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memorandum

date	October 15, 2019
to	Sherrie Ringstad, City of Mill Creek
from	Jessica Redman, Wetland Ecologist
subject	7C's Pool House– Buffer Averaging Plan Review

At the request of the City of Mill Creek (City), ESA reviewed the *Buffer Averaging Plan for 7C's Pool House* (hereinafter referred to as the Plan), prepared by Wetland Resources (dated August 22, 2019) for the property located at the southern corner of the intersection between North Creek Drive and Dumas Road (Snohomish County Parcel Number 28053100203700). The property is currently undeveloped. The applicant has submitted a formal application for development of an approximately 10,000 square foot (SF) recreational building that will include an indoor pool and be used as a swim school. Parking, concrete sidewalks, stormwater facilities, and associated utilities will also be a part of the proposed development. The purpose of this review is to determine if the proposed project complies with Mill Creek Municipal Code (MCMC) Chapter 18.06 – *Environmentally Critical Areas.*

In addition to the Plan, ESA reviewed the Stormwater Management Plan and the Civil Plans prepared by Terra Vista NW and dated September 16, 2019. A site visit was also conducted by two ESA biologists on October 4, 2019.

Report Summary

According to the Plan, one wetland (Wetland A) occurs onsite. Wetland A is a Category III wetland, which requires a 100-foot buffer per Mill Creek Municipal Code (MCMC) 18.06.930. The wetland was delineated in May 2018 by Harmsen and Associates, Inc. and findings were presented in a technical memorandum dated May 18, 2018. This technical memorandum was included in the Plan as Appendix C. A second wetland (Wetland B) occurs offsite to the south and was delineated in March and April of 2014 by Shannon and Wilson, Inc. Findings of the Wetland B delineation were presented in the *Remillard Property Wetland Delineation Report* dated April 11, 2014 and included in the Plan as Appendix B. ESA reviewed the Remillard delineation report and the wetland boundary in April 2014. Wetland B is also a Category III wetland and therefore requires a 100-foor buffer per MCMC 18.06.930. However, the wetland is located 176 feet south of the property boundary and therefore the buffer does not cross onto the subject parcel.

To accommodate development of the Project, the applicant proposes to reduce the buffer of Wetland A by 5,230 SF on its southwestern side. An additional 5,230 SF of buffer will be added to two separate areas of the buffer located northeast and southwest of the wetland, resulting in an equivalent area of wetland buffer. According to the Plan, the proposed buffer averaging meets all the required criteria per MCMC 18.06.930.C. Additionally, the Plan states that because the quality of the added buffer area is at least equal to the quality of the reduced buffer, no buffer enhancement is being proposed.

A description of the proposed stormwater management plan is not included in the Plan as required by MCMC 18.06.530.B. However, the Drainage Report states that three stormwater detention facilities will be used for to collect runoff from the newly added impervious surface. Additionally, water quality will be treated by a Biopod system at the confluence of the three detention facilities at the southwest corner of the site. No stormwater improvements are proposed within the wetland buffer.

Review Findings

Based on the site visit and the document review, we have the following comments and recommendations:

- ESA generally agrees with the boundary of Wetland A. The majority of the wetland flags were observed in the field. The wetland occurs in the eastern portion of the parcel and is a sloped and depressional feature that exhibits palustrine forested (PFO), palustrine scrub-shrub (PSS), and palustrine emergent (PEM) vegetative cover. Dominant wetland vegetation observed during the October 4th site visit included, but was not limited to, western red cedar (*Thuja plicata*), salmonberry (*Rubus spectabilis*), hardhack spirea (*Spiraea douglasii*), small-fruited bulrush (*Scirpus microcarpus*), and skunk cabbage (*Lysichiton americanus*).

- ESA agrees that Wetland A is a Category III wetland, warranting a 100-foot buffer.

- ESA agrees that the buffer of Wetland B on the adjoining parcel to the south does not extend into the subject parcel.

- ESA agrees that the proposed Project has met all the requirements for buffer averaging per MCMC 18.06.930.C and the proposed buffer averaging will not result in a net loss of buffer function or area.

- ESA agrees that the condition of the proposed buffer addition area is equal in quality to the area of proposed buffer reduction. However, according to MCMC 18.06.610, "compensatory mitigation shall be provided for all unavoidable alterations of a critical area or buffer in accordance with an approved critical area report and mitigation plan." Buffer conditions within the site are intact with native vegetation and little invasive species and therefore, we agree that enhancement of the buffer with native vegetation would not be a practical mitigation option. However, due to the amount of mature forested habitat that will be lost as a result of the development, we recommend the wetland buffer be enhanced with habitat structures. Examples of artificial habitat structures that could benefit the site include downed logs, snags, artificial nesting structures, and brush piles. The Washington Department of Natural Resources (WDNR) and the National Resource Conservation Service (NRCS) provides guidance on the installation of these features and generally include the following:

Downed Logs

Several species use downed logs to meet at least some of their habitat needs. Small mammals, such as squirrels, use dead trees as foraging sites, storing winter supplies, and for roosting or denning. Insects also use dead trees as over-wintering sites, often eating portions of the dead trees and contributing to the decomposition process. WDNR recommends that two downed logs per acre are kept on site to provide current and future wildlife habitat (WDNR, 2017).

Snags

General recommendations for maintaining snags in most stands to benefit wildlife include:

- One snag/acre larger than 20-inch diameter at breast height (dbh) for use by larger woodpeckers and owls;
- Four snags/acre between 10- and 2- dbh for small mammals such as flying squirrels and smaller raptors such as red-tailed hawks;
- Two snags/acre between 6- and 10-inch dbh for smaller birds such as chickadees and nuthatches (NRCS, 2011).

Additional information can be found in the *Managing Forests for Fish and Wildlife* Habitat Management Leaflet (NRCS, 2002)

Artificial Nesting Structures

Many types of wildlife use artificial nesting structures including but not limited to songbirds, raptors, squirrels, and bats. Structures are generally designed to meet the nesting requirements of a certain species and commonly include nest boxes, bat boxes, and nesting platforms. More information on the design, construction, and placement of nesting structures for various avian and mammalian species can be found in the *Artificial Nesting Structures* Habitat Management Leaflet (NRCS, 2008).

Brush Piles

Brush piles are mounds of woody vegetative material that can provide nesting habitat, resting areas, concealment and protection for birds and small mammals. Each structure can provide habitat for up to 0.5-acre. Brush piles are usually most effective when located along habitat edges and generally one brush pile every 200-300 feet will provide adequate cover for most species (NRCS, 2010, 2012). More information on the construction and placement of brush piles can be found in *Fish and Wildlife Structure – Wildlife Brush and Rick Piles* (NRCS, 2012).

References

NRCS. 2012. *Fish and Wildlife Structure – Wildlife Brush and Rick Piles.* Conservation Practice 734 – Job Sheet. May 2012. Available at: http://www.ncrcd.org/files/8714/1875/2798/Brush_Piles.pdf

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NRCS. 2002. *Managing Forests for Fish and Wildlife* Habitat Management Leaflet. December 2002. Number 18. Available at: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_010130.pdf.

WDNR. 2017. Forest Practices Illustrated. Revised 2017. Available at: https://www.dnr.wa.gov/publications/fp_fpi_complete.pdf?rsryv