City of Sammamish Washington

Department of Community Development

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Complex Floodplain Development Projects – Floodplain Habitat Assessment Guide

Unless specifically excepted from floodplain permit requirements, all development projects within the Special Flood Hazard Area (SFHA; also known as the 100-year floodplain) of Lake Sammamish require a floodplain permit from the City. Projects that will require a detailed Habitat Assessment (HA) and Floodplain Permit include the following:

- ☐ In-water work required.
- ☐ Overwater work that exceeds minor development criteria.
- ☐ The installation of new piles or pile replacement for a new, repaired or replaced overwater structure.
- ☐ New lawn or landscaping features will occur that are greater than 20% of the shoreline jurisdictional area.
- ☐ Any road expansion (this does not include filling potholes, repaving, installing signs and other normal road maintenance).
- ☐ Any maintenance, repairs or remodeling of structures that is more than 50% of the value of the structure.
- ☐ Expansion of a structure greater than 10% of its existing footprint.
- ☐ Removal or clearing of any significant trees.
- ☐ Removal of more than 5% of existing native vegetation within shoreline jurisdictional area.
- ☐ Bulkhead development, and/or bulkhead replacement that is a different material, different place, or different angle from the original.
- ☐ Other developments that include constructing new structures, fill, or impervious surfaces, including new or expanded driveways or parking pads.

It will likely be necessary to contract with a qualified wildlife/habitat biologist to support completion of your habitat assessment. This guidance is to inform you and your development team.

Your habitat assessment report must include the following:

1. Project Description and Project Area Description

- A description of the project location including the section, township and range, surrounding land use, and parcel numbers.
- A brief description of the project that includes the purposed use and size of the project and site.
- Identification of the Action Area. For most projects, the Aquatic Action area should extend into Lake Sammamish within 200 feet of the project site. Any project that requires in-water pile driving would warrant a larger Action Area.

2. Habitat and Species Description

A brief discussion of the current habitat conditions. Use this information as a baseline and expand as appropriate to the specifics of your project:

- Relevant background information relating to the proposed project: This could include a description of the on-site Lake Sammamish shoreline and other available habitat information, such as mapped wetlands and other critical areas designated by the City or identified through a critical areas study.

- Identification of protected species within the shoreline, including at minimum bull trout (*Salvelinus confluentus*), Puget Sound DPS steelhead (*Oncorhynchus mykiss*), and Chinook salmon (*Oncorhynchus tshawytscha*). Both the National Marine Fisheries Service and US Fish and Wildlife Service provide details on threatened and endangered species. The USFWS, through the IPaC website, provides a site-specific species list for specific project area.
- Results of Site Investigation/Visit: To identify and document habitat resources and wildlife species that are within or adjacent to the project site.

3. Habitat Narrative

In addition to the habitat description, a habitat narrative must be included that addresses specific habitat factors required by the BiOp. Use this information as a baseline, and expand as appropriate to the specifics of your project:

- **Primary Constituent Elements (PCEs):** These are specific elements of physical or biological features, for each listed salmonid species, that provide for a species' life-history processes and are essential to the conservation of the species, and used to define the presence or absence of critical habitat. As of December 2019 there is no designated critical habitat for Puget Sound Chinook salmon, Puget Sound steelhead, or Coastal-Puget Sound bull trout within the whole of Lake Sammamish. The closest designated critical habitat for Puget Sound Chinook salmon (70 FR 52630) and Coastal-Puget Sound bull trout (75 FR 63898) is in Lake Washington, at least 14 miles downstream of City of Sammamish limits. The closest designated Puget Sound steelhead critical habitat in WRIA 8 is the Cedar River (NMFS, 2016), nearly 34 RM downstream of the Action Area. As no designated critical habitat for any of these species is within, or adjacent to, the City limits, any proposed floodplain development project would have no effect on critical habitat. No additional discussion of PCEs should be required (unless critical habitat is established at some future date within Lake Sammamish).

- **Water Quality:** Lake Sammamish is considered to have a mesotrophic (as opposed to eutrophic) state, meaning it has moderate levels of biological activity, moderate water clarity, moderate algal growth, and moderate phosphorus concentrations. There are seasonal variations in transparency or water clarity within Lake Sammamish. Transparency is typically lowest during the winter months when chlorophyll levels are low and streams deliver increased quantities of fine sediment, which creates turbid conditions. Summer transparency levels are higher as stream inputs become less important and primary productivity increases in response to higher temperature and increased daylight. See the King County Lake Sammamish webpage and page 31 of the City's Shoreline Inventory and Characterization for additional Lake Sammamish water quality data.

- **Riparian Vegetation Community**: A mixed community of coniferous and deciduous riparian vegetation is interspersed along the Lake Sammamish shoreline. In addition to providing riparian functions that are important to salmonid species along the lake shoreline, the riparian vegetation provides habitat for numerous avian predators, such as bald eagle, osprey and red-tailed hawks. Some of the best riparian habitat areas are at the north end of the lake where the shoreline is less heavily developed and relatively large patches of native vegetation still remain intact. Your habitat narrative should describe riparian vegetation conditions at the project site and throughout the Action Area (e.g., vegetative communities, species, densities, and size).

- **Lakeshore Shallow Water Habitat:** The majority of the properties along the Lake Sammamish shoreline are fronted by bulkheads, and many have residential docks. These existing shoreline modifications have altered the complexity and condition of shallow water habitat along the Lake

Sammamish shoreline. The habitat narrative should describe lakeshore conditions at the project site and throughout the Action Area (e.g., bank condition, bank angle, substrate, shoreline vegetation).

- **Floodplain Connectivity:** The mapped floodplain of Lake Sammamish in the City is only associated with the lake shoreline, and does not contain riverine floodplain or have dynamic connection to any streams, side-channels, or tributaries that would increase the extent of the floodplain.

Habitat Variables not relevant to Lake Sammamish Floodplain: As a lake floodplain in a regulated system, there are certain floodplain habitat variables that are not relevant. These include water quantity (flood storage) AND floodplain refugia.

4. Construction Process

A description of construction plans for the proposed project. A list/description of construction elements that could apply to your Lake Sammamish project are provided below. Use this information as a baseline and expand as appropriate to the specifics of your project:

- Scheduling and phasing of construction
- Methods and means of construction, examples include: In-water work, equipment needed, cut and fill, grading, landscaping/vegetation removal.
- Protection measures and Best Management Practices (BMPs): All measures required by federal, state and local agencies should be described; as well as any additional measures being taken to avoid and minimize impacts to the natural environment.
- Describe any mitigation measures that will be implemented to offset impacts, as required by federal, state and local agencies.

5. Effects Analysis

According to the FEMA Floodplain habitat assessment guidance (FEMA 2013) an impacts analysis is required that shows the project proposal will not result in any adverse effects on floodplain functions, including discussion on proposed construction practices, project elements, and mitigation measures that are part of the project that will allow for avoidance of adverse effects. See below for a list of the effects categories that must be discussed for your project. Rely on this guidance, and provide the level of detail necessary to adequately assess impacts and potential adverse effects associated with your project:

- **Direct Effects:** Impacts occurring as a direct result of the proposed project in the same time and place. This section should acknowledge the extent of significant tree removal, vegetation clearing, and construction activity within the floodplain area, including such elements as alterations to water quality from additional impervious surface. Discussion on measures to minimize construction limits and associated temporary impacts should be provided. Reference to critical areas studies and construction grading/total erosion and sediment control plans should be provided, where applicable.
- **Indirect Effects:** Impacts that are a result of an action and can occur later in time or in a different place and are reasonably foreseeable. If applicable, the discussion should acknowledge long-term implications of the development action on larger land-use or population growth patterns or rates.
- **Interrelated and interdependent actions:** An interrelated action is part of the proposed action and depends on the proposed action for its justification; an interdependent activity has no independent utility from the proposed action (USFWS, NMFS 1998). For all anticipated and City-allowable projects that could be proposed on the single-family residential properties within the

Lake Sammamish floodplain, there will be no interrelated or interdependent actions. The habitat assessment should include verification of this.

- **Cumulative Effects:** The incremental effects of an action, together with impacts of present and reasonably foreseeable future actions by state, tribal, local, or private entities. This section should provide discussion and verification on how the proposed floodplain development has been completed consistent with policies and standards of the City SMP, with a statement that the SMP Cumulative Impacts Analysis (City of Sammamish, 2010) provides conclusion that cumulative impacts of shoreline ecological functions are not anticipated to occur.

6. Other Required Elements

A list of other information that may be required in a Habitat Assessment is found below:

- Figures, at minimum including the following:
  - Vicinity Map
  - Action Area Map with identification of Project Site and on-site or adjacent habitat features (including critical areas)
  - Site Design / Project Plans
- Listing of Referenced Project Materials (as applicable):
  - Project Critical Areas Study, as may be required by the City
  - WDFW Hydraulic Project Approval (HPA) / Army Corps of Engineers JARPA submittal, as may be required for projects waterward of the Lake Sammamish Ordinary High Water Mark
  - Arborist Report and Tree Protection Plan
  - Landscaping Plan / Shoreline Vegetation Enhancement Plan, as may be required for SMP compliance
  - Stormwater Technical Information Report (TIR) or other analysis of consistency with SMC Title 13 (Surface Water Management).

Effects Determination

Based on the information above, the applicant will provide a recommended effects determination for each applicable ESA-listed species in the Action Area. The following are the three different effects determinations and what they mean for your project.

- No Effect (NE): The project does not have any effect on listed species or floodplain functions.
- May Affect, Not Likely to Adversely Affect (NLAA): The project may result in adverse impacts to listed species or floodplain functions, but they will likely be insignificant or discountable. This determination may warrant additional conditions from the City in order to ensure impact avoidance and minimization as part of the floodplain permit approval.
- Likely to Adversely Affect (LAA): The project will likely result in short/long-term adverse impacts to listed species or floodplain functions. Projects with a LAA determination are not allowed to occur within the Lake Sammamish floodplain. If there are likely adverse impacts associated with your proposal, additional planning, redesign, and avoidance measures should be considered to result in a NE or NLAA determination.

After the completion and submittal of the Habitat Assessment report, a final effects determination will be made by the City.