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Statewide Conservation Issues

The Stakeholder Advisory Committee helped Oregon Department of Fish and Wildlife identify six key conservation issues, large-scale issues that present the greatest threats to fish and wildlife populations and their habitats throughout Oregon. They form the framework for the Conservation Strategy. The following table summarizes goals for reducing and reversing the impact of these factors, as well as the actions that Oregonians can take to address each of these issues. These issues are discussed in greater detail in the Statewide Perspectives and Approaches Chapter (pages 35 to 109).

Six Key Conservation Issues, Goals and Actions

Overall Goals for the Conservation Strategy: maintain healthy fish and wildlife populations by maintaining and restoring functioning habitats, prevent declines of at-risk species, and reverse any declines in these resources where possible. Reducing and reversing the impacts of these key conservation issues can contribute significantly to these goals, while also contributing to healthy human communities.

Overall Recommended Actions for all Key Conservation Issues:

These actions apply to all six key conservation issues. For all recommended actions, implementation will depend on cooperative efforts by a variety of entities and may be contingent upon funding, statutory authority, and other factors. Actions need to be compatible with local priorities and local comprehensive plans and land use ordinances and other applicable state, federal, and local laws. Actions on federal lands need to undergo federal planning processes prior to implementation to ensure consistency with existing plans and management objectives for the area. In many cases, these actions are already occurring and should be continued or expanded. For example, Oregon Department of Fish and Wildlife and landowners have done extensive work to address fish passage. In other cases, new actions are identified. Ideally, new actions should be implemented, monitored and adapted accordingly. Actions:

- a. Work with community leaders and agency partners to ensure planned, efficient growth, and to preserve fish and wildlife

habitats, farmland, forestland, rangeland, open spaces, and recreation areas.

- b. Use, expand, and improve financial incentive programs and other voluntary conservation tools to support conservation actions taken by landowners and land managers.
- c. Develop new voluntary conservation tools to meet identified needs.
- d. Promote collaboration across jurisdictional and land ownership boundaries.
- e. Work creatively within the existing regulatory framework, seeking new opportunities to foster win-win solutions.
- f. Inform Oregonians of conservation issues and the actions everyone can take that will contribute to Oregon's collective success.

ISSUE 1: Land Use changes

Converting from one type of land use to another – whether changing from agricultural areas to urban development, or from unmanaged native vegetation to intensively managed areas – can impact fish and wildlife habitat, reduce habitat patch size, and decrease connectivity between habitat patches. Oregon's increasing human population will increase demands for residential and commercial uses, resulting in future land use changes.

Goal: Manage land use changes to conserve farm, forest and range, open spaces, natural recreation areas, and fish and wildlife habitats.

Actions:

- 1.1. Conserve Strategy Habitats using voluntary, non-regulatory tools such as financial incentives, conservation easements, landowner agreements and targeted acquisition.
- 1.2. Encourage strategic land conservation and restoration within Conservation Opportunity Areas.

- 1.3. Work cooperatively within existing land use planning processes to conserve Strategy Habitats, and optimize use of transferred development rights, conservation banking and other market-based tools to meet land use goals.
- 1.4. Create a system for tracking land use changes over time.
- 1.5. Support local land use plans and ordinances that protect farm and forestlands and other fish and wildlife habitats in urban and rural areas.

ISSUE 2: Invasive Species

Invasive species are species not native to ecosystems to which they have been intentionally or accidentally introduced and whose introduction causes or is likely to cause economic or environmental harm. Many non-native species have been introduced to Oregon. While not all non-native species are invasive, some crowd out native plants and animals and become a serious problem. They alter habitat composition, increase wildfire risk, reduce productivity, or otherwise disrupt natural habitat functions.

Goal: Prevent new introductions of species with high potential to become invasive, and reduce the scale and spread of priority invasive species infestations.

Actions:

- 2.1. Focus on prevention through collaborative efforts and increased public awareness and reporting.
- 2.2. Develop early response mechanisms to facilitate swift containment of new introductions, using site-appropriate tools.
- 2.3. Establish system to track location, size and status of infestations of priority invasives.
- 2.4. Focus on eradication of invasive species in Strategy Habitats and other high priority areas where there is a clear threat to ecosystems and a high probability of success.
- 2.5. Work with the Department of Agriculture, the Invasive Species Council and other partners to develop an invasive species implementation tool that evaluates the ecological impact and management approaches for invasive species identified as priorities in the Conservation Strategy.
- 2.6. Develop and test additional techniques to deal with invasives and share information with landowners and land managers.

ISSUE 3: Disruption of Disturbance Regimes

People have altered historic natural disturbance regimes, sometimes creating a cascade of unintended effects. Fires have been suppressed, increasing forest tree density and fuel loads. As a result, wildfires have increased in intensity, placing both human and wildlife habitat at risk. Flooding has been controlled to a great extent by dams, dikes and revetments (hardened banks), which has altered floodplain function.

Overall Goals: Restore natural processes such as fire and flood cycles to sustain and enhance habitat functions in a manner compatible with existing land uses. Encourage efforts to increase understanding of historic natural disturbance regimes.

Fire Regimes

Goal: Reduce uncharacteristically severe wildfire, and restore fire or use site-appropriate techniques that mimic the effects of fire in fire-dependant ecosystems.

Actions:

- 3.1. Use wildfire risk classification maps to identify local zones with greatest risk of uncharacteristically severe wildfire and prioritize for further action.
- 3.2. Collaborate with landowners and other partners in these zones to lower risk of wildfires while maintaining wildlife habitat values, and to choose the sites and landscapes for fuel reduction.
- 3.3. Seek and support cost-effective methods for reducing fuels, especially innovative approaches that contribute to local economies.
- 3.4. Using site-appropriate prescriptions, carefully reintroduce natural fire regimes as part of an overall wildfire risk reduction and habitat restoration program in locations where conflicts such as smoke and safety concerns can be minimized.
- 3.5. Use site-appropriate tools such as mowing, brush removal, tree cutting, and controlled grazing to mimic effects of fire in fire-dependent habitats.
- 3.6. Develop tools that evaluate trade-offs between short term loss of wildlife habitat values and long term damage to habitat from wildfires.
- 3.7. Evaluate effects of forest management practices that reduce wildfire risk to wildlife habitat values.

Flood Regimes

Goal: Maintain and, where feasible, restore floodplain functions such as aquifer recharge, water quality improvements, soil moistening, natural nutrient and sediment movements, animal and seed dispersal, gravel transport and recruitment, and habitat variation.

Actions:

- 3.8. Restore floodplain function by: reconnecting rivers and streams to their floodplains, restoring stream channel location and complexity, removing dikes and revetments, allowing seasonal flooding, restoring wetland and riparian habitats, and/or removing priority high-risk structures within floodplains.
- 3.9. Work with power companies, agencies, irrigation districts and municipalities to time water releases to replicate natural flood cycles.
- 3.10. Identify and restore important off-channel habitats and oxbows cut-off by previous channel modification.

ISSUE 4: Barriers to Fish and Wildlife Movement

People have built communities, roads, dams and other structures that act as barriers to the movement of fish and wildlife. These barriers reduce total habitat, create challenges to animal dispersal and reproduction and make wildlife more vulnerable to injury and death.

Goal: Provide conditions suitable for natural movement of animals across the landscape.

Actions:

- 4.1. Continue working with Oregon Watershed Enhancement Board, Oregon Department of Transportation, U.S. Forest Service, U.S. Bureau of Land Management, and other partners to inventory, prioritize and remove fish passage barriers, leveraging current work done by Oregon Department of Fish and Wildlife's Fish Passage Task Force to expand implementation of fish passage priorities.
- 4.2. Maintain and restore habitat to ensure aquatic connectivity and terrestrial corridors in priority areas, such as Conservation Opportunity Areas and urban centers.
- 4.3. When planning aquatic passage projects, consider the needs of other aquatic species and terrestrial wildlife, as well as fish.
- 4.4. Continue to screen ditch and pump water diversions to protect fish using funds from Oregon's Fish Screening and Passage Cost Sharing Program and working with state and federal funding partners.

- 4.5. Work with Oregon Department of Transportation, county transportation departments, and other partners to identify and address key areas of wildlife mortality on highways and consider animal movements when planning new roads.
- 4.6. Identify, maintain and restore important stop-over sites for migratory birds.

ISSUE 5: Water Quality and Quantity

Recent droughts have heightened awareness of the inter-related issues of water quality and quantity. Water quality and quantity problems can greatly impact aquatic species, and are linked to increasing intensities of land use practices, changes in land use, and growing demand for water.

Overall Goal: Maintain and restore water quality and quantity to support fish and wildlife and habitats in balance with economic and social needs of local communities.

Water Quality

Goal: Maintain or restore water quality in surface and groundwater to support a healthy ecosystem, support aquatic life and provide fish and wildlife habitat.

Actions:

- 5.1. Reduce runoff from impervious surfaces.
- 5.2. Restore wetlands and riparian areas to increase filtration of sediments and contaminants.
- 5.3. Implement water quality improvement projects and management frameworks.
- 5.4. Monitor structural, compositional, and functional parameters of aquatic habitats for changes in water quality.
- 5.5. Maintain and restore native vegetation throughout watersheds, including upland areas, riparian corridors and floodplains.

Water Quantity

Goal: Maintain or restore sufficient stream flows to support aquatic species and Strategy Habitats.

Actions:

- 5.6. Work with Oregon Water Resources Department and the Oregon Department of Environmental Quality to develop tools to maintain in-stream flow (e.g., water markets and water banks).
- 5.7. Seek opportunities to restore aquifer recharge and maintain groundwater.

- 5.8. Use established indicators to monitor watershed function and determine thresholds for action.
- 5.9. Work with Water Resources Department and other partners to establish priorities and implement projects to restore stream flow.

ISSUE 6: Institutional Barriers to Voluntary Conservation

In some cases, institutional barriers prevent landowners from implementing projects that will benefit fish and wildlife. These barriers include the difficulty of obtaining multiple permits, cumbersome requirements for financial assistance, and rules originally passed for one purpose that block another one. In addition, lack of technical assistance or awareness of available programs can be a barrier to landowner participation.

Goal: Share information, streamline processes, and seek creative programs that support voluntary conservation actions.

Actions:

- 6.1. Streamline permitting processes for habitat restoration projects and application processes for financial incentive programs.
- 6.2. Resolve conflicting regulations that hinder conservation and restoration of Strategy Habitats.
- 6.3. Improve coordination and delivery of incentives programs to more effectively serve landowners and more strategically address needs of Strategy Species and Habitats.
- 6.4. Improve data management, coordination and sharing between various conservation partners to support voluntary conservation.
- 6.5. Expand technical assistance and delivery of services to landowners through outreach and stakeholder involvement.

In addition to these six issues, the Stakeholder Advisory Committee identified global warming as an important issue that could potentially impact fish and wildlife populations in the future. There is a growing consensus in the scientific community that the Earth's climate is changing, but the impacts of these changes on Oregon's ecosystems are not as clear. Global warming could potentially change the distribution and composition of habitats, especially in coastal, alpine and subalpine areas.

Global warming also could potentially interact with some of the key conservation issues, making these issues more complex or their effects more unpredictable. For example, changes in temperatures and weather systems resulting from global warming potentially could reduce overall water supplies, affect how invasive species colonize and spread, and/or increase the intensity or frequency of wildfires or floods. In general, actions to address the key conservation issues will need to be adapted as conditions change and as knowledge increases. Global warming may create some "changing conditions" that require an adaptive management approach.

Oregon Department of Fish and Wildlife considered global warming to be beyond the scope of this Conservation Strategy. Global warming is currently being addressed at a larger scale through the West Coast Governors' Global Warming Initiative and through other planning efforts. In response to the West Coast Governors' Global Warming Initiative, Governor Kulongoski and the Oregon Department of Energy convened the Governor's Advisory Group on Global Warming. The Advisory Group presented its recommendations in the report, Oregon Strategy for Greenhouse Gas Reduction (<http://egov.oregon.gov/ENER-GY/GBLWRM/Strategy.shtml>). The report contains recommendations for energy efficiency, transportation, renewable energy, electric generation and other topics. For a brief overview of the global warming issue and current planning efforts, see Appendix VI.

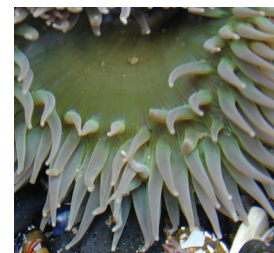
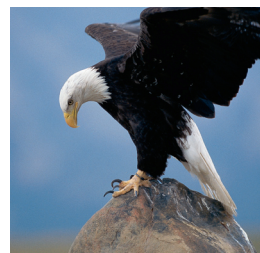


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