

HABITAT TECHNOLOGIES

WILDLIFE SPECIES UTILIZATION AND AVAILABLE HABITATS ASSESSMENT

HYDE MINE FACILITY

**Parcel 3021079080
Black Diamond Area of King County, Washington**

prepared for

**Mr. Brett Morris, Project Manager
@ Palmer Coking Coal Co. LLP
PO Box 10
Black Diamond, Washington 98010-0010**

prepared by

**HABITAT TECHNOLOGIES
P.O. Box 1088
Puyallup, Washington 98371-1088
253-845-5119**

JUNE 14, 2021

**wetlands, streams, fisheries, wildlife – mitigation and permitting solutions
P.O. Box 1088, Puyallup, Washington 98371
253-845-5119 contact@habitattechnologies.net**

INTRODUCTION

This document presents the culmination of activities and onsite evaluations undertaken to complete an analysis and characterization of wildlife species utilization and available habitats within an independent parcel (Parcel 3021079080 - project site) that comprises the property associated with the proposed Hyde Mine Facility. The project site was located generally to the east of the Enumclaw – Franklin Road SE, southeast of the Town of Black Diamond, King County, Washington. The project site was dominated by a reproduction Douglas fir (*Pseudotsuga menziesii*) plant community that had been planted and become established following recent forest harvest activities completed between 2013 and 2018. The project site was located within Section 30, Township 21 North, Range 07 East (Figure 1).

The assessment of wildlife species utilization and available habitats was completed consistent with the provisions of King County 21A.24.382 - Wildlife Habitat Conservation Areas. This document was designed to accommodate continued site planning and potential regulatory actions. This document has been prepared for submittal to King County and potentially other resource permitting agencies for verification and potential future permitting actions.

PROJECT SITE DESCRIPTION

The project site was composed of an irregular shaped parcel totaling approximately 240-acres. The project site was vacant and located within a rural area that included a number of parcels developed into single-family homesites, an adjacent active surface mine, and managed forest lands. The entire project site, along with the majority of adjacent parcels, had undergone prior forest harvest actions dating back several decades.

Prior actions had also included the re-configuration of parcels within the project area to facilitate various land use actions and appropriate planning/permitting. The project site was generally rolling and managed for the production of coniferous forest. As defined by aerial photos between 2013 and 2018 the project site underwent “clear-cut” forest harvest actions that removed timber in segments of the majority of the project site. By the spring of 2019 the entire project site (with the exception of the very northern edge and the southwestern corner) had been harvested and replanted with seedling Douglas fir trees consistent with the provisions of the Washington Department of Natural Resources Forest Practices Application (FPA). A paved, public roadway (Enumclaw Franklin Road SE) formed the southwestern and northwestern boundaries of the project site. The project site also included a pattern of internal roadways that facilitated recent forest harvest and forest silvicultural activities.

Directions to Project Site: From the Town of Black Diamond continue southward towards the City of Enumclaw on Enumclaw Black Diamond Road SE (SR 169). After crossing over the Green River turn easterly onto Enumclaw-Franklin Road SE. Continue generally northeasterly on Enumclaw-Franklin Road SE to the project site.

BACKGROUND INFORMATION

NATIONAL WETLAND INVENTORY

The *National Wetland Inventory (NWI) Mapping* completed by the U.S. Fish and Wildlife Service was reviewed as a part of this assessment (Figure 2). This mapping resource did not identify any wetlands or drainage corridors within the project site. This mapping resource did identify wetlands and associated drainage corridor offsite to the west, northeast, and southeast of the project site. This mapping resource also identified the Green River Corridor offsite to the northwest.

STATE OF WASHINGTON PRIORITY HABITATS AND SPECIES

The State of Washington *Priority Habitats and Species (PHS) Mapping* was reviewed as a part of this assessment (Figure 3). This mapping resource identify that the entire project site and the majority of the adjacent properties were utilized by regular concentration of elk (*Cervus elaphus*).

STATE OF WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

The State of Washington Department of Fish and Wildlife (WDFW) Mapping was reviewed as a part of this assessment (Figure 4). This mapping resource did not identify any drainage corridors within the project site. Offsite drainage corridors were noted to the southwest, the northwest, and northeast of the project site.

STATE OF WASHINGTON DEPARTMENT OF NATURAL RESOURCES

The State of Washington Department of Natural Resources (WDNR) *Water Type Mapping* was reviewed as a part of this assessment (Figure 5). This mapping resource did not identify any drainage corridors within the project site. This mapping resource did identify a wetland complex offsite to the southeast associated with Fish Lake, and drainage corridors offsite to the northeast, to the southwest, and to the northwest of the project site.

KING COUNTY MAPPING

The King County Mapping was reviewed as a part of this assessment (Figure 6). This mapping resource did not identify any wetlands or drainage corridors within the project site. This mapping resource did identify a coal mine hazard area within the northeastern portion of the project site and a wetland areas offsite to the west and southeast of the project site. This mapping resource also identified the Green River Corridor offsite to the northwest of the project site, Fish Lake offsite to the southeast and a wetland offsite to the northwest.

SOILS MAPPING

The soil mapping inventory completed by the Natural Resources Conservation Service (NRCS) was reviewed as a part of this assessment (Figure 7). This mapping resource identified the soil throughout the majority of the project site as Everett very gravelly sandy loam. The Everette soil series is defined as rolling and somewhat excessively well drained, as formed in very gravelly glacial outwash deposits, and is not listed as “hydric” soil.

This mapping resource identified the soil within the very southern portion of the project site as Alderwood gravelly sandy loam. The Alderwood soil series is defined as moderately well drained, as formed in glacial deposits, and is not listed as a “hydric” soil but may exhibit small inclusions of hydric soils.

REVIEW OF AERIAL PHOTOS

A review of aerial photos identifies that the project site was dominated by a reproduction coniferous forest prior to the start of harvest activities in 2013. Between 2013 and 2018 forest harvest activities were completed in segments using typical “clear-cut” harvest techniques. Forest harvest activities appeared to use a pattern of existing internal roadways.

PRIOR ASSESSMENTS

Prior assessments for areas adjacent and associated with the project site had been completed as a part of the planning for the potential expansion of the existing Wheeler Gravel Mine located adjacent to the western boundary of the project site. An assessment of the existing Wheeler Gravel Mine (22-acres) immediately to the west of the central portion of the project site did not identify any wetlands or aquatic areas (*Wildlife and Habitat Study* prepared by Terra Associates, Inc. dated December 1997). The Terra Associates report noted a number of species within the project area and that proposed actions would retain a 100 to 200 foot wide vegetated buffer between the existing mine and Enumclaw-Franklin Road SE. This report concluded that while small mammals would likely be killed or injured during site development the larger more mobile animals would displace into adjacent areas.

A *Wildlife and Habitat Inventory Report* was prepared by Ecological Land Services, Inc. in January 2008 for a proposed rezone and expansion of the Franklin Ridge Sand and Gravel facility. This assessment failed to document any important species to federal, state, or local agencies within the rezone/expansion area.

ONSITE ANALYSIS

CRITERIA FOR CRITICAL AREAS IDENTIFICATION

For the purpose of the assessment the wildlife habitats and other critical areas (surface water drainage corridors, wetlands) which may be located within or immediately adjacent to the project site. This assessment did not include an assessment of potential steep slope, stormwater, erosion hazardous, or geotechnically hazardous critical areas.

Fish and Wildlife: A “fish and wildlife conservation area” is defined by King County as an area for a species whose habitat the King County Comprehensive Plan requires the County to protect that includes an active breeding site and the area surrounding the breeding site that is necessary to protect the breeding activity (21A.06.1423).

Aquatic Areas: A stream (aquatic area) is generally defined as a location where surface waters produce a defined channel or bed. A defined channel or bed is typically an area which demonstrates clear evidence of the passage of water and includes, but not limited to, bedrock channels, gravel beds, sand and silt beds, and defined channel swales. A stream need not contain water year-round. A stream typically does not include irrigation ditches, canals, storm or surface water run-off devices, or other artificial watercourses unless the constructed watercourse conveys a stream which naturally occurred prior to the construction of such watercourse.

Wetlands: Wetlands are transitional areas between aquatic and upland habitats. In general terms, wetlands are lands where the extent and duration of saturation with water is the primary factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface (Cowardin, et al., 1979). Wetlands are generally defined within land use regulations as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (United States Army Corps of Engineers, 1987).

Wetlands exhibit three essential characteristics, all of which must be present for an area to meet the established criteria (United States Army Corps of Engineers, 1987 and United States Army Corps of Engineers, 2010). These essential characteristics are:

- 1. Hydrophytic Vegetation:** The assemblage of macrophytes that occurs in areas where inundation or soil saturation is either permanent or of sufficient frequency and duration to influence plant occurrence. Hydrophytic vegetation is present when the plant community is dominated by species that require or can tolerate prolonged inundation or soil saturation during the growing season.
- 2. Hydric Soil:** A soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions

in the upper parts. Most hydric soils exhibit characteristic morphologies that result from repeated periods of saturation or inundation. These processes result in distinctive characteristics that persist in the soil during both wet and dry periods.

- 3. Wetland Hydrology:** Permanent or periodic inundation, or surface soil saturation, at least seasonally. Wetland hydrology indicators are used in combination with indicators of hydric soil and hydrophytic vegetation to define the area. Wetland hydrology indications provide evidence that the site has a continuing wetland hydrology regime. Where hydrology has not been altered vegetation and soils provide strong evidence that wetland hydrology is present.

STUDY METHODS AND OBSERVATIONS/FINDINGS

Habitat Technologies completed a series of onsite assessments and species utilization observations between May and mid-June 2021. Habitat Technologies had also completed similar assessments for a variety of parcels within the local area of the project site over the past few decades. The onsite assessments included a mixture of meandering walks throughout the project site along with transects and scattered stationary observation points. This onsite assessment was completed during the mid to late spring breeding/nesting season. Onsite field data collection and observations were completed on:

May 15, 2021

Onsite between 1630 and 2100.

Meandering survey and two stationary locations in the southern portion of the site.

May 16, 2021

Onsite between 0600 and 1030.

Meandering survey and two stationary locations in the central portion of the site.

May 21, 2021

Onsite between 0500 and 0930.

Meandering survey in the central and southern portions of the site.

May 28, 2021

Onsite between 0900 and 1430.

Meandering survey and four stationary locations in the central and northern portions of the site.

June 8, 2021

Onsite between 1200 and 1730.

Meandering survey and five stationary locations in the southern, central, and northern portions of the site.

June 12, 2021

Onsite between 0500 and 1130.

Meandering survey and five stationary locations in the southern, central, and northern portions of the site.

- **Soils and Hydrology**

As observed throughout the project site the soil exhibited a texture and coloration somewhat typical of the Everett very gravelly sandy loam soil series. Surface soil texture was dominated by gravelly sandy loam and very gravelly sandy loam. This soil throughout the project site was identified as non-hydric in character. Onsite hydrology appeared to be the result of seasonal stormwater. The project site was identified to drain moderately well to excessively well, and no portion of the project site was identified to exhibit field evidence typically associated with a defined surface water channel (stream/aquatic area) or wetland.

As viewed from the project site boundary and aerial photos “potential” wetlands and aquatic areas were noted offsite to the northeast, to the southeast, to the southwest, and to the west (potential is used since no specific field data were collected for these offsite areas).

- **Vegetation**

Following the most recent forest harvest actions (2013 to 2018) the harvested areas within the project site were planted with seeding Douglas fir consistent with the typical provisions of the FPA (see Photos). Additional plants within these replanted recently harvested areas included sapling big leaf maple (*Acer macrophyllum*), sapling red alder (*Alnus rubra*), sapling black cottonwood (*Populus trichocarpa*), sapling cherry (*Prunus* spp.), sapling Western red cedar (*Thuja plicata*), sapling Western hemlock (*Tsuga heterophylla*), cascara (*Rhamnus purshiana*), Scots broom (*Cytisus scoparius*), Himalayan blackberry (*Rubus procera*), evergreen blackberry (*Rubus laciniatus*), trailing blackberry (*Rubus ursinus*), Indian plum (*Oemleria cerasiformis*), vine maple (*Acer circinatum*), Pacific red elderberry (*Sambucus racemosa*), hazelnut (*Corylus cornuta*), Oregon grape (*Berberis nervosa* and *Berberis aquifolium*), salal (*Gaultheria shallon*), salmonberry (*Rubus spectabilis*), snowberry (*Symphoricarpos albus*), holly (*Ilex aquifolium*), Oceanspray (*Holodiscus discolor*), rose (*Rosa gymnocarpa*), thimbleberry (*Rubus parviflorus*), gooseberry (*Ribes divaricatum*), sword fern (*Polystichum munitum*), nettle (*Urtica dioica*), bracken fern (*Pteridium aquilium*), bleeding heart (*Dicentra formosa*), geranium (*Geranium* spp.), bluegrass (*Poa* spp.), bentgrass (*Agrostis tenuis*), bedstraw (*Galium aparine*), cats ear (*Hypochaeris glabra*), Western trillium (*Trillium repens*), foamflower (*Tiarella trifoliata*), daisy (*Bellis* spp.), vanilla leaf (*Achlys triphylla*), cats ear (*Hypochaeris* spp.), clover (*Trifolium* spp.), foxglove (*Digitalis purpurea*), mullein (*Verbascum thapsus*), Queen Anne’s lace (*Daucus carota*), wild strawberry (*Fragaria virginiana*), reed canarygrass (*Phalaris arundinacea*), wheatgrass (*Agropyron* spp.), and fescue (*Festuca* spp.). This plant community was identified as non-hydrophytic in character (i.e. typical of non-wetlands).

A few portions of the project site that did not undergo recent forest harvest actions (the very northern edge and the southeastern corner) and were dominated by a reproduction Douglas fir plant community approximately 25 to 40 years of age. With the exception of the trees being older, the plant community exhibited the same shrub understory vegetation as the majority of the project site. This plant community was identified as non-hydrophytic in character (i.e. typical of non-wetlands). This plant community was also identified to extent offsite onto adjacent similarly managed parcels and homesite areas.

As viewed from the project boundary the plant communities associated with the potential offsite wetland and aquatic areas to the northeast, to the northwest, and to the southeast appeared dominated by species more typically associated with seasonally to permanently saturated soil conditions. Observed species included red alder, black cottonwood, Western red cedar, Pacific willow (*Salix lasiandra*), red osier dogwood (*Cornus stolonifera*), Douglas spiraea (*Spiraea douglasii*), and salmonberry. These plant communities were identified as “potentially” hydrophytic in character (i.e. typical of wetlands).

- **Wildlife Species**

Wildlife species observed directly or indirectly, observed within the general area of the project site during prior assessments, those species noted within prior assessment within the area of the project site, and those species that may potentially utilize the habitats provided by the project site included black tailed deer (*Odocoileus hemionus*), elk (*Cervus elaphus*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), black bear (*Ursus americanus*), mountain lion (*Felis concolor*), raccoon (*Procyon lotor*), porcupine (*Erithizon dorsatum*), striped skunk (*Mephitis mephitis*), opossum (*Didelphis virginianus*), longtail weasel (*Mustela frenata*), Douglas squirrel (*Tamiasciurus douglasii*), deer mouse (*Peromyscus maniculatus*), shrew (*Sorex* spp.), Townsend chipmunk (*Eutamias townsendi*), voles (*Microtus* spp.), eastern cottontail (*Sylvilagus floridanus*), bats (*Myotis* spp.), great blue heron (*Ardea herodias*), red tailed hawk (*Buteo jamaicensis*), common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), sharp-shinned hawk (*Accipiter striatus*), great horned owl (*Bubo virginianus*), merlin (*Falco columbarius*), bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), Western screech owl (*Otus kennicotti*), barred owl (*Strix varia*), American robin (*Turdus migratorius*), violet green swallow (*Tachycineta thalassina*), tree swallow (*Tachycineta bicolor*), song sparrow (*Melospiza melodia*), house sparrow (*Passer domesticus*), white crowned sparrow (*Zonotrichia leucophrys*), golden crowned kinglet (*Regulus satrapa*), ruby crowned kinglet (*Regulus calendula*), black capped chickadee (*Parus atricapillus*), chestnut backed chickadee (*Parus rufescens*), common bushtit (*Psaltriparus minimus*), red breasted nuthatch (*Sitta canadensis*), American goldfinch (*Carduelis tristis*), purple finch (*Carpodacus purpureus*), brown creeper (*Certhia familiaris*), evening grosbeak (*Coccothraustes vespertina*), golden crowned sparrow (*Zonotrichia atricapilla*), rufous hummingbird (*Selasphorus rufus*), Anne’s hummingbird (*Calypte anna*), band-tailed pigeon (*Columbia fasciata*), rock dove

(*Columbia livia*), ruffed grouse (*Bonasa umbellus*), California quail (*Callipepla californica*), Northern flicker (*Colaptes auratus*), downy woodpecker (*Picoides pubescens*), hairy woodpecker (*Picoides villosus*), pileated woodpecker (*Dryocopus pileatus*), sapsucker (*Sphyrapicus ruber*), winter wren (*Troglodytes troglodytes*), rufous-sided towhee (*Pipilo erythrophthalmus*), Steller's jay (*Cyanocitta stelleri*), starling (*Sturnus vulgaris*), dark eyed junco (*Junco hyemalis*), common garter snake (*Thamnophis sirtalis*), and Pacific treefrog (*Hyla regilla*).

The project site was not observed to provide spawning habitats for amphibians and has not been identified or documented to provide habitats for fish species.

A scattering of smaller sized nests suitable for passerine birds were observed throughout the project site. However, no large nests suitable for large raptors (i.e. bald eagle, osprey, red-tailed hawk) or great-blue heron were observed within the project site. An active nesting pair of red tailed hawks were identified offsite to the southeast of the project site.

- **Wildlife Movement Corridors**

The project site was within an area managed for forest production and included a scattering of surface mines and moderately sized parcels being converted into single-family homesites. As identified by onsite assessment small, medium, and large mammals were noted to be moving throughout the project site. The project site was also within the general area associated with the migratory movement of passerine birds and raptors.

STATE LISTED PRIORITY WILDLIFE SPECIES

Several species identified by the State of Washington as "Priority Species" were observed onsite or potentially may utilize the project site. *Priority species* include State Endangered, Threatened, Sensitive, and Candidate species; animal aggregations (e.g., heron colonies, bat colonies) considered vulnerable; and species of recreational, commercial, or tribal importance that are vulnerable. Priority species require protective measures for their survival due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance.

Game Species: "Game species" are regulated by the State of Washington through recreational hunting bag limits, harvest seasons, and harvest area restrictions. Observed or documented "game species" within and adjacent to the project site included black-tailed deer, elk, ruffed grouse, California quail, black bear, mountain lion, and band-tailed pigeon.

State Candidate: State Candidate species are presently under review by the State of Washington Department of Fish and Wildlife (WDFW) for possible listing as endangered, threatened, or sensitive. One State Candidate species - pileated

woodpecker – was identified to use a scattering of the snags and downed logs retained following prior forest harvest actions. No active nest locations were identified onsite for this species.

State Sensitive: State Sensitive species are native to Washington and is vulnerable to declining and is likely to become endangered or threatened throughout a significant portion of its range without cooperative management or removal of threats. No State Sensitive species were observed as a part of this assessment or have been documented to use the project site.

State Threatened: State Threatened species means any wildlife species native to the state of Washington that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range within the state without cooperative management or removal of threats. The project site did not appear and has not been documented to provide direct critical habitats for State Threatened species.

State Endangered: State endangered species means any species native to the state of Washington that is seriously threatened with extinction throughout all or a significant portion of its range within the state. The project site did not appear and has not been documented to provide direct critical habitats for State Endangered species.

STATE LISTED PRIORITY HABITATS

The State of Washington as has identified a number of “Priority Habitats” which are habitat types or elements with unique or significant value to a diverse assemblage of species. Identified terrestrial priority habitats include aspen stands, biodiversity areas and corridors, eastside steppe, herbaceous balds, inland dunes, juniper savannah, old growth – mature forest, Oregon white oak woodlands, riparian areas, shrubsteppe, and westside prairie. Identified aquatic priority habitats include freshwater wetlands, instream areas, coastal nearshore areas, open coastal areas, and Puget Sound nearshore areas.

As defined by onsite assessment the project site did not exhibit any “priority habitats.” Freshwater wetland priority habitats were identified offsite to the northeast, offsite to the southeast, and offsite to the west. In addition, an instream priority habitat with seasonal flow was identified offsite to the southwest of the project site.

FEDERALLY LISTED ENDANGERED, THREATENED, OR CANDIDATE SPECIES

Pursuant to the provisions of the *Endangered Species Act of 1973* (ESA) a number of involved federal regulatory and resource agencies have established a list of imperiled species and their critical habitats. The overall purpose of the ESA program aspires to

provide a framework to conserve and protect endangered and threatened species and their identified critical habitats. ESA prohibits importing, exporting, taking, possessing, selling, and transporting endangered and threatened species (with certain exceptions); and prohibits the destruction of identified critical habitat. A “take” includes to harass, harm, pursue, hunt, shoot, wound, trap, capture, collect, or attempt to engage in any such conduct. The U.S. Fish and Wildlife Service (USFWS) further defines “harm” as a significant habitat modification or degradation that results in death or injury to a listed species by significantly impairing behavioral patterns which include, but are not limited to breeding, feeding, or sheltering.

No federally listed endangered, threatened, or candidate species were observed or have been documented to use the habitats provided within or immediately adjacent the project site. A single, federally listed “species of concern” – bald eagle – has been documented to utilize the habitats provided by the Green River Corridor, area lakes, and ponds within the general area of the project site. However, the project site has not been documented to provide critical habitat for this species.

The Green River Corridor well offsite to the north-northwest has been documented to provide habitats for three federally listed threatened fish species – Puget South Chinook salmon (*Oncorhynchus tshawytscha*), Puget Sound steelhead (*Oncorhynchus mykiss*), and native char/bull trout (*Salvelinus confluentus*). The Green River Corridor has also been documented to provide critical habitats for coho salmon (*Oncorhynchus kisutch*) – a federally listed species of concern.

KING COUNTY SPECIES OF LOCAL IMPORTANCE/ECOLOGICAL COMMUNITIES

King County has designated the following species to be listed as “Species of Local Importance” and “High Quality Ecological Communities.” However, only a few of these listed species (**highlighted below**) were observed, have been documented by prior assessments, or may potentially utilize the habitats provided within the project site. The project site was not observed and has not been documented to provide high quality ecological communities. A number of listed “species of local importance” have been documented or would be reasonably associated with the aquatic/terrestrial habitats associated with the offsite areas along the Green River Corridor, Fish Lake, and a scattering of wetlands.

1. Fish

- Kokanee salmon
- Sockeye/red salmon
- Chum salmon
- Coho/silver salmon
- Pink salmon
- Coastal resident/searun cutthroat trout
- Rainbow/searun Steelhead trout
- Dolly varden – native char
- Pacific lamprey

2. Shellfish

- Dungeness crab
- Pandalid shrimp
- Geoduck clam
- Pacific oyster

3. Marine Fish

- White sturgeon
- Pacific herring
- Longfin smelt
- Surfsmelt
- Lingcod
- Pacific sand lance
- English sole
- Rock sole

4. Birds

- Western grebe
- American bittern
- Great blue heron
- Brant
- Harlequin duck
- Wood duck
- Hooded merganser
- Barrow's goldeneye
- Common goldeneye
- Cinnamon teal
- Tundra swan
- Trumpeter swan
- Surf scoter
- White-winged scoter
- Black scoter
- Osprey
- **Western screech-owl**
- Sooty grouse
- **Band-tailed pigeon**
- Belted kingfisher
- **Hairy woodpecker**
- Olive-sided flycatcher
- Western meadowlark
- Cassin's finch
- **Purple finch**

5. Mammals

- American marten
- Mink
- Columbian black-tailed deer
- **Elk** in their historic range
- Mountain goat
- Pika
- Roosting concentrations of Big-brown bat and Myotis bats

6. Amphibians

- Red-legged frog

7. Reptiles

- Western fence lizard

8. Rare Plants

- Bristly sedge
- Canadian St. John's-wort
- Clubmoss cassiope
- Oregon golden aster
- Toothed wood fern
- Vancouver ground-cone
- White-top aster

9. High-quality Ecological Communities

- Douglas-fir - Pacific Madrone / Salal
- Douglas-fir - Western Hemlock / Sword fern
- Forested Sphagnum Bog
- Low Elevation Freshwater Wetland
- North Pacific Herbaceous Bald and Bluff
- Red Alder Forest
- Western Hemlock - (Western Redcedar) / Bog Labrador-tea / Sphagnum spp.
- Western Hemlock - (Western Redcedar) / Devil's-club / Sword fern
- Western Hemlock - (Western Redcedar) / Sphagnum spp.
- Western Hemlock / Sword fern – Foam flower
- Western Redcedar- Western Hemlock / Skunk cabbage
- Willow spp.
- Shrubland

As noted above, the project site was dominated by a young, reproduction coniferous forest plant community “HABITAT TYPE.” As observed onsite during the spring of 2021 the project site was not identified and has not been documented to provide high-quality ecological communities.

SELECTED DEVELOPMENT ACTION


A *Selected Development Action* for the project site is presently within the very initial review and planning process. As initially defined the *Selected Development Action* would focus on the removal of mineral resources from the project site. Removal actions would occur over an extended period of time and be completed in designed segments. Those areas proposed for future mining would continue to be managed for forest production. Those areas where mining has been concluded would be restored and reclaimed in accordance with the approved Washington Department of Natural Resources Mining Permit.

CONCLUSION

Based on the appropriate planning and implementation of the *Selected Development Action* the proposed utilization of the project site as a surface mine would not be reasonably identified to adversely impact habitats defined as King County *Fish and Wildlife Conservation Areas* or adversely impact King County Species of Local Importance. The Selected Development Action would also not be reasonably identified to adversely impact critical habitats associated with Washington State Listed endangered, threatened, or sensitive species; and would not be reasonably identified to adversely impact critical habitats associated with federally listed endangered, threatened, or sensitive species.

STANDARD OF CARE

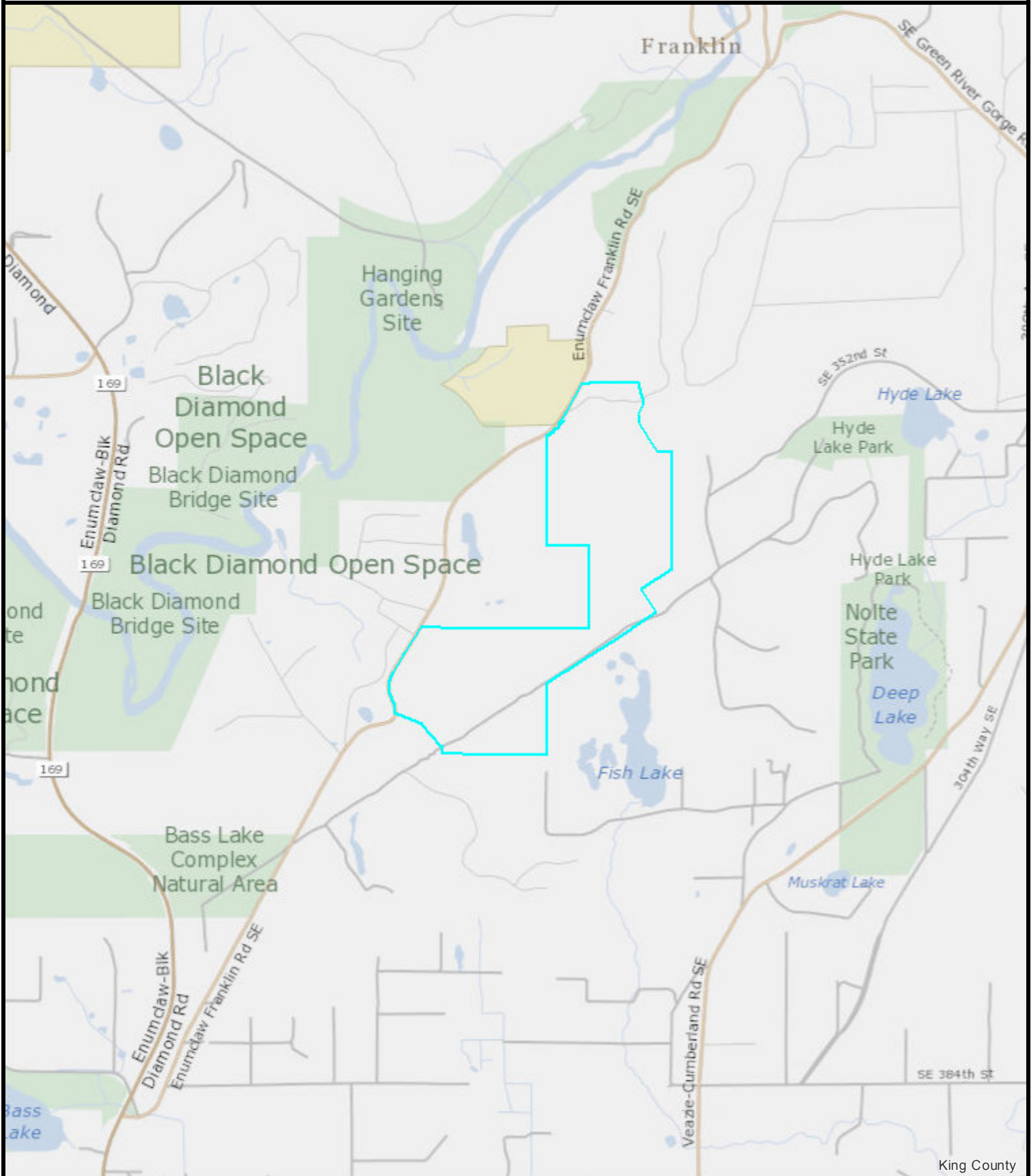
This document has been completed by Habitat Technologies for use by **Mr. Brett Morris, Project Manager, @ Palmer Coking Coal Co. LLP**. Prior to extensive site planning the defined critical habitats should be reviewed and verified by King County Department of Permitting and Environmental Review personnel and potentially other resource and permitting agencies. Habitat Technologies has provided professional services that are in accordance with the degree of care and skill generally accepted in the nature of the work accomplished. No other warranties are expressed or implied. Habitat Technologies is not responsible for design costs incurred before this document is approved by the appropriate resource and permitting agencies.


Bryan W. Peck
Senior Wetland Biologist


Thomas D. Deming, SPWS
Habitat Technologies

FIGURES

Figure 1 Site Vicinity



King County

The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

Date: 6/21/2021

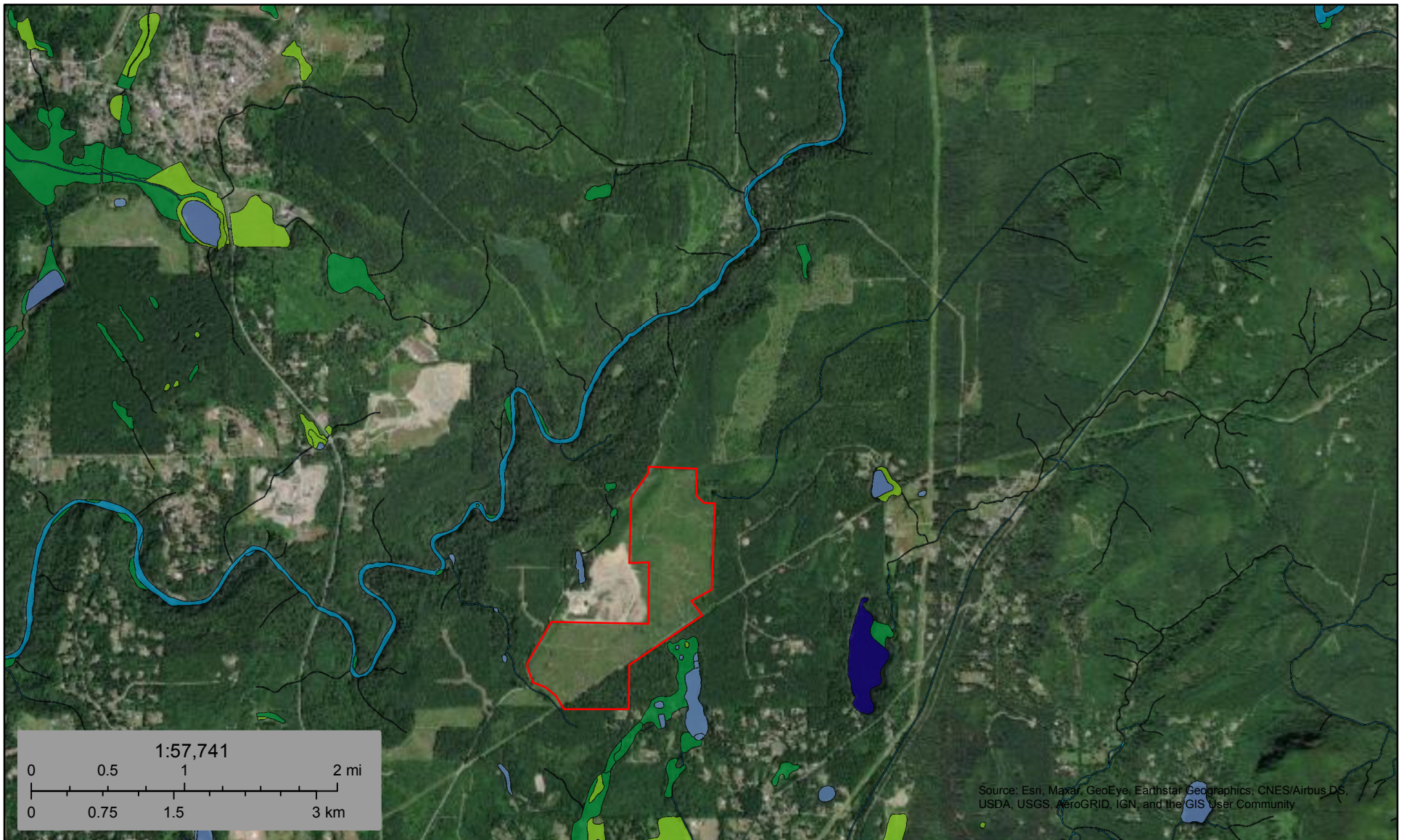
Notes:



King County










Figure 2 NWI Mapping



June 22, 2021

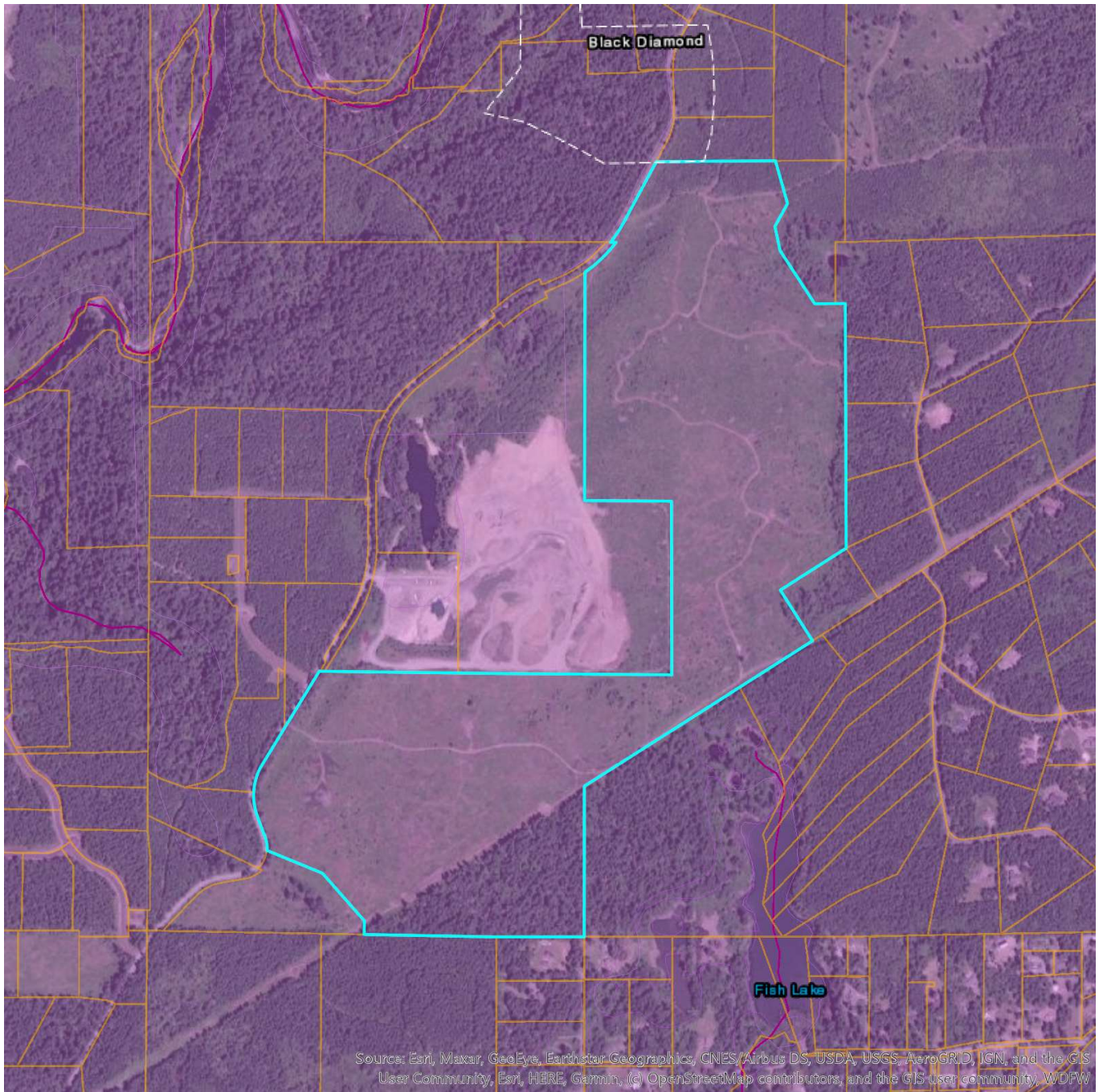
Wetlands

- | | | |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Emergent Wetland |  Lake |
|  Estuarine and Marine Wetland |  Freshwater Forested/Shrub Wetland |  Other |
| |  Freshwater Pond |  Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



Priority Habitats and Species on the Web



Report Date: 06/22/2021, Parcel ID: [3021079080](#)

PHS Species/Habitats Overview:

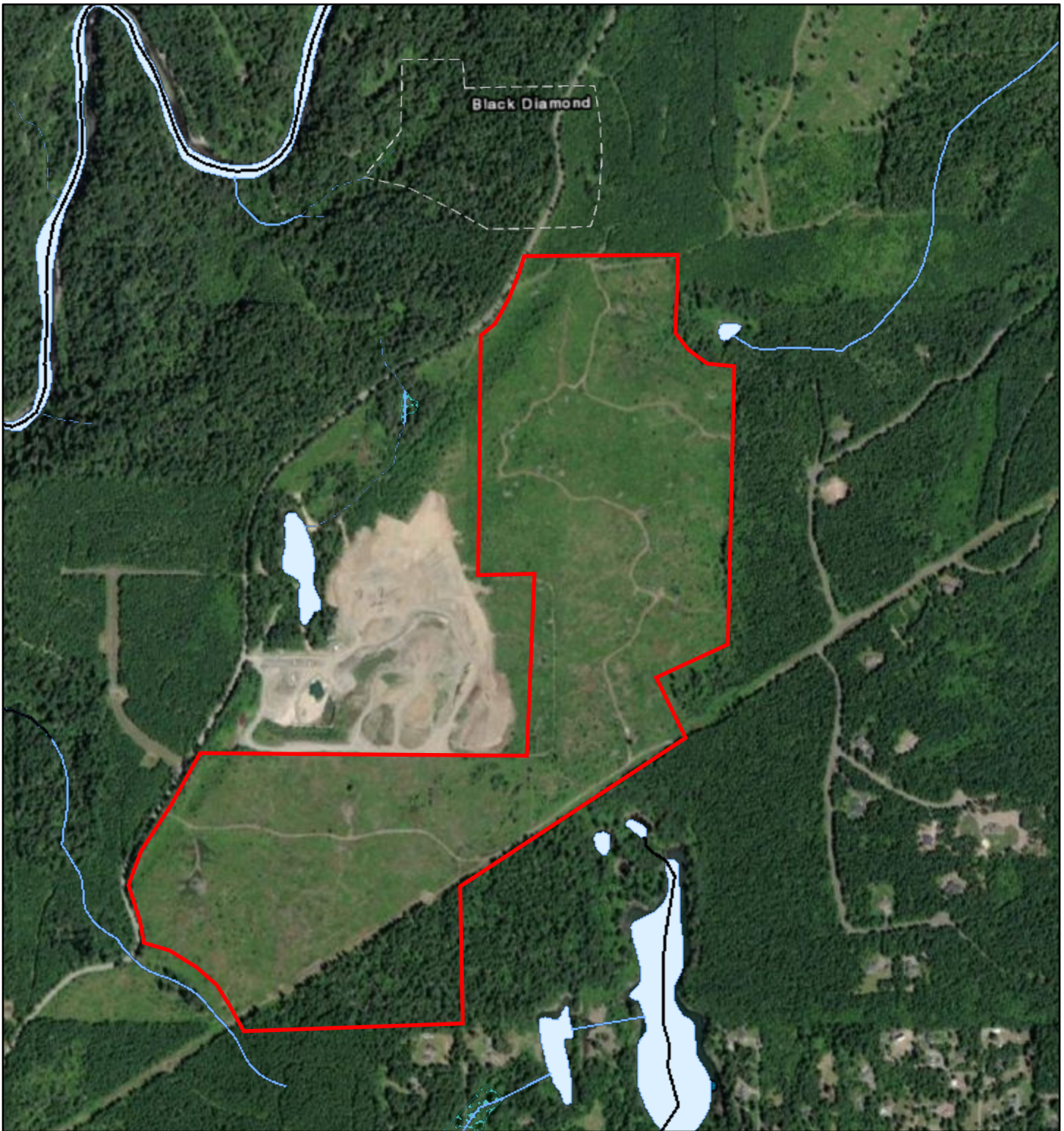
Occurrence Name	Federal Status	State Status	Generalized Location
Elk	N/A	N/A	No

PHS Species/Habitats Details:

Elk	
Scientific Name	<i>Cervus elaphus</i>
Priority Area	Regular Concentration
Site Name	GREEN/CEDAR RIVER
Accuracy	General locality
Notes	GREEN/CEDAR RIVER WINTER ELK RANGE.KING COUNTY ELK HABITAT INCLUDES RESIDENT AND WINTER MIGRATORY ELK.
Source Record	918540
Source Dataset	PHSREGION
Source Name	SPENSER, ROCKY WDFW
Source Entity	WA Dept. of Fish and Wildlife
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00614
Geometry Type	Polygons

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.

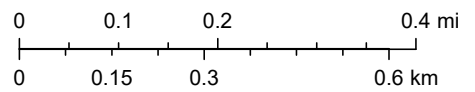
Figure 4 WDFW Salmonscape Mapping



June 22, 2021

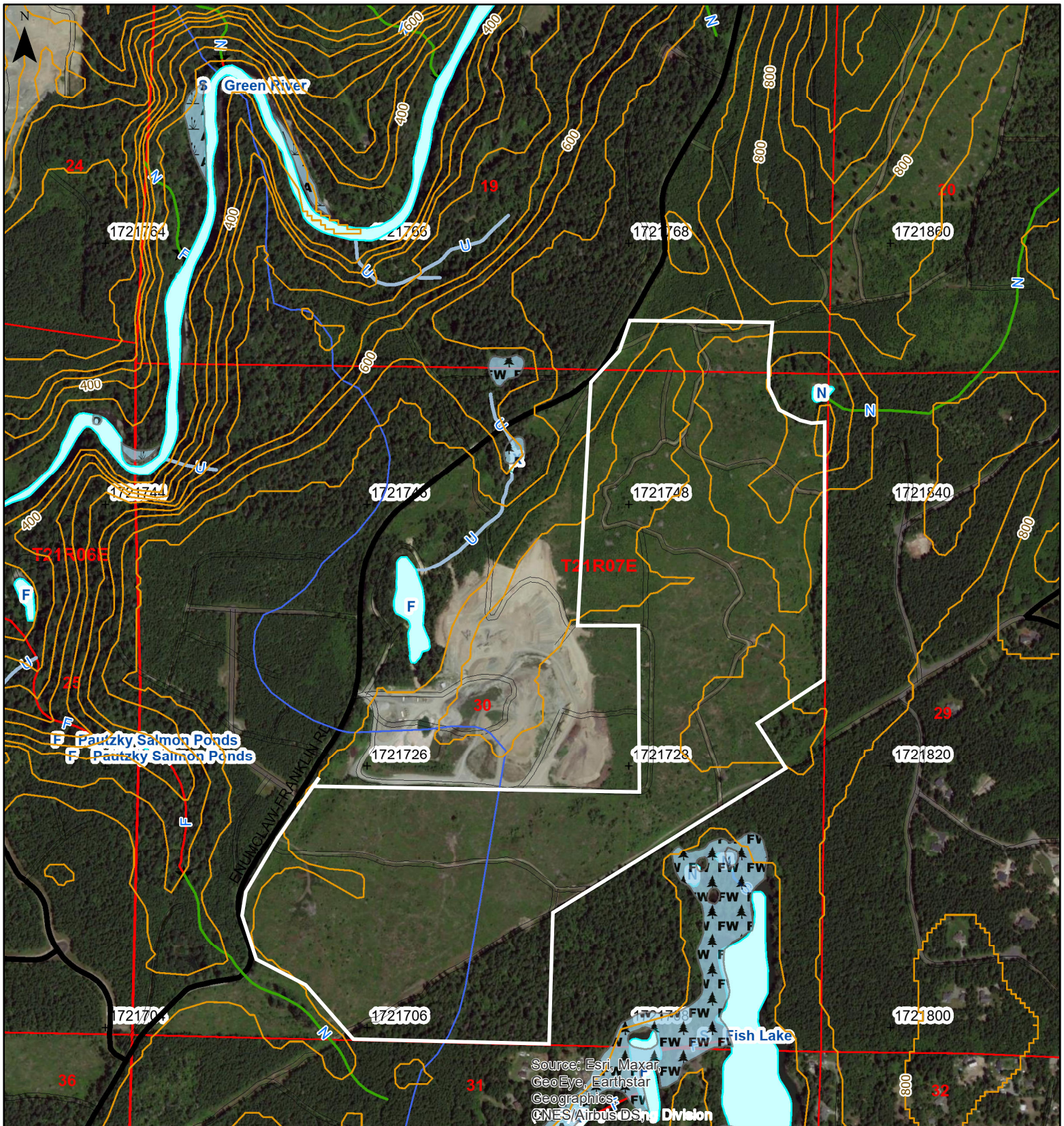
1:18,056

— All SalmonScape Species



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, USGS/NHD, Dale Gombert (WDFW), WDFW

Figure 5 Forest Practices Water Type Map












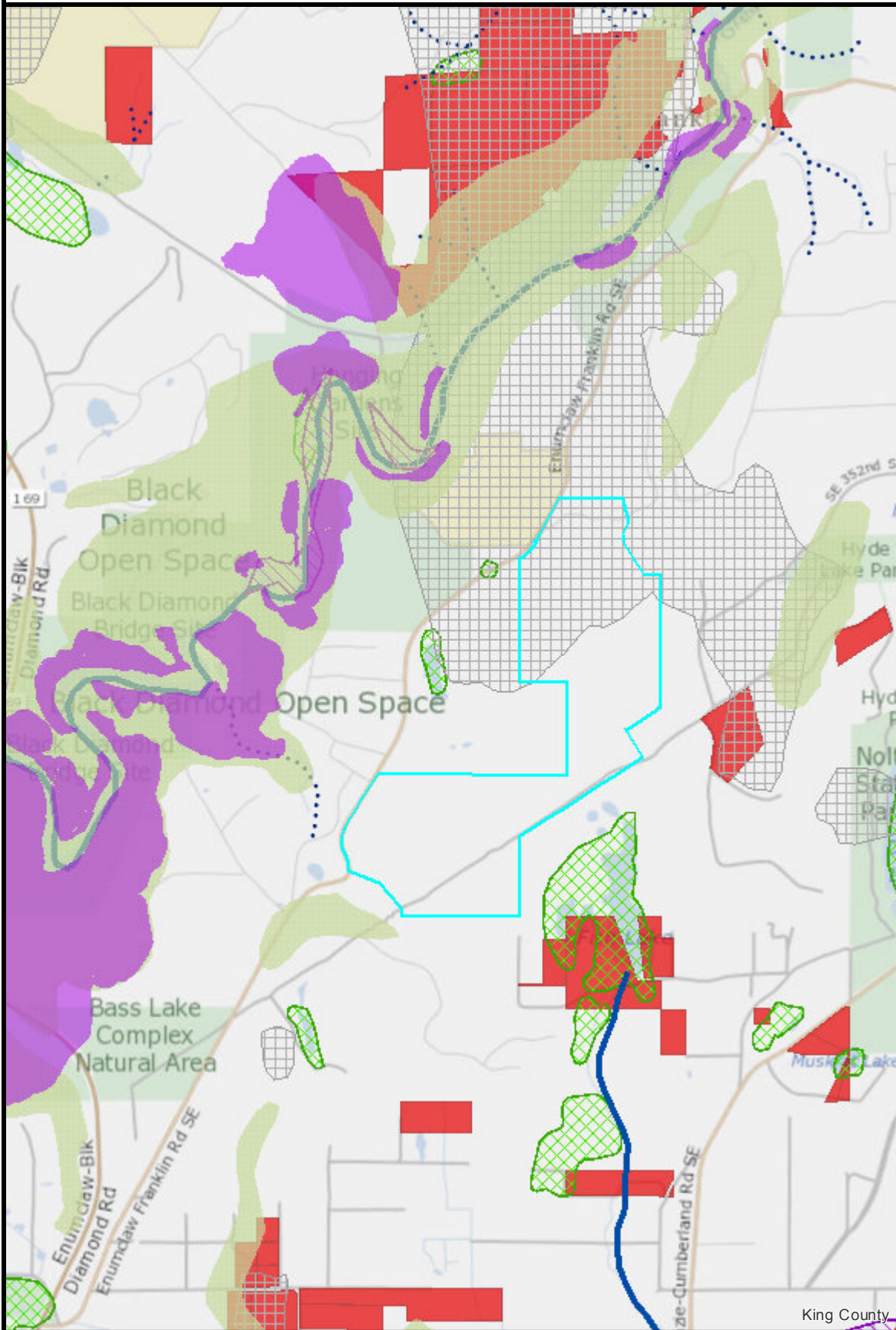











Map Symbols	Additional Information	Legal Description
<ul style="list-style-type: none">  New Stream  Proposed Water Type  Stream Removal  Break between water types 	<ul style="list-style-type: none">  Start and End Point of Surveyed Reach  Natural Fish Barrier  Manmade Barrier  End of Fish or Last Fish 	<p>S29 T21.0N R07.0E, S31 T21.0N R07.0E S25 T21.0N R06.0E, S19 T21.0N R07.0E S20 T21.0N R07.0E, S32 T21.0N R07.0E S36 T21.0N R06.0E, S30 T21.0N R07.0E S24 T21.0N R06.0E</p>
 <p>WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES</p>	<p>Extreme care was used during the compilation of this map to ensure its accuracy. However, due to changes in data and the need to rely on outside information, the Department of Natural Resources cannot accept responsibility for errors or omissions, and therefore, there are no warranties that accompany this material.</p>	<p>0 0.25 Miles</p> <p>Date: 6/22/2021 Time: 4:05:47 PM</p>

Figure 6 King County Mapping



Legend

-  Potential landslide hazard areas (2016, see explanation-->)
 -  Erosion hazard (1990 SAO)
 -  Seismic hazard (1990 SAO)
 -  Coal mine hazard (1990 SAO)
- Stream (1990 SAO)**
-  class 1
 -  class 2 perennial
 -  class 2 salmonid
 -  class 3
 -  unclassified
 -  Wetland (1990 SAO)
 -  Sensitive area notice on title

The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

Date: 6/21/2021

Notes:



King County

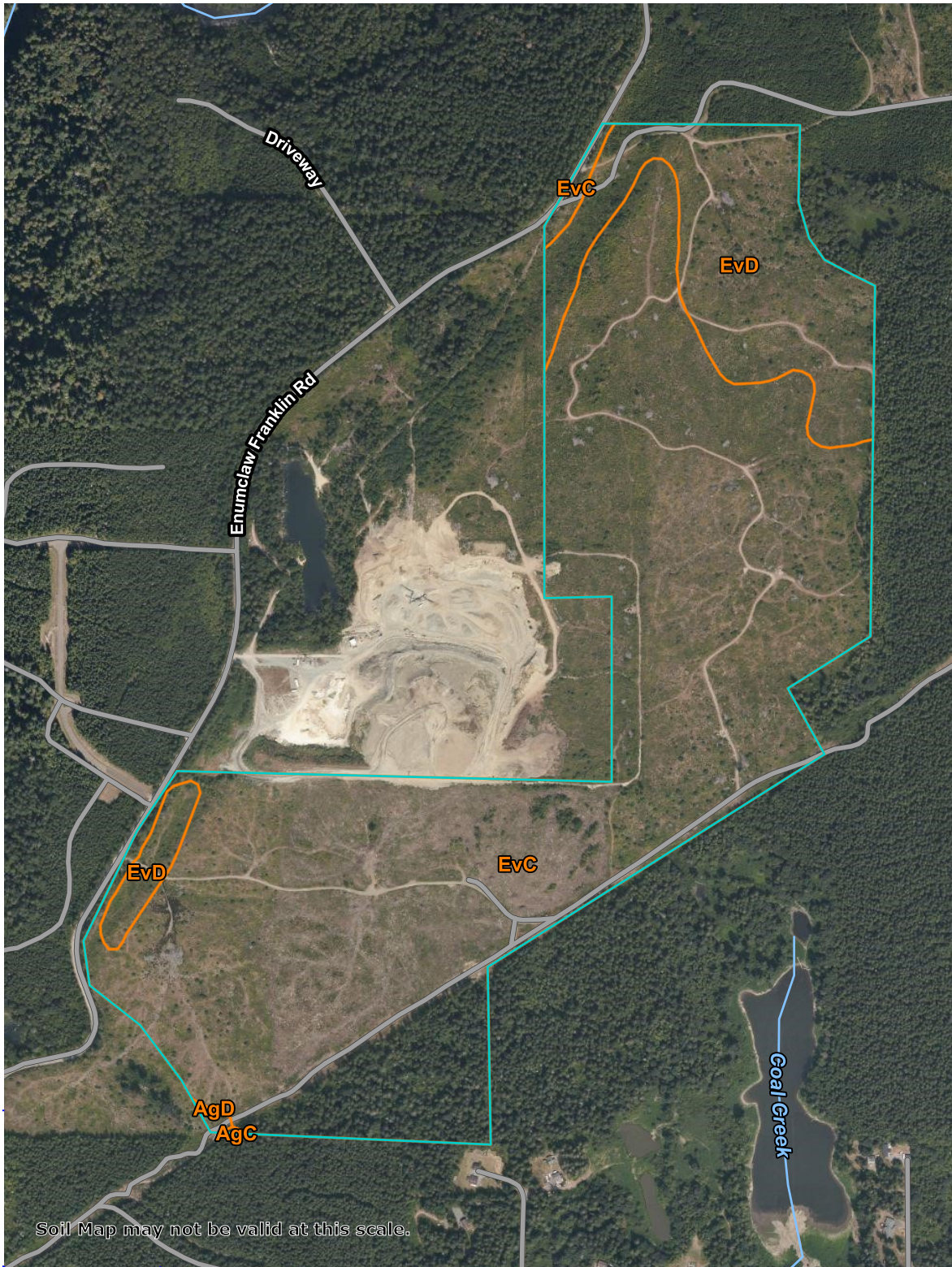
Soil Map—King County Area, Washington
(Figure 7 Soils Map)

121° 58' 25" W

121° 57' 8" W

47° 17' 16" N

47° 17' 16" N



47° 16' 7" N

47° 16' 7" N

121° 58' 25" W

121° 57' 8" W



Map Scale: 1:10,300 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84





MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: King County Area, Washington

Survey Area Data: Version 16, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 30, 2018—Aug 6, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AgC	Alderwood gravelly sandy loam, 8 to 15 percent slopes	0.1	0.0%
AgD	Alderwood gravelly sandy loam, 15 to 30 percent slopes	0.4	0.2%
EvC	Everett very gravelly sandy loam, 8 to 15 percent slopes	196.8	82.9%
EvD	Everett very gravelly sandy loam, 15 to 30 percent slopes	40.0	16.9%
Totals for Area of Interest		237.3	100.0%

REFERENCE AND BACKGROUND LIST

- Adamus, P.R., E.J. Clairain Jr., R.D. Smith, and R.E. Young. 1987. Wetland Evaluation Technique (WET); Volume II: Methodology, Operational Draft Technical Report Y-87, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- Cowardin, Lewis M. et al, 1979. Classification of Wetlands and Deepwater Habitats of the United States. Office of Biological Services, U.S. Fish and Wildlife Service, U.S. Department of the Interior, FWS/OBS-79/31.
- Hitchcock, C.L., A. Cronquist. 1977. Flora of the Pacific Northwest. University of Washington Press. Seattle, Washington.
- Hruby, T. 2014. Washington State Wetland Rating System for Western Washington: 2014 Update. (Publication #14-06-029). Olympia, WA: Washington Department of Ecology.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetlands Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X. <http://wetland-plands.usace.army.mil/>
- Reppert, R.T., W. Sigleo, E. Stakhiv, L. Messman, and C. Meyers. 1979. Wetland Values - Concepts and Methods for Wetland Evaluation. Research Report 79-R1, U.S. Army Corps of Engineers, Institute for Water Resources, Fort Belvoir, Virginia.
- United States Army Corps of Engineers, 1987. Wetlands Delineation Manual. Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. March 1987.
- United States Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), Environmental Laboratory ERDC/EL TR-08-13.
- US Climate Data, 2015 <http://www.usclimatedata.com/climate/tacoma/washington/united-states/uswa0441/0441/2014/1>
- USDA Natural Resource Conservation Service Plants Database, 2015 (for hydrophytic plan classification): <http://plants.usda.gov/>
- United States Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey. 2016 <http://vewsoilsurvey.nrcs.usda.gov/app/newfeatures.2.3.htm>.
- US Fish and Wildlife Service National Wetland Inventory Mapper, 2016 (for NWI wetland mapping): <http://www.fws.gov/wetlands/Data/Mapper.html>.

Washington State Department of Ecology. 1997. Washington State Wetlands Identification and Delineation Manual. Publication Number 96-94.

Washington State Department of Fish and Wildlife Priority Habitats and Species Maps 2016 <http://wdfw.wa.gov/mapping/phs/>

Washington State Department of Fish and Wildlife SalmonScape Mapping System, 2016 (for fish presence): <http://apps.wdfw.wa.gov/salmonscape/map.html>

Washington State Department of Natural Resources FPARS Mapping System, 2016 (for stream typing): <http://fortess.wa.gov/dnr/app1/fpars/viewer.htm>

PHOTOS



The project site was dominated by a young, reproduction forest plant community established following recent forest practices.



General view across the central portion of the project site.



General view across the southcentral portion of the project site.



General view of the very northern portion of the project site.