



CITY OF MERCER ISLAND

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CRITICAL AREAS DETERMINATION

NOTICE OF DECISION

October 9, 2017

Project Number: CAO17-004

Description: The applicant has proposed to reconstruct a single-family residence that is currently located within two watercourse buffers. A portion of Watercourse A is a type 3 open watercourse (35-foot buffer) and a portion of Watercourse A is a piped watercourse (25-foot buffer) located on the northeastern portion of the property. Watercourse B is a piped watercourse that is located on the neighbor's property and the 25-foot buffer extends onto the subject property.

The applicant is proposing to reduce Watercourse B buffer to 14 feet and to alter the buffer for Watercourse A. The existing home is 10 feet from the Type 3 section of Watercourse A and the proposed home will not be closer than 10 feet from the watercourse. The existing home is located over the piped Watercourse A section, and the proposed house will not be closer than the existing condition and will be 9 feet from the piped section.

The applicant is proposing to locate two stormwater catch basins within the Watercourse B buffer. New utilities are an allowed alteration within a critical area, however the proposal must meet the requirements set out in MICC 19.07.030 (A)(7). The catch basins are necessary to convey drainage from the adjacent roof and to minimize runoff from the new driveway onto the adjacent neighboring property to the west. The applicant has proposed a vegetative bioswale with a vertical catch basin to filter and slow all runoff entering the system.

A shoreline vegetation plan and buffer enhancement plan will be implemented to mitigate for the impacts to the watercourse buffers. Refer to the Plan Set sheet W5-W8 for more details (Exhibit 2).

Decision: Approved subject to conditions.

Applicant: Brad Sturman
9 103rd Ave NE
Bellevue, WA 98004

Owner: Colin and Jillian Hagstrom
7880 SE 80th PL
Mercer Island, WA 98040

Site Address: 7428 SE 71st ST, Mercer Island, WA, 98040;
Identified by King County Assessor tax parcel number 536800-0300

Zoning District: R-15

SEPA Compliance: A SEPA Determination of Non-Significance was issued on July 10, 2017 under project number SEP17-009.

Exhibits:

1. Revised (final) Critical Area Study, Hagstrom Residence: Watercourse Buffer Reduction, conducted by The Watershed Company received by the City on September 14, 2017.
2. Final Plan Set received by the City on September 14, 2017.
3. Project Narrative prepared by Brad Sturman received by the City on April 21, 2017.
4. Development Application for file number CAO17-004 received by the City on April 21, 2017.
5. First Review Letter sent to the applicant by the City on June 9, 2017.
6. ESA first review memorandum of the applicant's original Critical Areas Study, received by the City on June 8, 2017. The ESA review was completed by Tobin Story, ESA Ecologist.
7. The Watershed Company's response to ESA's memorandum and the first review letter prepared by Ryan Kahlo, PWS, was received by the City on July 3, 2017.
8. Second Memorandum to the applicant's revised Critical Area Study and planting plan conducted by Aaron Booy and Christina Hersum, ESA Biologists of Environmental Science Associates (ESA) received by the City on August 21, 2017.
9. Second Review Letter sent to the applicant by the City on July 7, 2017.
10. City issued SEPA Determination of Non-Significance for SEP17-009 on July 10, 2017.
11. Staff Site Visit photographs from May 19, 2017.
12. SEPA Checklist received by the City on May 19, 2017.
13. Third review comments prepared by the City were emailed to the applicant August 21, 2017.
14. The Watershed Company's response to ESA's second memorandum and the third review comments were received by the City on September 14, 2017.

I. FINDINGS OF FACT

1. Application Description:

The request is for approval of a critical areas determination to reduce the required buffer associated with piped watercourse A from 25 feet to 14 feet (8 feet 3 inches from the property line), to accommodate the construction of a new home. The applicant has also proposed to use the allowed alteration provision in MICC 19.07.030(A)(10) for the reconstruction of the existing house within the Watercourse A buffer. The applicant has proposed to use the allowed alteration provision in MICC 19.07.030 (A)(7) for the new storm drain and two catch basins within the Watercourse B buffer.

2. Zoning:

The existing zoning of the subject site is Single Family Residential R-15 (15,000 square foot minimum lot area).

3. Adjacent Land Use:

The surrounding land uses consist of single family residences to the East, South, and West. The subject property from SE 71st ST connects to the Mercer Way right-of-way to the southeast. The Lake Washington Shoreline is to the North.

4. Description of Proposed Buffer Reduction and Alteration:

Mercer Island City Code (MICC) MICC 19.07.070(B)(2) allows for watercourse buffers to be reduced *“in accordance with an approved critical area study when he/she determines that a smaller area is adequate to protect the watercourse, the impacts will be mitigated by using combinations of the below mitigation options, and the proposal will result in no net loss of watercourse and buffer functions. However, in no case shall a reduced buffer contain a steep slope.”*

Measurement of slopes presented in the site plan, Exhibit 2, indicates there are no slopes within the reduced buffer that meet the definition of steep slope per MICC 19.16.010(S). The applicant must provide mitigation as described in MICC 19.07.070(B)(2)(b).

The applicant’s Critical Areas Study, buffer reduction and site analysis (Exhibits 1 and 2) indicate that a reduced buffer is adequate to protect the piped watercourse. The review response letter (Exhibit 7) prepared by Ryan Kahlo, PWS, Ecologist, of The Watershed Company states, for Watercourse A:

“...decreasing the amount of impervious within the buffer (net reduction of 173sf) combined with moving all impervious areas farther from the watercourse (including portions of the existing structure which are on top of the piped watercourse) would be sufficient to ensure no net loss of critical area or buffer function without additional buffer enhancement. Combining these measures with 1,634 sf of buffer enhancement far exceeds the requirement of ‘no net loss’ of function, instead providing a substantial improvement in buffer function (page 2).”

Furthermore, the review response letter (Exhibit 7) states that:

“Indirect effects on Watercourse A through reduction in runoff velocities and increasing shade and input of organic materials associated with the buffer planting plan will represent a slight improvement in watercourse functions (page 2).”

The Critical Area Study and Mitigation Plan (Exhibit 1) on page 17 Section 5, Impact Assessment, Table 1 has a summary of the areas of proposed buffer impacts, reductions, and mitigation areas, which indicates that:

“the proposal will result in a net reduction of 631 square feet of impervious surface are in critical area buffers (including both watercourses and the Lake Washington Shoreline). A total of 4,953 square feet of buffer will be enhanced through planting.”

MICC 19.07.030 (A)(1-13) lists the allowed alterations to critical areas and buffers that are subject to the specific conditions listed within that code section. The applicant’s proposal includes the alteration of the watercourse buffers for a new utility facility (stormwater system) and the reconstruction of the existing single-family residence.

5. SEPA Review:

The proposal is not categorically exempt from SEPA review per WAC 197-11-800(1)(a)(i), as the open type 3 watercourse (Watercourse A) constitutes the project being undertaken partly on lands covered by water. A SEPA Determination of Non-Significance was issued on July 10, 2017 (Exhibit 10).

6. Public Noticing and Comments:

There is no public hearing requirement for a critical areas determination (an administrative action) per MICC 19.15.010(E) and 19.15.020(F)(1). On May 22, 2017, City staff sent a Public Notice of Application to all property owners within 300 feet of the subject property and placed the Public Notice of Application in the City Weekly Permit Bulletin. Additionally, the site was posted with a public notice sign, in a location that is visible to the public right-of-way, on May 22, 2017, as required by MICC 19.15.020(E)(4)(a). A public comment period ran from May 22, 2017 through 5:00 P.M. on June 21, 2017. The City received no public comment letters.

7. Allowed Alterations to Critical Areas and Buffers:

MICC 19.07.030(A) states “the following alterations to critical areas and buffers are allowed and the applicant is not required to comply with the other regulations of this chapter, subject to an applicant satisfying the specific conditions set forth below to the satisfaction of the code official; and subject further, that the code official may require a geotechnical report for any alteration within a geologic hazard area:”

The applicant is proposed to use MICC 19.07.030(A)(10) for altering the Watercourse A buffer, which states the following:

10. Existing single-family residences may be expanded or reconstructed in buffers, provided all of the following are met:
 - a. The applicant must demonstrate why buffer averaging or reduction pursuant to MICC 19.07.070(B) will not provide the necessary relief;
 - b. Expansion within a buffer is limited to 500 square feet beyond the existing footprint that existed on January 1, 2005;
 - c. The expansion is not located closer to the critical area than the closest point of the existing residence;
 - d. The functions of critical areas are preserved to the greatest extent reasonably feasible consistent with best available science;
 - e. Impacts to critical areas are mitigated to the greatest extent reasonably feasible so that there is no net loss in critical area functions;
 - f. Drainage capabilities are not adversely impacted; and
 - g. The city may require a critical area study or restoration plan for this exemption.

Staff Analysis:

As stated in Exhibit 1, The Watershed Company Critical Areas Study section 4.1, the applicant has proposed using the allowed alterations provision that the existing single-family residence may be reconstructed in the Watercourse A buffer (code section stated above). Section 4.1 of the Critical Areas Study addressed how they are meeting requirements a-g listed above.

The Watershed Company’s Critical Areas Study (Exhibit 1) documents compliance with the above criteria a-g. Based upon the peer review by ESA (Exhibit 6 and 8), staff finds that the applicant has addressed and met the requirements set out in MICC 19.07.030(A)(10).

The applicant has proposed to use MICC 19.07.030 (A)(7) to alter the Watercourse B buffer for a new stormwater pipe and catch basins. The code requirements to alter a critical area for new utilities states the following:

7. New Utility Facilities. New utilities, not including substations, subject to the following:
 - a. Construction is consistent with best management practices;
 - b. The facility is designed and located to mitigate impacts to critical areas consistent with best available science;
 - c. Impacts to critical areas are mitigated to the greatest extent reasonably feasible so there is no net loss in critical area functions;
 - d. Utilities shall be contained within the footprint of an existing street, driveway, paved area, or utility crossing where possible; and
 - e. The code official may require a critical area study or restoration plan for this allowed alteration.

Staff Analysis:

As seen on the final site plan (Exhibit 2) and stated in Exhibit 1, the final Critical Areas Study, the applicant has proposed using the allowed alterations provision that new utilities may be reconstructed in the Watercourse B buffer (code section stated above). ESA (peer review) had recommended in Exhibit 8 that the applicant address how they are meeting MICC 19.07.030 (7) and recommended possible mitigation options. ESA's second review memorandum (Exhibit 8, page 3) stated that "based on our review of submitted materials, we recommend option focused on reducing the amount of runoff from pollution generating impervious surface (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."

The applicant in their final submittal (Exhibit 1, 2, and 14) addressed ESA's and the City's concerns and recommendations stated above. Mitigation for the new storm catch basins and system within the enhancement area is the addition of a vegetative bioswale that will treat runoff from the adjacent roof and driveway. Exhibit 1 section 4.2 states that the bioretention area has been adequately sized to treat 99% of the run off volume through the 18-inch thick bioretention soil layer for the required water quality treatment. The installation of the vegetative bioswale will increase water quality, hydrology, and habitat functions. The provided final revised Critical Areas Study (Exhibit 1) documents compliance with the above criteria a-e.

The City's peer review consultant (ESA) second memorandum (Exhibit 8) states "that after the integration of the final recommendation 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 (Exhibit 8, page 3)." Staff finds that with the submitted materials in Exhibit 1 and 2 that the applicant has integrated ESA's recommendations (Exhibits 6 and 8) and meets MICC 19.07.030 (A)(10) and MICC 19.07.030 (A)(7).

8. Watercourse Designation and Typing.

MICC 19.07.070(A) states watercourses shall be designated as Type 1, Type 2, Type 3 and Restored according to the following criteria:

1. Type 1 Watercourse. Watercourses or reaches of watercourses used by fish, or are downstream of areas used by fish.
2. Type 2 Watercourse. Watercourses or reaches of watercourses with year-round flow, not used by fish.
3. Type 3 Watercourse. Watercourses or reaches of watercourses with intermittent or seasonal flow and not used by fish.

4. Restored or Watercourse. Any Type 1, 2 or 3 watercourses created from the opening of previously piped, channelized or culverted watercourses.

Staff Analysis:

The applicant provided a critical areas study (Exhibit 1), which states, “all watercourses observed within the project area were located in the field and are depicted on the attached maps (Appendix D),” which can be found in Exhibit 1. In addition, the study states “the storm pipe is classified as a piped watercourse and requires a 25-foot protective buffer.” This is consistent with the City’s GIS mapping system which designates this watercourse as a piped watercourse. The City’s peer reviewer, ESA, confirmed the watercourse status (Exhibit 9). Staff finds that the applicant has addressed and met the requirements set out in MICC 19.07.070(A).

9. Watercourse Buffer Widths.

Standard watercourse buffer widths shall be as follows (MICC 19.07.070(B)(1):

Watercourse Type	Standard (Base) Buffer Width (feet)	Minimum Buffer Width with Enhancement (feet)
Type 1	75	37
Type 2	50	25
Type 3	35	25
Restored or Piped	25	Determined by the code official

Staff Analysis:

As stated above, the City’s mapping resources, the applicant’s critical areas study (Exhibit 1), and the City’s ESA first peer review (Exhibit 6), identify the existing watercourse as a piped watercourse. Piped watercourses are subject to a 25-foot regulated buffer that may be reduced to a minimum buffer width determined by the code official through an approved critical areas determination. The Watercourse B (piped watercourse) minimum buffer width with enhancement is determined by the code official. Watercourse A is a type 3 and piped watercourse, the minimum buffer would be 25 for the type 3 portion and reduced to a width determined by the code official for the piped portion, however, the applicant is not proposing to use the reduction in buffer width provision so this does not apply. Refer to Findings of Fact #7 above. Staff finds that the proposal meets MICC 19.07.070 (B)(1).

10. Reduction of Watercourse Buffer Widths.

MICC 19.07.070 (B)(2)(a) states that the code official may allow the standard buffer width to be reduced a minimum width determined by the code official in accordance with an approved critical area study when he/she determines that a smaller area is adequate to protect the watercourse, the impacts will be mitigated by using combinations of the below mitigation options, and the proposal will result in no net loss of watercourse and buffer functions. However, in no case shall a reduced buffer contain a steep slope.

Staff Analysis:

The applicant is requesting a reduced buffer width from the standard 25 feet to 0 feet for the piped watercourse and is proposing mitigation to support the reduce watercourse buffer. Mercer Island City Code (MICC) 19.07.070(B)(1) states that the standard buffer width for a piped watercourse is 25 feet. Per MICC 19.07.070(B)(1), the minimum buffer width with enhancement for a piped watercourse is determined by the code official. As indicated on the topographic and boundary line survey within Exhibit 2 page 2, the reduced buffer does not contain a steep slope. Staff finds the applicant has addressed and met the requirements set out in MICC 19.07.070(B)(2)(a).

11. Reduction of Buffer Width Mitigation Options.

MICC 19.07.070(B)(2)(b) states the code official may consider the following mitigation options:

- i. Permanent removal of impervious surfaces and replacement with native vegetation;**
- ii. Installation of biofiltration/infiltration mechanisms such as bioswales, created and/or enhanced wetlands, or ponds supplemental to existing storm drainage and water quality requirements;**
- iii. Removal of noxious weeds, replanting with native vegetation and five-year monitoring;
- iv. Habitat enhancement within the watercourse such as log structure placement, bioengineered bank stabilization, culvert removal, improved salmonid passage and/or creation of side channel or backwater areas;
- v. Use of best management practices (e.g., oil/water separators) for storm water quality control exceeding standard requirements;
- vi. Installation of pervious material for driveway or road construction;
- vii. Use of “green” roofs in accordance with the standards of the LEED Green Building Rating System;
- viii. Restoration of off-site area if no on-site area is possible;
- ix. Removal of sources of toxic material that predate the applicant’s ownership; and
- x. Opening of previously channelized and culverted watercourses on-site or off-site.

Staff Analysis:

The applicant has proposed the removal of impervious surface and native vegetation replacement, which is the mitigation option described in MICC 19.07.070(B)(2)(b)(i). The proposed mitigation is illustrated in Exhibit 1, under Appendix A Mitigation and Restoration Plan and described in greater detail in the rest of the Critical Area Study. The applicant has proposed 1,634 square feet of buffer enhancement area for Watercourse A, 1,411 square feet of buffer enhancement for Watercourse B, and 1,908 square feet of shoreline planting. The total buffer enhancement area on-site is 4,953 square feet. The applicant has proposed to remove 190 square feet of impervious surface from Watercourse B buffer area and 268 square feet of impervious surface removal within the 25-foot shoreline buffer. The applicant has proposed the installation of a vegetative bioswale, which is the mitigation option described in MICC 19.07.0707 (B)(2)(b)(ii). The vegetative bioswale is mitigation for the alteration of the Watercourse A buffer for the proposed stormwater system. For more information about the vegetative bioswale please refer to Findings of Fact #7.

With the information provided, specifically Exhibits 1 and 2, and ESA peer review (Exhibits 6 and 8), staff finds that the proposal meets MICC 19.07.070 (B)(2)(b) by using (i) and (ii) as mitigation options.

12. Maintenance and Monitoring.

Landscape maintenance and monitoring may be required for up to five years from the date of project completion if the code official determines such condition is necessary to ensure mitigation success and critical area protection. Where monitoring reveals a significant variance from predicted impacts or a failure of protection measures, the applicant shall be responsible for appropriate corrective action, which may be subject to further monitoring (MICC 19.07.040(J)).

Staff Analysis:

As approved with conditions, a five-year maintenance bond or assignment of funds, and maintenance and monitoring of mitigation is required. Refer to Exhibit 2 Sheet W5-W8 for more details on the maintenance and monitoring plan. As approved with conditions, the City will require that the building permit provide a final plan. In particular, the City’s peer reviewer notes that: “...Established performance

standards, protocols for the 5-year monitoring period, and maintenance activities are consistent with current best practices and City's critical areas requirements (Exhibit 6, page 4)." Staff finds the applicant has addressed and met the requirements set out in MICC 19.07.040(J).

13. Permit Expiration:

MICC 19.15.020(K) states "Except for building permits or unless otherwise conditioned in the approval process, **permits shall expire one year from the date of notice of decision** if the activity approved by the permit is not exercised. Responsibility for knowledge of the expiration date shall be with the applicant."

Staff Analysis:

Staff finds that this requirement shall carry with the proposal, and is appropriate as a condition of approval.

II. CONCLUSIONS OF LAW

Based on the above Findings of Facts, the following Conclusions of Law have been made:

1. The subject property contains a piped watercourse buffer, and a piped and open watercourse and associated buffer.
2. As specified in MICC 19.07.070(B)(1), the minimum buffer width may be reduced by the code official subject to approval of proposed mitigation. The proposed mitigation is consistent with MICC 19.07.070(B)(2)(b)(i) and will mitigate any potential impacts from the buffer reduction.
3. A critical areas study (Exhibit 1) and proposed mitigation plan (Exhibit 2) was submitted and following peer review (Exhibits 6 and 8), the city has confirmed that impacts will be mitigated as required by MICC 19.07.070(B)(2)(a). In particular, the city's peer reviewer notes that: "...Species selected for the Mitigation Plan are appropriate for the area and for watercourse and lakeshore buffers, and have the potential to provide increased buffer water quality, hydrology, and habitat functions, especially where adjacent (Exhibit 6, page 4)."
4. As approved with conditions, and following implementation of the proposed mitigation plan, a reduced buffer of 14 feet (8 feet 3 inches from the property line) is adequate to protect the piped watercourse.
5. Pursuant to MICC 19.07.070(B), the code official may allow the standard buffer to be reduced to a minimum buffer width determined by the code official.
 - a. The buffer is applied from the edge of the piped watercourse (MICC 19.16.010).
 - b. The code does not authorize the code official to authorize any structures above or on top of the piped watercourse or within the reduced buffer.
 - c. The code official concludes that a minimum buffer of 14 feet east from the piped watercourse (8 feet 3 inches from the property line) should be authorized, subject to the mitigation proposed by the applicant.
6. A financial guarantee (e.g. bond, cash deposit, or assignment of funds) shall be required for critical area mitigation prior to the issuance of any permit for clearing, grading, or building.
7. As shown in Exhibit 1 and Exhibit 2, no portion of the reduced watercourse buffer is on a steep slope.
8. The proposal will result in no net loss of watercourse and buffer functions.

III. DECISION

Based upon the above noted Findings of Fact and Conclusions of Law, a reduction in the width of the required west piped Watercourse B buffer and the allowed alteration within Watercourse A buffer is **APPROVED** with conditions. The approval is for reducing Watercourse B buffer from 25 feet to 14 feet, and using the allowed alteration and not constructing any structures closer than 10 feet from the open

type 3 section of Watercourse A and 9 feet from the piped section of Watercourse A, as shown in Exhibits 1 and 3. This decision is final, unless appealed in writing consistent with adopted appeal procedures.

IV. CONDITIONS OF APPROVAL

The following conditions shall be binding on the "Applicant," which shall include owner or owners of the property, heirs, assigns, and successors.

1. The proposed buffer reduction and subsequent site development, shall be completed in substantial conformance with the proposed mitigation and site plans (Exhibits 1 and 3).
2. The applicant shall complete a King County Critical Area Bond Quantity Worksheet and submit to the Code Official for review and approval. To view this worksheet please visit: <http://www.kingcounty.gov/~media/depts/permitting-environmental-review/dper/documents/forms/ls-wks-sensareaBQ-pdf.ashx?la=en>
3. The applicant shall post a financial surety for completion of the proposed mitigation, consistent with MICC 19.01.060.
5. Upon completion of the mitigation work, a letter written by a qualified professional detailing compliance with the approved mitigation plan shall be submitted to the City of Mercer Island Development Services Group. The compliance letter shall be accompanied by a set of as-built drawings depicting type and location of mitigation plantings.
6. A maintenance and monitoring memo or report by a qualified professional shall be submitted to the City of Mercer Island Development Services Group annually for a period of five years. Plant survival rates are to meet or exceed those set out in Exhibit 1.
7. This permit approval shall **expire one year** from the date of notice of decision if the activity approved by the permit is not exercised.
8. The applicant shall obtain all required permits for construction.
9. The applicant shall install and have inspected full temporary erosion and sediment control measures prior to construction.

Approved this 9th day of October 2017.



**Lauren Anderson
Assistant Planner
Development Services Group
City of Mercer Island**

Parties of record have the right to appeal the decision on this action when it is issued. If at that time you desire to file an appeal, you must submit the appropriate form, available from the Development Services Group, and file it with the City Clerk within fourteen (14) days from the date this decision is signed. Upon receipt of a timely complete appeal application and appeal fee, an appeal hearing will be scheduled. To reverse, modify or remand this decision, the appeal hearing body must find that there has been substantial error, the proceedings were materially affected by irregularities in procedure, the decision was unsupported by material and substantial evidence in view of the entire record, or the decision is in conflict with the city's applicable decision criteria.

Please note that the City will provide notice of this decision to the King County Department of Assessment, as required by State Law (RCW 36.70B.130). Pursuant to RCW 84.41.030(1), affected property owners may request a change in valuation for property tax purposes notwithstanding any program.