

SURFACE WATER MANAGEMENT

ADMINISTRATIVE PROCEDURES

for

CLACKAMAS COUNTY SERVICE DISTRICT NO. 1

and

SURFACE WATER MANAGEMENT AGENCY OF CLACKAMAS COUNTY

January 2003



ADMINISTRATIVE PROCEDURES

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ADMINISTRATIVE PROCEDURES

Introduction

Clackamas County Service District No. 1 (CCSD#1) and the Surface Water Management Agency of Clackamas County (SWMACC) are County Service Districts (Districts) authorized to provide surface water management under ORS 451 regulations. The Districts have determined through their review of hydrologic data and computer modeling of quantity and quality events that impervious surface area is, without appropriate mitigation measures, the primary cause of a change in the quantity, quality and timing of the surface water leaving developed sites and impacting water of the state within the boundaries of the Districts.

Section 1: The Rules and Regulations for each District describe the rate structure for charges to customers within each District's boundaries. The Districts recognize that some customers may implement water quantity and quality facilities on site and maintain these facilities at their own expense. Provisions for a reduction in the surface water fee are located in Section 1 of this Administrative Document. Information is provided for customers to apply for a partial abatement of their charges.

Section 2 of this document provides information on the voluntary certification program for erosion control. The Rules and Regulations discuss the fees, basic requirements, and enforcement for lack of compliance. Section 2 provides the details on actions necessary to remain in compliance with the certification program, actions that would result in revocation of compliance and mechanisms for reestablishing compliance after certification has been revoked.

Section 3: The Rules and Regulations for Surface Water Management require undisturbed buffers adjacent to sensitive areas. Buffer requirements are specified under the "Natural Resource Protection" sections of the Rules and Regulations for each District. Minimum buffer widths are calculated based on information in Section 3 of these Administrative Procedures, specifically Section 3.1 **Application of Buffers for Lakes, Springs, and Wetlands** and Section 3.2 **Application**.

SECTION 1

PROVISIONS FOR CREDIT, OR A REDUCTION IN, THE SURFACE WATER SERVICE CHARGE

DEFINITIONS

Business Customer:	A person who resides or conducts business or other activities on a business parcel. Mere ownership and activities which are necessary to prevent or abate nuisances at or avoid deterioration of a business parcel shall not constitute "residing" or "conducting business or other activities."
Business Parcel:	A parcel of land which is not a single family parcel.
Customer:	A single family customer or a business customer.
Detention:	Facilities that are normally dry and are designed to hold surface water temporarily while gradually releasing it at a reduced rate to the surface water system. The facility must be designed to not adversely impact the waters of the state within the Districts' boundaries.
District, Districts:	Clackamas County Service District No. 1 (CCSD #1) and the Surface Water Management Agency of Clackamas County (SWMACC)
Hydrologic Response:	The manner by which surface water collects on the parcel and is conveyed from that parcel. The principal measures of the hydrologic response may be stated in terms of total runoff volume, as a percentage of total precipitation generated by a storm of given duration, intensity or frequency.
Peak Discharge:	Maximum discharge from a site during a storm event.
Pollution Reduction Facility:	A facility designed to remove pollutants, such as phosphorus from surface water runoff.
Retention:	A stormwater storage facility that normally holds water and has the capacity to hold all the runoff during a storm event. The water is released to the environment through evaporation, plant transpiration or infiltration into the soil.
Service Charge Credit	Reduction in surface water fee, see "Discussion".
Single Family Customer:	A person who resides on a single family parcel. Mere ownership and activities which are necessary to prevent or abate nuisances at or avoid deterioration of a single family parcel shall not constitute "residing."
Single Family Parcel:	A parcel of land with one single family residence located on it which is used primarily for single family residence purposes.

- 2 Year Storm: A rainfall event with the intensity and duration that has a fifty (50) percent chance of occurring in a given year.
- 25 Year Storm: A rainfall event with the intensity and duration that has a four (4) percent chance of occurring in a given year.
- 100 Year Storm: A rainfall event with the intensity and duration that has a one (1) percent chance of occurring in a given year.

PROVISIONS FOR CREDIT/FEE REDUCTION OF THE SURFACE WATER SERVICE CHARGE

BACKGROUND

The Districts will provide credit against service charges to recognize the benefit of on-site detention/retention, water quality mitigation or other means of surface water control. The Districts' surface water rates are directly related to the amount of runoff contributed to the system. There are two primary objectives for the service charge credit system allowed by the Surface Water Management Program: 1) to enable a customer to directly control the need for surface water management services provided by each District and therefore the cost of the service; and 2) to provide incentives for a customer to meet or exceed stormwater quantity requirements. The level of credit directly reflects the reduced impact of a parcel with on-site controls over a similar parcel lacking mitigation. The amount of reduction is a function of the construction of facilities to provide on-site water quality and quantity treatment in excess of the Districts' minimum standards. Under the impervious surface approach, the credit results from estimating the mitigation effect(s) of an on-site stormwater quantity and/or quality facility. This impact is then converted to a reduced service charge for a specific single family or business parcel.

The credit will be available to those customers who exceed the Districts' stormwater facility design criteria. The Districts' policy includes provisions for rescinding the credit under conditions where the control is either removed or is not maintained to design specifications. It should be noted that credit applications need not require professional certification for single family residences. Non-single family sites shall require professional technical information to demonstrate meeting requirements of these administrative rules. The customer is responsible for accurate completion of all information required in the application package.

A new form credit application must be applied for when there are changes constructed on the site and when there is a change in responsible parties for the site.

POLICY SUMMARY

Credits are provided against stormwater service charges for those customers having on-site detention facilities, on-site water quality facilities, or who have special improvements to reduce stormwater quality and quantity impacts. The customer is responsible for initiating the credit request and completing the application material required by the Districts. The credit calculation will be consistent with each District's rate structure and will allow a customer control of the service charge amount.

DISCUSSION

Single family or business customers that have installed an approved on-site "retention" or "detention" facility, or water quality facility, may apply for an adjustment of the service charge applied to a specific parcel, PROVIDED THAT the resulting adjustment will be commensurate with the customer's reduced usage of the Surface Water Program as established through the parcel's mitigating effects on runoff.

The Districts' Engineer, or designee, may adjust the surface water program service charge for such parcels based on hydrologic and/or pollution reduction data submitted to the Districts' Surface Water

Engineer by that customer or his agent which demonstrates a hydrologic response or nonpoint source pollution contribution substantially similar to that of a parcel with a lesser amount of impervious surface. The Districts' Engineer will evaluate each case to determine the appropriate level of service charge adjustment.

The premise behind the surface water mitigation credit is that some parcels with on-site facilities effectively control their use of the stormwater system/facilities operated by the Districts. Accordingly, this reduced level of use is reflected by a reduced service charge to qualifying customers within the Districts' Surface Water Management Service Areas.

The specific level of credit application is described below. Maximum credits available are 66% and are distributed evenly between water quality and water quantity facilities:

- 33% maximum credit for water quality facilities;
- 33% maximum credit for water quantity facilities.

A minimum charge of 34% will be charged to all sites. The surface water program is a federally mandated program to provide clean water for the benefit of everyone in the region. As such, all sites must participate in the costs of implementing the program.

Water quality facilities must meet the following (maximum 33% credit);

- On-site treatment that has capacity to treat a 100-year storm event will result in the maximum credit. Minimum requirements are provided in the Rules and Regulations; credit of up to 33% of total surface water charge is a direct proportion between the minimum requirements of the Rules and Regulations and treatment for a 100-year storm event.
- Treatment must be by vegetated swale, pond, or other system with equivalent treatment capacity. The District must approve all proposed alternatives.

Water quantity facilities must meet the following (maximum 33% credit):

- Complete retention and infiltration of stormwater on-site results in maximum 33% credit. No credit is provided for meeting the minimum District standards for detention. Increasing from the minimum requirements to retention and infiltration of a 100-year return interval will result in increasing credit, proportional to the excess capacity provided.
- No access to or use of District-operated, maintained or regulated stormwater conveyance systems.
- Operations of the Districts do not provide protection of the single family or business parcel from upstream surface water flows.

Applications

All service charge credits/fee reduction applications must address the following:

1. Demonstration of stormwater retained (maximum credit for retention of a 100-year storm).
2. Appropriate plan for maintenance of facilities.
3. Compliance with the current design standards of the Districts.
4. If retention is not provided, evidence that runoff is not being discharged to any surface water system.

5. Evidence that the activity on the parcel has neither access to nor makes use of the Districts' surface water systems.
6. Proof that the maintenance, improvements and regulatory enforcement program will provide no surface water protection for the customer's parcel during storm events.

All adjustments will remain in effect as long as:

- The customer has obtained the surface water permits required by the appropriate District and the facility has been constructed in compliance with all approved plans.
- The customer remains responsible for all costs of operation and maintenance of the facility and operates/maintains the facility effectively.
- Districts' staff will have access to the stormwater facility for purposes of inspecting its compliance with design, maintenance and operating standards.
- In the event the property is sold, a new fee reduction application must be submitted by the new owner to ensure that the conditions under which the reduction was initially granted are still applicable.

Additional details for Single Family Residential:

Water Quality Criteria

Tier 1 (minimum)

- Site has an approved and functioning surface water treatment system;
- Less than 10% of property drains or is able to drain to adjacent properties untreated;
- Supporting calculations of water quality treatment are not provided;
- Treatment system is regularly inspected and maintained. Proof of inspection and maintenance shall be submitted to the District annually.

Tier 2 (maximum)

- Site has an approved and functioning surface water treatment system;
- Demonstration of water treatment through performance or supporting calculations is provided;
- Less than 10% of property drains or is able to drain to adjacent properties untreated;
- Treatment system is regularly inspected and maintained. Proof of inspection and maintenance shall be submitted to the Districts annually.

Water Quantity Criteria

Tier 1 (minimum level)

- Site has functioning retention system for the surface water from impervious areas;
- Less than 10% of property drains or is able to drain to adjacent properties;
- No supporting calculations of retention capacity are submitted to the Districts;
- Retention system is registered with DEQ, if applicable.

Retention Tier 2 (maximum level)

- Site has functioning retention system for the surface water from impervious areas;
- Evidence that the activity on the parcel has neither access to nor makes use of the Districts' surface water systems;
- Demonstration through performance or supporting calculations that the retention system will retain a 100-year storm and/or the site has topography that requires retention to prevent property damage;
- Less than 10% of property drains or is able to drain to adjacent properties;
- Retention system is registered with DEQ, if applicable.

The credits for Single Family Residential are applied as follows

Retention/Infiltration (water quantity):

- Parcels that meet the minimum criteria level for retention/infiltration receive a fee reduction. CCSD#1 residents receive a \$1 per month reduction. SWMACC residents receive a \$4 reduction per 6 month period.
- Parcels that can demonstrate through performance, calculations or topography that they meet the maximum criteria for infiltration receive a larger fee reduction. CCSD#1 residents receive a \$2 per month reduction. SWMACC residents receive an \$8 reduction per 6 month period.

Treatment (water quality):

- Sites that meet the minimum criteria level for treatment receive a fee reduction. CCSD#1 residents receive a \$1 per month reduction. SWMACC residents receive a \$4 reduction per 6 month period.
- Sites that can demonstrate through performance or calculations that they meet the maximum criteria level for treatment receive a larger fee reduction. CCSD#1 residents receive a \$2 reduction. SWMACC residents receive an \$8 reduction for a 6 month period.

Maximum discount (combination of Infiltration and Treatment) of \$4 per month for CCSD#1 and \$16 per 6 month period for SWMACC.

SERVICE CHARGE CREDIT/FEE REDUCTION APPLICATION FORM
FOR SINGLE FAMILY AND BUSINESS CUSTOMERS

Site Location: _____
Street Address
City
Zip

Authorized Contact: _____
Name and Business Title (last, first and title)

Contact Mailing Address: _____
Street Address
City
Zip

Phone: _____ District (CCSD#1 or SWMACC): _____

Land Use: Single Family____ Multi Family____ Comm./Ind____ Other (Specify)____

Site Characteristics:

Total Area: _____ Sq. Ft. Roof Area: _____ Sq. Ft.
Paved Area: _____ Sq. Ft. Landscaped Area: _____ Sq. Ft.
Other Impervious Area: _____ Sq. Ft.

Is onsite de/retention provided (above minimum development standards)? Yes____ No____

If yes, provide the following:

Retention Capacity: _____ cubic ft.
Type of de/retention: _____ (i.e. pond, vault, pipe, etc.)

Is water quality provided? Yes____ No____

If yes, provide the following:

Type of water quality facility: _____ (i.e. vegetated swale, wetpond, etc.)
Capacity of Facility: _____ (cfs)

Please attach to this application form a scaled sketch or drawing of the site's legal boundaries and drainage plan. Please show all buildings, parking lots, roads, storage, stormwater facility, landscaped areas, and any other improvements impacting the stormwater flows at this site. Provide a response to each of the credit/fee reduction conditions listed on the attached credit guidelines and any other rationale demonstrating that the parcel is not served by the District's surface water program.

Certification:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete.

Name and Official Title Signature Date

SERVICE CHARGE CREDIT/FEE REDUCTION APPLICATION FORM
FOR SINGLE FAMILY AND BUSINESS CUSTOMERS

Service Charge credit/fee reduction conditions; please respond to the following:

1. Describe how stormwater in excess of minimum development standards will be retained on site.

2. Describe how water quality facilities are constructed on site to avoid contaminating ground water or surface water, to meet the minimum District standards and to meet requirements described in this document.

3. Describe how facilities will be maintained, including work to be done, frequencies, equipment required, etc.

4. Provide calculations, plans and specifications in conformance with current District standards.

5. If retention is not provided, how is runoff handled?

6. Why does the activity on the parcel neither access nor make use of the District's surface water system?

7. Why does the District's maintenance, improvements and regulatory enforcement program provide no surface water protection for the customer's parcel during storm events, nor provide improvements to water quality?

SECTION 2

EROSION CONTROL CERTIFICATION PROGRAM

Purpose:

To prevent erosion and improve sediment control in connection with construction and development related activities through a voluntary educational effort.

Outline:

Construction companies performing work in the Districts are encouraged to have a person (or persons) certified in erosion prevention and sediment control. Initial training will consist of basic concepts and tools. Periodic refresher training will maintain certification viability and serve as a vehicle to introduce new methods and technologies. As an incentive to participate in this program, discounts will be given on erosion control permit fees for those individuals who have a current certification.

Requirements:

To attain the Erosion Control Certification a minimum of four (4) hours of training from a District-approved program is required. To maintain the certification, a District-approved refresher course must be taken every two (2) years. Those who are listed as the certified personnel on an erosion control permit must be empowered with sufficient authority to implement the measures necessary to ensure permit compliance. Communication and direction by District staff will be with the certified individual.

Education:

Initial training: Will consist of basic erosion prevention and sediment control measures. An exam will be given at the end of the course.

Refresher training: Will consist of a review of basic measures and an update on new methods and technology. An exam will be given at the end of the course.

Service provider(s): The Urban Watershed Institute, Clackamas Community College. Classes such as the ten-week course on erosion prevention and sediment control taught by Fred Wright of Environmentally Wright, will also be accepted.

Testing/Certification: A District approved exam will be given at the end of the training. A passing grade must be achieved to receive certification.

Certification Tracking:

A database of certified personnel will be compiled to track certifications. Before issuance of an erosion control permit, proof of current certification must be provided by the applicant.

Implementation:

Timelines: This program was implemented in November 1999.

Notification: Notification was provided through notices to the HomeBuilders Association of Metropolitan Portland, current erosion control permit holders and media sources.

Permit Fee Discounts:

Discounts on erosion control permit fees will be available for those applicants who either:

- a. Have one or more erosion control certified individuals on staff who have the responsibility and authority for erosion control for the permit site. A 24-hour phone number must provided for response to erosion control problems.

Or

Have a contract with a professional erosion control company for ongoing erosion control maintenance of the site for the duration of the construction. The erosion control company must have a erosion control certified individual or individuals on staff and a 24-hour phone number must provided for response to erosion control problems. The erosion control company must also be authorized to take corrective measures without waiting for permission from the site owner/manager.

Enforcement:

Certified erosion control permittees whose sites are out of compliance with erosion control regulations may be subject to losing their certification discount eligibility and be required to remit the balance of the permit fee for the site.

Conditions of Certification Discount Eligibility Revocation

A permittee's erosion control certification discount eligibility will be revoked if any of the following situations occur:

- More than four site visits with deficiencies are performed on a permitted site.
- A warning of a potential Stop Work order is given for a permitted site.
- A Stop Work order is placed on a permitted site.

In addition to the revocation of the certification discount eligibility, the permittee will be required to remit the balance of the permit fee for the site.

Re-Certification

Individuals who have had their certification revoked may be regain certification by re-taking the educational class and passing the exam.

Program Updates:

The program will be reviewed periodically to address new regulations, information and technology. Those changes that the District determines to be appropriate will be made as needed on an annual basis.

SECTION 3

Application of Undisturbed Buffer Requirements and Process for Requesting a Variance on Standard Buffers

Introduction

The Rules and Regulations for Surface Water Management in the Districts require undisturbed buffers adjacent to sensitive areas. Buffer requirements are specified in Section 5.3 of the Rules and Regulations for the Surface Water Management Agency of Clackamas County, and Section 5.4 of the Rules and Regulations for Clackamas County Service District No. 1. See the Rules and Regulations for each District for definitions of terms. Minimum buffer widths are calculated based on information in Section 3 of these Administrative Rules, specifically Section 3.1 **Application of Undisturbed Buffer Requirements**.

The performance goals of the undisturbed buffer are:

- to filter pollutants from surface water, including providing shade for the sensitive area;
- natural migration of the sensitive area; and
- preservation of the ecological integrity of the sensitive area.

The Rules and Regulations also provide for a variance from the minimum standard width in exchange for a mitigation of the buffer of 1.5:1. In order to qualify for a variance, the applicant must demonstrate that the performance goals of the buffer can be achieved.

The variance request will be reviewed on a case-by-case basis and/either approved or disapproved by the Surface Water Manager based on the following considerations:

- Consideration of any and all viable alternative options;
- Existing buffers in the vicinity of the proposed development;
- The extent and type of hardship posed on the developer, or owner, by meeting the specified buffer requirements;
- Whether there is room available on site to mitigate for buffer encroachments;
- Current use of the site;
- The type of development proposed for the site; and
- Unique characteristics associated with each site.

Included in this section are:

- 3.1 Application of Undisturbed Buffer Requirements
- 3.2 Natural Resource Assessments
- 3.3 Sensitive Area Buffer Variance Process

The Sensitive Areas Certification Form and Wetland and Stream Buffer Variance Application described in Section 3.2 Natural Resource Assessments are available upon request. The forms are available from our office at 9101 SE Sunnybrook Blvd., Suite 441, Clackamas, Oregon, and from our web site at <http://www.co.clackamas.or.us/wes/index.htm>.

SECTION 3.1

APPLICATION OF UNDISTURBED BUFFER REQUIREMENTS

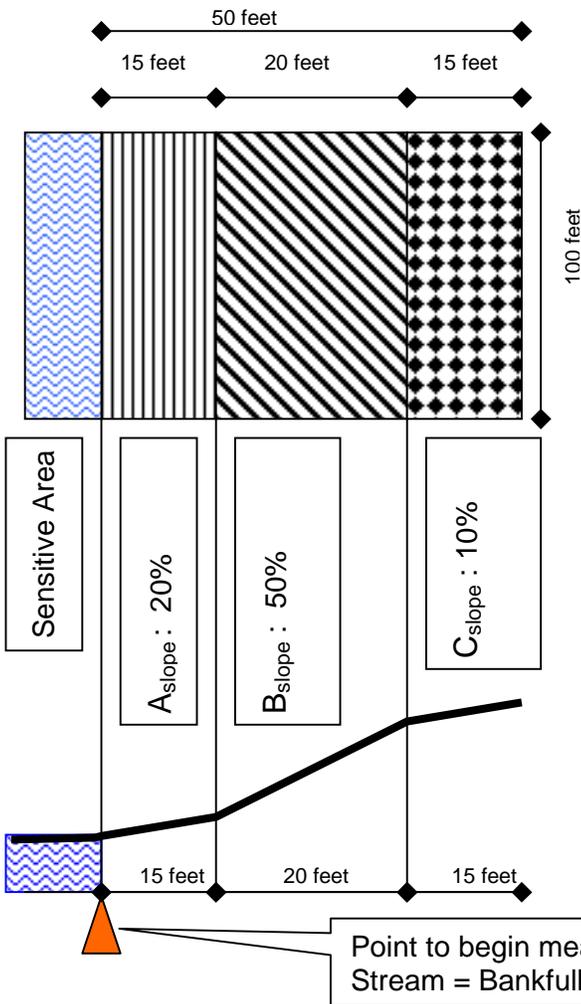
Per the Rules and Regulations for each District:

The buffer width is to be set based on the horizontal distance measured perpendicular to the sensitive area boundary, not based on the slope distance from the sensitive area.

The buffer width is determined based on the slope of the land adjacent to the sensitive area in 25 or 50 foot increments (see Tables). The Districts recognize that the slope of the land may vary within the measurement area and an Area Weighted Average slope must be calculated for situations where this variation exists.

The calculation for the Area Weighted Average slope is as follows; note that A, B, and C indicate different slope areas, measured horizontally.

$$\frac{(A_{\text{slope}} \times A_{\text{area}}) + (B_{\text{slope}} \times B_{\text{area}}) + (C_{\text{slope}} \times C_{\text{area}})}{(A_{\text{area}} + B_{\text{area}} + C_{\text{area}})}$$



Area A = 15' x 100' = 1500 SF
 Area B = 20' x 100' = 2000 SF
 Area C = 15' x 100' = 1500 SF

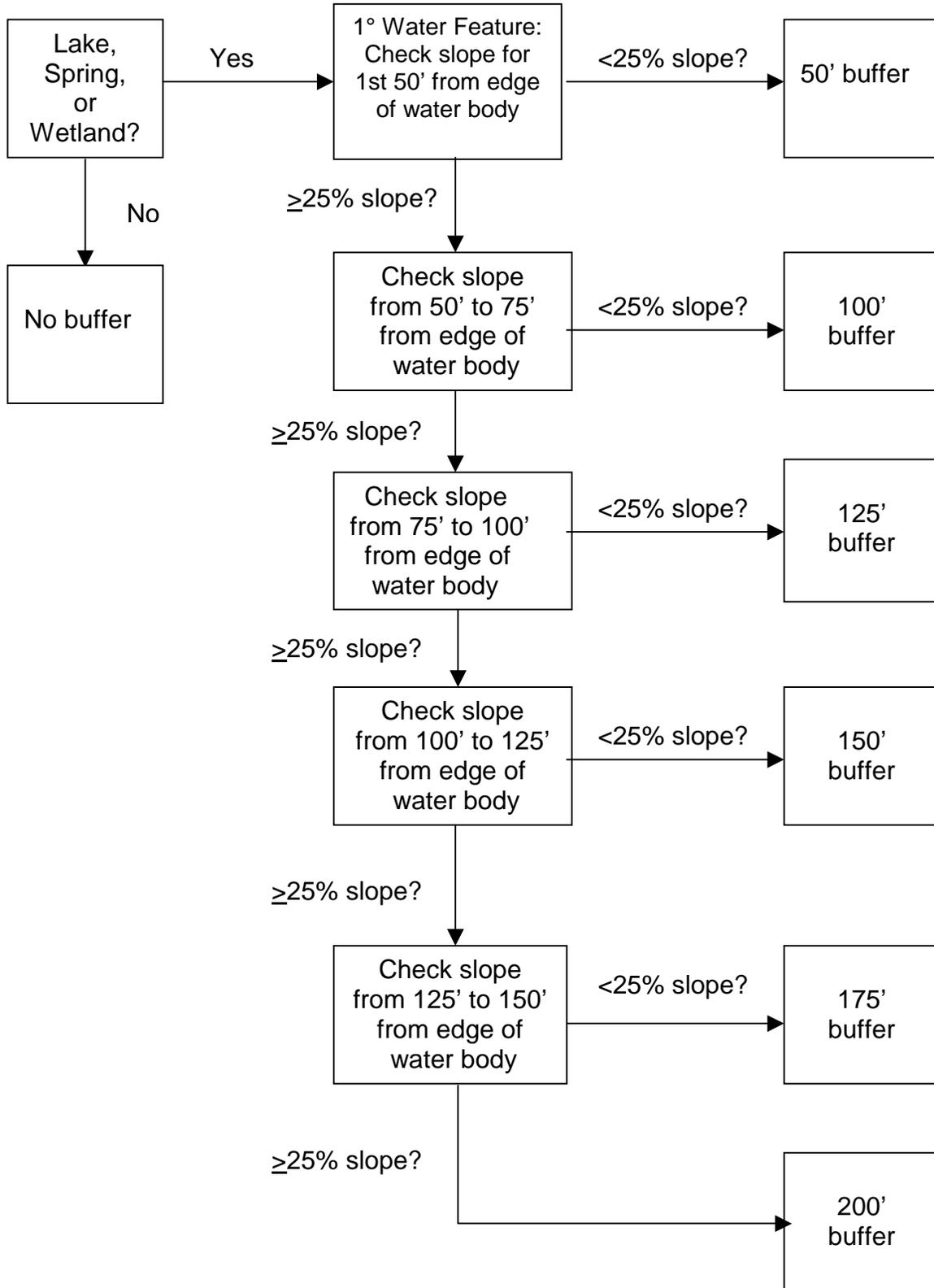
Slope A = 20%
 Slope B = 50%
 Slope C = 10%

Avg. slope = $\frac{(1500 \times .20) + (2000 \times .50) + (1500 \times .10)}{(1500 + 2000 + 1500)}$

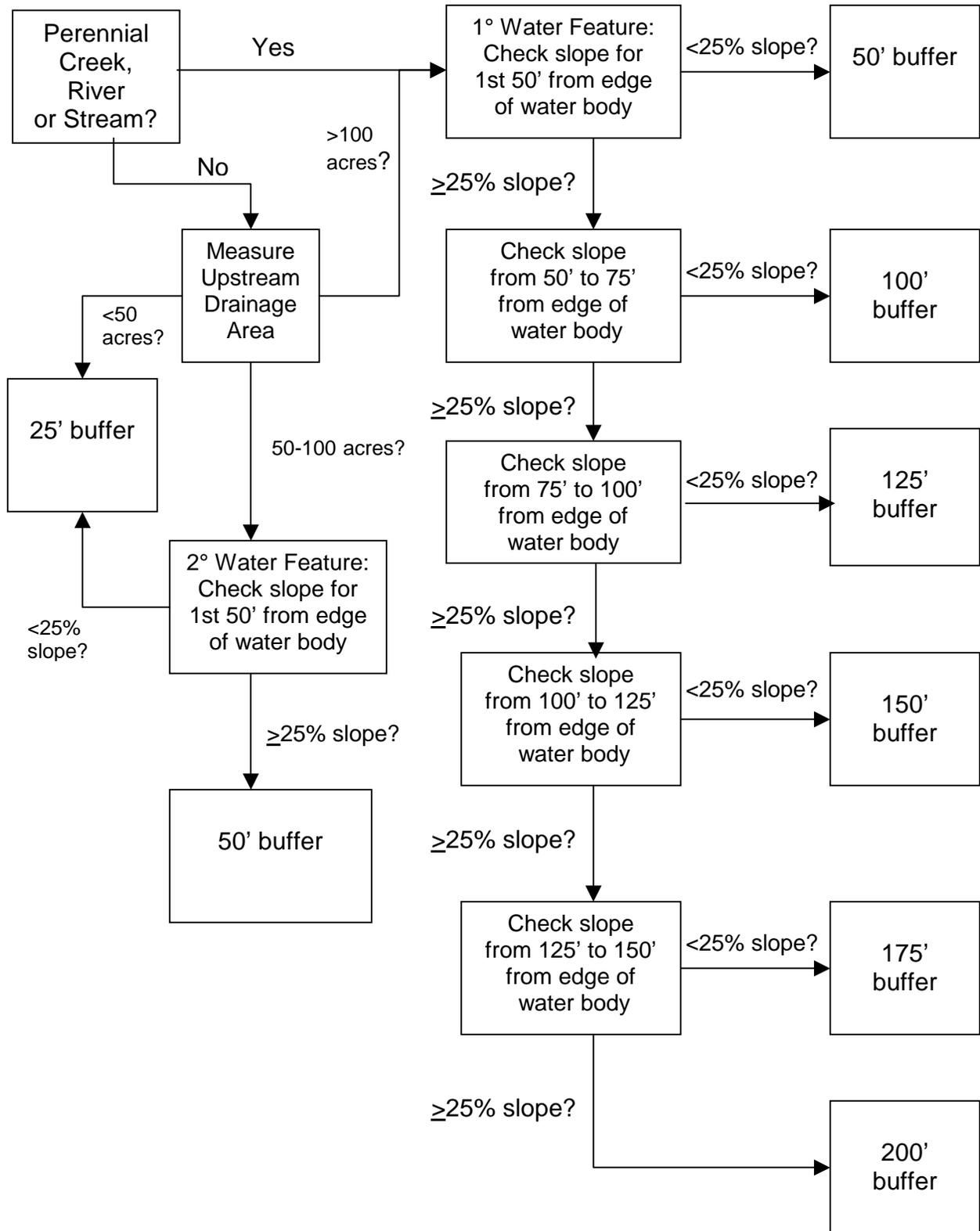
= .29 (29% slope)

29% > 25%
 ∴ measure the next 25' buffer width

Buffers for Lakes, Springs, & Wetlands



Buffers for Rivers, Creeks, & Streams



SECTION 3.2

NATURAL RESOURCE ASSESSMENTS

3.2.1 INTRODUCTION

This Section presents methodologies for determining the location, size, and condition of sensitive areas, undisturbed buffers, and steep slopes in project areas, as well as the definitions and data required for these determinations.

3.2.2 QUALIFICATIONS

- A. The sensitive area certification may be completed by the property owner or by an authorized representative of the property owner.
- B. The assessment should be conducted by a professional familiar with wetland and other natural resource assessments.

3.2.3 SCOPE OF ASSESSMENT

- A. Sensitive areas and their undisturbed buffers generally do not follow property boundaries. To ensure that the sensitive areas are provided with proper protections, the assessment requires investigation extending of 200' on to the adjoining properties. The assessment required to determine sensitive areas on adjoining properties may be limited to the best available knowledge and is not subject to a detailed analysis.
- B. The applicant shall attempt to gain site access to adjacent properties from the property owner or an authorized representative of the property owner. If property owner/authorized representative denies access the applicant shall use off-site delineation methods including use of mapping information, aerial photographs for the area, and visual observation from the property boundary to perform the assessment.

3.2.4 ASSESSMENT METHOD

- A. **Step 1:** Conduct a reconnaissance of the project area and complete the sensitive area certification form.
 - 1. Determine the presence or absence of water quality sensitive areas on site or within 200' on adjacent property.
 - 2. If no water quality sensitive areas are discovered, then complete the **Sensitive Areas Certification Form** (Exhibit 1).
 - 3. If sensitive areas are found continue to Step 2.
- B. **Step 2:** Delineate the boundaries of the sensitive area.
 - 1. Lakes, Springs, and Wetlands:
 - a) Delineate boundaries using the methods described in the 1987 US Army Corps of Engineers Wetland Delineation Manual.
 - b) Survey and map all wetland boundaries on the site base map.

2. Intermittent and/or perennial streams:
 - a) Identify whether the stream is perennial or intermittent. Streams are considered perennial until proven intermittent with adequate field documentation (photos, field data), or determination by Oregon Division of State Lands.
 - b) For all intermittent and/or perennial streams, delineate sensitive area boundaries by identifying the top of bank of the defined channel, or the surface elevation of a 2-year, 24-hour storm event. If determining the surface elevation of a 2-year, 24-hour storm event is not possible, then the outside edge of the stream sensitive area is determined by identifying the areal extent of:
 - 1) Water marks on fixed objects (vegetation, buildings, etc.);
 - 2) Drift lines (deposited waterborne twigs, litter, etc.); or
 - 3) Waterborne sediment deposits on the soil surface or fixed objects (vegetation, buildings, etc.)
 - 4) Use the indicator that provides the greatest areal cover.
- C. **Step 3:** Determine the undisturbed buffer width for each sensitive area identified.
 1. Follow procedures outlined in Section 3.1 of the Surface Water Management Administrative Procedures for determining undisturbed buffer width.
 2. Stake, survey, and map the boundaries of the sensitive areas and the undisturbed buffers on the project site and adjacent properties within 200' of the property line on the base map and flag them on the project site.
- D. **Step 4:** Determine the existing undisturbed buffer condition.
 1. Identify the plant community types present in undisturbed buffer.
 - a) Traverse the undisturbed buffer in order to determine the number and area covered by each plant community present. A plant community is defined as a grouping of plants that often occur together growing in a uniform habitat.
 - b) Sketch the location of each plant community on a base map.
 2. Select representative sample points.
 - a) A representative sample point is an area within a plant community in which the visually determined characteristics best represent the plant community as a whole.
 - b) Mark the location of the sample point(s) on the base map.
 - c) Establish at least one sample point per acre per community type. All communities must be sampled.
 3. Characterize each plant community type.

- a) At the sample point, visually determine and document the area covered by all species providing greater than 5 percent cover within the plot boundary.
 - b) Use a 10-foot radius plot for herbs (non-woody vegetation) and a 30-foot radius plot for woody vegetation.
 - c) Plot boundaries may be adjusted to ensure that only one plant community is represented in a plot.
4. Determine cover by native species, invasive species, and noxious species.
 - a) For each community type determine the cover provided by both native species and by invasive species and noxious weeds.
 - b) Average the cover estimates for communities with more than one sample plot.
 - c) Native species as listed in the most current version of Metro Native Plant List.
 - d) Noxious species are those found in the most current version of Oregon Department of Agriculture Noxious Weed List at http://www.oda.state.or.us/Plant/weed_control/NoxWeedQuar.html.
 - e) Invasive species include Himalayan blackberry (*Rubus discolor*), reed canarygrass (*Phalaris arundinacea*), Scot's broom (*Cytisus scoparius*), teasel (*Dipsacus fullonum*), English ivy (*Hedra helix*), nightshade (*Solanum sp.*), and clematis (*Clematis ligusticifolia* and *C. vitabla*).
 5. Transfer results to base map.

E. Step 5: Prepare the Natural Resources Assessment Report

1. Draft a report documenting the site and adjacent property sensitive area, undisturbed buffer condition, and slope.
2. Include a description of each plant community.
3. Include copies of written data assessment forms from any wetland delineation, and undisturbed buffer analysis and show on the base map.
4. Include copy of site base map in report and photos of representative features on site and adjacent property.
5. If encroachment in the undisturbed buffer is proposed, complete and submit a **Wetland and Stream Buffer Variance Application**, (Exhibit 2) along with the Natural Resource Assessment.

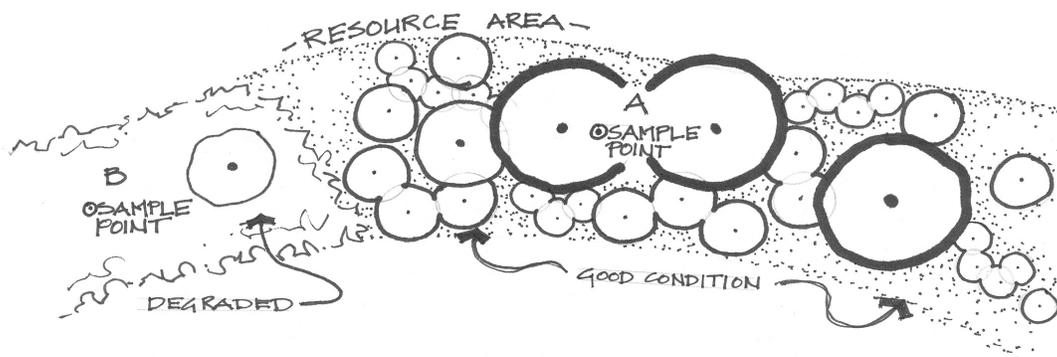




Exhibit 1

Sensitive Areas Certification Form

Property Owner

Name _____

Address _____

City/State/Zip _____

Telephone _____	Fax _____
-----------------	-----------

E-mail _____

Authorized Agent

Name _____

Address _____

City/State/Zip _____

Telephone _____	Fax _____
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E-mail _____

Project Location

Street, road, or other descriptive location _____

Legal Description:

Quarter	Section	Township	Range
In or near (city or town)	County	Tax Map #	Tax Lot #
Waterway	River Mile	Latitude	Longitude

Adjacent Property Information:

Street, road, or other descriptive location _____

Legal Description:

Quarter	Section	Township	Range
In or near (city or town)	County	Tax Map #	Tax Lot #
Waterway	River Mile	Latitude	Longitude

Exhibit 1 (cont'd)

An onsite, water quality-sensitive area reconnaissance was completed on:

Date	By	Title	Company
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A. Existence of Water Quality-Sensitive Areas

As defined in the Rules and Regulations of each Surface Water Management District, water quality-sensitive areas:

do do not exist on site (check appropriate box).

do do not exist within 200' on adjacent properties, or unable to evaluate adjacent property (check appropriate box).

- If water quality-sensitive areas exist, complete Section B below.
- If water quality-sensitive areas do not exist, skip Section B, sign this form and submit to the District with plan approval package.

B. Types of Water Quality-Sensitive Areas

The type(s) of water quality-sensitive area(s) that occur on site or within 200 ft on adjacent properties are (check all that apply):

wetland(s) spring(s) intermittent stream(s) perennial stream(s) ponds

Sign this form and submit to WES with plan approval package and one (1) copy of:

- Natural Resources Assessment Report that includes:
 - Wetland Delineation Report per DSL / Corps reporting requirements (if wetlands present).
 - Undisturbed buffer documentation, including a base map and photographs showing the surveyed location of all sensitive areas, undisturbed buffers, and undisturbed buffer condition.

I certify that I am familiar with the information contained in this document, and to the best of my knowledge and belief, this information is true, complete, and accurate.

Property Owner:

Print/Type Name

Print/Type Title

Signature

Date

SECTION 3.3

Sensitive Area Buffer Variance Process

3.3.1 Goal: The goal of the buffer regulations is to protect the ecological benefit and water quality benefit to sensitive areas by maintaining a healthy riparian zone.

3.3.2 Function: Buffers function by utilizing certain vegetation species to filter pollutants (including fine sediment, nitrates, phosphates, bacteria, and heavy metals) from surface water and by providing shade, large woody debris, and migration area for sensitive areas, thereby preserving their ecological integrity.

3.3.3 Sensitive Area: Generally defined as a wetland, lake, spring, or stream.

3.3.4 Buffer Width: As per the Districts' Surface Water Management Rules and Regulations, the buffer around wetlands and perennial streams is 50-200 feet, (25-200 feet for intermittent streams) depending on side slope and upstream drainage area. (See Sections 3.1 flowcharts for detailed methodology for determining the required buffer width based on sensitive area characteristics.)

3.3.5 Activities allowed in the buffer area:

Removal of invasive vegetative species (see Natural Resource Assessment section) – ALL REMOVAL must be accompanied by a replanting plan and an erosion control plan for the time between when invasives are removed and replanting occurs.

3.3.6 Erosion Control Plan: Should indicate erosion control materials/methods appropriate for the level of removal of vegetation in buffer. If all vegetation is to be removed, lay straw and grass seed over all exposed soil. If vegetation is removed on water edge, hay bales need to be staked to reduce scour resulting from water velocities.

3.3.7 Replanting Plan: Should include appropriate plants selected from the Metro Native Plant List (available at the WES office). Should include trees (Douglas fir, cedar, alder, maple, etc.), shrubs (native roses, salmonberry, etc.), and ground cover (native grass mix, sedges, rushes, native wildflowers, etc.). A plan needs to be submitted to the District and approved by District SWM staff.

3.3.8 Activities prohibited in the buffer area:

- Construction of structures (buildings of any kind)
- Grading of any kind (including swales, ponds, etc.)
- Impervious Surface (parking lots, gravel, etc.)
- Tree Removal (dead or alive) unless approved by the District
- Herbicide/Pesticide use in and around sensitive areas and buffers must be approved by the District
- Ornamental Vegetation (lawns, non native shrubs, bark dust, etc.)

3.3.9 Procedure for Buffer Variances

As a general rule, buffer variances are not encouraged. The Districts must uphold the buffer requirements to ensure compliance with the Endangered Species Act, Clean Water Act, and METRO requirements.

To request a buffer variance, the developer must write a letter to the Surface Water Manager stating the reason that the development cannot meet the called for buffer width, and must propose a different buffer width and mitigation plan that preserves the essential functions of the buffer as described above.

3.3.10 Variance Timing

The buffer variance must be requested as part of the land use or Design Review application process of a development plan, in order to enable the Districts to make the necessary recommendations to the County Planning Department. A Natural Resource Assessment must be submitted to both the District and the Oregon Division of State Lands (DSL) before a variance request will be considered. Final variance approval will not be granted until DSL concurs with the Natural Resource Assessment.

3.3.11 Restoration of Buffer Area

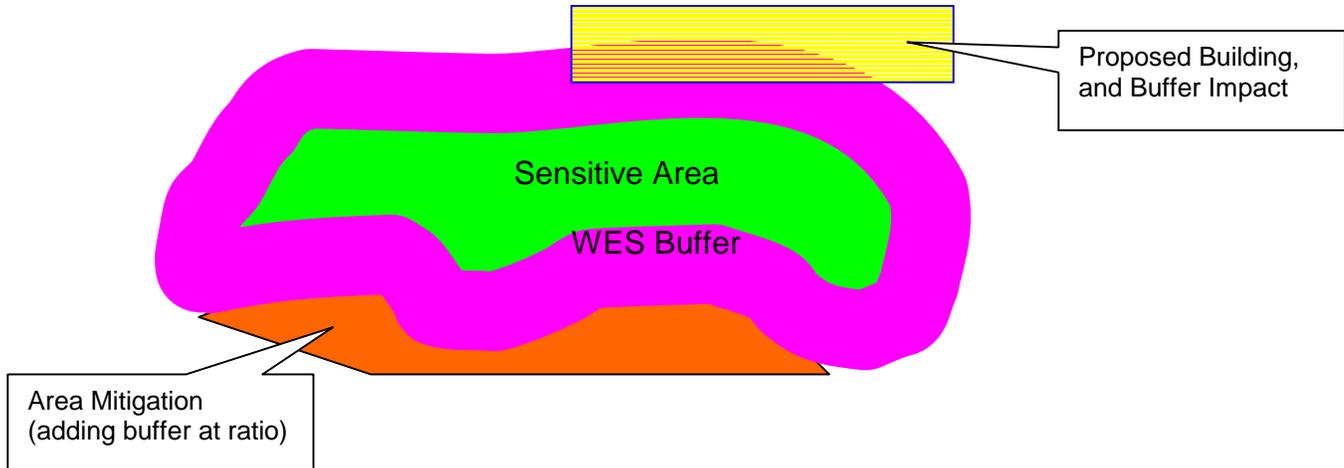
As sites are redeveloped, buffer areas which are currently or have previously been impacted (i.e. impervious surface/structures in the buffer) will need to be restored into buffers that provide water quality benefit and function as a filter for pollutants. This may include situations where gravel is removed and the area is replanted with the above-mentioned vegetation.

The Districts recognize the effort to restore buffer areas. As a result, depending on the level of restoration effort for the buffer, the full buffer width might not be necessary. However, this depends completely on the level of effort that the applicant proposes for the buffer. For example, for a site with a 50 foot buffer requirement, of which 45 of the 50 feet of buffer is currently gravel, a variance request that might be considered would be for an intensive, highly vegetated 25-foot buffer to be created. Due to the level of effort required to remove the gravel, placement of native soils, purchase and plant native vegetation, and follow up with appropriate monitoring, in the end, the 25 foot, highly vegetated buffer would be of greater water quality benefit than a 45 foot gravel buffer.

3.3.12 Measurement of Variance Acceptance:

AREA MITIGATION

At a ratio of 1.5:1, the developer must provide a map and calculations indicating that the ratio has been met. Note that if a developer can meet the 1.5:1 ratio fully, then no enhancement of the buffers would be necessary, provided that the essential functions of the buffer are preserved.



ENHANCEMENT MITIGATION

A developer may choose to mitigate buffer impacts by enhancing all remaining buffer areas. This could include planting native plants in the buffer, removing impervious surfaces in the remaining buffer, placing native, organic soils in the remaining buffer (to enhance soils to support plants). Note that detention ponds and water quality swales are not allowed in buffers as per the Districts' Rules and Regulations (which state that no grading can occur in the buffer area).

All plants must be selected from the Metro Native Plant List.

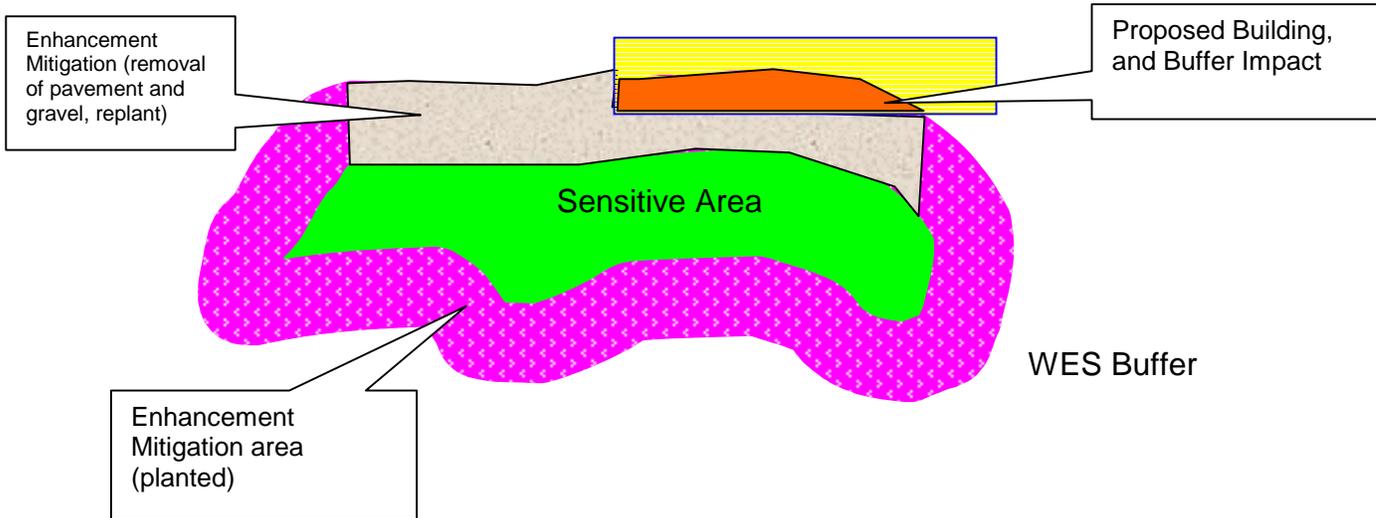
Plants should meet a minimum 3' OC (on center) density.

Developer must show a map of all enhancement activities in the buffer area, and a complete species list and number of species proposed.

Developer must provide 100% success in the planting. Assuming a 30% mortality rate of the plants, the developer can choose to plant 130% of the site (allowing 30% to die, and not replanting), or at the end of three years must replant any dead plants up to the 100% success.

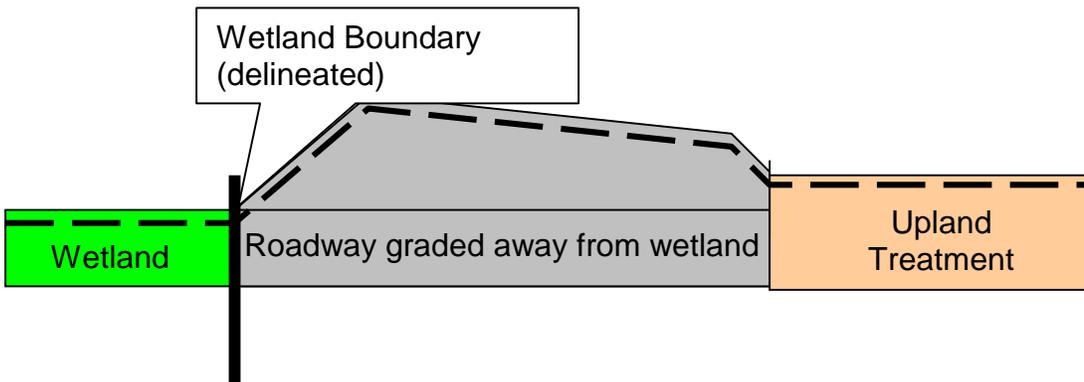
ODSL and Corps of Engineer mitigation requirements do not satisfy the Districts' buffer variance requirements. If a DSL/COE mitigation plan includes activity in the buffer area, additional buffer mitigation may still be needed to satisfy the Districts' requirements.

Developer must provide minimum 3 years of monitoring and maintenance (which removal of invasive species). All such maintenance must be documented and reported annually.



ROADWAY BUFFER MITIGATION

Commonly, a developer will obtain a permit from state and federal agencies to fill a wetland and construct roadways on the wetland. In scenarios where a roadway is proposed in the location of where a buffer should be, then the developer needs to mitigate for the area of the buffer elsewhere on the development site, AND construct the roadway in a manner to prevent any untreated runoff from directly entering the wetland. One example of appropriate roadway construction for these scenarios would include grading the road in a manner that all runoff would drain toward upland treatment prior to discharging to the wetland.



DSL/Corps permitted stream crossings (culverts, bridges, etc.) do not require buffer mitigation.

3.3.13 Acceptance of Buffer Variance:

It is the decision of the Surface Water Manager to approve or deny variance applications. All variance requests must be addressed to the Surface Water Manager at time of application. The District is required to notify property owners within 250 feet of the proposed variance of the decision to either grant or deny the variance. The decision may be appealed to the Director of WES within 14 days of the notification of the decision by the Surface Water Manager.

After a developer submits a variance request and provides a plan that meets the function (defined above) of the buffer, an approval letter will be sent to the developer. The letter will summarize the plan and indicate procedure for District staff to inspect the buffer during and after implementation of the approved plan.



Exhibit 2

WETLAND AND STREAM BUFFER VARIANCE APPLICATION

REQUIRED INFORMATION FOR VARIANCE REQUEST (request will not be processed without all of the following information)			
Building Permit #		Watershed Name	
Zoning Permit #		Natural Resource Type (CIRCLE ALL THAT APPLY)	STREAM WETLAND RIVER SPRING
Grading Permit #		Stream Name (if known)	
Conservation Easement Enclosed?		Natural Resource Assessment Enclosed?	YES NO (CIRCLE ONE)
Site Address		Project Name	

CONTACT INFORMATION			
OWNER/APPLICANT INFORMATION		MAINTENANCE CONTACT INFORMATION (MINIMUM 3 YEAR MAINTENANCE REQUIRED)	
NAME		NAME	
COMPANY		COMPANY	
ADDRESS		ADDRESS	
PHONE		PHONE	
FAX		FAX	
MOBILE		MOBILE	

BUFFER INFORMATION (EXISTING)		BUFFER MITIGATION	
REQUIRED BUFFER WIDTH (FT)		MINIMUM PROPOSED BUFFER WIDTH (FT)	
REQUIRED BUFFER AREA (SQ. FT.)		TOTAL PROPOSED BUFFER AREA (SQ. FT.)	
ENCROACHMENT AREA (SQ. FT)		NEW BUFFER AREA TO BE CREATED (SQ. FT)	
AREA OF IMPACT (PERCENTAGE OF TOTAL BUFFER ON SITE)		TOTAL BUFFER AREA TO BE RESTORED (SQ. FT, NEW AND EXISTING)	

I will implement the buffer variance mitigation that I have proposed to ensure the long term protection of the natural resources on my site. I agree to maintain all buffer areas on my site for a minimum of three years and agree to make arrangements for long term maintenance of the buffer areas with future landowners. I agree that I am responsible for monitoring and annual reporting of maintenance to comply with these rules. I acknowledge that failure to adhere to these requirements will result in enforcement actions to bring the site into compliance.

OWNER/APPLICANT SIGNATURE

DATE