

STAFF REPORT
KIRBY BILLINGSLEY SHORELINE STABILIZATION (HYDRO PARK)

TO: Douglas County Hearing Examiner
FROM: Douglas County Land Services Staff
RE: Kirby Billingsley Shoreline Stabilization (Hydro Park) SP-2017-10
Public Utility District No. I of Chelan County
DATE: April 4, 2019

I. GENERAL INFORMATION

Requested Action: An application for a shoreline substantial development permit for shoreline stabilization of approximately 1,647 linear feet of bank slope at Kirby Billingsley Hydro Park.

Location: The subject property is described as being located within the Northeast Quarter of Section 24, Township 22N., Range 20 E., W.M., Douglas County, Washington. The shoreline designation is Urban Conservancy. The Douglas County Assessor's Numbers are 41000002305, 41000002306, 41000003402, 41000003500, 41000003604, 41000003603, 41000003602, 41000003601, 41000002801, 41000002801, and 41000002702.

II. SITE INFORMATION

Site Characteristics: Kirby Billingsley Hydro Park is a public recreational day-use area that offers picnicking, boat launching, swimming, baseball/soccer fields, tennis courts, and volleyball courts. There is also paved parking space for vehicles and boat trailers and a shoreline trail along the Columbia River. The project is located in an actively used park consisting of turf grass and other landscape vegetation with little shelter or refuge. Habitat available within the Park is of limited quality due to human use and modification. The shoreline consists of a heavily eroded bank and patches of riparian vegetation, including willows (*Salix* spp.), cottonwood (*Populus* spp.), and elm (*Ulmus* spp.). There is very little large woody material.

Project Proposal: Chelan PUD is proposing to construct bank stabilization measures at the Park to ensure public safety, provide additional fish habitat, and to protect the Park from ongoing river bank erosion. The bank of the Columbia River adjacent to the Park is being actively eroded by wave action, river level fluctuation, and elevated flows. Portions of the shoreline in the vicinity of the Park have eroded up to 5 feet in height, creating unstable banks for the general public and eroding river shoreline bank habitat. This bank erosion is expected to continue indefinitely if not stabilized, resulting in adverse effects to the Park streambanks and potentially affecting Endangered Species Act (ESA)-listed salmon, steelhead, and bull trout and designated critical habitat for these species. Thus, the purpose of the proposed Project is to improve the stability of the bank slope in the vicinity of the Park. Stability would be improved through the installation of three types of shoreline stabilization measures and designated shoreline access areas to reduce erosion from foot traffic.

The proposed Project will consist of installing three types of shoreline stabilization measures as well as designated public access points. Plan, profile, and cross-section details that illustrate the elements of the site improvements are provided. The use of

heavy mechanized equipment, including excavators, loaders, and dump trucks, will be required. Work will be done in the dry whenever possible and all staging will occur in the uplands of the Park above the OHWM. The following bank stabilization measures are planned for the Project:

Base Rock, Fiber Roll, and Live Stakes Installation

24-inch to 36-inch base rocks would be placed aligned with the OHWM. These rocks would be placed atop a 6-inch-deep layer of angular crushed rock and screened with a roughly 5-foot-wide fish-friendly gravel mix below the OHWM. This gravel mix would consist of 12-inch minus streambed cobble and sediment and will match the existing riverbed elevation. A 12-inch-diameter fiber roll (coir log or similar) would be placed atop the base rocks, tied back to the slope, and staked down between the rocks. The bank would be laid out slightly steeper than the existing slope at turf areas (not to exceed 4: 1) to preserve as much of the existing lawn as possible. Existing vegetation, including non-native species, would be removed to allow the installation of jute mesh over a layer of mulch and straw. Live stake plantings of various native species would be installed at 3-foot on center triangular spacing. Additional native trees and shrubs would be planted along the upland edge and intermixed with the live stake plantings. A wooden split rail fence would be installed at the upland edge of the work area to protect the stabilization measures and to reduce unauthorized access to the shoreline.

Terraced Rock Slope with Plantings Installation

36-inch base rocks would be placed with the waterward side aligning with the current OHWM. These rocks would be placed atop on a 6-inch-deep layer of angular crushed rock and screened with a roughly 5-foot-wide fish friendly gravel mix below the OHWM. This gravel mix would consist of 12-inch minus streambed cobble and sediment and would match the existing riverbed elevation. Additional 18-inch to 36-inch rocks would be placed atop the base rocks to resemble a 36-inch above grade retaining wall. Behind the wall, a series of additional 36-inch rock walls and sloped terraces (max slope 3:1) would be installed to meet the existing ground elevation. Adjacent walls would be spaced 5 to 10 feet apart. Geotextile tieback of the rock retaining walls would likely be required. Existing vegetation (including non-native shrubs and trees) would be removed in the rock slope area. Between the walls, jute mesh over native, non-mow hydro-seeding and straw would be placed. Native plantings would be installed atop this jute mesh and hydro-seed combination to stabilize the slope and screen the rock walls.

Armored Slope Installation

A 3-foot to 4-foot-thick revetment mat of angular rock would be installed atop a prepared subgrade and geotextile fabric at a 2: 1 max slope. The toe of the rock armoring would align with the OHWM. The toe of slope would be screened with an approximately 5-foot-wide layer of fish-friendly gravel mix below the OHWM matching the existing river bed contour. Existing native and non-native vegetation would be removed.

Gravel Beach Access with Containment Curb

A 6-inch-deep layer of 1-1/2-inch pea gravel would be installed extending to the upland edge of the OHWM. On the Park side of the pea gravel, a concrete containment curb would be installed with an anchor point for jet-skis. The gravel beach would be accessed through a break in the installed fencing from the Park side of the slope. The proposed Project includes shoreline stabilization both above and below the OHWM of the Columbia River as well as Park improvements in the uplands. Table 1 (below) summarizes the Project elements (McMillen Jacobs 2016b).

Table 1
Summary of Construction Elements for the Proposed Site Improvements

Project Element	Activities	Estimated Area or Quantity	Excavation volume	Fill volume
Base Rock, Fiber Roll, and Live Stake Installation	24-inch base rock (above OHWM)	16,674 sf	711 cy	156 cy
	Fish-friendly gravel mix (below OHWM)	5,257 sf	117 cy	234 cy
	Vegetation removal	1,051 lf	--	--
Terraced Rock Slope with Plantings Installation	Rock wall and slope lay back (above OHWM)	6,920 sf	78 cy	464 cy
	Fish-friendly gravel mix (below OHWM)	1,628 sf	37 cy	72 cy
	Vegetation removal	320 lf	--	--
Armored Slope Installation	Angular rock riprap (above OHWM)	1,485 sf	280 cy	220 cy
	Fish-friendly gravel mix (below OHWM)	826 sf	18 cy	37 cy
	Vegetation removal	165 lf	--	--
Gravel Beach Access with Containment Curb Installation	Pea gravel (above OHWM)	1,733 sf	52 cy	50 cy
	Containment curb (above OHWM)	180 lf	--	--
	Vegetation removal	111 lf	--	--

The use of heavy mechanized equipment will be required. Equipment to be used will include excavators, loaders, front-end lifts, dump trucks, and a bulldozer. Construction will primarily occur using equipment based in the uplands above OHWM; however, excavator buckets will also operate below the OHWM to excavate sediments to install the fish-friendly gravel mix. The Project is expected to be completed in one construction season, and will begin with the development of the access and staging areas. In-water excavation (below the OHWM) will occur from lowest elevations to highest elevations. Excavated material will be stockpiled upland on site or, if unsuitable for backfill on the new shoreline slope, put to other beneficial re-use on site or disposed at an off-site approved location.

Zoning and Development Standards: The subject property is a “Recreation Overlay.” The purpose of the R-O recreational overlay district is to provide for the continuance of public and private parks and other outdoor recreational facilities in order to encourage the development of additional active recreational facilities in Douglas County, and to maintain adequate buffers between recreational developments and surrounding land uses.

III. COMPREHENSIVE PLAN:

The subject property is a “Recreation Overlay.” Encourage the retention of open space and development of recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks. The following goals and policies set forth in the comprehensive plan are relevant to this development:

CRITICAL AREAS – FISH AND WILDLIFE HABITAT CONSERVATION AREAS

GOAL 1: Protect fish and wildlife habitat areas as an important natural resource for Douglas County, particularly in regard to their economic, aesthetic and quality of life values.

POLICY CA-14: Impacts of new development on the quality of land, wildlife and vegetative resources will be considered as part of the environmental review process and require any

appropriate mitigating measures. Such mitigation may involve the retention and/or enhancement of habitats.

POLICY CA-15: The maximum amount of vegetation should be maintained in its natural state and be disturbed only as minimally necessary for the development. Disturbed areas should be re-vegetated with native vegetation as soon as possible. Re-vegetation will be maintained in good growing conditions, as well as being kept free of noxious weeds.

POLICY CA 16: If a development proposal is located in or near a habitat conservation area shown on the reference maps, a consultation and subsequent mitigation measures, if needed, should be encouraged from the WDFW or other appropriate agency.

POLICY CA-19: Proper riparian management that maintains existing riparian habitat and is consistent with best agricultural management practices should be encouraged.

POLICY CA-20: Ensure that land uses adjacent to naturally occurring wetlands and other fish and wildlife habitat areas will not negatively impact the habitat areas. If a change in land use occurs, adequate buffers will be provided to the habitat areas.

POLICY CA-21: Activities allowed in fish and wildlife habitat conservation areas and open space will be consistent with the species located there, including all applicable state and federal regulations and/or best management practices for the activity regarding that species.

According to the applicant, the Kirby Billingsley Hydro Park (Park) Shoreline Stabilization Habitat Management and Mitigation Plan (HMMP) describes three wetlands (Wetlands A, B, and C) along the shoreline in the Park that will be impacted by construction activities. Wetland A is located at the northern end of the Project area outside of the proposed shoreline stabilization area. Wetland B is located in the middle of the shoreline Project area where no stabilization measures are proposed. Wetland C is located at the southern end of the Project area (McMillen Jacobs 2016). The Project is focused on bank stabilization in the areas identified, and wetlands will be avoided and enhanced (Wetland C; 0.03 acres). The wetland will be filled with shoreline stabilization features. These enhanced plantings will increase public safety and help stabilize the bank along the shoreline. Following the installation of shoreline stabilization features, the bank will be replanted with native riparian and wetland vegetation. Both the McMillen Jacobs, 2016a Kirby Billingsley Hydro Park Shoreline Stabilization Biological Assessment Prepared for Chelan County Public Utility District No. 1, Wenatchee, W A Dated December 2016; and McMillen Jacobs, 2016b Kirby Billingsley Hydro Park Shoreline Stabilization Habitat Management and Vegetation Plan Prepared for Public Utility District No. 1 or Chelan County, Washington Dated December 2016 have been provided.

The HMMP has been prepared to address potential impacts to the Columbia River and associated shoreline wetlands and wetland buffers.. The wetland will include enhanced plantings with native riparian and buffer vegetation following the installation of shoreline stabilization features. The completed Project will also provide fish habitat in the vicinity of the Park's shoreline as well as replace non-native vegetation along the shoreline with native riparian plantings. The McMillen Jacobs, 2016b Kirby Billingsley Hydro Park Shoreline Stabilization Habitat Management and Vegetation Plan Prepared for Public Utility District No. 1 or Chelan County, Washington Dated December 2016 is provided.

In addition, cultural resource studies were conducted extensively as part of the licensing for Rock Island Dam.

IV. SHORELINE MASTER PROGRAM

The Douglas County Regional Shoreline Master Program classifies this reach of the Columbia River shoreline as Urban Conservancy. The purpose of the urban conservancy environment is to protect and restore ecological functions of open space, floodplain and other sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses.

A listing of the applicable policies and regulations are found in the analysis section of this staff report.

WASHINGTON ADMINISTRATIVE CODE (WAC)

WAC 173-27 provides updated rules for administering the Shoreline Management Act (RCW 90.58) and the local master program. WAC 173-27-150 establishes minimum review criteria for substantial development permits. The criteria states that a substantial development permit shall be granted only when the proposed development is consistent with:

- The policies and procedures of the Act;
- The provisions of these regulations; and
- The applicable master program adopted or approved for the area.

The applicant has provided a "Written Response to Criteria in the Washington Administrative Code."

V. ENVIRONMENTAL REVIEW

Chelan PUD is the designated Responsible Official; and issued a Determination of Non-significance on July 24, 2017.

VI. AGENCY AND PUBLIC COMMENTS:

Applicable agencies have been given the opportunity to review this proposal. The following agencies have been sent copies of the proposal and have commented as indicated below:

Agency Notified	Response Received	Agency Notified	Response Received
WA Department of Ecology	N/R	WA Dept. of Fish & Wildlife	N/R
WA Department of Ecology - Shorelines	N/R	WA Department of Natural Resources	N/R
Chelan County PUD	N/R	Yakama Nation	N/R
DC PUD	N/R	US Army Corps of Engineers	N/R

* N/R = No Reply

No agency comments were received at the writing of this staff report.

No public comments were received at the writing of this staff report.

VII. PROJECT ANALYSIS

Upon review of the application materials, site plans, agency comments, the Douglas County Countywide Comprehensive Plan, the Douglas County Regional Shoreline

Master Program and other applicable codes and requirements, planning staff offers the following analysis and recommendations for the subject application:

Comprehensive Plan consistency:

Open Space / Recreation and Public Access can be considered when potential adverse impacts to water quality, slope stability, vegetation, wildlife and aquatic life have been sufficiently addressed. Critical area policies place preference on the protection of and preservation of wetlands over the alteration and mitigation of impacts to wetlands. The proposal is consistent with the goals and policies of the Douglas County Countywide Comprehensive Plan.

Consistency with the Douglas County Shoreline Master Program

The applicant has provided information that demonstrates consistency with the Douglas County Shoreline Master Program (SMP).

The following goals and objectives set forth in the Shoreline Master Program are relevant to this project:

PUBLIC ACCESS:

GOAL 1: Provide safe, convenient and diversified access for the public to the publicly owned shorelines of Douglas County and assure that public access facilities will recognize the rights of private property owners, will not endanger life, and will not adversely affect fragile natural areas and resources.

GOAL 2: Provide the public opportunities to enjoy the physical and aesthetic qualities, including views, of shorelines of the state consistent with the other goals and policies of this Program.

OBJECTIVE 1: Promote and enhance the public interest with regard to rights to access waters held in public trust by the state, while protecting private property rights and public safety.

OBJECTIVE 4: Encourage the development of additional public access to the shoreline on lands owned by the county, state, and federal government and through public easements.

OBJECTIVE 6: Public access should be located, designed, developed, managed and maintained in a manner that protects shoreline ecological functions and processes.

RECREATION:

GOAL 1: Provide opportunities and space for diverse forms of water-oriented recreation.

OBJECTIVE 2: Recreational areas should be located, designed, developed, managed, and maintained in a manner that protects shoreline ecological functions and processes.

OBJECTIVE 3: Recognize and protect the interests of all people of the state by providing increased recreational opportunities within shorelines of statewide significance.

OBJECTIVE 4: Provide diverse choices of regional water-oriented public recreational opportunities when consistent with this Program.

OBJECTIVE 5: Location, design and operation of recreational development shall consider measures necessary to establish a high level of compatibility with other uses and activities and avoid negative impacts to the shoreline environment.

OBJECTIVE 7: Encourage federal, state and local governments to develop existing sites and to acquire additional shoreline property for public recreational use.

HISTORICAL/ CULTURAL

GOAL 1: Identify, protect, preserve and, where appropriate, restore sites that have historical, cultural, educational and scientific value and/or significance.

OBJECTIVE 1: Cultural and historic sites should be protected in collaboration with appropriate tribal, state, federal and local governments. Public agencies and private parties should be encouraged to cooperate in the identification, protection and management of cultural resources.

4.1 ECOLOGICAL PROTECTION AND CRITICAL AREAS

POLICY 1: Shoreline use and development should occur in a manner that assures no net loss of existing ecological functions and processes and protects critical areas. Uses should be designed and conducted to avoid, minimize, or to fully mitigate in so far as practical, any damage to the ecology and environment.

The applicant has provided studies, reports and/or plans to address no net loss of ecological functions and protects critical areas. An inventory of the materials are summarized below and are within the file of record.

REGULATION 1: Mitigation sequencing – applicants shall demonstrate all reasonable efforts have been taken to mitigate potential adverse impacts in the following prioritized order:

- a. Avoiding the impact altogether by not taking a certain action or parts of an action;
- b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
- c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project;
- d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
- e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and
- f. Monitoring the impact and the compensation projects and taking appropriate corrective measures.

Suggested conditions of approval require that the mitigation measures be monitored for 5 years after installation to determine survivability and corrective measures be taken if survivability is not achieved.

The applicant has provided the following plans and/or studies in support and address Mitigation sequencing:

- A. McMillen Jacobs (McMillen Jacobs Associates), 2015. Kirby Billingsley Hydro Park Shoreline Stabilization Waters of the US and Wetlands Delineation Report. Prepared For Chelan County Public Utility District No. 1, Wenatchee, WA. Dated November 2015.*
- B. McMillen Jacobs, 2016a. Kirby Billingsley Hydro Park Shoreline Stabilization Biological Assessment. Prepared for Chelan County Public Utility District No. 1, Wenatchee, W A. Dated December 2016.*
- C. McMillen Jacobs, 2016b. Kirby Billingsley Hydro Park Shoreline Stabilization Habitat Management and Vegetation Plan. Prepared for Public Utility District No. 1 or Chelan County, Washington. Dated December 2016 and amended May 1, 2018.*
- D. Water Quality Protection Plan (WQPP); Spill Prevention, Control, and Countermeasures (SPCC) Plan; and Temporary Erosion and Sedimentation Control (TESC) Plan.*
- E. Master Stabilization Plan received March 12, 2019 includes:*
 - a. Existing Conditions; Demolition Plan; Erosion and Sedimentation Control Plan (Areas A-E); Site Plan; Site Details; Grading Plan; Landscaping Plan; and Irrigation Plan.*

Generally, the project is designed to minimize impacts to instream and upland habitat in the vicinity of the Park. In order to avoid or minimize potential adverse impacts to the environment, the applicant has provided BMPs which will be employed during construction

4.2 WATER QUALITY

REGULATION 5: All building materials that may come in contact with water shall be constructed of untreated wood, cured concrete or steel. Materials used for decking or other structural components shall be approved by applicable state agencies for contact with water to avoid discharge of pollutants. Wood treated with creosote, arsenate compounds, copper chromium arsenic or pentachlorophenol is prohibited in shoreline water bodies.

The Master Stabilization Plan received March 12, 2019 and supporting studies include measures to protect the Columbia River. .

4.3 VEGETATION CONSERVATION

REGULATION 2: Where impacts to buffers are permitted under Section 4.1, Ecological Protection and Critical Areas, new developments shall be required to develop and implement a management and mitigation plan. When required, management and mitigation plans shall be prepared by a qualified biologist and shall be consistent with the requirements of Appendix H. Management and mitigation plans shall describe actions that will ensure no net loss of ecological functions. Vegetation shall be maintained over

the life of the use and/or development by means of a conservation easement or similar legal instrument recorded with the County Auditor.

REGULATION 4: Native vegetation clearing shall be limited to the minimum necessary to accommodate approved shoreline development.

The McMillen Jacobs, 2016b Kirby Billingsley Hydro Park Shoreline Stabilization Habitat Management and Vegetation Plan Prepared for Public Utility District No. 1 or Chelan County, Washington Dated December 2016 and amended May 1, 2018 was submitted in the application materials.

4.7 RESTORATION

POLICY 2: Mitigation associated with shoreline development projects shall be designed to achieve no net loss of ecological function.

The McMillen Jacobs, 2016b Kirby Billingsley Hydro Park Shoreline Stabilization Habitat Management and Vegetation Plan Prepared for Public Utility District No. 1 or Chelan County, Washington Dated December 2016 and amended May 1, 2018 was submitted in the application materials.

5.14 SHORELINE STABILIZATION

1. New development or land divisions with a known or suspected geological hazard shall be set back from the geologic hazard or designed sufficiently to ensure that shoreline stabilization is not required during the life of the project, as demonstrated by a geotechnical analysis prepared in conformance with Section 4.1 Ecological Protection and Critical Areas.
2. New, expanded or replacement shoreline stabilization shall not be permitted unless it can be demonstrated that the proposed measures will not result in a net loss of shoreline ecological functions.
3. New or enlarged structural shoreline stabilization measures for an existing primary structure, including residences, are prohibited unless there is conclusive evidence, documented by a geotechnical analysis, that the structure is in danger from shoreline erosion caused by stream processes or waves. Normal sloughing, erosion of steep bluffs, or shoreline erosion itself, without a scientific or geotechnical analysis, is not demonstration of need. The geotechnical analysis shall evaluate onsite drainage issues and address drainage problems away from the shoreline edge before considering structural shoreline stabilization.
4. New shoreline stabilization for new water-dependent development is prohibited unless it can be demonstrated that:
 - a. The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage;
 - b. Nonstructural measures, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient; and
 - c. The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report.
5. New shoreline stabilization for new non-water-dependent development, including single family residences, is prohibited unless it can be demonstrated that:
 - a. The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage;

- b. Nonstructural measures, such as placing the development further from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient; and
 - c. The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report. The damage must be caused by natural processes, such as stream processes or waves.
6. Where shoreline 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.
 7. Replacement of an existing shoreline stabilization structure with a similar structure is permitted if there is a demonstrated need to protect primary uses or structures or public facilities including roads and bridges, railways, and utility systems, from erosion caused by stream undercutting or wave action. A geotechnical analysis shall be required to document that alternative solutions are not feasible or do not provide sufficient protection. Existing shoreline stabilization structures that are being replaced shall be removed from the shoreline unless removal of such structures will cause significant damage to shoreline ecological functions or processes. When a vertical or near vertical wall is being constructed or reconstructed, not more than one cubic yard of fill per one foot of wall may be used as backfill to qualify for single family home exemption. Replacement walls, bulkheads or revetments shall not encroach waterward of the ordinary high water mark or the existing shore defense structure unless the primary use being protected is a residence that was occupied prior to January 1, 1992, and there is overriding safety or environmental concerns. In such cases, the replacement structure shall abut the existing shoreline stabilization structure.
 8. Beach nourishment and bioengineered erosion control projects may be considered a normal protective bulkhead when any structural elements are consistent with the above requirements and when the project has been approved by the Department of Fish and Wildlife.
 9. Groynes are prohibited except as a component of a professionally designed community or public beach management program that encompasses an entire reach for which alternatives are infeasible, or where installed to protect or restore shoreline ecological functions or processes.
 10. Jetties and breakwaters are prohibited except as an integral component of a professionally designed marina. Where permitted, floating, portable or submerged breakwater structures, or smaller discontinuous structures are preferred where physical conditions make such alternatives with less impact feasible.
 11. New or expanded shoreline stabilization may be permitted to protect projects with the primary purpose of enhancing or restoring ecological functions, or hazardous substance remediation permits pursuant to RCW 70.105D, Hazardous Waste Cleanup, when non-structural approaches, such as vegetation planting, and/or onsite drainage improvements are not feasible or do not provide sufficient protection.
 12. Proposed designs for new or expanded shoreline stabilization shall be designed and certified by a qualified engineer and a qualified biologist.
 13. 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.
 14. 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.
 15. Public access shall be provided for publicly financed shoreline erosion control measures consistent with the requirements of WAC 173-26-231(3)(a)(iii)(E).

16. Geotechnical reports that address the need to prevent potential damage to a primary structure shall address the necessity for shoreline stabilization by estimating time frames and rates of erosion and report on the urgency associated with the specific situation.
17. Hard armoring solutions should not be authorized except when a geotechnical report confirms that there is a significant possibility that the primary structure will be damaged within three years as a result of shoreline erosion in the absence of hard armoring measures, or where waiting until the need is that immediate, would foreclose the opportunity to use measures that avoid impacts on ecological functions. Where the geotechnical report confirms a need to prevent potential damage to a primary structure, but the need is not as immediate as the three years, the report may still be used to justify more immediate authorization to protect against erosion using soft measures.
18. Shoreline stabilization for the purposes of addressing mass wasting or erosion due to upland conditions shall also be in conformance with Section 4.1 Ecological Protection and Critical Areas.

The applicant has provided a "Written Response to Regulations 1 to 18 in Section 5.14, Douglas County Shoreline Master Program."

Appendix H, Chapter 3: Critical Areas – Fish and Wildlife Habitat Conservation Areas

The McMillen Jacobs, 2016b Kirby Billingsley Hydro Park Shoreline Stabilization Habitat Management and Vegetation Plan. Prepared for Public Utility District No. 1 or Chelan County, Washington Dated December 2016 and amended May 1, 2018 was submitted in the application materials.

As conditioned, the proposal is consistent with this section.

Consistency with WAC 173-27 and RCW 90.58:

As conditioned below, the project appears consistent with the requirements and criteria of the Shoreline Management and Enforcement Procedures, and the Shoreline Management Act.

VIII. RECOMMENDATION

As conditioned below, this application does not appear to be detrimental to the general public health, safety or welfare and meets the basic intent and criteria associated with Title 18 and 19 of the Douglas County Code, the Douglas County Countywide Comprehensive Plan, and the Douglas County Regional Shoreline Master Program. Staff recommends approval of SP-2017-10, subject to the following findings of fact and conditions:

Suggested Findings of Fact

1. The applicant is Public Utility District No. 1 of Chelan County.
2. Public Utility District No. 1 of Chelan County has submitted an application for a shoreline substantial development permit for shoreline stabilization of approximately 1,647 linear feet of bank slope at Kirby Billingsley Hydro Park. .
3. The subject property is described as being located within the Northeast Quarter of Section 24, Township 22N., Range 20 E., W.M., Douglas County, Washington. The shoreline designation is Urban Conservancy. The Douglas County Assessor's Numbers are 41000002305, 41000002306, 41000003402, 41000003500,

41000003604, 41000003603, 41000003602, 41000003601, 41000002801, 41000002801, and 41000002702

4. The subject property is located in the Recreation Overlay.
5. The Columbia River Shoreline section of the subject property is designated as Urban Conservancy by the Douglas County Regional Shoreline Master Program.
6. WAC 173-27-150 establishes minimum review criteria for Shoreline Substantial Development Permits. This criteria states that a substantial development permit shall be granted only when the development proposed is consistent with the policies and procedures of the Act; the provisions of this regulation; and the applicable master program adopted or approved for the area.
7. The applicant has provided the following plans and/or studies in support of the project:
 - A. McMillen Jacobs (McMillen Jacobs Associates), 2015 Kirby Billingsley Hydro Park Shoreline Stabilization Waters of the US and Wetlands Delineation Report Prepared For Chelan County Public Utility District No. 1, Wenatchee, WA Dated November 2015.
 - B. McMillen Jacobs, 2016a Kirby Billingsley Hydro Park Shoreline Stabilization Biological Assessment Prepared for Chelan County Public Utility District No. 1, Wenatchee, W A Dated December 2016.
 - C. McMillen Jacobs, 2016b Kirby Billingsley Hydro Park Shoreline Stabilization Habitat Management and Vegetation Plan Prepared for Public Utility District No. 1 or Chelan County, Washington Dated December 2016 and amended May 1, 2018.
 - D. Water Quality Protection Plan (WQPP); Spill Prevention, Control, and Countermeasures (SPCC) Plan; and Temporary Erosion and Sedimentation Control (TESC) Plan.
 - E. Master Stabilization Plan received March 12, 2019, includes: Existing Conditions; Demolition Plan; Erosion and Sedimentation Control Plan (Areas A-E); Site Plan; Site Details; Grading Plan; Landscaping Plan; and Irrigation Plan
8. The mitigation proposed in the plans and/or studies meets the requirements of the Douglas County Regional Shoreline Master Program. Specifically, 4.1 Ecological Protection And Critical Areas, 4.2 Water Quality, 4.3 Vegetation Conservation, 4.7 Restoration, and 5.14 Shoreline stabilization
9. The project is designed to minimize impacts to instream and upland habitat in the vicinity of the Park. In order to avoid or minimize potential adverse impacts to the environment, the applicant has provided Best Management Practices which will be employed during construction.
10. Chelan PUD is the designated Responsible Official; and issued a Determination of Non-significance on July 24, 2017.
11. The applicant has provided a "Written Response to Criteria in the Washington Administrative Code."
12. Cultural resource studies were conducted extensively as part of the licensing for Rock Island Dam; and the Yakama Nation was provided an opportunity to comment.
13. Surrounding property owners were given the opportunity to comment on the proposal, can request a copy of the decision, and can appeal the decision subject to the requirements outlined in DCC Title 14.
14. No public comments were received at the writing of this staff report
15. Proper legal requirements were met and surrounding property owners were given the opportunity to comment on the proposal at a public hearing.

16. WAC 173-27-090 requires that construction must be commenced within 2 years of the effective date of the shoreline permit and that authorization for construction shall terminate 5 years after the effective date of the shoreline permit.
17. As conditioned, the development will not adversely affect the general public, health, safety and general welfare.

Suggested Conclusions:

1. As conditioned, the development meets the goals, policies and implementation recommendations as set forth in the Douglas County Countywide Comprehensive Plan and the Douglas County Regional Shoreline Master Program.
2. As conditioned, this proposal is consistent with applicable federal and state laws and regulations.
3. As proposed, revised, and conditioned, potential impacts of the project can be mitigated.
4. Public interests will be served by approval of this proposal.
5. As conditioned, the proposal is consistent with Title 18 "Zoning" and Title 19 "Environment" of the Douglas County Code.

Suggested Conditions of Approval:

1. The project shall proceed in substantial conformance with the plans and application materials on file, submitted on August 21, 2017, revised and augmented May 31, 2018 and further revised on March 12, 2019 except as amended by the conditions herein.
2. The applicant shall comply with all applicable local, state and federal regulations.
3. A copy of this permit and attached conditions shall be kept on-site and provided to the contractor and all others working within the shoreline area at all times. The applicant, contractor, machinery operators and all others working within the shoreline area shall have read this permit and attached conditions and shall follow its conditions at all times.
4. The project application shall proceed consistent with the following plans and/or studies in support of the project:
 - A. McMillen Jacobs (McMillen Jacobs Associates), 2015 Kirby Billingsley Hydro Park Shoreline Stabilization Waters of the US and Wetlands Delineation Report Prepared For Chelan County Public Utility District No. 1, Wenatchee, WA Dated November 2015.
 - B. McMillen Jacobs, 2016a Kirby Billingsley Hydro Park Shoreline Stabilization Biological Assessment Prepared for Chelan County Public Utility District No. 1, Wenatchee, WA Dated December 2016.
 - C. McMillen Jacobs, 2016b Kirby Billingsley Hydro Park Shoreline Stabilization Habitat Management and Vegetation Plan Prepared for Public Utility District No. 1 or Chelan County, Washington Dated December 2016 and amended May 1, 2018.
 - D. Water Quality Protection Plan (WQPP)
 - E. Spill Prevention, Control, and Countermeasures (SPCC) Plan
 - F. Temporary Erosion and Sedimentation Control (TESC) Plan
 - I. Master Stabilization Plan received March 12, 2019 which includes, but is not limited to: Existing Conditions; Demolition Plan; Erosion and Sedimentation Control Plan (Areas A-E); Site Plan; Site Details; Grading Plan; Landscaping Plan; and Irrigation Plan
5. The following BMPs will be employed during construction:

- A. All applicable permits for the Project would be obtained prior to construction. Work would be performed according to the requirements and conditions of these permits.
- B. The contractor would inspect fuel hoses, oil or fuel transfer valves, and fittings on a regular basis for drips or leaks in order to prevent spills or runoff of deleterious materials into the surface water.
- C. The contractor would conduct all refueling at least 150 feet from the river.
- D. Chelan PUD would develop a Water Quality Protection Plan.
- E. The contractor would be responsible for the preparation and implementation of a Spill Prevention, Control, and Countermeasures (SPCC) Plan to be used for the duration of the Project, which would include spill prevention, control, and response BMPs. In addition, the SPCC Plan would outline roles and responsibilities, notifications, inspections, and response protocols to be implemented in the event of a spill.
- F. The contractor would provide the Project Engineer with a Temporary Erosion and Sedimentation Control (TESC) Plan and/or a Construction Stormwater Pollution Prevention Plan (SWPPP) that would use BMPs to prevent erosion and sediment-laden runoff from leaving the site; this TESC/SWPPP would be implemented prior to the start of ground-disturbing activities.
- G. All areas disturbed by Project construction would be stabilized and re-vegetated as soon as possible post-construction to prevent erosion prior to the removal of TESC/SWPPP measures.
- H. As part of the TESC/SWPPP, clearing limits would be clearly marked to limit impacts to upland vegetation in those areas proposed as part of this Project. The contractor would clean equipment to remove noxious weeds/seeds, aquatic invasive species, and petroleum products prior to mobilizing to the site.
- I. The contractor would not use asphalt, concrete, or steel for shoreline stabilization or in the active stream channel. Geofabric will be used behind the treatment to stabilize the area.
- J. Excess or waste materials would not be disposed of or abandoned waterward of the OHWM or allowed to enter Waters of the State.
- K. Demolition and construction materials would not be stored where wave action or upland runoff can cause materials to enter surface waters.
- L. For temporary upland soil or sediment stockpiles, the offloading site would include BMPs consistent with the SWPPP to prevent uncontrolled release of material to aquatic areas or upland areas.
- M. Excavators and loaders would contain hydraulic fluid certified as non-toxic to aquatic organisms.
- N. If in-water work occurs, a turbidity curtain would be installed in the water below the OHWM around the work area to minimize the downstream transport of re-suspended sediments from construction activities in the mainstem of the Columbia River.
- O. If in-water work occurs, a block seine would be deployed from shore to herd fish out of the construction area. Once deployed, the area would be surveyed via snorkeling to ensure all ESA-listed fish are excluded from the construction area. The seine would remain in place during all in-water construction activities to prevent fish from re-entering the construction area.
- P. The placement of material would occur starting at lower elevations and working to higher elevations, to the extent practicable.
- Q. Imported materials would consist of clean granular material free of contaminants and all other deleterious materials.

- R. In-water work will be conducted during the approved in-water work window, currently October 1 - 31 for Chelan PUD.
4. A five year monitoring period shall commence upon placement of the planting materials and irrigation system.
 5. The mitigation site shall be maintained to ensure the management and mitigation plan objectives are successful. Maintenance shall ensure 80% survival during the 5 year monitoring period and shall include corrective actions to rectify problems, include rigorous, as-needed elimination of undesirable plants; protection of shrubs and small trees from competition by grasses and herbaceous plants, and repair and replacement of any dead plants.
 6. Onsite monitoring and monitoring reports shall be submitted to Douglas County Transportation and Land Services 1 year after mitigation installation; 3 years after mitigation installation; and 5 years after mitigation installation. Monitoring reports shall be submitted by a qualified biologist, as defined by Douglas County Code. The biologist must verify that the conditions of approval and provisions in the Habitat Management and Mitigation Plan have been satisfied.
 7. Non-compliance can result in the scheduling a hearing with the Douglas County Hearing Examiner to review conformance with the conditions of approval and to determine what actions may be appropriate.
 8. Where a condition imposed herein may be found inconsistent with the requirements of the Washington State Department of Fish and Wildlife, HPA Permit, or permitting issued by the United States Army Corps of Engineers, the Douglas County Land Services Director shall have discretion to allow for project redesign consistent with the approvals granted by said agencies; if the redesign can be found consistent with the Douglas County Code, the Shoreline Master Program, and the Shoreline Management Act.
 9. Construction of the project for which this permit has been granted must be commenced within two (2) years of the effective date of this permit. Authorization to conduct development activities granted by the permit shall terminate five (5) years from the filing date of the permit.

Respectfully Submitted, Land Services Department

Attachments / File of Record