November 14, 2007

Mr. Jeff Potter, PE
@ Integrity Land LLC
23175 - 224th Place SE, Suite A
Maple Valley, Washington 98036

RE: CRITICAL AREAS ASSESSMENT
Maple Center Properties; City of Maple Valley, Washington

Dear Mr. Potter,

Following your request Habitat Technologies has completed an onsite critical areas assessment for the proposed Maple Center Properties, City of Maple Valley, Washington (Figure 1). Onsite assessment followed the established criteria and methods as defined within the *Corps of Engineers Wetlands Delineation Manual* (1987 Manual), the *Washington State Wetlands Identification and Delineation Manual* (Wash Manual), the Washington Department of Natural Resources (WDNR) Forest Practice Rules, and City of Maple Valley Title 18 –Critical Areas Regulations.

BACKGROUND INFORMATION

National Wetland Inventory Mapping

The National Wetland Inventory (NWI) mapping completed by the U.S. Fish and Wildlife Service was reviewed as a part of this assessment. This mapping resource did not identify any wetlands or drainage corridors within the project site. This mapping resource did identify a wetland offsite to the north of the central-northeastern boundary of the project site. The offsite wetland was noted as palustrine, unconsolidated bottom, semi-permanently flooded, excavated (PUBFx) (Figure 2).

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. This mapping resource did not identify any priority habitats or species within the project site or adjacent areas. This mapping resource did not identify the offsite wetland as noted in the NWI mapping above (Figure 3).

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. This mapping resource did not identify any streams within or adjacent to the project site (Figure 4). This mapping resource did identify the Cedar River well offsite to the northeast.

State of Washington Department of Natural Resources

The State of Washington Department of Natural Resources (WDNR) mapping was reviewed as a part of this assessment. This mapping resource did not identify any streams within the project site (Figure 5). This mapping resource did identify the Cedar River well offsite to the northeast as noted in the WFDW mapping above. This mapping resource also identified the Cedar River Water Supply Pipeline along the northern boundary of the project site. This Pipeline was identified as a WDNR Type "X" Water.

King County Mapping

The King County Mapping was reviewed as a part of this assessment. This mapping resource did not identify any wetlands or streams within the project site. This mapping resource generally identified the Cedar River to the northeast of the project site as noted in the mapping resources above (Figure 6).

Soils Mapping

The soil mapping inventory completed by the Soils Conservation Service was reviewed as a part of this assessment. This mapping resource identified the soil throughout the project site as Everett gravelly sandy loam (EvC and EvD). The Everett soil series is defined as somewhat excessively drained, as formed in gravelly glacial outwash, and as not listed as "hydric" (Figure 7).

Washington State Natural Heritage Program

The Washington State Natural Heritage Program was reviewed as a part of this assessment. This resource failed to identify any high quality, undisturbed wetland or a wetland that supports state Threatened, Endangered, or Sensitive plant species within the Section/Township/Range of the project site.

ONSITE EVALUATION

Evaluation Methodologies

Onsite wetland and drainage corridor assessment was completed during late November and early December 2007. This assessment followed the methodologies and procedures defined in the 1987 Manual, the Wash. Manual, the WDNR Forest Practice Rules, and City of Maple Valley Title 18 – Critical Areas Regulations. 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" (1987 Manual).

Wetlands exhibit three essential characteristics, all of which must be present for an area to meet the established criteria within the Wash. Manual and the 1987 Manual. These essential characteristics are:

1. **Hydrophytic Vegetation:** A predominance of plants that are typically adapted for life in saturated soils.
2. **Hydric Soil:** A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper horizons.
3. **Wetland Hydrology:** Permanent or periodic inundation, or soil saturation to the surface, at least seasonally.

A stream is defined as a "watercourse" which includes any portion of a channel, bed, bank, or bottom waterward of the ordinary high water line of waters of the state including areas in which fish may spawn, reside, or through which they may pass, and tributary waters with defined beds or banks, which influence the quality of fish habitat downstream. This definition includes watercourses that flow on an intermittent basis or which fluctuate in level during the year and applies to the entire bed of such watercourse whether or not the water is at peak level. This definition does not include irrigation ditches, canals, storm water run-off devices, or other entirely artificial watercourses, except where they exist in a natural watercourse that has been altered by humans.

Wildlife habitat conservation areas are generally identified as those areas that are essential for the preservation of critical habitat and species. Such wildlife habitat conservation areas include areas with which non-aquatic state or federally designated endangered, threatened, and sensitive species have a primary association. Habitats and species of local importance are those identified by the City of Maple Valley for their unusual or unique habitat, or noted as essential for preserving connections between habitat blocks and open space.

Field Observations

Onsite assessment activities encompassed the entire project site. The project site was approximately fifty (50) acres in size and was accessed by SE 240th Way which transected the project site. The project site was composed of eleven (11) existing parcels noted in the following table:

1522069012	1522069013	1522069119
1622069023	1622069030	1622069138
1622069168	2122069050	2122069182
2222069072	8856571110	

The project site had undergone prior land use manipulations to include forest harvest, reforestation, clearing, grading, minor surface mining excavation, field sports area creation, fencing, soil stockpiling, internal and external road construction, landscaping, and the development of adjacent properties. The project site was bounded by existing developments which included residential, public roadways, a commercial gravel mine, and the City of Seattle's water supply pipeline corridor.

Vegetation

The majority of the project site exhibited a mixed, upland, forest overstory typically of a managed second-growth Douglas fir forest plant community. Portions of the project site had undergone somewhat recent thinning activities of merchantable trees. Observed tree species included Douglas fir (*Pseudotsuga menziesii*), Western red cedar (*Thuja plicata*), Western hemlock (*Tsuga heterophylla*), big leaf maple (*Acer macrophyllum*), black cottonwood (*Populus trichocarpa*), red alder (*Alnus rubra*), and cascara (*Rhamnus purshiana*). The understory was dominated by a wide variety of shrubs and herbs which included Himalayan blackberry (*Rubus procera*), evergreen blackberry (*Rubus laciniatus*), Pacific blackberry (*Rubus ursinus*), Scot's broom (*Cytisus scoparius*), rose (*Rosa* spp.), Indian plum (*Oemleria cerasiformis*), vine maple (*Acer circinatum*), hazelnut (*Corylus cornuta*), Oceanspray (*Holodiscus discolor*), thimbleberry (*Rubus parviflorus*), salmonberry (*Rubus spectabilis*), Pacific red elderberry (*Sambucus racemosa*), red huckleberry (*Vaccinium parvifolium*), snowberry (*Symphoricarpus albus*), Oregon grape (*Berberis nervosa* and *Berberis aquifolium*), holly (*Ilex aquifolium*), salal (*Gaultheria shallon*), sword fern (*Polystichum munitum*), bracken fern (*Pteridium aquilium*), nettle (*Urtica dioica*), bleeding heart (*Dicentra formosa*), geranium (*Geranium* spp.), Canadian thistle (*Cirsium arvensis*), bull thistle (*Cirsium vulgare*), bluegrass (*Poa spp.*), and buttercup (*Ranunculus repens*). This plant community was identified as non-hydrophytic in character (i.e. typical of uplands).

The second plant community was identified within a once managed sports field area that had been created through grading and clearing in the central-eastern portion of the project site. A remnant batting cage facility and concession trailer were still present during the time of this assessment. This area exhibited a prior managed mixed grass and herb plant community with scattered areas of shrubs establishing. Observed species included Himalayan blackberry, Scot's broom, Pacific blackberry, bracken fern, geranium, daisy (*Bellis* spp.), Canadian thistle, bull thistle, smooth cats ear (*Hypochaeris glabra*), hairy cats ear (*Hypochaeris radicata*), plantain (*Plantago major*), fireweed (*Epilobium angustifolium*), teasel (*Dipsacus sylvestris*), sheep sorrel (*Rumex acetosella*), dandelion (*Taraxacum officinale*), clover (*Trifolium* spp.), buttercup, orchard grass (*Dactylis glomerata*), wheat grass (*Agropyron* spp.), fescue (*Festuca* spp.), velvet grass (*Holcus lanatus*), vernal grass (*Anthoxanthum odoratum*), bentgrass (*Agrostis* spp.), and bluegrass (*Poa spp.*). This plant community was identified as non-hydrophytic in character (i.e. typical of uplands).

The third plant community was identified contiguous to the SE 240th Way Corridor that transected the project site. This plant community was dominated by ornamental street

trees, landscaped median planters, and managed lawn adjacent to the roadway corridor. This plant community was identified as non-hydrophytic in character (i.e. typical of uplands).

Soils and Hydrology

As documented at representative sample plots the project site exhibited soils with a gravelly loam to gravelly sandy loam texture and coloration typical of the Everett soil series (see Appendix A). Soils within the project site did not exhibit prominent redoximorphic features and appeared to drain moderately well to well following seasonal storm events. Field indicators of wetland hydrology patterns were absent throughout the project site.

A small, excavated depression was identified in the northern portion of the project site. This depressional area was at the end of an internal roadway and appeared to have been created decades ago as a part of surface mining actions. However, the southern portion of this excavated depression had been partially refilled in more recent years. The lowest portion of this depression had not undergone refilling actions and was dominated by a plant community more typically associated with upland soil and hydrology conditions. As documented at representative sample plots no portion of this excavated depression exhibited a hydrophytic plant community, wetland soil characteristics, or field indicators of wetland hydrology.

Offsite

The project site was generally surrounded by existing development, public roadways, or public utility corridors.

Wildlife and Habitat Observations

The majority of the project site was dominated by a somewhat managed second-growth conifer forest plant community. This plant community has undergone prior forest harvest, clearing, and replanting actions. No portion of the project site, or area within the immediate vicinity of the project site exhibited aquatic habitats. Surface water was present within the surface mine to the northwest of the project site and the Cedar River Corridor was located well offsite to the northeast.

The onsite assessment of wildlife species presence and available wildlife habitats was completed as a part of the onsite assessment of wetland and stream characteristics. This assessment included both early morning and late afternoon observations. Species presence and habitat utilization were evaluated following the methods identified by Horner and Raedeke (1989) and within U.S. Fish and Wildlife Service Publication 80/58 (Mikol, 1980). In addition, the King County Wildlife Study Guidelines (Draft Wildlife Management in King County, Issue Paper, 1993) were also followed to assure consistency with the documentation of habitat types.

Based on the existing plant communities, direct observations, and observations within adjacent parcels avian species that were observed or that would be expected within the project site would include red tailed hawk (*Buteo jamaicensis*), rough legged hawk (*Buteo lagopus*), sharp-shinned hawk (*Accipiter striatus*), American crow (*Corvus brachynchos*), common raven (*Corvus coraw*), rock dove (*Columbia livia*), mourning dove (*Zenaida macroura*), band-tailed pigeon (*Columbia fasciata*), Northern flicker (*Colaptes auratus*), hairy woodpecker (*Picoides villosus*), tree swallow (*Tachycineta bicolor*), house sparrow (*Passer domesticus*), violet green swallow (*Tachycineta thallassina*), barn swallow (*Hirundo rustica*), brown creeper (*Certhia familiaris*), bushtit (*Psaltriparus minimus*), red-breasted nuthatch (*Sitta Canadensis*), song sparrow (*Melospiza melodia*), American robin (*Turdus migratorius*), dark eyed junco (*Junco hyemalis*), Steller's jay (*Cyanocitta stelleri*), starling (*Sturnus vulgaris*), black capped chickadee (*Parus atricapillus*), rufous sided towhee (*Pipilo erythrophthalmus*), rufous hummingbird (*Selasphorus rufus*), great horned owl (*Bubo virginianus*), Western screech owl (*Otus kennicotti*), killdeer (*Charadrius vociferus*), ruffed grouse (*Bonasa umbellus*), California quail (*Callipepla californica*), American goldfinch (*Carduelis tristis*), pine siskin (*Carduelis pinus*), purple finch (*Carpodacus purpureus*), golden crowned kinglet (*Regulus satrapa*), and evening grosbeak (*Coccothraustes vespertina*). The majority of these avian species would be expected to feed throughout the project site and within adjacent properties. No large nests suitable for raptors were observed within or adjacent to the project site.

Mammal species observed (directly or indirectly) or expected within the project site would include elk (*Cervus elaphus*), black tailed deer (*Odocoileus hemionus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), opossum (*Didelphis virginianus*), deer mouse (*Peromyscus maniculatus*), shrew (*Sorex* spp.), vole (*Microtus* spp.), Townsend mole (*Scapanus townsendii*), bats (*Myotis* spp.), Norway rat (*Rattus norvegicus*), eastern gray squirrel (*Sciurus carolinensis*), Douglas squirrel (*Tamiasciurus douglasii*), mountain beaver (*Aplodontia rufa*), and eastern cottontail (*Sylvilagus floridanus*).

The project site would also provide habitats common garter snake (*Thamnophis sirtalis*). The project site did **not** provide suitable habitats for spawning amphibians or suitable habitats for fish species.

- **Wildlife Movement Corridors**

As identified by onsite wildlife trials, small, medium, and large mammals appeared to be moving throughout the project site and into adjacent properties. However, as a result of adjacent development the project site did **not** exhibit field evidence of being part of a movement corridor for medium or large mammals. Medium and large mammals appeared to be moving onto to the site from the forested area offsite to the northeast and the highest percentage of medium or large mammals utilization of the project site appeared within the northeastern portion of the project site.

- **Listed State Priority Species**

State Priority Species are identified as fish and wildlife species requiring protective measures and/or management guidelines to ensure their perpetuation. State Priority Habitats are identified as habitat types with unique or significant value to many species. An area identified and mapped as priority habitat has one or more of the following attributes:

1. comparatively high fish and wildlife density
2. comparatively high fish and wildlife species diversity
3. important fish and wildlife breeding habitat
4. important fish and wildlife seasonal ranges
5. important fish and wildlife movement corridors
6. limited availability
7. high vulnerability to habitat alteration
8. unique or dependent species

Game Species: A variety of species identified by the State of Washington as "Priority Species" were observed onsite or potentially may utilize the project site. The majority of these priority species were identified as "game species" which are regulated by the State of Washington through recreational hunting bag limits, harvest seasons, and harvest area restrictions. These species include elk, black tailed deer, mourning dove, band-tailed pigeon, California quail, and ruffed grouse.

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. No State Candidate species were identified to potentially utilize the project site during this assessment.

State Monitored: State Monitored species are native to Washington but require habitat that has limited availability, are indicators of environmental quality, require further assessment, have unresolved taxonomy, may be competing with other species of concern, or have significant popular appeal. No State Monitored species were identified to potentially utilize the project site during this assessment.

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 provide critical habitats for State Threatened species. However, a State Threatened species - bald eagle (*Haliaeetus leucocephalus*) has been documented along the Cedar River Corridor and area lakes within this portion of King County. As such, this species may occasional overfly the area of the project site.

- **Federally Listed Species**

No federally listed endangered or threatened species, or critical habitats for such listed species were observed within or immediately adjacent to the project site. A single listed threatened species – bald eagle - has been documented along the Cedar River Corridor and area lakes within this portion of King County. As such, this species may occasional overfly the area of the project site.

FINDINGS AND CONCLUSIONS

Onsite assessment was completed during late November and early December 2007 following the methods and procedures defined within both the Wash. Manual, the 1987 Manual, the WDNR Forest Practice Rules, and City of Maple Valley Title 18 –Critical Areas Regulations. This assessment identified that no area within the project site exhibited all three of the established criteria for designation as "wetland." In addition, no area was identified within the project site to exhibit characteristics of a "stream" and no area was identified within the project site to meet the City of Maple Valley criteria for designation as a fish and wildlife habitat conservation area.

The majority of the project site was dominated by a somewhat managed second-growth conifer forest plant community. While the project site does provide habitats for a variety of wildlife species, none of these wildlife species are federally or state listed as endangered, threatened, or candidate species. The project site does provide suitable habitats for a variety of state listed "game" species.

- **Elk Habitat Utilization**

As identified by onsite assessment the project site is utilized by elk. The majority of this utilization is restricted to the northern portion of the project site. However, this area does not appear to be used by heavy concentrations of elk and did not provide a movement corridor between other habitats or along an aquatic corridor.

As recently discussed with WDFW Biologists the WDFW is in the process of updating the management recommendations for identified priority species. Unfortunately, the updated management recommendations have not yet been completed for elk. As such, the current management recommendations for elk are presented in the 1991 document entitled *Management Recommendations for Washington's Priority Habitats and Species* (Roderick and Milner, 1991).

The 1991 WDFW management recommendations note that the availability of cover or forage within a winter range may limit elk herds. Such winter range often occurs at lower elevations along foothills, valley edges, and steep canyons. These management recommendations further note that most elk use cover stands along the edge of openings. The optimal thermal cover contains mature trees averaging over 21 inches in diameter at breast height, four of more canopy layers, and scattered, small openings

with forage. In addition, special features of elk habitat include travel corridors and wallows.

Thank you for allowing Habitat Technologies the opportunity to assist with your project planning efforts. Please contact us at 253-845-5119 with any questions or need for additional assistance.

Sincerely,

Bryan W. Peck
Wetland Biologist

Thomas D. Deming
Professional Wetland Scientist

FIGURES

REFERENCE LIST

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