

Wanapum Right Bank Stabilization Mitigation Plan

September 2019

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1.0 Introduction

In May 2018, due to high run off flows of the Columbia River, the right (west) bank near the Wanapum avian tower 4 required emergency stabilization. The shoreline was armored 100 yards downstream and 100 yards downstream of the avian tower. Public Utility District No. 2 of Grant County, Washington (Grant PUD) will armor the remaining slope between the repaired area to the existing rip-rap near the right fish bank. Approximately 300 yards of shoreline will be armored to protect the shoreline and decrease further erosion and damage.

1.1 Project Location

The Wanapum Dam is located on the Columbia River, at river mile 415.8. The additional armoring of the shoreline will occur on the right (west) bank near avian tower 4. See Figure 1



Figure 1 Wanapum Dam Right Bank Armor Project.

1.2 Mitigation Area Location and Site Description

The Airstrip is located at North 46.8646, West -119.9682. It is a Grant PUD owned property that is approximately 77 acres of reclaimed farm land that has a de-commissioned airstrip. Currently, Grant PUD manages this property for wildlife habitat enhancements under FERC License Article 409. It is bordered on the eastern edge by the Columbia River and contains a large upland component throughout the central portion of the property (Figure 2). The Airstrip is frequented by a number of native wildlife species including coyote (*Canis latrans*), bobcat (*Lynx rufus*), Rocky Mountain Elk (*Cervus elaphus nelsoni*), mule deer (*Odocoileus hemionus*) and several species of raptors, upland and migratory bird species as well as being a key wintering area for waterfowl.



Airstrip Upland Mitigation Planting

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Figure 2 Proposed Airstrip Mitigation Area.

1.3 Vegetation Mitigation Objectives

The goal of the proposed vegetation mitigation is to provide long-term beneficial impacts to wildlife habitat conditions at the Airstrip property in order to compensate for disturbances related to the Wanapum Right Bank Stabilization Project. Vegetation mitigation will be accomplished by planting select native species at Airstrip, beginning in the fall of 2019. Grant PUD will be responsible for the installation and maintenance of the mitigation area for a period of three years.

2.0 Methods

Grant PUD proposes to install a native grass seed mix (Table 1) throughout approximately 46 acres of the upland portion of the Airstrip property in the fall of 2019. Once these grasses have been established, Grant PUD will plant 500 Big Sagebrush (*Artemisia tridentata*) 40 c.i. plugs throughout the site in Fall 2021. By postponing the planting of sagebrush until 2021, it allows for the 2020 and 2021 applications of broadleaf herbicides to suppress the existing seed bank of Russian thistle and other potential noxious weeds due to the nature of the site. Any Big Sagebrush seedlings would be affected by those herbicide applications.

The native seed mix will be applied with a drill seeder by Benson Farms Inc. Native Seeds (BFI). Prior to the 2019 planting efforts, BFI will mow, harrow and spray for invasive weeds throughout the mitigation area. Plug plantings will be installed using hand tools consisting of dibble bars and shovels in Fall of 2021.

Table 1 List of native grasses and mix ratios.

| Common Name | Bio-type/Cultivar | PLS lbs / Acre |
|--------------------------|-------------------|----------------|
| Bluebunch wheatgrass | Wahluke | 3.9 |
| Indian ricegrass | Nezpar | 1.5 |
| Bottlebrush squirreltail | Yakama | 0.6 |
| Sandberg's bluegrass | Frenchman Coulee | 0.6 |
| Thickspike wheatgrass | Scwendimar | 2.7 |
| Needle and Threadgrass | Col Bas | 0.6 |
| Sand Dropseed | Pasco | 0.05 |
| | Total | 10.00 |

3.0 Monitoring and Maintenance

Monitoring and maintenance will be conducted by Grant PUD staff throughout the Airstrip mitigation site for a period of three years. Staff will conduct site visits regularly throughout the year to observe and note weed growth, native wildlife usage and the general wellbeing of plantings at each site. This routine monitoring will provide crews the opportunity to provide weed maintenance as needed.

3.1 Photo Points

Grant PUD staff will establish three photo points evenly distributed throughout the mitigation area. Photos will be taken from each location in the four cardinal directions. These photos will be used to illustrate the overall progress of the site and included in a year-end report to WDFW.

4.0 Reporting

Grant PUD will submit a status report to WDFW by December 31, each year for a total of three years. Annual reports will illustrate site conditions, adaptive management and any weed control efforts that occurred during the year. The report will also include monitoring pictures from each of the photo points that will indicate the overall progress of the site.

5.0 Conclusion

In an effort to mitigate for the Wanapum Right Bank Stabilization Project, Grant PUD will drill-seed a native seed mix throughout approximately 46 acres of the Airstrip property. After native grasses have established, Grant PUD will plant 500 Big Sagebrush plugs throughout the site in 2021. Grant PUD staff will routinely monitor the site and conduct weed management throughout the growing season. Three photo points will be established that illustrate the progress of the seed mix and plug plantings on an annual basis. Grant PUD will provide WDFW a status report that includes a summary of management activities conducted throughout the year for a total of three years.