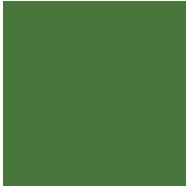
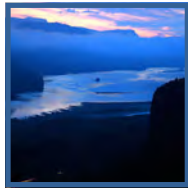




**Multnomah
County**
Comprehensive Plan



**CHAPTER 5
NATURAL RESOURCES**



INTRODUCTION/BACKGROUND INFORMATION

Maintaining environmental quality and protecting natural resources is essential for livability in Multnomah County, including a strong and sustainable economy. The County’s natural resources -- from its many streams and rivers, to the wetlands on Sauvie Island, to the wildlife habitat in the West Hills and East County, to the grand beauty of the Columbia River Gorge -- are visual and ecological assets. Each is a major factor in defining the character of the rural areas of the County and each contributes to the quality of life for residents and visitors. Protecting and conserving these resources are vital components to a successful land use program. Protecting and managing these resources helps improve the quality of air we breathe, the ground we walk on, and the water in aquifers, wetlands, streams, and lakes.

Goals 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces) and 6 (Air, Water, and Land Resources Quality) of Oregon’s statewide planning goals require cities and counties to plan for the management and protection of natural resources, including maintaining air, land, and water quality and protecting riparian corridors, wetlands, and wildlife habitat. Goal 15 (Willamette River Greenway) also protects the Willamette River and includes requirements for land uses and other activities adjacent to it. These goals and their associated administrative rules call for cities and counties to inventory significant natural resources and create and implement programs to protect them from impacts associated with land use and development.

“For our environment we envision the people of our community living in close proximity to nature, conserving and caring for our precious natural resources. We envision healthy and unpolluted air, soils and streams.”
- East of Sandy River Community Vision

This chapter provides an overview of conditions and planning issues associated with natural resources and environmental quality, along with Comprehensive Plan policies and strategies to address them, including the following topics:

- Water quality and erosion control
- Rivers, streams, and wetlands
- Wildlife habitat
- Air quality, and noise and lighting impacts
- Scenic views and sites
- Tree protection
- Wilderness areas
- Mineral and energy resources

Cultural and historic resources are addressed in Chapter 6 and additional policies related to solid waste management, wastewater treatment, and stormwater management can be found in Chapter 11.



Natural Resource Conditions

Water and Riparian Resources

There are numerous lakes, creeks, and streams, and three large rivers in the rural areas of Multnomah County. The three rivers are the Columbia, the Willamette, and Sandy, but numerous tributary streams crisscross the eastern and western portions of the County. During the 1990s, the County inventoried these resources and conducted an analysis of economic, social, environmental, and energy impacts of potential development on these and other natural resources to help guide the County's environmental protection program. Since that time, the State of Oregon has prepared updated maps and inventories of rivers and streams in Multnomah County and other areas of the state.

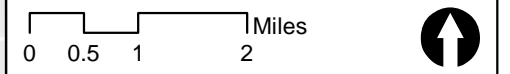
Figures 5-1 and 5-2 illustrate riparian areas (creeks, streams, rivers, and other bodies of water) that have been inventoried and identified as significant riparian resources in the rural parts of the County. Riparian areas labeled as SEC Water Resource (SEC-WR) and SEC Streams (SEC-S) are those streams subject to the County's Significant Environmental Concern overlays for water resources and streams, respectively. Areas labeled Riparian Wildlife Habitat areas (Metro) represent riparian areas and associated habitat inventoried by Metro within approximately one mile outside of the Metro Urban Growth Boundary. Areas labeled Fish Habitat (ODFW and StreamNet) have been identified by the State of Oregon and other sources as fish-bearing streams. These maps are intended for illustrative purposes only. Regulations and associated maps are included in the County's Zoning Ordinance and associated geographic information system (GIS) data. The maps show the approximate location of the inventoried streams. However, they do not necessarily denote the size or geographic boundaries of the resources or associated areas which are subject to County regulations.

Multnomah County protects water quality, ecological function, and wildlife habitat associated with streams and rivers through the County's Significant Environmental Concern (SEC) overlay zones for streams and water resources (SEC-s and SEC-wr), scenic waterways (SEC-sw), significant wetlands (SEC-w), wildlife habitat (SEC-h), and Willamette River Greenway (WRG). Although the SEC-h overlay does not directly apply to riparian areas, it protects upland wildlife habitat areas which in turn can have a beneficial effect on adjacent riparian corridors. The majority of the area within the West Hills, including numerous riparian corridors, is within a SEC-h overlay. The SEC overlay inventories and protection programs limit and regulate development activity within designated stream conservation areas and water resource areas associated with significant streams and protected water features.



West Multnomah County
Riparian Areas

-  SEC Streams
-  Inventoried Riparian Wildlife Habitat Areas (Metro)
-  Fish Habitat (ODFW and StreamNet)
-  Subareas
-  County Boundaries



Prepared By: SWCA
Date: 10/14/2016

Coordinate System:
NAD 1983 HARN State Plane Oregon North FIPS 3601

Source:
Multnomah County. Metro Regional Land Inventory System (RLIS) (2005). Oregon Fish Habitat Distribution, Oregon Department of Fish and Wildlife

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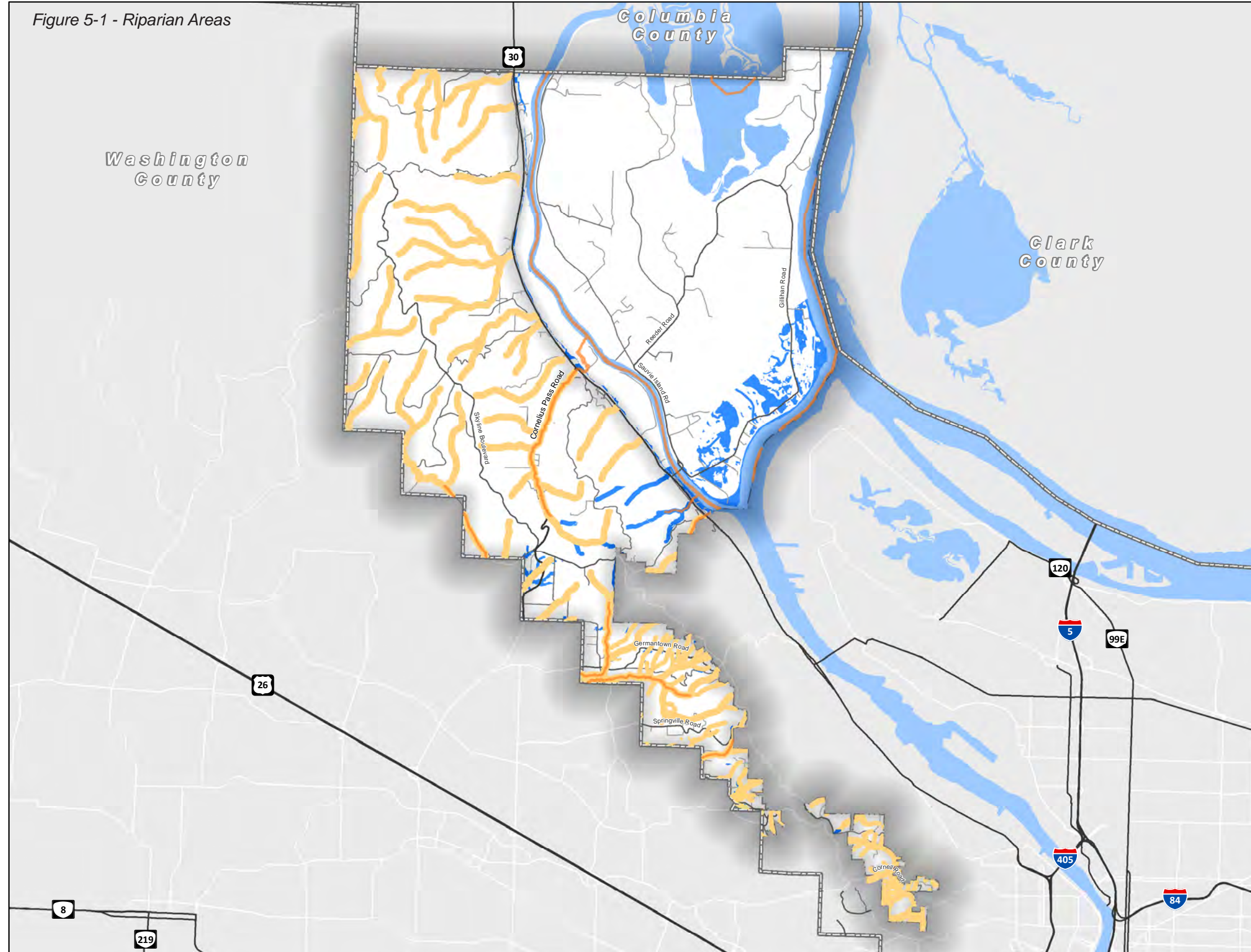
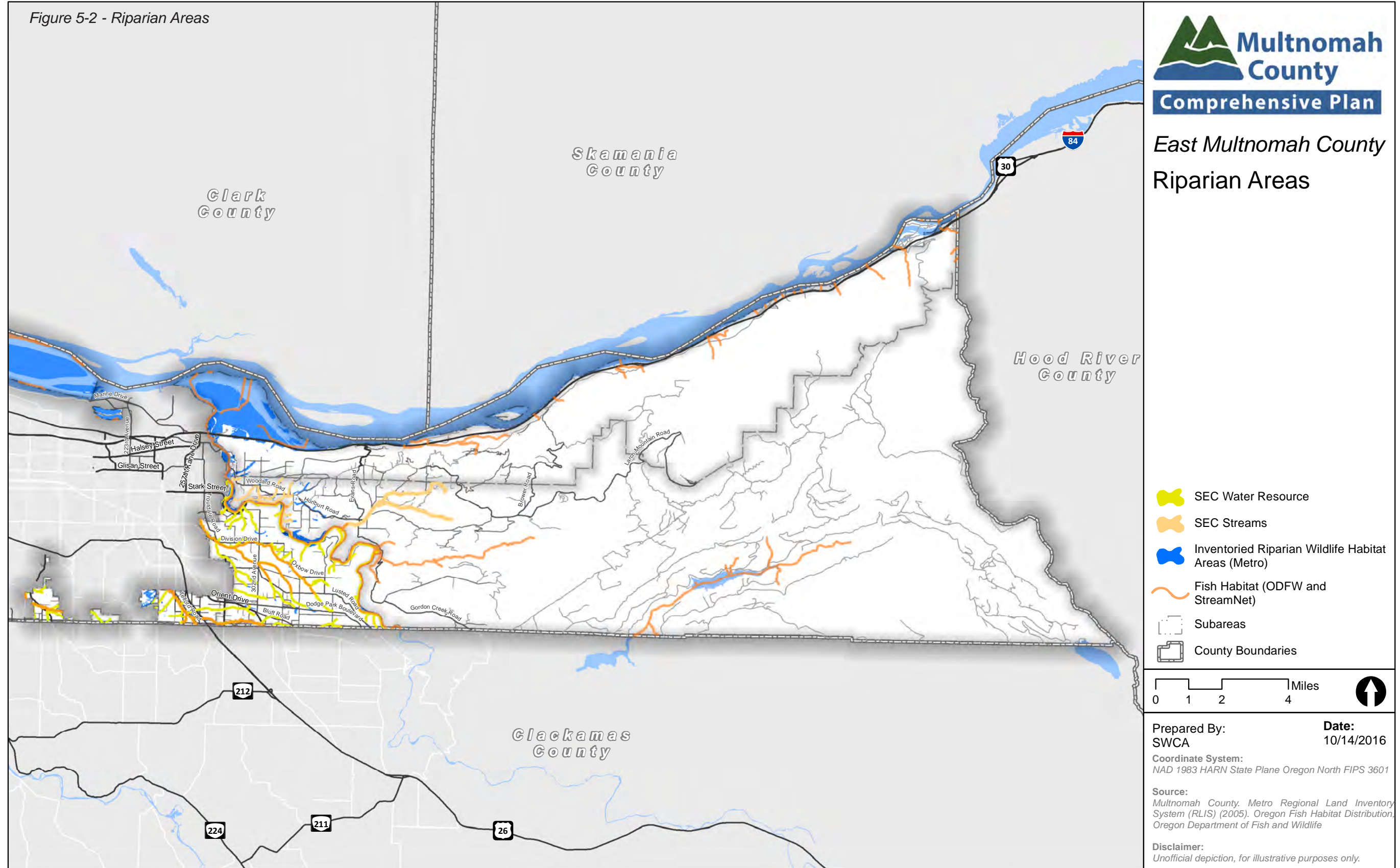


Figure 5-1 - Riparian Areas



Figure 5-2 - Riparian Areas



Multnomah County
Comprehensive Plan

East Multnomah County
Riparian Areas

- SEC Water Resource
- SEC Streams
- Inventoried Riparian Wildlife Habitat Areas (Metro)
- Fish Habitat (ODFW and StreamNet)
- Subareas
- County Boundaries

0 1 2 4 Miles

Prepared By: SWCA Date: 10/14/2016

Coordinate System: NAD 1983 HARN State Plane Oregon North FIPS 3601

Source: Multnomah County, Metro Regional Land Inventory System (RLIS) (2005). Oregon Fish Habitat Distribution, Oregon Department of Fish and Wildlife

Disclaimer: Unofficial depiction, for illustrative purposes only.



Water quality in streams and rivers also is protected through state regulation of discharges to waterways through the National Pollutant Discharge Elimination System (NPDES) permitting program. Any land use discharging liquid into a river or stream must meet state and federal pollution standards. National and state requirements associated with the federal Endangered Species Act also help protect water quality and aquatic habitat in streams and rivers by minimizing impacts of any state or federally funded projects that could adversely affect a riparian area. Water quality also is protected by the County's grading and erosion control requirements which help avoid and minimize impacts of erosion associated with land development.

In addition, County and national flood prevention and floodplain protection requirements help ensure that areas within floodways and floodplains associated with riparian areas can provide flood storage and flow movement functions in the event of a flood.

Groundwater serves the function of naturally replenishing surface waters such as wetlands, streams, and lakes. This helps provide vital habitat for aquatic organisms and wildlife. It also is a source of clean water to help meet human water needs for drinking, household use, commercial/industrial use, and irrigation. This is particularly true in rural areas, which rely on wells for their water supply. The primary causes of groundwater degradation are from agricultural practices and wastewater from septic systems. State and county requirements associated with installation of septic systems help protect groundwater quality by ensuring that a septic system is adequately sized to accommodate the development's effluent and to effectively filter potential pollutants from wastewater.





Wetlands

Wetlands, including swamps, bogs, fens, marshes, and estuaries, play a crucial role in a healthy ecosystem by providing essential habitat for waterfowl, fish, amphibians, and many other animal and plant species. The state defines a wetland as an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions (Oregon Administrative Rule (OAR) 660-023-0100). These areas also serve several natural hydrological functions, including absorbing flood waters, sustaining summer stream flows, replenishing groundwater, and filtering out harmful pollutants from waterways. However, these beneficial functions of wetlands may be adversely affected by human activities such as encroachment through development, alterations to natural drainage patterns, pollution, and the introduction of nuisance or invasive plant species.

Figures 5-3 and 5-4 illustrate the approximate location of wetlands that are either subject to the County's Significant Environmental Concern regulations, labeled as SEC Wetlands (SEC-W), or which have been inventoried as wetlands by the State of Oregon (Statewide Wetland Inventory). These maps are intended for illustrative purposes only. Regulations and associated maps are included in the County's Zoning Ordinance and associated geographic information system (GIS) data. The maps show the approximate location of the inventoried wetlands. However, they do not necessarily denote the exact size or geographic boundaries of the resources or associated areas which are subject to County regulations.

To meet Statewide Planning Goal 5 - Wetland requirements, at minimum, counties are required to adopt the Statewide Wetland Inventory (SWI). A county may also elect to create a Local Wetland Inventory (LWI) as outlined in OAR Chapter 660, Division 23. Multnomah County has completed the process of determining significant wetlands and has a LWI. These wetlands are primarily located on Sauvie Island, with a more limited number found in the East of Sandy and West of Sandy areas. Additionally, the County has analyzed the economic, social, environmental, and energy (ESEE) consequences that could result from a decision to allow, limit, or prohibit a conflicting use to create regulations that are contained in its SEC-wetland overlay zone.

The County's SEC-w regulations require either that wetlands designated as SEC-w be buffered from development or that mitigation occur for impacted wetlands. Property owners who are proposing to develop any area within a designated wetland are required to notify and obtain permits from the Oregon Department of State Lands (DSL) which regulates the alteration and filling of wetlands. The DSL and US Army Corps of Engineers generally require that development avoid wetlands. If a property owner or developer is allowed to

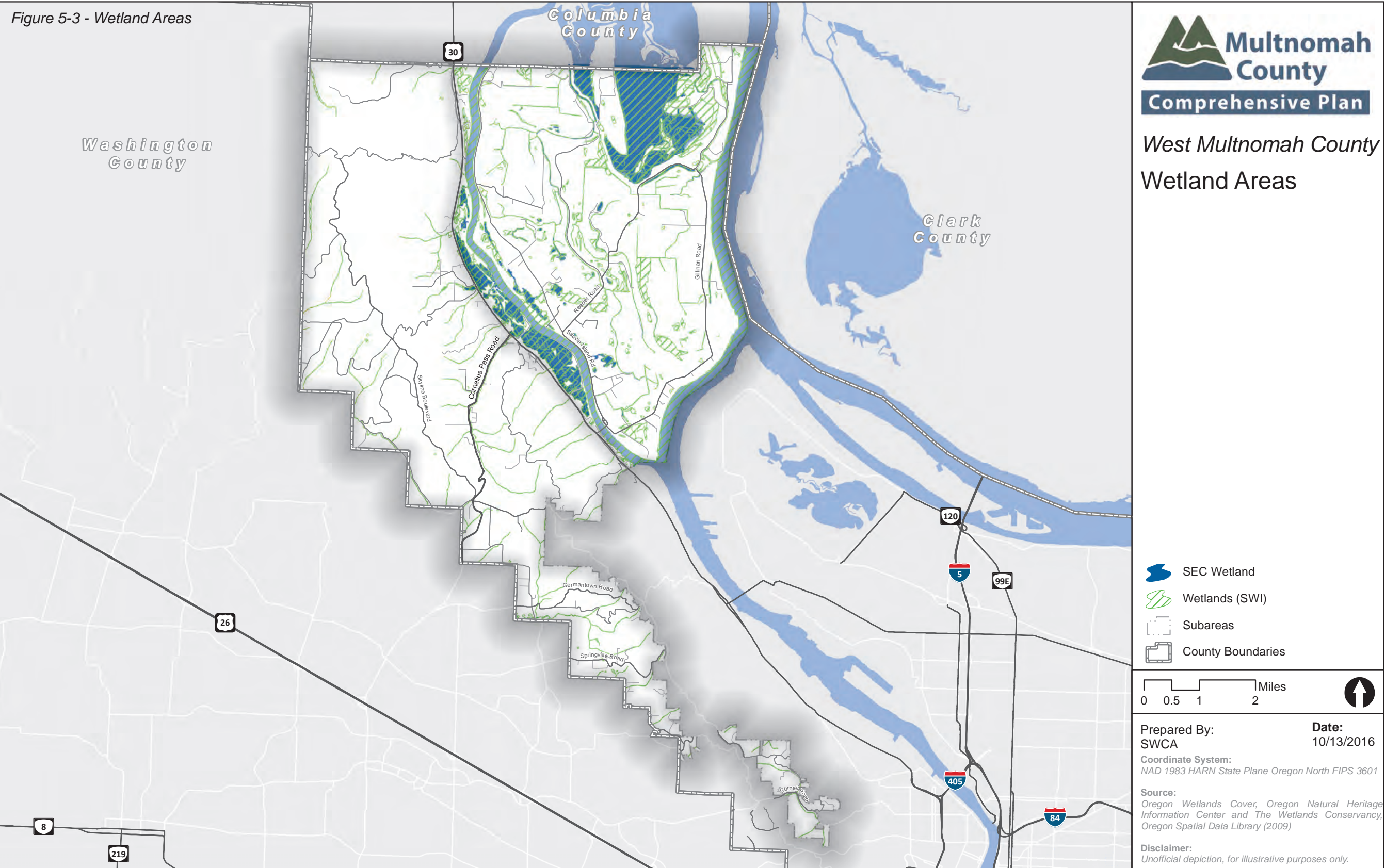
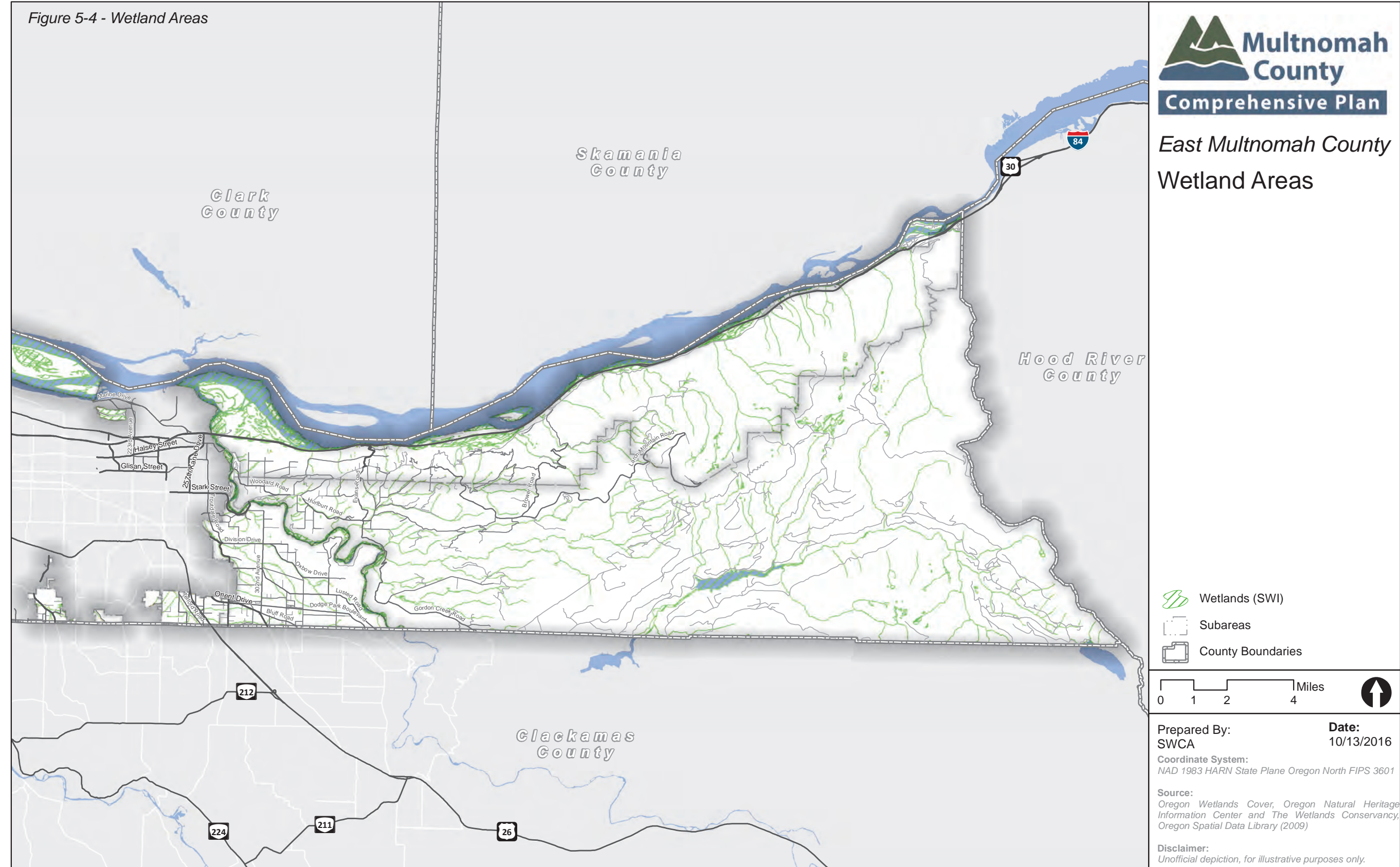




Figure 5-4 - Wetland Areas





fill or alter a wetland, they typically are required to mitigate those impacts by creating new wetlands, enhancing or restoring on-site or off-site wetlands, or contributing to a wetland mitigation bank that provides for off-site restoration of wetlands.

Wildlife Habitat

Multnomah County's rural areas are home to a wide variety of birds, mammals, fish, amphibians, and reptiles. Significant wildlife habitat are found in forested lands in the East and West of Sandy River and West Hills areas, the areas surrounding Multnomah Channel, wetlands areas on Sauvie Island, and rivers and streams throughout the County.

Figures 5-5 and 5-6 illustrate wildlife habitat areas that have been inventoried and identified as significant wildlife habitat resources in the rural parts of the County. Habitat areas labeled as SEC Habitat (SEC-H) are those habitat areas subject to the County's Significant Environmental Concern overlays for wildlife habitat. All other habitat areas have been identified by the Oregon Department of Fish and Wildlife (ODFW) as wildlife habitat areas. These maps are intended for illustrative purposes only. Regulations and associated maps are included in the County's Zoning Ordinance and associated geographic information system (GIS) data. The maps show the approximate location of the habitat areas. However, they do not necessarily denote the exact size or geographic boundaries of the resources or associated areas which are subject to County regulations.

In the western part of the County, the majority of the West Hills or Tualatin Mountains has been determined to be significant wildlife habitat. This ecosystem is part of a larger system which includes Forest Park to the south and east and natural areas in Washington and Columbia Counties, stretching eventually to the Oregon Coast Range, on the north and west. Forest Park is especially dependent upon a natural connection to the Coast Range in order to retain the diversity of wildlife which makes the park a uniquely intact wildlife habitat. The wildlife habitat in Forest Park is designated as of state importance, including an ODFW Conservation Opportunity Area (CR-09). Metro's 2006 Natural Areas Bond measure identifies portions of the West Hills around Forest Park and in the upper Rock Creek basin as significant natural areas. The Balch Creek area also is an integral part of this wildlife habitat resource, because it is adjacent to Forest Park, close to the Portland metropolitan area, and identified by the City of Portland as having significant wildlife habitat values. Portions of Sauvie Island adjacent to the Multnomah Channel have been identified by the state as having prime wildlife habitat for black-tailed deer, Roosevelt elk, and western painted turtles.



In the eastern part of the County, large areas along the Sandy River, within the Columbia River Gorge, and in the Bull Run Watershed have been identified as significant or critical wildlife habitat for a variety of species. Many of these areas are currently within the County SEC-h overlay, or are protected by requirements associated with the Columbia River Gorge National Scenic Area, CFU-3 zoning, Bull Run Watershed or the Mt. Hood National Forest.

Additional protection may be warranted for lands adjacent to Multnomah Channel and lands in the East of Sandy River planning subarea based on current mapping of wildlife habitat areas by the Oregon Department of Fish and Wildlife.

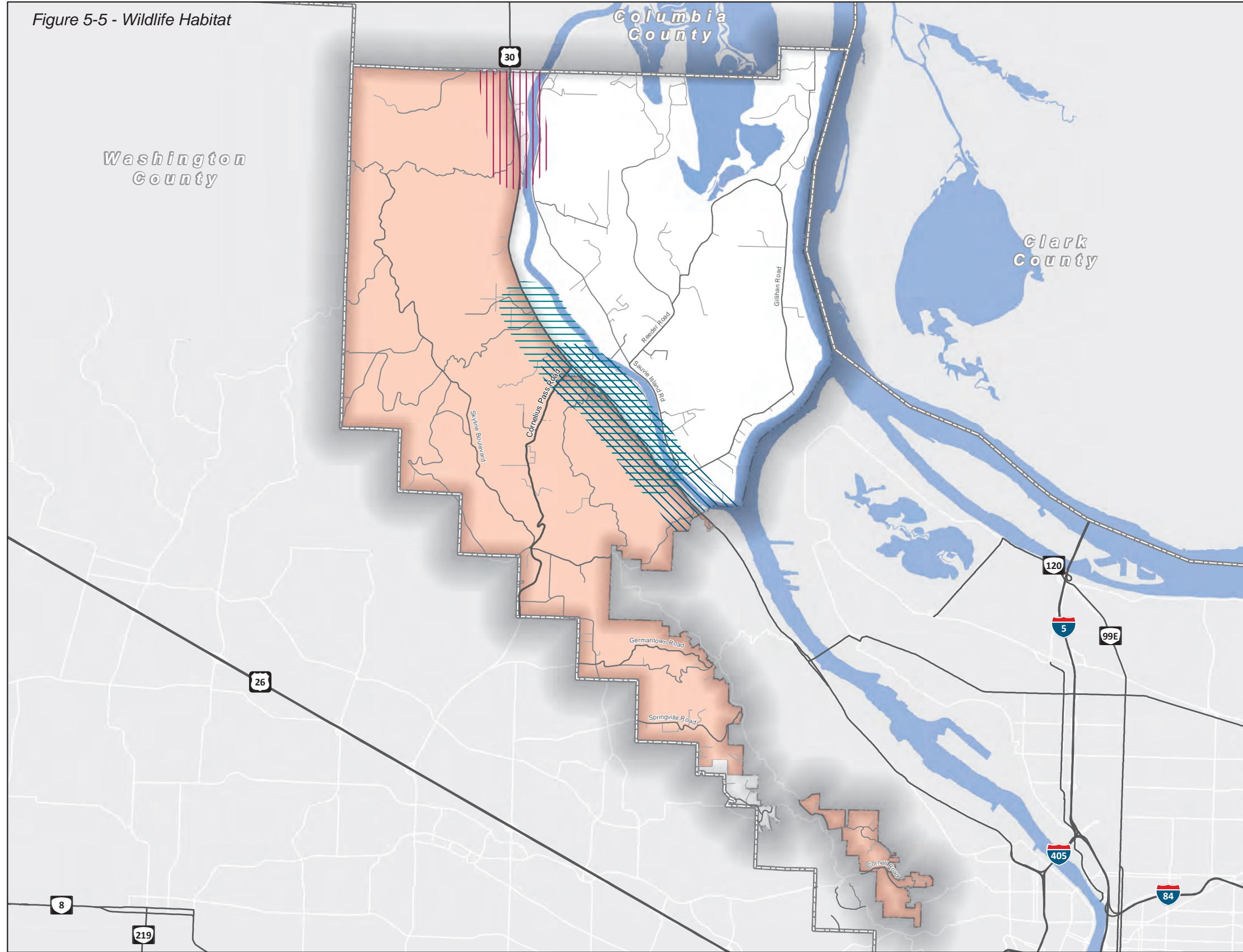
Fish and wildlife species depend on a complex array of habitat conditions for their food, water, mobility, security, and reproductive needs. Limiting the impacts of land use and development in these areas is critical for sustaining wildlife populations. The SEC-h overlay provisions generally require that development be clustered near roads, that fencing be designed to support wildlife passage, that a wildlife conservation plan be prepared, the types of vegetation that may be planted are limited to native species and existing trees and other vegetation be preserved. US Forest Service and CFU-3 zoning requirements have even stricter development limitations surrounding the Bull Run watershed (identified as critical habitat by the US Forest Service) with very few land use activities permitted there. In addition to these regulatory programs, there are a number of voluntary programs available to protect wildlife habitat, including conservation easement and tax incentive programs.

Scenic Views







In the West Hills and Sauvie Island/Multnomah Channel planning subareas, Multnomah County has identified scenic views of the West Hills from a number of specific viewing areas as significant. These include several parks and wildlife areas. The County's SEC-v overlay, which is generally located along the east slope of the West Hills, requires that development must be visually subordinate to the larger surrounding landscape in order to protect the area's overall scenic qualities as seen from identified viewing areas.



Figure 5-5 - Wildlife Habitat



West Multnomah County
Wildlife Habitat

-  SEC Habitat
-  Black-tailed Deer (ODFW)
-  Eik (ODFW)
-  Black Bear (ODFW)
-  Subareas
-  County Boundaries



Prepared By: SWCA
Date: 10/13/2016

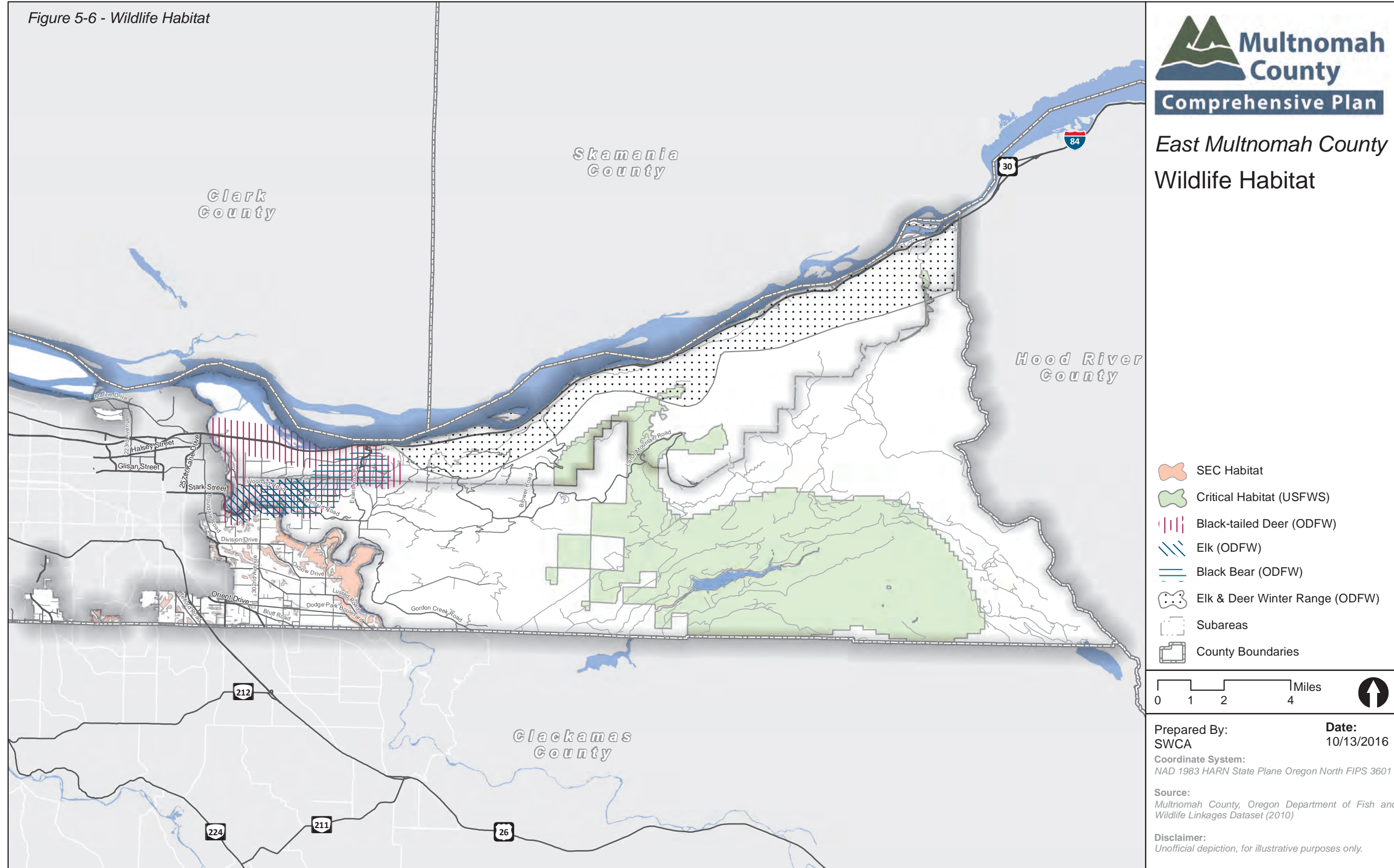
Coordinate System:
NAD 1983 HARN State Plane Oregon North FIPS 3601

Source:
Multnomah County, Oregon Department of Fish and Wildlife Linkages Dataset (2010)

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Figure 5-6 - Wildlife Habitat



Multnomah County
Comprehensive Plan

East Multnomah County
Wildlife Habitat

- SEC Habitat
- Critical Habitat (USFWS)
- Black-tailed Deer (ODFW)
- Elk (ODFW)
- Black Bear (ODFW)
- Elk & Deer Winter Range (ODFW)
- Subareas
- County Boundaries

0 1 2 4 Miles

Prepared By: **SWCA** Date: **10/13/2016**

Coordinate System:
 NAD 1983 HARN State Plane Oregon North FIPS 3601

Source:
 Multnomah County, Oregon Department of Fish and Wildlife Linkages Dataset (2010)

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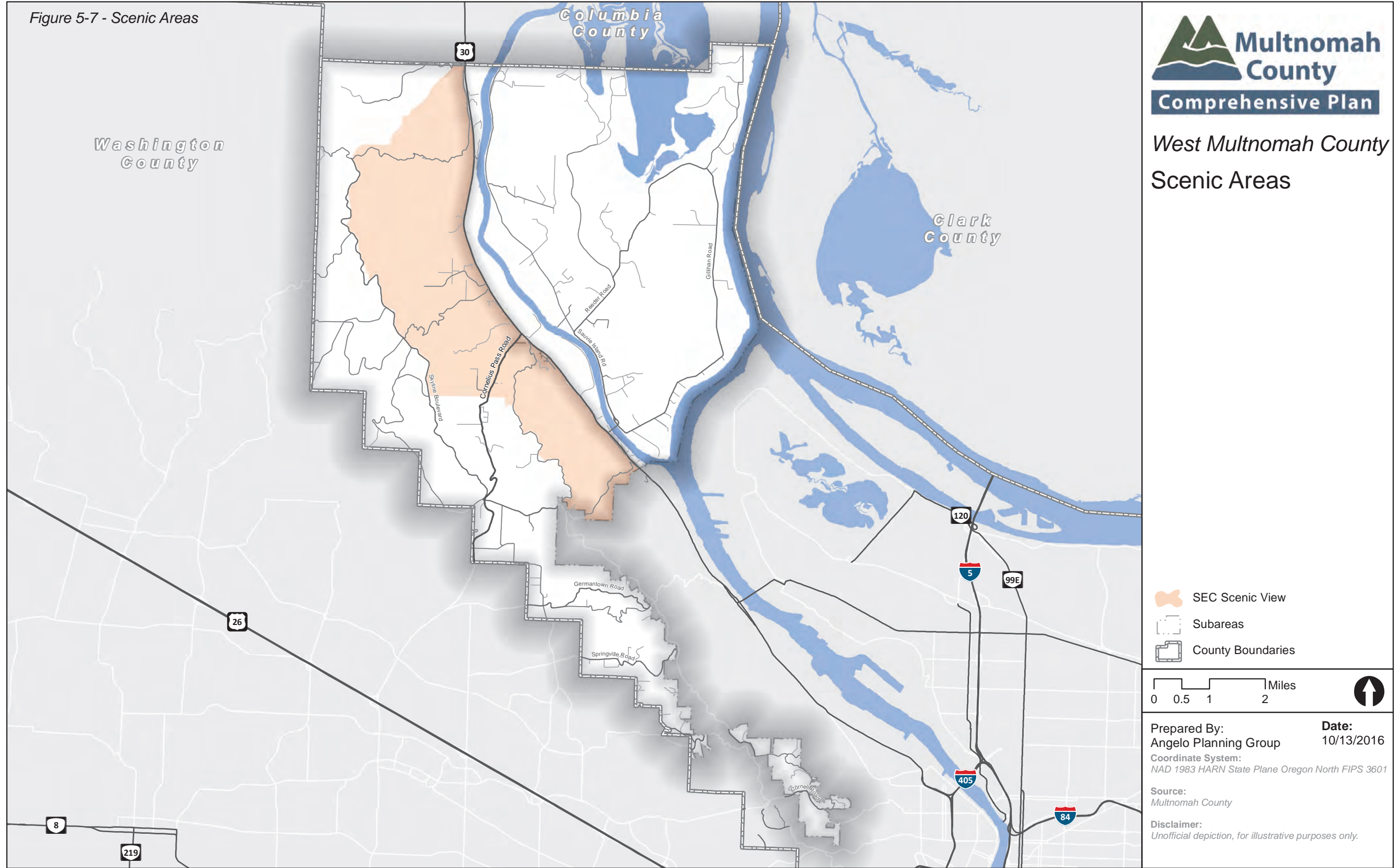
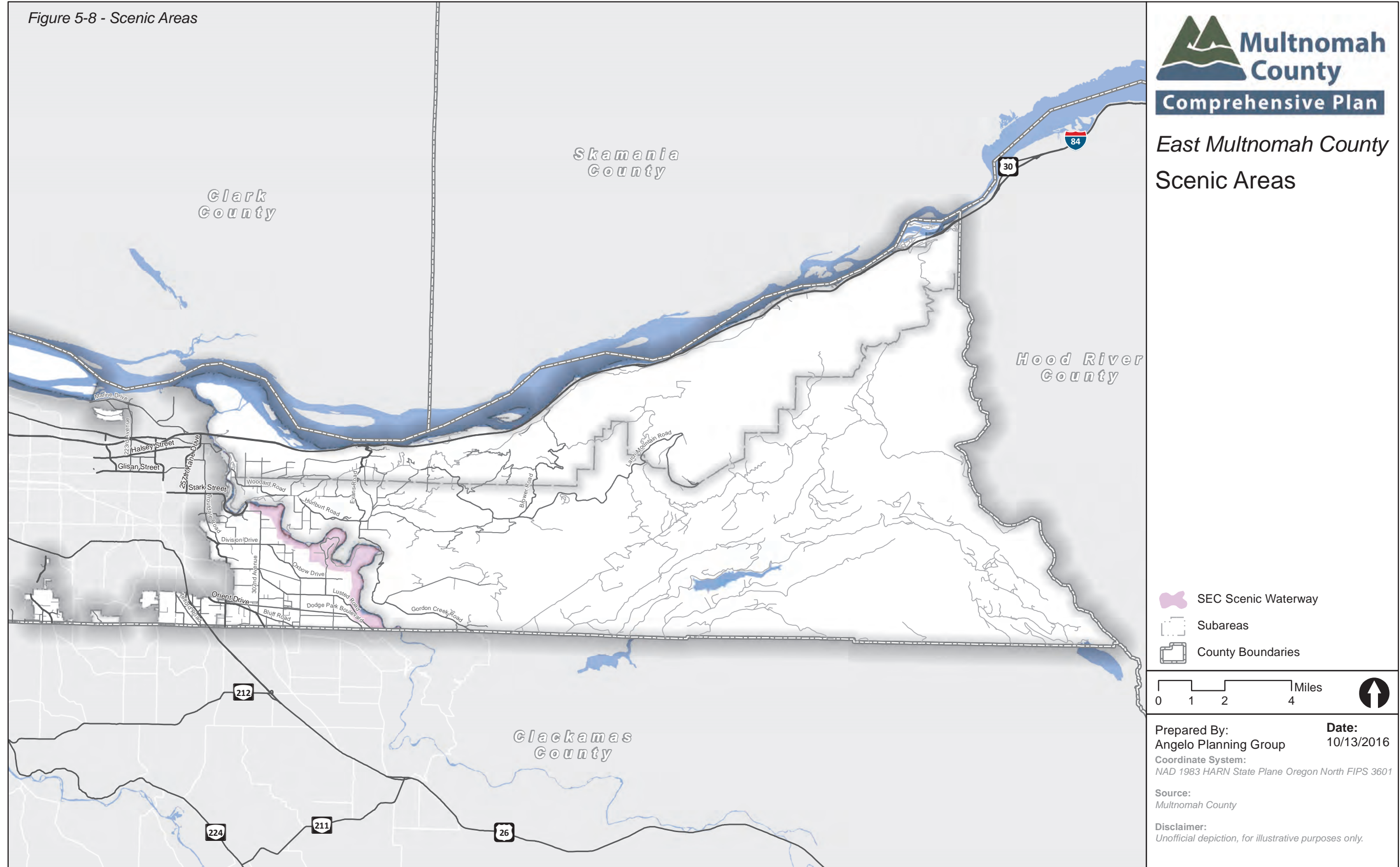




Figure 5-8 - Scenic Areas





Relevant Studies and Planning Processes

A variety of state, regional, and local plans and policies are relevant to planning for natural resources in Multnomah County, including the following.

Oregon's **Statewide Planning Goals 5 and 6** provide overall guidance for protecting the quality of air, land, and water resources and for inventorying and protecting significant natural resources, including riparian areas, wetlands, and wildlife habitat areas, as well as mineral and aggregate resources. Cities and counties are required to identify these resources, determine which ones are considered to be significant and establish a protection program for them. They may use "safe harbor" approaches for some resources or develop their own program which must meet or exceed safe harbor requirements.

The **Columbia River Gorge National Scenic Act** establishes a national scenic area to protect and provide for the enhancement of the scenic, cultural, recreational, and natural resources of the Columbia River Gorge. It also protects and supports the economy of the Columbia River Gorge area by encouraging growth to occur in existing urban areas.

The **Forest Park Natural Resources Management Plan** formulates goals, strategies, and actions to protect and enhance park resources and manage recreation use. The plan includes recommendations, strategies and actions, identifies projects, and provides regulations which govern park activities

The **Mt. Hood Land and Resources Management Plan** is administered by the United States Forest Service and guides all natural resource management activities and establishes management standards and guidelines for all of the areas in the Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management.

Consistent with the federal **Clean Water Act**, the **Oregon Department of Environmental Quality (DEQ)** establishes standards for water quality and wastewater discharges, including standards for treatment and allowable types of systems that can be used in rural areas, as well as for discharge of pollutants to streams or rivers. The DEQ also monitors and administers regulations associated with air quality.

Metro Title 13 requires counties and cities to protect significant streams within the Metro jurisdictional boundary and provides a legal framework for doing so. In January 2010, Multnomah County added additional stream corridors to the SEC-s and SEC-wr regulatory program in order to comply with Title 13.



The **East of Sandy River Wildlife Habitat and Stream Corridor ESEE Report (Revised January 1997)** forms the basis for applying the SEC regulatory program within the East of Sandy River Planning subarea.

The **Wetlands Inventory Study prepared by Esther Lev, Environmental Consult (August 1988)** forms the basis for applying the SEC-w overlay in the Sauvie Island/Multnomah Channel planning subarea.

The **West Hills Reconciliation Report (Revised May 1996)** establishes the basis for statewide Goal 5 protections in the West Hills planning subarea. The report provides ESEE analyses specific to wildlife, streams, scenic views, and the Angell Brothers aggregate quarry site. The report was adopted by ordinance as an amendment to the Comprehensive Plan.

The **West of the Sandy River Rural Area Transportation and Land Use Plan Wildlife Habitat and Stream Corridor ESEE Report (December 2002)** forms the basis for the Significant Environmental Concern protection program for water resources and wildlife habitat in the West of Sandy River planning subarea.

The **Howard Canyon Reconciliation Report (Revised October 2004)** was originally adopted in 1994 by ordinance as part of a Goal 5 work program to reconcile stream and aggregate resources in the Howard Canyon area of the East of Sandy River planning subarea. The 1996 amended report provided an ESEE analysis of the Howard Canyon aggregate mine, which concluded that proposed levels of mining at the site were acceptable in terms of impacts to nearby land uses. The report was amended in 2004 to not protect mining at the site and effectively prohibit any mining at the site except what is currently allowed by DOGAMI.

Multnomah County's Zoning Code includes standards for the Significant Environmental Concern overlay zones, which protect a variety of different types of resources, including streams, water resources, wildlife habitat, wetlands, scenic views, and scenic rivers. The zoning code also contains additional standards for mineral and aggregate natural resources.

The **Multnomah County Climate Action Plan** serves as the 40-year roadmap for the institutional and individual change needed to reduce community-wide greenhouse gas emissions 80% by 2050 as well as preparation strategies to address anticipated physical and societal effects of climate change. The County Climate Action Plan includes a number of actions and strategies related to protection of natural resources, and air and water quality which are repeated in this chapter.



Key Planning Issues and Supporting Information

A number of key planning issues affect natural resource planning policies and practices in the rural portions of Multnomah County:

- **Support for conservation and protection of natural resources.** This and other chapters of the Comprehensive Plan include a variety of policies aimed at protecting natural resources because of their importance in maintaining environmental quality and in sustaining more desirable, livable communities. While some community members have expressed concern about how these policies impact use of their property, the majority of participants involved in the Comprehensive Plan update process support the natural resource protection policies in this Plan.
- **Updated inventories of natural resources.** Additional natural resource sites not previously protected by County overlay zone provisions are identified in this Comprehensive Plan. Per state requirements, the County had several options for protecting these resources. Based on discussion and support from the project's Community Advisory Committee and other community members, the County elected to undertake a new ESEE analysis to identify potential land uses on or near each resource site and analyze the consequences of potential development to establish a protection program. The new resource sites include several riparian corridors in both East and West County and wildlife habitat adjacent to the Multnomah Channel and in the East of Sandy River area. The County also decided to apply its local wetland inventory based on the work from the Wetland Inventory Study for Sauvie Island/Multnomah Channel.





- **Expansion of scenic view overlay zone.** Community and CAC members discussed and recommended considering expansion of the County’s SEC-v (scenic view) overlay zone to include the west side of the Tualatin Mountains as a scenic view area. This would require that development between the base of the mountains and ridgeline be visually subordinate to the surrounding landscape.
- **Tree preservation.** Trees are an integral part of the County’s landscape and serve a wide variety of functions, including providing shade, absorbing carbon dioxide and producing oxygen, providing habitat for wildlife, and contributing to the beauty and rural character of the County. Trees are often cut down as part of the development process, either to make room for new buildings or to improve views associated with them. Based on CAC and community input and guidance, the Comprehensive Plan includes a number of policies aimed at preserving trees and minimizing their loss during development.
- **Balancing recreational use with protection of natural resources.** Oftentimes, recreational facilities are sited within environmentally sensitive areas where it is important to balance recreation needs with natural resource management and protection objectives. This issue was raised by community members during preparation and update of this Comprehensive Plan and a number of policies direct the County to balance these two different types of objectives.





GOAL, POLICIES, AND STRATEGIES

Goal: To protect and restore rivers, streams, wetlands, wildlife habitat and other natural resources; maintain and enhance air, water, and land quality; conserve scenic areas and open spaces; and maintain natural resources' contribution to the rural character of the County.

Policies and Strategies Applicable County-wide

The policies in this chapter focus on management and protection of a full range of natural resources, including water resources (streams, rivers, and wetlands), fish and wildlife habitat, wilderness areas, tree protection, and scenic views and sites. They also generally address air and water quality, noise and lighting impacts, and mineral and energy resources.

General Policies and Strategies

- 5.1 Identify and protect natural resources in order to promote a healthy environment and natural landscape that contribute to Multnomah County's livability.
- 5.2 Protect natural areas from incompatible development and specifically limit those uses which would significantly damage the natural area values of the site.

Strategy 5.2-1: *Utilize the Oregon Natural Heritage Resources Register to maintain a current inventory of ecologically and scientifically significant natural areas.*

Strategy 5.2-2: *Incorporate headwaters management strategies into County planning activities with the understanding of the importance of headwaters and their critical ecosystem role.*

- 5.3 Encourage voluntary conservation efforts such as conservation easements and community-based restoration projects that complement Multnomah County's Goal 5 (Natural and Cultural Resources) and Goal 15 (Willamette River Greenway) regulatory programs and if possible, extend the Riparian and Wildlife Habitat tax deferral to all lands that are eligible by administrative rule or statute within the County.

Strategy 5.3-1: *Multnomah County will work with partner agencies to provide landowners with information about various agency programs. Programs may include property tax deferral and exemption programs available for stream enhancement and agricultural plans to protect streams and their watersheds.*



Strategy 5.3-2: *Make information about other agency programs and educational materials available to the public at the planning counter and on the Internet.*

- 5.4 Review Goal 5 inventories and programs periodically in order to consider any new data and, if necessary, initiate amendments to the inventories and protection programs.

Strategy 5.4-1: *Conduct periodic reviews of stream regulatory and educational programs to gauge and improve their effectiveness.*

Water Quality and Erosion Control

- 5.5 Protect the County's water quality by adopting standards to protect the water quality resources from the impacts of development.
- 5.6 Protect vegetated riparian corridors in order to maintain their water quality functions including the following:
 - 1. Providing shade to maintain or reduce stream temperatures to meet state water quality standards;
 - 2. Supporting wildlife in the stream corridors;
 - 3. Minimizing erosion, nutrient, and pollutant loading into water;
 - 4. Maintaining natural hydrology; and
 - 5. Stabilizing slopes to prevent landslides that contribute to sedimentation of water.
- 5.7 Allow changes to existing development when the overall natural resource value of the property is improved by those changes and water quality will be improved.

Strategy 5.7-1: *Natural resource protection standards and water quality standards shall allow changes to existing development which result in a net benefit to the protected resource.*

- 5.8 Support efforts by the Soil and Water Conservation Districts to conduct a public information and assistance program for watershed property owners in management practices that enhance the water quality of streams.



- 5.9 Encourage streamside property owners to use cooperative agreements, property tax deferral and exemption programs to maintain water quality of waterways.

Strategy 5.9-1: *Work cooperatively with the Soil and Water Conservation Districts, property owner organizations, and the County Assessor to inform landowners about the property tax deferral and exemption programs available to them.*

- 5.10 Encourage use of voluntary measures to decrease the negative impacts of agricultural practices upon water quality in area streams.

Strategy 5.10-1: *Support educational programs through the USDA Natural Resources Conservation Service (NRCS) and the Soil and Water Conservation Districts to inform farming operations of best management practices to reduce agricultural runoff and to protect water quality in area streams.*

- 5.11 Protect water quality of streams by controlling runoff that flows into them.

Strategy 5.11-1: *Use hillside development and erosion control standards to control the effects of nonpoint runoff into streams from sources such as roadways, parking areas, and other impervious areas.*

- 5.12 Limit visible and measurable erosion from development in substantial compliance with the water quality standards of Title 3 of the Metro Urban Growth Management Functional Plan.

Strategy 5.12-1: *Establish standards that apply erosion and sediment control regulations to all development activities that may result in visible or measurable erosion. Visible or measurable erosion includes, but is not limited to:*

1. Increases water turbidity above the state water quality standard, where the turbidity measured downstream of development is more than 10% above an upstream control point.
2. Evidence of concentrated flows of water over bare soils or evidence of on-site erosion such as rivulets on bare soil slopes, where the flow of water is not filtered or captured on the site.
3. Earth slides, mudflows, earth sloughing, or other earth movement that leaves the property.



Strategy 5.12-2: *Help prevent erosion by requiring the use of prevention practices such as non-disturbance areas, construction schedules, erosion blankets, and mulch covers. To the extent that erosion cannot be completely prevented, sediment control measures are to be designed to capture, and retain on site, soil particles that have become dislodged by erosion.*

Strategy 5.12-3: *Adopt a limited construction season for development within primary and secondary water feature corridors to allow disturbance to occur during dry parts of the year and limit it during wet seasons.*

Strategy 5.12-4: *Control stormwater volume from developed areas in a manner that does not contribute to increased flow streams and does not result in hydromodification impacts, such as channel straightening, widening, deepening, and clearing of in-stream habitat features. Investigate how runoff could be reduced from roofs, parking, and maneuvering areas through use of site-scale infiltration and other low impact development techniques.*

Strategy 5.12-5: *Require that stream crossings be avoided where possible, and when unavoidable, require stream crossings to follow Oregon Department of Fish and Wildlife fish passage regulations where native migratory fish are currently or have historically been present. For non-fish bearing streams, require crossings that avoid or minimize impacts to natural stream functions.*

- 5.13 Update erosion and stormwater management regulations to include Low Impact Development (LID) standards to reduce the impact of built areas, promote the natural movement of water within an ecosystem and better protect riparian areas, streams, wetlands, and watersheds.
- 5.14 Stormwater drainage for new development and redevelopment shall prioritize water quality and natural stream hydrology in order to manage stormwater runoff in accordance with the following:
 - 1. The run-off from the site shall not adversely affect the water quality in adjacent streams, ponds, or lakes, or alter the drainage on adjoining lands, or cause damage to adjacent property or wildlife habitat.
 - 2. Stormwater infiltration and discharge standards shall be designed to protect watershed health by requiring onsite detention and/or infiltration in order to mimic pre-development hydraulic conditions so that post-development runoff rates and volumes do not exceed pre-development conditions.



3. Apply Low Impact Development Approaches (LIDA) in order to conserve existing resources, minimize disturbance, minimize soil compaction, minimize imperviousness, and direct runoff from impervious areas onto pervious areas.
4. Protect and maintain natural stream hydrology (or flow), with an emphasis on reducing hydromodification impacts such as stream incision and widening.
5. Develop and adopt drainage system design guidelines and standards to accommodate fish and wildlife passage where appropriate.
6. Develop and adopt standards for managing stormwater in landslide hazard areas in accordance with best management practices.

Rivers, Streams, and Wetlands

Willamette River Greenway

- 5.15 Protect, conserve, enhance, and maintain the natural, scenic, historical, agricultural, economic, and recreational qualities of lands along the Willamette River.

Strategy 5.15-1: *Apply the Willamette River Greenway (WRG) Overlay District to those lands designated WRG on the Multnomah County Zoning Map.*

Strategy 5.15-2: *Those wetlands and water areas that are located within the Willamette River Greenway will be protected by development review procedures within the WRG overlay zone instead of the SEC zone.*

Strategy 5.15-3: *Update the Willamette River Greenway standards in the Multnomah County Zoning Code for clarity consistent with implementing rules and statutes.*

Wild and Scenic Waterways

- 5.16 Protect all state or federal designated scenic waterways from incompatible development and prevent the establishment of conflicting uses within scenic waterways.



- 5.17 Recognize and support the Management Goals, Standards and Guidelines of the Sandy Wild and Scenic River and State Scenic Waterway Management Plan (1993), which are intended to protect and enhance the following outstanding values: scenic, recreation, wildlife habitat, water quality and quantity, fisheries, geological, botanical/ecological, and cultural.

Strategy 5.17-1: *Coordinate with the Oregon State Parks and Recreation Department in the review and regulation of all development proposals or land management activities along the Sandy River State Scenic Waterway.*

Strategy 5.17-2: *Apply the SEC overlay zone to the Sandy River State Scenic Waterway corridor to ensure proper recognition of the waterway and to further mitigate the impacts on uses allowed within the underlying resource zones.*

Strategy 5.17-3: *Coordinate with the U.S. Forest Service in the review and regulation of all development proposals or land management activities within the federal wild and scenic river segment of the Sandy River.*

Strategy 5.17-4: *Work with state and federal agencies or other interested parties in developing proposals for scenic waterway protection of other stream segments in the County.*

Wetlands and Riparian Areas

- 5.18 Designate as areas of Significant Environmental Concern, those water areas and adjacent riparian areas, streams, wetlands, and watersheds that warrant designation as a protected Goal 5 resource or have special public value in terms of the following:
1. Economic value, including ecosystem services value (the benefits people derive from ecosystems, including but not limited to: nutrient recycling, air purification, climate regulation, carbon sequestration, water purification, food, temperature regulation, and aesthetic experience);
 2. Natural area value (areas valued as habitats for plant, animal or aquatic life, or having a state or federally listed plant or animal species);
 3. Recreation value, where compatible with underlying natural area value;
 4. Educational research value (ecologically and scientifically significant lands), or;



- 5. Public safety (municipal water supply watersheds, water quality, flood water storage areas, vegetation necessary to stabilize river banks and slopes).

Strategy 5.18-1: *Maintain inventories and continue to protect all significant riparian corridors and wetlands in accordance with applicable ESEE analysis reports.*

Strategy 5.18-2: *Update the inventory of riparian corridors, including water areas and adjacent riparian areas, to include significant riparian corridors identified in Metro’s Urban Growth Management Functional Plan Title 13, Nature in Neighborhoods inventory within unincorporated Multnomah County.*

Strategy 5.18-3: *As appropriate, rely upon the findings contained within Metro’s analysis of “Economic, Social, Environmental, and Energy” (ESEE) consequences to apply the Significant Environmental Concern overlay for streams (SEC-s) to riparian corridors that have been added to the updated inventory.*

Strategy 5.18-4: *Utilize the Statewide Wetlands Inventory (SWI) to identify the location of wetlands within the County.*

Strategy 5.18-5: *Update the County’s wetland protection program to comply with Goal 5 safe harbor criteria and Oregon Department of State Lands (DSL) requirements.*

Strategy 5.18-6: *Periodically review and consider new data to update the inventory of significant wetlands and riparian corridors.*

- 5.19 Periodically review and consider any new data to update, adjust, and more accurately show riparian corridor centerlines.
- 5.20 Promote creation of cooperative property owner organizations for the protection of individual streams and their watersheds.

Strategy 5.20-1: *Encourage these and other organizations, including Soil and Water Conservation Districts, to provide technical assistance and information regarding financial resources to people about best management practices necessary to protect streams and adjoining riparian habitat.*

- 5.21 Provide incentives through the Zoning Code for new development to be compatible with, and enhance, significant streams and adjoining riparian habitat.
- 5.22 Support and promote enforcement of existing stream protection standards in the Forest Practices Act.



Strategy 5.22-1: *Seek changes to the Forest Practices Act when necessary to better protect stream water quality.*

- 5.23 Promote cooperation with owners throughout the entire watershed, regardless of jurisdictional lines.

Strategy 5.23-1: *Work cooperatively with the local Soil and Water Conservation Districts and other interested parties in efforts to promote watershed health throughout the entire watershed.*

- 5.24 Balance protection of significant streams with flexibility of use by property owners.

Strategy 5.24-1: *Provide incentives to encourage development to be compatible with significant streams.*

Strategy 5.24-2: *Consider additional streams for significance and protection if requested by a property owner or other interested party.*

- 5.25 Although a wetland area may not meet the County criteria for the designation “Significant,” the resource may still be of sufficient importance to be protected by State and Federal agencies.

Fish and Wildlife Habitat

- 5.26 Designate as areas of Significant Environmental Concern, those habitat areas that warrant designation as a protected Goal 5 resource or have special public value in terms of the following:
 1. Economic value, including ecosystem services value (the benefits people derive from ecosystems, including but not limited to: nutrient recycling, air purification, climate regulation, carbon sequestration, water purification, food, temperature regulation, and aesthetic experience);
 2. Natural area value (areas valued as habitats for plant, animal or aquatic life, or having a state or federally listed plant or animal species);
 3. Recreation value, where compatible with underlying natural area value;
 4. Educational research value (ecologically and scientifically significant lands), or;
 5. Public safety (municipal water supply watersheds, water quality, flood water storage areas, vegetation necessary to stabilize river banks and slopes).



Strategy 5.26-1: *Maintain inventories and continue to protect all significant wildlife habitats in accordance with applicable ESEE analysis reports.*

Strategy 5.26-2: *Periodically review and consider any new data to update the inventory of significant wildlife habitats.*

Strategy 5.26-3: *Update the inventory of wildlife habitat and associated wildlife corridors in accordance with Statewide Planning Goal 5.*

Strategy 5.26-4: *Designate wildlife habitat and corridors mapped by Oregon Department of Fish and Wildlife as significant.*

Strategy 5.26-5: *Conduct an analysis of “Economic, Social, Environmental, and Energy” (ESEE) consequences on wildlife habitat that has been added to the inventory.*

Strategy 5.26-6: *If warranted by an ESEE analysis, apply the Significant Environmental Concern overlay for wildlife habitat (SEC-h) to any newly identified significant wildlife habitat.*

5.27 Protect significant native fish and wildlife habitat and wildlife corridors and specifically limit conflicting uses within these habitats and sensitive big game winter habitat areas.

Strategy 5.27-1: *Utilize local and regional scientific information to identify significant native fish and wildlife habitat areas and wildlife corridors. If necessary, supplement this information with additional science-based analysis to identify additional significant habitat areas and corridors.*

Strategy 5.27-2: *Provide information through various existing programs to the community about how wildlife habitat can co-exist with other uses on private property.*

Strategy 5.27-3: *Work with the Oregon Department of Forestry to better protect wildlife habitat from the negative impacts associated with timber harvesting.*

Strategy 5.27-4: *Direct the Multnomah County Vector Control staff to coordinate with Oregon Department of Fish and Wildlife, using that agency’s map of sensitive areas and their Vector Control Guidance for Sensitive Areas to identify important habitat for sensitive species like red-legged frogs and native turtles where an altered protocol should be used. The County’s vector control staff is encouraged to act as a resource in efforts to educate and collaborate with landowners about natural means of mosquito control.*



- 5.28 Establish a Wildlife Advisory Committee to advise the County about matters under its jurisdiction and control that may affect wildlife.
- 5.29 Develop and implement a bird-friendly building policy for new buildings.

Strategy 5.29-1: *Review Portland’s Green Building Design Guidelines and other sources for appropriate building requirements.*

- 5.30 Encourage and promote bird-friendly building practices.

Strategy 5.30-1: *Develop or procure educational materials about bird-friendly building design, construction, and management, and make those materials available to development applicants.*

- 5.31 Protect significant forested wildlife habitat areas through large-lot zoning and educational programs.

Strategy 5.31-1: *Provide information through various existing programs to the community about how wildlife habitat can co-exist with other uses on private property.*

Strategy 5.31-2: *Work with the Oregon Department of Forestry to better protect wildlife habitat from the negative impacts associated with timber harvesting.*

Strategy 5.31-3: *Work cooperatively with the local Soil and Water Conservation Districts and the USDA Natural Resources Conservation Service to develop a public education and assistance program which informs landowners, including farmers, on how they can manage their properties to best protect wildlife habitat while continuing to make productive economic use of their land.*

- 5.32 Provide incentives through the zoning code for new development to be compatible with and to enhance wildlife habitat.

- 5.33 Balance protection of wildlife habitat with flexibility of use by property owners.

Strategy 5.33-1: *Enforce existing animal control restrictions on free-ranging domestic pets which can have a negative impact on wildlife.*

Strategy 5.33-2: *In significant wildlife habitat areas, encourage fencing which allows wildlife to pass through.*

Strategy 5.33-3: *Encourage clustering of development to minimize conflicts with wildlife.*



Strategy 5.33-4: *Where possible, streamline and simplify the Multnomah County Code to provide and encourage fish and wildlife habitat restoration and enhancement projects on public and private lands conducted by natural resource public agencies such as Metro, Soil and Water Conservation Districts, and Oregon Department of Fish and Wildlife.*

- 5.34 Work with State and local agencies, Soil and Water Conservation Districts, and other public and private conservation groups to protect high value habitat such as, but not limited to, oak woodlands, bottomland cottonwood/ash forests, and old growth forests.
- 5.35 Work with and coordinate with the Oregon Department of Fish and Wildlife (ODFW), local Soil and Water Conservation Districts, and other agencies or organizations authorized by the State to administer the Wildlife Habitat tax deferral programs for lands that are eligible by administrative rule or statute.
- 5.36 Explore amendments to the Significant Environmental Concern overlay for wildlife habitat (SEC-h) to limit the size and building footprint of houses in order to minimize harm to wildlife habitat in significant habitat areas.
- 5.37 Encourage educational programs regarding the maintenance and restoration of wildlife habitat, including programs addressing:
 - 1. Maintenance and restoration of wildlife corridors.
 - 2. Restoration and enhancement of wetlands, riparian areas, and grasslands.
 - 3. Planting of native vegetation hedgerows.
 - 4. Conserving Oregon white oak habitat and bottomland cottonwood/ash forests.
 - 5. Use of wildlife-friendly fencing.



Scenic Views and Sites

- 5.38 Conserve scenic resources and protect their aesthetic appearance for the enjoyment of future generations.

Strategy 5.38-1: Apply the SEC overlay zone to the Sandy River State Scenic Waterway and any other designated significant scenic areas to assure the scenic resources of these areas are not diminished as new development occurs.

Strategy 5.38-2: Coordinate reviews of development proposals within SEC areas with other affected agencies (i.e., National Forest Service, State Parks and Recreation Department's Rivers Program, etc.).

Strategy 5.38-3: Enforce large lot zoning regulations in resource areas to conserve scenic qualities associated with farm and forest lands.

Strategy 5.38-4: Apply the WRG overlay zone to lands within the Willamette River Greenway. Review new development within the greenway to assure scenic values are not diminished.

Strategy 5.38-5: Administer Design Review provisions to enhance visual qualities of the built environment.

- 5.39 Balance protection of scenic views with flexibility of use by property owners.

Strategy 5.39-1: Do not render property unbuildable solely because of scenic view considerations.

Strategy 5.39-2: Allow placement of residences so that a view from the property is possible as long as the proposed development is visually subordinate from key viewing areas.

Strategy 5.39-3: Regulate the use of reflective glass, including solar panels, in scenic areas.

Strategy 5.39-4: Promote strong Forest Practices standards to better protect scenic views from the negative impacts associated with timber harvesting.

Strategy 5.39-5: Provide incentives to encourage development to be compatible with significant scenic views.



Strategy 5.39-6: *In the West of Sandy planning subarea, use education - i.e. providing information regarding identified viewsheds to property owners -- rather than regulations to implement this policy.*

Tree Protection

- 5.40 In order to minimize the detrimental environmental impacts and habitat fragmentation of extensive tree removal around structures, development, landscaping, and yard areas, amend the Significant Environmental Concern overlay zones to require replanting of trees, in areas where tree removal has occurred, consistent with County fire-safety standards and legitimate farm uses.

The County may require concurrence from the Oregon Department of Agriculture of a legitimate farm use when tree removal is done to convert forest land to agricultural use. For timber harvests under the Oregon Forest Practices Act (OFPA), the County may require evidence of compliance with the OFPA and may require reforestation within areas considered exempt from reforestation by the Oregon Department of Forestry such as, but not limited to, areas cleared for residential development.

Strategy 5.40-1: *Update development requirements to ensure that removal of trees to accommodate new development is minimized and that replanting of such trees is required where physically possible.*

Strategy 5.40-2: *Monitor implementation of approved developments to ensure that tree protection and replanting requirements are met within a specified time period and that tree removal does not exceed the level approved in the development permit.*



Air Quality, Noise, and Lighting Impacts

- 5.41 Cooperate in the development and implementation of regional efforts to maintain and improve air and water quality and reduce noise impacts.
- 5.42 If a land use proposal is a noise-sensitive use and is located in a noise-impacted area, or if the proposed use is a noise generator, the development must meet the following:
 1. Building placement on the site must be in an area having minimal noise level disruptions to reduce impacts from surrounding noise generators if the use is a noise-sensitive use, or to minimize impacts on surrounding uses if the use is a noise generator.
 2. Building insulation or other construction techniques must be used to lower interior noise levels in noise-impacted areas.

Strategy 5.42-1: *Inventory existing and potential air, water, wildlife habitat, and noise impacts at the local level as part of the planning process.*

Strategy 5.42-2: *Cluster, buffer or isolate land uses which cause negative impacts on air and water resources or wildlife habitat areas or are noise generators.*

Strategy 5.42-3: *Limit noise impacts on wildlife habitat areas.*

Strategy 5.42-4: *Review and revise the Multnomah County Noise Ordinance as needed to minimize impacts from major noise generating uses, such as agri-tourism events and mass gatherings, on nearby rural residences.*

Strategy 5.42-5: *Request that the Port of Portland conduct semi-annual review of impacts from Port owned properties having noise and light effects on rural areas of the County.*

- 5.43 Require outdoor lighting to be low intensity and designed in a manner that minimizes the amount of light pollution.

Strategy 5.43-1: *Adopt a “dark sky” ordinance and work with the City of Portland, Port of Portland, and other adjacent jurisdictions and agencies towards reducing light pollution from sources outside the County’s jurisdictional boundary.*



Wilderness Areas

- 5.44 Recognize the value of wilderness among the many resources derived from public lands.

Strategy 5.44-1: *As a federally designated wilderness area, the Mark O. Hatfield Wilderness is a significant Goal 5 Resource Site.*

Strategy 5.44-2: *The Mark O. Hatfield wilderness area shall be protected through the County's most restrictive Commercial Forest Use zoning and/or through the appropriate SEC overlay zoning.*

Strategy 5.44-3: *Coordinate with federal land management agencies and Congressional staff in the formulation of proposals for any additional wilderness areas within Multnomah County.*

Strategy 5.44-4: *Support wilderness designation of federal lands which meet guidelines for wilderness designation.*

Mineral and Energy Resources

- 5.45 Protect sites required for generation of energy.

Strategy 5.45-1: *Maintain an inventory of energy sources production sites within the County.*

Strategy 5.45-2: *Coordinate with appropriate regulatory or licensing authorities in the protection of sites required for energy generation.*

- 5.46 Protect and ensure appropriate use of mineral and aggregate resources of the County and minimize conflicts between surface mining activities and surrounding land uses.

Strategy 5.46-1: *The County shall protect significant mineral and aggregate resources consistent with Statewide Planning Goal 5 and Oregon Administrative Rules, Chapter 660, Division 16.*

Strategy 5.46-2: *Allow mining and the expansion of the significant Goal 5 mineral and aggregate resources, in accordance with state rules, statutes, and local conditional use permit requirements, to provide needed aggregate materials for the Portland Metropolitan Area.*



Strategy 5.46-3: *Require new or expanded mineral and aggregate extraction operations to develop programs based upon an economic, social, environmental, and energy (ESEE) consequences analysis that will minimize any negative effects of mineral and aggregate-related activities on surrounding affected uses.*

Strategy 5.46-4: *Utilize the Protected Aggregate and Mineral Resources (PAM) Overlay and Mineral Extraction conditional use criteria to protect identified mineral and aggregate resource sites and to reduce potential impacts of resource extraction on uses within the overlay zone.*

Strategy 5.46-5: *Balance the need for aggregate materials with the protection of scenic views, streams, and wildlife habitat within the vicinity of significant Goal 5 mineral and aggregate resources including implementing measures contained in past reconciliation reports for the Angell Brothers and Howard Canyon quarry sites.*

Strategy 5.46-6: *The County will coordinate its permitting and compliance monitoring processes for mineral and aggregate resources with the Oregon Department of Geologic and Mineral Industries (DOGAMI), Department of Environmental Quality (DEQ), and Oregon Department of State Lands (DSL) as applicable. For mining operations where the County has issued a land use permit, the County will initiate coordination efforts by conducting biennial compliance reviews with the regulatory agencies or according to such other review schedule acceptable to the regulatory agencies.*

Strategy 5.46-7: *Conditional use permits issued by the County for new, renewed, or expanded mining operations shall be reviewed every two years to determine compliance with the permit conditions.*





West Hills Policies and Strategies

- 5.47 Consider expansion of the Significant Environmental Concern Overlay for Views (SEC-v) to the west slope of the West Hills area to protect views from the Tualatin Basin.

Sauvie Island and Multnomah Channel Policies and Strategies

- 5.48 Collaborate and partner with private, public, and nonprofit organizations and tribes to adopt and maintain an inventory of natural systems in the planning area, document restoration projects, and develop strategies to address natural resource issues including but not limited to hydrology, climate change, changes in regional geography, wildlife and habitat conservation, restoration and enhancement, and educational programs.
- 5.49 Coordinate with federal and state agencies, including National Oceanic and Atmospheric Administration Fisheries Division (NOAA Fisheries) to develop design standards that protect salmon habitat and fish passage within and along the Multnomah Channel and its tributaries and ensure compliance with the Endangered Species Act (ESA).
- 5.50 Multnomah County should work collaboratively with the Sauvie Island Drainage Improvement Company, state and federal agencies, and non-profit organizations to maintain the drainage and flood control functions provided by the Company while restoring natural systems where appropriate.
- 5.51 Recognize and celebrate the heritage value of the natural resources of Sauvie Island to Native American tribes, including historic wetlands, riparian areas, water bodies, and oak uplands. Encourage and support the protection and restoration of these resources.
- 5.52 Continue to explore and encourage opportunities to conduct selected dredging to increase depth, flows, flushing, and circulation action in Sturgeon Lake in coordination with partner agencies and organizations. Support the dredging and reconstruction of the Dairy Creek Channel between the Columbia River and Sturgeon Lake to allow it to remain open for 8-10 months of each year, and contribute to the cost of replacing two failed culverts where Reeder Road crosses Dairy Creek.



5.53 Recommend that any fill generated as a result of dredging activities be located on Sauvie Island only under the following conditions:

1. To assist in flood control
2. Not on designated wetlands
3. Not on high value farm land unless placement of such fill improves a farm's soils or productivity
4. In areas where it will not negatively impact wildlife habitat.

5.54 To implement Policy 5.17 of this Plan, implement the following strategy.

Strategy 5.54-1: *In addition to safe harbor protection program criteria, apply the Significant Environmental Concern overlay (SEC-w) to significant wetlands located on Sauvie Island and Multnomah Channel as required by the Wetlands Inventory/ESEE analysis conducted in 1988 and as adopted by Ordinance 801 or as revised by any subsequent ESEE analysis.*

West of Sandy Policies and Strategies

There are no policies specific to this rural planning area.

East of Sandy Policies and Strategies

There are no policies specific to this rural planning area.