



## ERIC DOYLE

### Senior Aquatic Ecologist

Eric Doyle is a certified fisheries biologist and interdisciplinary environmental specialist with 21 years of experience in environmental consulting. He focuses on issues affecting habitat and water quality for fish and other aquatic organisms, with an emphasis on habitat protection and restoration strategies. Eric conducts environmental impact analyses for projects in freshwater, estuarine, and marine environments and for a broad range of land use types (e.g., transportation, agriculture, forestry). He is well-versed in the Endangered Species Act (ESA) and has worked closely with federal and state agencies to develop regional guidance and complete complex individual and programmatic consultations. Eric also is experienced with NEPA/SEPA compliance, performing direct, indirect, and cumulative impact analyses for aquatic and terrestrial wildlife resources in a variety of contexts, such as fisheries management plans, national park management, regional growth management ordinances, and major transportation projects. An important part of Eric's work is developing life-cycle based habitat models to support salmon and steelhead recovery efforts in the Pacific Northwest. He is also a field biologist with experience in salmonid habitat surveys; biological monitoring; and marine biological surveys in intertidal, open water, and benthic environments.

### Representative Projects

#### **Okanogan and Methow EDT Model Development, Salmonid Habitat Status and Trends Monitoring, Confederated Tribes of the Colville, Nespelem, WA.**

*Project Manager/Technical Lead.* Working with the Tribes' Okanogan Basin Monitoring and Evaluation Program (OBMEP) to integrate quantitative ecosystem model with long-term habitat status and trends monitoring to support the conservation and recovery of ESA-listed salmon and steelhead. Eric is integrating the Okanogan Ecosystem Diagnosis and Treatment (EDT) model with OBMEP's ongoing habitat status and trends monitoring, allowing for the direct translation of empirical habitat data into EDT model inputs. EDT data inputs are updated as new OBMEP data are collected, providing a method for tracking changes in habitat potential over time and predicting the anticipated response to habitat restoration efforts. In a parallel effort, Eric is working with OBMEP and the Tribes' Okanogan Subbasin Habitat Implementation Program to build specialized web-based reporting and decision support tools to make EDT results more useful for trend monitoring and restoration planning. Based on the successes realized in the Okanogan, the Tribes have invested in the development of a similar EDT model platform for the adjacent Methow subbasin. This recently completed model platform will support future status and trend monitoring and restoration planning efforts.

#### **Sanpoil River and Lake Roosevelt Tributary EDT Model Development, Restoration Planning and Anadromous Reintroduction Analyses, Confederated Tribes of the Colville Reservation, Spokane, WA.**

*Task Manager/Technical Lead.* Eric worked with the Tribes' Lake Roosevelt Habitat Implementation Program to develop EDT model platforms for the Sanpoil



#### EDUCATION

M.M.A., Marine Affairs, University of Washington, 1997

B.S., Marine Biology/Chemistry, Western Washington University, 1989

#### CERTIFICATIONS

Certified Fisheries Professional, American Fisheries Society, No. 2930

Qualified Senior Writer for Biological Assessment, WSDOT

#### EXPERTISE

Aquatic Ecology

Fisheries Biology

Endangered Species Act Compliance

NEPA/SEPA

Habitat Monitoring and Restoration Strategies

Land Use Impacts

Salmonid Life Cycle Modeling

Salmonid Conservation and Recovery

Ecosystem Modeling, Data Synthesis, and Analysis

#### AFFILIATIONS

American Fisheries Society, Member

#### AWARDS

Outstanding Performance Award, National Marine Fisheries Service Western State Habitat Office, 2009



River subbasin and select tributaries to Lake Roosevelt draining the eastern portion of the Colville Reservation. Led the development of new model platforms for each subbasin incorporating extensive habitat surveys and water quality data, modeled habitat conditions, and population information. These model platforms were used to characterize habitat performance and limiting factors for redband trout. The resulting information was used to develop a habitat restoration strategy for this species. At the Tribes' request, Eric subsequently used these models to evaluate habitat potential the reintroduction of Chinook salmon and steelhead. This analysis is a component of Phase I of the Upper Columbia United Tribes proposed plan to reintroduce anadromous species upstream of Grand Coulee Dam, which is a core UCUT objective in the renegotiation of the Columbia River Treaty.

**Tongue River Railroad, NEPA Environmental Impact Statement, Surface Transportation Board, Washington D.C. Task Lead/Field Team Lead.** Eric led the development of the fisheries and aquatic habitat component of a NEPA EIS for the Tongue River Railroad, a proposed spur line connecting new coal mines in the Powder River Basin in southeast Montana to the Burlington Northern rail network in southern Montana. Led one of two field teams characterizing aquatic habitat conditions in the Tongue River and tributary streams over a 150-mile study corridor. This work was conducted in remote environments, typically out of cell phone communication. Eric compiled this survey information into a habitat characterization for 53 different fish species known or likely to occur in the study area, and developed the direct, indirect and cumulative impact analysis components of the NEPA EIS.

**Programmatic ESA Consultations, U.W. Army Corps of Engineers (Corps) Seattle District, Seattle, WA. Technical Lead.** Provided ESA compliance expertise to the Seattle District Regulatory Division. Primary assignment was to develop the biological assessment (BA) and National Marine Fisheries Service (NMFS)/U.S. Fish and Wildlife Service (USFWS) biological opinion for the 2010 programmatic ESA consultation covering fish passage and habitat restoration actions in Washington State. The documents were developed to streamline the permitting and ESA consultation process for environmentally beneficial fish passage and restoration projects. The consultation was reinitiated to address new species listings and new impact analysis criteria and to include additional categories of restoration actions that were not addressed previously. In addition, wrote a programmatic BA for emergency bank stabilization actions accompanied by habitat mitigation. Coordinated closely with the Corps ESA and regulatory leads, the USFWS and NMFS, and the regulated community to ensure that these programmatic documents met the needs of all parties. Aided the Corps and NMFS with the development of a consistent and defensible basis for conducting Section 7 consultations for recently listed Puget Sound rockfish species.

**NMFS ESA Liaison, Washington State Department of Transportation (WSDOT), Olympia, WA. Project Manager.** Served 15-month term as an ESA consultation liaison with NMFS on behalf of WSDOT. Wrote multiple biological opinions and concurrence letters for major transportation projects affecting listed species in marine and riverine ecosystems, and conducted the supporting analyses and research. Significant formal consultations included the Manette Bridge replacement, the Interstate 5 Tacoma/Pierce County HOV lanes mega-project, the State Route (SR) 14 Camas-Washougal expansion project, and the SR 502 corridor widening project. As part of the latter project, Eric developed a new method for characterizing land use indirect effects resulting from projected development induced by transportation improvements. This method was subsequently incorporated into the WSDOT biological assessment guidance manual.

**SE 30th Street/Sunset Creek Flooding Improvement Project, City of Bellevue, WA. Project Scientist.** Worked as part of an integrated project team to develop a comprehensive solution to chronic sediment deposition and flooding problems on a hydromodified reach of urban Sunset Creek. The solution involved the development of an innovative culvert design that included an integrated sediment trap along with channel enhancements to improve habitat conditions, fish passage, and sediment transport. The trap allows for more active adaptive management of sediment delivery rates to the downstream channel, and reduces the frequency of and need for dredging of the active channel. Used knowledge of fish passage requirements and fish capture and handling techniques to modify and improve the project design. Developed the BA and all state and local permit applications.