CITY OF PUYALLUP
Development and Permitting Services
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Critical Areas Report Checklist—Floodplain Habitat Assessments

This checklist reflects the minimum elements needed for a complete Floodplain Habitat Assessment report as described in Puyallup Municipal Code 21.07.050. It is intended to be used as a preliminary review for basic completeness prior to technical review, which may address concerns or requirements beyond the basic elements included here. Use of this checklist will ensure efficient and consistent review of development proposals in the City of Puyallup. If a report element is included, note the page, section, or figure number in Column 2.

Report Details	
Name of Report	Update of the Biological Habitat Assessment of Deer Creek for Project Impacts from the Kilcha Sekyra Senior Housing Complex
Date of Report	Original Report: May 17, 2013; Addendum: December 19, 2016; Update: Jan. 4, 2022
Author of Report	JOHN COMIS ASSOCIATES, LLC
Application Number	P-15-0081

Included?	Location in Report[1]	Report Element
☑ Yes ☐ No	pages 1 t	A description of the methods used to determine the floodplain (see pages 1 thru 5 for description of methods used, action area, separation of flood plain areas, & summary of project findings)
☑ Yes ☐ No	pages 4 thru 11	A detailed description of the floodplain habitat related to ESA-listed species on or within 300 feet adjacent to the site, including the size, type/classification, condition, disturbance history (see pages 9 & 10 in JCA report with Appendix 1 & 2)
☑ Yes ☐ No	pages 4&	A detailed summary of current flood elevation studies, historical flood data, high water marks and other reliable data known to the community (see pages 4 thru 6 of JCA report that describe the map data provided by Az-G Engineering)
☑ Yes ☐ No	sec. D&E	A detailed assessment of the potential impacts to floodplain habitat and any downstream critical areas impacts resulting from site development
☑ Yes ☐ No	sec. C&D	An analysis of site development alternatives and measures taken to avoid, minimize and mitigate floodplain and flooding area impacts, including compensatory flood storage
☑ Yes ☐ No	sec. D&E	A detailed description of the effects and/or indirect effects of the proposed development on floodplain area and function, including a quantification of the area of disturbance
☑ Yes ☐ No	sec. E	A description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations, including how the development is offsetting loss of flood storage capacity that may occur (e.g. compensatory storage requirements)

[1] Location in report can be either page number, figure number, or report section.

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Included?	Location in Report[1]	Report Element
☑Yes ☐No	sec. C & D. a, size D. b, veg. D. c, hab. D. d, fish D. e, distr -ibution D. Sum. D. f, use D. g, effects on	Assessment of floodplain functions under pre- and post-development conditions. Functions must include: • Water quantity • Water quality • Flood storage capacity • Channel migration/bank stability • Riparian vegetation • Habitat forming processes (e.g., large woody debris [LWD] recruitment) and habitat isolation • Refuge for fish from higher velocity floodwaters • Spawning substrate
☑Yes ☐No	pages 4 & 5	A "take" statement (Note: the proposed development cannot result in "take" of any species listed as threatened or endangered under the ESA, unless federal and state permits authorizing take have been issued)
☑Yes ☐No	pages 1& 2, apdx 4	The dates, names, and qualifications of the person(s) preparing the report and documentation of any fieldwork performed on the site and analysis of consultants compliance with the city's Qualified Professional requirements (PMC 21.06.210 (108))
☑Yes ☐No	Figure 1	Site vicinity map
☑Yes ☐No	Figs. 1&2	Figure showing study area (including within 300 feet of the site/project area)
☑Yes ☐No	Figs. 3&4	Figure showing location of floodplains, critical areas, and critical area buffers (also see Appendix 2 for more flood data, including composite flood data maps) (also see Figures 5 & 6 for critical areas mapped by city and "SalmonScape")
☑Yes ☐No	Fig. 7	A site plan for the development proposal showing the proposed development footprint and clearing limits and mitigation area, if any
☑Yes ☐No	this doc.	"FEMA Region X - Puget Sound BiOp Floodplain Habitat Assessment Worksheet," completed and included with report

Comments:

Many of the items listed herein are found described in various parts of the JCA "Bio-Assessment" report. Please refer to the report sections listed above for these details.

PUGET SOUND BIOLOGICAL OPINION FLOODPLAIN HABITAT ASSESSMENT MINIMUM STANDARDS WORKSHEET (V 1.5)

Brief Description of Proposal: Sekyra Senior Housing Complex **Permit #** P-15-0081

Note: The items marked in red below are prepared by John Comis Associates, LLC, the project biologist, and represent a professional judgment on these matters concerning fish and wildlife biological assessment and potential impacts that may occur due to project site development.

The checked boxes indicate items addressed in the JCA Bio-Assessment report and the unchecked boxes include descriptions why the item is not specifically addressed in the report.

This checklist is intended to assist permit reviewers in determining whether an HA meets the minimum standards for the habitat assessment analysis.

General BiOp Minimum Standards:

Each of the following must be documented in the permit file or an explanation provided as to why it does not apply to the project.

☑ New structures located in the least impactful location, as practicable. The permit file should include documentation of the measures taken to avoid placing structures in the floodplain and to minimize the impacts of the proposed project on floodplain functions (see Floodplain Habitat Assessment and Mitigation, Section 5.2). (see Figure 7)

(see report pages 1-2 for "study area" description)

☐ Any removed large woody debris is replaced per *WDFW Aquatic Habitat guidelines*. (none for the project site within the designated floodplain)

☐ Bank armoring/stabilization follows and documents methodology consistent with WDFW Marine Shorelines Design Guidelines or the Integrated Streambank Protection Guidelines. A needs and alternatives analysis is essential for these projects. (None is required for the project site within the designated floodplain)

☑ The project is either inherently designed to avoid adverse impacts on floodplain functions (if in the Protected Area) or compensatory mitigation is provided so there are no adverse impacts on floodplain functions that support ESA listed species. See below for more information. (see JCA report section E, "NFIP Regional Guidance for Compensatory Storage" for description of the floodplain. compensatory storage & stormwater management)

The **Protected Area** is defined as greater of the Floodway, Riparian Buffer Zone (RBZ), or Channel Migration Zone (CMZ). If no CMZ is identified in a riverine system, the Protected Area extends to the outer limits of the floodplain. **Please note the Protected Area <u>does not</u> extend outside of the SFHA.**

☑ As part of the flood permit, applicant has been notified that their property contains land within the Riparian Buffer Zone (RBZ) and/or floodplain. (The project site is situated only within a designated floodplain and not within a RBZ)

☐ Prior to permit issuance, the applicant has recorded a notice on the title of the property stating that the property is within the RBZ and/or the 100-year floodplain. (unknown if applicant has posted notice on title regarding "property within a designated 100-year floodplain)

Minimum Habitat Assessment Standards:

In addition to customary elements of a project application such as a project description, site plans, and methods of work, the HA must show that the proposal will result in no adverse effects on floodplain functions and/or includes appropriate compensatory mitigation. The HA document and analysis must include the elements listed below. This checklist is provided to assist the HA reviewer in determining whether an HA is sufficient.

☑ Project and action area description, maps, and site plans have been provided

☑ Methods of work are described

☑ Projects in the Protected Area are designed to inherently avoid detrimental impacts without mitigation.

☑ The HA specifically considers both direct and <u>indirect impacts</u>. Indirect impacts are a result of an action and can occur later in time or in a different place and are reasonably foreseeable.

☑ The HA evaluates the impacts of interrelated and interdependent activities.

The **action area** to be analyzed should typically be well beyond the subject parcel(s) and must consider all areas that could be impacted by the proposal, especially including indirect effects and effects of interrelated and interdependent actions, in the vicinity of and downstream from the proposal (and only within the SFHA).

An **interrelated activity** is part of the the proposed action and depends on the proposed action for its justification. An interdependent activity has no independent utility apart from the proposed action (USFWS, NMFS 1998)

☐ The HA specifically considers cumulative impacts of reasonably foreseeable projects beyond the subject proposal/lot for all of the elements of the analysis listed below, and especially loss of storage.

☑ The HA contains sufficient analysis for each specific item below to demonstrate a claim of no adverse effect on the existing (legal) condition of the floodplain functions (baseline condition). If an element does not apply to a particular project, the HA should briefly explain why.

Cumulative impacts are the incremental effect of an action, together with impacts of present and reasonably foreseeable future actions by state, tribal, local, or private entities. Cumulative effects can result from individually minor but collectively significant actions taking place over time.

☐ 1. Water quantity and quality will not be affected by demonstrating that pre-development water pattern will be substantially the same as the post-development water pattern. The following items should be included in the analysis:

- The HA demonstrates how low impact development techniques have been used
- New impervious surfaces are noted and included in the analysis
- Water temperature impacts from development have been evaluated
- Potential changes in groundwater and hyporheic functions, pollutants, and sediment runoff have been evaluated
- Stormwater leaves the site with the same frequency, timing, and duration as before the development

The **hyporheic** zone is a region beneath and alongside a stream bed, where there is mixing of shallow groundwater and surface water.

☐ 2. Flood velocities and volumes are not increased, even when considering cumulative impacts.

☐ 3. Flood storage capacity is not affected or compensatory storage has been proposed that:

- Provides sufficient capacity to hold displaced flood storage volume
- Restores ground elevations that are comparable to the existing conditions
- Maintains floodplain connectivity and fish access (fish will not be stranded or trapped as the floodplain fills and drains)
- Provides floodplain refugia and habitat for listed fish comparable to the existing condition
- Is hydrologically connected to the flooding source
- Is located within the same hydraulic reach as the proposed development to minimize effects on fish populations.

Compensatory storage is generally necessary for displaced flood storage volume and loss of accessible floodplain refugia for listed fish when a project includes fill or structural displacement.

A **refugium** (plural: refugia) is a location which supports an isolated or relict population of a once more widespread species.

☐ 4. Riparian vegetation evaluation has been included

☐ 5. Measures to preserve habitat forming processes (such as large woody debris recruitment) are included

☐ 6. Refuge from higher velocity floodwaters is provided

☐ 7. Spawning substrate is provided or protected

☐ 8. Ensure there are no adverse effects resulting from:

- Habitat isolation
- Bank armoring
- Channel straightening
- Construction effects (transport of sediment from the work area, noise, etc.)
- Direct effects

Substrate: a substance or layer that underlies something, or on which some process occurs, in particular.

- the surface or material on or from which an organism lives, grows, or obtains its nourishment.
- the substance on which an enzyme acts.

Habitat Isolation means the separation of habitat components (such as main channel and off channel habitats) such that a species can no longer access all of the habitat elements even though they may still be present on the landscape.

(All of the above listed floodplain and/or habitat effects are either not associated with this project site (such as habitat isolation, armoring, etc.) or they are addressed in the JCA report (such as flood storage capacity and compensatory mitigation) and water quality and quantity impacts are controlled by an engineered plan for stormwater runoff controls using onsite detention.

Effect Determinations:

Following the evaluation of potential effects, the HA should make a determination of the effect of the proposed development on listed salmonid species and orcas. The effects determination should be one of the following options. Please check which effects determination has been made in the HA under review.

☐ **No Effect (NE):** The project will have no effect whatsoever on listed species and designated floodplain functions. An insignificant or discountable affect is not the same as no effect. If work affects any items evaluated in the HA section above, even insignificantly, an NE determination is typically not appropriate.

☑ **May Affect, Not Likely to Adversely Affect (NLAA):** The appropriate conclusion when effects on the species or floodplain functions that support those species are expected to be beneficial, discountable, or insignificant - even when considering direct, indirect, and cumulative impacts. Beneficial effects are positive impacts without any adverse effects on fish or habitat. Insignificant effects refer to the size of the impact and discountable effects are those extremely unlikely to occur due to timing. Based on best judgement, a person cannot meaningfully measure, detect, or evaluate insignificant effects or expect discountable effects to occur. The term "negligible" means the same as "insignificant" (immeasurable). (see pages 4 & 5 of the JCA report)

☐ **Likely to Adversely Affect (LAA):** The effect of the project is likely to result in a short or long-term adverse effect on listed species or floodplain functions.

Proposal is Within the Protected Area

If the proposal is within the Protected Area, the following four conditions must be met through the HA analysis. The Protected Area is defined below.

☑ All "General BiOp Minimum Standards" have been met.

☑ All minimum "Habitat Assessment Standards" have been addressed.

☐ No mitigation is proposed. The project design inherently avoids adverse effects. Project design elements that consider and improve floodplain functions that support ESA-listed species may be incorporated. (see report sections C and E for details of proposed design elements such as onsite stormwater detention and onsite compensatory flood water storage)

☑ The proposal will result in an NE or NLAA effects determination for ESA-listed species..

Table 2: Minimum Area of Habitat Assessment in Protected Areas

Water/Stream Type	RBZ
CMZ	CMZ+50 feet
S (Shorelines of the State)	250 feet
F >5' and Marine Shorelines	200 feet
F<5' and Lakes [1]	150 feet
N w/unstable slopes	225 feet
N	150 feet

The **riparian buffer zone (RBZ)** is the land adjacent to streams and other bodies of water where vegetation is strongly influenced by the presence of water. They are often thin lines-of-green containing native grasses, flowers, shrubs and trees that line the banks of streams and other bodies of water.

The **channel migration zone (CMZ)** is the area along a river within which the channel(s) can be reasonably predicted to migrate over time as a result of natural and normally occurring hydrological and related processes.

[1] Lakes are defined as over 20 acres.

Proposal is Outside the Protected Area and Within the SFHA

If the proposal is outside of the Protected Area, but still within the SFHA the following conditions must be met through the HA analysis.

- ☐ All "General BiOp Minimum Standards" have been met.
- ☐ All minimum "Habitat Assessment Standards" have been addressed.
- ☐ New structures are located at least 15 feet from edge of the Protected Area, in previously disturbed/cleared areas, or outside of the SFHA, as practicable.
- ☐ Removal of native vegetation leaves at least 65% of the area of the lot within the SFHA in an undeveloped state.

Flood zones describe the probability of a flood occurring:
- 100 year = once every 100 years or 1% chance
- 50 year = once every 50 years or 2% chance
- 10-year = once every 10 years or 10% chance

Any property having a 1% or greater chance of flooding is in the floodplain.

- ☐ 10, 50, and 100-year flood zones are conveyed to the applicant and marked onsite.
- ☐ Creation of new impervious surfaces does not exceed 10% of the portion of the lot in the SFHA unless sufficient mitigation is provided.
- ☐ New structures are located such that new flood protection or armoring will not be needed.
- ☑ The proposal will result in an NE or NLAA effects determination for ESA-listed species.

Additional Considerations for Lake and Coastal Floodplains

- ☐ **Armoring/stabilization:** See "General BiOp Standards" section above.
- ☐ **Lakes:** The Protected Area is the RBZ (150 feet from the OHWM) because floodways and CMZ's are not applicable.
- ☐ **Coastal:** The Protected Areas is the SFHA located within 200 feet of the OHWM (i.e. the coastal RBZ) because floodways and CMZs are not applicable.

NOTES:

The 2022 report by JCA regarding Federal and State Listed Endangered and Sensitive Species for Compliance with the Endangered Species Act (ESA) was the "Update of the Biological Habitat Assessment of Deer Creek for Project Impacts from the Kilcha Sekyra Senior Housing Complex." This report was prepared by JCA for Parcel Nos. 0420267003, 0420267027, 0420267028, 0420267013, 0420267008, 0420267007, 0420267001, located at 704 25th Street SE, Puyallup, WA 98372, situated in the SE ¼ of the SW ¼ of Section 26-T20N-R4E, W.M. City of Puyallup, Pierce County, Washington. The report dates by John Comis Associates, LLC (JCA), are: Original Report: May 17, 2013; Addendum: December 19, 2016; Update: January 4, 2022.