

**Docket No. AD04-4-000, Notice Requesting Applications
for Panel Member List
for Hydropower Licensing Study Dispute Resolution**

Applicant: Marsha Stephens, Ph.D.
Address: 294 CR 332, Abilene, TX 79606
Phone: 325/698-1599

The following information is provided in support of my application for the subject panel list in accordance with notices published by the Federal Energy Regulatory Commission on 12 March 2004 and 8 July 2004.

Description of Qualifications*

*Please see the attached CV for more specific information related to these qualifications.

1. I wish to be considered for the following resource areas:

Terrestrial Resources: wildlife biology, threatened and endangered species, and general.

Pursuant to these areas, my education includes a Ph.D. and M.S. in biology. My relevant experience includes sponsored research and scholarly publications in population, community and ecosystem ecology, and wildlife inventories for purposes of resource management and restoration. I have taught college-level courses in general biology, zoology, human anatomy and physiology, ecology, vertebrate biology, and microbiology. I have also managed and participated in research on occurrence and cycling of environmental contaminants.

2. Knowledge of the effects of construction and operation of hydroelectric projects:

I do not have specific knowledge of the effects of construction and operation of hydroelectric projects. However, I do have extensive knowledge of general construction practices and mitigation, project management and operational impacts of natural gas transportation facilities, including pipelines and compression. Therefore, I have some general knowledge that is relevant to hydroelectric projects.

3. Working knowledge of laws relevant to expertise: I have a working knowledge of the Endangered Species Act, the Clean Water Act, Clean Air Act, National Historic Preservation Act, NAGPRA, National Environmental Policy Act, CERCLA, RCRA, TSCA, and SARA. This knowledge was developed as a result of involvement with environmental studies conducted while I was a Senior Scientist with an environmental services firm, and later as a manager of environmental sciences with a natural gas pipeline company. In the latter position, my staff and I were responsible for identification and interpretation of relevant existing regulations, oversight of compliance monitoring, and extensive analysis and comment on developing regulatory changes. In a later position managing an academic environmental research center, I developed and

implemented compliance programs to satisfy requirements of the OSHA Laboratory Standard and Right to Know standards, as well as CAA and RCRA.

4. Ability to promote constructive communication about a disputed study: I have formal training (via in-house and externally-provided short courses) in negotiation/dispute resolution, project management, and human resources management. In association with my prior management positions, I have extensive experience in resolution of technical issues in settings with multiple stakeholder interests. I also have the experience of seeing project issues from the perspective of the regulated proponent (corporate project sponsor), a technical expert (scientist and environmental services consultant), a regulatory agency (leader of an environmental monitoring program providing independent data to document compliance of the Department of Energy with environmental protection requirements associated with a nuclear waste disposal), and even an opponent (recent technical assistance to a local community group opposing permitting for a large scale confined animal feeding operation).

References

Dr. Richard Arimoto
Senior Scientist
Carlsbad Environmental Monitoring and Research Center
New Mexico State University
1400 University Dr.
Carlsbad, NM 88220
505/234-5503

Dr. Clark Beasley
Distinguished Professor
Department of Biology
McMurry University
S. 14th & Sayles
Abilene, TX 79605
325/793-3867

Dr. David Schmidly, President
Office of the President
Oklahoma State University
Stillwater, OK 74078
405/744-6384

Dr. Gregory Odegard
(former Vice-President, Environmental, Safety & Health, El Paso Energy)
12312 N 133rd Place
Scottsdale, AZ 85259
480/235-7900

Curriculum Vitae

MARSHA REEVES STEPHENS, Ph.D. (formerly Conley)

Home Address: 294 CR 332, Abilene, TX 79606
Telephone: 325/698-1599
Citizenship: US
Marital Status: Married

PROFESSIONAL POSITIONS - OVERVIEW

2001-present. Retired; Adjunct Faculty, Cisco Junior College, McMurry University (both in Abilene, Texas)

Occasional teaching.

1996-2001. Director, Carlsbad Environmental Monitoring & Research Center, New Mexico State University, Carlsbad, New Mexico

Managed multi-disciplinary environmental research organization with 30+ technical and administrative staff, 26,000 sq ft. laboratory complex, and >\$3 million annual budget from grants and contracts, specializing in radioanalyses, environmental chemistry, in vivo bioassay, field sampling, and risk modeling; included scientific program design and oversight, community outreach and education, coordination with main campus administration, and program expansion/diversification. PI for long-term project of independent environmental monitoring in association with U.S. DOE WIPP site, including design and implementation of sampling and analyses and public reporting of results.

1991-1996. Manager, Environmental Sciences, El Paso Natural Gas Company, El Paso, Texas.

Managed technical staff of engineers and scientists responsible for company's environmental compliance in operations and new construction, regulatory interpretation, due diligence, and employee training.

1990-1991. Senior Scientist, Advanced Sciences, Inc., Las Cruces, New Mexico.

Conducted technical studies and assessments to meet environmental compliance requirements of federal and private clients.

1985-1990. College Assistant Professor, Dept. of Mathematical Sciences and Dept. of Biology, New Mexico State University.

Teaching and sponsored research.

1983-1984, & 1990. College Assistant Professor, Dept. of Fishery and Wildlife Sciences, New Mexico State University.

Teaching and sponsored research.

EDUCATION

Ph.D. in Biology. New Mexico State University, 1984. Dissertation: Population Regulation and Prey Community Impact of *Geolycosa rafaellana* (Araneae: Lycosidae).

M.S. University of Texas at El Paso, 1977. Major: Biology. Thesis: Carrion Communities of the Northern Chihuahuan Desert.

M. Ed. Texas A&M University, 1974. Major: Educational Curriculum and Instruction; Minor: Wildlife Science.

B.S. Lamar University, 1970. Major: Secondary Education; Teaching fields: Biology and Earth Science.

OTHER POSITIONS

Biology and Physical Science Teacher, Orangefield ISD, Orangefield, Texas (1/71-5/72)

Biology Teacher, Navasota ISD, Navasota, Texas (1972-1973)

Teaching Assistant, Dept. of Educational Curriculum and Instruction, Texas A&M University (1973-1974)

Instructor of Biology, El Paso Community College, El Paso, Texas (1974-1977)

Research Assistant, White Sands National Monument Inventory Project, University of Texas at El Paso (5/76-8/76)

Instructor of Biology, Ranger Junior College, Ranger, Texas (1977-1980)

Teaching Assistant, Dept. of Fishery and Wildlife Science, New Mexico State University (9/80-12/80)

Teaching Assistant, Center for Learning Assistance, New Mexico State University (1/81-12/81)

Research Assistant, Dept. of Biology, New Mexico State University (1/82-8/83)

Instructor, Short Course "Life in the Desert", New Mexico Community Foundation-Elderhostel (5/89, 6/89, 6/88)

Co-instructor, Short Course "Analysis and Modelling of Wild Horse Populations", Bureau of Land Management, conducted at New Mexico State University and Reno, Nevada (1/81, 5/84, 6/90)

PUBLICATIONS

Arimoto, R., T. Kirchner, J. Webb, M. Conley, B. Stewart, D. Schoep and M. Walthall.

2002. ^{239,240}Pu and inorganic substances in aerosols from the vicinity of the Waste Isolation Pilot Plant: The importance of resuspension, Health Physics 83:456-470.

Conley, M.R., C.L. Steussy, M.S. Cohen, E.D. Gaughan, R.A. Knoebel, D.S. Kurtz, and D.T. Pengelley. 1992. Student perceptions of projects in learning calculus. International

Journal of Mathematical Education in Science and Technology. 23(2) 175-192.

O'Neill, R.V., S.J. Turner, V.I. Cullinan, D.P. Coffin, T. Cook, W. Conley, J.W. Brunt, J.M. Thomas, M.R. Conley, and J.R. Gosz. 1991. Multiple landscape scales: An intersite comparison. *Landscape Ecology* 5:137-144.

Turner, S.J., R.V. O'Neill, W. Conley, M.R. Conley and H. Humphries. 1991. Pattern and scale: Statistics for Landscape Ecology. In: M.D. Turner and R.H. Gardner, *Quantitative Methods in Landscape Ecology*, Ecological Studies 82:17-10, Springer-Verlag.

Brunt, J.W., M.R. Conley, and G.L. Cunningham. 1988. Sex in Ephedra with relation to Chihuahuan Desert habitats. *Am. Midl. Nat.* 119:137-142.

Kimsey, B. and M.R. Conley. 1986. Habitat use of raptors in south-central New Mexico. Proceedings of the Southwestern Raptor Management Symposium and Workshop, National Wildlife Federation Scientific and Technical Series No. 11:197-203.

Conley, M.R. 1985. Adhesive technique for capture of burrow-dwelling wolf spiders. *J. Arachnol.*, 13:395-396.

Conley, M.R. 1985. Predation versus resource limitation in survival of adult burrowing wolf spiders (Araneae: Lycosidae). *Oecologia*, 67:71-75.

Conley, M.R. and W. Conley. 1984. New Mexico State University College Ranch and Jornada Experimental Range: Summary of Research, 1900-1983. *N.M. Agr. Exp. Sta. Spec. Rep.* 56.

Sterling, B., W. Conley, and M.R. Conley. 1983. Projections of demographic compensation in coyote populations. *J. Wildl. Manage.*, 47:1177-1181.

Conley, M.R. 1982. Carrion locating efficiency in burying beetles (Nicrophorus carolinus) (L.) (Silphidae). *Southwestern Nat.*, 27:11-15.

Conley, M.R. 1982. Apparent predation on horned lark by loggerhead shrike. *Southwestern Nat.*, 27:367.

McKinnerney, M.R. 1978. Carrion communities in the Northern Chihuahuan Desert. *Southwestern Nat.*, 23:563-576.

PRESENTATIONS (Since 1985)

2000. Public access to environmental monitoring at waste sites – an experiment in progress, Waste Management 2000, Tucson, Arizona.

1992. NEPA, the FERC, and Tiering: Lessons from the Process Gone Astray (with G. J. Odegard), Symposium on the National Environmental Policy Act, 17th Annual Conference, National Association of Environmental Professionals, Seattle, Washington.

1989. Life on the Edge: The Conceptual and Mathematical Character of Discontinuities in Ecological Organization. (with W. Conley), Symposium on Modelling Ecotones, Boundaries and Transition Zones, Annual Meeting, Ecological Society of America and International Society of Ecological Modeling, Toronto, Ontario, Canada.

1988. Demographic responses of ant populations to alterations in plant communities. (with J. Brunt). 35th Annual Meeting, Southwestern Association of Naturalists, San Angelo, Texas.

1987. Episodic events in long term data: examples from meteorological attributes (with W. Conley and T. Karl). Invited Symposium on Episodic Events, Annual Meeting, Ecological Society of America, Columbus, Ohio.

1986. Mathew's question revised: did the old muskrat trappers really know what they were talking about? 33rd Annual Meeting, Southwestern Association of Naturalists, Norman, Oklahoma.

1985. Demographic variations in desert ant populations following a soil nitrogen amendment. 32nd Annual Meeting, Southwestern Association of Naturalists, Glendale, Arizona.

INVITED SEMINARS

2002. Community and population ecology, Hardin-Simmons University, Abilene, Texas.

2002. Research and beyond - pathways in science, McMurry University, Abilene, Texas.

2000. From bats to bombs – adventures of an eclectic ecologist, Winona State University, Winona, Minnesota.

2000. Where environmental science and public information meet – an experiment in progress, U.S. Geological Service Upper Midwest Environmental Sciences Center, LaCrosse, Wisconsin.

1999. Where environmental science and public information meet – an experiment in progress, Department of Geosciences, Texas Tech University.

1989. Life on the Edge: The character of discontinuities in ecological organization. Department of Biology, Texas Tech University.

1987. Modeling predictability in spatial organization among desert ants. Invited Seminar, Department of Zoology, University of Oklahoma.

PROFESSIONAL MEMBERSHIP AND SERVICE

New Mexico State University-Carlsbad, Science Advisory Board (appointed) (1999-2001)

University of Texas at El Paso, National Science Foundation Model Institutions of Excellence Project, Advisory Board (appointed) (1995-1999)

Texas Prefreshman Engineering Program, Steering Committee (1992-1996)

Pacific Coast Gas Association:

--Vice-Chair (appointed), Environmental Committee (1996)

--Co-Sponsor (appointed), 1996 Environmental Workshop

--Chair (appointed), Regulatory Subcommittee (1993-94)

Ecological Society of America:

--Chairman, Statistical Ecology Section (1989-1991)

--Coordinator, Working Group for Statistical Ecology (1986-1989)

--Chair, Contributed Paper Session in Animal Population Ecology (1990)

--Co-Chair, Symposium on Computational Ecology (1989)

--Co-Chair, Contributed Paper Session on Statistical Analyses (1988)

Southwestern Association of Naturalists:

--Board of Governors (1987-1990)

--Technical Session Moderator (1980, 1982, 1985, 1987)

--Editorial Assistant for Higher Vertebrates (1980-1982)

--Standing Committee on Conservation (Member 1984-1986);Chairman(1987-1990)

--Wilks Award Committee (1987-1989)

American Arachnological Society:

--Co-Host, 1988 Annual Meeting, Las Cruces, NM

Manuscript Review:

--Southwestern Naturalist (1990)

--American Midland Naturalist (1983)

--Journal of Wildlife Management (1985-1990)

--Wildlife Bulletin (1988-1990)

--Monitoring and Aquatic Ecosystems, ASTM (1985)

Proposal Review:

--National Science Foundation, Biotic Systems & Resources: Ecosystems Studies (1986, 1988), Ecology (1987-1990), Population and Physiological Biology (1987-1989).

--National Science Foundation, Instrumentation & Resources Special Projects (1990).

--National Science Foundation, Mathematical Sciences, Statistics & Probability (1991).

--U.S. Department of Energy, Theoretical Ecology Program (1989).

--United States-Israel Binational Science Foundation (1986).

Review Panels:

--National Science Foundation, Behavioral, Biological and Social Sciences, Research Experience for Undergraduates (1991).

--Editorial Board, Research Data Management in the Ecological Sciences, 1984 Symposium Volume, University of South Carolina Press.

GRANTS

1999-2001: Carlsbad Environmental Monitoring and Research Program, Department of Energy (approximately \$3.5 million annually).

1984-1991:

Training, Data Synthesis and Networking for the DOE National Laboratories, Department of Energy/INEL (w/W. Conley) (\$50,000).

Research and Development to Integrate Wildlife Considerations Within the Land Condition Trend Analysis Program in Arid Lands, Department of Defense (\$27,460).

Research and Development to Integrate Wildlife Considerations Within the Land Condition Trend Analysis Program in Arid Lands, Department of Defense (\$34,928).

The New Mexico State University Science Workbench: An Integrated Approach to Research Data Management. National Science Foundation (with W. Conley), (\$38,760).

Variation in Rabbit Foraging Behavior/REU Supplement. National Science Foundation, (\$3,900).

Variability in Desert Ecosystems, Long Term Ecological Research. National Science Foundation (with G. Cunningham, W.G. Whitford, J. Reynolds, T. Ward, and P.J. Wierenga), (\$250,000/yr).

Muskrats in the Mesilla Valley. New Mexico State University President's Grant, (with R. Valdez), (\$750).

Variability in Desert Ecosystems, Long Term Ecological Research. National Science Foundation (with G. Cunningham, W. Conley, W.G. Whitford, J. Ludwig, and P.J. Wierenga), (\$350,000/yr).

Remote Sensing in Location and Monitoring of Prairie Dog (Cynomys ludovicianus) Colonies in the Tularosa Basin, New Mexico. New Mexico Department of Game and Fish (with W. Conley), (\$24,000).

Grants-in-Aid of Research, Sigma Xi, The Scientific Research Society (\$500).

HONORS

Certificate of Recognition, New Mexico Commission on the Status of Women, 2000

REACH Certificate of Recognition, El Paso YWCA and El Paso Times, 1992

Wilk's Award, Southwestern Association of Naturalists, 1977

Who's Who in American Universities and Colleges, 1975-1976

Phi Kappa Phi

Kappa Delta Pi

Beta Beta Beta

Submission Contents

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