DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE., P.O. BOX 90012
BELLEVUE, WA 98009-9012

OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 14-141200-GJ

Project Name/Address: Hilltop Vegetation Management/5389 146th Ave SE

Planner: Heidi M. Bedwell

Phone Number: 425-452-4862/ hbedwell@bellevuewa.gov

Minimum Comment Period: December 1, 2014

Materials included in this Notice:

- ☒ Blue Bulletin
- ☒ Checklist
- ☒ Vicinity Map
- ☐ Plans
- ☐ Other:

OTHERS TO RECEIVE THIS DOCUMENT:

- ☐ State Department of Fish and Wildlife / Sterwart.Reinbold@dfw.gov; Christa.Heller@dfw.wa.gov;
- ☒ State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
- ☐ Army Corps of Engineers Susan.M.Powell@nws02.usace.army.mil
- ☐ Attorney General ecyolyef@atg.wa.gov
- ☒ Muckleshoot Indian Tribe Karen.Walter@muckleshoot.nsn.us; Fisheries.fileroom@muckleshoot.nsn.us

Reviewed by Heidi M. Bedwell (HMB) 11/10/2014

SEPA ENVIRONMENTAL CHECKLIST DRAFT

UPDATED 2014

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

***Instructions for applicants*:**

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. background

1. Name of proposed project, if applicable: **Hilltop Community Inc. General Clearing and Grading Permit**

2. Name of applicant: **Hilltop Community Inc., Marianne Emerson – Site Plan Committee Chair, Alexandra Harris – Community Lands Committee Chair**

3. Address and phone number of applicant and contact person: **Marianne Emerson, 5303 146th Ave SE, Bellevue 98006-3547, 202-486-4143**

4. Date checklist prepared: **August 1st, 2014**

5. Agency requesting checklist: **City of Bellevue**

6. Proposed timing or schedule (including phasing, if applicable): **September 1st, 2014**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. **No plans beyond what is being proposed are known at this time.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. **Technical memorandum (OTM) prepared by Otak, Inc. and attached as Exhibit A**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. **No, there are none.**

10. List any government approvals or permits that will be needed for your proposal, if known. **General clearing and grading permit from the City of Bellevue as stated in Exhibit C of the pre-annexation agreement, GR #1210306-000 between Hilltop Community, Inc. and the City of Bellevue**

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) **The proposal is to continue to use Hilltop Community Inc's Site Plan Committee Policy and Procedures (attached as Appendix B to govern vegetation management on all of the property it owns, pursuant to Exhibit C of the pre-annexation agreement between the City of Bellevue and Hilltop Community, Inc. Hilltop's history of responsible environmental stewardship is described in the pre-annexation agreement on page 3 and in the preamble of Exhibit C.**

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. **This proposal covers the land owned by Hilltop Community, Inc. in Bellevue, which is parcels 3377900205 and 3377900210.**

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B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site
(circle one): **Flat**, rolling, hilly, steep slopes, mountainous,
other _____

b. What is the steepest slope on the site (approximate percent slope)? **Over 40%, see page 3 of OTM**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. **Soil characteristics vary, see page 3 and following of OTM**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. **In the history of Hilltop Community, Inc. from the late 1940s to the present, there is no history of unstable soils.**

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. **No filling, excavation or grading is proposed.**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. **No, Hilltop expects no soil disturbance with vegetation management.**

May be possible with tree and vegetation removal

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? **None. No new surfaces are planned.**

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: **On sites where vegetation is modified, care will be taken with any machinery required for the operation and stumps will be left in place. Also, often new replanting will be required.**

Erosion control per BCC 23.76 Clearing and Grading Code

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. **Normal small emissions from vegetation management equipment operation and afterwards, none**

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. **None**

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c. Proposed measures to reduce or control emissions or other impacts to air, if any: **Not Applicable**

3. **Water**

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type
and provide names. If appropriate, state what stream or river it flows into. **There are several wetlands areas, described on page 4 of OTM and in its Appendices A and B**

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. **Yes, vegetation management may take place within these areas. Care will be taken to avoid disturbing any water.**

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. **No fill materials will be placed or removed during planned activites.**

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. **No surface water will be impacted**

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. **No entire site sits at the top of a hill at over 1000 feet ASL**

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. **No**

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. **No.**

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. **No Applicable.**

c. Water runoff (including stormwater):

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1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. **No changes will be made to current runoff pathways, current runoff infiltrates through catchment areas and/or flows in established runoff collection pathways**

2) Could waste materials enter ground or surface waters? If so, generally describe. **No waste materials will be generated.**

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. **No.**

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: **Not Applicable.**

4. **Plants**

a. Check the types of vegetation found on the site:

__**X**__deciduous tree: alder, maple, aspen, other
__**X**__evergreen tree: fir, cedar, pine, other
__**X**__shrubs
__**X**__grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
__**X**__ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation
Vegetation is described on page 6 and following of OTM

b. What kind and amount of vegetation will be removed or altered? **Deciduous and evergreen trees and shrubs will be periodically removed or trimmed. Determination of allowable vegetation removal will be under the authority of the Site Plan Committee which is accountable to the Hilltop Community, Inc. The primary objective of vegetation management in this project is to maintain historical view corridors and level of vegetation on the property. Under no foreseeable circumstances would the vegetation management reduce density of vegetation below historic levels. Records will be kept and sent to the City of Bellevue annually.**

c. List threatened and endangered species known to be on or near the site. **None**

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: **As mentioned in 1.h, Hilltop plans to continue to replant areas where cutting has taken place with smaller native plants such as**

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vine maple (Acer circinatum), beaked hazelnut (Corylus cornuta), red huckleberry (Vaccinum parvifolium), red-osier dogwood (Cornus sericea)

e. List all noxious weeds and invasive species known to be on or near the site. **Himalayan blackberry (Rubus armeniacus), creeping buttercup (Ranunculus repens), English holly (Ilex aquifolium), English laurel (Prunus laurocerasus). Hilltop has a annual program targeted at eliminating noxious weeds from community lands.**

5. **Animals**

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

birds: hawk, heron, eagle, **songbirds**, other: **flicker, pileated woodpecker**

mammals: **deer**, bear, elk, beaver, other: **squirrel, coyote, rabbit**
fish: bass, salmon, trout, herring, shellfish, other _____

b. List any threatened and endangered species known to be on or near the site. **Only known species of local importance is the pileated woodpecker.**

c. Is the site part of a migration route? If so, explain. **No.**

d. Proposed measures to preserve or enhance wildlife, if any: **Density and variety of native vegetation will be preserved to no less than historical levels, offering significant areas for wildlife.**

e. List any invasive animal species known to be on or near the site. **Rabbit, red squirrel**

6. **Energy and natural resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. **None**

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. **Potentially increase quanity of sunlight available for certain solar installations.**

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: **None.**

7. **Environmental health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. **No.**

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1) Describe any known or possible contamination at the site from present or past uses. **None.**

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity. **None.**

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project. **None.**

4) Describe special emergency services that might be required. **None**.

5) Proposed measures to reduce or control environmental health hazards, if any: **None.**

b. **Noise**

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? **None.**

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. **During any vegetation management, noise from typical equipment such as chainsaw, chipper, or wood splitter, during norman daytime hours.**

3) Proposed measures to reduce or control noise impacts, if any: **None due to very limited duration and frequency.**

8. **Land and shoreline use**

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. **The current site's use is vacant – single family and vacant – single family with improvements. The adjacent properties are all single family residential use. This proposal does not affect current land uses.**

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? **Site has been residential since late 1940s and no land will be converted.**

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: **No**.

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c. Describe any structures on the site. **The site currently has one swimming pool, 20 feet by 40 feet with associated building containing pumping and heating machinery, one tennis court, one basketball court and two water storage tanks.**

d. Will any structures be demolished? If so, what? **No.**

e. What is the current zoning classification of the site? **R-2.5**

f. What is the current comprehensive plan designation of the site? **Residential**

g. If applicable, what is the current shoreline master program designation of the site? **Not applicable.**

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. **No.**

i. Approximately how many people would reside or work in the completed project? **None.**

j. Approximately how many people would the completed project displace? **None.**

k. Proposed measures to avoid or reduce displacement impacts, if any: **None needed**

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: **None needed.**

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:**Not applicable.**

9. **Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. **None**

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. **None**

c. Proposed measures to reduce or control housing impacts, if any: **None needed.**

10. **Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? **None proposed**

b. What views in the immediate vicinity would be altered or obstructed? **Historic view cooridors will be maintained under this project. No views would be negatively affected and no new structures are planned.**

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c. Proposed measures to reduce or control aesthetic impacts, if any: **Replanting with native plants**

11. **Light and glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? **None**

b. Could light or glare from the finished project be a safety hazard or interfere with views? **No.**

c. What existing off-site sources of light or glare may affect your proposal? **None**

d. Proposed measures to reduce or control light and glare impacts, if any: **None needed**

12. **Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity? **Walking, swimming, tennis, playing outdoor games such as baseball and soccer**

b. Would the proposed project displace any existing recreational uses? If so, describe. **No, uses will be maintained and possibly enhanced by proposed vegetation management.**

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: **None needed**

13. **Historic and cultural preservation**

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. **Houses in the proximity are largely examples of mid-century modern architecture built 50 – 60 years ago.**

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. **No.**

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. **Community is occupied by a number of second and third generation owners with extensive familiarity with the site.**

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. **Not applicable.**

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14. **Transportation**

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. **See Figures 1 and 2 in OTM**

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? **Yes, there is one bus, route #823, that runs twice daily in the area and one other bus, route #246, is about one mile away.**

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? **None**

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). **No.**

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. **No.**

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? **Not applicable**

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. **No.**

h. Proposed measures to reduce or control transportation impacts, if any: **None needed**

15. **Public services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. **No.**

b. Proposed measures to reduce or control direct impacts on public services, if any.
Vegetation management will reduce fire risk.

16. **Utilities**

a. Circle utilities currently available at the site:
electricity, natural gas, **water,** refuse service, **telephone,** sanitary sewer, septic system, other _____

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b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. **None.**

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Marianne M Emerson

Name of signee Marianne M Emerson

Position and Agency/Organization Site Plan Committe Chair, Hilltop Community

Date Submitted: 8-1-14

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D. supplemental sheet for nonproject actions

(**IT IS NOT NECESSARY** to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general
terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise? No increase.

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life? As mentioned, some trees would be cut or limbed, but others would be planted to avoid affecting animal life.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

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3. How would the proposal be likely to deplete energy or natural resources? No depletion of energy or natural resources from small amounts of tree-cutting

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans? No changes to land use.

Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities? No increase demands.

Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment. No conflict.

Technical Memorandum

10230 NE Points Drive
Suite 400
Kirkland, WA 98033
Phone (425) 822-4446
Fax (425) 827-9577

To: Hilltop Community, Inc.

From: Kevin O'Brien, Senior Wildlife Biologist
Darcey Miller, Senior Wetland Biologist

Copies: File

Date: July 24, 2014

Subject: Hilltop Community Critical Areas Assessment

Project No.: 32421

Summary

The City of Bellevue desires to work with the Hilltop Community, Inc (HC) to establish a habitat management plan that simultaneously allows for vegetation clearing and management to preserve views, and maintains habitat functions and continues to provide wildlife with nesting, breeding, and foraging opportunities. As a component of the habitat management plan, the City has indicated its willingness to issue a programmatic clearing and grading permit to allow for vegetation modification in the Community outside of critical areas (steep slopes, wetlands, streams) and their buffers, and has requested that the Community identify and characterize critical areas within its boundaries.

On behalf of the Hilltop Community, Inc. (HCI), Otak, Inc. biologists conducted site visits at two parcels (Parcel numbers 3377900205 and 3377900210—collectively referred to as the site in this document), owned in common by the HCI and located in the Hilltop Community neighborhood in Bellevue, Washington. The purpose of the site visits was to delineate and characterize wetlands and streams present on the properties, to and to provide information on other critical areas that may occur on the two properties.

Five wetlands were observed on the site, which were named Wetlands A, B, D, E, and F. All of the wetlands are classified as Category III, and are required to have 60-foot-wide buffers measured from the wetland edge, per the Bellevue Land Use Code (BLUC). Five small, intermittent (seasonal), non-fish-bearing drainages were also observed on the site. According to the BLUC, all of these drainages would be classified as Type O streams and are accorded 25-foot buffers. Both the wetland and stream buffers have additional building setback requirements associated with each buffer type.

Known species of local importance (per BLUC 20.25H.150) that occur on site include pileated woodpeckers, with several other species potentially occurring on site; no buffers are established for areas in use by species of local importance per BLUC.

Steep slopes occur along portions of the western and eastern edges of the site, evincing slopes of greater than 40% in these areas. Steep slopes have a critical areas buffer of 50 feet from the top of the slope.

Four categories of plant communities occur on the site: mature, conifer-dominated forest; mixed deciduous-conifer forest; scrub/shrub-forest complex; and open space-forest complex. Priority habitat features such as snags and course woody debris are abundant on the site. The site as a whole provides high value for wildlife habitat, and scores very high on the

Methodology

Wetlands on the site were delineated by Otak biologists on May 12 and 13, 2014, using the methodology specified in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (USACE 2010). Following routine methodology, data on vegetation, soils, and hydrology were collected in areas that appeared to have wetland characteristics. Data for wetland and upland plots were recorded on U.S. Army Corps of Engineers (USACE) wetland delineation data forms (see Appendix A). Using a handheld GPS unit, Otak biologists took waypoints along the wetland edges in order to map the wetland delineation (see Figure 2). Wetland ratings were determined using the *Washington State Wetland Rating System for Western Washington* (Hruby 2004), as required by the BLUC 20.25H.095.B (see Appendix B). Wetland buffer widths were determined according to BLUC 20.25H.095.C.

In order to characterize habitat and function associated with the onsite streams, drainages, and riparian corridors and wildlife habitat, qualitative assessments of stream habitat were conducted by Otak scientists on May 13 and June 14, 2014. Additional characterization of the upland forest and shrub community for wildlife habitat value was conducted on July 1, 2014. Visual assessments were made for the purpose of assessing fish access, identifying surrounding land use and factors that may affect water quality, and describing the site as it may affect use by fish and other organisms. Qualitative field observations were made for the purpose of assessing reach geomorphology (bankful widths and depths, wetted widths and depths), wood quantity and dimensions, stream substrate, canopy cover, riparian vegetative community, and other noteworthy features. Stream categories were assigned per the definitions in BLUC 20.25H.075.B. Stream buffer widths were determined according to BLUC 20.25H.075.C.

Forested upland and wetland habitat on the site was also assessed for habitat parameters during the site visits. Parameters assessed include land use; habitat types, connectivity, and corridors; critical areas proximity; size and interspersion of habitat units; vegetative cover, conifer component, richness, and structural diversity; size of trees; invasive species; presence of water; and snags and other habitat special features. GPS waypoints (Garmin Montana 650t w/WAAS, accuracy within 3

meters) were taken at portions of the site with significant trees, snags and decaying tree trunks, and coarse woody debris. Clinometer readings were taken in areas of steep slopes to determine gradient, and qualitative observations of potential historic slope failures or mass wasting events were made during the site assessments. Geotechnical data were not taken as a component of this assessment.

General Site Characteristics

The parcels (Parcel numbers 3377900205 and 3377900210) are located in the City of Bellevue, King County, Washington in Township 24N, Range 5E, Sections 22 and 23 (Figure 1). The Hilltop Community is located on a topographic high point of the surrounding landscape, with elevations ranging from approximately 920 to 1080 feet above sea level. Approximately 40 residential homes are contained within the Hilltop Community, ranged along a circuit of roadways and cul-de-sacs comprised of 146th, 148th, and 151st Avenues SE, and SE 54th and 55th Streets. The two communally-owned parcels evaluated during the site visits generally circle the homes and roadway circuit and provide a greenbelt surrounding the community (Figure 2). A walking trail winds through this greenbelt, allowing pedestrian access to and through the parcels. The portion of the site that is more centrally located consists of a mix of forested and open space, as well as community amenities such as a pool, playfields, and picnic areas.

The Hilltop Community is a mix of forested and residential parcels, and generally occurs in a broader landscape that is characterized by surrounding residential development and some open green spaces and parks including the Somerset Park and open space complexes, Forest Park and Forest Park Meadows Park and open space, and Saddleback Park and open space.

The site encircles the Hilltop Community residential lots, and generally slopes downwards and away from the more centrally located residential lots in all directions. A portion of the western edge of the site consists of gradients of 40% or greater, falling away steeply to the surrounding neighborhoods. Portions of the eastern boundary of the site are also steep, but the majority of the steep slopes occur on privately held parcels in these areas. The site is well-vegetated, consisting primarily of a mature forested plant community with well-developed shrub and herbaceous layers. Trees on the site are frequently large, and comprise a mix of coniferous and deciduous species. The residential parcels upslope of the site generally consist of mixed landscaped and forested habitat.

The Hilltop Community is located in the headwaters portion of three drainages: Coal Creek, Sunset Creek, and Vasa Creek (City of Bellevue, 2009). The majority of the Hilltop Community neighborhood drains to the Coal Creek basin, and includes the southwest portion of the neighborhood. Much of the central and eastern portion of the neighborhood drains to Vasa Creek, while a small section of the northwest and northeast portion of the neighborhood drains to Sunset Creek. The Hilltop Community is located high in the drainage basins for each of these stream

systems, and surface water in the neighborhood's small wetlands and little drainages is seasonal and generally composed of small volumes and low flows.

Critical Areas Observations

The City of Bellevue identifies six types of critical areas in its Land Use Code (BLUC 20.25H):

- Wetlands
- Streams
- Habitat for Species of Local Importance
- Geologic Hazard Areas
- Areas of Special Flood Hazard
- Shorelines

Four of these critical area types—wetlands, streams, habitat for species of local importance, and geologic hazard areas—occur on the HCI site. Figure 2 provides an overview of critical areas, critical area buffers, and additional habitat characteristics for the site.

Wetlands

Otak biologists conducted wetland delineations and characterizations on the site on May 12 and 13, 2014, delineating Wetlands A, B, C, D, and E (see Figure 2). Data from wetland plots were recorded for each of the five wetlands (see Appendix A).

Wetlands A and B

Wetlands A and B are slope/riverine wetlands (rated as riverine) located in the western portion of the site (see Figure 2). Stream 1 is located within these wetlands; although it and Wetland A begin east (upstream) of the community-owned property (the site), the stream and Wetland B continue offsite to the west. Wetland A and the upper portion of Stream 1 drain into a culvert under the walking trail, thus providing some of the hydrology for Wetland B. Wetland A contains hydrophytic vegetation consisting of palustrine scrub-shrub (PSS) and palustrine emergent (PEM) Cowardin classes. Dominant vegetation in the wetland includes thimbleberry (*Rubus parviflorus*), cotoneaster (*Cotoneaster sp.*), creeping buttercup (*Ranunculus repens*), bedstraw (*Galium sp.*), and various grass species. Wetland B consists of only a palustrine forested (PFO) Cowardin class that is dominated primarily by red alder (*Alnus rubra*), willow (*Salix sp.),* Indian plum (*Oemleria cerasiformis*), reed canary grass (*Phalaris arundindacea*), creeping buttercup, and fringecup (*Tellima grandiflora*). In both wetlands, the vegetation dominance test did not exceed 50%; however, the "Problematic Vegetation" indicator is met (see Appendix A). In Wetland A, one of the dominant species is cotoneaster, which is a horticultural plant present throughout much of the site (likely planted long ago) that we observed in

both wet and dry areas. However, cotoneaster is not listed on the National Wetland Plant List, and therefore must be assumed to be an upland (UPL) species. Because other vegetation in and near the plot is hydrophytic, the soils are hydric, and wetland hydrology is present, the vegetation at the plot is considered problematic but hydrophytic. In Wetland B, the vegetation dominance test yielded a 50% value; this is very close to meeting the criteria for wetland vegetation, but this value was influenced by a single red elderberry (*Sambucus racemosa*) that is within the plot, near the wetland edge. Hydric soils and wetland hydrology were also observed in Wetlands A and B. Soils observed in the Wetland A and Wetland B data pits meet the criteria for Redox Dark Surface (F6) (see Appendix A). Soils in the Wetland A and Wetland B data pits were saturated to the surface during our site visit. As such, all three parameters required for wetlands were met in Wetland A and B.

Wetland D

Wetland D is a slope/riverine wetland (rated as riverine) located in the southeast portion of the site (see Figure 2). Wetland D is located on the west side of Stream 4, a stream that begins north (upstream) of the community-owned property (the site) and continues offsite to the south. Wetland D and the upper portion of Stream 4 drain under the walking trail. Wetland D contains hydrophytic vegetation within a palustrine emergent (PEM) Cowardin class. Dominant vegetation in the wetland includes creeping buttercup, lady fern (*Athyrium filix-femina*), sedge (*Carex sp.*), and a small amount of Himalayan blackberry (*Rubus armeniacus*). The vegetation dominance test resulted in 50% obligate (OBL), facultative wet (FACW), or facultative (FAC) species; this is very close to meeting the criteria for wetland vegetation, but this value was influenced by the two non-native blackberry species within the plot, both of which have been shown to be aggressive enough to survive in wetlands. Therefore, the "Problematic Vegetation" indicator is met (see Appendix A). Soils observed in the Wetland C data pit meet the criteria for Redox Dark Surface (F6) (see Appendix A). Soils in the data pit were saturated to the surface during our site visit, and water was observed in the pit at 6 inches below the surface. As such, all three parameters required for a wetland determination were met in Wetland D.

Wetland E

Wetland E is a depressional wetland located in the northeast portion of the site, along a chainlink fence bordering the north side of the community-owned property (see Figure 2). Stream 5 is located uphill of Wetland E and may provide some hydrology to the north end of the wetland intermittently. Wetland E contains hydrophytic vegetation consisting of palustrine scrub-shrub (PSS) and palustrine emergent (PEM) Cowardin classes. Dominant vegetation in the wetland includes willow species, thimbleberry, creeping buttercup, lady fern, largeleaf avens (*Geum macrophyllum*), Himalayan blackberry, and a small amount of English ivy (*Helix hedera*) and trailing blackberry (*Rubus ursinus*). At the data plot for Wetland E, the vegetation dominance test resulted in 43% FACW species, and the prevalence index is also close to the cutoff. Himalayan blackberry, trailing blackberry, and English

ivy are considered to be non-native, aggressive species that may grow in wetter areas, despite the fact that they are classified as FACU. Because other vegetation in and near the plot is hydrophytic, the soils are hydric, and wetland hydrology is assumed to be present, the vegetation at the plot is considered hydophytic and the "Problematic Vegetation" indicator is met (see Appendix A). Soils observed in the Wetland E data pit meet the criteria for Redox Dark Surface (F6). Some water-stained leaves were observed. Because we observed the site after early growing season, a dry-season water table is assumed and verifed during a later field visit. The sand component of the observed soil in the second layer likely causes moderate drainage after rainfall. Some water-stained leaves were also observed. The soil very clearly meets hydric soil criteria, and vegetation was also determined to be hydrophytic (see Appendix A). As such, all three parameters required for a wetland determination were met in Wetland E.

Wetland F

Wetland F is a depressional/riverine wetland (rated as depressional) located in the western-central portion of the site, just north of the swimming pool (see Figure 2). Stream 2 is located in the western half of Wetland F, and flows west and out of the wetland and into a ditch located along 148th Avenue SE. Wetland E contains hydrophytic vegetation consisting of palustrine forested (PFO) and palustrine scrub-shrub (PSS) Cowardin classes. Dominant vegetation in the wetland includes red alder, willow sp., twinberry (*Lonicera involucrata*), red osier dogwood (*Cornus sericea*), black hawthorn (*Crataegus douglasii*), spirea (*Spiraea douglasii*), thimbleberry, cotoneaster sp., Himalayan blackberry, English ivy, trailing blackberry, Japanese knotweed (*Polygonum cuspidatum*), creeping buttercup, lady fern, largeleaf avens, slough sedge (*Carex obnupta*), and fragrant fringecup. At the data plot for Wetland F, the vegetation dominance test resulted in 67% OBL, FACW, or FAC plants; therefore, the criteria for hydrophytic vegetation is met (see Appendix A). Soils observed in the Wetland F data pit are 7 inches of 10YR 2/2 loam above 9 inches of 10YR 3/1 gravelly sandy loam, which comes close to but does not meet the criteria for any of the hydric soil indicators. At the data pit, soils were saturated to the surface and the water table was observed at 5 inches below the surface. Because the data plot clearly contains hydrophytic vegetation and hydrology, and because other, informal pits in the wetland revealed obvious hydric soils, this data pit meets the criteria for Problematic Hydric Soils. As such, all three parameters required for a wetland determination were met in Wetland F.

Streams

Five drainages are associated with the HCI site. These are intermittent streams with a seasonal hydrologic regime, and do not appear to convey much flow based on the channel morphology and presence of vegetation in many portions of the channels. All of the drainages except Stream 3 were dry during the July 1 site visit. Stream 3 had less than 0.1 foot of slowly flowing water that infiltrated into the soils completely within 50 feet of the HCI site trail. All of the drainages are characteristic of drainages in the upper portions of watershed that have very small contributing

basins. Typically, these are seasonally groundwater-fed systems that also respond to precipitation events, but tend to convey little flow.

Channelization in these systems at lower gradients is generally poor, with active channels poorly defined and difficult to distinguish from the surrounding topography. At steeper gradients, these small drainage systems become moderately incised due to the increase in flow energy associated with the steepening slope. During the winter months, channel widths and depths appear to range, respectively, from 1.5 to 3 feet and 0.3 to 1.0 feet.

Stream substrate consists primarily of fines and a small amount of gravels. Riparian vegetation consists of native species noted in the previous section. Canopy cover and shade are functional in these reaches. Although large is available to these systems, the low-energy nature of the drainages and their position in the upper watershed are not conducive to moving large wood or forming wood-forced scour pools.

The five on-site drainages do not provide fish habitat due to a combination of small size, intermittent flow, lack of surface water connection to a fish bearing system, and relatively high gradients (greater than 20%) in the case of Streams 1 and 2. Washington Department of Natural Resources, Washington Department of Fish and Wildlife, and the City of Bellevue do not map these stream systems. Based on field observations, all of the streams appear to infiltrate or are conveyed into drainage structures within or just outside of the Hilltop Community neighborhood, lacking a physical connection to other aquatic systems via a surface water channel, stream, or wetland system. Per the BLUC 20.25H.075.B.4, all five of the site drainages would be characterized as Type O systems

Wildlife Habitat and Species of Local Importance

The forested wetland and upland forest on the HCI site provides or has the potential to provide high quality wildlife habitat for a variety of different species, including species of local importance per BLUC 20.25H.150. Species obligately associated with relatively high quality coniferous habitat such as Douglas squirrels (*Tamiasiurus douglasii*) were observed during the site visits. Although the WDFW Priority Habitat and Species database (WDFW, 2014b) does not indicate known occurrences of priority species, the forested and wetland conditions associated with the parcels have the potential capacity to provide habitat for a number of species of local importance. Such species of local importance potentially utilizing habitat on the parcels include pileated woodpecker (*Dryocopus plieatus*), Vaux's swift (*Chaetura vauxi*), great blue heron (*Ardea herodias*), green heron (*Butorides striatus*), and red-tailed hawk *(Buteo jamaicensis)*. Some potential also exists for occurrence of the various *Myotis* bat species that utilize forested habitat for roosting, and wetland and stream habitat for foraging (e.g. *Myotis volans*). Importantly, evidence of pileated woodpecker foraging activity—the large cavities

created by foraging woodpeckers in snags and stumps—were noted during the site visits, indicating that this species of local importance utilizes the HCI site.

Steep Slopes and Landslide Hazards

The western and eastern portions of the HCI site have steep slopes (Figure 2). Clinometer readings and GPS waypoints taken during the site visits and subsequent overlay of the waypoints on the basemap confirmed the characterization of these areas as steep slopes. Per BLUC 20.25H.120, steep slopes are slopes that have a gradient of 40 percent or more, have a rise of at least 10 feet, and exceed 1,000 square feet in area.

The southeast portion of the HCI site is mapped by King County as containing landslide hazard areas. However, no obvious evidence of landslides was noted during the site visits. Rotational slope failure scars, evidence of mass wasting events, vegetative evidence of unstable slopes (raw earth, pistol-butting of trees, etc.) were not noted in the areas mapped as landslide hazards. Both steep slopes and landslide hazards are considered geologic hazard areas according to BLUC, are regulated as critical areas by the City, and have associated setbacks for structures (see below).

Wetland Categorization, Stream Typing, Buffers, and Setbacks

The site is considered to be "undeveloped" for wetlands, according to the Bellevue Land Use Code (BLUC) 20.25H.095.C.1.a, because it does not have a previously-recorded Native Growth Protection Area (NGPA) or Native Growth Protection Easement (NGPE) associated with a wetland and/or wetland buffer. Applying the *Washington State Wetland Rating System for Western Washington* (Hruby 2004), Wetlands A, B, D, E, and F would be classified as Category III, with habitat scores of less than 20 (see Appendix B). Wetlands of this category and habitat score that are on undeveloped land are required to observe a 60-foot buffer (BLUC 20.25H.095.C.1). In addition, a 20-foot structure setback is required, as measured from the outer edge of the wetland buffer (BLUC 20.25H.095.D).

All five of the drainages are intermittent, non-fish bearing systems that do not possess a surface water connection to a fish-bearing system, and would be characterized as Type O systems per the BLUC 20.25H.075.B.4. The five drainages on the HCI site do not possess a surface water connection to other aquatic systems via a surface water channel, stream, or wetland system. The HCI site is considered to be "undeveloped" for streams according to the Bellevue Land Use Code (20.25H.075.C.1.a.i), due to the lack of a primary structure on the parcel. Type O stream systems have 25 foot buffers and an additional 10-foot structure setback beyond the buffer on undeveloped parcels.

The steep slopes and potential landslide hazard areas associated with the western and eastern portions of the site are critical areas, and would have a critical areas buffer of 50 feet from the top of the slope (BLUC 20.25H.120B[1]). In addition, a structure setback distance of 75 feet from the toe of the slope pertains for both identified landslide hazards and steep slopes.

Upland Forested Habitat, Habitat Features, and Non-native Vegetation

Upland forested areas comprise the majority of habitat present on the site, with large conifers and deciduous trees co-occurring throughout most of the site. The dominant vegetation in the forest overstory consists of Douglas fir (*Pseudotsuga menziesii*), Western hemlock (*Tsuga heterophylla*), big leaf maple (*Acer macrophyllum*), and red alder. Subdominant species in the overstory include Western red cedar (*Thuja plicata*) and black cottonwood (*Populus balsamifera*). Dominant or common shrub and small tree species in the understory include beaked hazelnut (*Corylus cornuta*), willow, Pacific dogwood (*Cornus nuttallii*), salmonberry (*Rubus spectabilis*), thimbleberry, red elderberry (*Sambucus racemosa*), salal (*Gaultheria shallon*), low Oregon grape (*Mahonia nervosa*), and red huckleberry (*Vaccinium parviflorium*), Dominant or common herbaceous species include sword fern (*Polystichum munitum*), lady fern, bracken fern (*Pteridium aquilinum*),.herb-Robert (*Geranium robertianum*), creeping buttercup, large-leaved avens, bedstraw, fringecup, etc. Table 1 shows additional plant species observed on the site.

Table 1: Plant Species Observed on the HCI Site

Stratum	Scientific Name	Common Name	Indicator
Tree	*Acer circinatum*	vine maple	FAC
	Acer macrophyllum	bigleaf maple	FACU
	Alnus rubra	red alder	FAC
	Athyrium filix-femina	lady fern	FAC
	Corylus cornuta	beaked hazelnut	FACU
	Crataegus monogyna	black hawthorn	FAC
	Malus fusca	Oregon crabapple	FACW
	Pseudotsuga menziesii	Douglas fir	FACU
	Sorbus sitchensis	Sitka mountain ash	FAC
	Thuja plicata	western red cedar	FAC
Shrub	*Cytisus scoparius*	Scotch broom	FACU
	Gaultheria shallon	salal	FACU
	Hedera helix	English Ivy	FACU
	Holodiscus discolor	oceanspray	FACU
	Ilex aquifolium	English holly	FACU
	Lonicera involucrata	twinberry	FAC

	Mahonia nervosa	low Oregon grape	FACU
	Oemleria cerasiformis	Indian plum	FACU
	Prunus laurocerasus	English laurel	FACU
	Rosa nutkana	Nootka rose	FAC
	Rubus armeniacus	Himalayan blackberry	FACU
	Rubus parviflorus	thimbleberry	FACU
	Rubus ursinus	trailing blackberry	FACU
	Salix sp.	willows	FACW
	Sambucus racemosa	red elderberry	FACU
	Spiraea douglasii	hardhack	FACW
	Vaccinium ovatum	evergreen huckleberry	FACU
	Vaccinium parviflorium	red huckleberry	FACU
Herb	*Carex obnupta*	slough sedge	OBL
	Dactylus glomerata	orchard grass	FACU
	Galium triflorum	fragrant bedstraw	FACU
	Geranium robertianum	herb Robert	FACU
	Geum macrophyllum	large leaf avens	FAC
	Glyceria sp.	mannagrass sp.	FACW
	Iris pseudacorus	yellow flag iris	OBL
	Lupinus polyphyllus	large-leaved lupine	FAC
	Phalaris arundincaea	reed canary grass	FACW
	Polystichum munitum	sword fern	FACU
	Pteridium aquilinum	bracken fern	FACU
	Ranunculus acris	tall buttercup	FACW
	Ranunculus repens	creeping buttercup	FAC
	Stachys chamissonis	hedge nettle	FACW
	Tellima grandiflora	fragrant fringecup	FACU

Large trees are a dominant component of the site, particularly along the eastern edge of the property and northeast property corner. In general, the site is more open and clear along the northwestern and western edges of the site, where lower growing shrub species are more dominant and vegetation management practices have kept viewscapes open and accessible to residents. Numerous large trees are also found along the south property edge and southwest property corner, interspersed with more open, shrub-dominated habitat containing smaller trees. A number of large trees are found in the surrounding the community area associated with the pool, playfields, and picnic areas.

The large trees form mixed stands of deciduous and coniferous species, with coniferous species providing the dominant component of the canopy along the eastern edge of the site. Tree diameters in these areas can exceed 36 inches at breast height, and commonly exceed 20 inches. These tree sizes are associated with a mature forest, defined as a forest with trees aged 80 or more years. Tree size and forest age on the site are consistent with the history of the Hilltop Community; the area was clear cut in the 1920's (Scheffer, 1994) and much of the site has become reforested in the interim, representing a mature forest habitat approximately 80-95 years of age. Mature, mixed conifer-deciduous or conifer dominated forests provide critical habitat for forest-adapted or specialist species that may not occur in younger-aged stands or disturbed habitat.

Structural complexity of the environment is an important component in determining wildlife species diversity. Structurally complex and heterogeneous habitat correlates with increased wildlife species diversity and abundances (August, 1983). In forested systems, structural complexity is both vertical and horizontal. Vertical structural complexity refers to the changes in distribution and physical features of the plant community in the vertical plane, from the herbaceous layer at the forest floor to the treetops. Horizontal complexity refers to patchiness in the distribution of plant species and habitat features across the landscape along the horizontal axis. The HCI site forested habitat may be characterized as mature forest, with mixed-aged stands of coniferous/deciduous species, interspersed with more open, shrub/scrub habitat. The habitat on site shows both a high vertical and horizontal structural complexity, and wildlife species adapted to more complex forest systems as well as more open and disturbed habitat are expected to occur or potentially occur in the habitat associated with the HCI site (see below).

Coarse woody debris and snags are also a prominent component of the forested habitat, as well as the more open areas to the west and within the shrub-dominated habitat along the southern edge of the site. Snags have been defined as any dead or partially dead tree with a diameter at breast height (dbh) of at least 4" and a height of at least 6' (Thomas *et al.*, 1979). Course woody debris (CWD) has been defined as "sound and rotting logs and stumps, and coarse roots in all stages of decay, that provide habitat for plants, animals and insects and a source of nutrients for soil structure and development. Material [is] generally greater than 7.5 cm (3") in diameter" (Stevens, 1997).
Snags and coarse woody debris have been correlated with high wildlife diversity, abundance, and maintenance of key wildlife species in the Pacific Northwest (Thomas, 1979; Neitro et al., 1985; Swanson and Franklin, 1992; Knutson and Naef, 1995). Numerous snags occur along the western and southern edges of the site, many of them of recent origin that have the potential to provide foraging and nesting sites as they age.

Non-native invasive species are present on the site in small quantities, generally occurring along the edges of habitat near the roads or trail and associated with habitat areas subject to disturbance. Generally, however, the occurrence of non-native species is infrequent, due to the presence of

contiguous forest habitat populated by numerous native plant species, as well as aggressive and ongoing control of non-natives by the members of the Hilltop Community. The most common and ubiquitous invasive species on site is Himalayan blackberry (*Rubus armeniacus*), occurring along the edges of the site and occasionally in disturbed areas within the broader forested wetland and upland matrix. English ivy (*Helix hedera*) also occurs along the site edges, with occasional patches of the species in the forest interior. Reed canary grass is occasionally associated with locally moister soil conditions and edge habitat English holly (*Ilex aquifolium*) occurs singly and occasionally, scattered throughout the site.

Figure 3 shows landscape-scale upland plant community categories as polygons on the site, based on taxonomic composition, relative maturity of the communities, presence of coarse woody debris and snags, and other relevant features. Additional detail specific to these plant community categories is provided below.

Mature, Conifer-Dominated Forest (est. 2.1 acres on HCI site):

Dominant tree species: Western hemlock and Douglas fir
- Subdominant tree species: Big-leaf maple and red alder

Typical tree sizes: 18" to 32" diameters

Age of stand: 80-95+ years old
- Stand age appears to apply across/throughout the community category

160+ trees of 16" diameter or greater sampled across polygon
- Densest concentration of large, mature trees on the HCI site

11 stumps/snags sampled across site
- Generally large, old conifers
- Abundant evidence of pileated woodpecker activity
- Provide a continuous canopy

Mixed Deciduous-Conifer Forest, Southern HCI Site (est. 6.5 total acres mixed deciduous-conifer forest on HCI site):

Dominant tree species: Western hemlock, Douglas fir, Big-leaf maple

Typical tree sizes: 12" to 24" diameters

Age of stand: Mixed—younger trees dominant, interspersed with mature (80+ years) small stands or individual trees

14+ trees of 16" diameter or greater sampled across polygon

25 stumps/snags sampled across site
- 7 large, old conifers concentrated in eastern portion of polygon
  - Evidence of pileated woodpecker activity

- 18 relatively young and undecayed stumps concentrated in central and western portion of polygon (relatively recently downed trees)
    - Evidence of vegetation management and habitat conservation

Downed coarse woody debris: 8 CWD units sampled—scattered across polygon and apparently deliberately placed (in most cases) and associated with vegetative management and habitat conservation

Mixed Deciduous-Conifer Forest, Northern HCI Site (est. 6.5 total acres mixed deciduous-conifer forest on HCI site):

Dominant tree species: Western red cedar, Big-leaf maple

- Subdominant tree species: Douglas fir, red alder, western hemlock

Typical tree sizes: 12" to 24" diameters

Age of stand: Mixed—younger trees dominant, interspersed with mature (80+ years) small stands or individual trees

35+ trees of 16" diameter or greater sampled across polygons—representing

25 stumps/snags sampled across site

- 14 large, old cedar stumps located throughout polygons
    - 10 relatively young and undecayed stumps associated with vegetation management and habitat conservation (relatively recently downed trees)

Downed coarse woody debris: 4 CWD units sampled—scattered across polygons and apparently deliberately placed and associated with vegetative management and habitat conservation

Scrub/Shrub-Forest Complex (est. 4.2 acres on HCI site):

Dominant species: Shrubs—Dogwood, young red alder, spirea, rose, willow, vine maple, red elderberry

Tree species present (greater than 16" diameter): Douglas fir, Big-leaf maple, Western red cedar

Field verification of >40% gradient steep slopes along western edge of polygon

Typical tree sizes: <12" diameter

Vegetation community age: Young, somewhat disturbed; occasional mature trees (individual or small stands) interspersed with largely scrub/shrub habitat

13 trees of 16" diameter or greater sampled across polygon

16 stumps/snags sampled across site

- 7 large, old cedar or other conifer stumps located throughout polygon
    - 9 relatively young and undecayed stumps associated with vegetation management and habitat conservation (relatively recently downed trees)

Portions of polygon apparently managed to preserved viewscapes

Open Space-Forest Complex (est. 3.85 acres on HCI site):

Parkland and open recreational space surrounded by large trees

Forest portion of complex consists of mixed deciduous-conifer community

- Dominant species: Big-leaf maple, Western hemlock, Douglas fir, black cottonwood

Trees appear to be 85-95+ years of age

- Up to 40" trunk diameters for some Western hemlocks in the polygon

14 trees of 16" diameter or greater sampled across polygon

3 stumps/snags sampled across site—larger, older specimens

Vegetation community age: Open space is managed for grass species, landscaping, surrounding forest habitat appears mature (80+ years)

Largest on-site wetland (Wetland F) associated with polygon

Habitat Functional Assessment

The following parameters are listed by the City of Bellevue as components of their urban habitat functional assessment model ("model"). These parameters are associated with both landscape and local spatial scales. Relevant parameters were assessed for the HCI site and are briefly characterized below—the first six parameters are landscape scale parameters, all subsequent parameters are relevant to and evaluated at the local, on-site spatial scale.

Existing Impervious Surface and Land Use/Development Density

The HCI site has little or no impervious surface associated with it, and would be accorded the highest level of function in the model for this parameter—falling within the 0-20% existing impervious surface category.

Occurrence of Habitat Types

Per the City of Bellevue, habitat types include mature coniferous, mixed coniferous-deciduous forest, scrub-shrub habitat, meadow and grassland, streams, wetlands, and ponds and lakes. The HCI site has at least 4 different habitats associated with it, and would be accorded the highest level of function in the model for this parameter.

Proximity of Known Critical Areas

Proximity of habitat associated with critical areas, including streams, wetlands, Priority Habitat and Species (PHS) per WDFW, ponds, wildlife networks, and other habitat types with high ecological value. The HCI site contains critical areas such as streams and wetlands and may be categorized as

high value PHS habitat (mature forest), and would be accorded the highest level of function in the model for this parameter.

Habitat Connectivity and Corridors
Defined as connections to off-site vegetated areas unbroken by habitat fragmentation (roads, maintained lawns, multi-use trails in heavy use, fences and walls, etc.), habitat connectivity is an important ecological parameter for movement of many wildlife species. Although the habitat connectivity within the HCI site ranks very high, the off-site connectivity may be characterized as moderate due to the presence of encircling roadways and residential development.

Patch Size
For the HCI site, habitat patch size includes habitat patches within the site as well as patches within an area of 250 acres surrounding the site. Patch size for the HCI site includes mature forest patches on site, open areas, and forested and open habitat associated with Somerset Park and open space complexes, Forest Park and Forest Park Meadows Park and open space, and Saddleback Park and open space. The HCI site scores high for this parameter, given the number of habitat patches within the assessment area.

Interspersion of Habitat Patches
This parameter is defined as variety of habitat available and amount of edge habitat. Edge habitat occurs between two distinct habitat types, and incorporates aspects of both bordering habitats. The interspersion parameter includes habitat patches within the site as well as patches within an area of 250 acres surrounding the site. This parameter would be characterized as high-moderate to high based on the surrounding forested and open habitat spaces, the relatively high ratio of edge habitat to core habitat in these spaces, and the degree to which these spaces are connected and arranged relative to one another at the landscape scale.

Size of Native Trees on Site
Due to the presence of many trees in excess of 20 inches in diameter and numerous ones in excess of 30 inches in diameter, the HCI site scores very high for this parameter.

Coniferous Component
Due to the presence of many conifers that are codominant in the forest overstory, the eastern edge of the site with a dominant coniferous forest component and numerous conifers in excess of 30 inches in diameter, the HCI site scores high for this parameter.

Percent Vegetative Cover
Ground, shrub, and canopy layers for the HCI site all show greater than 50% vegetative cover; the HCI site scores high for this parameter.

Vegetative Vertical Structural Diversity
Vegetative vertical structural diversity tends to be high in mature and old growth forest habitat. The HCI site scores high for this parameter.

Vegetative Species Richness
Due to the number of plant species observed on the HCI site (greater than 20), the site scores high for this parameter.

Invasive Species Component
Due to the low coverage by invasive plant species on the HCI site (less than 10%), the site scores high for this parameter.

Proximity to Year-Round Water
The HCI site is located near the top of the three drainage basins, and the surface water features in the site vicinity show a seasonal/intermittent in hydrology. Year-round perennial surface water occurs at some distance from the site, and this parameter would be rated as low to moderate in function.

Snags
The number and density of snags at the HCI site results in a high functional rating for this parameter.

Other Habitat Special Features
The HCI site contains other habitat features of ecological value, including downed course woody debris, large stumps, water-holding features, and trees and snags with suitable nesting cavities. This parameter would be rated moderate-high to high for the HCI site.

Taken as a whole, the HCI site scores very high across almost all parameters for the urban habitat functional assessment model. Habitat within the HCI site may be characterized as high functioning, high value vegetative and wildlife habitat.

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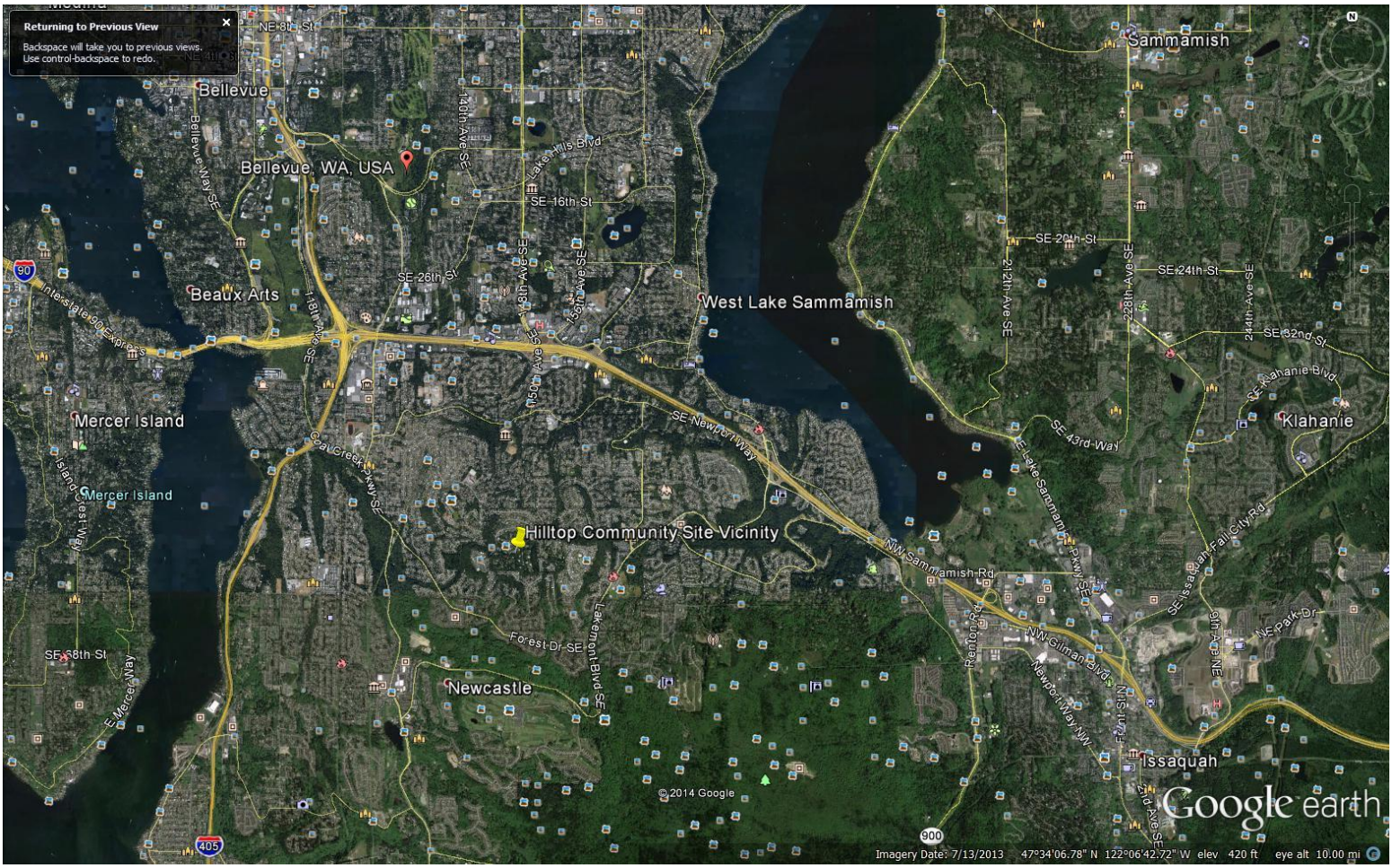
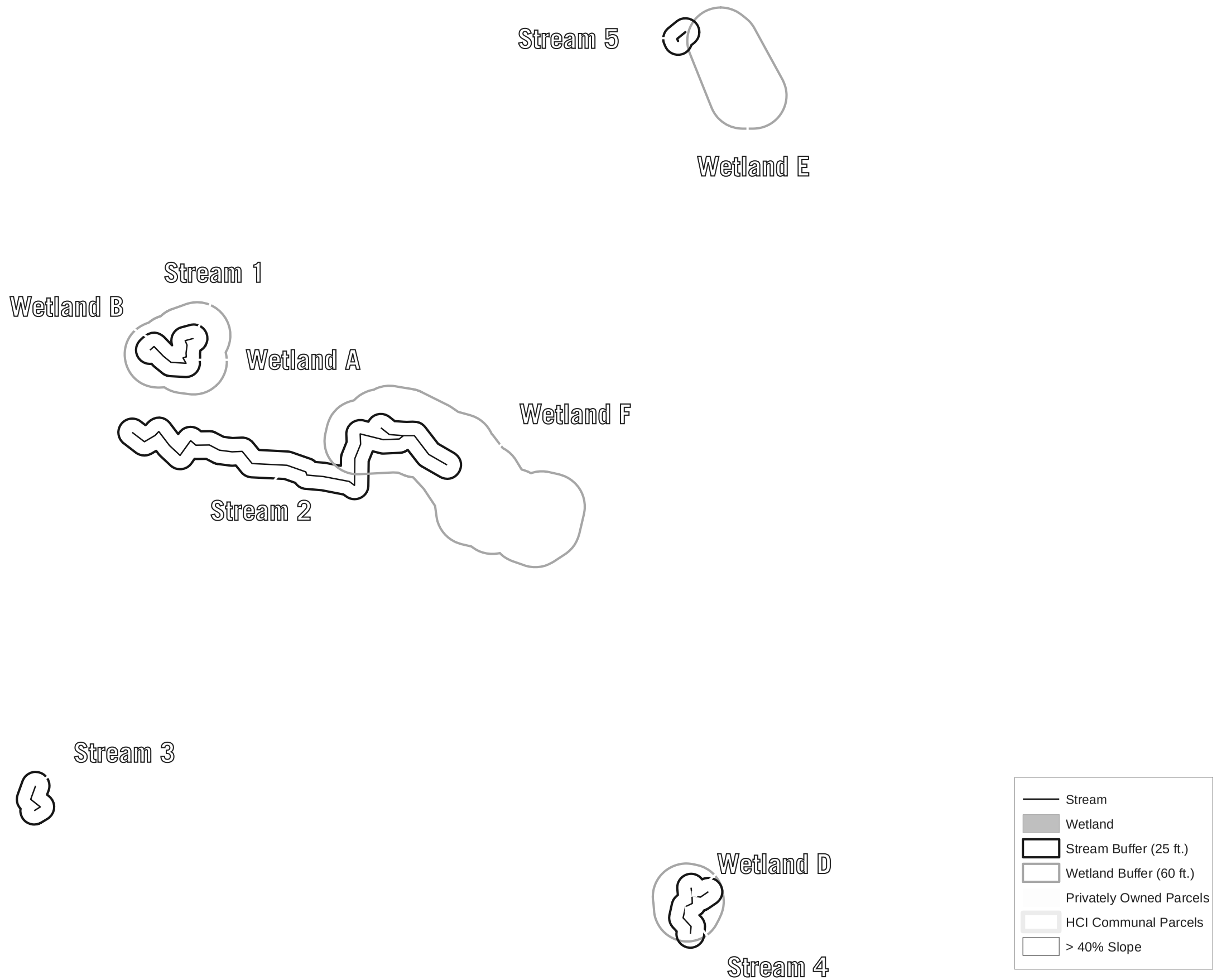


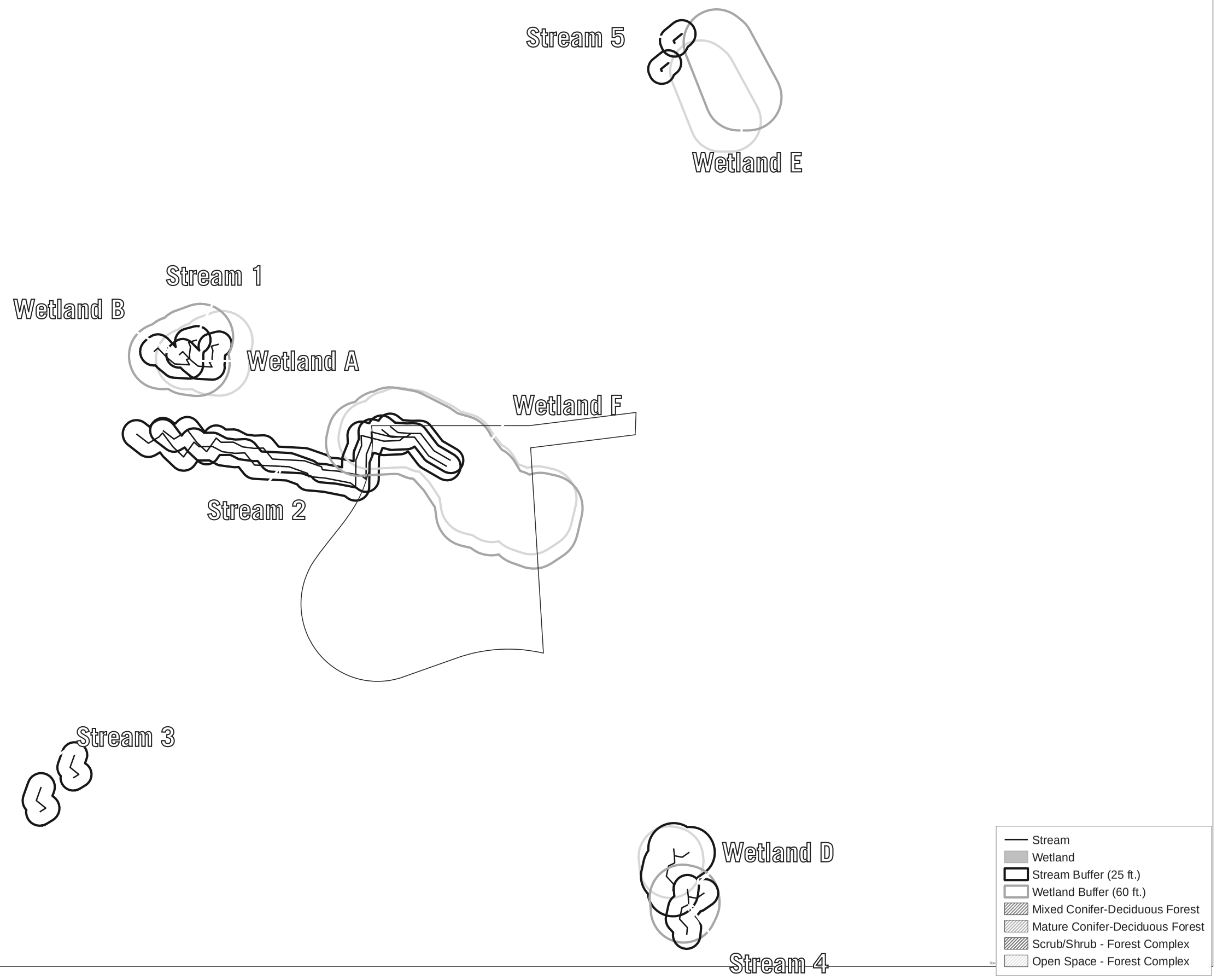
Figure 1—Hilltop Community Site Vicinity Map

Hilltop Community
Critical Areas
Figure 2



Hilltop Community Plant Categories and Approximate Boundaries

Figure 3



Appendix A—Wetland Data Forms

See Project File for Wetland Forms