

Development of a Community Stewardship Program for the Pierce County Biodiversity Network

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Introduction

The University of Washington's Department of Urban Design and Planning (UW-UDP) has been implementing a series of pilot projects that explore the feasibility of conducting a gap analysis at the local level. The lessons learned from these pilot projects, conducted in collaboration with the Washington Gap Analysis Project (WA-GAP) and the Washington Department of Fish and Wildlife (WDFW), will assist county governments in Washington State that are drafting plans for wildlife and habitat as required by the state Growth Management Act (Dvornich et al. 2003). These pilot projects are also providing information for other state initiatives (e.g., the Washington Comprehensive Wildlife Conservation Strategy, ecoregional assessments, and a state biodiversity council).

Over the past five years, the Washington Cooperative Fish and Wildlife Research Unit, Washington Department of Fish and Wildlife, and Pierce County Planning and Land Services conducted a GAP Pilot Project (Pflugh et al. 2000) that developed a Biodiversity Management Area (BMA) network identifying 16 biologically rich areas in Pierce County. WA-GAP data sets were used to develop the BMAs with additional input from the National Wetland Inventory, the County Wetland Inventory, Heritage data, and salmonid data from WDFW and other cooperating agencies.

Although the BMA Network was adopted into the Open Space section of Pierce County's Comprehensive Plan, finer-resolution mapping and habitat-quality assessment were needed before the development and implementation of biodiversity management plans could proceed. The Pierce County Biodiversity Alliance was formed to address these issues.

Goals

The Alliance's primary goals are as follows: (1) to educate local jurisdictions and the public and involve them in the biodiversity planning process; (2) to establish new surveys and monitoring programs where necessary; (3) to empower citizen-scientists to collect monitoring data; (4) to provide a level of quality assurance

through the use of experts; and (5) to develop biodiversity management plans that will provide detailed information on habitat quality and species presence/viability, restoration opportunities, and priorities for conservation and land acquisition for each defined BMA. The Alliance has chosen one BMA as a pilot, the Gig Harbor BMA. The process will be applicable throughout the network, regardless of habitat or community. The outreach and stewardship process is purposefully independent of the scientific process of developing a network. This allows the outreach and stewardship process developed in this pilot effort to be more widely applied to other communities or jurisdictions beyond Pierce County.

Methods

Network Assessment

WA-GAP land cover maps were updated with 1998 satellite imagery. The BMA network was ground-truthed in 2004 through a series of steps. First an analysis was done using recent satellite imagery and color digital orthophotos, and this was followed up by driving routes through BMAs that did not fall within Mount Rainier National Park and state and private timberlands. Fifty percent of the original habitat had to remain within the BMA after ground-truthing for the BMA to be accepted into the final network; one BMA was removed and only 1 percent of the original core area was removed from the network. Many corridors were originally riparian areas, but during the assessment all were realigned along major rivers and streams because the county had existing regulations that would be used for corridor protection. The original network and corridors included a quarter-mile buffer; these buffers were removed because they included too many fragmented lands.

The final Pierce County Assessment (Brooks et al. 2004) included all predicted and verified species lists for each BMA, an assessment of the habitat, and recommendations based on the ground-truthing efforts. Butterfly and recent Heritage data were obtained from WDFW and added to the report. The biodiverse lands identified by the Puget Sound ecoregional assessment (EA) were compared with the Puget Sound portion of Pierce County. BMAs that overlapped with the EA polygons were highlighted for their local and regional importance. Four BMAs did not overlap, however, indicating local biological significance. This report can be accessed through Pierce County's web site: <www.co.pierce.wa.us/pc/services/home/property/pals/other/biodiversity.htm>.

Pilot BMA Project

The Gig Harbor BMA was selected as a pilot implementation

project. The Alliance received small grants and conducted an intensive 24-hour species verification survey (bioblitz) in June 2005 and organized community outreach efforts on private lands with media coverage. Preparation for the bioblitz began with a NatureMapping workshop to train citizens and experts on data-collection protocols. Thirty-four landowners allowed access to their property. A total of 35 experts, 13 citizen-scientists, and 4 landowners observed 72 percent of the predicted bird species, 57 percent of the predicted amphibians, 32 percent of the predicted mammals, 40 percent of the predicted reptiles, 3 fish species, 148 invertebrate samples that are undergoing identification, and 169 plant species. A community meeting is planned to present the results of the bioblitz.

The Alliance was recently awarded another grant to continue its work in Gig Harbor and it plans to conduct another bioblitz within the BMA using trained community members under professional guidance who will go to properties missed during the first bioblitz. This training will enable citizens to help establish a benchmark of current species located within the BMA and will also contribute to long-term monitoring activity. Species observations recorded during this monitoring will be used to evaluate whether biodiversity conservation strategies are having positive and successful results.

The Alliance will convene a citizen-based advisory committee to help develop long-term biodiversity conservation strategies. The goal of these public workshops and committee processes will be to develop implementation measures to conserve biodiversity. These measures may include such actions as enrolling in county incentive-based land-protection programs (Public Benefits Rating System) or permanently dedicating or purchasing properties as open space (Conservation Futures Program), restoring native vegetation in areas of degraded habitat (Landowner Incentive Programs, Backyard Wildlife Sanctuary Program), and educating people on acceptable riparian/wetland land management. The Alliance will continue to invite new partners and organize community-planning sessions to craft a local vision plan for stewardship of their BMA. The plan may also be used to solicit funding for various implementation measures, such as native vegetation restoration.

The last step, and possibly the most important, is to provide continued feedback to the community and the Pierce County

Biodiversity Alliance in the form of maps, data, and reports illustrating the progress of the Gig Harbor Pilot BMA Project.

Conclusions

Problems with landscape-scale planning documents result from the failure to implement the products in a meaningful way and the short life span of the products (Christensen 2004). Instead of land-use guidance implemented through short-term, often unfavorable, land-use regulations, the Pierce County Biodiversity Alliance aims for a community-based approach for the long-term maintenance of biologically rich lands within Pierce County. The vision for protection or stewardship will be locally driven and tied to tangible factors, such as habitat loss, the introduction of exotic species, environmental degradation, and increased runoff and pollutants within the network. A locally based process is more likely to garner community support. Using media coverage, we anticipate more landowners will engage in the process beyond those owning property within the network. Therefore, it is the Alliance's long-term goal that local governments and communities will work together to educate private landowners about conservation and collaborate to help them maintain biodiversity through better planning, both within and outside the network.

Literature Cited

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