

ELIZABETH G. LACK, *Biologist/Environmental Specialist*



EDUCATION

B.S. Colorado State University, Fort Collins, Colorado 1988 *Forestry, Concentration Biology*

PROFESSIONAL EXPERIENCE

2008-Present *Biologist/Environmental Specialist*, Western EcoSystems Technology, Inc., Cheyenne, Wyoming
 2008 *NEPA Specialist*, Tetra Tech., Santa Fe, New Mexico
 2005-2007 *Forest Extension Officer*, U.S. Peace Corps, Zambia
 1999-2005 *Biologist/Environmental Specialist*, Western EcoSystems Technology, Inc., Cheyenne, Wyoming
 1998-1999 *NEPA Specialist*, SWCA Environmental Consultants
 1995-1997 *Operations Manager*, BrightWood Software Development Corp.
 1990-1994 *Environmental Scientist/Assistant Project Manager*, Woodward-Clyde Consultants
 1989-1990 *Laboratory Technician*, Hunter/ESE Environmental Laboratory
 1986-1988 *Forest Technician*, U.S.D.A Forest Service
 1987 *Research Assistant*, Colorado State University, Fort Collins, Colorado

ADDITIONAL TRAINING & EDUCATION

Adult CPR/AED, 2005
 Wetland Plant Identification, Wetland Training Institute, 2001
 Training on Identification of *Spiranthes diluvialis* and *Gaura neomexicana* spp. *coloradensis*, 2000
 Wetland Delineation Course, Wetland Training Institute, 2000
 Biological Assessment Workshop, Montana Department of Transportation, 1999
 Black-footed Ferret Survey Techniques Workshop, 1998
 Short Course on Wetlands Issues in Resource Development, 1993
 Dale Carnegie Course, 1992
 Technical Writing of NEPA Documents, Shipley Associates, 1991
 40 Hour Hazardous Waste Worker Basic Health and Safety Training, 1990

SPECIALTY AREAS

Ms. Lack has over fifteen years of professional experience in environmental consulting. She has expertise in environmental impact assessment; natural resource management; wetland delineation, mitigation, and monitoring; botanical/biological surveys and research; environmental compliance and permitting; and ecological risk assessment. She has served as project manager, task manager, or assistant project manager on numerous projects, and is familiar with applicable regulations such as National Environmental Policy Act (NEPA), Section 404 of the Clean Water Act, and the Endangered Species Act. She has worked on a broad range of projects, including pipeline, highway, wind energy, oil and gas, mining, and natural resource management, among others, primarily in the Western and Great Plains states. Ms. Lack is an accomplished technical writer and editor; she has authored numerous technical documents and reports.

Much of Ms. Lack's work experience has been in the field, conducting a variety of botanical and wildlife surveys and overseeing and coordinating field crews. She is knowledgeable in the use of many vegetative sampling techniques such as transect, quadrats/plots, point counts, and Relève' methods in riparian, grassland, desert, and forest habitats. She has also conducted presence/absence surveys and used Sherman live-traps, mist-nets, and tape-playback sampling methods. In addition to her field experience, Ms. Lack is an accomplished technical writer and editor and has authored numerous technical documents and reports.

SELECTED PROJECT EXPERIENCE

National Bio and Agro-Defense Facility Environmental Impact Statement, U.S. Department of Homeland Security, (2007-2008)—Ms. Lack coordinated analysis of over 3,500 public scoping comments and authored a Scoping Report. She also served as assistant project manager, author, and editor on a fast-track EIS that included analysis of seven alternatives.

Linking Income, Food, and Environment (LIFE) Project, U. S. Peace Corps, Copperbelt Province, Zambia (2005 – 2007)—After three months of Pre-Service Training that included cross-cultural studies; local language education; and technical training, Ms. Lack was assigned as a Community-based Forest Extension Officer at Katanino Local Forest. Her primary duties included assisting local community groups derive non-timber benefits from the forest through various activities such as bee-keeping, mushroom collection, and food preservation. Additional duties include assisting women's

groups with education and development of income generating activities; helping to link existing government and non-government resources with community needs; training farmers on conservation farming, agroforestry techniques, and growing and using tree species such as moringa and jatropha; and helping with marketing of agriculture and other local products. Secondary duties include dissemination of health information to community groups and assisting local schools with environmental education.

Wetlands and Waterbodies Survey for the Proposed Entraga Gas Pipeline Project, Colorado and Wyoming, Natural Resource Group, Denver, CO and Entraga Gas Pipeline Inc., Denver, CO (2004-2005)—Ms. Lack served as field crew leader and coordinator for a project delineating and characterizing jurisdictional wetlands and waterbodies along a 327-mile proposed gas pipeline. Two hundred ninety six wetlands and 485 waterbodies were delineated using GPS technology. In her capacity, Ms. Lack was responsible for logistics, health and safety of the crew in often remote locations, equipment maintenance, and timely and accurate data downloads. She was also responsible for preparation of the technical report, which included maps of all wetlands produced using GIS.

Habitat Characterization and Mapping, Wild Horse Wind Power Project, Kittitas County, Washington, Zilkha Renewable Energy (2003-2004) — Ms. Lack mapped and characterized vegetation types and searched for rare plant species at a proposed wind power project site. She also assessed impacts to vegetation resources. She prepared a technical report documenting her findings and later testified at a county hearing for the project.

Monitoring of Created Wetlands at High Savory Reservoir, Carbon County, Wyoming, Wyoming Water Development Commission, Cheyenne, WY (2003-2004) — Ms. Lack assisted with the monitoring of the success of created wetlands at High Savory Reservoir. She used line transects and quadrats to quantify vegetative composition, density, and vigor and recorded wildlife use of the wetlands. The data was used to measure the success of the wetlands according to stipulations in an Army Corps of Engineers permit.

Baseline Vegetation Survey, Jeffrey Island and Cottonwood Ranch, Central Platte River, Nebraska, Central Nebraska Public Power and Irrigation District, Gothenburg, NE (2001-2002) — Ms. Lack led an intensive, quantitative vegetation survey on two properties totaling 6,670 acres adjacent to the Platte River in central Nebraska. The purpose of the project was to develop a baseline from which to evaluate and monitor planned restoration activities for habitat for whooping crane, least tern, and piping plover. She used the modified point-step and point-center quarter sampling methods and was responsible for correctly identifying all species encountered. She documented her finding in a technical report.

U.S. Highway 189/191 – Daniel Junction to Hoback Junction Environmental Assessment, Sublette County, Wyoming, Wyoming Department of Transportation, (2000-2004)—Ms. Lack served as project manager and primary author for the EA. She also organized and assisted with the public scoping meetings and coordinated the multi-disciplinary team. The EA received high praise from the client for its completeness and accuracy.

Swamp Creek East Biological Assessment, Lincoln County, Montana, Carter - Burgess, Denver CO and Montana Department of Transportation, Helena, MT (2000-2001) — Ms. Lack assisted with preparation of a Biological Assessment addressing grey wolf, white sturgeon, grizzly bear, bull trout, Canada lynx, and bald eagle for the Swamp Creek East highway reconstruction project near Libby, Montana. She conducted a reconnaissance survey and collected available data. Impacts to bull trout were assessed using U.S. Fish and Wildlife's Bull Trout Matrix evaluation guidance document. The BA was included in the Biological Resources Report and submitted to the U.S. Fish and Wildlife Service for concurrence.

Wetland Mitigation Site Selection, High Savory Dam Project, Carbon County, Wyoming, Wyoming Water Development Commission, Cheyenne, WY (1999) — Ms. Lack assisted with the selection of wetland mitigation sites in the field to mitigate 17 acres of wetland and 60 acres of riparian impacts associated with the High Savory Dam project.

Elephant Butte Reservoir Resource Management Plan Environmental Impact Statement, New Mexico, Bureau of Reclamation (1998) —Ms. Lack served as technical editor for the EIS. She was responsible for consistency, clarity, and accuracy. She encouraged team members to meet project deadlines and she helped assemble the final document.

Screening Level Field Study, Kennecott Utah Copper, Salt Lake City, UT (1994) – Ms. Lack served as a team leader for screening level field studies for an ecological risk assessment at a large pit mine in Utah. She collected soil and vegetation samples for chemical analysis and characterized vegetation using the Releve' method. She was responsible for field crew and samples in a semi-remote location.

SCIENTIFIC ORGANIZATION MEMBERSHIPS

National Association of Environmental Professionals

Wyoming Native Plant Society

Society of Wetland Scientists