



January 20, 2020

AOA-5506

Scott Ray
8310 – 59th Ave. NE
Marysville, WA 98270-3221

**SUBJECT: Wetland Buffer Enhancement for Ray Town Homes
9820 – 55th Ave NE, Marysville, WA
Parcels 300515003-02100 and -05000**

Dear Scott:

On November 9, 2017 I conducted a wetland delineation on the subject property utilizing the methodology outlined in the May 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*. One wetland (Wetland A) was identified and delineated along the southwest property line during the field investigation. The boundary of the wetland was subsequently surveyed and is depicted on **Figure 1**. An additional field investigation was conducted on November 15, 2018.

The eastern portion of the site is currently developed with two single-family residences, a detached shop, several sheds, and associated parking and yard areas. The remainder of the site consists primarily of a periodically mowed pasture that appears to have likely been historically graded.

1.0 WETLAND A

Wetland A consists of a shallow isolated topographic depression located along the southwest property line. The wetland appears to be part of a larger wetland mosaic that extends into the pasture located on private property off-site to the south. Soils within the wetland were dry at the time of the November 2017 site review and wetland hydrology was necessarily assumed based on the presence of hydric soils. The wetland appears to be hydrologically supported primarily by a high groundwater table.

Vegetation within most of the wetland consisted of periodically mowed pasture grasses. The northwest corner of the wetland also contained a forested and scrub-shrub plant community that included a mix of both hydrophytic and more mesic species. Observed plants included paper birch (*Betula papyrifera*), black cottonwood (*Populus trichocarpa*), salmonberry (*Rubus spectabilis*), red-osier dogwood (*Cornus sericea*), black twinberry (*Lonicera involucrata*), skunk cabbage (*Lysichiton americanum*), and sword fern (*Polystichum munitum*).

Wetland A meets the criteria for a Category IV wetland per the current City rating system. Category IV wetlands in the City of Marysville require a standard 35-foot buffer from the wetland edge per MMC 22E.010.100(4). An additional 15-foot building setback is required from the buffer edge per MMC 22E.010.380.

According to MMC 22E.010.100(3):

(3) Where existing buffer area plantings provide minimal vegetative cover and cannot provide the minimum water quality or habitat functions, buffer enhancement shall be required. Where buffer enhancement is required, a plan shall be prepared that includes plant densities not less than five feet on center for shrubs and 10 feet on center for trees. Monitoring and maintenance of plants shall be required in accordance with MMC 22E.010.160, Wetland monitoring program and contingency plan. Existing buffer vegetation is considered “inadequate” and will require enhancement through additional native plantings and removal of nonnative plants when:

- (a) Nonnative or invasive plant species provide the dominant cover;*
- (b) Vegetation is lacking due to disturbance, and wetland resources could be adversely affected; or*
- (c) Enhancement plantings in the buffer could significantly improve buffer functions.*

Since the existing buffer currently consists of pasture and would be considered “inadequate”, a buffer enhancement planting plan is required as part of a development proposal.

2.0 PROPOSED BUFFER REDUCTION

The proposed project consists of the Ray Town Homes residential development.

Per MMC 22E.010.100(5)(b), buffer reductions may be allowed for wetlands; provided, that the applicant demonstrates the proposal meets criteria in subsections (5)(b)(i) through (iii) and either (iv) or (v) of this section. Buffer width reduction proposals that meet the criteria as determined by the director shall be reduced by no more than 25 percent of the required buffer and shall not be less than 25 feet in width.

The proposed buffer reduction plan has been designed to meet conditions (i) through (iii) and (v) and in no case would the buffer be reduced by more than 25% of the standard buffer or result in a buffer that is less than 25 feet.

- (i) *The buffer area meets buffer area planting requirements in subsection (3) of this section and MMC 22E.010.150 and has less than 15 percent slopes; and*

The buffer area to be reduced currently consists of pasture located on a gentle slope. A buffer enhancement planting plan has been developed that will significantly increase the plant species and structural diversity of the buffer over current conditions.

- (ii) *A site-specific evaluation and documentation of buffer adequacy is based on consideration of the best available science as described in MMC 22E.010.040; and*

The proposed plantings would increase the overall wildlife habitat of the wetland buffer by increasing the plant species and structural diversity. The enhancement plan would also provide an increased physical and visual screen to the wetland from the proposed project.

- (iii) *Buffer width averaging as outlined in subsection (5)(a) of this section is not being utilized; and either*

Additional buffer reduction through averaging is not proposed.

- (v) *The wetland scores 4 points or less for wildlife habitat in accordance with the rating system applied in MMC 22E.010.060, and mitigation is provided based on MMC 22E.010.150, 22E.010.370, and Table 2 of this section, when determined appropriate based on the evaluation criteria in subsection (5)(b)(ii) of this section.*

Wetland A has a habitat score of 4 and as part of the project the entire degraded wetland buffer on the site will be enhanced with native plantings to significantly increase the habitat value of the buffer. The plan has been designed to incorporate all of the applicable elements of MMC 22E.010.150. In addition, a rail fence with signage will be installed along the edge of the buffer to prevent pedestrian intrusion per MMC 22E.010.370.

Table 2. Mitigation Measures

Disturbance	Activities That May Cause Disturbance	Measures to Minimize Impacts	Proposed Project
Lights	Parking lots, warehouses, manufacturing, high density residential	Direct lights away from wetland	The area adjacent the wetland buffer consists almost entirely of a proposed roadway and detention tract and should not have lights directed into the wetland.
Noise	Manufacturing, high density residential	Place activity away from wetland	The area adjacent the wetland buffer consists largely of a proposed internal roadway that should not generate excessive noise levels.
Pets and Humans	Residential areas	Landscaping to delineate buffer edge and to discourage disturbance of wildlife by humans and pets	A rail fence and plantings will demarcate the edge of the buffer and should discourage access.
Dust	Tilled fields	Best management practices for dust control	Best management practices will be utilized for dust control.

2.1 Goal, Objectives, and Performance Standards for Enhancement Area

The primary goal of the enhancement plan is to increase the habitat function of the buffer on the site. To meet this goal, the following objectives and performance standards have been incorporated into the design of the plan:

Objective A: Increase the structural and plant species diversity within the enhancement areas.

Performance Standard: There will be 100% survival of all woody planted species throughout the enhancement area at the end of the first year of planting. Following Year 1, success will be based on an 80% survival rate. In addition, areal coverage of planted or recolonized native woody or desirable herbaceous species will be 15% after Year 1, 25% after Year 2, 50% after Year 3, and 80% after Year 5.

Objective B: Limit the amount of invasive and exotic species within the wetland buffer enhancement area.

Performance Standard: After construction and following every monitoring event for a period of at least five years, exotic and invasive plant species will be maintained at levels below 20% total cover in all planted areas.

2.2 Construction Management

Prior to commencement of any work in the enhancement area, the clearing limits will be staked and any existing vegetation to be saved will be clearly marked. A pre-construction meeting will be held at the site to review and discuss all aspects of the project with the landscape contractor and the owner.

A consultant will supervise plan implementation during construction to ensure that objectives and specifications of the enhancement plan are met. Any necessary significant modifications to the design that occur as a result of unforeseen site conditions will be jointly approved by the City of Marysville and the consultant prior to their implementation.

2.3 Monitoring Methodology

The monitoring program will be conducted for a period of five years, with reports submitted to the City of Marysville according to the following schedule:

- at the time of construction
- 30 days after planting
- early in the growing season after the second year following installation
- at the end of the growing season after the second year following installation
- annually for Years 3 through 5

Although the entire enhancement area will be reviewed, permanent vegetation sampling plots will be established at selected locations to incorporate all of the representative plant communities. The same monitoring points will be re-visited each year with a record kept of all plant species found. Vegetation monitoring will include general appearance, health, mortality, colonization rates, percent cover, percent survival, volunteer plant species, and invasive weeds.

Photo-points will be established from which photographs will be taken throughout the monitoring period. These photographs will document general appearance and progress in plant community establishment in the enhancement area. Review of the photos over time will provide a visual representation of success of the plan.

3.0 MAINTENANCE PLAN

Maintenance will be conducted on a routine, year-round basis. Additional maintenance needs will be identified and addressed following a twice-yearly maintenance review. Contingency measures and remedial action on the site shall be implemented on an as-needed basis at the direction of the consultant or the owner.

3.1 Weed Control

Routine removal and control of non-native and other invasive plants (e.g., reed canarygrass, Himalayan and evergreen blackberry, Japanese knotweed, Scot's broom, English ivy, morning glory, thistle and creeping nightshade) shall be performed by manual means whenever possible. Chemical means (Rodeo or Roundup) will only be used if necessary. Undesirable and weedy exotic plant species shall be maintained at levels below 20% total cover within any given stratum at any time during the five-year monitoring period.

3.2 General Maintenance Items

Routine maintenance of planted trees shall be performed. Measures include resetting plants to proper grades and upright positions. Tall grasses and weeds shall be removed at the base of plants to prevent engulfment. Weed control should be performed by; hand removal, installation of weed barrier cloth with mulch rings, or selective weed-whacking. If weed whacking is performed, great care shall be taken to prevent damage to desired native species either planted or re-colonized.

4.0 CONTINGENCY PLAN

All dead plants will be replaced with the same species or an approved substitute species that meets the goal of the enhancement plan. Plant material shall meet the same specifications as originally installed material. Replanting will not occur until after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.). Replanting shall be completed under the direction of the consultant, City of Marysville, or the owner.

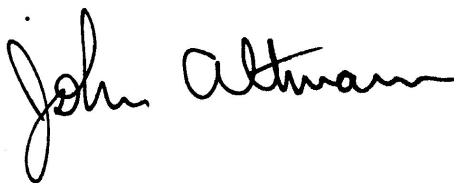
5.0 AS-BUILT PLAN

Following completion of construction activities, an as-built plan for the enhancement area will be provided to the City of Marysville. The plan will identify and describe any changes in relation to the original approved plan.

If you have any questions, please give me a call.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC

A handwritten signature in black ink that reads "John Altmann". The signature is written in a cursive, flowing style.

John Altmann
Ecologist