

4.3 Zoning

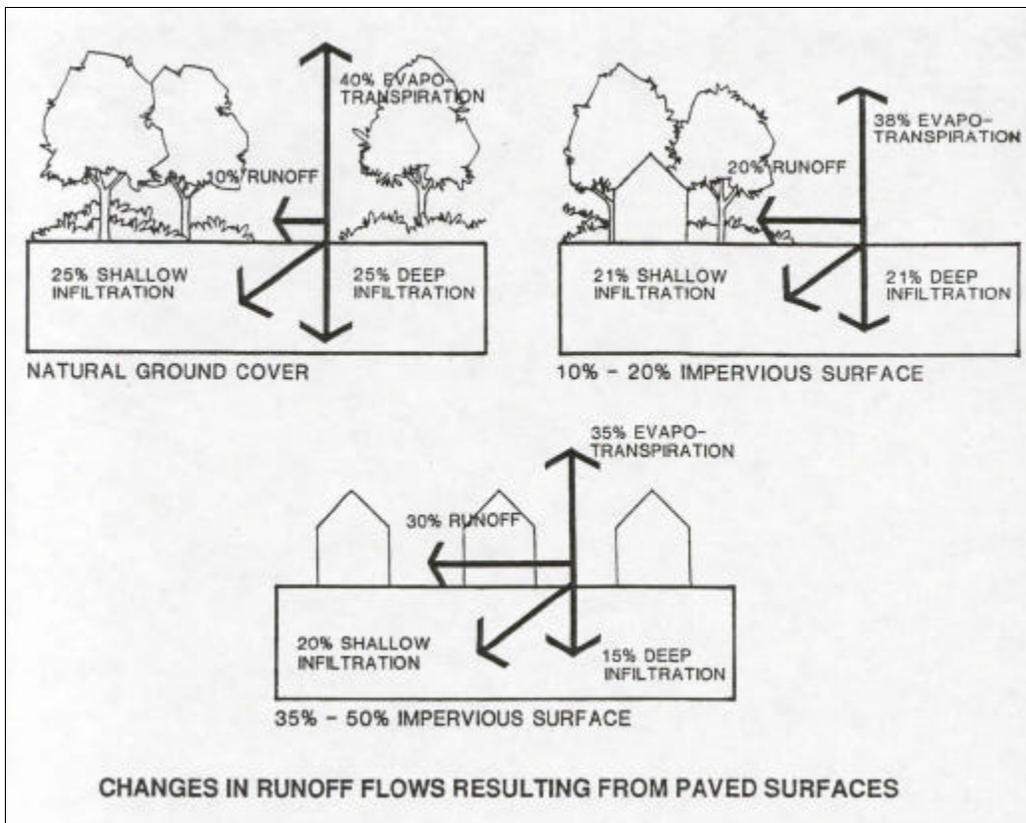
4.3.1 Impervious Surfaces

Problem

Impervious surfaces, usually found in developed areas, can have a significant impact on water quality. Impervious surfaces increase the amount and rate of surface water runoff, leading to erosion of stream banks, degradation of habitat, and increased sediment loads in streams. Impervious surfaces can accumulate large amounts of pollutants that are then “flushed” into local water bodies during storms. Impervious surfaces also can interfere with recharge of ground water and the base flows to water bodies.

Examples of common impervious surfaces include roads, rooftops, buildings, parking lots, driveways, sidewalks and patios. Almost any contemporary urban land use produces over ten percent impervious coverage, with the most significant amount of that coverage coming from roads, driveways and parking lots. Degradation of water quality and loss of habitat value can occur as impervious surface coverage in a watershed approaches 10 percent. (That is not to say that an urban area should only have ten percent impervious surface, but that the urban area is an important consideration to the overall health of a watershed.) Greater impacts to water quality occur as impervious surfaces begin to dominate the landscape (see figure below).

Figure 4.1 Water Cycle Changes Associated with Urbanization



Objective

To infiltrate all, or almost all, rainfall on the site by minimizing the effective impervious surfaces. Effective impervious surface means that the necessary impervious surfaces, such as driveways and buildings, are buffered by pervious surfaces that provide the infiltration necessary to effectively eliminate the impact of the impervious surfaces.

Strategy

Implement the following model ordinance language in designated land use districts, and define “impervious cover” in the zoning ordinance.

Alternatively, implement the more stringent model ordinance in the Appendix. The model ordinance in the Appendix allows applicants to bypass certain code and engineering requirements, if they are able to show that their site design allows infiltration of all stormwater onsite.

Discussion

Impervious reduction can also be addressed through site-specific development requirements. Jurisdictions need to be mindful not to promote inefficient, low-intensity development by adopting impervious cover restrictions that require all development to be low density.

Impervious Surface Requirements – Sample Code Provisions

1. The impervious surface requirements apply to the following districts:
[list districts – recommended that all districts outside of the downtown or town center be covered by this code provision].
2. Impervious cover [not mitigated by on-site vegetated swales, infiltration basins or other techniques approved by the [jurisdiction]] shall not exceed [X] percent of the total subject site area draining to each drainage discharge point.
3. Impervious cover defined. Impervious cover refers only to strictly impervious surfaces including roofs of buildings, specifically impervious asphalt and concrete pavements, and other specifically impervious pavement materials such as mortared masonry and gravel.

4.3.2 Residential Density and Building Size

Problem

Rigid residential density standards that require each development to adhere to minimum/maximum lot size and units per gross acre can make protecting and enhancing water quality difficult. Rigid standards make it difficult to preserve and/or work around site characteristics that are important for water quality such as steep slopes, natural drainage ways, wetlands, and significant natural vegetation. In addition, flexibility in

building design and housing types is often necessary to minimize impervious surfaces and allow for stormwater infiltration.

Objective

To provide alternatives to rigid lot area and density standards that conform to the Comprehensive Plan and aid in the protection and enhancement of water quality and aquatic habitat.

Strategy

Allow lot size averaging and density transfers, and use density bonuses to encourage creative design that protects and enhances water quality and aquatic habitat.

Discussion

These standards can be provided citywide “by definition”, or they can be limited to specific districts. They are intended to provide a more flexible alternative to minimum lot size standards (e.g., 3,000 sq ft, 5,000 sq ft, and 7,500 sq ft.).

The residential density standards must be consistent with the Comprehensive Plan. Where sanitary sewer is not available, density standards must also be considerate of state on-site septic siting requirements. The Comprehensive Plan may need to be amended to allow density bonuses.

When approving a density transfer it is important to keep a record of how much density is transferred from the “sending” area to the “receiving” area. If a plat is recorded (i.e., for a land division), the “sending” area is usually identified as an open space tract with appropriate conditions and restrictions on use, development, etc. (e.g., through a conservation easement or dedication) which protects it from future development.

Residential Density Standards – Sample Code Provisions

Lot Size Averaging. Except as allowed through a planned unit development, new partitions and subdivisions shall achieve the following lot areas:

- a. R-3 (attached/detached single family) zone - average lot area between 3,000-4,000 square feet. Minimum lot area is 2,000 - square feet;
- b. R-5 (detached single family) zone - average lot area between 5,000-6,000 square feet. Minimum lot area is 4,000 square feet;
- c. R-7.5 (detached single family) zone- average lot area between 7,500-9,000 square feet. Minimum lot area is 6,000 square feet.

(See “Model Development Code & User’s Guide for Small Cities” Section 2.1.150 for residential density calculation and Section 2.1.130 for additional lot area standards.)

Density Bonus. A density bonus may be granted up to a total of [10-20] percent of the base density for the provision of the following public benefits:

- a. Dedication of public park, greenway, supplemental wetlands and/or riparian buffers;

- b. [other, such as dedication of upland forest areas, reducing development in steep slope areas]

Density Transfer. A density transfer is an equal transfer of allowable dwelling units from one portion of the site to another. Density transfers are allowed by right for the following areas (i.e., transfer density ‘from’):

- a. Area within the floodway and the floodway fringe;
- b. Area over [X] percent slope;
- c. Known landslide areas or areas shown to have potential for severe or moderate landslide hazard (e.g., on Department of Geology and Mineral Industries maps);
- d. Streams, wetlands and natural areas and their associated buffers in excess of that required to satisfy Goal 5.
- e. Areas constrained by monitoring wells and similar areas dedicated to associated buffers; remediation of contaminated soils or ground water; and
- f. Areas similar to those in a-e above, as approved by the Planning Director, and subject to public notice for Type II Administrative Decisions.

4.3.3 Lot Coverage

Problem

Local zoning codes may include rigid lot coverage provisions that inhibit creative development, and reduce the developers ability to address impervious cover. This is especially problematic if the impervious surfaces provision described in 4.2.1 is implemented. Developers will need to find creative solutions to limit the amount of their parcel covered by the building and/or room for treatment and infiltration BMPs, while maintaining the density needed to meet state and local goals and a reasonable economic use. Instead of a lower lot coverage standard, a developer is usually better served by a higher lot coverage standard (in conjunction with an overall density standard – see 4.2.2), to maintain open space that can be used for on-site treatment on other portions of the property.

Objective

Allow flexible lot coverage standards to provide opportunities for creative development for both single lots and large master planning efforts.

Strategy

Provide flexible lot coverage standards based on building type and lot size, and define “lot coverage” in the zoning ordinance.

Discussion:

The lot coverage standard should be tailored to balance the local design context and the housing needs of the community with the need to protect and enhance water quality and aquatic habitat. The lot coverage standards should encourage creative site use by a developer to increase density while decreasing effective impervious surfaces. The

impervious surface requirement found in Section 4.3.1 should be coordinated with lot coverage requirements, so conflicting standards are not present in the development code. If a community chooses coverage standards less than presented above for the purposes of achieving more open space and permeable surfaces, there may be a conflict with applying “smart development” principles, as defined by the *Smart Development Code Handbook* published by the Transportation Growth Management Program, and achieving density goals.

Lot Coverage - Sample Code Provisions: (excerpted from Section 2.1.160 of the Model Development Code and User’s Guide for Small Cities)

1. Maximum Lot Coverage. As applicable, the following standards shall apply in the [R-1 and R-2 zones / list appropriate zones]:
 - a. Single Family Detached Housing – [30 - 50] percent
 - b. Duplex and Triplex Buildings - [40 - 60] percent
 - c. Single Family Attached Townhomes - [60 - 70] percent
 - d. Multiple Family Housing Developments - [40 - 60] percent
 - e. Neighborhood Commercial and Mixed Use Buildings - [70 - 90] percent
2. Lot Coverage Defined. “Lot Coverage” means all areas of a lot or parcel covered by buildings (as defined by foundation perimeters) and other structures with surfaces greater than 36 inches above the finished and natural grade; except for covered front porches, covered (non-enclosed) bicycle parking, pergolas, porticos, balconies, overhangs and similar architectural features placed on the front (e.g., street facing) elevation of a building.

4.3.4 Commercial Areas

Problem

Water quality impacts of commercial development in downtown and neighborhood center areas are just as important as those of residential development. Many local zoning codes lead to low intensity commercial development and the conversion of areas to surface parking lots. Higher-intensity commercial development in designated areas can prevent other areas of the local jurisdiction from becoming covered with impervious surfaces associated with auto-oriented commercial development.

Encouraging higher intensity downtown and/or neighborhood center development requires a fine level of analysis due to the many interrelated issues. Requiring two story development with minimum design standards in a historic downtown is probably important for community aesthetics, but in some jurisdictions it may result in more development along the fringes of town at easier-to-develop sites.

Objective

To require more efficient use of land in the downtown, and provide incentives for higher-intensity development.

Strategy

Establish incentives for development in downtown and/or neighborhood centers. For example, exempt parking requirements for development in downtown or allow height bonuses for certain types of development. A commercial model code for small cities is under development and should be available for use after June, 2001. Contact the Code Assistance Program at DLCD for more information.

Discussion

Without careful application, implementation of standards to concentrate development in a downtown or neighborhood district can increase lower intensity development in other less restrictive districts.

4.3.5 Building Setbacks

Problem:

Many local zoning codes may have very strict requirements that govern the front and side yard setbacks. These criteria can constrain or prevent developers from designing open space or cluster developments that can reduce impervious cover. Minimum setbacks and frontage distances can increase impervious cover in the following ways. Front yard setbacks, which dictate how far houses must be from the street, can extend driveway length. Large side setbacks directly influence the compactness of development, and can result in longer roads to service the neighborhood.

Objective

Relax side and front yard setback requirements to allow for more compact development and less overall site imperviousness while maintaining target densities. Relax front setback requirements to minimize driveway lengths and reduce overall lot imperviousness. Allow shared driveways and rear alleys or lanes to reduce the need for driveways on each lot.

Strategy

Implement the *Model Development Code and User's Guide for Small Cities* residential district setback provisions found in Section 2.1.120.

Discussion

While consideration of setbacks is important for the protection and enhancement of water quality, neighborhood compatibility also should be considered. Larger front yard setbacks could be used for infiltration if they are more compatible with community standards. Alleys can help reduce impervious surfaces when neighborhood street standards are reduced, alleys are paved with pervious surfaces (see Section 4.3 for examples), and the total paved area of a rear alley is less than the total paved area of individual driveways. Varying setbacks should not be used to decrease densities. Creative use of a site by a developer can actually increase density while decreasing effective impervious surface.

4.3.6 Permitted Uses

Problem

Certain uses can be detrimental to water quality but are typically allowed as an outright use in certain zoning districts (i.e., auto repair shops or businesses using known hazardous materials). These uses may occur without necessary water quality review or conditions placed on the use. The potential for impacts on water quality is a great concern, especially when the use occurs within a flood hazard area, near a stream, wetland, lake, pond or other waterbody, or wellhead protection area.

Objective

Identify allowed land uses that pose significant risk to water quality. Change the zoning code to place water quality conditions, such as material handling and storage or a spill response plan, on these uses through a Type II conditional use permit procedure as defined in the *Model Development Code & User's Guide for Small Cities*. (See water quality design guidelines in Section 4.4.1 of this guidebook for example conditions.)

Strategy

List uses and reference to water quality development conditions:

- Automobile body/repair shop;
- Gas station;
- Fleet/trucking;
- Dry cleaner;
- Electrical/electronic manufacturing facility;
- Machine shop;
- Metal plating/finishing/fabricating facility;
- Chemical processing/storage facility;
- Wood preserving/treating facility;
- Junk/scrap/salvage yard;
- Mines/gravel pit (unless zoned EFU and permitted under ORS 215.248);
- Irrigated nursery/greenhouse stock (unless zoned EFU);
- Confined animal feeding operations (unless zoned EFU);
- Land divisions resulting in high density (>1/acre) septic systems;
- Equipment maintenance/fueling areas;
- Injection wells/dry wells/sumps;
- Underground storage tanks, (except those with spill, overflow, and corrosion protection requirements in place);
- All other facilities involving the collection, handling, manufacture, use, storage, transfer or disposal of any solid or liquid material or waste having potentially harmful impact on groundwater or surface water quality;
- All uses not permitted or not permitted as special exceptions.

Discussion

The permitted uses in this section of code should be coordinated with restrictions on uses in other sections of the development code, including those found in Section 4.3.8(a)(i) - The Additional Protection Measures for the model Riparian Protection Overlay.

4.3.7 Agriculture, Horticulture and Livestock Uses

Problem

Many smaller towns and rural residential areas have agriculture uses that are allowed throughout the community. Some of these uses can have detrimental impacts on water quality. For example, concentrated animal pasturing or storage of fertilizer or pesticides.

Objective

Protect and enhance water quality by managing agriculture, horticulture and livestock uses.

Strategy

Implement Section 2.1.200(H) of the *Model Development Code and User's Guide for Small Cities* with the following changes.

Agriculture, Horticulture and Livestock – Sample Code Provisions

The [jurisdiction] allows for agriculture, horticulture and livestock uses, subject to the following standards which are intended to provide buffering between these uses and residences and to protect and enhance water quality and aquatic habitat.

1. Prohibited Areas. Livestock shall not be kept within any of the following areas, as applicable, due to the higher intensity living environments of these areas or the potential impact on water quality.
 - a. Multi-family sub-district
 - b. Manufactured housing park sub-district
 - c. Neighborhood commercial sub-district
 - d. Within a riparian protection overlay
2. Minimum Lot Size. No livestock shall be kept on any lot less than one acre in area.
3. Density. No more than [two] head of livestock over the age of six months may be maintained per acre. No more than [X] swine and/or fowl may be maintained per acre.
4. Farm Structures. New barns, stables, and other buildings or structures used to house livestock shall not be developed closer than [X] feet of the property line.
5. Storage of fertilizer, pesticide herbicide, or animal waste. Fertilizer, pesticide and/or herbicide or other similar farm chemicals shall be covered and stored at an elevation one foot higher than the 100 year flood. Animal waste that is collected, shall also be stored at an elevation one foot higher than the 100 year flood.

4.3.8 Specific Area Plan District (Section 2.5 in the *Model Development Code*)

Problem

Some areas within a jurisdiction include significant natural resources that are important to water quality and aquatic habitat. A jurisdiction may feel that such an area requires a greater level of planning detail than is normally found in the comprehensive plan, zone map or public facilities plan to ensure protection of the natural resources.

Objective

To protect significant natural features with a detailed plan district which requires specific goals to be met.

Strategy

Implement Chapter 2.5 – Specific Area Plan Districts of the Model Development Code.

4.3.9 Overlay Districts (Section 2.6 in the *Model Code and User's Guide for Small Cities*)

Overlay districts add requirements to the overlay area that are in addition to base district requirements where special conditions warrant extra care. Overlay districts are excellent tools to protect and enhance water quality and aquatic habitat. The underlying zoning pattern can be maintained, while the overlay district identifies the physical outline of a riparian area (or other designated areas), and attaches special conditions to activities occurring in the watershed area. Density transfers and hardship variances can be used to maintain the economic viability of a site, while maintaining density goals.

Perhaps the most common overlay districts to protect and enhance water quality and aquatic habitat are the riparian districts required by Goal 5. Other water quality overlay districts included in this guide book are:

- drinking water protection overlays to protect drinking water resources;
- hillside or steep slopes overlays to prevent or restrict development on slopes of X percent or more;
- floodway and floodplain overlays to prevent all development in the floodway and severely restrict development in floodplains; and
- wetland protection overlay.

4.2.9(a) Riparian Protection Overlay to Meet Goal 5 Safe Harbor Provisions, TMDL Management Plan Requirements and ESA Liability Concerns

Problem

Local jurisdictions must address their riparian and wetland resources per Goal 5 requirements. In addition, the presence of a stream on DEQ's 303(d) list, or liability concerns resulting from an ESA listing may necessitate more stringent riparian protection (see Chapter 2 for more details). In some cases the riparian buffer required by the Goal 5 safe harbor provision may be adequate to address the water quality impact issues that led to

a 303(d) listing. In other cases, such as when temperature is a factor, a Goal 5 buffer, especially the safe harbor buffer, may not provide enough protection for the riparian area.

Objective

Promote stream health and protect and enhance water quality by establishing riparian protection areas along streams that have been identified through a Goal 5 process, are listed on DEQ's 303(d) list, or are within a watershed effected by an ESA listing for an aquatic species.

Strategy

Implement the following safe harbor model ordinance for Goal 5. If a larger protection area is required to meet other water quality regulations as per Goal 6, implement the supplemental provisions found after the safe harbor model code.

Discussion

The implementation of this ordinance requires the identification and mapping of water bodies within the jurisdiction that qualify as Goal 5 resources. In addition, a determination of the stream flow in cubic feet per second must be made to determine the proper overlay required for each stream. This ordinance will meet the requirements of Goal 5, but may not meet requirements of a TMDL management plan or fully address liability concerns resulting from an ESA listing (see Chapter 2 for more information). When the riparian protection area is established using the Goal 5 rule, any deviation from the safe harbor protection area widths must be done through an ESEE analysis. However, if a jurisdiction makes a finding that a riparian protection overlay is needed to meet state and federal water quality regulations, appropriate riparian corridor widths may be established under the Goal 6 rule.

RIPARIAN PROTECTION OVERLAY (RP)

In an riparian protection overlay the following restrictions shall apply:

(1) Purpose

The primary purposes for the creation of the Riparian Protection Overlay along the [list stream and waterways that apply] corridors are to: protect and enhance water quality; prevent property damage during floods and storms; limit development activity in designated riparian corridors; protect native plant species; maintain and enhance fish and wildlife habitats; and conserve scenic and recreational values of riparian areas.

(2) Establishment of the Riparian Corridor or Overlay Boundary

The riparian protection overlay consist of two component areas: the area within the channel banks, and the protective overlay zone. Areas developed prior to adoption of this section of the [Municipal Code] are acknowledged as pre-existing conditions and are allowed to be maintained in their status at the time of adoption of this section.

For the purposes of this section, development means buildings and any other development requiring a building permit, or any alteration of in the overlay by grading or construction of an impervious surface, including paved or gravel parking areas or paths and any land clearing activity such as removal of trees or other vegetation.

The two components of the riparian protection overlay are defined as:

- a. The area within the channel limits of a water feature (from top of one bank to top of the opposite bank) identified in (b) of this subsection. For a given stream, river, or channel the top of bank is the same as the “bankfull stage.” The “bankfull stage” is defined as the stage or elevation at which water overflows the natural banks of streams or other waters of this state and begins to inundate the upland.
- b. The overlay zones measured horizontally upland from the top of bank are as follows:

- i. Overlay zone from top of bank: In Cubic Feet Per Second (CFS)

<u>Stream Flow (CFS)</u>	<u>Overlay Zone</u>	<u>Water Body</u>
1,000 CFS or more	75 feet	[list water bodies]
Less than 1,000 CFS	50 feet	[list water bodies]

- ii. The provisions of the riparian protection sub-zone do not exempt persons or property from state or federal laws that regulate protected lands, water, wetland, or habitat areas. In addition to the restrictions and requirements of this Section, all proposed development activities within any jurisdictional wetland are also subject to applicable state and federal agency standards, permits and approval.

(3) Limitations on Use

In addition to the requirements of the underlying zone, the following limitations and exceptions shall apply:

- a. Removal of Vegetation:

The removal of vegetation from the RP Overlay is prohibited, except for the following uses after [Planning Official] approval:

 - i. Replacement of vegetation with native riparian species as is necessary for restoration activities;
 - ii. Removal of non-native vegetation and replacement with native plant species;
 - iii. For the development of water-related or water-dependent uses, provided they are designed and constructed to minimize impact on the existing riparian vegetation;
 - iv. Removal of emergent in-channel vegetation which has the potential to cause flooding;

b. Building, Paving, and Grading Activities:

Within the RP Overlay, the placement of structures or impervious surfaces, including grading and the placement of fill, is prohibited except as stated below. Exceptions to the RP Overlay restrictions may be made for the following uses, provided they are designed and constructed to minimize adverse impacts to the riparian area:

- i. Replacement of existing structures with structures located on the original building footprint which do not disturb additional riparian surface area;
- ii. Streets, roads, and paths which are included in the [jurisdiction's] Transportation System Plan;
- iii. Water-related and water-dependent uses, including the drainage facilities, water and sewer utilities, flood control projects, and drainage pumps;
- iv. Routine maintenance or replacement of existing public facilities projects and public emergencies, including emergency repairs to public facilities;
- v. In-channel erosion or flood control measures that have been approved by the Oregon Division of State Lands (DSL), the U.S. Army Corps of Engineers or an other state or federal regulatory agency, and that utilize bio-engineering methods (rather than rip rap).

c. Land Partitions and Property Line Adjustments

Property boundary amendments which would create parcels that cannot be developed in conformance with Riparian Protection Overlay regulations are prohibited.

d. Site Maintenance

The limitations imposed by this section do not preclude the routine maintenance of structures. Maintenance of lawns, planted vegetation and landscaping shall be kept to a minimum and not include the spraying of pesticides or herbicides. Vegetation shall be replanted with native species. Maintenance trimming of existing trees shall be kept at a minimum and under no circumstances can the trimming maintenance be so severe as to compromise the tree's health, longevity, and resource functions. Vegetation within utility easements shall be kept in a natural state and replanted when necessary with native plant species.

e. Hazardous Tree Removal

Hazardous trees are those that pose an obvious and immediate health, safety, or welfare threat to persons or property. Hazardous tree removal, except in emergency circumstances, is required to be reviewed by [jurisdiction] staff. Any trees removed are required to be replaced by like native species or alternate approved native species.

(4) Procedures

The procedure for reviewing any development within the RP Overlay is as follows:

- a. Any development or vegetation removal proposal within the RP Overlay shall be submitted to the Planning Official. [The proposal will be reviewed through a Type III procedure as defined in Section 4.1.5 of the *Model Development Code and User's Guide for Small Cities*.]

- b. The applicant shall be responsible for the preparation of a professional quality map showing the precise location of the top-of-bank, 100-year flood elevation, wetland edge (if present), riparian setback, significant vegetation, site improvements or other relevant primary features. The application also shall include:
 - i. Grading Site Plan. The grading plan shall include information on terrain, drainage, location of proposed and existing structures, and finished elevations.
 - ii. Vegetation Report. This report shall consist of a survey of existing native vegetation and proposed alterations. Where the removal of native vegetation is proposed, measures for re-vegetation and enhancement with native plant species will be included. The [jurisdiction] shall have and maintain a list of native vegetation species.

(5) Hardship Variances

For any existing lot or parcel demonstrated to have been rendered not buildable by application of this ordinance and/or when a riparian corridor overlay map error has been verified, the property owner may apply for a hardship variance for waiver of land development restrictions and prohibitions found under subsection (3) of this section. A decision regarding hardship variances will follow the procedures and standards of Article [list appropriate reference to variances] of this ordinance.

(6) Restoration and Enhancement Exceptions

Permanent alteration of the riparian area by placement of structures or impervious surfaces may be permitted upon demonstration that equal or better protection for the remaining on-site Riparian Protection Overlay area will be ensured through restoration of riparian areas, enhanced buffer treatment or similar measures. In no case shall such alterations occupy more than 50% of the width of the riparian area measured from the upland edge of the corridor.

(7) Appeals

[Planning Commission] decisions can be appealed to the [City Council/County Commission] using the procedures described in Section [X] of this Ordinance.

(8) Enforcement

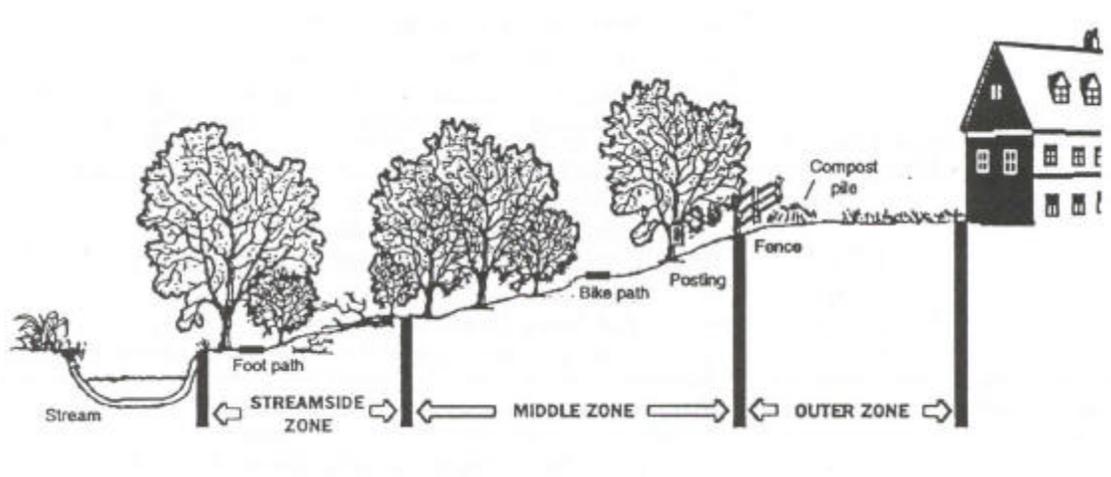
This ordinance shall be enforced in accordance with the procedures cited in the [jurisdiction] Municipal Code Section [X].

4.3.9(b) Additional Protection Measures for Model Buffer Ordinance

If a community determines that a greater amount of riparian protection is needed, based on Goal 6 findings the following ordinance language can be used. The ordinance language in the next few pages replaces Section 2a through Section 2b of the Safe Harbor model ordinance above. The diagram below describes the three zones implemented by the additional language.

Discussion

There are a number of items within the following ordinance language that must be customized to meet the needs of a local jurisdiction. Those items include the minimum width of the protection area, the adjustment for slope and the list of water pollution hazards. (See the drinking water protection ordinance in the next section for a more restrictive list of pollution hazards.) The model language, including the recommended buffer widths, is modified from a model ordinance created by the Center for Watershed Protection based in Ellicott City MD.



Source: *Better Site Design: A Handbook for Changing Development Rules in Your Community*. Center for Watershed Protection, Ellicott City MD.

(Replace Section 2b of safe harbor ordinance.)

- b. The required width for all water quality protection overlays (i.e., the base width) shall be a minimum of [100] feet. The water quality overlay will be expanded using the following conditions and criteria.
 - i. In streams with over 1,000 CFS, [25] feet shall be added to the base width of the water quality protection overlay. (Alternatively protection thresholds could be based on the watershed area rather than stream flow.)
 - ii. The water quality protection overlay width shall be modified if steep slopes are within [200 feet] of the stream and drain into the stream system. In those cases, the water quality protection overlay width shall be adjusted as follows:

Percent Slope	Width of Buffer
15%-17%	add 10 feet
18%-20%	add 30 feet
21%-23%	add 50 feet
24%-25%	add 60 feet

- iii. Water quality protection overlays shall be extended to encompass the entire 100-year floodplain.
- iv. When a wetland extends beyond the edge of the overlay required by other provisions in this section, the overlay shall be adjusted to include the full extent of the wetland plus a [25]-foot zone extending beyond the wetland edge. (Check that this wetland buffer is no less than wetland buffers provided in wetland overlay zone.)

(Add Section 2c to safe harbor ordinance.)

- c. Water Pollution Hazards. The following land uses and/or activities are designated as potential water pollution hazards and must be set back from any stream or waterbody by the distance indicated below:
 - i. Outside storage of hazardous substances or materials [150] feet
 - ii. Aboveground or underground petroleum storage facilities [150] feet
 - iii. Solid waste landfills or junkyards [300] feet
 - iv. Confined animal feedlot operations and other livestock areas [250] feet
 - v. Land application of biosolids [100] feet (Shall be a minimum of 30 feet by DEQ regulations)

(Larger buffers are needed when water table next to a stream is high.)

(The following provisions give more specific direction for allowed and prohibited uses within the protection overly by dividing the protected area into three zones. Use the following code language to replace Section 3 of the safe harbor ordinance, or integrate the concept of a three zone protection area with the limitations listed in the safe harbor ordinance.)

(3) Limitations on Use

The water quality protection overlay shall be composed of three distinct zones, with each zone having its own set of allowable uses and vegetative targets as specified in this ordinance. In addition to the requirements of the underlying zone, the following limitations and exceptions shall apply:

- a. Zone 1: Streamside Zone. The goal for the Streamside Zone is undisturbed native vegetation and is regulated as follows:
 - (i) Protects the physical and ecological integrity of the stream ecosystem.
 - (ii) Begins at the edge of the stream bank of the active channel and extends a minimum of [25] feet from the top of the bank.
 - (iii) Allowable uses within this zone are highly restricted to
 1. Flood control structures
 2. Unpaved footpaths
 3. Road crossings, where permitted
 4. Utility rights of way as part of allowed road crossings
- b. Zone 2: Middle Zone. The goal of the Middle Zone is to maintain and enhance mature native vegetation adapted to the region and is regulated as follows:
 - (i) Protects key components of the stream and provides distance between upland development and the streamside zone.
 - (ii) Begins at the outer edge of the streamside zone and extends a minimum of [50] feet plus any additional buffer width as specified in this section.
 - (iii) Allowable uses within the middle zone are restricted to
 1. Biking or hiking paths
 2. Structural and nonstructural stormwater management facilities, with the approval of [planning official]
 3. Recreational uses as approved by [planning official]
 4. Tree removal limited to safety and necessary for construction of uses allowed in the Middle Zone. Tree removal requires approval from [planning official]
 5. Utility rights of way
- c. Zone 3: Outer Zone. The goal of the Outer Zone is to provide a gradual transition between development and the water quality protection overlay and is regulated as follows:
 - (i) Prevents encroachment into the water quality buffer and provides an opportunity for treatment of stormwater where pollutant loads are low and water enters the buffer as sheet flow.
 - (ii) Begins at the outward edge of the middle zone and provide a minimum width of [25] feet between Zone 2 and the nearest permanent structure.
 - (iii) Prohibits, permanent structures, or impervious cover, with the exception of paths.
 - (iv) Encourages the planting of native vegetation to increase the total width of the buffer.

4.3.9(b) Drinking Water Protection (DWP) Overlay Zone for Groundwater Wells

Problem

Development and implementation of a Drinking Water Protection Plan is a strategy available to local governments interested in protecting their source of municipal water. Local governments are not required to develop plans, but those who choose to do so can receive assistance from DEQ and the Oregon Health Department (OHD). Many communities have not developed strategies to protect their drinking water and are placing their drinking water at risk from both point and nonpoint sources of pollution. Protection of drinking water is a key water quality issue, and should not be overlooked when developing ordinances to protect other elements of water quality such as riparian areas. The OHD can require a local jurisdiction to find a new source of drinking water or treat the existing source, if the current supply does not meet certain standards. Protection is a much more cost-effective alternative.

Objective

To protect existing sources of drinking water from both point and nonpoint sources of pollution.

Strategy

Develop a voluntary Drinking Water Protection Plan as outlined by the DEQ and OHD and implement the following model ordinance. If final completion of the Drinking Water Protection Plan is a number of years away, then the model ordinance should be implemented first to establish a base level of protection. The ordinance can then be updated upon completion of the plan.

Model Drinking Water Protection Ordinance for Groundwater Wells

Section 1.0 – General

Appropriate land use regulations may be imposed which are in addition to those imposed in the underlying zoning districts or in other county regulations. Where the regulations and permitted uses of an underlying district conflict with those of an overlay district, the more restrictive standards shall apply.

Section 2.0 – Purpose

The [jurisdiction] recognizes: (a) that residents of [jurisdiction] rely exclusively on groundwater for a safe drinking water supply, and (b) that certain land uses in [jurisdiction] can contaminate groundwater, particularly in shallow/surficial aquifers. The purpose of the Groundwater Protection Area District is to protect public health and safety by minimizing contamination of the shallow/surficial aquifers of [jurisdiction]. This Article established procedures and standards for the use of hazardous materials within Time of Travel Zones (TOTZ).

Section 3.0 - Definitions

AQUIFER. A geological formation, group of formations or part of a formation capable of storing and yielding groundwater to wells and springs.

BEST MANAGEMENT PRACTICES (BMPs). Measures, either managerial or structural, that are determined to be the most effective, practical means of preventing or reducing pollution inputs from point sources or nonpoint sources of water bodies.

CONFINED ANIMAL FEEDING OPERATION (CAFO). The concentrated confined feeding or holding of animals or poultry, including, but not limited to horse, cattle, sheep or swine feeding areas, dairy confinement areas, slaughterhouse or shipping terminal holding pens, poultry and egg production facilities and fur farms, in buildings or in pens or lots where the surface has been prepared with concrete, rock or fibrous material to support animals in wet weather, or which have waste water treatment works.

CONTAMINATION. An impairment of water quality by chemicals, radionuclides, biologic organisms, or other extraneous matter, whether or not it affects the potential or intended beneficial use of water.

DEVELOPMENT. The carrying out of any construction, reconstruction, alteration of surface or structure or change of land use or intensity of use.

FACILITY. Something that is built, installed, or established for a particular purpose.

FARM PRACTICES. A mode of operation that is common to farms of a similar nature; reasonable and prudent for the operation of such farms to obtain a profit in money; is or may become a generally accepted method in conjunction with farm use; complies with applicable laws; and is done in a reasonable and prudent manner.

GREY WATER. All domestic wastewater except toilet discharge water.

HAZARDOUS MATERIAL. A material which is defined in one or more of the following categories:

- **Ignitable:** A gas, liquid or solid which may cause fires through friction, absorption of moisture, or which has low flash points. Examples: white phosphorous and gasoline.
- **Carcinogenic:** A gas, liquid, or solid which is normally considered to be cancer causing or mutagenic. Examples: PCBs in some waste oils.
- **Explosive:** A reactive gas, liquid or solid which will vigorously and energetically react uncontrollably if exposed to heat, shock, pressure or combinations thereof. Examples: dynamite, organic peroxides and ammonium nitrate.
- **Highly Toxic:** A gas, liquid, or solid so dangerous to humans as to afford an unusual hazard to life. Example: chlorine gas.

- **Moderately Toxic:** A gas, liquid or solid which through repeated exposure or in a single large dose can be hazardous to humans.
- **Corrosive:** Any material, whether acid or alkaline, which will cause severe damage to human tissue, or in case of leakage might damage or destroy other containers of hazardous materials and cause the release of their contents. Examples: battery acid and phosphoric acid.

PRIMARY CONTAINMENT FACILITY. A tank, pit, container, pipe or vessel of first containment of a liquid or chemical.

RELEASE. Any unplanned or improper discharge, leak, or spill of a potential contaminant including a hazardous material.

SECONDARY CONTAINMENT FACILITY. A second tank, catchment pit, pipe, or vessel that limits and contains liquid or chemical leaking or leaching from a primary containment area; monitoring and recovery are required,

SHALLOW/SURFICIAL AQUIFER. An aquifer in which the permeable medial (sand and gravel) starts at the land surface or immediately below the soil profile.

SPILL RESPONSE PLANS. Detailed plans for control, recontainment, recovery, and clean up of hazardous material releases, such as during fires or equipment failures.

TIME-OF-TRAVEL DISTANCE. The distance that groundwater will travel in a specified time. This distance is generally a function of the permeability and slope of the aquifer.

TIME OF TRAVEL ZONE (TOTZ). The area mapped pursuant to Oregon Health Division Delineation Certification #0002R which identifies the time it takes ground water to flow to a given well or wellfield.

WELLHEAD PROTECTION AREA. The surface and subsurface area surrounding a water well, spring or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach that water well, spring or wellfield.

Section 4.0 – Time of Travel Zones (TOTZ)

1. The DWP Overlay District includes two TOTZ: Zone A: 0-6 months and Zone B: all areas not included in Zone A. The locations of the TOTZ for each wellhead are shown on Drinking Water Protection Area Maps on file with the [jurisdiction].
2. The areas within specified wellhead TOTZ are those drinking water protection areas certified by the Oregon Health Division, under the Oregon Administrative Rules that apply to Oregon’s EPA-approved Drinking Water Protection Program, in Oregon Health Division Delineation Certification #0002R, March 18, 1999.
3. In determining the location of a property within a TOTZ, the following criteria shall apply:
 - a. The [name jurisdiction] Taxation maps shall be used as a base map with the addition of TOTZ boundaries.
 - b. That portion of a tax lot that lies within a TOTZ shall be governed by the restrictions applicable to that TOTZ.
 - c. Tax lots having parts lying within more than one TOTZ shall be governed by the standards of the more restrictive TOTZ.
4. Exception. The Director may waive the requirement that the more restrictive standards apply when all of the following apply:
 - a. Storage, use, handling, treatment, production, and/or transportation of hazardous materials will not take place within the portion of the tax lot having the more restrictive TOTZ standards; and
 - b. Storage, use, handling, treatment, production, and/or transportation of hazardous materials will not take place within 50 feet of the portion of the tax lot having more restrictive TOTZ standards; and
 - c. The tax lot is 20,000 square feet or larger.
 - d. A property owner may request the TOTZ be modified by submitting a Zone Change application to the [jurisdiction]. Any request for modification of the TOTZ shall be accompanied by certification of the TOTZ as proposed to be modified by the Oregon Health Division, under the Administrative Rules that apply to Oregon’s EPA-approved Drinking Water Protection Program.

Section 5.0 – Review Procedures

1. A Drinking Water Protection Overlay District Development Application shall be submitted in instances (a) through (d) that include storage, use, handling, treatment, production, and/or transportation of hazardous materials or which increase the quantity of hazardous materials used or produced within the DWP Overlay District.
 - a. when there is a change of use, occupancy or tenancy of a property, including but not limited to a change from vacant to occupied;
 - b. during the Building Permit process;
 - c. when there is an internal alteration of a building that does not require a Building Permit; or
 - d. in conjunction with any development application including but not limited to Site Plan review and Minimum Development Standards.

2. DWP Overlay District applications shall be reviewed under Type II procedures (as defined in *Model Development Code & User's Guide for Small Cities*). Development approval within the DWP Overlay District shall be obtained before any change of use, construction, storage or development begins.

3. Applications shall include the following information:
 - a. Hazardous Material Inventory Statement and, upon request from the [Director], a Material Safety Data Sheet for any or all materials entered in the Statement. Hazardous material weights shall be converted to volume measurement for purposes of determining amounts - 10 pounds shall be considered equal to 1 gallon in conformance with Uniform Fire Code 8001.15.1;
 - b. a list of the chemicals to be monitored through the analysis of groundwater samples and a monitoring schedule if ground water monitoring is anticipated to be required;
 - c. a detailed description of the activities conducted at the facility that involve the storage, handling, treatment, use or production of hazardous materials in quantities greater than the maximum allowable amounts as stated in Section 6, 2.c;
 - d. a description of the primary and any secondary containment devices proposed, and, if applicable, clearly identified as to whether the devices will drain to the storm or sanitary sewer;
 - e. a proposed Hazardous Material Management Plan for the facility that indicates procedures to be followed to prevent, control, collect and dispose of any unauthorized release of a hazardous material;
 - f. a description of the procedures for inspection and maintenance of containment devices and emergency equipment;
 - g. a description of the plan for disposition of unused hazardous materials or hazardous material waste products over the maximum allowable amounts including the type of transportation, and proposed routes.

4. For those development proposals requiring Site Plan Review or Minimum Development Standards review as specified in [reference appropriate section] of this Code, applications may be submitted concurrently.
5. A complete DWP Overlay District Development application together with all required materials shall be accepted by the [Director] prior to the review of the request as specified in [reference appropriate code section], Application Submittal.
6. The [Director] shall review the application and make a decision on the application after consulting with the [list appropriate officials, building, fire, etc.]

Section 6.0 – Use Provisions

1. ZONE A - DRINKING WATER CRITICAL IMPACT ZONE.

- a. Encouraged Uses. Provided they meet appropriate performance standards outlined in 2c below and are designed so as to prevent any groundwater contamination:
 - i. Parks, greenways, or publicly-owned recreational areas.
 - ii. Necessary public utilities/facilities.
- b. Special Exceptions. The following uses are permitted only under the terms of a special exception and must conform to provisions of the underlying zoning district and meet the performance standards outlined in 2(c) below.
 - i. Expansion of existing nonconforming uses to the extent allowed by the underlying district. (NOTE: consult local plan for nonconforming uses and standards and criteria for their expansion.) The [Council/Planning Commission] shall not grant approval unless it finds such expansion meets the criteria for nonconforming uses and in addition does not pose greater potential contamination of groundwater than the existing use.

- c. Prohibited Uses. The following uses are prohibited within Zone A, the 6-month time-of-travel zone. (NOTE: this is typically within about 1000 feet of the public water supply well.)
- Automobile body/repair shop;
 - Gas station;
 - Fleet/trucking/bus terminal;
 - Dry cleaner;
 - Electrical/electronic manufacturing facility;
 - Machine shop;
 - Metal plating/finishing/fabricating facility;
 - Chemical processing/storage facility;
 - Wood preserving/treating facility;
 - Junk/scrap/salvage yard;
 - Mines/gravel pit (unless zoned EFU and permitted under ORS 215.248);
 - Irrigated nursery/greenhouse stock (unless zoned EFU);
 - Confined animal feeding operations (unless zoned EFU);
 - Land divisions resulting in high density (>1/acre) septic systems;
 - Equipment maintenance/fueling areas;
 - Injection wells/dry wells/sumps;
 - Underground storage tanks, (except those with spill, overflow, and corrosion protection requirements in place);
 - All other facilities involving the collection, handling, manufacture, use, storage, transfer or disposal of any solid or liquid material or waste having potentially harmful impact on groundwater quality;
 - All uses not permitted or not permitted as special exceptions.

2. ZONE B. Zone B is established as the remainder of the wellhead protection area not included in Zone A.

- a. Permitted Uses: All uses permitted in the underlying zoning districts provided that they can meet the Performance Standards as outlined for the Wellhead Protection Area District.

- b. Special Exceptions: All special exceptions allowed in underlying districts may be approved by the [Council/Planning Commission] provided they can meet performance standards outlined for the Wellhead Protection Area District.
- c. Performance Standards: The following standards shall apply to uses in Zones A and B of the Drinking Water Protection Area District:
 - i. Any facility involving the collection, handling, manufacture, use, storage, transfer or disposal of any solid or liquid material or wastes, except those facilities associated with Farm Practices as defined in ORS 30.930 in an Exclusive Farm Use Zone and to the extent prohibited by SB 3486 (pesticide use and sale) and Confined Animal Feeding Operations (CAFOs), in excess of 1,000 pounds and/or 100 gallons, which has the potential to contaminate groundwater, must have a secondary containment system which is easily inspected and whose purpose is to intercept any leak or release from the primary containment vessel or structure. Underground tanks or buried pipes carrying such materials must have double walls and inspectable sumps.
 - ii. Open liquid waste ponds containing materials referred to in item (i) above will not be permitted without a secondary containment system.
 - iii. Storage of petroleum products in quantities exceeding fifty-five (55) gallons at one locality in one tank or series of tanks must be in elevated tanks; such tanks must have a secondary containment system noted in item (1) above where it is deemed necessary by [city engineer].
 - iv. All permitted facilities must adhere to appropriate federal and state standards for storage, handling and disposal of any hazardous waste materials.
 - v. A contingency plan acceptable to [planning official] for all permitted facilities must be prepared for preventing hazardous materials from contaminating the shallow/surficial aquifer should floods, fire, or other natural catastrophes, equipment failure, or releases occur:
 - (a) For flood control, all underground facilities shall include but not be limited to a monitoring system and secondary standpipe above the 100 year flood control level, for monitoring and recovery. For above ground facilities, an impervious dike, above the 100 year flood level and capable of containing 100 percent of the largest volume of storage, will be provided with an overflow recovery catchment area (sump).
 - (b) For fire control, plans shall include but not be limited to a safe fire fighting procedure, a fire retarding system, effective containment of any liquid runoff, and provide for dealing safely with any other health and technical hazards that may be encountered by disaster control personnel in combating fire. Hazards to be considered are pipes, liquids, chemicals, or open flames in the immediate vicinity.
 - (c) For equipment failures, plans shall include but not be limited to:
 - Below ground level, removal and replacement of leaking parts, a leak detection system with monitoring, and an overflow protection system.
 - Above ground level, liquid and leaching monitoring of primary containment systems, their replacement or repair and cleanup and/or repair of the impervious surface.

- (d) For any other release occurring, the owner and/or operator [as specified in the contingency plan] shall report all incidents involving liquid or chemical material to the designated wellhead protection spill coordinator at the [appropriate office location].
- vi. Since it is known that improperly abandoned wells can become a direct conduit for contamination of groundwater by surface water, all abandoned wells should be properly plugged according to Oregon Water Resources Department regulations.

Section 7.0 - City/County Liability

1. Warning and Disclaimer of Liability. The degree of aquifer protection required by this Article in the areas designated in Section [X – Time of travel zones section] is based on scientific and engineering considerations. The nature of these considerations is such that the exact boundaries of Time of Travel Zones (TOTZ) have an associated uncertainty that renders conclusions based on them to be estimates. Under no conditions should this Article be construed to guarantee the purity of the ambient ground water or guarantee the prevention of ground water contamination. Therefore, this Article shall not create liability on the part of the [jurisdiction], or any [jurisdiction] personnel, for any contamination that may result from reliance on this Article or any administrative decision made under this Article.

Section 8.0 - Enforcement

Reference to appropriate section of the Development Code (see 4.4.5 of this guidebook).

Section 9.0 - Saving Clause

1. Should any section or provision of this ordinance be declared invalid, such decision shall not affect the validity of the ordinance as a whole or any other part thereof.

4.3.9(c) Hillside Development (Steep Slopes)

Problem

Development on hillsides and/or areas defined as steep slopes poses a high risk of erosion, and an increased risk of land slides both during and after construction. Sedimentation resulting from erosion can be particularly detrimental to stream water quality and wildlife, since the upper reaches of streams (if accessible) are important spawning and rearing areas for fish and an important source of cold, clean water. Many local development codes do not adequately regulate development on steep slopes, thus resulting in degradation of water quality and endangerment of public safety through the increased likelihood of landslides.

Objective

To regulate development on hillsides in order to protect and enhance water quality and to protect public and private property from damage due to landslides.

Strategy

Implement the following model ordinance to regulate hillside development. Tailor the ordinance to meet local requirements, particularly the identification of drainage areas and the upper reaches of streams.

Discussion

Implementation of this model ordinance requires that “steep slopes” and “constrained slopes” be defined and mapped. This model ordinance uses a wide range of percentages for both steep slopes and constrained slopes to fit with the local topography and development history. Two classes of slopes are used to allow a jurisdiction the flexibility of different levels of development based on the slope. Another, more restrictive, option would be to classify everything as a steep slope above 15 or 20 percent and use just the steep slope standards found in this ordinance.

Other issues to be resolved in this ordinance include the provision for maximum impervious surfaces (IV.A.3.a), the limitation of residential density (IV.C.1) and the amount of density transfer allowed (IV.C.3). A community must look carefully at how much density they allow to be transferred and where are the potential impacts to the “receiving” area or lands. See Section 4.3.2 for more information on density transfer.

Model Hillside and Erosion Control Overlay [HS]

- I. Purpose. The purpose of this overlay district is to promote the public health, safety, water quality and general welfare. Provisions under this section are designed to:
 - A. Restrict or prohibit uses, activities or development which is damage-prone or damage-inducing to the land or to water quality.
 - B. Require uses vulnerable to landslides, including public facilities which serve such uses, to be protected at the time of initial construction.
 - C. Allow the development of land only for those uses which are suitable on steep slopes.
 - D. Maintain land and water quality by minimizing erosion and sedimentation, and by restricting or prohibiting development, excavation and vegetation removal in areas with constrained or steep slopes.
 - E. Comply with Statewide Planning Goals 6 (Air, Water and Land Resources Quality) and 7 (Natural Hazards).

II. Areas of Application. The Hillside and Erosion Control Overlay District shall apply to land on slopes of [15-35] percent or greater or unconstrained slopes within [30] feet of the top of escarpments associated with rivers or streams. (note – if implementing the extended model buffer ordinance in Section 4.2.8(a) (Riparian Overlay) of this guide book, then the 30 foot setback should be coordinated with the provisions of that ordinance.)

A. Delineation of Boundaries.

The Hillside and Erosion Control Overlay District shall be mapped generally by the [jurisdiction], and shall consist of Steep Slope and Constrained Slope areas.

1. Steep Slope areas include all areas in the [jurisdiction] where the slope of the land is [15-35] percent or greater.
2. Constrained slope areas include all areas where the slope of the land is between [beginning at 15-20 and ending at 25-35] percent.
3. These areas are associated primarily, but not exclusively, with the [list significant drainages and streams in the jurisdiction].
4. Specific determination of Steep Slope and Constrained Slope areas shall be made at the time of a development proposal by the applicant for alteration or development for the respective properties within the Hillside and Erosion Control Overlay District, based on the topographic map and field survey.
5. Areas subject to the restrictions and prohibitions of this overlay district are indicated on the map entitled "[jurisdiction] Slope Map" on file with the [jurisdiction].
 - a. Where development, excavation or vegetation removal is proposed for areas with [the minimum defined for constrained slopes] percent or greater slope, an on-the-ground topographical survey shall be prepared for the entire site. The survey shall show trees or tree clusters and 2 foot contours, and shall be provided by the property owner or applicant for development approval.
 - b. Areas with [as defined for constrained slopes above] percent slopes, and areas with [as defined as steep slopes above] percent or greater slopes, shall be specifically indicated on the required survey maps.

B. Warning and Disclaimer of Liability.

The degree of landslide protection required by this ordinance is considered reasonable for regulatory purposes, and is based on common engineering and scientific practices . Landslides may occur on rare occasions in areas outside of the delineated Steep Slope and Constrained Slope boundaries. This Ordinance does not imply that areas outside the Hillside and Erosion Control Overlay District boundaries, or land use permitted within such boundaries, will be free from significant mass movement or landslide damage. This Section shall not create [jurisdiction] liability for damage resulting from reliance on the provisions of this Section or any administrative decision lawfully made thereunder.

III. Permitted Uses

- A. Steep Slope [as defined above] or unconstrained slopes within [30] feet of the top of escarpments associated with rivers or streams.
 - 1. Open space and trails as designated by the [comprehensive plan] provided they are constructed consistent with standards on file with the [jurisdiction].
 - 2. Removal of refuse and unauthorized fill.
 - 3. Removal of nuisance or invasive plant species, or planting of approved vegetation species on the [Native] Plant List kept on file at the [jurisdiction].
 - 4. Removal of dead or dying trees that are an imminent danger to public safety as determined by the [Director].
 - 5. Construction of roads designated in the Transportation System Plan and public utilities necessary to support permitted development on slopes of [the minimum defined for constrained slopes] percent or less, subject to construction standards on file in at the [jurisdiction].
 - 6. Expansion of existing roadways and public utility facilities necessary to support permitted development on slopes of [the minimum defined for constrained slopes] percent or less, subject to construction standards on file in at the [jurisdiction].

- B. Prohibited uses on slopes of [the minimum defined for steep slopes] percent or greater, unless specifically permitted under Section IV:
 - 1. Man-made structures except as described in IV.C.4.
 - 2. Vegetation removal not specifically allowed under sub-section III A.
 - 3. Road construction not specifically allowed under sub-section III A.
 - 4. Excavation.

- C. Uses Permitted - Constrained Slope [as defined above].
 - 1. Open space.
 - 2. Any use in the underlying district provided the standards of Section IV are met.
 - 3. Removal of nuisance or invasive plant species, or planting of approved vegetation species on the [Native] Plant List and kept on file at the [jurisdiction].

IV. Hillside Development Standards.

A. Standards.

1. The property shall have access to a public street or to a private street connected to a public street. All streets shall be built to a width and street improvement standard acceptable to the [jurisdiction]. The parcel can be adequately served by [municipal] water supply and sanitary sewer systems or meets applicable state standards for individual sewage disposal systems.
2. Where slopes are [the minimum defined for steep slopes] percent or greater, or on unconstrained land within [30] feet of the top of escarpments associated with rivers or streams, grading, approved vegetation removal, site preparation and construction shall be prohibited, except where necessary to provide access or utilities to buildable lots with slopes of [as defined for constrained slopes] percent or less.
 - a. Land with slopes of [the minimum defined for steep slopes] percent or greater shall be conserved and maintained as open space. This may occur through private ownership, through private conditions, covenants and restrictions, through conservation easements enforceable by the [jurisdiction] or other public or private nonprofit agency, or where approved by the [City/County Council/Commission], dedication to the [jurisdiction] or donation to other appropriate public or private nonprofit agency.
 - b. Disturbed areas shall be replanted in approved [native] vegetation and tree cover.
3. Where development is proposed on slopes of [the minimum defined for constrained slopes] percent or greater:
 - a. The impervious surface area of any residential lot or commercial or industrial site (including driveways, sidewalks, structures, swimming pools, and any other area not covered by vegetation) shall not exceed [30] percent of the constrained [as defined for constrained slopes] slope area;
 - b. Development shall not result in cuts or fills in excess of three (3) feet except for basement construction unless specifically approved by the [Director].
 - c. At least half the constrained slope area shall remain in, or be planted in, approved native vegetation. The existing tree canopy shall be retained wherever possible, and shall be considered in meeting this standard.
 - d. If development is proposed on constrained or steep slope areas, a mitigation plan for disturbed areas on constrained or steep slope areas shall be prepared and implemented. This plan shall provide for the replanting and maintenance of approved native plant species designed to achieve pre-disturbance conditions.

4. The applicant's engineering plans shall certify that runoff and sedimentation from the site will not increase more than [10%] above conditions present on the site as of [effective date of ordinance].
 5. The applicant's engineer shall provide a construction erosion control plan and water quality plan, consistent with the provisions of Section [X – cross reference to appropriate Code section] [and consistent with the DEQ's or jurisdiction's NPDES stormwater control program].
- B. Submission Requirements. For the purpose of minimizing landslide hazards, and where development is proposed on slopes of [as defined for constrained slopes] percent or greater, the [Director] shall require submission of the following special reports, prepared by professionals in their respective fields:
1. Hydrology and Geology Report. This report is required for subdivisions with [25] lots or more. This report shall include information on the hydrological activities of the site, the effect of hydrologic conditions on the proposed development, and any hydrological or erosion hazards. This report shall also include geological characteristics of the site, its suitability for development, its carrying capacity, and any geological hazard that might present a hazard to life and property, or adversely affect the use or stability of a public facility or utility.
 2. Soils Report. A soils report is required for all new development. This report shall include information on the nature, distribution and strength of existing soils, the adequacy of the site for development purposes, and an assessment of grading procedures required to impose the minimum disturbance to the natural state.
 3. Grading Plan. The grading shall be specific to a proposed physical structure or use and shall include information on terrain (two-foot contours), drainage, direction of drainage flow, location of proposed structures and existing structures which may be affected by the proposed grading operations, water quality facilities, finished contours or elevations, including all cut and fill slopes and proposed drainage channels. Project designs including but not limited to locations of surface and subsurface devices, walls, dams, sediment basins, storage reservoirs, and other protective devices shall form part of the submission. The grading plan shall also include a construction phase erosion control plan and a schedule of operations and shall be prepared by a professional engineer registered in Oregon.
 4. Vegetation Report. This report shall consist of a survey of existing vegetative cover, whether it is native or introduced, and how it will be altered by the proposed development. Measures for re-vegetation with approved native plant species will be clearly stated, as well as methods for immediate and long-term stabilization of slopes and control of soil erosion. The vegetation report shall be prepared by a landscape architect, landscape designer, botanist, arborist, or natural resource planner with specific knowledge of native plant species, planting and maintenance methods, survival rates, and their ability to control erosion and sedimentation. The applicant will be responsible for replacing any [native] plant species that do not survive the first two years after planting.

5. Design Standards. The required reports shall include design standards necessary for the engineer and landscape expert to certify that development on slopes of [the minimum as defined for constrained slopes] percent or greater, when combined with impacts from development of lesser slopes, will not increase runoff, sedimentation to affected streams or wetlands, erosion, or landslide potential more than [10%] above base conditions. These requirements shall be incorporated as conditions into the final decision approving the proposed development.

C. Residential Density Allowance and Transfer Provisions.

1. Slopes of between [as defined for constrained slopes] percent: the maximum residential density allowed in constrained slopes areas shall be [70] percent of the [average] density otherwise permitted in the underlying residential zoning district. The remaining [30] percent of the otherwise permitted density may be transferred to buildable portions of the site (i.e., areas where slopes are less than 15 percent and outside of the 100-year floodplain).
2. Slopes of [minimum as defined for steep slopes] percent or greater: density may be transferred to buildable portions of the site (i.e., where slopes are less than 15 percent and outside the floodplain) at a rate of [one unit per steeply-sloped acre.]
3. The net increase in density as a result of density transfer shall not exceed [50] percent of the base density that would otherwise be allowed on buildable portions of the lot.
4. Exception: Each lot-of-record that has received planning approval from [jurisdiction], may have one dwelling unit, provided that the siting, engineering, erosion control, water quality and re-vegetation standards of Section IV have been fully satisfied. No new lot shall be approved for development which is exclusively on slopes of [the minimum defined as steep slopes] percent or greater.

V. Approval Procedure - Type II.

A. The [Director] shall approve new development for a single-family or two-family dwelling under the Type II procedure (as defined by the *Model Development Code and User's Guide for Small Cities*) within the Hillside and Erosion Control Overlay District only if the proposed use or structure meets all of these conditions:

1. Development standards are met as prescribed under section IV.
2. Adequate protection is utilized to minimize landslide and erosion hazards, consistent with Section [cross-reference to appropriate Code section as per Section IV.A.5 above].

3. The applicant provides assurances that development impacts will be minimized on slopes greater than [the minimum defined for steep slopes] percent, provided however, that a property owner shall not be denied the right to construct a single-family home on a residentially zoned, lot-of-record, approved by the [jurisdiction] prior to [effective date of ordinance].
4. Notwithstanding the provisions of Section [reference appropriate Code section on variances], Variance, an adjustment of up to [50] percent from any dimensional standard in the underlying zoning district may be approved under Type I procedure, where necessary to avoid construction on slopes of [the minimum defined for steep slopes] percent or greater or to meet the standards of Section IV.
5. It is in conformance with the provisions of the [jurisdiction] Development Code .

B. The [Director] shall determine the final boundaries of constrained slope and steep slope areas based on topographical information provided by an engineer or surveyor registered in Oregon. The applicant shall be responsible for submitting such information.

VI. Approval Procedure - Type 3. The [Planning Commission] shall approve new developments for more than one single-family or two-family dwelling within the Hillside and Erosion Control Overlay District under a Type 3 procedure provided that the proposed use or structure meets all of these conditions:

- A. Development standards are met as prescribed under Section IV.
- B. Adequate protection is utilized to minimize landslide and erosion hazards, consistent with Section [cross-reference to appropriate Code section as per Section IV.A.5 above].
- C. It is in conformance with the [jurisdiction's] Comprehensive Plan, and [jurisdiction's] Development Code, [provided, however, that policies in the Comprehensive Plan will not be used to discourage needed housing, or to unreasonably increase cost or review time].

4.3.9(d) Floodway and Floodplain Overlay District

Problem

Most of Oregon's flood prone communities participate in the National Flood Insurance Program (NFIP). In exchange for implementation and enforcement of floodplain development ordinances, local governments ensure that flood insurance is available to community residents. Communities participating in the NFIP must also designate a floodway to avoid significantly increasing upstream flood elevations. A floodway is defined as the river channel and floodplain that must remain unobstructed in order to discharge the base flood without increasing flood levels by more than one foot. Construction within the floodway is well regulated, but development in the floodplain may not be. In addition, some local flood hazard ordinances may be out of date, requiring updating to protect private and public property from flood hazards and aid in the protection and enhancement of water quality.

The floodplain serves as natural storage for flood waters, protecting downstream development by decreasing the velocity of runoff and lengthening the amount of time it takes for water to flow downstream. An intact, natural floodplain improves water quality in the same way. Decreased velocity reduces erosion and the lengthening of the runoff period decreases the severity of the flood. Building impervious surfaces in a floodplain disrupts the natural function of the floodplain, and leads to decreased water quality, loss of fish and wildlife habitat/refuge and increased property damage. Unfortunately, floodplains are some of the least costly land to build on, and have been mostly built out in many communities.

Objective

To protect and enhance water quality, preserve fish and wildlife habitat/refuge and to decrease property damage by better regulating development within the floodplain and prohibiting development in the floodway.

Strategy

Update the community's flood hazard ordinance using the model FEMA ordinance found in the appendix. The model establishes the minimum ordinance language needed for a community to participate in the National Flood Insurance Program. Supplement the model ordinance with the following water quality provisions to help protect and enhance water quality. If the community's flood hazard ordinance is up to date, the following additions can be made to the existing ordinance with a minimal amount of effort.

Note: The parenthetical references refer to the model FEMA ordinance found in the` appendix.

Statement of Purpose (Section 1.3 in the FEMA model ordinance)

Add language to the purpose section of the floodplain ordinance specific to the water quality issues associated with flooding:

To protect and enhance water quality by restricting or prohibiting uses which cause increased flood heights or velocity or lead to increased erosion on site or downstream.

Area of Flood Hazard (Section 3.2 in the FEMA model ordinance)

To participate in the National Flood Insurance Program, local governments must include a reference to the Flood Insurance Administration's (FIA's) Flood Insurance Study and the Flood Insurance Rate Maps in their flood development ordinance. Many of these maps are almost 20 years old and do not reflect flood hazards associated with new development. To better protect the community from flooding and to achieve water quality goals, a community might include a broader area for floodplain management based on historic flood records, including aerial photos.

The Ordinance shall apply to all areas of special flood hazard areas within [jurisdiction]. The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled *The Flood Insurance Study for the [jurisdiction]* dated [list date] and as amended, with accompanying Flood Insurance Maps, as amended are hereby adopted by reference and declared to be a part of this ordinance. The flood hazard areas also include areas identified and mapped by [jurisdiction] that were not studied by the Flood Insurance Administration. The report and maps are incorporated in the overlay zone by this reference and are on file [list location of maps].

Floodways (Section 5.3 in the FEMA model ordinance)

The current NFIP regulations require different treatment of development in floodways versus floodplains. These could be treated differently by local governments to address water quality concerns.

Floodways are those areas closest to the stream channel, and thus development in this area has the greatest impact on flooding and water quality. Federal regulations require an engineering certification that development in the floodway area will cause no rise in the base flood elevation. Some communities have gone beyond this general requirement by prohibiting any development or "encroachment" in the floodway area. In effect, establishing a setback requirement for new development.

Above ground structures are not allowed in the [jurisdiction] floodway as delineated by the Federal Emergency Management Agency on [date of floodway map].

In some cases, local governments allow no development in floodways with the exception of local public works activities (utilities, bridges...). The following language provides an exception for public works activities:

Floodways are established in Special Flood Hazard areas to transport the waters of a 100-year flood out of the community as quickly as possible with minimal flood damage. Floodways are most often mapped in urban areas, including in small cities. Encroachments on the floodway generally produce a rise in base flood elevation and contribute to other hydraulic problems. Accordingly [jurisdiction] prohibits encroachment on designated floodways except for public works projects pursuant to section [xx] (below).

[Jurisdiction] recognizes that utilities, flood prevention structures and improvement projects that are in the public's best interest must sometimes encroach on designated floodways. In compliance with Federal Emergency Management Agency requirements, (44 CFR s. 65.12), [jurisdiction] will permit floodway encroachments under the following conditions:

- (1) the [jurisdiction] finds that the proposed public works project is in the public interest; and
- (2) FEMA has approved the proposed project.

In no instance shall the proposed development result in any increase in flood levels during the occurrence of the base flood discharge.

Encroachments (Section 5.4 in the FEMA model ordinance)

The model FEMA ordinance requires that proposed development within areas of special flood hazard not increase the surface elevation of the base flow more than one foot. Some jurisdictions allow only a 0.1-foot rise or 0.5-foot rise. Another option is to maintain a strict zero-rise standard to avoid cumulative impacts from many developments in the Flood Hazard area. These lower allowed flood elevations result in wider floodways. Wider floodways result in less streamside development, which benefits water quality.

The cumulative effect of any proposed development within the areas of special flood hazard established in Section 3.2 of this ordinance shall not increase the water surface elevation of the base flood at any point.

Prohibited Uses

The FEMA model ordinance does not include a list of prohibited uses. There are certain uses that a community may want to prohibit from the area of special flood hazard. Generally these uses will be similar to those prohibited in the Drinking Water Protection Overlay found in 4.2.8(b) of this guidebook.

The following uses are prohibited from the area of special flood hazards as defined 3.2 of this ordinance:

- Automobile body/repair shop;
- Gas station;
- Fleet/trucking/;
- Dry cleaner;
- Electrical/electronic manufacturing facility;
- Machine shop;
- Metal plating/finishing/fabricating facility;
- Chemical processing/storage facility;
- Wood preserving/treating facility;
- Junk/scrap/salvage yard;
- Mines/gravel pit (unless zoned EFU and permitted under ORS 215.248);
- Irrigated nursery/greenhouse stock (unless zoned EFU);
- Confined animal feeding operations (unless zoned EFU);
- Land divisions resulting in high density (>1/acre) septic systems;
- Equipment maintenance/fueling areas;
- Injection wells/dry wells/sumps;
- Underground storage tanks, (except those with spill, overflow, and corrosion protection requirements in place);
- All other facilities involving the collection, handling, manufacture, use, storage, transfer or disposal of any solid or liquid material or waste having potentially harmful impact on groundwater quality;
- All uses not permitted or not permitted as special exceptions.

44.3.9(e) Wetland Protection Overlay

Problem

Many communities rely on the Oregon Division of State Lands (DSL) to designate and regulate wetlands. The DSL's jurisdiction over wetlands is limited to regulation of fill and removal activities in the wetland itself. The regulations permit fill to be placed in wetlands if the loss is mitigated. DSL does not have jurisdiction over vegetation removal, or any buffer that may be needed to preserve wetland functions.

Oregon State Land Use Planning Goal 5 directs local governments to protect significant wetlands from urban impacts. Goal 5 requires that local communities complete a "Local Wetlands Inventory" (LWI) that identifies all wetlands and characterizes them by their condition and function. Significant wetlands must then be identified using criteria adopted by the DSL (see OAR 141-086-0350 for a list of the criteria) and programs to protect significant wetlands must be developed. The significance of a wetland is determined largely by the habitat and water quality functions the wetland provides. In some cases these functions can be compromised if urban development is allowed up to the edge of the wetland. The standard Goal 5 process requires an economic, social, environmental, and

energy (ESEE) analysis, to determine appropriate protection measures. State land use laws, however, provide a safe harbor option for protecting significant wetlands. The safe harbor does not protect wetland buffers. If adopted under Goal 5 rules, restrictions on development adjacent to significant wetland would need to be justified under an ESEE analysis.

It may also be possible to address wetland and wetland buffer protection under the water quality provisions of Goal 6. It is well established that wetlands serve an important function in preserving the natural hydrology of a watershed. However, a connection must be made between protecting wetland function in a watershed and protecting water quality. Findings to justify protection of wetlands under Goal 6 would need to be established. DSL's Oregon Freshwater Wetlands Assessment Methodology and the state criteria for determining wetlands significant for water quality (see OAR 146-086-0350) provides guidance for this type of assessment.

NMFS has identified a local wetlands protection program, which includes buffers as a criterion for a limitation on take (See Chapter 2).

Objective

Protect wetlands and wetland function through a protection overlay that includes a wetland buffer to protect and enhance water quality and aquatic habitat.

Strategy

Implement the following model ordinance to meet Goal 5 safe harbor requirements for protecting locally significant wetlands. Using the ESEE analysis process, identify appropriate protection measures for upland areas that serve to protect wetland functions from urban impacts. Alternatively, use the following model ordinance to meet Goal 6 requirements based on findings that wetland protection is necessary for meeting water quality standards or load allocations issued under a TMDL.

Discussion

The following model ordinance includes a wetland buffer as a component of the wetland protection area. A wetland buffer is excluded from the safe harbor provisions of Goal 5. Therefore, specific findings will need to be made, using an ESEE analysis, to protect wetland buffers around some or all wetlands. The more weight that is given to aquatic habitat needs in the analysis, the more likely the resulting program will meet the wetland protection criterion for limitation on take in the 4(d) rule for salmon and steelhead.

If a community chooses not to address wetland buffers, this model ordinance can be used to meet the safe harbor requirements of Goal 5 by not including the language italicized and within brackets.

The implementation of this ordinance requires the completion of a Local Wetlands Inventory as prescribed in the Goal 5 rule. This inventory should be referenced in the Comprehensive Plan. An example can be found in Chapter 3 - Model Comprehensive Plan under Goal 5.

WETLAND PROTECTION AREAS

I. Wetland Protection Areas, Purposes

The purposes of establishing wetland protection areas are:

- (1) To implement the goals and policies of the [jurisdiction] Comprehensive Plan and achieve their purposes.
- (2) To protect and restore [jurisdiction's] wetland areas, thereby protecting and restoring the hydrologic, ecologic, and land conservation functions these areas provide for the community.
- (3) To protect fish and wildlife habitat, enhance water quality, control erosion and sedimentation, and reduce the effects of flooding.
- (4) To protect and restore the natural beauty and distinctive character of [jurisdiction's] wetlands as community assets.
- (5) To enhance the value of properties near wetlands by utilizing the wetland as a visual amenity.
- (6) To enhance coordination among local, state, and federal agencies regarding development activities near wetlands.

II. Wetland Protection Areas, Definitions

The following definitions shall apply to Sections I through XI, "Wetland Protection Areas":

Wetland - An area inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and which, under normal circumstances, does support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Locally significant wetland - Locally significant wetlands are as determined by OAR 141-86-350.

Local Wetlands Inventory (LWI) – Maps and report entitled [list report that inventories wetlands] and any subsequent revisions as approved by the Oregon Division of State Lands.

Oregon Freshwater Wetland Assessment Methodology (OFWAM) - A wetland function and quality assessment methodology developed by the Oregon Division of State Lands.

Wetland buffer area - An area, identified and recorded through an ESEE process, surrounding or adjacent to a locally significant wetland.

Wetland protection area - An area that includes any wetland determined to be locally significant [*plus its wetland buffer area*].

Jurisdictional delineation - A delineation, approved by the Oregon Division of State Lands, and the U.S. Army Corps of Engineers if required, of the wetland boundary.

III. Determination of Local Significance for Wetlands

A determination of locally significant wetlands has been made by the [jurisdiction] in accordance with rules adopted by Division of State Lands (OAR 141-086-3000, and are identified on [Name locally significant wetland inventory map for the jurisdiction].

IV. Determination of a Wetland Buffer Area

A determination of the wetland buffer area shall be made by the [jurisdiction] through an ESEE decision process as described in OAR 660-02-0040. The wetland buffer area shall be identified on a “Wetland Buffer Map” that includes all locally significant wetlands and their buffer areas. The map shall be kept available at the [jurisdiction] for reference. Upon approval of the ESEE decision process the provisions of Sections I through XII “Wetland Protection Areas” shall apply to the identified wetland buffer areas.]

V. Wetland Protection Areas, Applicability

A. The provisions of Sections I through XII, “Wetland Protection Areas,” shall be applied to any property or parcel containing wetlands identified as being locally significant [*and the areas identified on the Wetland Buffer Map*]. The provisions shall apply regardless of whether or not a building permit, development permit, or plan authorization is required. The provisions do not provide any exemption from state or federal regulations. Sections I through XII, “Wetland Protection Areas,” shall take precedence over other wetland regulations or standards in specific area plans or applicable master plans.

B. Applications for plan authorizations (except Annexations), development permits, or building permits, and plans for proposed public facilities on parcels containing a wetland protection area, or a portion thereof, shall contain the following:

- (1) A jurisdictional delineation of the wetland boundary, approved by the Oregon Division of State Lands.
- (2) A to-scale drawing that clearly delineates the wetland boundary, the wetland buffer area, the surface water source, and existing trees and vegetation.

- C. When reviewing development permits or plan authorization applications for properties containing a wetland protection area, or portion thereof, the approving authority shall consider how well the proposal satisfies the purpose statements in Section I, “Wetland Protection Areas, Purposes,” in addition to any other required approval criteria.
- D. The [Planning Commission] shall be the approving authority for applications for exceptions to the Wetland Protection Area provisions. In addition to the provision of Sections [list appropriate sections of development code that deal with exceptions or variances] such a request shall be submitted to the Oregon Department of Fish and Wildlife for a mitigation recommendation pursuant to OAR 635-415 “Fish and Wildlife Habitat Mitigation Policy.”

VI. Wetland Protection Areas, Location

Wetland protection areas consist of locally significant wetlands [*plus the wetland buffers identified on the Wetlands buffer Map*].

VII. Permitted Activities Within Wetland Protection Areas

- A. Any use, sign, or structure, and the maintenance thereof, lawfully existing on the date of adoption of this ordinance, is permitted within a wetland protection area. Such use, sign, or structure may continue at a similar level and manner as existed on the date of adoption of this ordinance. The maintenance and alteration of pre-existing ornamental landscaping is permitted within a wetland protection area as long as no additional native vegetation is disturbed. The provisions of this section shall not be affected by any change in ownership of properties containing a wetland protection area.
- B. All plans for development and/or improvements within a wetland protection area shall be submitted to the Oregon Department of Fish and Wildlife for a mitigation recommendation pursuant to OAR 635-415 “Fish and Wildlife Habitat Mitigation Policy.” The following activities, and maintenance thereof, are permitted within a wetland protection area, if applicable permits from the Oregon Division of State Lands and the U.S. Army Corps of Engineers are obtained.
 - (1) Wetland restoration and rehabilitation activities.
 - (2) Restoration and enhancement of native vegetation.
 - (3) Cutting of trees which pose a hazard due to threat of falling, if the tree is left in the wetland protection area after felling; or removal of non-native vegetation, if replaced with native plant species at the same amount of coverage or density.
 - (4) Normal farm practices, other than structures, in existence at the date of adoption of the provisions herein, on land zoned for Exclusive Farm Use.
 - (5) Channel maintenance practices, other than structures, to maintain flow at original design capacity within a waterway, necessary to mitigate flooding, provided that management practices are used to minimize sedimentation and impact to vegetation.

(6) Replacement of a permanent legal nonconforming structure in existence at the date of adoption of this ordinance with a structure on the same building footprint, if it does not disturb additional area, and in accordance with the provisions of Sections [list sections of code related to nonconforming uses].

(7) Expansion of a permanent legal nonconforming structure in existence at the date of adoption of this ordinance, if the expansion area is not within the wetland protection area, and in accordance with the provisions of Sections [list sections of code related to nonconforming uses].

C. New fencing shall be permitted at the discretion of the [Planning Director or designee] in consultation with the [Director of Public Works] and applicable state and federal agencies. An application for new fencing within a wetland protection area shall contain a to-scale drawing that clearly depicts the wetland and wetland buffer area boundary on the entire parcel or parcels, and shall indicate why the proposal is necessary and how it minimizes intrusion into the wetland protection area.

VIII. Conditional Uses within Wetland Buffer Areas

A. The following activities, and maintenance thereof, are allowed within the wetland buffer area if compatible with Section I “Wetland Protection Areas, Purposes,” if no other options or locations are feasible, and if designed to minimize intrusion. Such activities shall be subject to approval of a Conditional Use Permit, which may be considered separately or in conjunction with another plan authorization review. The approving authority must determine that the proposal complies with at least one of the Conditional Use Permit criteria and the criteria of this paragraph. Applicable permits from the Oregon Division of State Lands and the U.S. Army Corps of Engineers shall be obtained. All development and improvement plans shall be submitted to the Oregon Department of Fish and Wildlife for a mitigation recommendation pursuant to OAR 635-415 “Fish and Wildlife Habitat Mitigation Policy.”

(1) Water-related or water-dependent uses as defined by [Department of Land Conservation and Development or jurisdiction], such as drainage facilities and irrigation pumps.

(2) Utilities or other public improvements.

(3) Streets, roads, or bridges where necessary for access or crossings.

(4) Public multi-use paths, accessways, trails, picnic areas, or interpretive and educational displays and overlooks, including benches and outdoor furniture.

IX. Prohibited Activities within Wetland Protection Areas

The following activities are prohibited within a wetland protection area, including the 50-foot wetland buffer area, except as permitted in Sections VI “Permitted Activities Within Wetland Protection Areas” and VII “Conditional Uses within Wetland Buffer Areas.”

- (1) Placement of new structures or impervious surfaces.
- (2) Excavation, grading, fill, or removal of vegetation, except for perimeter mowing for fire protection purposes.
- (3) Expansion of areas of pre-existing non-native ornamental landscaping such as lawn, gardens, etc.
- (4) Dumping, piling, or disposal of refuse, yard debris, or other material.
- [(5) Discharge of untreated stormwater]

[X. Wetland Buffer Areas, Reduction or Deviation

A request to deviate from the wetland buffer area, including buffer averaging, may be submitted for consideration by the [Planning Director or designee]. A deviation request may be approved as long as equal or better protection of the wetland will be ensured through a plan for restoration, enhancement, or similar means, and if applicable permits from the Oregon Division of State Lands and the U.S. Army Corps of Engineers are obtained. Such a plan shall be submitted to the Oregon Department of Fish and Wildlife for a mitigation recommendation pursuant to OAR 635-415 “Fish and Wildlife Habitat Mitigation Policy.” In no case shall activities prohibited in Section VIII (1) through (3) “Prohibited Activities Within Wetland Protection Areas” occupy the wetland or more than 50 percent of the wetland buffer area. The [Planning Commission] shall be the approving authority for applications to alter the buffer area.]

XI. Conservation and Maintenance of Wetland Protection Areas

When approving applications for the following plan authorizations: Land Divisions, Planned Unit Developments, Conditional Use Permits, and Exceptions, or for development permits for properties containing a wetland protection area, or portion thereof, the approving authority shall assure long term conservation and maintenance of the wetland protection area through one of the following methods:

- (1) The area shall be protected in perpetuity by a conservation easement recorded on deeds and plats prescribing the conditions and restrictions set forth in Sections I through XII, “Wetland Protection Areas,” and any imposed by state or federal permits; or,

- (2) The area shall be protected in perpetuity through ownership and maintenance by a private nonprofit association by conditions, covenants, and restrictions (CC&R's) prescribing the conditions and restrictions set forth in Sections I through XII, "Wetland Protection Areas," and any imposed by state or federal permits; or,
- (3) The area shall be transferred by deed to a willing public agency or private conservation organization with a recorded conservation easement prescribing the conditions and restrictions set forth in Sections I through XII, "Wetland Protection Areas," and any imposed by state or federal permits; or,
- (4) The area shall be protected through other appropriate mechanisms acceptable to the [jurisdiction] which ensure long-term protection and maintenance.

XI. Wetlands Notification to Oregon Division of State Lands

The Oregon Division of State Lands shall be notified in writing of all applications to the [jurisdiction] for development activities, including applications for plan authorizations, development permits, or building permits, and of development proposals by the [jurisdiction], that may affect any wetlands, creeks, or waterways identified on the Local Wetlands Inventory.