



the OREGON CONSERVATION STRATEGY



Chapter 7: Monitoring



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Oregon Department
of Fish and Wildlife



OregonConservationStrategy.org

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Monitoring

Overview

The Oregon Conservation Strategy identifies priority Strategy Species and Strategy Habitats. These Strategy Species and Habitats should be monitored over time to determine their status and the effectiveness of applied conservation actions. Detailed guidance for monitoring is available and summarized for some [Strategy Species](#) and [Strategy Habitats](#).

Importance of Monitoring

Investments in conservation should be strategic, effective, and accountable. Success of these investments can be measured by: (1) assessing existing conditions, (2) identifying desired conditions, and (3) measuring change over time.

A well-designed monitoring program takes an adaptive management approach using verifiable and reliable science. Monitoring objectives should be simple, easily communicated, and relevant to people's concerns. Data and information derived from monitoring should be easily understood, well-documented, and accessible in a variety of formats for relevant audiences (e.g., scientists, public and private land managers, policy makers).

Role of Monitoring in Grants and Project Funding

Specific methodologies for monitoring and reporting monitoring results allow grant administrators and other funders to track specific progress and investment value of projects they have funded. This is especially helpful when tracking investments and projects that occur over wide areas and long periods of time.

Monitoring of conservation efforts or management actions should be funded along with any project implementation. Further, natural resource professionals should seek collaborative ways to make monitoring affordable, relevant, and easily accessible. Monitoring results should be shared with peers, policy makers, and local decision-makers to the extent possible, allowing people to learn about successes and adapt actions and policies more efficiently and strategically.



Photo Credit: Keith Kohl, ODFW. Western Pond Turtles.

What to Monitor

It is not possible to monitor all species of potential conservation concern. Natural resource managers must consider the conservation goals and make reasoned, strategic decisions about monitoring needs. Priority is often placed on species or habitats in decline (Strategy Species and Habitats), or on locations that will potentially have the greatest impact to a number of conservation priorities simultaneously ([Conservation Opportunity Areas](#)).

Monitoring may occur at different scales: site, stream, watershed, ecoregion, and statewide. While different questions may be addressed and different variables measured at each scale, a monitoring plan should focus data collection on a clearly-defined purpose. Monitoring should be directed at the same scale that the conservation action or limiting factor is occurring. Results from local, site-specific monitoring projects should be incorporated into statewide, regional, national, and even international monitoring projects to allow for examination of larger-scale population or ecological trends. Project goals should outline what will be monitored, the appropriate monitoring approach, and for how long. Monitoring may be directed toward individual species or species groups, habitat conditions, ecological function, or ecological integrity.

Some key considerations when designing programs to monitor the status of Strategy Species and Strategy Habitats include:

- Monitoring efforts for Strategy Species should emphasize either species data gaps or limiting factors at appropriate spatial scales. Depending on the existing knowledge base, species monitoring may need to focus on collecting data regarding:
 - Range and distribution
 - Population status and trends (at various scales)
 - Life history traits
 - Response to particular types of habitat management or human activity
 - Effects of [Key Conservation Issues](#)
 - Specific limiting factors (e.g., the degree of contaminants in fish found in the lower Columbia River).
- For long-term monitoring efforts, emphasize Strategy Species or Strategy Habitats and/or support regional, west-wide, or national programs
- Incorporate Strategy Species monitoring into other monitoring efforts

Photo Credit: Brian Wolfer, ODFW. One way to record the presence of Strategy Species is to use trail cameras that automatically take a picture when they sense movement. In this example, a Fisher was recorded near the upper Middle Fork Willamette River drainage area, in the Willamette National Forest.

Monitoring Strategies

Conservation Strategy monitoring can focus on (1) species, sometimes called the “fine filter for conservation planning” or (2) habitats or other environmental measurements, sometimes called the “coarse filter for conservation planning”. Specific examples are described below.

Species Monitoring

What to Monitor	Why Monitor?
Strategy Species	Determine the current presence and distribution of species as well as demographic information, such as population status and/or trends.