

a. Flood control works shall be permitted when it is demonstrated by engineering and scientific evaluations that:

(1) they are necessary to protect health/safety and/or existing development;

(2) non-structural flood hazard reduction measures are infeasible; and

(3) measures are consistent with an adopted comprehensive flood hazard management plan that evaluates cumulative impacts to the watershed system.

e. Revetments and levees shall be designed consistent with appropriate engineering standards and WCC Title 17. Height shall be limited to the minimum required to protect the adjacent lands from the designed flood and demonstrated through hydraulic modeling that the height will not adversely impact shoreline ecological functions and processes.

f. Where flood control works are necessary, they shall be setback at convex (inside) bends to allow streams to maintain point bars and associated aquatic habitat through normal accretion. Levees that have already cut off point bars, should be relocated where feasible to lower flood stages and current velocities.

g. Where levees are necessary to protect floodway fringe areas, they shall be located and designed to protect shoreline ecological functions and processes. Such works should be located near the tangent to outside meander bends so that the stream can maintain normal meander progression and utilize most of its natural flood water storage capacity.

h. Channelization projects that damage fish and wildlife resources, degrade recreation and aesthetic resources, or result in high flood stages and velocities shall not be permitted when feasible alternatives are available.

i. No motor vehicles, appliances, other similar structures or parts thereof; nor structure demolition debris; nor any other solid waste shall be used for flood control works.

j. Cut-and-fill slopes and back-filled areas shall be stabilized with brush matting and buffer strips and revegetated with native grasses, shrubs, or trees to prevent loss of shoreline ecological functions and processes.

k. Flood control works and instream structures shall be constructed and maintained in a manner that does not degrade the quality of affected waters. The County may require reasonable conditions to achieve this objective such as layback of prism centerlines, buffers, or storage basins.

l. Natural instream features such as snags, uprooted trees, or stumps should be left in place unless it can be demonstrated that they are actually causing bank erosion or higher flood stages.

m. Flood control works and instream structures shall allow for normal ground water movement and surface runoff.

n. Flood control works and instream structures shall preserve valuable recreation resources and aesthetic values such as point and channel bars, islands, and braided banks.

Consistent, to the maximum extent possible. Repairs to the Sande-Williams Levee is economically justified such that the benefits of the repair outweigh the cost of construction.

Professional engineers have designed the repair and determined that the replacement of the rock armoring is required. The repair will restore the existing levee to its pre-damaged level of protection and would not change the height. The proposed repair would be within the pre-damaged riverward footprint; however the riverward levee face would be resloped and the crest shifted landward. No instream features will be removed and no change to ground water movement or surface water runoff is expected. Only clean quarried rock that meets the Corps design specifications will be used for the repair.

23.100.06.B.2 Design and Operation

a. The County shall require professionally engineered design of any proposed flood control works or instream structure.

d. No flood control works or instream structure may commence without the developer having obtained all applicable federal, state, and local permits and approvals, including but not limited to an HPA from the State Department of Fish and Wildlife.

Consistent. The Corps has employed professional engineers to design the proposed project. The Corps will meet all required permitting and consultation requirements.

23.100.06.C Flood Control Works and Instream Structures – Shoreline Area Regulations

7. Conservancy: Flood control works and instream structures are permitted as a conditional use subject to policies and regulations; provided that, channelization or dams for flood control are prohibited.

Consistent. No new channelization is proposed. The project maintains the status quo of the existing levee.

23.100.13 Shoreline Stabilization

Shore stabilization in shoreline areas shall be subject to the policies and regulations of this Section and Chapter 9.

23.100.13.A Shoreline Stabilization – Policies

1. Alternatives to structures for shore protection should be used whenever possible. Such alternatives may include no action (allow the shoreline to retreat naturally), increased building setbacks, building relocation, drainage controls, and bioengineering, including vegetative stabilization, and beach nourishment.

Consistent. Numerous alternatives were considered for the repair. Analysis showed that the repair in kind was the most cost-effective alternative and would have minimal environment impact.

5. Shore stabilization on streams should be located and designed to fit the physical character and hydraulic energy potential of a specific shoreline reach, which may differ substantially from adjacent reaches. ***Consistent. The design is being designed by professional engineers to meet the physical conditions of the site.***

6. Shore stabilization should not be permitted to unnecessarily interfere with public access to public shorelines, nor with other appropriate shoreline uses including, but not limited to, navigation, seafood harvest, or private recreation.

Consistent. The proposed project will not eliminate or reduce public access and recreation.

7. Provisions for multiple use, restoration, and/or public shore access should be incorporated into the location, design and maintenance of shore stabilization for public or quasi-public developments whenever safely compatible with the primary purpose. Shore stabilization on publicly owned shorelines should not be allowed to decrease long term public use of the shoreline.

Consistent. The proposed project will not eliminate or reduce public access and recreation.

8. Shore stabilization should be developed in a coordinated manner among affected property owners and public agencies for a whole drift sector (net shore-drift cell) or reach where feasible, particularly those that cross jurisdictional boundaries, to address ecological and geo-hydraulic processes, sediment conveyance and beach management issues. Where beach erosion threatens existing development, a comprehensive program for shoreline management should be established.

Consistent. Project specific descriptions and impacts will be addressed during the NEPA and through other Federal/State public disclosure processes

10. Shore stabilization should be located, designed, and maintained to protect and maintain shoreline ecological functions, ongoing shore processes, and the integrity of shore features. Ongoing stream, lake or marine processes and the probable effects of proposed shore stabilization on other properties and shore features should be considered. Shore stabilization should not be developed for the purpose of filling shorelines.

Consistent. The project would maintain the status quo of the site.

11. Failing, harmful, unnecessary, or ineffective structures should be removed, and shoreline ecological functions and processes should be restored using non-structural methods or less harmful long term stabilization measures.

Consistent. The proposed action would repair an existing serviceable structure.

12. Structural shoreline stabilization measures should only be used when more natural, flexible, non-structural methods such as vegetative stabilization, beach nourishment and bioengineering have been determined infeasible. Alternatives for shoreline stabilization should be based on the following hierarchy of preference:

- a. No action (allow the shoreline to retreat naturally), increase building setbacks, and relocate structures.
- b. Flexible defense works constructed of natural materials including soft shore protection, bioengineering, including beach nourishment, protective berms, or vegetative stabilization.
- c. Rigid works constructed of artificial materials such as riprap or concrete. Materials used for construction of shoreline stabilization should be selected for long term durability, ease of maintenance, compatibility with local shore features, including aesthetic values and flexibility for future uses.

Consistent, to the maximum extent possible. The flow velocities and conditions at the Sande-Williams levee require some form of levee structure to mitigate flood hazards to nearby properties. Non-structural and alternative bank stabilization techniques were discussed but eliminated in favor of the proposed project. The proposed project would reduce the amount of riprap and fill material to the maximum extent practicable. The design is intended to provide long term durability and ease of maintenance.

23.100.13.B Shoreline Stabilization – Regulations

23.100.13.B.1 Allowed Use

d. Where shore stabilization is allowed, it shall consist of “soft”, flexible, and/or natural materials or other bioengineered approaches unless a geotechnical analysis demonstrates that such measures are infeasible.

Consistent, to the maximum extent possible. Numerous alternatives were considered for the repair. Analysis showed that the repair in kind was the most cost-effective alternative and would have minimal environment impact. It is infeasible to use vegetation to protect the length of levee to be repaired as class V riprap is often removed by the river during flood events. The Corps has determined that the Nooksack River is too large and dynamic in this reach to repair the levee with soft techniques.

j. No motor vehicles, appliances, other similar structures nor parts thereof, nor structure demolition debris, nor any other solid waste shall be used for shore stabilization.

Consistent. Natural armor rock will be used.

k. The size of shore stabilization measures shall be limited to the minimum necessary to provide protection for the primary structure or use it is intended to protect.

Consistent. The design of the proposed levee repair was made to minimize the amount of material required for cost savings and to reduce environmental impacts while retaining an acceptable degree of reliability.

23.100.13.B.3 Shore Stabilization on Streams

In those limited cases where a proposed bulkhead, revetment or other similar structure meets the criteria in this section for a shoreline permit or an exemption under SMP 23.60.02.2, and to assure that such revetment or similar structure will be consistent with this Program, the administrator shall review the proposed design for consistency with state guidelines for streambank protection as it relates to local physical conditions and issue written findings that the location and design meet all criteria of this Program, subject to the following:

a. Revetments or similar hard structures are prohibited on estuarine shores, in wetlands, on point and channel bars, and in salmon and trout spawning areas, except for the purpose of fish or wildlife habitat enhancement or restoration.

b. Revetments or similar hard structures shall be placed landward of associated wetlands unless it can be demonstrated that placement waterward of such features would not adversely affect ecological functions.

c. A geotechnical analysis of stream geomorphology both upstream and downstream shall be performed to assess the physical character and hydraulic energy potential of the specific stream reach and adjacent reaches upstream or down, and assure that the physical integrity of the stream corridor is maintained, that stream processes are not adversely affected, and that the revetment will not cause significant damage to other properties or valuable shoreline resources. In addition:

(1) Revetments or similar structures shall not be developed on the low, inner-most channel banks in a stream except to protect public works, railways and existing commercial farmsteads.

(2) Where revetments or similar structures are proposed, analysis shall assure that localized shore stabilization will be effective, as compared to more extensive cooperative measures to address reach scale processes. Revetments shall be setback at convex (inside) bends to allow streams to maintain point bars and associated aquatic habitat through

normal accretion. Where revetments or similar structures have already cut off point bars from the stream, consideration should be given to their relocation.

(3) Revetments shall be designed in accordance with WDFW streambank protection guidelines.

d. Cut-and-fill slopes and backfilled areas shall be stabilized with brush matting and buffer strips and revegetated with native grasses, shrubs and/or trees so that there is no net loss of ecological functions.

e. All forms of shore stabilization shall be constructed and maintained in a manner that does not degrade the quality of affected waters. The County may require reasonable conditions to achieve this objective such as setbacks, buffers, or storage basins.

f. Shore stabilization shall allow for normal ground water movement and surface runoff.

g. Selection of materials for projects shall be in conformance with applicable engineering standards.

Consistent. The repair is not located on sensitive areas such as wetlands, point bars, or channel bars. Spawning habitat is in the project reach; however the project would be constructed within the fish work window when spawning does not occur. The construction will be restricted to the pre-damage footprint. The project is being designed by professional engineers to meet the physical conditions of the site and the surrounding reach in order to comply with applicable engineering standards for levees. The proposed repair would the status quo of the repair site and are not expected to degrade the long term water quality of Nooksack River.

23.100.13.B.4 Viewpoints and Public Access

a. Where appropriate, larger public or private shore stabilization projects shall be required to maintain, replace or enhance existing public access opportunities by incorporating physical or visual access areas and/or facilities into the design of the project.

Consistent. The proposed project does not restrict public access or viewpoints. The project area is not accessible to the public as a recreational area and this condition will be unchanged with the proposed action.

23.100.13.C Shoreline Stabilization – Shoreline Area Regulations

7. Conservancy:

a. Bulkheads, revetments, and bioengineering approaches are permitted subject to policies and regulations of this Program.

Consistent. Review of the policies and regulations of the policy show that the proposed repair of existing levee is permitted.

4. Enforceable Policies of the Coastal Zone Management Program

The project complies with the following enforceable policies of the Coastal Zone Management Program:

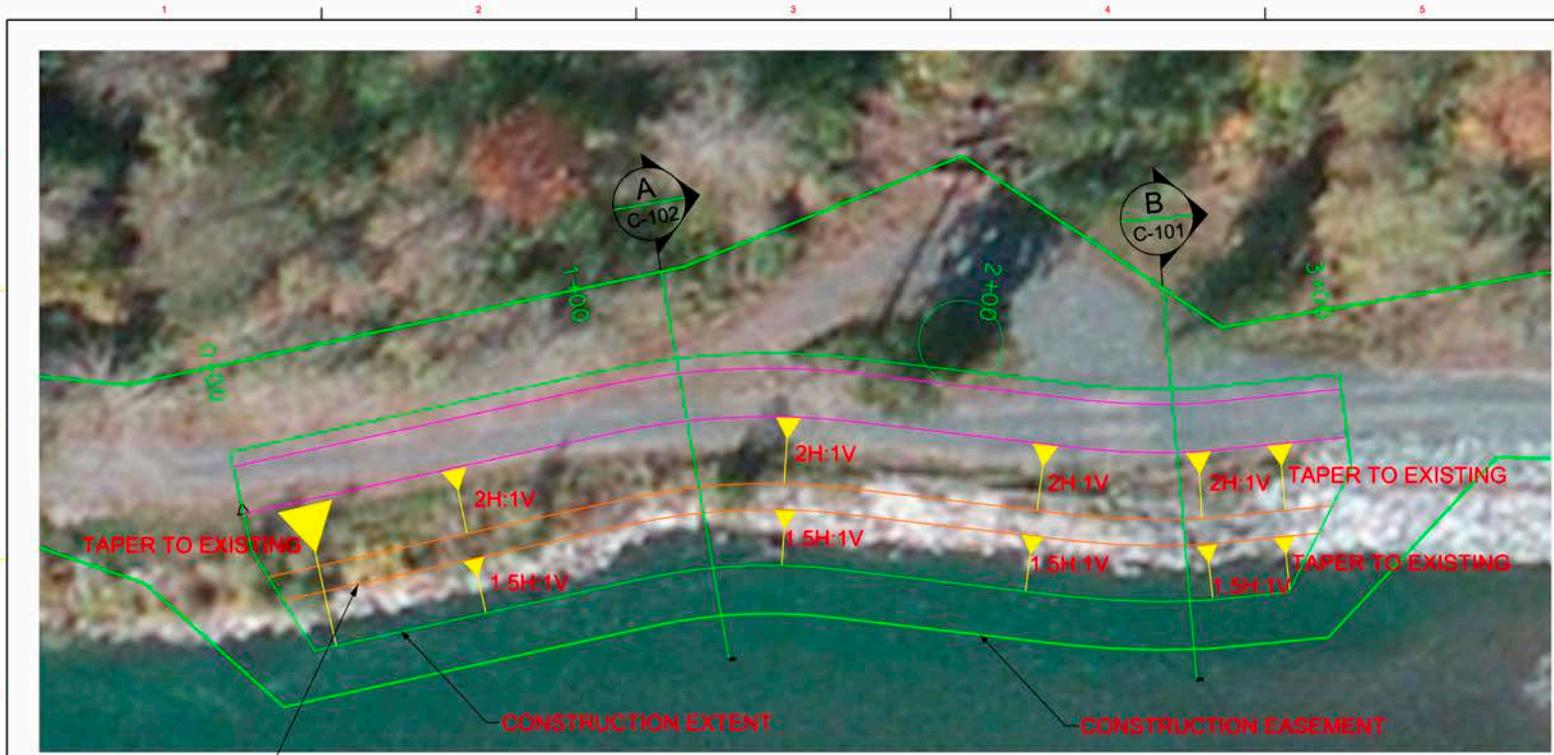
- 1) Shoreline Management Act: The consistency determination submitted to Washington Department of Ecology outlines the Corps analysis of substantive compliance with the SMA.

- 2) **State Water Quality Requirements:** The Corps concludes that the project is not subject to regulation under Sections 401 and 404 of the Federal Water Pollution Control Act. The exemption from the requirement to evaluate the effects of discharges of fill material into waters of the United States under 33 USC 1344(f)(1)(B) applies because all riverward work at the repair site will be conducted within the pre-damaged levee footprint. Therefore the proposed repair of the Sande-Williams Levee does not require a 404 (b)(1) evaluation nor a 401 water quality certification.
- 3) **State Air Quality Requirements:** The project constitutes a routine facility repair and/or maintenance activity, generating an increase in emissions that is clearly *de minimis* under 40 CFR 93.153(c)(2)(iv), and is therefore exempt from the conformity requirements of the Clean Air Act.
- 4) **State Environmental Policy Act:** Corps Civil Works projects comply with NEPA and are not subject to SEPA. The Corps is preparing an Environmental Assessment on the work and expects to conclude NEPA with a Finding of No Significant Impact prior to construction.

The remaining two policies, the Energy Facility Site Evaluation Council law and the Ocean Resources Management Act are not applicable to this project.

STATEMENT OF CONSISTENCY

Based on the above evaluation, the Corps has determined that the proposed action complies to the maximum practicable extent with the policies, general conditions, and activities as specified in the Whatcom County Shoreline Management Program approved by the Director of the Washington Department of Ecology. The proposed action is thus considered to be consistent to the maximum extent practicable with the State of Washington Shoreline Management Program and policies and standards of the Whatcom County Shoreline Master Program.



7' ROCK BENCH SANDE-WILLIAMS PLAN
1"=30'

- NOTES:
1. LANDWARD SLOPES SHALL BE BLENDED INTO EXISTING LANDWARD AREA.
 2. UPSTREAM AND DOWNSTREAM ENDS SHALL BE TAPERED TO FORM A SMOOTH TRANSITION INTO EXISTING.
 3. SITE SHALL BE ACCESSED FROM WILLIAMS ROAD.

IF SHEET MEASURES LESS THAN 22" X 34" IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY.

US Army Corps of Engineers SEATTLE DISTRICT	
PROJECT NO.: DRAWING NO.: SHEET NO.:	DATE: SCALE: DRAWN BY:
REVIEWED BY: CHECKED BY: DESIGNED BY: DATE:	
U.S. ARMY CORPS OF ENGINEERS SEATTLE DISTRICT SEATTLE, WASHINGTON	
2015 LATIVE RECONSTRUCTION SANDS W/LLIAMS ROAD BANK RINKS IS REPAIR-RINKS PLAN	
SHEET IDENTIFICATION C-101	

1 2 3 4 5



NOTES:
 1. EASEMENTS ON ACCESS ROADS AND THE LEVEE CROWN ARE 12 FEET WIDE.
 2. SEE SHEET C-101 & C-103 FOR SITE AND STAGING DETAILS.

SITE ACCESS OVERVIEW
 NTS



US Army Corps of Engineers
SEATTLE DISTRICT

NO.	DESCRIPTION	DATE	BY

DESIGNED BY: [] PROJECT NO.: []
 DRAWN BY: [] CONTRACT NO.: []
 CHECKED BY: [] DATE PLOTTED: []
 PROJECT NO.: [] FILE NUMBER: []
 DATE: [] FILE NAME: []

U.S. ARMY CORPS OF ENGINEERS
 SEATTLE DISTRICT
 SEATTLE, WASHINGTON

2025 FUTURE REDEVELOPMENT
 SANDE-WILLIAMS LEVEE
 SANDS AND WILLIAMS ROAD BANK
 RINKS IS
 SITE ACCESS

SHEET IDENTIFICATION
C-103

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