

November 2020
DuPont Aggregates South Parcel Project



Floodplain Habitat Assessment and Mitigation Report

Prepared for
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1 Introduction

Glacier Northwest, Inc., dba CalPortland, is seeking regulatory approvals for the Pioneer Aggregates South Parcel Project (Project), which proposes to extend sand and gravel mine operations to the southeast of existing activities at the Pioneer Aggregates Mine in DuPont, Washington. This Floodplain Habitat and Mitigation Report (Report) has been prepared per Federal Emergency Management Agency (FEMA) guidelines as defined in the FEMA guidance document *Regional Guidance for Floodplain Habitat and Assessment and Mitigation in the Puget Sound Basin* (FEMA 2013).

There is one waterbody in the Project Area, the 1.78-acre Kettle Wetland. Fish and wildlife habitat conservation areas located within the Project Area include the Kettle Wetland, the associated wetland buffer, and upland vegetation communities. The following Project documents have been prepared describing the Kettle Wetland and vegetation communities and wildlife habitat conditions within the Project Area:

- *North Sequim Creek Project Impact Area Wetland Delineation Report* (Anchor Environmental 2007)
- *Addendum to 2007 North Sequim Creek Project Impact Area Wetland Delineation Report* (Anchor QEA 2018)
- *South Parcel Expansion Project Critical Areas Report* (Anchor QEA 2020a)

These other reports provide supporting information such as the Project description, Kettle Wetland delineation and rating, vegetation and wildlife habitat description, topography, soils, geologic conditions, Project impacts, proposed mitigation measures, and associated figures, all of which are included by reference in this Report. Per FEMA guidance, the term Project Area is used in this Report (FEMA 2013). In the *South Parcel Expansion Project Critical Areas Report and Habitat Management Plan* (Anchor QEA 2020a), the term Expansion Area is used to describe the Project Area.

2 Project Area

The proposed Project is located on privately owned property at 4301 Pioneer Avenue in the City of DuPont, Pierce County, Washington (Figure 1). The proposed Project covers portions of Sections 22, 23, 26, and 27 of Township 19 North, Range 1 East at 47.118213 N latitude, -122.661295 W longitude.

The Project will be located on the following privately owned tax parcels: 0119233011, 0119233014, 0119233015, 0119233016, 0119233017, 0119262015, 0119262016, 0119232011, 0119232012, and 0119224005. The Project is located in the Chambers-Clover Watershed, Water Resource Inventory Area (WRIA) 12 (Ecology 2020).

The Project Area is zoned as Mineral Resources overlay (City of DuPont 2015). Project Area features including parcel boundaries, the analysis area, the Kettle Wetland, topography, soils, geology, and aerial photographs displaying vegetation communities are shown in the figures in the *South Parcel Expansion Project Critical Areas Report and Habitat Management Plan* (Anchor QEA 2020a) and *North Sequelitchew Creek Project Impact Area Wetland Delineation Report* (Anchor Environmental 2007).

2.1 Fish and Wildlife Habitat

There is one waterbody in the Project Area, the Kettle Wetland. The Kettle Wetland is a 1.78-acre wetland located southwest of the existing processing plant. This wetland is classified as a Class II wetland by City of DuPont regulations and a Category III wetland using the Washington State Department of Ecology (Ecology) wetland rating system. Water levels within the wetland are determined by the seasonal fluctuation in the elevation of the Vashon aquifer, which is the dominant source of hydrology for the wetland. The Kettle Wetland is more than 1/2 mile from a water of the United States and sits in a closed depression, with no surface water connection to the larger watershed, substantially limiting the wetland's opportunity to provide hydrologic or water quality functions. The Kettle Wetland is within a FEMA-mapped Special Flood Hazard Area without base flood elevation (Zone A). A second FEMA-mapped Special Flood Hazard Area (also Zone A) is approximately 0.3 mile southwest of the Kettle Wetland (Figure 2). This second feature is on dry, excessively drained soils (Soil Survey Staff 2020). The second feature has been previously disturbed and cleared of woody vegetation. It provides poor habitat conditions for the species described in this document. Neither of the two Flood Hazard Areas have any surface water connections; the only hydrologic connections are precipitation and in the case of the Kettle Wetland, groundwater.

The original Kettle Wetland delineation was conducted in 2007 by Anchor Environmental staff. The Kettle Wetland was redelineated in December 2017 due to the length of time that transpired since the original delineation occurred. During this later delineation, the Kettle Wetland was rated under Ecology's *Washington State Wetland Rating System – Western Washington: 2014 Update* (Hruby 2014)

and the 2018 DuPont Municipal Code Sensitive Areas Regulations (City of DuPont 2018). On April 17, 2019, the U.S. Army Corps of Engineers issued a determination that the Kettle Wetland is not a water of the United States (USACE 2018).

A complete description of the Kettle Wetland and associated wetland buffer vegetation, soil, and hydrologic characteristics, wetland functions, wetland delineation data forms, and the Ecology and City of DuPont wetland rating forms are included in the *North Sequim Creek Project Impact Area Wetland Delineation Report* (Anchor Environmental 2007) and *Addendum to 2007 North Sequim Creek Project Impact Area Wetland Delineation Report* (Anchor QEA 2018).

The Kettle Wetland is identified on Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) Maps (WDFW 2020a) and U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Map Information (USFWS 2020a). The southwest portion of the Project Area is also mapped by WDFW PHS as a biodiversity area. The WDFW PHS identifies the Project Area as containing big brown bat (*Eptesicus fuscus*), little brown bat (*Myotis lucifugus*), and Yuma myotis bat (*Myotis yumanensis*), which may breed in the area. No state or federally listed species are documented by WDFW within the Project Area (WDFW 2020a). Federally listed species are discussed in Section 2.1.1.

2.1.1 Endangered Species Act-Listed Species and Critical Habitats

Endangered Species Act (ESA)-listed species and critical habitats under National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) jurisdiction in western Washington are referenced on the agencies' websites. The NMFS identifies ESA-listed species that occur or may occur within a broad geographic area, such as an evolutionarily significant unit (ESU) or a distinct population segment (DPS), rather than a project-specific location (NMFS 2020). The USFWS identifies ESA-listed species that occur or may occur within a specific location where a project is proposed (USFWS 2020b).

The October 2020 status and potential presence of federally listed species and critical habitats protected under the ESA that may occur within the Project Area are presented in Table 1. As shown in Table 1, 11 ESA-listed species are identified by NMFS and USFWS as having the potential to occur within the Project Area. Of these species, three are aquatic (fish); five are terrestrial (one amphibian, three birds, and one mammal), and three are plants. Designated critical habitat for several of these species is present within Pierce County; however, no designated critical habitat is present within the Project Area.

Table 1**Occurrence of Listed Species and Critical Habitat in or Near the Project Area**

Common Name	Scientific Name	ESA Status	Jurisdiction	Species Present in Project Area	Critical Habitat Present in Project Area
Fish					
Puget Sound ESU Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	Threatened	NMFS	No	No
Puget Sound DPS Steelhead	<i>Oncorhynchus mykiss</i>	Threatened	NMFS	No	No
Coastal-Puget Sound DPS Bull Trout	<i>Salvelinus confluentus</i>	Threatened	USFWS	No	No
Amphibians					
Oregon Spotted Frog	<i>Rana pretiosa</i>	Threatened	USFWS	No	No
Birds					
Marbled Murrelet	<i>Brachyramphus marmoratus</i>	Threatened	USFWS	No	No
Streaked Horned Lark	<i>Eremophila alpestris strigata</i>	Threatened	USFWS	No	No
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Threatened	USFWS	No	No
Mammals					
Gray Wolf	<i>Canis lupus</i>	Proposed Endangered	USFWS	No	No
Plants					
Golden Paintbrush	<i>Castilleja levisecta</i>	Threatened	USFWS	No	No
Marsh Sandwort	<i>Arenaria paludicola</i>	Endangered	USFWS	No	No
Water Howellia	<i>Howellia aquatilis</i>	Threatened	USFWS	No	No

There are no federally listed species, designated critical habitats, or essential fish habitats in the Project Area. The ESA-listed or proposed terrestrial and plant species identified by the USFWS as potentially occurring in the Project Area do not occur in the vicinity of the Project Area based on the species' life history and habitat requirements. The Kettle Wetland does not provide wetland habitat features associated with Oregon spotted frog. Potential habitat for the four ESA-listed bird and mammal species identified in Table 1 (gray wolf, marbled murrelet,¹ streaked horned lark, and yellow-billed cuckoo) is not located within many miles of the Project Area due to urban development. Additionally, these species are not typically associated with areas of human activity except in rare, usually temporary, circumstances. Habitat features associated with the three plant species (golden paintbrush, marsh sandwort, and water howellia) are not present within the Project Area or vicinity.

¹The Project Area is adjacent to Northwest Forest Plan areas designated as Congressional Reserve. It is not in or near an area that is considered late-successional or managed as late-successional, which is generally where marbled murrelets could be expected to be found. Small segments of the Project Area are mapped under Northwest Forest Plan "Davis layers" (NWFP 2012) as potentially suitable habitat. The Project Area may or may not meet the technical definition of suitable habitat (greater than 5 acres contiguous stand of greater than 60% conifer cover with at least one potentially suitable nesting tree); however, there is a lack of multilevel canopy, which means horizontal and vertical cover over large branches is limited if present at all. There are no known detections in the Project Area (WDFW 2022) and Sequalitchew Creek is unlikely to be a flyway due to limited availability of mature/old growth forest nearby.

3 Project Description, Environmental Effects, and Mitigation Measures

3.1 Project Description

The Project description is presented in the *South Parcel Expansion Project Critical Areas Report and Habitat Management Plan* (Anchor QEA 2020a).

3.2 Environmental Effects and Mitigation Measures

The following subsections provide a summary of environmental effects under the proposed Project. A complete description of potential Project impacts and Project mitigation measures is presented in the *South Parcel Expansion Project Critical Areas Report* (Anchor QEA 2020a).

3.2.1 Wetlands

Under the proposed Project, permanent impacts to the Kettle Wetland and its buffer would occur as a result of earthwork mining activities: the entire wetland would be excavated. The area of wetland disturbance is 1.78 acres, and the total buffer area of disturbance is 3.4 acres. All functions and values of the wetland will be mitigated for by constructing a larger wetland as described in the *South Parcel Expansion Project Wetland Mitigation Plan* (Anchor QEA 2020b).

3.2.2 ESA-Listed Species and Critical Habitats

Overall, the Project will not result in measurable potential impacts on ESA-listed species or critical habitats. There is no designated critical habitat located within the Project Area. Potentially suitable habitat for ESA-listed species identified by NMFS and USFWS as having the potential to occur within or near the Project Area is not present within the Project Area. Based on the proposed Project elements, if an ESA biological evaluation was performed for this Project, the effect determination for ESA-listed species and associated critical habitats would likely be no effect.

4 References

- Anchor Environmental, 2007. *North Sequalitchew Creek Project Impact Area Wetland Delineation Report*. Prepared for CalPortland Northwest. October 30, 2007.
- Anchor QEA (Anchor QEA, LLC), 2018. *Addendum to 2007 North Sequalitchew Creek Project Impact Area Wetland Delineation Report*. Prepared for CalPortland. February 10, 2018.
- Anchor QEA, 2020a. *South Parcel Expansion Project Critical Areas Report*. Prepared for CalPortland. November 2020.
- Anchor QEA, 2020b. *South Parcel Expansion Project Wetland Mitigation Plan*. Prepared for CalPortland. November 2020.
- City of DuPont, 1992. *Pioneer Aggregates Mining Facility and Reclamation Plan – Draft Environmental Impact Statement*.
- City of DuPont, 2015. *2015 Comprehensive Plan Periodic Update*. October 27, 2015.
- City of DuPont, 2018. City of DuPont Municipal Code. Accessed January 11, 2018. Available at: <https://www.codepublishing.com/WA/DuPont/>.
- EBASCO, 1991. *Rare Plant and Wildlife Surveys of Lone Star Northwest/Pioneer Aggregates Project*.
- Ecology (Washington State Department of Ecology), 2020. "Environmental Information; Water Resource Inventory Area Maps, Chambers-Clover Watershed WRIA 12." Accessed October 20, 2020. Available at: https://fortress.wa.gov/dfw/score/score/maps/map_details.jsp?geocode=wria&geoarea=WRI A12_Chambers_Clover.
- FEMA (Federal Emergency Management Agency), 2013. *Regional Guidance for Floodplain Habitat and Assessment and Mitigation in the Puget Sound Basin*. FEMA Region 10. August 2013.
- Hruby, T., 2014. *Washington State Wetlands Rating System – Western Washington: 2014 Update*. Washington State Department of Ecology Publication No. 14-06-029.
- NMFS (National Marine Fisheries Service), 2020. "Endangered Species Act Status Reviews and Listing Information." Accessed October 20, 2020. Available at: http://www.westcoast.fisheries.noaa.gov/protected_species/salmon_steelhead/salmon_and_steelhead.html.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Accessed November 2, 2020. Available at: <http://websoilsurvey.nrcs.usda.gov/>.

USACE (U.S. Army Corps of Engineers), 2018. Letter from Kristina G. Tong, Section Chief, Regulatory Branch, Seattle District, to Pete Stoltz, Manager, Permitting and Government Affairs, CalPortland. Reference: NWS-2018-1114. April 17, 2018.

USFWS (U.S. Fish and Wildlife Service), 2003. Personal communication (agency correspondence) from Ken S. Berg to Josh Wozniak, Herrera Environmental Consultants, Inc., Seattle, Washington. Regarding: The presence of endangered, threatened, and candidate species of plants and wildlife near the DuPont Gravel Mine project area. Ecological Services Division, Lacey, Washington. June 24, 2003.

USFWS (U.S. Fish and Wildlife Service), 2020a. "Wetlands Mapper for National Wetlands Inventory." Accessed October 20, 2020. Available at: <https://www.fws.gov/wetlands/>.

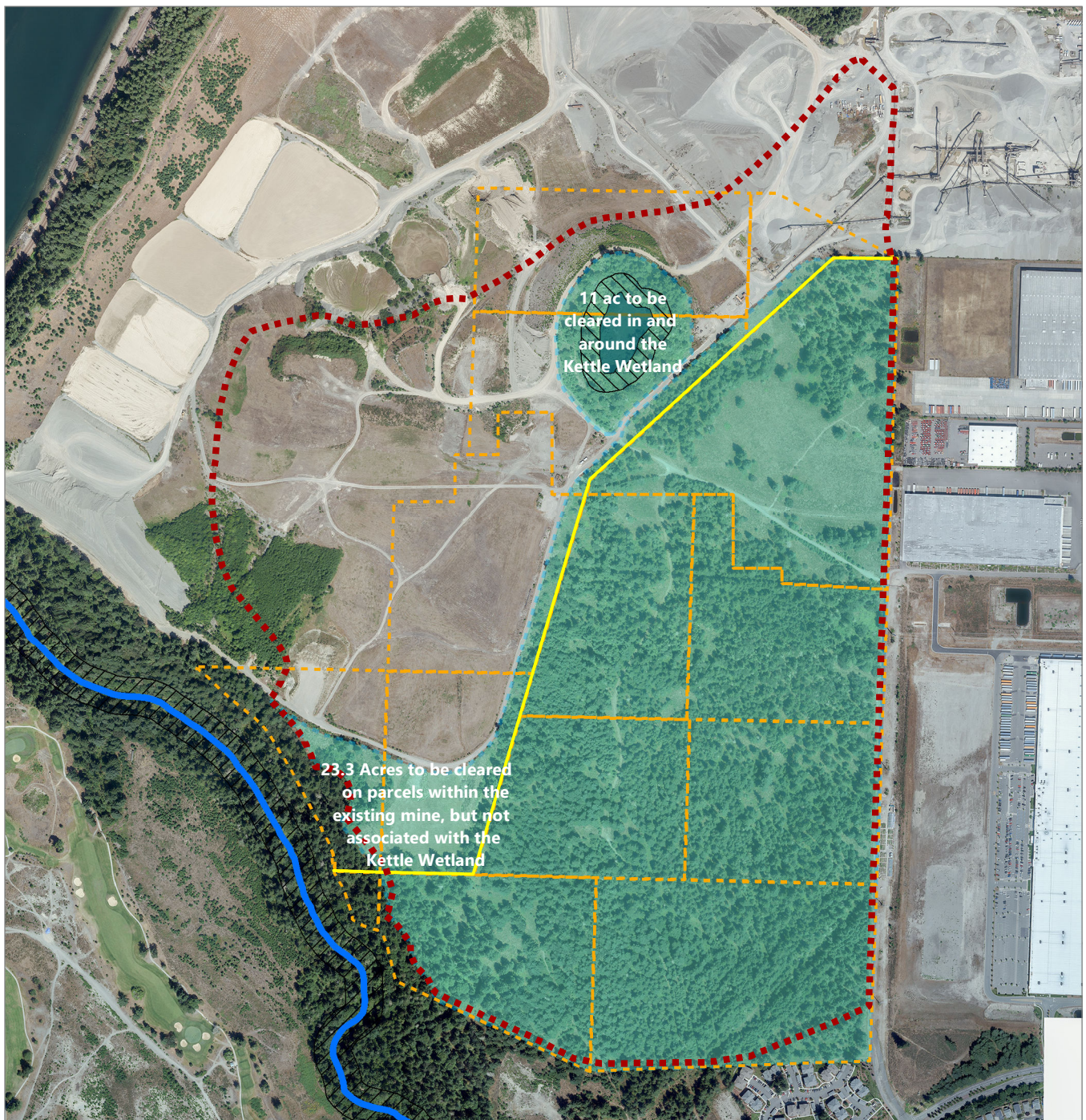
USFWS, 2020b. "Endangered Species Act Status Reviews and Listing Information." Accessed October 20, 2020. Available at: <https://ecos.fws.gov/ipac/>.

WDFW (Washington Department of Fish and Wildlife), 2020a. "Priority Habitats and Species Maps." Accessed October 20, 2020. Available at: <https://geodataservices.wdfw.wa.gov/hp/phs/>.

WDFW, 2020b. "SalmonScape." Accessed October 20, 2020. Available at: <http://apps.wdfw.wa.gov/salmonscape/>.

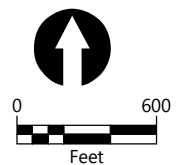
WDFW, 2022. Telephone interview with Darrin Masters, WDFW Area Habitat Biologist. September 13, 2022.

Figures



LEGEND:

- | | |
|---|-----------------------|
| South Parcel Project | Kettle Wetland |
| Clearing Limits for Mine Expansion (201.6 ac) | 100-ft Wetland Buffer |
| Boundary of Existing Mine | Sequalitchew Creek |
| Area Inside Existing Mine (100.7 ac) | 100-ft Stream Buffer |



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National Flood Hazard Layer FIRMette



122°58'24"W 47°11'17"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE)
	With BFE and Depth Zone AE, AO, AH, VC, AP
	Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% Annual Chance Flood with average depth less than one foot, or with drainage areas of less than one square mile, Zone X
	Future Conditions 1% Annual Chance Flood Hazard, Zone X
	Area with Reduced Flood Risk due to Levee, See Note, Zone X
	Area with Flood Risk due to Levee, Zone X

OTHER AREAS	Area of Minimal Road Hazard, Zone X
	Effective 10 MRA
	Area of Unincorporated Road Hazard, Zone X

GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Roadwall

OTHER FEATURES	20.2
	Cross Sections with 1% Annual Chance Water Surface Elevation
	Casual Transfers
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Casual Transfers, Baseline
	Profile Baseline
MAP PANELS	Hydrographic Feature

MAP PANELS	Digital Data Available
	No Digital Data Available
	Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The baseline shown complies with FEMA's baseline requirements.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was updated on 11/3/2020 at 2:00 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: Basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unincorporated areas cannot be used for regulatory purposes.

Filepath: https://anchorqea-my.sharepoint.com/personal/jsmall_anchorqea_com/Documents/WORK/DuPont/Internal Team/b7-Floodplain assessment/Figures/FEMAFigure2.docx



Figure 2
Mapped Flood Hazards Within the Expansion Area
FEMA Habitat Assessment
Pioneer Aggregates South Parcel Project