

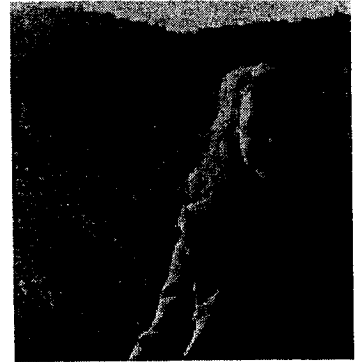
AMANDA AZOUS

Amanda L. Azous is an environmental scientist, consultant and sole proprietor of Azous Environmental Sciences, a private consulting firm, established in Seattle, Washington 1990 and located on Orcas Island, Washington since 1993. She is co-editor and primary author of the book *Wetlands and Urbanization*, published in 2000 by CRC/Lewis Press. Ms. Azous has a Bachelor of Landscape Architecture and a M.S. in Environmental Engineering and Science, both from the University of Washington, Seattle. She is also a registered professional wetland scientist (PWS Certification No. 001067).

Amanda Azous has worked on a broad range of projects including development of environmental policy, writing environmental protection regulations and developing performance standards for wetland restoration and mitigation projects. Her recent experience includes wetland design, enhancement and restoration, watershed analysis, environmental impact assessment, water quality studies, GIS analysis of landscapes, land use surveys and environmental impact evaluations. Her firm specializes in land management plans for forestry, conservation and stewardship as well as evaluations of environmental factors as a basis for community planning.

Ms. Azous is a recognized authority on wetlands and management of ecosystem processes. She is an author and co-author of journal articles and numerous technical reports addressing community planning, urban stormwater impacts and management of plant and amphibian communities in urbanizing watersheds.

Ms. Azous is a member of the Society of Wetland Scientists, Washington Native Plant Society, Society of Ecological Restoration, the San Juan County Land Bank Commission, San Juan County Noxious Weed Board and a member of the Advisory Council to the San Juan Nature Institute.



RECENT PROJECTS

ENVIRONMENTAL PROPERTY EVALUATION

WETLAND DELINEATION REPORTS

Azous Environmental Sciences routinely performs environmental property evaluations including wetlands delineations and characterizations for parcels of all sizes. Reports are comprehensive, clear and understandable, providing an inventory and categorization of wetlands, priority habitats and other sensitive areas, critical boundaries, relevant regulatory information and other land use and zoning information needed by a current or prospective property owner. Environmental property evaluations are an important source of information and can save time consuming and costly delays to achieving your development goals..

LAND PLANNING

STEWARDSHIP, FORESTRY, AND OPEN SPACE PLANS:

Azous Environmental Sciences often assists property owners in preparing plans required to qualify for State and County programs for reduced property assessments. We develop plans for sustainable management of timber, fish and wildlife as well as protection of open space, scenic views and cultural resources. We have worked on properties ranging from a management plan for the 1000 acres of designated forest land comprising Turtleback Mountain to requesting open space tax status for small parcels of five acres or more. If you are interested in protecting the natural and cultural resources of your land you may want to consider qualifying for tax abatement programs that offer rewards for conservation easements, open space and productive sustainable forest management.

RESOURCE BASED COMMUNITY PLANNING

Azous Environmental Sciences recently completed a land use plan for Orcas Village on Orcas Island in partnership with Peter Fisher and with the assistance of the Orcas Village Steering Committee, a community volunteer organization. The scope of work included developing a plan based on scientific analysis of cultural and ecological data. We identified areas of agreement and issues in conflict with future community goals. The creative solutions that we developed resulted in a plan supported by the community and San Juan County.

ECOLOGICAL RESTORATION

STREAM RESTORATION

Azous Environmental Sciences studied the West Sound Creek System, located on Orcas Island, to determine the most cost effective use of resources to restore native salmon runs. Rob Endicott, of Glenwood Springs Fish Hatchery, was engaged as a fish expert to complement the study team. Included were a field survey and watershed analysis of the creek system. The study identified significant habitat available in the lower reaches of the system that only needed a longer season with stream flow to significantly increase the success of restoring a local run. Although the area remains largely rural, the history of the watershed showed that increasing deforestation in addition to development of many in-stream ponds were large contributors to the increasingly short season of creek

flow. Recommendations included developing a system allowing a stream flow to bypass all ponds as needed to augment stream flow in the late spring and especially the early fall.

WETLAND ENHANCEMENT AND MITIGATION

Wetlands enhancement design and a proposal for site design of a road were produced for Brettland Farm, Orcas Island. Azous Environmental Sciences designed enhanced wetlands with restored hydrology, improved habitat for wildlife and aesthetic plantings and trails. Wetland delineations, a proposal and design for compensatory mitigation, a SEPA review checklist and all required support documents describing the project were included. The project was successfully permitted.

SCIENTIFIC STUDIES

WATERSHED ANALYSIS

Azous Environmental Sciences analyzed 18 watersheds in San Juan County including a water quality study of freshwater streams, a GIS analysis of septic, erosion and land use impacts, a survey of farming operations, marinas, and hazardous waste sites and identification and descriptions of local habitats and species.

WETLAND MITIGATION STANDARDS

In 1998, Azous Environmental Sciences analyzed data to develop wetland restoration and mitigation standards for depression flow-through wetlands in Western Washington. These standards are used by King County and Washington State Department of Ecology as guidance for assessing natural and constructed wetland functions and values.

WETLAND ECOSYSTEM STUDIES

From 1986 until its completion in 1996, Amanda Azous, was a team scientist with the Puget Sound Wetlands and Stormwater Management Research Program (PSWSMRP), a research program to understand and better manage changes to wetlands resulting from urbanization. The results of these studies are the basis for much of the wetlands policy and regulation in Washington State.

THE EFFECTS OF STORMWATER ON WETLANDS

Between 1996 and 1997 Azous Environmental Sciences performed a study to assess the effects of high water level fluctuations from stormwater runoff on wetlands. The results were used to develop the stormwater management requirements now used for large plat developments in King County.

RECENT PUBLICATIONS

Azous, A. L. and R. R. Horner (co-editors). 2000. *Wetlands and Urbanization: Implications for the Future*. CRC/Lewis Press, Boca Ratan, FL.

Reinelt, L., R. Horner and A. Azous. 1998. *Impacts of urbanization on palustrine (depressional freshwater) wetlands research and management in the Puget Sound region*. Urban Ecosystems Vol. 2, Pp. 219-236.

Azous, A. L. 1998. *Beyond Politics: Strategies to Achieve Community Goals in Proceedings from the 1998 Conference of the International Association for the Study of Common Property (IASCP)*. Vancouver, British Columbia. IASCP.

Azous, A. L., M. B. Bowles and K. O. Richter. 1998. *Reference Standards and Project Performance Standards for the Establishment of Depressional Flow-Through Wetlands in the Puget Lowlands of Western Washington*. King County Department of Development and Environmental Services, Renton, WA.

R. R. Horner, D. B. Booth, A. L. Azous and C. W. May. 1996. *Watershed Determinants of Ecosystem Functioning in Effects of Watershed Development and Management on Aquatic Ecosystems*. Proceedings of an Engineering Foundation Conference, Edited by L. A. Roesner. American Society of Civil Engineers, New York.

K. O. Richter and A. L. Azous. 1995. *Amphibian Occurrence and Wetland Characteristics in Lower Puget Sound Wetlands*. WETLANDS. Journal of the Society of Wetland Scientists. Vol. 15, No. 3.

Azous, A. L. and K. O. Richter. 1995. *Amphibian and Plant Community Responses to Changing Hydrology in Urban Wetlands*. Puget Sound Research 095. Puget Sound Water Quality Authority, Seattle, WA.

Cooke, S. S. and A. Azous. 1995. *Vegetation Species Responses to Changing Hydrology in Urban Wetlands in Proceedings Third Puget Sound Research Meeting*, Puget Sound Water Quality Authority, Olympia, WA.
