

NMFS Exhibit 1

Statement of Qualifications for Rosalie del Rosario

Submitted for the “Informational Proceeding to Develop Flow Criteria for the Delta Ecosystem Necessary to Protect Public Trust Resources”, scheduled to begin March 22, 2010

ROSALIE B. DEL ROSARIO

National Marine Fisheries Service, 650 Capitol Mall, Suite 8-300, Sacramento, CA 95814
(916) 930-3614 Rosalie.delRosario@noaa.gov

Education

Ph.D. Aquatic Ecology, University of California at Berkeley, 2000
B.A. Integrative Biology, University of California at Berkeley, 1992

Employment

Ecologist, National Marine Fisheries Service, Sacramento, 2001-Present
Lecturer, California State University at Sacramento, 2006-2007
Post-doctoral Researcher, San Diego State University, 2001
Lecturer, General Biology, UC Berkeley, 2001
Graduate Student Researcher, Aquatic Ecology and Entomology, UC Berkeley, 1995-2000
Graduate Student Instructor, Aquatic Entomology and General Biology, UC Berkeley, 1996-1997
Research Assistant, Long-term monitoring of exotic species, NOAA Great Lakes Environmental Research Laboratory, Ann Arbor, Michigan, 1994-1995
Field Analytical Specialist, Intl. Technology, engineering consulting firm, San Diego, 1993-1994
Research Intern, Rapid rural appraisal of coastal community resources, Institute of Environmental Science and Management, Philippines, 1992-1993

Publications

del Rosario, Rosalie B., Yvette J. Redler, and Patricia Brandes. In Preparation. Residence of Winter-Run Chinook Salmon in the Sacramento-San Joaquin Delta: The role of Sacramento River hydrology in driving juvenile abundance and migration patterns in the Delta.

Diffendorfer, J.E., R.E. Chapman, J.M. Duggan, G.M. Fleming, M. Mitrovitch, M.E. Rahn, and R. del Rosario. 2002. Coastal sage scrub response to disturbance. A literature review and annotated bibliography. Report to California Department of Fish and Game.

del Rosario, Rosalie B., Emily A. Betts, and Vincent H. Resh. 2002. Cow manure in headwater streams: Tracing aquatic insect responses to organic enrichment. *Journal of the North American Benthological Society*, 21(2):278-289.

del Rosario, Rosalie B. and Vincent H. Resh. 2002. Responses of caddisflies and other indicator taxa to experimental manure enrichment in streams. Pp. 499-505. In Wolfram Mey (ed.): *Proceedings of the 10th International Symposium on Trichoptera*, Potsdam 2000, Goecke and Evers, Keltern, 664 pages.

del Rosario, Rosalie B. and Vincent H. Resh. 2001. Interstitial invertebrate assemblages associated with small-scale subsurface flowpaths in perennial and intermittent California streams. *Archiv für Hydrobiologie*, 150(4):625-640.

del Rosario, Rosalie B. and Vincent H. Resh. 2000. Invertebrates in intermittent and perennial streams: Is the hyporheic zone a refuge from drying? *Journal of the North American Benthological Society*, 19(4):680-696.

Distinctions and Awards

NOAA Fisheries Performance Awards, 2001-2009
NOAA Fisheries Recognition for Technical Service Award, 2008
NOAA Fisheries Protected Resources Division Workshop Leadership and Planning, 2008
NOAA Fisheries Equal Employment and Opportunity Committee Recognition, 2002-2004
Best Paper Award for Applied Research, North American Benthological Society, 2000
Richard B. Gump South Pacific Research Fellowship, 2000
Robert L. Usinger Memorial Award in Aquatic Entomology, 2000
Entomology Students' Organization Travel Grant, 2000
UC Berkeley Outstanding Graduate Student Instructor Award, 1998
Sigma Xi Grants-in-Aid-for-Research, 1998
Harvey I. Magy Memorial Scholarship, 1998
Chancellor's Opportunity Predoctoral Fellowship, 1995-1998

Key Technical Expertise as NMFS Ecologist. I am responsible for applying scientific information on Chinook salmon, steelhead, and sturgeon to complex planning and management forums in the Central Valley under the Endangered Species Act, National Environmental Policy Act, and Magnuson-Stevens Fishery Conservation and Management Act.

Bay Delta Conservation Plan, NMFS Lead Scientist. Responsible for agency's technical input during the development of nation's largest aquatic habitat conservation plan seeking long term balance between ecosystem conservation in the Sacramento-San Joaquin Delta and California water demand. Apply scientific findings and ecological concepts concerning anadromous fishes recovery goals and objectives, Central Valley water operations, natural hydrographs, estuarine and riverine habitat restoration, water quality, non native species, hatcheries and harvest issues to the scientific evaluation and planning processes.

Draft Central Valley Salmonid Recovery Plan, Contributor. Drafted recovery plan outline for Central Valley Chinook salmon and steelhead, developed Delta-specific salmonid stressor matrix, and first field application of the plan's salmonid stressor tables to Central Valley project development. The plan is guided by conservation principles of population spatial structure, genetic diversity, population growth, abundance, watershed uses, recommended management actions, and habitat connectivity among freshwater, estuarine and marine environments.

Central Valley Research Permits Program, Coordinator. Collaborated with Central Valley researchers to generate information for the recovery and conservation of anadromous species. Applied monitoring and research data to regional implementation of the Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act.

NMFS Representative in Planning Forums: Sacramento-San Joaquin Estuary Interagency Ecological Program; Comprehensive Study; Bay-Delta Public Advisory Committee Watershed Subcommittee; Sacramento River Conservation Area; Sacramento River Project; North Delta Improvements Project; Battle Creek Salmon and Steelhead Restoration Project; Ecosystem Restoration Plan Conservation Strategy for the Delta; Butte County Regional Habitat Conservation Plan; and Ecosystem Restoration Program Adaptive Management Planning Team.

Key Research Topics as Doctoral and Post-Doctoral Researcher

Aquatic invertebrate community responses to natural disturbances from hydrologic intermittency and anthropogenic nutrient enrichment in California coastal and Sierran streams
Use of stable carbon isotopes to trace organic enrichment absorption in stream invertebrate fauna
Taxonomic identification and classification of aquatic invertebrates
Trophic structure of aquatic invertebrate communities
Temporal and spatial variability of aquatic invertebrate communities
Water quality monitoring using benthic invertebrates
Freshwater community ecology and insect ecology
Multispecies index of biological integrity for San Diego coastal sage scrub communities

Teaching

Lecturer, Stream Ecology and Aquatic Pollution Assessment, CSU Sacramento, Fall 2006 & 2007
Lecturer, Field Methods in Ecology, CSU Sacramento, Spring 2007
Lecturer, General Biology (Molecular and Cell Biology, Genetics, Animal Physiology), UC Berkeley, Spring 2001
Graduate Student Instructor, Aquatic Entomology, UC Berkeley, Fall 1997
Graduate Student Instructor, General Biology (Ecology, Evolution, Botany), UC Berkeley, Spring 1996 and 1997

Conference Presenter or Co-author

Salmonid Restoration Federation/California-Nevada American Fisheries Society, Redding, CA 2010
San Francisco Estuary Conference, Oakland, CA 2009
National American Benthological Society, Anchorage, AK 2006
CALFED Science Conference, Sacramento, CA 2004
Western Division and California-Nevada American Fisheries Society, San Diego, CA 2003
California-Nevada Chapter of the American Fisheries Society, Lake Tahoe, CA 2002
National American Benthological Society, Keystone, CO 2000
International Symposium on Trichoptera, Potsdam, Germany 2000
National American Benthological Society, Duluth, MN 1999
Western University Research Forest Manager's Conference, Georgetown, CA 1999
Sigma-Xi Chapter, Berkeley, CA 1998

Peer Review Referee

Canadian Journal of Fisheries and Aquatic Sciences
Journal of the American Water Resources Association
Freshwater Biology
Aquatic Conservation: Marine and Freshwater Ecosystems
Journal of the North American Benthological Society
US Environmental Protection Agency
Archiv für Hydrobiologie
Hydrobiologia
Great Basin Naturalist
Pesticide Science
Book chapter in *Global Perspectives on River Conservation: Science, Policy and Practice*