North Bethany Subarea Stream Corridors: Existing Regulations

In Oregon, there is a distinct difference between the land use rules that apply in rural areas versus those that apply in urban areas. Applying existing urban regulations to the formerly rural North Bethany Subarea (North Bethany) is a necessary preliminary step in the urbanization process. The focus of this fact sheet is to identify the relevant regulatory programs that apply to natural water features. In some cases more than one program will apply to a specific feature; for instance, some floodplain areas may also be jurisdictional wetlands. This paper describes each program individually, and explains generally how those rules are applied.

Only existing regulatory programs are being applied to North Bethany. While no new rules are proposed, new information is being incorporated for wetland areas. The wetland data update is required under state law, as further explained below.

The county has multiple existing regulatory programs that apply to various types of water features, including Drainage Hazard Areas (DHA), Floodplain areas, Jurisdictional Wetlands, Water Quality Sensitive Areas and Vegetated Corridors (regulated by Clean Water Services), and Fish & Wildlife Habitat (county Goal 5 program). Each program is designed to mitigate impacts of development relative to a particular natural process, feature or function. Related development standards are found in the county’s Community Development Code (CDC) and in Clean Water Services’ Design and Construction Standards for Sanitary Sewer and Surface Water Management (D&C Standards).

In some cases more than one regulatory program applies to a subject area or feature, and often those regulatory boundaries are not the same. For instance, natural stormwater drainage ways are typically existing stream channels, which also qualify as jurisdictional wetlands. In these situations, the regulatory measures overlap. Because of this overlap, regulations applied in isolation do not paint a complete scenario. For example, a wetland boundary is not sufficient to determine the extent of a wildlife habitat area, nor the boundaries of a DHA or 100-year floodplain. Likewise, necessary alterations within a given resource area—such as culvert installation or replacement for a road crossing—may be subject to more than one set of regulations, some of which may have ramifications for other applicable regulatory programs. The purpose of a particular program can be either to protect natural areas from development impacts, as is the case for certain fish and wildlife habitat areas (Goal 5), preserve water quality (Goal 6), and/or to protect development improvements from the negative effects of natural hazards, as is the case with floodplain restrictions (Goal 7, FEMA). This fact sheet explains how these existing regulations are applied and assesses the general implications of each for affected areas in North Bethany.
Under the county’s Comprehensive Plan, areas subject to regulations are identified on Community Plans or other adopted maps in a generalized fashion and at a relatively large scale. For example, the light blue color on the Significant Natural and Cultural Resources Maps that indicates Water Areas and Wetlands generally corresponds with the extent of the known DHA and floodplain areas at the time that map was adopted. For planning purposes, this broad-scale level of detail provides a preliminary indication of significant natural features that can be found in a given vicinity. Site-specific information about a given feature is expected to be acquired at the pre-development stage. This typically involves a surveyed delineation of any protected areas in order to clearly demarcate portions of a property to be avoided by development. Site specific analysis may also be necessary to understand the extent of a feature.

In North Bethany, some of the pre-development stage site analysis is being conducted as part of the planning work. This will provide a greater degree of certainty regarding the general location and extent of various features. The table below summarizes applicable county regulations for various types of water resources and notes associated planning analyses.

**Table: Summary of Existing Regulations Applicable in North Bethany**

*Related to Natural Resource / Water Areas*

<table>
<thead>
<tr>
<th>resource type</th>
<th>applicable existing regulations</th>
<th>proposed for North Bethany</th>
<th>preliminary planning analysis completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>drainage hazard areas (DHA)</td>
<td>CDC Section 421</td>
<td>same</td>
<td>- peak channel volume &amp; velocity to be conducted by first development within 250 feet of a designated reach, based on new inventory, CWS and federal flood agency (FEMA)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- may be prepared by CWS in association with plans for regional stormwater facilities along Bethany Ck</td>
</tr>
<tr>
<td>floodplain areas</td>
<td>CDC Section 421</td>
<td>same</td>
<td>- best available information from county, CWS and federal flood agency (FEMA)</td>
</tr>
<tr>
<td>jurisdictional wetlands</td>
<td>CDC Section 422 CWS D&amp;C standards Goal 5 OAR</td>
<td>same, based on new inventory</td>
<td>- North Bethany Local Wetland Inventory (LWI)</td>
</tr>
<tr>
<td>wetland buffer areas / vegetated corridors</td>
<td>CWS D&amp;C Standards</td>
<td>same, based on new inventory</td>
<td>- based on new wetland inventory (LWI) and latest topographic data</td>
</tr>
<tr>
<td>fish &amp; wildlife habitat areas—riparian</td>
<td>CDC Section 422</td>
<td>same</td>
<td>- Wildlife Habitat Assessment prepared for planned residential areas adjacent to Bethany Creek corridor</td>
</tr>
</tbody>
</table>

1 Only county/CWS regulatory programs are listed here; other federal and state programs may apply directly, such as those of the Department of State Lands for jurisdictional wetlands and the US Army Corps of Engineers for navigable waterways.
Drainage Hazard Areas

Drainage Hazard Areas are stream channels that are important for the drainage of large volumes of stormwater. These channels have been determined to be subject to flooding as a result of 25-year storm events. The presence of a DHA requires an engineered hydrology analysis to determine the peak volume and velocity of flow that will travel through the channel given build-out of the up-stream areas of the drainage basin. This determines the width of the DHA. Until this analysis is conducted, the locations of DHAs are identified on county maps with a generic buffer width of 250 feet. The adjacent image shows the DHA buffer associated with Bethany Creek just north of Springville Road. Existing regulations, per CDC Section 421, require a DHA analysis for any proposed development within the 250-foot buffer area. Typically, the first urban development proposal along an identified DHA triggers the required DHA analysis. In the case of Bethany Creek, this may fall to CWS for their preliminary work on locating and sizing regional stormwater facilities.

Floodplain Areas

Floodplain areas are mapped to generally indicate the limits of flooding for typical 100-year flood events. The maps depict a known flood elevation based on best available topographic and flood information. Any proposed development within 250 feet of the mapped floodplain area is required to perform a site-specific delineation of the floodplain elevation in order to assure that development is sufficiently outside of the flood-prone area. The adjacent image shows the floodplain area in the vicinity of North Bethany.
The county participates in the federal flood insurance program that involves the federal government’s concurrence with the county’s maps and development regulations. Clean Water Services assumes a primary administrative role in the regulation of floodplain areas given the importance of these features in the management of storm events.

As the Tualatin River Basin has developed over time, the watershed’s hydrology has evolved. This is one reason federal flood insurance maps are periodically updated. Clean Water Services recently coordinated with the federal flood insurance program to revise floodplain maps for the Tualatin River basin; these were submitted for federal review in 2006.

Wetlands and Adjacent Buffer Areas

Jurisdictional wetlands are regulated by the Oregon Department of State Lands (DSL). Not all wetland areas are known; many are discovered as part of the site development process. The adjacent image shows wetlands in North Bethany that were known prior to the start of the concept planning work (based on the National Wetland Inventory, or NWI). Additional wetlands may be present; these areas would be identified through more specific site evaluation. State and federal law provides a definition for determining the presence of a wetland, as well as a standard methodology for the identification of significant wetland areas.

In Oregon, wetlands are Goal 5 resources. Neither the county’s nor the Metro-Tualatin Basin’s Goal 5 programs include a wetland element. The adoption of urban land use designations in North Bethany triggers the application of the Goal 5 Administrative Rule. The Goal 5 Rule requires local governments to conduct a local wetlands inventory (LWI)\(^2\), adopt the LWI, make a “significance” determination [per ORS 197.279(3)(b)] and adopt a list of significant wetlands. For significant wetlands, local governments must complete an ESEE analysis (to weigh the environmental, social, energy and economic consequences of allowing conflicting uses) and adopt a program pursuant to OAR 660-023-0040 and -0050. The program must require notification to DSL concerning permits or land use decisions affecting inventoried wetlands [OAR 660-023-0100(7)].

\(^2\) LWI Standards and Guidelines are outlined under OAR 141-086-0180. The LWI is subject to approval by DSL; it is to be used in place of National Wetland Inventory and can be used for Goal 5 purposes.
A LWI determines the presence of wetlands based on wetland determinations; a standard methodology for this is provided in state law. Subsequent delineation locates the specific wetland area on a given site; this typically occurs as part of a development request. A LWI for North Bethany was completed by PHS in February 2010. The attached image shows a draft map of the wetlands identified through that process. The inventory is undergoing a “concurrence” review by DSL to determine whether or not the inventory and methodology are consistent with what is required by law. Development near wetlands identified in the LWI and protected through the ESEE analysis will be subject to county Goal 5 standards for wetlands. In addition, CWS D&C standards apply to these wetlands and others delineated at the development review stage.

Under CWS D&C Standards, wetlands are considered “water quality sensitive areas” for the management of water quality and quantity. Buffer areas are important to protect both of these wetland functions and therefore are regulated by CWS. Under the CWS program, buffer areas associated with streams are called “vegetated corridors.” Vegetation is an important buffer feature and any nearby development triggers the enhancement of vegetation if it is in a condition that is considered to be less than “good.”

**Significant Fish & Wildlife Habitat for Riparian Corridors**

These Goal 5 elements are covered under the county’s existing program and the adopted Metro-Tualatin Basin Goal 5 program (also known as Nature In Neighborhoods). The Concept Plan for North Bethany Subarea does not propose any changes to the Metro-Tualatin Basin program.

In North Bethany, applicability of the county’s Goal 5 existing program is limited to primarily the Bethany Creek corridor, identified as a Water Areas & Wetlands and Fish & Wildlife Habitat in the Bethany Community Plan and as shown in the adjacent image. The dark blue color shown on the Significant Natural and Cultural Resources Maps indicates the “standard” 200-foot buffer width which, under CDC Section 422, requires a biologist’s Wildlife

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3 The required function and condition assessment of mapped wetlands must use the Oregon Freshwater Wetland Assessment Methodology (OFWAM, DSL 1996). This was used by Pacific Habitat Services for North Bethany area wetland determination. This method “provides information for planning purposes on the location of potentially regulated wetlands… but is not of sufficient detail for permitting purposes under the state Removal-Fill Law (ORS 196.800 through 196.990).”
Habitat Assessment (WHA), delineation of the resource area and findings that the proposed development impacts “will not seriously interfere” with habitat function. While in practice, map amendments to the dark blue color are not common, the WHA is essentially a refinement of those mapped boundaries.

For North Bethany, the only program adjustment will be the refinement of this “dark blue” designation, based on more specific site information. The biologist assessment will be addressed as part of Ordinance No. 730 so that a more specific delineation of the habitat resource can be depicted on the adopted map. This is similar to what was done as part of the plan amendment for what is now the Arbor Oaks Subarea area via Ordinance No. 546. (The Ord. 546 process actually refined the delineation to distinguish between resource types, resulting in both “dark blue” and “light blue” colors on the amended map.)

In effect, CDC Section 422 will be addressed through the ordinance process and will result in protection of the habitat area by including those areas in a “no build” district on the adopted plan. The preliminary habitat assessment is pending. It therefore will not be necessary for future residential development on adjacent lands to address CDC Section 422. Exceptions to this will be the two planned road crossings. Impacts associated with the crossings and necessary culvert installations will be addressed as part of the development review for requests that include each of the local streets/stream crossings.

Attachment
North Bethany Facilitated Workgroup Process
Overview of Meeting Topics to Address Outstanding Issues for 2010 Ordinance

**Group 1: Natural Resources / Open Spaces**

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Meeting Purpose</th>
<th>Agenda Topics</th>
<th>Materials Provided in Advance / at Meeting</th>
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</table>
| #1: April 27 | • Address facilitation preliminaries  
• Describe various analyses that have been conducted to provide more specific site information for North Bethany than is typical for other areas of the county  
• Provide a foundation upon which to discuss future meeting topics by explaining existing county regulations and how they apply to the North Bethany Subarea | 1. Welcome and Introductions  
2. Meeting Agenda, Ground Rules and Procedures  
3. Overview of Issue List and Objectives for Workgroup #1  
4. Planning-Level Site Analyses  
5. Existing Natural Resource Areas and Regulations | • Fact Sheet No. 8: North Bethany Subarea Stream Corridors: Existing Regulations (incl. map images)  
• Series of annotated North Bethany Subarea maps highlighting locations of existing regulation areas for existing programs  
• Composite map showing overlap among applicable regulation areas |
| #2: May 13 | • Describe which additional Goal 5 requirements applicable to North Bethany are required under the Goal 5 Administrative Rule  
• Get feedback on proposed solution for addressing significant wetland areas, including process for determining more accurate boundaries on-site | 1. Required Goal 5 Update: Wetlands and Open Spaces  
2. Determine Preferred Land Use Designations for Wetland Corridors  
3. Development Standards and Review Procedures for Wetland Corridors | • Annotated North Bethany Subarea maps showing new resources mapped as part of North Bethany Concept Planning.  
• Discuss case study for a disputed site along Bethany Creek  
• Possible Fact Sheet explaining required Goal 5 update. |
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| #3 May 20 | • Describe objectives for incorporating new site data and requirements on steep slopes and potential landslide hazard areas; discuss options for implementing appropriate land use standards | 1. Steep Slopes Land Use Designation and Development Standards  
2. Potential Landslide Hazard Area Development Standards | • Fact Sheet No. 5: Potential Landslide Hazard Areas  
• Fact Sheet No. 15: Update to Grading Standards |

Senior Planner Paul Schaefer and County Building Division staff to attend this meeting and present on grading and landslide issues.

| #4 June 3 | • Introduce and resolve outstanding issue related to the intent and design of the parks program | 1. Park Location Criteria and Flexibility | • Fact Sheet No. 13: Park Location Objectives, Flexibility and Approval Criteria |

**Acronyms used:**  
CWS = Clean Water Services  
ESEE = Economic, Social, Environmental and Energy consequences analysis (part go Goal 5 OAR)  
THPRD = Tualatin Hills Park & Recreation District