The Conservation Opportunity Framework: Guiding Investments on the Ground

About the Council

The Washington Biodiversity Council is a public-private partnership chartered to develop policies to conserve Washington's remarkable biological diversity for the benefit of all.

The Council developed the Conservation Opportunity Framework as part of the *Washington Biodiversity Conservation Strategy* in 2007, and it is working to build awareness of the concepts and tools embedded in the framework.

Biodiversity—the web of life— is the full range of life in all its forms.

Biodiversity includes

- all species, from tiny microbes, to top predators, to people.

- all ecosystems, from beaches and forests to rivers and grasslands.

- all the ecological processes and products necessary for our lives
  - from services such as water filtration, climate stability, and pollination
  - to goods such as food, building materials, and medicine
  - to benefits such as recreational opportunities, artistic inspiration, and a sense of place.

What is the Conservation Opportunity Framework?

The Conservation Opportunity Framework is a set of maps that identify regional opportunities for biodiversity conservation in Washington. The maps assess the distribution of important species, plant communities, and ecological systems, and overlay them with human population trends. The maps are part of the *Washington Biodiversity Conservation Strategy*.

Why do we need the Conservation Opportunity Framework?

Washington needs better ways to consider regionally important biodiversity when making decisions affecting the landscape.

The landscape-based approach of the Conservation Opportunity Framework:

- **Provides guidance** on priorities for conservation actions.
- **Indicates areas of greatest importance** for multiple species and important ecosystems across the landscape.
- **Creates a common framework for increased coordination** of land stewardship efforts.

What benefits does the Conservation Opportunity Framework provide?

- **Spatially explicit landscape focus**—the framework helps direct effort, time, money, and other resources to areas that will yield the greatest conservation benefit.
- **Wall-to-wall coverage**—every place and every person can contribute to biodiversity conservation in Washington.
- **Opportunities for action**—a range of voluntary, collaborative actions are possible; increased coordination will improve success.

Who can use the Conservation Opportunity Framework?

Communities, planners, agencies, schools, foundations—the maps and the underlying data are available to the public. The maps provide high-level guidance on where to invest in biodiversity conservation activities in Washington. These activities include a wide range of approaches (see next page) for stewarding biodiversity, maintaining working lands, and sustaining important cultural attributes of the landscape.

The framework emphasizes that all areas can contribute to keeping Washington's species and ecosystems healthy.

Washington's Ecoregions

How do the Conservation Opportunity Framework maps work?

Overlaying two sets of data—biodiversity significance and future risk to biodiversity significance (as estimated by distance from projected population growth centers)—produces a nine-part matrix of conservation opportunity.

The conservation opportunity maps are based on Washington's ecoregions. Ecoregions encompass landscape-level processes and share climate, vegetation, geology, and other environmental patterns. Washington's nine terrestrial ecoregions extend past our borders; we share a rich mix of species and ecosystems with our neighbors.

Ecoregions are a practical unit for conservation planning because they reflect broad ecological patterns and are large enough to include entire populations of species and their habitats, as well as natural processes such as wildfire.

Biodiversity Significance

Biodiversity significance ratings are based on the ecoregional assessments, the best and most recent scientific analysis of Washington's biodiversity as it is currently understood statewide.

The assessments considered a combination of 300 to over 800 species, natural communities, and ecological systems in an ecoregion, including:

- **Rare or declining species** (mammals, amphibians, reptiles, invertebrates, and plants), or those with specialized habitat needs.

- **Natural communities**, defined as a distinctive set of ecologically interacting plants and animals, including specific types of forests, wetlands, prairies, etc.

- **Ecological systems**, suites of natural communities that share similar biological, geological, and climatic conditions, including such groupings as alpine, lowland wet forest, and scablands.

Ecological systems provide a "coarse filter" for evaluating biodiversity; this coarse filter represents all habitats important to the common species of an ecoregion.

The ecoregional assessments are available at **http://www.waconservation.org/**. They were produced through a partnership of The Nature Conservancy, Washington Department of Fish and Wildlife and Washington Department of Natural Resources. The detailed data underlying the assessments are available from Washington Department of Fish and Wildlife and the Washington Natural Heritage Program.

Future Risk

Ratings of future risk to biodiversity significance are based on major land use designations and distance from projected population centers, as determined by the Western Futures growth model. Projected population centers act as a proxy for future density, land use changes, and ecosystem stresses.

The Conservation Opportunity Framework uses this growth model because it provides a consistent data set for the entire state.

The growth model is available at
http://www.centerwest.org/futures/

Community planners may find that additional data layers at finer resolution can generate maps more useful at a local level than the Conservation Opportunity Framework was able to model (see sidebar on the Pilot Project in North Central Washington).

Pilot Project in North Central Washington

Land use planners in north central Washington are considering how they can assess future risk to biodiversity by superimposing different types of information on the biodiversity significance map layer.

By experimenting with overlays of zoned land use categories and urban growth area boundaries, they are working to create a locally useful tool.

The Initiative for Rural Innovation and Stewardship (http://irisncw.org) is coordinating this project, sponsored in part by the Washington Biodiversity Council.
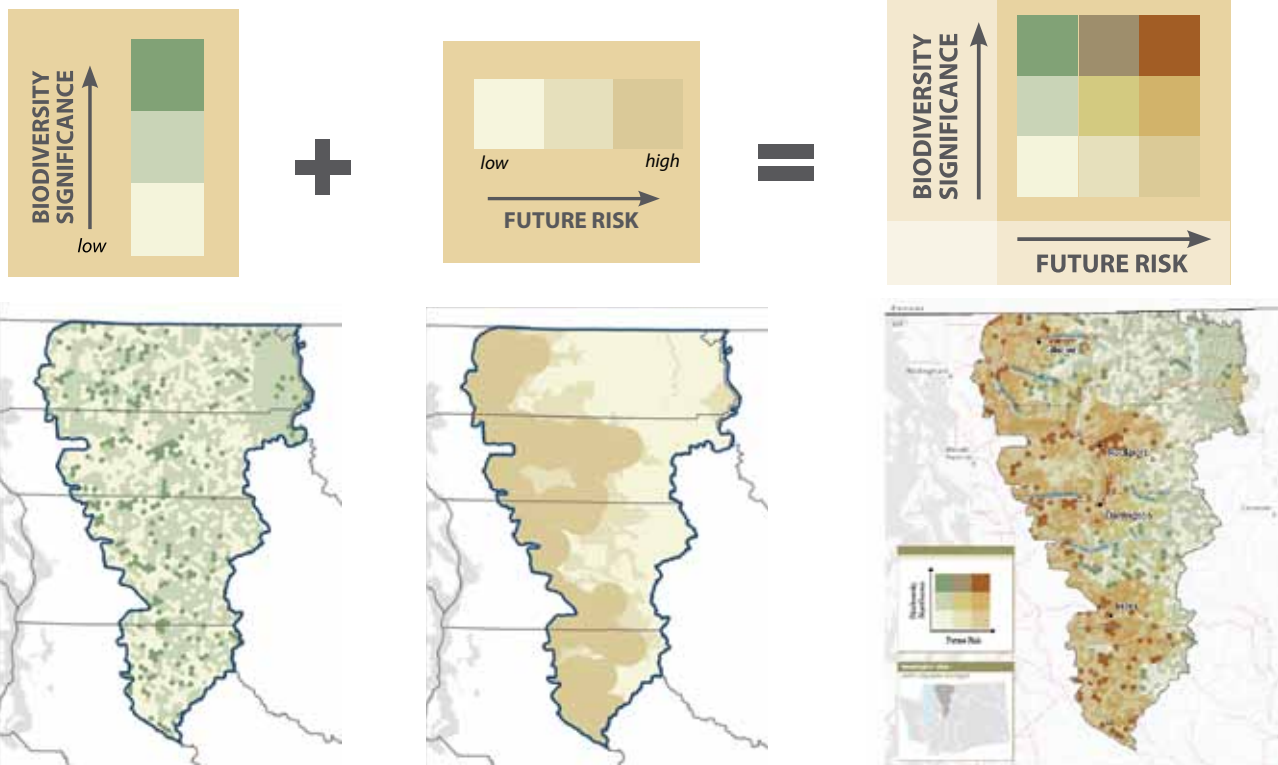
Example: North Cascades Ecoregion. Overlaying two sets of data—biodiversity significance and future risk to biodiversity significance (as estimated by distance from projected population growth centers)—produces a nine-part matrix of conservation opportunity. This example shows the North Cascades ecoregion.

How do I get started exploring the Conservation Opportunity Framework?

To access the maps, data layers, and underlying data, please e-mail info@biodiversity.wa.gov or call (360) 902-3027 or TDD (360) 902-1996.

For more information about the Council or the *Washington Biodiversity Conservation Strategy*, please visit www.biodiversity.wa.gov

or contact:
Lynn Helbrecht
Executive Coordinator
Washington Biodiversity Council
(360) 902-3087 or TDD (360) 902-1996
lynn.helbrecht@biodiversity.wa.gov

We welcome your questions and comments.

WASHINGTON

BIODIVERSITY COUNCIL

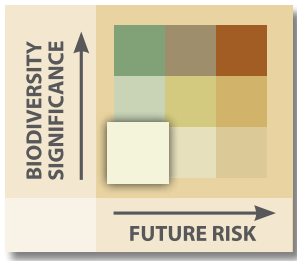CONSERVATION | EDUCATION | STEWARDSHIP

1111 Washington Street S.E.

P.O. Box 40917

Olympia, WA 98504-0917

(360) 902-3000 or TDD (360) 902-1996

www.biodiversity.wa.gov

Connect and Discover—conserving biodiversity in areas of low biodiversity significance and low future risk.

Lands that are defined as having lower biodiversity significance and risk—the lower left corner—are already conserved in some way, and, relative to other areas, have fewer rare species and less overall biodiversity.

These areas:

- May be less significant from an ecoregional perspective;
- May be particularly important to local biodiversity or for habitat connectivity;
- Could need more research and study—they may be considered of lower biodiversity significance because we lack information.

Conservation of common species is especially important in these areas, and voluntary community efforts can help achieve this goal. Ongoing monitoring and management will be needed to understand the effects of climate change, reduce catastrophic fire risk, and prevent degradation of native biodiversity by invasive species. As we currently understand the biodiversity present in these areas, large-scale state investment in biodiversity conservation generally should not be targeted here.

Example: Urban or Suburban Parks

Natural areas in urban or suburban parks allow people to connect with nature. These places may provide important remnant habitats, though relative isolation from other natural areas may limit their ecoregional importance. Threats may include invasive species, trampling and overuse, and pressure to develop for high-intensity recreation activities. Conservation strategies could include discovery walks to observe birds and wildflowers, neighborhood work parties to control invasive species, and citizen science efforts to monitor species changes over time.
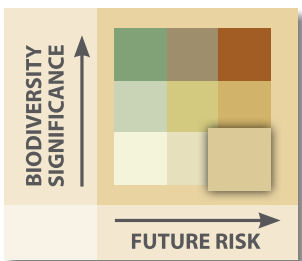
Learn and Restore—conserving biodiversity in areas of low biodiversity significance and high future risk.

Lands that are classified in the lower-right corner are defined as places that, relative to others, have less overall biodiversity but higher likelihood of facing growth pressures.

These areas:

- May have high residential density;
- May be important places for people to contact nature and learn about local biodiversity;
- Could need more research and study;
- Could have biodiversity that is significant for people's quality of life, even if not generally significant from an ecoregional perspective.

Education, restoration, and proactive land use planning can be emphasized in these areas. Citizen science projects can identify locally important areas and fill gaps in biodiversity data, while backyard and community wildlife habitat enhancement efforts can help ensure that common species remain plentiful. Planners and officials can strive to design green spaces that maximize the public's ability to encounter nature.

Example: County Planning

County planning can play a vital role in biodiversity conservation. Pressures on open space are increasing, especially in areas undergoing rapid conversion to residential use. Innovative planning can become urgent to allow local communities to retain the opportunities to interact with nature close to home.
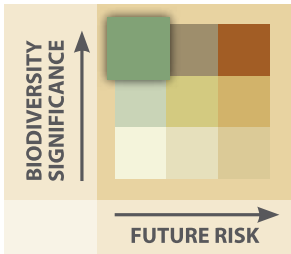
Manage and Maintain—conserving biodiversity in areas of high biodiversity significance and low future risk.

Lands classified in the upper left corner are defined as places that, relative to others, have more overall biodiversity yet face less development pressure. These areas have relatively a high priority for conservation.

These areas:

- Probably have species or ecosystems that are important regionally;

- May have a protected status that is likely to continue in the future (e.g., national park, city watershed, agricultural easement);

- May lack imminent threats to biodiversity from increased human population.

In general, these areas are at low risk, but they need to be managed to prevent damages from invasive species, catastrophic fire, recreation, and other uses. It also may be useful to identify linkages to connect highly significant areas to one another, conduct ongoing monitoring and research on potential effects of global climate change, and assess the accuracy of our understanding of biodiversity and ecological processes.

Example: Conservation Easements

Conservation easements can be used to manage land for its natural values and to maintain forests and farms as working lands. Easements can prevent changes to a property's uses that could degrade its biodiversity values.
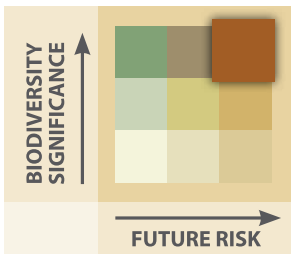
Collaborate and Innovate—conserving biodiversity in areas of high biodiversity significance and high future risk.

Lands classified in the upper right corner are the highest priority areas for biodiversity conservation. They are places that have the highest biodiversity significance and face the highest likelihood of rapid change.

These areas:

- Probably have significant ecoregional biodiversity values;

- May be under pressure from human population growth and impact;

- May be of urgent conservation concern.

These areas need a full toolbox of strategies. Tools might include facilitated collaboration among local residents engaging in conservation activities and strategically targeted incentives such as technical assistance and grants. Restoration for ecological function may be important; these areas may be able to provide mitigation banks or other market tools. Targeting state conservation investment should be considered here.

Existing conservation lands are especially important and should be managed for their special features. Linking conservation areas will be critical for sustaining healthy populations of some species.

Example: A Full Toolbox

Rapidly developing communities that encompass exceptional biodiversity values need a full toolbox of conservation approaches. Innovative thinking and collaboration among diverse interests can develop a suite of successful programs and activities. Collaborative conservation efforts could include cost-share habitat improvement projects, citizen involvement programs, agricultural or conservation easements, and ecotourism.