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GEORGIAN HEIGHTS PHASE 4 HABITAT CONSERVATION AREA REPORT

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CITY OF WOODINVILLE
PLANNING DEPARTMENT

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1.0 INTRODUCTION

Adolfson Associates, Inc. (Adolfson) performed field studies and prepared this technical report for the Georgian Heights Phase 4 site, located in the City of Woodinville, Washington (Appendix A, Figure 1). This report includes a description of wildlife habitat, critical habitats and species, project impacts, and habitat protection and mitigation, and meets the requirements of Habitat Conservation Area Report, as provided by the City.

2.0 PROJECT DESCRIPTION

Georgian Heights Phase 4 is a proposed 51-lot residential subdivision located immediately south of NE 205th Street, north of the Woodinville High School, and one lot west of 136th Avenue NE. Other project elements include a public road and cul-de-sac, private access roads, Native Growth Protection Areas (NGPA), and utilities. Site drawings are provided in Appendix B, Sheet 1 of 1.

3.0 SITE DESCRIPTION

The Georgian Heights Phase 4 site is a 19.22-acre parcel. The site is mostly forested, with some areas dominated by shrubs (Appendix A, Figure 2). Roads and residential development surround the site.

The site is located within the Little Bear Creek sub-basin within the Sammamish River-Lake Washington watershed (WRIA 8). The site receives surface water from the west and slopes down to the east. Two unnamed streams and two wetlands are located on the site (Appendix B, Sheet 1 of 1). Surface water from the site eventually enters Little Bear Creek east of the site.

4.0 STUDY METHODS

Adolfson scientists conducted field studies on March 22, 25, and 30, 2004. Field data collected included information on wetland and upland characteristics, wetland boundary delineation, stream characterization, and wildlife observations. These data are described in *Georgian Heights Phase 4 – Wetland and Stream Mitigation Report* (Adolfson, 2004). Additional information was described in an earlier wetland delineation report (Raedeke, 1988). This Habitat Conservation Area report provides additional analysis of wildlife use of habitat on the site, and of habitats within 300 feet of the site, as required by the City.

5.0 ONSITE HABITAT CONSERVATION AREAS

Fish and Wildlife Habitat Conservation Areas are defined by and regulated by the City of Woodinville in accordance with the Woodinville Municipal Code (WMC) Chapter 21.24 Environmentally Sensitive Areas. Fish and wildlife habitat conservation areas on the site include the wetlands, streams, and buffers identified in the *Georgian Heights Phase 4 – Wetland and Stream Mitigation Report* (Adolfson, 2005) because they will be protected as Native Growth Protection Areas. No other criterion for designating habitat conservation areas listed in WMC 21.24.310 is applicable to this site.

5.1 Habitat Description

The site includes wetland, riparian, and upland forest habitats (Appendix B: Sheet 1 of 1). Forested wetland habitat covers approximately 7.5 acres of the site and upland forest covers approximately 11.5 acres. The forested wetlands have an open canopy with some areas dominated by shrubs. Dominant trees include red alder and western red cedar. Douglas fir and western hemlock, species more typically found in upland habitats, are scattered throughout the wetlands on small hummocks. Dominant shrubs include salmonberry, vine maple (also on hummocks), and Himalayan blackberry near the wetland boundaries. The dominance of Himalayan blackberry on the site, throughout the wetland and buffer areas near the roads was not noted in the 1988 Raedeke report; this species has likely spread onto the site since 1988. Dominant herb species include skunk cabbage, lady fern, and youth-on-age. Vegetation in the riparian habitats is similar to that found in the wetlands. Upland forest areas are vegetated primarily by Douglas fir, western red cedar, vine maple, salmonberry, Himalayan blackberry, sword fern, and salal.

Two streams flow through the site. They enter the site from the slopes to the west and flow generally east to Little Bear Creek located approximately 650 feet east of the site at its closest approach. The on-site streams have seasonal flow with unconsolidated silt and sand substrates. The streams are not accessible to migrating fish and they do not provide suitable fish habitat for resident fish due to the lack of a defined channel in some areas and the distance from Little Bear Creek according to a site survey by WDFW (Holser, personal communication 2005).

Habitat features on the site include deciduous and conifer snags, large woody debris, seasonal and perennially inundated areas, streams, dense shrub thickets, large conifer and deciduous trees, leaf litter, berries, nuts, and seeds.

5.2 Wildlife Observations

The native forest habitats support a variety of native wildlife species. Bird species observed on the site during the three days of field investigations in March 2004 include: American robin, bushtit, Bewick's wren, winter wren, black-capped chickadee, chestnut-backed chickadee, song sparrow, spotted towhee, red-breasted nuthatch, Steller's jay, golden-crowned kinglet, hairy woodpecker, and pileated woodpecker. Mammal sign observed included mountain beaver and raccoon. Amphibians observed include Pacific chorus frog and western red-backed salamander. Other species of mammals, amphibian, reptiles, and birds likely use the habitats present on the site.

5.3 Priority Species

The only priority species known to exist on the site is pileated woodpecker, a Washington State candidate species. The species was observed foraging on the site by Adolfson staff, and foraging excavations were common in large snags.

Other priority species are not known to use the site. The site is not mapped within any bald eagle territory, and no great blue heron colonies are located on or near the site (WDFW, 2004).

However, the site does contain large trees potentially suitable for nesting by these species. There is no habitat for anadromous fish on the site.

5.4 WDFW Management Recommendations

Washington State Department of Fish and Wildlife (WDFW) management recommendations for the pileated woodpecker encourage the retention of numerous snags for nesting and foraging birds and the preservation of forest habitat (WDFW, 2005).

6.0 OFFSITE HABITAT CONSERVATION AREAS

Little Bear Creek is located more than 300 feet east of the site (Appendix A: Figure 2). A pond and wetland pasture is located on the north side of NE 205th Street within 300 feet of the site. No priority wildlife species use is mapped in areas within 300 feet of the project site (WDFW, 2004).

7.0 PROJECT IMPACTS

Project elements that will affect wetlands, streams, and upland habitats include roads, utilities, and lot development (Appendix B). Approximately 12.5 acres of forested habitat including wetlands will be protected and approximately 4.5 acres of forested habitat (mostly uplands) will be cleared and graded for lot development. The utility right-of-way encompasses 2 acres of the site. Utilities that cross wetland areas will be bored avoiding the loss of habitat, and any buffer areas disturbed by utility construction will be restored after construction. New roads will cross the unnamed stream and associated wetland on the north portion of the site at two locations (Appendix B: site map). In addition, a road will cross a narrow finger of wetland dominated by shrubs in the southwest portion of the site. The total wetland fill resulting from these road crossings is 0.08 acre in size. Underground utilities including water and sewer lines will be installed beneath wetland and stream buffer areas near the south site boundary using boring technology to avoid wetland impacts. The wetland buffer will be reduced throughout the site to allow for the development of 51 residential lots. Wetland and buffer enhancement is proposed to mitigate for buffer reduction.

Using best management practices during construction will protect water quality on the site and downstream. A specialty consultant engineer from Associated Earth Sciences, Inc will implement a temporary erosion control plan along with regular onsite monitoring and inspection. For any in-water construction work, the project will be incompliance with the State of Washington Water Quality Standards for Turbidity (WAC 173.201A-110).

Stormwater from the developed site will be treated in an infiltration pond for Phase 3 and a water quality settling pond will discharge surface water from impervious surfaces via a dispersal trench prior to exiting the building portion of the subdivision. All of the dispersed water will enter the existing onsite wetlands.

8.0 HABITAT MANAGEMENT AND MITIGATION

Mitigation plan drawings are provided in Appendix B. This section of the report discusses mitigation sequencing, the type of mitigation to be provided, and monitoring and maintenance. Specific goals and objectives, performance standards, monitoring, and maintenance requirements for the wetland and buffer mitigation areas are provided in Appendix B.

8.1 Mitigation Sequencing

Mitigation sequencing has been followed for wetlands and streams on this project, and includes the sequence of avoidance, minimization, restoration, and compensatory mitigation.

Avoidance. All residential lots have been located outside of wetland and stream areas. Utilities will be installed by boring beneath wetland areas to avoid wetland impacts.

Minimization. Direct wetlands and stream impacts are limited to road crossings required for access to new lots. Wetland and stream road crossings are designed to meet the requirements of WMC 21.24.320 and WMC 21.24.360. Minimum lot sizes are used to avoid impacts to the wetlands, streams, and buffers that encompass most of this site. Residential lots have been clustered and lot sizes have been minimized to protect a large, continuous tract of habitat.

Restoration. All buffer areas temporarily disturbed by construction such as the utility line corridor and any areas disturbed adjacent to new lots or roads will be revegetated with native vegetation once construction is complete in these areas.

Compensatory Mitigation. Mitigation plans are provided in Appendix B, Sheets 1 through 3 of 3. Compensatory mitigation calculations are shown in Appendix B, Sheet 1 of 1. To compensate for 0.08 acre (approximately 3,600 square feet) of wetland impact, new wetlands will be created at a 2:1 ratio. Approximately 7,226 square feet of wetland will be created near NE 205th Street adjacent to the existing wetland boundary. New wetland hydrology will be accomplished using surface water that has been treated by onsite stormwater treatment facilities and limited grading to spread surface water across the surface. Only a few trees currently exist in the wetland creation area, these trees will be retained to the extent possible while clearing and grading to create wetland conditions.

Mitigation for wetland and stream buffer reduction includes wetland and buffer enhancement of areas currently dominated by Himalayan blackberry and reed canarygrass. Wetland and buffer areas will be enhanced by the removal of non-native, invasive plant species and replanting with native vegetation. The area of wetland enhancement is estimated to be 19,861 square feet and the area of buffer enhancement is estimated to be 18,383 square feet.

8.2 Agency Management Recommendations

No seasonal restrictions for construction on the site are required by WDFW for fish or other priority species or habitats. Management recommendations for the pileated woodpecker include

retention of numerous snags for nesting and foraging birds and the preservation of forest habitat in large blocks (http://www.wdfw.wa.gov/hab/phs/vol4/phs_vol4_birds.pdf, 2005).

8.3 Wetland and Stream Mitigation Measures

Mitigation for wetland, stream, and buffer impacts includes wetland and buffer enhancement and wetland creation. Wetland and buffer areas currently dominated by Himalyan blackberry and reed canarygrass will be enhanced by removing these non-native, invasive species and replanting with native shrubs and trees. The wetland creation area will also be planted with native trees and shrubs. Habitat enhancement and creation is shown on the site plan (Appendix B).

The enhanced wetland and buffer areas and the newly created wetland will provide additional habitat for wildlife. Pileated woodpecker primarily use mature forest habitat, and are unlikely to use mitigation areas in the near future; however, these areas could be used more over time.

8.4 On-Going Management Practices

The more than 12.5 acres of forested habitat that is protected on the site under this mitigation plan should continue to provide foraging and potential nesting habitat for pileated woodpeckers. Large trees will also be protected in wetland, riparian, and buffer areas protected as NGPAs may provide potential habitat for other priority species. The NGPAs will be protected with chain link fencing located between the developed areas and the protective areas. No development (e.g. trails) will be allowed in the fenced NGPA. Monitoring and maintenance of mitigation areas is discussed below.

8.5 Off-Site Habitat Areas

Project construction should not affect offsite habitat areas. Best management practices will be used to ensure that erosion and sedimentation is controlled during construction, and sediments will not migrate to off-site wetlands or streams.

8.6 Monitoring and Maintenance

Enhancement and creation areas will be monitored and maintained on an annual basis for a period of five years to determine if the wetland and stream mitigation performance standards outlined in Appendix B are being met. Maintenance will include the continued removal of non-native invasive plant species and irrigation as needed. Annual monitoring reports will be sent to the City, the contractor, and the owner.

9.0 REFERENCES

Adolfson Associates, Inc. 2005. *Georgian Heights Phase 4 – Wetland and Stream Mitigation Report.*

Holser, G. 2005. Communications from Randolf Cherewick's site visit with Ginger Holser, Habitat Biologist, Washington State Department of Fish and Wildlife.

Raedeke Associates. 1988. *Assessment of the Wetlands on the Woodinville High School Annex Property, King County, Washington.*

WDFW (Washington Department of Fish and Wildlife). 2004. Priority Habitats and Species Database.

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