CONFLUENCE
ENVIRONMENTAL COMPANY

March 17, 2022

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Assistant Planner
City of Puyallup Planning Services
333 South Meridian
Puyallup, WA 98371

Re: 808 14th Street SW: Third-Party Review of Critical Areas Assessment – Biological Evaluation

Dear Mr. Beale:

This memorandum includes the results from the third-party review of the October 2021 Critical Areas Assessment – Biological Evaluation letter (the letter) created for the Mullan property at 808 14th Street SW, Puyallup, WA 98371 (tax parcel number 5505300831) by Habitat Technologies. Confluence Environmental Company (Confluence) biologists reviewed the letter (Habitat Technologies 2021) and conducted a site visit to the project property on March 2, 2022. Site photos from this visit are included in Attachment A. The following sections include our findings and recommendations based on the site visit and our review of the letter.

METHODS

In order to verify the findings in the letter, Confluence conducted a brief wetland reconnaissance on the property. This section describes the methods used to identify the presence or absence of wetlands.

For this reconnaissance effort, Confluence evaluated the presence or absence of hydrophytic vegetation, hydric soil, and wetland hydrology indicators at soil probe locations across the site to determine if the area represented by the soil probe was wetland or upland. Soil probe locations and presence or absence of hydric soil and wetland hydrology indicators were recorded using GPS.

Confluence used the PLANTS Database (NRCS 2022) to provide consistency in scientific naming and the 2018 National Wetland Plant List (Corps 2020) to determine the wetland indicator status of plants.

RESULTS

The following sections outline the findings of the site visit and letter review.

Site Visit

During the site visit, Confluence biologists observed and noted the soil, hydrology, and vegetation conditions at 3 soil probe locations within the project parcel, as shown in Figure 1.

Figure 1. Soil Probe Locations

These sampling locations were based at the central portion of the existing lot in a topographical depression that was flooded.

Soil Probe (SP)-1 was located in the central lawn area of the parcel in an area dominated by lawn grasses. The soils were brown (10YR 4/3) with less than 2% redoximorphic features. The water table was observed to the soil surface, and locations immediately adjacent to SP-1 had surface ponding. These findings indicate a lack of hydric soil indicators; therefore, SP-1 is representative of an upland area.

SP-2 was located to the northwest of SP-1 in an area dominated by lawn grasses. The soils were very dark grayish brown (10YR 3/2) with 5% reddish brown (5YR 4/4) redoximorphic concentrations along the pore linings and in the matrix starting at 5 inches from the soil surface. This soil profile meets the requirements for the Redox Dark Surface (F6) hydric soil indicator. The water table was observed to the soil surface, and locations immediately adjacent to SP-2 had surface ponding. Additionally, oxidized rhizospheres along living roots were observed at 4 inches below the soil surface. These findings indicate wetland conditions at SP-2.

SP-3 was located to the west of SP-2 in an area dominated by lawn grasses and creeping buttercup (*Ranunculus repens*). The soils were very dark grayish brown (10YR 3/2) with 5% reddish brown (5YR 4/4) redoximorphic concentrations in the matrix. This soil profile meets the requirements for the Redox Dark Surface (F6) hydric soil indicator. The water table was observed to the soil surface, and locations immediately adjacent to SP-3 had surface ponding. Additionally, oxidized rhizospheres along living roots were observed at 6 inches below the soil surface. These findings indicate wetland conditions at SP-3.

The City of Puyallup Critical Areas Map shows that the parcel is encumbered by the 2017 regulated floodplain associated with Meeker Creek, including the 100-year floodplain and the 500-year floodplain (Zone X) (City of Puyallup 2022). The City of Puyallup Critical Areas Map does not show any wetlands, streams, or other critical areas on the parcel, and the closest mapped wetland is over 300 feet from the southern parcel boundary (City of Puyallup 2022).

Letter Review

The letter was reviewed for completeness according to the regulations outlined in Puyallup Municipal Code (PMC) Chapter 21.06.530 for Critical Areas regulations specific to general critical area report requirements, Chapter 21.07 for Flood Damage Protection regulations.

Chapter 21.06—Critical Areas

Per PMC 21.06.530(1)(a), a critical areas report is required to include a detailed description of the critical areas and buffers on or adjacent to the project site, including the size, type/classification, condition, disturbance history, and functions and values. As explained in the previous section and shown in Figure 1, two of the soil probe assessments taken during the March 2, 2022, site visit found wetland conditions on site. Additional site investigation should be conducted to either locate and

delineate this wetland feature or provide sufficient information, including historical climatic data as appropriate, to rule out the presence of a wetland. All additional findings, including wetland determination data forms and maps of sample plot locations, should be thoroughly documented in the letter.

PMC 21.06.530(1)(b) requires a site plan for the development proposal showing the proposed development footprint and clearing limits and all critical areas and buffers. A preliminary site plan for the proposed development was included with the letter. However, per the comments related to PMC 21.06.530(1)(a) above, this site plan should be updated to include additional wetland critical areas and their buffers as appropriate.

Per PMC 21.06.530(1)(d), the report should include the dates, names, and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site. Accordingly, the letter should be updated to include the date that the fieldwork was conducted and the qualifications of the letter authors per the definition under PMC 21.06.210(108). Additionally, any fieldwork documentation, including but not limited to wetland determination data forms and field notes, should be provided as an appendix to the letter. Finally, a map should be provided that shows the locations of sample plots observed during the 2021 fieldwork and any additional sample plots taken in accordance with the additional information requests associated with PMC 21.06.530(1)(a).

Per PMC 21.06.530(1)(e), detailed assessment of the potential impacts to critical areas and buffers resulting from site development is required. The letter addresses this requirement under the section titled "Detrimental Impact Avoidance Methods," subsection "Summary of Potential Effects" (Habitat Technologies 2021). While we generally agree with the assessment of potential effects that the project may have on streams, riparian and aquatic habitats, other critical habitats, and their buffers, this letter section should be updated to include the impacts to on-site wetlands and their associated buffers that may be identified per the additional information request related to PMC 21.06.530(1)(a). Accordingly, the quantities of excavation or fill and temporary impacts should be detailed in the letter with accompanying maps.

Per PMC 21.06.530(1)(f), the report should also include an analysis of site development alternatives and measures taken to avoid and minimize critical area impacts. The letter discusses avoidance and minimization measures that will be used to generally reduce impacts to the site and surrounding areas. The letter does not discuss any development design alternatives in terms of the size of the proposed new single-family home or where the home will be located on the site. Note that if wetlands and their buffers are found to occur on-site with the requested additional site investigation, then the discussion of development alternatives and additional avoidance and minimization measures will be necessary.

Chapter 21.07—Flood Damage Protection

Per PMC 21.07.050(1)(c), applicants for development permits shall also submit a habitat assessment prepared by a qualified professional evaluating the effects and/or indirect effects of the proposed development (during both construction and operation) on the following floodplain functions and documenting that the proposed development will not result in "take" of any species listed as threatened or endangered under the Endangered Species Act (ESA):

i. Water quantity and quality (including preparing hydrologic and hydraulic analyses in accordance with standard engineering practice). This is required for development that is concluding that compensatory storage of less than 1:1 is necessary to avoid "take" of any species listed;

ii. Flood storage capacity;

iii. Channel migration and bank stability;

iv. Riparian vegetation;

v. Habitat forming processes (such as large wood recruitment) and habitat isolation;

vi. Refuge for fish from higher velocity floodwaters; and

vii. Spawning substrate.

The letter addresses these requirements under the section titled "Floodplain Functions Effects Determination." Additionally, the condition under PMC 21.07.050(1)(c)(ii)—flood storage capacity—is not adequately addressed in the letter. On page 11 of the letter, the proposed project elements to address flood storage capacity are described as follows: "Onsite biofiltration and infiltration of seasonal stormwater runoff from impermeable surfaces. In addition, Best Management Practices shall be implemented. As such, the pre-construction flood storage capacity shall be substantially the same as the post-construction water patterns" (Habitat Technologies 2021). Based on the preliminary site plan submitted with the letter, the proposed new single-family home will be constructed directly in the mapped 100-year floodplain. This proposed construction will result in direct filling of the existing 100-year floodplain, which means that the pre- and post-construction flood storage capacity will not be substantially the same. Sections 2.1 and 5.1 of the Preliminary Stormwater Site Plan (Barghausen 2022) state that compensatory storage area will be provided on-site for fill within the floodplain. However, the Critical Areas Assessment (Habitat Technologies2021) nor the Stormwater Site Plan discusses the amount of floodplain fill associated with the project or the quantity and location of floodplain storage created by the project. Both reports should be updated to fully address these code requirements.

Per PMC 21.07.060(1) and the definition of area of special flood hazard under PMC 21.07.030, the portion of the site encumbered by the 100-year floodplain is a special flood hazard area. Therefore, the standards in this section are required. Notably, under PMC 21.07.060(1)(f), the project must provide compensatory storage as specified therein. The letter should be updated to

state the quantity of impact to the flood storage capacity volume and the proposed compensatory storage restoration to offset those impacts per either PMC 21.07.060(1)(F)(i) or 21.07.060(1)(F)(ii)(B).

In summary, we found several instances of missing information in the 2021 letter. We recommend that Habitat Technologies update the letter to include the following information as detailed in this letter:

- Evidence of the presence or absence of wetlands within the vicinity of SP-2 and SP-3, which will require further site evaluation.
- An analysis of any impacts to wetlands and wetland buffers if the presence of wetlands is confirmed.
- All wetland determination forms and a map of all sample plots.
- An updated site plan based on the results of the requested additional field investigation. The site plan may also need to be updated to address floodplain storage concerns.
- Qualifications of persons conducting the work and preparing the report.
- A discussion of design alternatives and additional avoidance and minimization measures, as appropriate.
- Proposed project effects on flood storage capacity and proposed compensatory restoration.
- Proposed impacts to flood storage volume and the compensatory storage proposed to offset project impacts to the floodplain.

Respectfully yours,

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Attachment A: Site Photos

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Photo 1—Soils and hydrology at Soil Probe (SP)-1.

Photo 2—View from SP-1, looking north.

Photo 3—View from SP-1, looking east.

Photo 4—View from SP-1, looking south.

Photo 5—View from SP-1, looking west.

Photo 6—Soil profile at SP-2.

Photo 7—Soils and hydrology at SP-2.

Photo 8—View from SP-2, looking north.

Photo 9—View from SP-2, looking east.

Photo 10—View from SP-2, looking south.

Photo 11—View from SP-2, looking west.

Photo 12—Soil profile at SP-3.

Photo 13—Hydrology at SP-3.

Photo 14—View from SP-3, looking north.

Photo 15—View from SP-3, looking east.

Photo 16—View from SP-3, looking south.

Photo 17—View from SP-3, looking west.

Photo 18—View of proposed southern lot from the eastern portion, looking west.

Photo 19—Southeastern area of the existing parcel, looking east.

Photo 20—Catch basin inlet near 14th Street SW.