

## 3. The Comprehensive Plan

### 3.1 Introduction

The comprehensive plan provides the framework for protecting and enhancing water quality. All water quality provisions in the land development code should be supported by the appropriate comprehensive plan goals and policies. Oregon Statewide Planning Goal 2: Land Use Planning, indicates that, “all land use plans shall include identification of issues and problems, inventories and other factual information for each applicable statewide planning goal, evaluation of alternative courses of action and ultimate policy choices...” Many comprehensive plans already have provisions that support water quality ordinances, particularly if any Goal 5 work has been completed. In addition to Goal 5 there are a number of Statewide Planning Goals that have water quality components to them. Perhaps the best way to address water quality is not to rely on one or two goals, but to recognize that most of the goals are in some way related to water quality, and when used in concert, they form a powerful basis for water quality ordinances.

Due to the changing regulatory environment, acknowledged local comprehensive plans may not adequately address water quality. New DEQ rules and pending ESA regulations are good reasons to review and update portions of the comprehensive plan. In the end, local jurisdictions will need to determine how to best address water quality and habitat protection in conjunction with state and federal agencies. A review of the comprehensive plan may reveal areas that can be strengthened, or where a community dialogue needs to occur about the proper method of protecting and enhancing water quality.

### 3.2 Model Comprehensive Plan Language

The following section contains a list of the Statewide Planning Goals applicable to water quality. There is a brief description of the goal and how it relates to water quality. Model comprehensive plan language to implement the model ordinances found in this guidebook is provided for each goal. The model language includes a reiteration of the Statewide Goal, sample findings and sample policies. As with any model language, the statements provided here are for example purposes only, and by state law each community must have a dialogue about what policies are appropriate for the community.

Because this guidebook focuses on water quality, sample language is only provided for the water quality component of each goal. Since changes to comprehensive plans are often long and involved processes, a community may decide to make changes for components other than water quality, or may be required to do so as part of periodic review. In these cases there are other resources available to assist communities with all facets of the comprehensive plan.

#### Goal 4: Forest Lands

While this guidebook is primarily focused on urban areas, there may be some unincorporated communities that include forest lands and even cities that have forest lands in their boundaries. Goal 4 requires that forest practices and auxiliary uses allowed in forest lands follow the rules specified in ORS 527.722, the Forest Practices Act. The act states that if a local jurisdiction decides to regulate tree cutting or other forestry practices

within its boundaries, then the local jurisdiction must implement all of the Oregon Forest Practices Act. Many communities have decided to take this approach, including the Cities of Tillamook and Veneta. The Forest Practices Act requires that forest practices be conducted in a manner that protects streams, wetlands and water quality. Local protections may not fall below the requirements found in the act. A model ordinance for tree preservation that meets the requirements of the Forest Practices Act can be found in Chapter 4 (4.3.8).

**Goal**

To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water and fish and wildlife resources and to provide for recreational opportunities and agriculture.

**Findings**

The [jurisdiction] contains forest lands or large tracks of property that remain forested and that are beneficial to the water quality of the watershed.

The [jurisdiction] has a mature tree canopy that has a beneficial impact on water quality by increasing infiltration and slowing the rate of runoff and by cooling the temperature of water in streams.

Loss of trees in the [jurisdiction] can lead to decreased water quality through increased erosion, decreased infiltration and increased water temperature.

Regulation of tree cutting by the [jurisdiction] will require the [jurisdiction] to ensure that all forest operations are regulated to protect soil, air, water, and fish and wildlife resources.

**Policies**

The [jurisdiction] will develop and implement development code language that will regulate tree cutting and protect soil, air, water and fish and wildlife resources during forest operations.

**Goal 5 – Natural Resources, Scenic and Historic Areas, and Open Spaces**

Goal 5 has received much attention in the last few years. Administrative rules were adopted in August of 1996 that require local governments to inventory and evaluate Goal 5 resources, and develop land use programs that conserve and protect significant Goal 5 resources. The Goal 5 rules requires that a local inventory and protection strategy be developed for three Goal 5 resources by completion of the jurisdiction's next periodic review. These resources are:

- riparian corridors, including water and riparian areas and fish habitats;
- wetlands;
- wildlife habitat

Other Goal 5 resources related to water quality protection are:

- federal Wild and Scenic Rivers;
- Oregon Scenic Waterways;
- groundwater resources;
- natural areas; and
- other resources not related to water quality

The first step in the Goal 5 process is to conduct an inventory of all Goal 5 resources. Local governments must demonstrate that the inventory process was “adequate”, meaning that the location, quality and quantity of resources were identified. They must also demonstrate that the resources identified are “significant.” The same information relating to location, quality and quantity of the resource may be used to evaluate its significance, though cities and counties may apply their own additional criteria in this step. Cities and counties must then conduct an “ESEE” analysis, evaluating the environmental, social, energy and economic consequences of allowing, limiting or prohibiting conflicting uses near a Goal 5 resource. Areas where conflicting uses “could adversely affect” the Goal 5 resource must be delineated as “impact areas.” Goal 5 requirements are met when local governments have adopted “clear and objective standards” in their comprehensive plans that define the degree of protection for each Goal 5 resource.

Revised Goal 5 provisions include a “safe harbor” option for protection of riparian areas and wetlands. Safe harbors offer a more streamlined approach that local governments may use to achieve Goal 5 compliance for these resources.

For riparian corridors, the “adequacy” and “significance” determinations may be skipped in exchange for the adoption of specific setback requirements. These requirements consist of a 50-foot setback from all fish-bearing lakes and streams and a 75-foot setback from all streams with average annual stream flow greater than 1,000 cubic feet per second. These protective setbacks are both a minimum and a maximum and can be imposed without consideration of conflicting plan objectives.

For wetlands inside urban growth boundaries and urban unincorporated communities, a local government may adopt an ordinance that meets the requirements of OAR 660-023-0100(4)(b) in lieu of following the ESEE decision process. The safe harbor provisions for wetlands require local wetlands inventory (LWI) to be conducted using the standards and procedures of OAR 141-086-0110 through 141-086-0240 and that the LWI be adopted as part of the comprehensive plan or as a land use regulation. Criteria for determining “significance” are defined in OAR 141-086-0300. Significant wetlands must be protected from grading, excavation, placement of fill, and vegetation removal other than perimeter mowing and other cutting necessary for hazard prevention.

The safe harbor provisions for riparian corridors and wetlands implement specific requirements in Goal 5. They may not be sufficient to protect endangered fish and wildlife species, nor to meet DEQ water quality requirements.

*Goal*

To protect natural resources and conserve scenic and historic areas and open spaces.

**Findings**

The water resources and associated riparian vegetation in the jurisdiction contribute to the health, safety, and general welfare of the area. The stability of the natural systems and the vitality of the community depend on the excellent water quality provided by these resources. These resources include: (list resources).

Natural drainageways are a significant natural resource. They provide protection from flooding, treatment of stormwater, and help to maintain stream morphology.

Fish and other wildlife, some of which are endangered or threatened, depend on the excellent water quality and habitat function provided by these resources.

The storage capacity for stormwater provided by soil and its filtering function are essential to maintaining ground and surface water resources. These functions must be preserved or their loss mitigated.

*The municipal water supply is drawn from groundwater [and/or surface water] within the city and care must be taken to preserve this valuable resource.*

*The Local Wetlands Inventory, published [X, X, 200X] describes locally significant wetlands.*

**Policies**

Significant natural features within the [jurisdiction] shall be identified and inventoried by the [jurisdiction]. These shall include:

- Seasonal and perennial streams and other natural drainageways, wetlands, and flood plains;
- Lands abutting any significant rivers or streams (list significant rivers and/or streams)
- Lands with significant native vegetation as defined in the Oregon Natural Heritage Plan (1998), which may include certain woodlands, grasslands, wetlands, riparian vegetation, and plant species;
- Significant hillsides;
- Groundwater and surface water areas used for drinking water.

Rivers, streams and lakes shall be preserved and buffered as needed to protect their function.

Significant natural drainage features and wetlands shall be preserved or have their losses mitigated.

Site-specific buffering, setback requirements and best management practices may be required, as necessary, to enhance and protect resources.

To minimize the negative impacts of development, stormwater should be infiltrated on site to the greatest extent possible. Runoff that cannot be infiltrated shall be managed so that the hydrograph of the receiving stream is not significantly impacted and treated so water quality is maintained.

*Domestic groundwater and surface water resources shall be mapped and protected from potential pollution through a variety of regulatory measures relating to land use, transportation and hazardous substance management.*

If waterways or lakes within the [jurisdiction] are declared water-quality limited by the Oregon Department of Environmental Quality, the City will work with DEQ to determine appropriate pollutant load reduction strategies implementation plan in response to a Total Maximum Daily Load (TMDL) determination developed for the watershed.

Land use and development standards shall be utilized to avoid pollution of groundwater resources, including current and potential wellhead areas.

Locally significant wetlands mapped in the Local Wetlands Inventory shall be protected by buffers to preserve habitat and protect and enhance water quality.

The [jurisdiction] will identify highly sensitive habitat areas and areas that are significant for the protection of water quality for public purchase and ownership or for purchase and protection through existing conservancy programs.

## Goal 6 – Air, Water and Land Resources Quality

Unlike Goal 5, Goal 6 does not have administrative rules to set standards for meeting the goal. Instead, it relies entirely on other state and federal regulations for direction and implementation. However, for water quality purposes, Goal 6 has the potential for being the most important land use planning goal. The Goal requires that “all waste and process discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards.”

State definitions for wastewater and pollutants include pollutants carried by stormwater, and impacts on habitat that result from stormwater flows. Goal 6 requires jurisdictions to integrate compliance with federal and state water quality regulations with their comprehensive planning process.

### Goal

To maintain and improve the quality of the air, water and land resources of the state.

### Findings

According to the 2000 Section 303(d) List of Water Quality Limited Waterbodies published by the DEQ, the [X section of X river] is water quality limited for [pollutant] (repeat this finding as necessary)

The pollutant load allocation given to [jurisdiction] as a result of the TMDL for [pollutant] conducted by DEQ represents a [percentage] reduction from current levels. A significant portion of this load reduction must be achieved through changes in development practices. (repeat finding as necessary)

According to the National Marine Fisheries Service [X species] is listed as [threatened/endangered]. [Spawning/rearing/migration] habitat for [X species] is found within [jurisdiction].

According to the US Fish & Wildlife Service [X species] is listed as [threatened/endangered]. [Spawning/rearing/migration] habitat for [X species] is found within [jurisdiction].

Development activities permitted by [jurisdiction] which result in harm to an threatened or endangered species and fall outside the provisions for incidental take allowed by section 4(d), a section 7 consultation or a section 10 permit of the ESA, could result in the [jurisdiction] being held liable for a take under the ESA.

The DEQ definition of waste water includes both point and non-point sources. Waste water from a point source comes from a discernable or discrete conveyance such as a pipe, ditch or channel. Non-point source waste water is from overland flow which does not generally follow a defined channel, and includes storm water. Water pollution in the [jurisdiction] results from both point sources and non-point sources.

Reduction of open space, removal of vegetative cover, terracing into hillsides, and development that increases the amount of impervious surfaces can contribute significantly to increases in the peak flows of stormwater and decrease water quality.

Offsetting measures can reduce the negative effects of urban development on water quality and quantity. Examples include reduction of stormwater runoff or maximization of infiltration, inclusion of landscaped buffer strips adjacent to new development, protection of flood plains, preservation and improvement of streamside vegetation along watercourses and in wetlands, and other development best management practices (BMPs).

Effective utilization of urban services through more compact development and efficient site planning can help reduce the impacts of development on water quality by reducing the amount of low density development that could otherwise occur in natural areas.

### **Policies**

All development within the [jurisdiction] shall comply with applicable state and federal water quality regulations.

All development within the [jurisdiction] shall be constructed to preserve the quality and quantity of groundwater resources.

To protect and enhance water quality in [jurisdiction], as required by state and federal requirements, the [jurisdiction] will develop regulations or programs to manage non-point pollutants by:

- Regulating site planning for new development and construction to better control drainage and erosion and to reduce and treat and retain stormwater runoff;
- Increasing riparian area buffer widths where appropriate to address Total Maximum Daily Load (TMDL) requirements and other state and federal requirements;
- Regulating the location of permitted uses that may have higher than ordinary impacts on water quality, particularly those that generate, store or use hazardous waste or materials;
- Reducing street-related water quality and quantity problems;
- Increasing public awareness of techniques and practices private individuals can employ to help correct water quality and quantity problems;
- Increasing public awareness, minimizing the use, and encouraging the appropriate disposal of polluting substances that affect surface and groundwater resources;
- Regulating the cutting of trees and encouraging the reforestation and re-vegetation of appropriate areas in the [jurisdiction];
- Requiring certain new construction and improvements to have an erosion control plan to protect water quality.

The [jurisdiction] shall limit the increase in the percentage of impervious surfaces.

### **Goal 7 – Areas Subject to Natural Disasters and Hazards**

While Goal 7 does not point specifically towards the issue of water quality, Goal 7 compliance entails measures that will help improve water quality. This goal notes that comprehensive plans “should consider as a major determinant, the carrying capacity of the air, land and water resources...(and) should not exceed the carrying capacity of such resources.” In protecting against floods and other natural disasters, local governments may jointly address issues of water quality, such as limiting development within floodways and reducing impervious surfaces that increase runoff and flooding.

#### **Goal**

To protect life and property from natural disasters and hazards.

#### **Findings**

Hillside development changes the landscape and results in increased runoff, increased downstream peak flows and decreased water quality. Changes generally include the loss of trees and shrubs that intercept rainfall, and hillside cuts that can interup the flow of groundwater. Poor development practices on hillsides can require increased public expenditures for flood and erosion control, landslide clean up, stormwater management, and water quality treatment.

Increased amounts of stream sedimentation lead to a loss of in-stream storage of flood water, leading to widening of stream/river banks and more flooding.

The [jurisdiction] includes slope above [X%] that are considered steep and are not suitable for building. Other slopes between [X and X%] are considered constrained and require special consideration before, during and after development.

Urban development, without stormwater runoff mitigation techniques, can significantly increase stream flooding frequency and peak flows and may enlarge the 100-year flood plain areas.

To maintain habitat for many species the natural hydrology of the stream should be maintained, meaning that annual flow patterns should remain the same after development as before development.

The natural sinuosity of a stream and its associated wetlands provide essential flood storage capacity.

Many portions of the floodway fringe contain natural assets such as significant vegetation, wildlife, etc. and are valuable for water quality, open space and recreation purposes.

### **Policies**

Development on hillsides shall not endanger life and property nor land and aquatic resources determined to be environmentally significant.

On tree-covered hillsides, development shall be designed to preserve as many trees and as much natural vegetation as possible.

The development code will define steep and constrained slopes.

The [jurisdiction] shall require certain land disturbing activities associated with construction and improvements to employ erosion control practices to prevent increased stream sedimentation.

Steep and constrained slopes will be mapped by the [jurisdiction] for the purpose of creating a hillside protection overlay zone.

Standards for the hillside protection overlay will require utilization of construction techniques that reduce sediment transport and peak storm flows by minimizing erosion and surface water runoff.

Development in the floodway fringe shall be controlled by local regulations in order to minimize potential damage (on-site, upstream and downstream) to life and property, to allow for transport of flood waters; to protect and enhance water quality, and to protect the economic, environmental, and open space qualities of the land and adjacent water bodies.

To the extent possible, significant drainageways shall be kept in a natural state to reduce flooding, protect and enhance water quality, and protect and enhance native plant species.

Standards for new development will require stormwater runoff to be infiltrated or detained on site or stored and treated by a regional facility to preserve the natural hydrograph and water quality of the receiving stream.

### **Goal 8: Recreational Needs**

Goal 8 deals primarily with providing and planning for recreation areas, facilities and opportunities, including the siting of destination resorts. Two of the guidelines for Goal 8 lend themselves to the protection and enhancement of water quality as part of planning for recreational facilities. According to Goal 8, “Planning and provision for recreation facilities and opportunities should give priority to areas, facilities and uses that...minimize environmental deterioration.” In addition, “Plans which provide for satisfying the recreation needs of persons in the planning areas should consider as a major determinant, the carrying capacity of the air, land and water...”

#### **Goal**

To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.

#### **Findings**

Certain parks can be developed with recreation areas that act as stormwater detention and treatment facilities as well as park space.

#### **Policy**

When developing plans for parks the [jurisdiction’s] goal is to design parks which meet the recreational needs of the community, protect the significant natural features, minimize environmental deterioration, and where possible serve as stormwater detention and treatment facilities.

### **Goal 10: Housing**

Goal 10 gives communities the opportunity to determine how their neighborhoods should develop and what characteristics are most important to emphasize during residential development. Since residential land use is the dominate use for most cities and rural communities, residential design can provide a significant link to the protection and enhancement of water quality. Many of the site design concepts used to protect and enhance water quality are similar to concepts used to promote human-friendly neighborhoods and other objectives of “smart development” as defined in the *Smart Development Code Handbook* published by the Transportation Growth Management Program.

**Goal**

To provide for the housing needs of the citizens of the state.

**Findings**

Promoting higher density housing makes more efficient use of urban services can reduce the total amount of impervious surface in a watershed.

Housing and housing developments can be designed in a manner that protects and enhances water quality through efficient site design and on-site best management practices (BMPs)

**Policies**

Planned unit developments and other flexible development techniques are encouraged so water quality issues are addressed more effectively during the development process.

Flexible site design standards will be implemented to encourage a wide-range of housing options and to help reduce impervious surfaces and protect existing natural areas.

All new housing will be developed in a manner that protects and enhances water quality and is consistent with other goals and policies on water quality.

Minimal street widths, a compact neighborhood form and a mix of uses that promote walking and bicycling is encouraged to help protect and enhance water quality in the watershed.

**Goal 11: Public Facilities and Services**

Goal 11 states that, “Urban and rural development shall be guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable, and rural areas to be served.” Urban facilities include storm drainage facilities and as sited in the Goal 11 rule, “major drainage ways (major trunk lines, streams, ditches, pump stations and retention basins).” In other words, Goal 11 requires planning for stormwater retention and the conveyance of stormwater. This requirement is often met through a community’s drainage plan, and is addressed from strictly engineering perspective that seeks to move stormwater quickly into the conveyance system, usually without treatment or methods for decreasing volume or peak flows of stormwater discharge.

When a community updates its public facilities plan, revised comprehensive plan policies can direct stormwater management policy to be more comprehensive and emphasize the protection and enhancement of water quality.

**Goal**

To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

**Findings**

Untreated stormwater and loss of natural storage capacity due to increases in impervious surfaces, loss of wetlands, and channelization of natural drainageways contribute to a decrease in water quality within [jurisdiction] and have contributed to the listing of [X stream/river] on DEQ's 303(d) List.

Improperly treated and/or stored stormwater can compromise the recovery of [listed species] and can lead to an illegal "take" of an endangered species.

Stormwater treatment requires a range of programs to be effective, including appropriate alterations to development patterns, on-site treatment, and/or regional treatment of stormwater and limits on increases to impervious surfaces.

Some areas of the [jurisdiction] are currently served by septic systems, some of which have failed in the past requiring the [jurisdiction] to annex those areas for public health reasons.

**Policies**

The [jurisdiction] shall increase its efforts to protect and enhance water quality, including preserving natural drainage and hydrology features, increasing opportunities for on-site infiltration, detainment and treatment of stormwater, through the stormwater master plan (or applicable plan), the Capital Improvement Program, and the development process.

Within the [jurisdiction] drainageway dedications adequate for flood protection, conveyance of stormwater, channel access and maintenance shall be secured along all open drainageways needed for public conveyance of stormwater, prior to or at the time of development. In already developed areas where dedications may not be possible, an easement may be pursued in lieu of dedication.

The [jurisdiction] shall recognize, and to the extent possible implement, other water quality goals and policies when developing the stormwater master plan (or other applicable plan).

The [jurisdiction] shall take steps to minimize the impacts to downstream water quality and drainage systems through the use of appropriate strategies as identified in the stormwater master plan (or other applicable plan).

## Goal 12: Transportation

The transportation system can have a large impact on water quality. Roadways and parking lots that are designed to excessive standards create large areas of impervious surface that collect oil and other pollutants, and increase both the quantity and velocity of runoff. Goal 12 recognizes that the transportation system can have negative environmental impacts and requires the transportation plan to “minimize adverse social, economic and environmental impacts and costs” and as a planning guideline not to exceed the carrying capacity of water resources. In addition, implementation requirements state that “Plans for new or for the improvement of major transportation facilities should identify the positive and negative impacts on...environmental quality.”

Transportation planning in Oregon is closely regulated by the Transportation Planning Rule (TPR) and is focused on insuring that transportation systems support more than one mode of transportation and interconnecting the land uses of the community. However, as indicated in the language of the Goal, transportation systems must also “be consistent with state and federal standards for protection of air, land and water quality including...the State Water Quality Management Plan.” [OAR 660-012-0035 (3)(b)] The actual connection between water quality and transportation planning is best made at the transportation project development level within the TPR. Section 660-012-0050(3) states that “Project development involves land use decision-making to the extent that issues of compliance with applicable requirements remain outstanding at the project development phase. Issues may include, but are not limited to, ...protecting or regulating development within floodways...identified Goal 5 resource areas, estuarine and coastal shoreland areas, and the Willamette River Greenway.”

### Goal

To provide and encourage a safe, convenient, economic transportation system

### Findings

The impervious surfaces required by the transportation system can have negative impacts on water quality by increasing both the quantity and velocity of runoff and by collecting oil and other pollutants that are flushed into waterbodies when it rains.

Skinny local streets, standards that limit the amount of parking, and pervious paving surfaces where practical can reduce the amount of impervious surfaces in the [jurisdiction].

### Policies

The transportation system plan shall be consistent with other [jurisdiction] goals and policies, including the goal of protecting and enhancing water quality.

The transportation system plan shall promote walking and bicycling within [jurisdiction] to reduce the impacts of transportation on water quality.

Street and parking standards shall be developed with a focus on protecting and enhancing water quality, including skinny residential streets, standards that limit the maximum amount of parking and pervious paving surfaces where practical.

#### **Goal 14 - Urbanization**

Urbanization of land resources and protecting and enhancing water quality are often thought of as competing goals with little chance for resolution. Studies have demonstrated a correlation between a moderate percentage of impervious surface in a watershed and degradation of stream quality and habitat function. It should not be assumed, however, that lower density requirements result in less impervious surfaces. It may be easier to design a low density neighborhood to have less impact on its immediately adjacent natural resources, but the cumulative effect of low density development can be more detrimental to the water quality of the entire watershed than compact development.

Lower density does not mean that fewer houses are built, since the demand for housing has not been affected. Houses are simply built over a greater percentage of the watershed. The infrastructure to serve those homes, including roads and other impervious surfaces, is still required and usually in greater quantities since the homes are further apart. The alternative is to increase density, or hold density constant, to better utilize the impervious surfaces, such as streets, that are required for urban development. In addition, innovative site design can maximize open space and BMPs can be used to treat stormwater on-site.

#### **Goal**

To provide for an orderly and efficient transition from rural to urban land use.

At the time of this writing Goal 14 is under review by DLCD and new rules being written that may impact the ability to use this goal to protect and enhance water quality. Therefore, no model findings or policies are provided.

#### **Goal 15 – Willamette River Greenway**

Goal 15 is meant to protect, conserve, enhance and maintain the qualities of the Willamette River Greenway. The goal requires the Department of Transportation to develop a Greenway Plan and for local jurisdictions in which the Greenway is located to incorporate the provisions of the plan in their comprehensive plan and appropriate statutes. The Goal requires the Greenway Plan to include, among others, inventory information on fish and wildlife habitats, hydrological conditions and ecologically fragile areas. The Goal also prohibits the intensification of uses or change of in use within the Greenway unless they are consistent with the Goal, related statutes, and the Greenway Plan.

#### **Goal**

To protect, conserve, enhance and maintain the natural, scenic, historical, agricultural, economic and recreational qualities of lands along the Willamette River as the Willamette River Greenway.

Because this Goal is specific to only some jurisdictions in the state, and because it has associated rules that implement the Goal and protect the water quality of the resources, specific findings and policies are not included in this guidebook.

### **Goal 16 – Estuarine Resources**

Goal 16 includes numerous comprehensive plan requirements that are meant to “protect the estuarine ecosystem, including its natural biological productivity, habitat, diversity, unique features and water quality.” The Goal requires inventories and the classification of management units for each estuary. Water quality is a major component of Goal 16, with the inventories and management units geared to reduce the amount of disturbance in the estuary. The implementation requirements state that an impact assessment be conducted for any “new actions which would potentially alter the estuarine ecosystem” (i.e. development) and that have not been addressed as part of the comprehensive plan. The impact assessment includes the “expected extent of impacts of the proposed alteration on water quality...”

The Goal 16 rule implements the requirements of the Goal and classifies each of the major estuaries in the state. The classification determines the types of activities that are permitted within the estuary and the allowed amount of discharge into the estuary.

#### **Goal**

To recognize and protect the unique environmental, economic, and social values of each estuary and associated wetlands; and to protect, maintain, where appropriate develop, and where appropriate restore the long-term environmental, economic, and social values, diversity and benefits of Oregon’s estuaries.

#### **Findings**

Upland activities that affect water quality and aquatic habitat throughout the jurisdiction impact the quality and functions of [name] estuary.

#### **Policies**

Amendments to development ordinances instituted to mitigate impacts to water quality and aquatic habitat should recognize and be coordinated with estuary plan objectives.

### **Goal 17 – Coastal Shorelands**

Goal 17 recognizes the importance of water quality as part of a healthy coastal environment. According to Goal 17 “land use plans, implementing actions and permit reviews shall include consideration of the critical relationships between coastal shorelands and resources of coastal waters...and maintain the diverse environmental, economic and social values of coastal shorelands and water quality in coastal waters.” As with many of the resource related goals, Goal 17 requires inventories to be completed and comprehensive plan policies adopted that are based on those inventories. The Goal 17 rule helps to implement the goal, and provides specific definitions, shoreland suitability criteria and methods for protecting shorelands.

#### **Goal**

To conserve, protect, where appropriate, develop and where appropriate restore the resources and benefits of all coastal shorelands, recognizing their value for protection and maintenance of water quality, fish and wildlife habitat, water-dependent uses, economic resources and recreation and aesthetics. The management of these shoreland areas shall be compatible with the characteristics of the adjacent coastal waters; and to reduce the hazard to human life and property, and the adverse effects upon water quality and fish and wildlife habitat, resulting from the use and enjoyment of Oregon's coastal shorelands.

#### **Findings**

Upland activities that affect water quality and aquatic habitat throughout the jurisdiction impact the quality and functions of coastal shorelands.

#### **Policies**

Amendments to development ordinances instituted to mitigate impacts to water quality and aquatic habitat should recognize and be coordinated with coastal shorelands objectives.

## Goal 18 – Beaches and Dunes

Goal 18 includes consideration of ground water resources associated with coastal and dune areas. One implementation requirement is for local governments to ensure that, “Local, state and federal plans, implementing actions and permit reviews shall protect the ground water from drawdown which would lead to loss of stabilizing vegetation, loss of water quality, or intrusion of salt water into water supplies”.

### **Goal**

To conserve, protect, where appropriate develop, and where appropriate restore the resources and benefits of coastal beach and dune areas. To reduce the hazards to human life and property from natural or man-induced actions associated with these areas.

### **Findings**

Upland activities that affect ground water levels adjacent to coastal beach and dune areas can impact vegetation in these areas and result in salt water intrusion into drinking water supplies.

### **Policies**

Amendments to development ordinances instituted to mitigate impacts to water quality and aquatic habitat should recognize and be coordinated with the dunal groundwater resource objectives of the [jurisdiction’s] beaches and dunes planning element.