



FISH & WILDLIFE PLANNER

Ecoregional Assessments: Viewing county wildlife resources from a regional perspective

George Wilhere, Washington Department of Fish and Wildlife

Limited resources, as well as social and economic considerations, make protection of all wildlife habitat impractical. To be effective, biodiversity conservation must efficiently use limited resources. Addressing this predicament requires a reliable method for prioritizing potential conservation areas. To guide biodiversity conservation and land use planning, Washington Department of Fish and Wildlife (WDFW) and Department of Natural Resources, along with The Nature Conservancy, have partnered to conduct ecoregional assessments (EAs) for Washington’s nine ecoregions (see Figure). EAs attempt to identify and prioritize the most important places for the conservation of biodiversity at the ecoregional scale. Important places are identified based on factors such as species rarity, richness, and representation as well as site suitability and overall efficiency.

Ecoregions are defined by their distinct vegetation types and typically span millions of acres across multiple states. The Columbia Plateau Ecoregion, for instance, is dominated by shrub-steppe vegetation while the West Cascades are primarily made up of Douglas-fir/western hemlock forest. EAs involve an analysis of data obtained from various sources and typically follow six basic steps:



Map of Washington’s nine ecoregions.

- (1) selection of conservation targets (e.g., species, habitat types) that fit a predetermined criteria;
- (2) assembling data for conservation targets;
- (3) defining the spatial representation for each target;
- (4) rating the suitability of each part of the ecoregion for conservation;
- (5) performing the data analysis;
- (6) refining output of the analysis through expert review.

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Ecoregional Assessments

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Typical data sources come from WDFW, Washington Natural Heritage Program, U.S. Forest Service, as well as regional experts. The analysis relies on an analytical tool known as MARXAN to identify the most efficient set of places to capture various amounts of biodiversity. The final product depicts areas of high priority for conservation.

The following are some examples of how ecoregional assessments could be used by planners:

Urban Growth Area (UGA) expansion. A county must expand its UGA to accommodate future growth and has narrowed its options to two areas, each of which produce similar economic results. EAs provide a regional context for choosing the option most beneficial to regional biodiversity conservation.

Land Use Zoning. A county is trying to determine where to maintain natural resource zones in order to retain agriculture and forestry industries. EAs can tell them where continuation of forestry or agriculture will provide the most benefit to regional biodiversity.

Land Acquisition. A timber company is selling a block of land for residential development but the land was identified by an EA as important for biodiversity conservation. The county government could use information in the EA to write a convincing grant proposal for funding land acquisition.

Tax Incentives. Numerous landowners want property tax relief because they maintain wildlife habitats on their property. The county code has a provision regarding property tax relief, but it cannot afford to grant relief to all landowners. The county government could use EAs to help rate the biodiversity conservation value of land and grant tax relief based on this rating.

Ecoregional assessments cover huge areas and therefore cannot adequately address all fish and wildlife resources important to local governments and citizens. Consequently, WDFW is also developing local habitat assessments to identify the relative value of all habitats across an entire county. This process combines local information and data with ecoregional priorities to assist in county land use planning. Local habitat assessments will provide officials with a better understanding of the relative value of wildlife resources across the county, as well as the potential contribution of an area to regional biodiversity.

For additional information on Washington's EAs, contact George Wilhere at wilhegfw@dfw.wa.gov. Questions about local habitat assessments can be directed to Erik Neatherlin at neathean@dfw.wa.gov.

WDFW requesting input to improve GMA web page

Washington Department of Fish and Wildlife's (WDFW) Growth Management Act (GMA) web page is now being updated to better serve local jurisdictions and the general public. The web page can be accessed at <http://wdfw.wa.gov/hab/gmapage.htm>.

Several links are being added so users can readily access relevant information such as Priority Habitats and Species, the Aquatic Habitat Guideline Program, issues in the Fish and Wildlife Planner, and other information related to fish and wildlife. Links are also being added to address wetlands, other agency GMA-related information, and Best Available Science and Shoreline Master Program guidance.

Your assistance is requested to make this update successful. WDFW wants to ensure that information of value to local planners or citizens can be readily accessed in one place. If there is something you would like us to make available on our GMA page, please forward your ideas to Millard Deusen, Land Use Policy Coordinator; WDFW; 600 Capitol Way North; Olympia, WA 98501-1091 or by email to deusemsd@dfw.wa.gov.

Synthesis of literature and guidance on wetlands finalized

Teri Granger, Washington Department of Ecology

The Washington Departments of Ecology (DOE) and Department of Fish and Wildlife (WDFW) recently completed a two-volume publication that will assist local governments in protecting and managing wetlands. The first volume is a synthesis of science on the management of wetlands. The second contains guidance for local governments on wetlands protection and management. Both volumes are available at http://www.ecy.wa.gov/programs/sea/bas_wetlands/index.html.

Background

The volumes were developed in response to the 1995 amendment to the Growth Management Act (GMA) that required cities and counties in Washington to include best available science (BAS) when developing or revising local regulations in critical area ordinances (CAOs) that include wetlands. Many jurisdictions lacked the resources to conduct a comprehensive evaluation of available wetland science and asked for assistance. As a result, WDFW and Ecology initiated the BAS Project to help local governments with this task.

Developing the two volumes

Both volumes were cooperatively developed by DOE; WDFW; Community, Trade, and Economic Development; Sheldon and Associates; and 2N Publications. The team heavily relied on public involvement. An extensive mailing list was compiled and updates and notices of peer and public reviews were periodically distributed. A local government wetlands advisory team discussed measures for managing and protecting wetlands and made suggestions on the guidance. Meetings were also held with business and environmental representatives.



Photo courtesy of WDFW

An extensive scientific literature review for Volume 1 uncovered more than 17,000 peer-reviewed works. Over 1,000 were relevant to management of Washington's wetlands and were synthesized by the authors to describe how wetlands in Washington function (including functions related to fish and wildlife habitat), how human activities affect wetlands, how management tools can protect wetland function, and how to address cumulative impacts.

The authors of Volume 2 used the first volume along with feedback from reviewers, to develop guidance on wetland protection and management. The guidance focuses on a diversified, landscape-based approach to plan for future land uses and to identify ways to apply commonly used regulatory measures such as buffers and compensatory mitigation. When possible, several regulatory options are provided. The importance of non-regulatory tools such as restoration and incentives are also part of the diversified approach. Volume 2 recommends that as protective measures are implemented, their effectiveness should be monitored and adapted when necessary. Recommendations related to wildlife are covered where habitat is addressed.

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Wetlands

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Use and limitations of the volumes

Local governments are not required to use these new publications; however, they are required by GMA to “include BAS” when developing or revising CAOs. Thus, they may refer to guidance provided in these volumes or conduct their own evaluation of the scientific literature. According to the Washington Court of Appeals, jurisdictions “cannot ignore BAS in favor of the science it prefers simply because the latter supports the decision it wants to make.” (*Honesty in Environmental Analysis & Legislation (HEAL) v. Central Puget Sound Growth Management Hearings Board*, 96 Wn. App. 534 (1999))

Volume 1 is limited to scientific information that has a practical application to the management and protection of wetlands. Neither volume addresses streams or riparian areas that are not wetlands. Marine and estuarine systems are covered only in regard to wetland rating and types that require specific management. Neither the effects of growing cranberries in wetlands nor the effects of silviculture and forest practices on forested wetlands are covered.

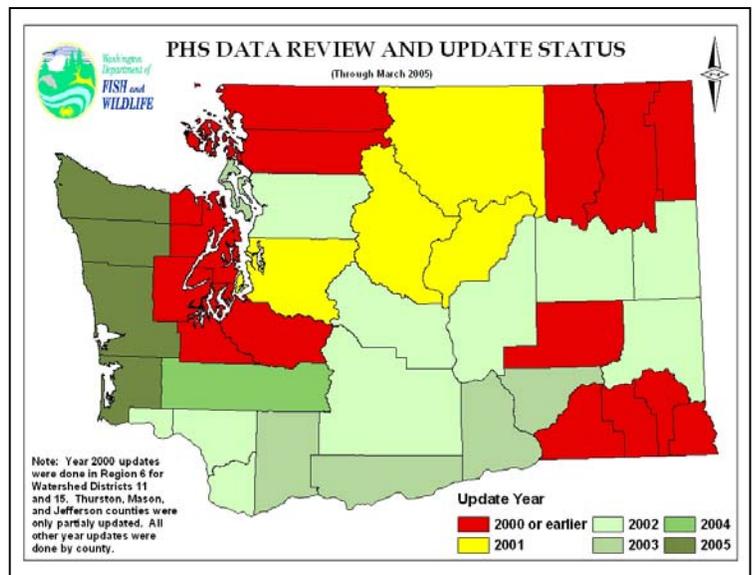
Contacts for technical assistance

Staff from DOE provide technical assistance to local governments regarding wetland protection and management. Contact information for regional wetland staff can be found at <http://www.ecy.wa.gov/programs/sea/wetlandcontacts.htm>. For information concerning this project, contact Teri Granger at 360.407.6857 or tgra461@ecy.wa.gov, or Dana Mock at 360.407.6947 or dmoc461@ecy.wa.gov.

Status of Priority Habitat and Species (PHS) data

Terry Johnson, Washington Department of Fish and Wildlife

The Washington Department of Fish and Wildlife’s (WDFW) Priority Habitat and Species (PHS) database contains information on the locations of important fish and wildlife resources. Priority species are those requiring special efforts to ensure their perpetuation because of low numbers, sensitivity to habitat alteration, tendency to form vulnerable aggregations, or because they are of commercial, recreational, or tribal importance. Priority habitats are areas that support diverse, unique, or abundant fish and wildlife communities. The agency regularly updates its PHS data, and the current status of the data is shown in this figure.



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PHS

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The PHS database was recently updated and revised maps and digital information are available for Pacific and Grays Harbor counties as well as for the western halves of Jefferson and Clallam counties. Regional biologists at WDFW were actively involved in revising wildlife and habitat data for each of these counties. Other updates are planned for Ferry, Stevens, Pend Oreille, and Douglas counties.

Other important fish And wildlife databases

Besides PHS, other databases are managed by WDFW and contain information that is commonly used by cities and counties throughout the state. The Wildlife Program manages our Wildlife Heritage, Spotted Owl, and Marbled Murrelet databases. The Heritage database is where data on numerous threatened, endangered, sensitive, and candidate species are maintained. The Fish Program maintains the Washington Lakes Rivers Information System (WLRIS) that contains 1:24000 scale salmonid spawning, rearing, and distribution data. WLRIS will later be including resident fish species. All of these databases can inform the local planning process and are available to those requesting PHS information.

Requesting PHS information

Information on how to request PHS maps or digital data can found at <http://wdfw.wa.gov/hab/release.htm>, or by ordering information from the Data Release Section at (360) 902-2543. A written request for ordering information can be sent to Washington Department of Fish and Wildlife; PHS Data Release; 600 Capitol Way North; Olympia, Washington, 98501-1091.

Nearshore examples can help local planners

Harriet Beale, Puget Sound Action Team

Many local planners are updating their management and shoreline master programs (SMPs) to add measures that protect marine and nearshore habitat. Cities and counties are incorporating recent science that reflects a growing understanding of the importance of nearshore habitat to migrating salmon and to the entire Puget Sound ecosystem.

In 2004, Puget Sound Action Team (PSAT) led a project to compile *Examples of Regulatory Language for Nearshore and Marine Shoreline Protection* (published January 2005) to assist local planning officials. An interagency team of staff from PSAT and the departments of Fish and Wildlife; Ecology; and Community, Trade, and Economic Development provided review and advice on the publication.



Photo courtesy of PSAT

Selecting the examples

A consultant funded by PSAT reviewed a number of Puget Sound critical areas ordinances (CAOs) and several SMPs to compile excerpts that reflected various approaches and levels of protection for nearshore habitat. Most examples were taken from regulations that pre-dated the current round of updates, although a few more recent examples were included. The PSAT publication consists of examples from both cities and counties in Puget Sound. The criteria for selecting examples were:

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Nearshore

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- protection of nearshore and marine shorelines;
- online availability of CAOs and SMPs; and
- extent to which they represent various approaches.

The project team found that each jurisdiction had unique conditions, and as a result, regulations often were specialized to local conditions or reflected a different regulatory framework. Selected examples were not intended to provide sources of best available science, but rather to provide a variety of approaches for jurisdictions to consider.

The nearshore and marine shoreline regulations in CAOs protect fish and wildlife habitat. In some cases, the protections apply to a particular species, while other regulations recognize and protect habitat-forming processes (e.g., drift cell processes that govern shoreline erosion and deposition). Some ordinances also included language linking nearshore and marine shoreline protection to closely associated geologic hazard, critical aquifer recharge, and flood hazard areas.

The publication offers only limited examples from local SMPs because few have updated to Ecology's 2003 SMP guidelines. This nearshore and marine shoreline publication will receive periodic updates as new examples from local government become available.

Using the examples

As scientific information describing the link between functional nearshore marine environments and the health of Puget Sound increases, local governments will require more resources to develop protective regulations. Although PSAT's newly developed publication was not intended to provide guidance, it does present a variety of regulations that, in most cases, were implemented by local governments. Planners in the process of writing regulations may benefit from PSAT's overview. They also may take additional steps and contact example jurisdictions to learn how local regulations are working.

The *Examples of Regulatory Language for Nearshore and Marine Shoreline Protection* is available online at <http://www.psat.wa.gov/Programs/GMA/GMA.htm>. For additional information about PSAT's nearshore and marine shoreline publication, please contact Harriet Beale at hbeale@psat.wa.gov.



Photo courtesy of WDFW

Fish and Wildlife Q & A

This interactive section offers answers from knowledgeable experts at the Washington Department of Fish and Wildlife to questions that have been posed by readers of this newsletter. Question concerning relevant fish and wildlife planning issues should be submitted by email to azerrjma@dfw.wa.gov. On the subject line, please write "FW Q & A." A response to selected questions will appear in a subsequent issue.

Reader's question:

The following question was submitted to the Fish and Wildlife Planner by a staff member of Pierce County:

The Washington Department of Fish and Wildlife provides definitions of priority habitats, including old growth and mature forests. The definitions refer to densities of certain size trees in stands. No mention is made of the size of the stand. It seems difficult to classify a relatively small site (say 5-10 acres surrounded by other land uses) as old growth or mature forest, even if it otherwise meets the definition. Is there some threshold for area?

Staff response:

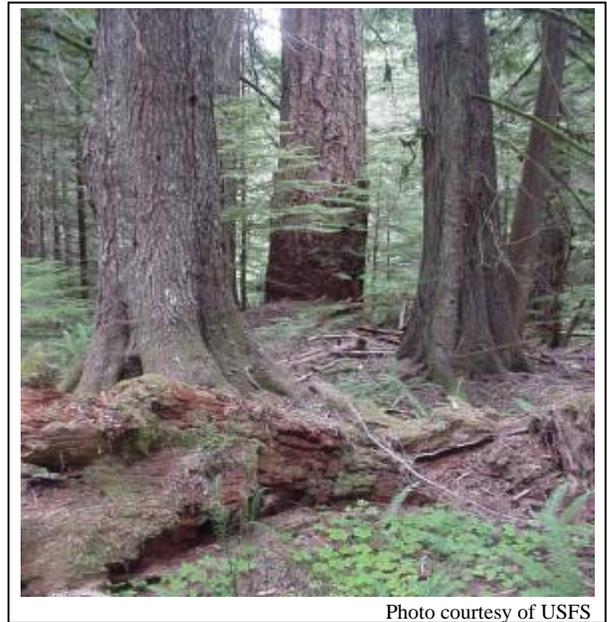
Steve Penland, Environmental Services Division Manager

Eric Larsen, Oil Spill Team Manager (formerly WDFW's Priority Habitat and Species Coordinator)

It is true that a two-acre patch of mature forest surrounded by urban development will not have the same assemblage of species as a similar two-acre patch of forest surrounded by additional mature/old growth forest. However, that two-acre patch of forest in an urban area will support species that are not found (or are found in reduced numbers) in the developed areas.

Wildlife functions of a patch of forest usually decrease as the patch size of the forest becomes smaller, surrounded by urban development. At the same time, there is no doubt that such a forest patch, even if it is quite small, will support more wildlife species than an urbanized area of the same size. Through long-range planning, additional opportunities can be found to link-up small forest patches in urbanizing environments to improve the effective size of habitat and support more species and individuals.

It is ultimately up to the local jurisdiction to determine if it will incorporate undeveloped lands (including small remnants of old growth forest) into an urban park system or an open space network for the sake of the area's wildlife, or whether it will sacrifice such areas (and the wildlife that use them) in order to increase urban densities. Therefore, there is no size threshold for defining or delineating an old growth or mature forest. Overall, bigger is better, but even very small remnant forests will contribute to local biodiversity.



Statewide educational and grant opportunities

Conferences & Workshops

- How to Enjoy Public Lands Without Destroying Them - September 12-14; Hood River Inn, Hood River, OR. Registration: \$125.00 or \$75.00 for high school/college students and 62+ seniors; additional information is available on the web at [The Columbia Gorge Ecology Institute](#) or by calling 541.387.2274.
- Washington Planners' Forum - Summer 2005 Series - The following Forums are sponsored by WA APA, PAW, and CTED:
 - July 20 - Eastern Washington (Moses Lake: Hallmark Inn)
 - July 27 - Northwest (Mount Vernon: Skagit Station)
 - July 28 - Olympic Peninsula (Silverdale: Long Lake Community Center)
 - August 4 - Southwest (Vancouver: City Hall)

All Forum sessions are 9 am - 3 pm with lunch on your own. Forums include guest presentations, jurisdictional sharing/report on GMA issues and progress, updates from the Growth Management Hearings Boards, and a report from CTED. If anyone has questions, please contact Ted Gage, AICP at 360.725.3049 or tedg@cted.wa.gov.

Grants

- Landowner Incentive Program (LIP) – This is a competitive grant process to provide financial assistance to private individual landowners for the protection, enhancement, or restoration of habitat to benefit species-at-risk on privately owned lands. Check the [LIP website](#) after mid-August for information about the next application cycle that will be open September through November 2005. Please direct questions to Ginna Correa at corregcc@dfw.wa.gov.
- Salmon Recovery Funding Board (SRFB) Grant Programs – SRFB administers two grant programs for protection and/or restoration of salmon habitat. Eligible applicants can include municipal subdivisions (cities, towns, and counties, or port, conservation districts, utility, park and recreation, and school districts), Tribal governments, state agencies, nonprofit organizations, and private landowners. All projects require [lead entity](#) approval, and the lead entity for your region should be contacted before applying to explain the process. Applications for funding are due to the SRFB on September 30, 2005.

* If you want us to post a fish and wildlife related workshop, conference, short-course, or a grant opportunity in this newsletter, please forward all relevant details to Jeff Azerrad at azerrjma@dfw.wa.gov.

WDFW Planning Contacts

Growth Management Issues

Eastern Washington – Jeff Lawlor, 509.456.4082, (Pend Oreille, N. Spokane); Karin Divens, 509.255.6103, (S. Spokane, Lincoln, Whitman); Allen Palmanteer, 509.738.2364 (Ferry, Stevens); Mark Grandstaff, 509.527.4141 (Walla Walla); Tom Schirm, 509.382.1266 (Garfield, Columbia, Asotin)

North-central Washington – Chris Parsons, 509.754.4624 Ext. 12 (Chelan, Okanogan, Douglas, Grant, Adams)

South-central Washington – Mark Teske, 509.962.3421, (Kittitas, Yakima, Benton, Franklin)

Southwest Washington – Carl Dugger, 360.906.6729, (Wahkiakum, Cowlitz, Lewis, Clark, Skamania, Klickitat)

Puget Sound – Pam Erstad (beginning 8/1/05), 425.379.2308, (Whatcom, Skagit, Snohomish, King, Island, San Juan)

Olympic Peninsula – Jeff Davis, 360.895.3965, (Kitsap, Jefferson); Chris Byrnes, 360.895.6123, (Clallam); Gloria Rogers, 360.249.4628, (Mason); Key McMurry, 360.249.1231, (Grays Harbor, Pacific); Debbie Carnevali, 360.264.5148, (Thurston); Don Nauer, 253.863.7979 (Pierce)

Ecoregional Assessment

George Wilhere – 360.902.2369

Erik Neatherlin – 360.902.2559, (Local Assessments)

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