



memorandum

date August 21, 2017
 to Lauren Anderson, Planner; City of Mercer Island
 from Aaron Booy & Christina Hersum, ESA Biologists
 subject Hagstrom Review CAO17-004, Resubmittal

Environmental Science Associates (ESA) reviewed the Comment Response memo and revised mitigation plan sheet set (The Watershed Company [TWC], July 27, 2017) submitted to the City for the development proposal at 7428 SE 71st Street in Mercer Island, Washington. The project proposes demolition and rebuild of a single-family residence on Parcel 5368000300. ESA has previously reviewed Critical Area Study, Hagstrom Residence: Watercourse Buffer Reduction (CAS) (TWC, 2017) and the Hagstrom Residence Site Plan (Sturman Architects, 2017) for the project, most recently in our June 8, 2017 letter. The purpose of our review was to verify development proposal (CAO17-004) consistency with City Critical Areas requirements (Mercer Island City Code [MICC] Chapter 19.07), including response to our previous recommendations and confirmation that proposed mitigation measures adequately achieve the standard of no net loss of ecological functions.

The applicant addressed many of the recommendations from our June 8, 2017 review letter, providing details in the Comment Response memo and revised Mitigation Plan that clarify design elements and compliance with MICC 19.07 standards. We did identify some remaining items that need to be addressed in the CAS. A summary of previous review recommendations, consideration of updates to the Mitigation Plan and discussed in the Comment Response Memo, and elements that still need to be addressed are detailed below (Table 1). In addition, we have included comments and recommendations following Table 1 that are related to the new storm drain proposed in the reduced buffer of Watercourse B, which was not discussed in our previous review of the CAS.

TABLE 1. SUMMARY OF ESA’S JUNE 2017 RECOMMENDATIONS AND REVIEW OF THE JULY 2017 COMMENT RESPONSE MEMO.

ESA’s June 2017 Recommendations	Review of TWC’s Comment Response Memo and Revised Mitigation Plan (and Additional Recommendations, as Necessary)
<i>Recommendation 1</i>	
Discuss the possibility of daylighting the lower portion of Watercourse A for more adequate mitigation within the 25-foot buffer.	Discussion in the Comment Response memo provides adequate justification for the existing proposed mitigation, and for not daylighting Watercourse A.

Recommendation 2	
Discuss impact area quantities and area of each type of corresponding mitigation proposed. Clearly quantify the buffer reduction pursued for Watercourse A in the CAS.	<p>Discussion in the Comment Response memo provides adequate explanation and justification for not including Watercourse A impact area quantities. However, we recommend that some of the explanation from the memo be added to the CAS to better clarify proposed mitigation, such as ‘...the applicant is utilizing this provision [MICC 19.07.030.A.10] for the entire Watercourse A buffer for simplicity.’” Also, we recommend that an asterisk be added to ‘N/A’ under reduction area for Watercourse A, and Shoreline Buffer, in Table 1 of the CAS that explains why there is no reduction area for those features for clarification purposes.</p> <p>In addition, the Comment Response memo provides different quantities from those provided in the CAS for both the net decrease in impervious surface (173 sf), and enhancement area (1,643) within the Watercourse A buffer. It appears the mitigation plan has been updated to reflect these new quantities; we recommend that the CAS be updated to reflect these changes as well.</p>
Recommendation 3	
List and indicate the minimum buffers for the piped portion of Watercourse A.	The mitigation plan sheets have been updated to include minimum distances between the proposed improvements and Watercourses A and B, as well as minimum buffer widths for Watercourse B.
Consider opportunities to provide 5-foot minimum buffer if not daylighting Watercourse A. This should include, at a minimum, realignment of stairway on east side of the proposed structure.	The mitigation plan sheets has been updated to include reconfiguration of the stairway so that it is now located further away (twelve feet) from Watercourse A.
Recommendation 4	
Correct inconsistencies between the drawing set and the CAS for the enhancement area quantity for the shoreline setback.	The Comment Response Memo states that the CAS has been updated to correct the inconsistency.
Correct inconsistencies between the drawing set and the CAS regarding the number of shrubs in the planting schedule.	The Comment Response Memo states that the CAS has been updated to correct the inconsistency in number of shrubs.

<p>Clarify the number and spacing of mitigation plantings is correct for the size of the mitigation area.</p>	<p>The number and spacing of mitigation plantings have been revised in the mitigation plan, and are adequate for the size of the mitigation area.</p>
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In addition to the recommendations above, we also recommend that the CAS be revised to include a discussion of the proposed storm drain catch basins and conveyance located within the reduced piped watercourse buffers and discharging to the piped segment of Watercourse A immediately above Lake Washington (per Engineering Drainage Plan [Eastside Consulting Inc., June 2017] provided by the City). While new utility facilities (including drainage conveyance and outfalls) may be allowed by MICC 19.07.030(7) (New Utility Facilities), the City requires mitigation and use of best management practices to the greatest extent reasonably feasible so there is no net loss in critical area functions. We recommend that the applicant be required to address potential impacts from proposed drainage facilities, and to provide mitigation consistent with MICC 19.07.030(7). Based on our review of submittal materials, we recommend options focused on reducing the amount of runoff from pollution generating impervious surfaces (the driveway), and/or providing basic water quality treatment for runoff. Potential options include the use of pervious materials for the driveway, or providing a vegetated bioswale in the conveyance flow path.

After integration of the final recommendations detailed above (regarding additional discussion and updates for proposed stormwater conveyance facilities within the watercourse buffers and discharging to the piped segment of Watercourse A), we believe that the mitigation approach will compensate for buffer impacts consistent with MICC 19.07 requirements.

Limitations

Within the limitations of schedule, budget, and scope-of-work, we warrant that this review was conducted in accordance with generally accepted environmental science practices, including the technical guidelines and criteria in effect at the time this review was performed. No other warranty, expressed or implied, is made.

If you have any questions, please contact us at 206-576-3790.