



March 2, 2022

Mr. Chris Beale, AICP, Senior Planner  
City of Puyallup  
333 S Meridian  
Puyallup, WA 98371

**Re: East Town Crossing Project: 3<sup>rd</sup> Party Review of Habitat Technologies' Conceptual Stream Corridor Restoration and Enhancement Program**

Dear Chris:

Confluence Environmental Company (Confluence) has reviewed the Conceptual Stream Corridor Restoration and Enhancement Program dated December 3, 2021, submitted by Habitat Technologies for the East Town Crossing project (Restoration Plan; Habitat Technologies 2021).

## **REVIEW FOR COMPLETENESS**

Confluence found that this report was incomplete according to the regulations outlined in Puyallup Municipal Code (PMC) Chapter 21.06:

- Per PMC 21.06.620, the report is missing the following element: An assessment of the project's consistency with applicable state and federal regulations, including the need for permits from state and/or federal agencies.
- Per PMC 21.06.1080, the report is missing the following element: Documentation that mitigation for alterations to habitat areas shall achieve equivalent or greater biologic functions, and shall provide similar functions as those lost (i.e., no net loss of functions and values). The report states there is no loss of function, but there is insufficient data to document this. For example, the report does not document the length of channel that is currently open versus the length of channel that will be open post project. Nor does the report clearly and succinctly document the existing buffer area (square footage) and conditions and compare them to the proposed area and conditions.
- The project does not comply with approved standard buffers (i.e., 50-foot buffer for Type III streams and 35-foot buffer for Type IV streams); thus, the report must also follow the innovative mitigation requirements of PMC 21.06.640.

## TECHNICAL REVIEW

Confluence conducted a technical review of relevant sections of the Restoration Plan (Habitat Technologies 2021) for compliance with PMC 21.06. We agree with the stream types described in the report.

We have the following comments and requests for additional clarity or information.

### Selected Development Action

An impact analysis is missing. Per PMC 21.06.1020, an impact analysis is required. The report states that it will avoid impacts to streams or their buffers. However, the report does not provide sufficient detail to determine this conclusion. The report does not discuss details such as the current and proposed open channel length—or provide a comparison—to allow for an analysis of the impact, if any. Based on the architectural and landscaping site plans, it appears that the length of stream channel placed within a culvert will increase. This would be considered an impact and would need to be mitigated for.

The report also does not provide a sufficient analysis of buffer impacts. The report does not discuss details such as how much buffer area is currently present using the standard buffer widths or the functioning condition of the existing buffer; nor does the report compare the existing conditions to the proposed buffer area and functioning condition. In addition, proposing buffers less than the standard buffer widths (50 feet [ft] for Type III stream and 35 ft for Type IV stream) is considered an impact. The report needs to demonstrate/document how the proposed buffer width and restoration do not result in a net loss of function and value. The report implies no net loss of function, but it does not demonstrate or describe how this conclusion was reached. A table summarizing impacts and proposed mitigation may be useful.

The plans in Appendix A appear to show restoration area of 15 ft (green highlight) along Pioneer, when a 50 ft buffer from OHWM is required per PMC 21.06. The Landscape Plan shows something closer to a 28 ft buffer (LLA 2021), which was the buffer width discussed in the October 27, 2021 meeting. The Restoration Plan and Landscape Plan need to be consistent in buffer designation.

### Stream Corridor Restoration and Enhancement Program

The report describes the restoration of the Type IV stream and buffer to include a meandering stream channel with instream woody debris and adjacent logs and snags, but the plan sets all show the channel as linear, without meanders. If the channel is to meander, then final construction site plans need to be updated to depict the meander. Approximate locations of snags, logs, and instream woody debris should also be depicted on the plans, or quantities provided in the text (e.g., “# snags and # logs will be placed in the mitigation area”).

A description of the wetland/critical areas creation area is missing. Appendix A depicts a large area designated as “wetland/critical areas creation area,” but there is no description of this area in the report. The report should explain why this area is called out and describe what would be done in the area.

It is unclear if fencing is proposed or not. The site plans show fencing, but the report states fencing may be installed. Per PMC 21.06.810, fencing and signage will be required.

## **Selected Plant Communities and Appendix A**

The species in the plant table in the report do not match those in the plant table in Appendix A. For example, Oregon ash, Sitka spruce, western crabapple, Pacific willow, twinberry, Nootka rose, salmonberry, Sitka willow, hazelnut, salal, and wild rose are all identified in the report but are not in the plant table in Appendix A. Both tables need to be consistent in both species and container sizes.

Neither the report nor Appendix A documents the area (square footage) to be planted with native vegetation. This information is needed to determine if proposed plantings are sufficient. For example, Appendix A shows a mitigation area of 57,090 sq ft, and the planting table in Appendix A shows a total of 100 plants to be installed. The Landscaping Plan shows a minimum plant spacing of 2.5 ft on center. Therefore, a 57,090 sq ft area would need 9,134 plants installed. The plant quantities in the Appendix A table also do not appear to match the green highlighted areas. For example, on the last page of Appendix A, there is approximately 5,120 sq ft (640 linear ft x 8 ft width) of area designated to be planted. Based on a plant spacing of 2 ft on center, 5,120 sq ft of area would need 1,280 plants to be installed (planted in a square spacing style). The plant table in Appendix A only shows 100 plants. Based on these calculations, the plant tables in Appendix A do not have sufficient plant quantities to meet the proposed plant spacing and area depicted in the plan.

Appendix A was compared to the Landscape Plan set for consistency between the two plans. Appendix A only shows plantings immediately next to the stream channel and not within the entire proposed stream buffer, especially along Pioneer Way E. The Landscape Plan shows plantings within the stream buffers, from the edge of the buffer plantings shown in Appendix A to the outer edge of the proposed buffer. However, all plantings within the proposed stream buffer should be included in the Restoration Plan. Unfortunately, most, if not all, of the plants shown within the proposed stream buffer in the Landscape Plan are non-native and are unacceptable in a stream buffer. We recommend reconciling the Landscape Plan with the Restoration Plan, with the Restoration Plan governing the buffers.

## **Standards of Success**

There should be a performance standard for each type of mitigation proposed: vegetation, habitat features, etc. We recommend adding a performance standard for habitat features (i.e.,

snags, downed logs, instream woody debris). An example method would be conducting a census of installed habitat features and comparing to the as-built. A similar performance standard could be established for channel length if increasing the channel length of the Type IV stream is a proposed mitigation for increased culvert lengths of the Type II stream.

## **CORRECTIONS REQUIRED**

1. Update the report to include the required elements of PMC 21.06.620, 21.06.640, and 21.06.1080. Missing elements are discussed above.
2. Update the report to include an impact analysis consistent with PMC 21.06.1020.
3. Update the report to demonstrate/document how the proposed buffer width and restoration do not result in a net loss of function and value. The report implies no net loss of function, but it does not demonstrate or describe how this conclusion was reached
4. Update the report to have a complete planting schedule. Based on our review, plant lists in the report and in Appendix A are not consistent. In addition, there do not appear to be sufficient plantings proposed.
5. Update the report to show the planting plan for the entire proposed buffer (i.e., do not have proposed buffer planting split between the Restoration Plan and the Landscape Plan set).
6. Update the standards of success to include performance standards for habitat features and, if needed, stream length.

If you have any comments or questions, please feel free to contact me.

Respectfully yours,



**KERRIE McARTHUR, PWS, CERP**

Senior Biologist

206.999.6201

[kerrie.mcarthur@confenv.com](mailto:kerrie.mcarthur@confenv.com)

## **REFERENCES**

Habitat Technologies. 2021. Conceptual stream corridor restoration and enhancement program, East Town Crossing. Prepared for @ East Town Crossing, Puyallup Washington by Habitat Technologies, Puyallup, Washington.

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LLA (Lyon Landscape Architects). 2021. East Town Crossing overall landscape plan. Prepared for @ East Town Crossing, Puyallup Washington by Lyon Landscape Architects, Tacoma, Washington.

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