

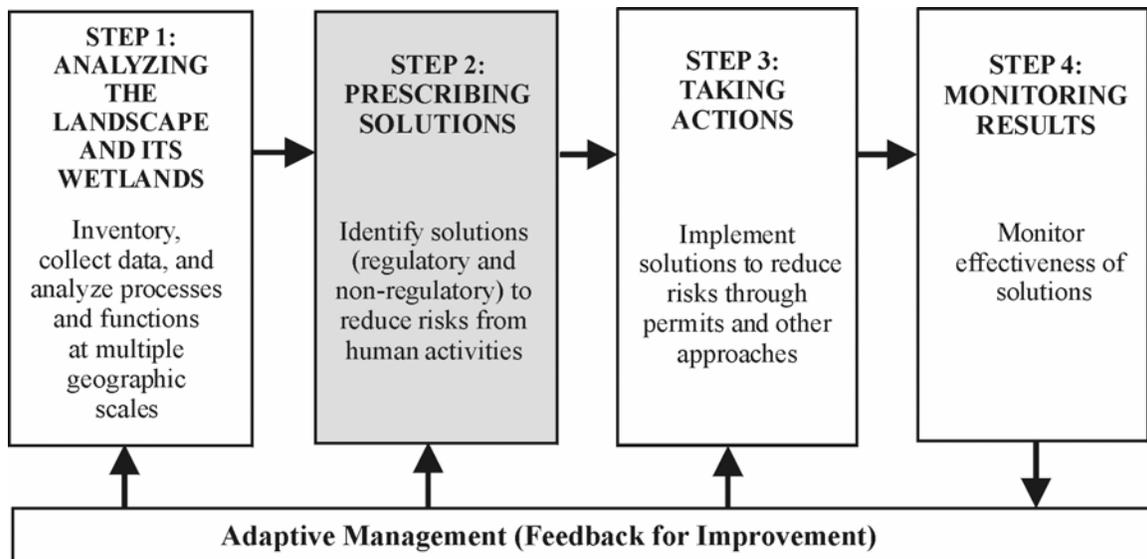
## Chapter 7

# Prescribing Solutions: Comprehensive Plans

## 7.1 Introduction

This chapter builds on the discussion in Chapter 6 about planning approaches that can be used to develop or update a comprehensive plan. The planning tools discussed in Chapter 6, such as Green Infrastructure and Alternative Futures, allow jurisdictions to use the data generated from a landscape analysis to create a vision of the future, integrating landscape-scale issues with the community's priorities regarding land uses.

Developing or updating a comprehensive plan, and the other planning approaches discussed in Chapter 6, are all part of Step 2 (Prescribing Solutions) in the four-step framework discussed in this volume (Figure 7-1). The tools for landscape analysis described in Step 1 (Chapter 5) can provide information to help guide the development or revision of a comprehensive plan, shoreline master program, or other planning effort. Regulatory and non-regulatory solutions, discussed later in Chapters 8 and 9, are also part of Step 2 and can be used to implement plans and policies.



**Figure 7-1. Comprehensive planning is part of Step 2 in the four-step framework recommended for protecting and managing wetlands (shaded box).**

By integrating landscape analysis and public involvement into the planning process, effective policies and regulations can be developed that reflect choices about land use that will protect, maintain, and restore landscape processes. Therefore, the results of landscape analysis should be incorporated into the goals and policies of the relevant mandatory and/or optional elements included within comprehensive plans. Because comprehensive plan goals and policies establish the basis for much of the regulatory language and codes, such as zoning, developed by a jurisdiction, the information in a comprehensive plan should reflect what is needed to maintain landscape processes and protect wetland functions and values.

Doing a landscape analysis is not a recommendation to implement an entirely new process. Aspects of a landscape analysis, as described in this volume, are already a required part of developing or amending/updating a comprehensive plan. The reader is referred to Chapter 6 for a thorough discussion of the importance of using information generated by a landscape analysis to inform planning, including comprehensive planning.

Although it is important to use information that includes data from the scale of the contributing landscape, comprehensive planning is conducted at the scale of the management area. The management area is restricted to the lands over which a jurisdiction has authority, because the boundaries for planning are political, not driven by the environmental processes at a landscape scale. This chapter provides a brief overview of comprehensive planning (Section 7.2), followed by a discussion of the mandatory and optional elements, including subarea plans, of comprehensive plans as established by the Growth Management Act (GMA) (Sections 7.3 and 7.4). The chapter includes examples of how typical language in a comprehensive plan can be modified to incorporate landscape analysis. It also discusses how subarea plans can be used by jurisdictions that would like to incorporate landscape information within a smaller planning area.

## **7.2 An Overview of Comprehensive Planning**

As discussed in detail in Chapter 2, and summarized briefly in the introduction of Chapter 6, the GMA dictates that counties and cities that meet certain provisions must plan for future growth (RCW 36.70A.040). They must develop comprehensive plans and development regulations, including critical areas ordinances, to meet the intent and requirements of the GMA (RCW 36.70A.020). Comprehensive plans and regulations are subject to continuing review and evaluation by the county or city that adopted them. The GMA also requires local jurisdictions to include best available science in the development of policies and development regulations used to protect the functions and values of critical areas, including wetlands (RCW 36.70A.172).

The key GMA requirements are as follows:

- Identify and protect critical areas and resource lands
- Designate county-wide planning policies and urban growth areas (for counties and cities fully planning under the GMA)
- Prepare and adopt comprehensive plans
- Adopt development regulations to implement the comprehensive plan
- Evaluate and update the comprehensive plan and development regulations

Comprehensive planning, as the name implies, is a planning process that encompasses all the activities that occur or may occur on the land over which a local government has jurisdiction. Typically, a comprehensive plan consists of a “map or maps and descriptive text covering objectives, principles and standards” used for its development (RCW 36.70A.070). A comprehensive plan is a document that provides direction for decisions about land use in a local jurisdiction. As described in the introduction to the Spokane County Comprehensive Plan (<http://www.spokanecounty.org/BP/Documents/CompPlan/Chapter1.pdf>):

*The Comprehensive Plan is a set of goals, policies, maps, illustrations and implementation strategies that states how the County should grow physically, socially, and economically. The plan emphasizes innovative and flexible strategies to guide growth and development. One of the central themes of the Plan is the promotion of economic development that occurs in harmony with environmental protection and preservation of natural resources. The Plan recognizes the interests of the entire community and promotes cultural and ethnic diversity.*

*The Comprehensive Plan establishes a pattern of land uses to shape the future in desirable ways...*

A comprehensive plan is composed of elements that address typical issues for a jurisdiction. Elements such as transportation and capital facilities (e.g., domestic water sources, sewage treatment, essential public facilities, and stormwater facilities) are incorporated into the planning process to ensure that adequate infrastructure is provided for existing and future land uses. In addition, there are elements that address the protection of natural resources, such as agricultural areas, and critical areas such as wetlands, geologic hazard zones, and fish and wildlife habitat.

Under the GMA, comprehensive plans must contain the following elements:

- Land Use Element
- Transportation Element
- Housing Element

- Capital Facilities Element
- Utilities Element
- Shorelines Element
- Rural Lands Element (for counties)

Also, if state funding is provided, Economic Development and Parks and Recreation Elements are required to be included in plans.

Optional elements may also be included in comprehensive plans, such as conservation, energy, recreation, and subarea plans, where appropriate. Some jurisdictions include additional elements that consider the environment. For example, Skagit County includes an Environment Element that specifically focuses on the influences of wetlands, streams, wildlife habitat, and other environmental factors on planning and land use, whereas Yakima County includes a Natural Setting Element. Overall, the plan “shall be internally consistent and all elements shall be consistent with the future lands use map” (RCW 36.70A.070) and shall be coordinated with the comprehensive plans of jurisdictions with common borders or related regional issues (RCW 36.70A.100).

The Legislature also set forth goals to guide the development of comprehensive plans. Application of a landscape analysis and principles for low impact development would assist in meeting the following of those goals:

- Encouraging development in existing urban areas
- Reducing sprawl
- Ensuring that adequate public facilities are in place for new development
- Retaining, enhancing, and conserving open space, recreation, and habitat areas
- Protecting the environment and enhancing water and air quality and availability of water
- Meeting the goals and policies of the Washington State Shoreline Management Act as set forth in RCW 90.58.020
- Encouraging economic development that is within the capacity of the state’s existing natural resources

The Legislature also directed local governments to include innovative techniques for land-use management in their comprehensive plans, including density bonuses, cluster housing, planned unit developments, and transfer of development rights (RCW 36.70A.090). Landscape analysis and principles of low impact development would also assist local governments in meeting this provision.

## **7.2.1 County-wide Plans and Policies**

The GMA establishes counties as the primary units for regional land-use planning. An important aspect of planning under the GMA is the requirement for counties to adopt planning policies that are county-wide under RCW 36.70A.210. County-wide planning policies are adopted in consultation with the municipalities in the county, to support and guide cross-jurisdictional cooperation between the county and the municipalities located within it.

At a minimum, a county-wide planning policy needs to address the development of urban growth areas, joint planning for these areas, siting public capital facilities of a county-wide or state-wide nature (such as transportation facilities), providing for affordable housing, economic development and employment, and analyzing the fiscal impact of the policies. The county-wide policies are binding on state agencies. Large urbanizing counties (those with population greater than 450,000 people) adjacent to each other are required to adopt multi-county planning policies.

Plans and policies for critical areas may need to be amended to create the basis of regulations that include best available science across jurisdictions. Because critical areas such as wetlands and the landscape processes that support them often span multiple jurisdictions, local governments should consider whether their current policies and regulations are consistent with the programs of neighboring jurisdictions. Jurisdictions should not, however, reduce regulatory protections for critical areas as the sole basis for achieving consistency across jurisdictions.

In fact, managing natural resources at the larger geographic scales of contributing landscapes or watersheds has become recognized internationally as an important approach to protecting aquatic resources, including wetlands (United Nations 1997). While planning at this scale may be beyond the purview of comprehensive planning for some local jurisdictions, it is possible for local jurisdictions to join existing programs to develop plans and actions at larger geographic scales. Examples of regional planning efforts being conducted by state and federal agencies related to aquatic resources are described in Appendix 7-A.

## **7.2.2 Tools for Implementing Comprehensive Plans**

The policies of comprehensive plans can be implemented through a variety of means. The most common and effective approach is to include policies in development regulations adopted through ordinance that then become mandatory. In some jurisdictions, policy language can be implemented through provisions of the State Environmental Policy Act. However, policy language is often viewed as more discretionary than development regulations that are adopted.

Under the provisions of the GMA, development regulations have to be consistent with the comprehensive plan that the jurisdiction has adopted. This is one of the key provisions of the GMA related to comprehensive plans and regulations: Ensure consistency between

plans, policies, and regulations, and provide coordination between contiguous jurisdictions.

The policies, goals, and values identified in the comprehensive plan are implemented through these regulations. Regulations are adopted through ordinances to prescribe general and permanent rules. In conflicts concerning development activity, the development regulations are the primary means for resolving disputes and carry more legal weight than the comprehensive plan policies. Regulatory tools are discussed in Chapter 8.

A comprehensive plan can also be implemented through non-regulatory tools, as discussed in Chapter 9 of this document.

## **7.3 Mandatory Elements of Comprehensive Plans**

Under the GMA, comprehensive plans must contain certain mandatory elements. Many of the mandatory elements of a comprehensive plan (RCW 36.70A.070) can incorporate the results of a landscape analysis and the Smart Growth planning processes described in Chapters 5 and 6. The mandatory elements that are the most applicable to wetlands protection and management include:

- Land Use Element
- Capital Facilities Plan Element
- Rural Lands Element (for counties)
- Transportation Element

Optional plan elements, especially conservation plans and subarea plans, may also be important in order to create an effective program to protect and manage natural resources that minimize cumulative impacts. These optional elements are discussed in greater detail in Section 7.4.

Each of the mandatory elements that can most appropriately be used for protecting and managing the landscape processes that maintain wetlands and their functions are described below. Examples of text for policies that incorporate landscape analysis are provided for each element.

### **7.3.1 Land Use Element**

The Land Use Element is the heart of the comprehensive plan. It determines the “proposed general distribution and general location and extent of the uses of land” including population densities, building intensities, and future population growth estimates (RCW 36.70A.070).

The tone of the Land Use Element is set by the text of the Introduction and Framework, which identify key guiding values and the priorities of the community. For example, as noted in the opening paragraphs of the City of Cheney Land Use Element ([http://cityofcheney.org/planning/comp\\_plan/comp\\_plan7.pdf](http://cityofcheney.org/planning/comp_plan/comp_plan7.pdf)):

*The Land Use Element of Cheney’s Comprehensive Plan is central to the entire planning process. The land use patterns are what determine the character of the community and dictate the types and locations of future development. This element of the plan determines the traffic patterns and the ability or inability to effectively alter those patterns over time. It can be sensitive or insensitive to the natural and physical characteristics existing within a community and, overall, it is the primary element which will determine the quality of life for the citizens of Cheney.*

In Skagit County, the Land Use Element focuses almost exclusively on human uses of the land in current and future conditions. The County’s Land Use Element assesses the condition, location, and distribution of existing land uses and identifies the appropriate intensity and density of land uses for the future based on development trends in the county and surrounding areas. The Land Use Element includes guidance for the development of commercial and industrial land uses as well as residential, agricultural, and other uses.

In some comprehensive plans, the Land Use Element begins by describing in some detail the natural history and ecological conditions of the landscape within the jurisdiction. This information is then used to plan land use on the landscape. The City of Bainbridge Island, for example, uses this approach to establish a “sense of place” before designating land use types. Other comprehensive plans do not include an extensive natural history section, but limit their descriptions to the existing and proposed land uses within the jurisdiction.

The Land Use Element must specifically provide for the protection of groundwater that is used for potable water. Also, where applicable, the Land Use Element must review drainage, flooding, and stormwater runoff and provide guidance for corrective actions to mitigate or cleanse those discharges that pollute waters of the state.

Most comprehensive plans state one or more “goals” which are vision statements that attempt to identify the priorities and values of the community. Following the goals may be a series of one or more “policies” related specifically to each identified goal. Sometimes the policies overlap or are even repeated from one goal statement to the next or from one element of the comprehensive plan to another.

### **7.3.1.1 Incorporating Landscape Analysis into the Land Use Element**

Logically, landscape data, or any environmental information, should be collected and analyzed prior to drafting the Land Use Element of the comprehensive plan. The analysis outlined in Chapter 5 identifies landscape processes as well as wetlands and their

functions. It identifies which areas need special management because they provide important processes, such as groundwater recharge and how wetlands function and contribute to the larger landscape processes. This type of analysis can also identify areas that, if restored or preserved, could improve functions and reduce cumulative impacts that cannot be avoided.

The Land Use Element can identify:

- The location and type/intensity of development consistent with protecting critical resources
- Areas critical to maintaining processes that support wetlands (e.g., infiltration and recharge areas, areas of critical subsurface and surface flow, discharge areas, areas of potentially high runoff)
- Areas that require restoration of landscape processes
- Areas that require protection (i.e., no development) in order to maintain critical landscape processes

The results of the landscape analysis described in Chapter 5 and additional planning approaches, such as Green Infrastructure or Alternative Futures analysis discussed in Chapter 6, can be used to guide the choices of land-use designations within a jurisdiction. Conducting a landscape analysis identifies critical locations within the management area where key landscape processes or wetland functions are provided. Integrating that information into a Green Infrastructure plan or an Alternatives Futures analysis allows the community to make informed decisions about land use that incorporate both human needs and environmental considerations at many geographic scales. The resulting land use choices, priorities, and goals can then be included in the policies of the Land Use Element. Such an approach can help ensure long-term maintenance of landscape processes and reduce the deficiencies of case-by-case permitting decisions.

### **7.3.1.2 Using Landscape Analysis in Different Sections of the Land Use Element**

The policies in the Land Use Element provide the foundation for developing subsequent elements of the comprehensive plan, other plans, and regulations, and non-regulatory components of programs. The Land Use Element of a comprehensive plan may typically be divided into Overviews, Goals, and Policies. The shaded box on the next two pages provides an example of the Table of Contents of a typical Land Use Element (the example is modified from a draft of the City of Bainbridge Island's Land Use Element). The major sections of a Land Use Element are then discussed in detail following the shaded box. For specific portions of the Land Use Element, modifications are suggested regarding where to incorporate landscape analysis. Explanatory text and policies for the relevant portions and, in some cases, examples of text that could be used directly are provided.

## **Sample Table of Contents for a Land Use Element**

### **Introduction**

Framework of the Plan

### **Overview of Existing Conditions – Natural Environment**

Note: This section describes the biological, physical, and geographic conditions of the jurisdiction. The same combination of data can be used in the landscape analysis (described in Chapter 5) to establish baseline conditions. The results of the landscape analysis would be woven through each of these sections, identifying the physical and biological linkages and areas that are critical for maintaining landscape processes and wetland functions.

Geography

Climate

Geologically Hazardous Areas

Watersheds

Wetlands

Streams

Groundwater

Aquifer Recharge Areas

Fish and Wildlife

### **Overview of Existing Conditions – Built Environment**

Note: This section describes the human-made conditions and land uses currently present in the jurisdiction.

Residential Development

Commercial Development

### **Overview of Existing Conditions – Resource Lands**

Note: This section describes the resources that humans use for economic purposes.

Agriculture

Forest Land

Mining

### **Goal and Policies/Principles of the Built Environment**

Note: This section outlines the overriding intent and values of the jurisdiction for the built environment. Each subsection below contains the policies or principles that create the framework on which subsequent community plans and/or regulations are developed.

Framework of the Plan

General Land Use

Neighborhood Service Centers

Light Manufacturing

Residential Open Space

Environment

## **Sample Table of Contents for a Land Use Element (continued)**

### **Goals and Policies/Principles of the Natural Environment**

Note: This section outlines the intent and values of the jurisdiction for the natural environment.

- Fish and Wildlife Policies
- Aquatic Resources
- Frequently Flooded Areas
- Geologically Hazardous Areas
- Atmospheric Conditions
- Greenways

### **Goals and Policies/Principles of Natural Resource Lands**

Note: This section outlines the intent and values of the jurisdiction for managed natural resource lands.

- Agricultural Lands
- Forest Lands
- Mining

The **Introduction** to the Land Use Element provides an overview of the Land Use Element and how information was obtained. If landscape analysis, or other environmental data, Green Infrastructure planning, or Alternative Futures analysis are incorporated, there should be a brief description of the methods used to generate the information.

The **Overview of Existing Conditions - Natural Environment** is where the results of a landscape analysis can be presented. It can also be where the criteria for establishing priorities for proposed land uses are described. The existing condition and the criteria for priorities set the stage for the future and would benefit from incorporating information about natural resources at all geographic scales. This would also be the location to describe the findings of Green Infrastructure planning or Alternative Futures analysis (discussed in Chapter 6), particularly in reference to establishing priorities. In this section it would be reasonable to present the conclusions from any public process used to create criteria or priorities for land use designations, as well as recommendations for preservation or restoration.

The **Overview of Existing Conditions - Built Environment** provides a summary of the relevant conditions of the developed lands within the jurisdiction. The character and extent of housing and lands zoned for various levels of residential use are described and contrasted with expected demands. Depending upon the jurisdiction, the section may contain descriptions of commercial and industrial lands, infrastructure (e.g., domestic water and public sanitary sewer systems), and transportation in sufficient detail on which to base the planning process. The overview of infrastructure and capital facilities is usually brief to illustrate existing conditions; detailed discussions are contained in the appropriate elements of the comprehensive plan. This section may include a description

and discussion of existing housing stock and residential zoning designations. If the results of a Green Infrastructure planning or Alternative Futures analysis include recommendations or criteria for housing considerations, this is the location for those findings.

The **Overview of Existing Conditions - Resource Lands** focuses on lands used for commodities: agricultural lands, commercial timberlands, and mining and mineral extraction. Depending upon the jurisdiction, the overview may or may not describe lands zoned for commercial resource use. The results of Green Infrastructure planning or Alternative Futures analysis may identify some of these lands as critical hubs or links from the perspective of maintaining or restoring landscape processes. It is appropriate to discuss those findings in this section.

The next sections of the Land Use Element present examples of policies for the Natural Environment, Built Environment, and Resource Lands. Policies are statements that guide more detailed planning documents conducted at a management scale, such as community plans, basin plans, or neighborhood plans, as well as Green Infrastructure or Alternative Futures plans. These policies also form the basis for a jurisdiction's regulations. The policies must reflect the priorities for the jurisdiction. The policies should reflect the findings of a landscape analysis (or any environmental analysis) and the priorities of the community.

### **7.3.1.3 Landscape Analysis in the Policy Language of the Land Use Element**

Policies can be modified to reflect the need for analyzing and protecting landscape processes that are necessary for the long-term protection of wetlands and the functions they provide. Specifically, a statement in the Introduction or opening section of the Land Use Element can provide the foundation for subsequent policies and regulations.

A policy statement can be created that directs the jurisdiction to use landscape analysis to identify lands that are critical to maintaining landscape processes, then to use this information in determining land use designations. Example policy statements include:

- A landscape analysis shall be conducted for each [subarea/planning area/sub-basin] to identify lands that are critical for the maintenance or restoration of the landscape processes that maintain wetland functions and minimize cumulative impacts
- Green Infrastructure planning or an Alternative Futures analysis will be conducted within each [subarea/planning area/sub-basin] to establish criteria and set priorities for land-use designations and protection of the landscape processes that maintain wetland functions

Below are two examples of typical policy statements that have been modified to include landscape analysis (new language is shown in *italics* and deleted words are indicated by ~~strikethrough~~):

- ~~Identified~~ Critical areas, *critical habitats*, shorelands, aquatic resource areas and natural resource lands *identified through a landscape analysis* shall be protected by restricting conversion *or rezoning to a buildable designation*; encroachment by incompatible uses shall be prevented by maintenance of adequate buffering between conflicting uses *and habitat function shall be maintained by establishing connective linkages between critical habitats identified in the landscape analysis*
- Open space corridors within and between urban growth areas shall be identified *based on the landscape analysis of critical habitats and linkages*; these areas shall include lands useful for recreation, fish and wildlife habitat *including corridors for movement between habitats*, trails, and connection of critical areas *to essential habitats to avoid future fragmentation*

Many existing policies in typical planning documents already include language that suggests identification and protection of environmentally sensitive lands. Examples of policy language that could be used to revise the Land Use Element of a comprehensive plan follow. These are only examples; there are many ways that the intent of these examples can be incorporated into a Land Use Element.

## General Land Use

General Land Use goals and policies provide more detailed guiding principles for overall land use within a jurisdiction. The general goals for land use listed below have been revised (new text is in *italics*) to show that little modification may be required to incorporate protection of landscape processes and wetland functions based on the results of landscape analysis.

- Support land-use development patterns which protect public, health, safety and welfare, *and the long-term protection of the environmental processes at all geographic scales that support the functions of critical areas, including wetlands*
- Encourage dedication of open space *that is identified as critical for maintaining environmental processes or for providing habitat linkages based on a landscape analysis*, preserve existing upland forest *to the extent feasible*, and encourage the restoration of trees and vegetation to maintain the feel of the community
- Guide future development into concentrated urban growth areas where adequate public facilities, utilities and services can be provided
- *Use appropriate development techniques to minimize impervious surface and maximize infiltration of surface runoff*
- Protect and conserve long-term, commercially viable forest, agricultural, and mineral natural resource lands

- Retain rural landscape features and lifestyles
- Maintain open space, recreation, fish and wildlife habitat, scenic and significant historic archeological cultural lands *by identifying, through a landscape analysis, the critical habitat areas and linkages across the landscape to ensure their protection*
- Enhance the community character, natural beauty, and environmental quality *by ensuring protection of critical areas and linkages through appropriate land-use designations*
- Help preserve rural economies
- Foster opportunities for rural-based employment, self-employment, and economic diversification
- Permit the operation of rural commercial businesses, natural resource related industries, recreation and tourism activities, cottage industries and small-scale businesses, and home occupations that are consistent with existing and planned land use patterns and are of an appropriate size and scale to maintain rural character

## Residential Open Space

The Residential Open Space section can be the location for a goal that creates flexibility in lot configurations or density through such mechanisms as transfer of development rights (TDR), discussed in Chapter 9. The following are examples from typical policies for Residential Open Space that have been modified (in *italics* or ~~struckthrough~~) to incorporate landscape analysis:

- Protect open space, *assure the long-term protection of critical areas and the environmental processes that sustain them at all geographic scales, and assure sustainable agricultural uses through public and private initiatives, including open space tax incentives, cluster development, planned unit development (PUD), transfer and purchase of development rights, public land acquisition, greenways, conservation easements, landowner compacts, down-zoning, limiting the amount of lot coverage, and other techniques*
- *Encourage preservation of key habitat linkages between critical areas, allow the aggregation of nonconforming lots of record and undeveloped subdivisions and short plats, so as to achieve ~~consistent with goals of the Plan~~, a development pattern that provides affordable housing, preserves open space, protects critical areas and landscape linkages, and protects water resources*
- *Establish and maintain vegetated buffers around critical areas to preserve the community's rural character and maintain upland habitat adjacent to aquatic resources; to assure the presence of forest buffers over the long term, require the*

*planting of native conifer seedlings within the margins of forested buffers left when adjacent upland forest is cleared for the creation of lot*

- New development should be responsive to the natural landscape conditions and should *reflect the results of a landscape analysis* so as to have the least environmental impact on the community's landscape
- *Forested steep slopes, particularly ridge lines, shall be protected for their visual, aesthetic, and habitat-linkage benefits, including their functions as wildlife habitat, and for control of erosion and sedimentation*
- A Flexible Lot Design Subdivision process will be created to encourage more creative development *that has the flexibility to reflect site conditions including the results of a landscape analysis*. Flexible lot design *can* integrate use of open space and placement of buildings and infrastructure to reflect site conditions. It will include a cluster zoning requirement in the subdivision process and ensures that the approval process is timely and efficient. The following criteria shall be considered for flexible lot design:
  - Suitable soils for individual, on-site septic systems *or the presence of a community treatment facility*
  - *The findings from the landscape analysis to identify key habitats, and appropriate habitat linkages across the landscape; flexible lot design shall incorporate a perimeter buffer to the development which also provides visual screening of the site from public roadways, and maintains public viewsheds*
  - *Where feasible, grading should be minimized and trees should be maintained as much as possible throughout the project area*
  - Land that is designated as permanent open spaces within Flexible Lot Design Subdivisions shall be used either for recreational, conservation, or *ongoing* agricultural uses; *lands designated for conservation shall not be used for active recreation or initiating agricultural uses*; recreation or agricultural lands shall *be* dedicated to the community, or to a private, non-profit organization
  - Revise the PUD section of the zoning ordinance to provide greater flexibility in design and provide density bonuses for imaginative design, preservation of *identified* environmentally sensitive areas *including aquifer recharge, floodplain, critical wetlands and habitat linkages identified through a landscape analysis*, and include a broad range of housing alternatives

## **Environment**

Within the Environment Element, a variety of goals and policies can be established to implement the intent of the guiding policies. For example, the following three goals are stated in the opening text of the Environment Element of the City of Olympia comprehensive plan

[http://www.trpc.org/resources/olycompplan03\\_ch2\\_environment.pdf](http://www.trpc.org/resources/olycompplan03_ch2_environment.pdf):

- *Long-term economic progress and environmental protection are mutually dependent*
- *Future generations have a right to an environment which has greater environmental assets than today*
- *A healthy environment contributes to the economy no less than do roads and other public services*

Examples of typical Environment policies that have been modified (new text in *italics*) to include recommendations from this volume are:

- Whenever there is a *proposed rezoning* or subdivision of land, the community *shall use the information from a landscape analysis to help assess and consider* the impact of the proposed project on critical areas
- *Identification and prioritization of lands for protection or reduced zoning shall be based on the results of a landscape analysis, or a process like that found in the Green Infrastructure plan*
- The number and design of lots shall be based on minimizing impact to critical areas and protecting natural systems; development shall *incorporate the findings of the landscape analysis during development of the* objectives of the Critical Areas policies rather than maximizing the number of lots; in order to protect critical areas, the full density permitted under the zoning ordinance may not be achieved
- Creative solutions (e.g., flexible lot design, TDRs, and *purchase of development rights* [PDRs]), which may allow the maximum number of lots while protecting critical areas, should be explored

## **Fish and Wildlife Policies and Aquatic Resources**

Policy language for fish and wildlife and aquatic resources may be the easiest to modify. Modifications to typical policy language may simply incorporate the requirement for conducting the landscape analysis, prioritizing lands for protection based on clearly identified criteria, and directing zoning to result in lower impact on high-priority habitats and critical areas. The following are examples of modifications (in *italics* or ~~strikethrough~~) of existing policy language:

- The protection, ~~and~~ *enhancement, or restoration* of wildlife habitat shall be an integral component of the land-use planning process
- The protection, ~~or~~ *enhancement, or restoration* of critical wildlife habitat *and linkages identified through landscape analysis* shall be ~~one of the criteria a~~ *primary criterion* used when evaluating the preservation of open space as part of development techniques, such as clustering, Flexible Lot Design Subdivisions, and creation of TDRs

- Protect critical wildlife habitat and limit fragmentation of habitat that isolates wildlife populations (physically and genetically) by developing an interconnected system of corridors which link critical wildlife habitat *based on a landscape analysis*
- Evaluate wildlife habitat and *linkages based on a landscape analysis*, and develop a classification system which will identify ~~priority~~ habitat to be preserved; the *analysis* shall consider watercourse areas, wetlands, shoreline, riparian areas, tidelands, public open space, forested areas, topography, *aquifer recharge areas*, *Washington Department of Fish and Wildlife Priority Habitats and Species data*, and intensity of adjacent development
- Structure regulatory processes and permitting decisions so that they reasonably balance natural values with the use of the land *by utilizing a landscape analysis to prioritize lands for protection or special management*
- Collect and analyze information relevant to the function of natural systems *by conducting a landscape analysis as well as collecting information at individual sites*
- Develop a community-wide program to educate the public about alternatives to using and disposing of herbicides, pesticides, and other household chemicals to reduce impacts *to aquatic resources* and other environmentally sensitive areas
- New development, using flexible lot design, should include any *aquatic resources, prioritized habitats and linkages, and regulated buffers* in separate tracts or easements to remain in common ownership

## **Frequently Flooded Areas and Geologically Hazardous Areas**

Through the landscape analysis, frequently flooded areas (FFAs) and geologically hazardous areas can be identified as lands requiring particular zoning limitations in order to protect public health and safety. Policy statements that are “standard” for these types of lands are appropriate to use.

However, FFAs and the processes that occur in these areas such as sediment transport, recruitment of large woody debris, nutrient cycling, and habitat linkages are protected under GMA. *Diehl V. Mason County* (95-2-0073) states, “An FFA designation must be clearly mapped and must include buffers sufficient to protect critical area functions and values.” These areas can also function as wetlands and wildlife habitat and provide linkages between landscape processes. Therefore, policy language can be modified to protect the processes and functions of FFAs and geologically hazardous areas, and the wetlands that occur within them, based on landscape analysis.

## **Natural Resource Lands**

Natural resource lands are designated for resource production and may include wetlands and other critical areas, as well as areas in which important landscape processes occur.

Development regulations should require buffers to protect the critical areas within these resource lands.

Typically these areas have already been designated; however, a landscape analysis may identify the linkage between these areas and landscape processes as well as the role that wetlands (and/or restored wetlands) play. For example, protection of shellfish areas is often related to water quality upstream of these resource lands. Wetlands and/or restored wetlands can provide important improvements in water quality. Shellfish growing areas are candidates for designated agricultural lands.

### **7.3.2 Capital Facilities Plan Element**

A Capital Facilities Plan Element includes the analysis and planning for public water, sewer, transportation, and recreation facilities. A jurisdiction has the responsibility to provide water and sewer services, parks and recreation, public safety, transportation facilities such as adequate streets and roads, plus other basic public services and facilities. The Capital Facilities Plan Element includes a requirement to reassess the Land Use Element if funding falls short of meeting existing needs for public services and utilities.

The Capital Facilities Plan Element can address regional water drainage needs, planned parks and recreation facilities, and other capital expenses needed for critical areas protection. Funds to support open space tax assessments, transfers of development rights, conservation easements, and similar needs can be identified in the Capital Facilities Plan Element.

In addition, policies in the Capital Facilities Plan Element can provide guidance on the appropriate conditions and geologic settings in which to use low impact development (LID) practices, referencing such policies in the Land Use Element. The Capital Facilities Plan would state the costs to implement the policies over time, along with alternatives that offer potential cost savings through measures such as LID. LID practices address the control of stormwater and surface water runoff, which is important in protecting wetland hydrology. Traditional and regional stormwater management facilities can also be assessed through the landscape analysis to identify how to minimize adverse impacts of runoff.

Policy language for the Capital Facilities Plan Element in a comprehensive plan can be readily modified to reflect these issues. For example (new language below is in *italics*):

- Designate utility corridors *using landscape analysis to ensure that placement of facilities does not result in permanent impacts to critical areas, their buffers, or habitat linkages*
- Promote the placement of underground utility distribution lines *using information from a landscape analysis to minimize or eliminate permanent or temporary impacts to critical areas*

### 7.3.3 Rural Lands Element

The Rural Lands Element in county comprehensive plans addresses lands that are not designated for urban growth or lands used for agriculture, forest practices, or mining. It implies lower density land uses with the intention of maintaining the locally defined rural character of unincorporated areas. Measures used to protect and manage rural lands include clustering, density transfer, design guidelines, conservation easements, and other innovative techniques designed to accommodate appropriate rural population densities and land uses.

One of the most significant impacts in rural zones is the increasing tendency to clear residential lots for pastures or viewsheds. The removal of forest cover, as discussed in Chapter 3 of Volume 1, has a significant effect on hydrologic patterns within the contributing landscape. Thus, guidance and policy language within the Rural Lands Element of a comprehensive plan can address site clearing and provide recommendations or requirements for retaining forest cover on lots of certain dimensions.

Typical examples of modified policies for Rural Lands are provided below (new text is in *italics* and deleted words are indicated by ~~strike through~~). Note that many of these examples of policies from existing comprehensive plans already incorporate many of the goals in Chapters 5 and 6 of this volume:

- Land use regulations and development standards shall protect and enhance the following components of the Rural Area
  - The natural environment, particularly as ~~evidenced by the health of~~ wildlife and fisheries (especially salmon and trout), *shellfish resources, habitat areas including linkages between habitats as identified as a result of landscape analysis*, aquifers used for potable water, surface water bodies, *wetlands and* natural drainage systems and their riparian corridors
  - Commercial and non-commercial farming, forestry, fisheries *including shellfish aquaculture*, mining, and *home-based and* cottage industries
  - Historic resources, historical character, and continuity including archaeological and cultural sites important to tribes
  - Community small-town atmosphere, safety, and locally-owned small businesses
  - Economically and fiscally healthy rural cities and unincorporated towns and neighborhoods with clearly defined identities compatible with adjacent rural, agricultural, forestry, and mining uses
  - Regionally significant parks, trails, and open space *including corridor linkages identified through landscape analysis*
  - A variety of low-density housing choices compatible with adjacent farming, forestry, mining, *and open spaces*, and not needing urban facilities and services

- The Rural Area designations include areas that are rural in character and meet one or more of the following criteria
  - Opportunities exist for significant commercial or non-commercial farming and forestry (large-scale farms *or more intensive small-scale farms* and forest lands are *usually* designated as Natural Resource Lands)
  - The area will help buffer nearby Natural Resource Lands from conflicting urban uses
  - The area is contiguous to other lands in the Rural Area, Natural Resource Lands, *wetlands, aquifer recharge areas or lands identified as critical habitats, habitat linkages or aquatic resources based on a landscape analysis*
  - There are major physical barriers to providing urban services at reasonable cost, or such areas will help define the outer limits for providing urban public services and infrastructure
  - Significant environmental constraints make the area generally unsuitable for intensive urban development

### 7.3.4 Transportation Element

The Transportation Element is focused on implementing the Land Use Element and addressing intergovernmental coordination of regional transportation facilities and strategies. It is important that the environmental impacts of existing and planned transportation strategies and facilities be addressed in a comprehensive way.

By using the results of a landscape analysis, additions or revisions to existing transportation facilities can be planned to avoid or minimize additional impacts to critical areas and areas that support environmental processes at all geographic scales. Addressing regional transportation issues within the context of landscape information can 1) identify areas that should be avoided, 2) limit habitat fragmentation, and/or 3) facilitate linkages along rights-of-way.

In addition, an Alternative Futures analysis can identify the logical consequences of configuring transportation corridors in various ways. It is possible to anticipate long-range impacts and plan for the compensation for unavoidable effects in advance of the impacts. Jurisdictions can use this approach to identify opportunities to implement Low Impact Development techniques to decrease impervious surfaces by requiring surface parking lots (including retrofits) to be pervious and infiltrate precipitation and water runoff as appropriate to the soil and geology in the area.” (For the January 2005 Puget Sound Action Team *Low Impact Development Technical Guidance Manual for Puget Sound* see [http://www.psat.wa.gov/Publications/LID\\_tech\\_manual05/lid\\_index.htm](http://www.psat.wa.gov/Publications/LID_tech_manual05/lid_index.htm).)

One of the requirements for the Transportation Element is financial planning. The Transportation Element has to ensure that, when combined with the Capital Facilities Plan Element, the true costs of planned public works are known in advance of rezoning and commitments to build. This type of analysis can be conducted through an

Alternative Futures assessment, where various costs (economic, community, as well as ecological costs) are determined and compared to help a community make informed choices.

### **7.3.5 Parks and Recreation Element**

This element addresses active parks and recreation opportunities within the community and must be consistent with the Capital Facilities Plan. It may incorporate assessment of the need for organized sports fields, athletic fields, pools, beaches, skateboard parks, etc. It can incorporate passive recreation such as photography or bird watching, as well as other types of recreation such as hiking or mountain biking, or those elements can be contained within a separate Recreation Element.

### **7.3.6 Economic Development Element**

Many jurisdictions are including an Economic Development Element. Some communities are drawing the links between a healthy environment and attracting tourist recreation spending, or building on the “watchable wildlife” program of the Department of Fish and Wildlife.

## **7.4 Optional Elements of Comprehensive Plans**

### **7.4.1 Conservation Element**

As noted in the beginning of this chapter, a jurisdiction may choose to add optional elements to its comprehensive plan that go beyond the mandatory elements, in order to more fully reflect the values and goals of the community. The GMA is open regarding potential elements that can be included as optional.

One optional element that can address the protection of critical areas is a Conservation Element. It can provide an alternative for jurisdictions that are not able to approach all of their comprehensive planning from the foundation of a Green Infrastructure plan or Alternative Futures analysis (discussed in Chapter 6). This can be an element within a comprehensive plan or it can take the form of an independent Conservation Plan. Unlike an Open Space Plan that protects resources through acquisition, the Conservation Element or Plan establishes a method or mechanism to protect and/or restore resource lands through incentives (such as tax credits). Programs such as the U.S. Department of Agriculture’s Wetland Reserve Program, the Natural Resources Conservation Service’s Conservation Reserve Program, as well as options offered through local land trusts, can also be used in relation to a Conservation Element. Whenever possible, lands to be managed in this way should be identified through landscape analysis or a Green Infrastructure plan.

A Conservation Element is different from the open space approach traditionally used in local planning. The difference is that Open Space Plans typically focus on protecting lands that are valued for aesthetic, recreational, and habitat features primarily through the acquisition of properties by the local parks department. The open space approach can fall short by 1) not including a broader definition of important features worthy of preservation for their contributions to landscape processes, and 2) not including sites that could be restored or enhanced to return processes and improved functions to the landscape.

During the development of a Conservation Element or Plan, sites for both potential acquisition and restoration can be identified. Appropriate sites, such as wetlands in key locations that have a high performance of functions or that support landscape processes, can be located using information generated during landscape analysis. Specific sites can be assessed using tools such as the Washington State wetland rating systems (Hruby 2004 a,b) and the Washington State wetland function assessment methods (Hruby et al. 1999, 2000).

A Conservation Plan should be implemented through both regulatory and non-regulatory components of a program to preserve and restore landscape features identified within the plan. Together, Conservation Plans and non-regulatory components of a program are important additions to comprehensive planning and regulations in providing protection for wetlands and other important landscape features. The tools a local jurisdiction needs to consider using for developing and implementing the non-regulatory component are discussed in Chapter 9.

#### **7.4.1.1 Natural Setting Element Used in Yakima County**

Yakima County has a Natural Setting Element that could be considered as part of a Conservation Element or Plan. The text below is taken from Yakima County's Natural Element (<http://www.co.yakima.wa.us/planning/pdf/plan2015.pdf>). The text has been modified to incorporate the recommendations of this volume (edits are shown in *italics* and ~~strikethrough~~):

- The Natural Setting Element serves ~~two~~ *three* purposes. The first is to clarify the relationship between the natural environment and our built-out surroundings. The second is to secure a balanced or sustainable approach to future development. *The third is to ensure that balanced and sustained economic growth is planned to ensure the existence of long-term landscape processes that sustain the natural environment and help define our community.* To help complete these purposes, the following guiding principles and assumptions were used:
  - Our cultural landscape “where we work, live and play” is shaped by our natural surroundings; *therefore, our future landscape must include the space and configurations needed to sustain the natural surroundings*
  - Our economic base of agriculture and forest products is dependent upon the County's natural setting and its resources

- In order to protect the long-term capacity of the environment to support growth, we need to understand the limits of natural systems *and we need to understand how our choices influence the processes that control those natural systems*
- Responsible growth requires us to work with and within our natural setting; we must work with nature rather than against it; *thus we must analyze, at a landscape scale, the processes that sustain the natural system and plan our future growth by working with nature*
- We must recognize our limits; humankind’s problems, especially in regards to the natural setting, cannot always be solved with better science or a technological fix

## 7.4.2 Subarea Plans

RCW 36.70A.080 allows for the development of subarea plans as optional elements of a comprehensive plan. Subarea plans are essentially more detailed land-use plans for a specific area and must be consistent with the comprehensive plan. One benefit of subarea plans is that citizens typically have increased opportunities for participation.

Some jurisdictions have adopted subarea plans that emphasize elements of the comprehensive plan that are important to that specific area, whether for reasons of economic development or environmental protection. They provide local governments the opportunity to fully incorporate Smart Growth and the results of landscape analysis (e.g., Green Infrastructure or Alternative Futures) into the comprehensive plan. For example, Alternative Futures analysis in Kitsap County’s Chico Creek (discussed in Chapter 6) resulted in a detailed subarea plan that addressed many of the issues covered in this chapter.

For jurisdictions that are not currently amending comprehensive plans to reflect the recommendations in this volume, it may be timelier and equally effective to incorporate the recommendations within subarea plans. This is particularly true for areas within the jurisdiction with a high density of critical areas. Planning only for a subarea does, however, reduce the geographic area that is included in landscape analysis. Therefore, it is advisable to have at least a cursory understanding of the landscape and its processes beyond the subarea as well as within its boundaries.

Plans and policies (discussed in this chapter as well as Chapter 6) are only some of the solutions that can be identified and developed as a part of Step 2, Prescribing Solutions. Regulatory and non-regulatory tools are identified and developed as common solutions. Chapters 8 and 9 discuss these tools in detail.