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PROFESSIONAL OVERVIEW

- Experience in a broad range of life sciences. These experiences include the use of algae as a feedstock for biofuels and reclamation of coal mine lands.
- A proactive leader with expertise to troubleshoot, initiate change and implement redesign/quality improvement processes while maintaining a positive, safe and productive environment. An example of this was the assumption of the role of Director of the Abandoned Mine Lands Division of the North Dakota Public Service Commission. The predecessor to Dr. Ogaard was an attorney with a focus on the rules and statutes to administer the program. As a botanist, Dr. Ogaard changed the focus to the quality of reclamation. Thousands of trees and shrubs were planted to control wind erosion and provide upland game habitat on sites reclaimed under this program. Wetlands were integrated into reclamation plans to control surface water runoff and provide waterfowl habitat. These changes resulted in an award from the federal government in a national competition.
- The program administered for the State of North Dakota was one hundred percent federally funded and required annual grant application submissions to the Office of Surface Mining Reclamation and Enforcement (OSMRE), a federal agency of the Department of Interior. Submissions included National Environmental Protection Act (NEPA) Environmental Assessments (EA's) for each project proposed. The content of these Environmental Assessments was based on collaboration with State and federal agencies and field work. Subchapter D of CERCLA was addressed on sites originally disturbed from uranium in the coal.
- I am self-taught in computer science. I taught the subject part-time at the collegiate level for eight years and owned a computer consultancy which supported a Clipper-based database program over the Internet that he wrote such to track all aspects of a private medical practice including electronic billing.
- I authored the first web site for the North Dakota Public Service Commission and wrote a Windows-based database program for the Center of Excellence for Hazardous Materials Management (CEHMM) to track scientific, physical and meteorological data from open raceway ponds with algal cultures.
- I employ a team management approach as a supervisor.
- I worked with undergraduates as an adjunct professor of mathematics at Bismarck State College.
- I served as Chief Procurement Officer for the Abandoned Mine Lands Division of the North Dakota Public Service Commission. I helped prepared bids, administered bid solicitation and held public bid openings for construction services. These services were procured

from the private sector.

- I authored papers based on primary botanical research and delivered these papers at national symposia. The program I administered in North Dakota was one hundred percent federally funded and required consultant with State and federal agencies as part of the grant process.

AREAS OF EXPERTISE

Computer science

- I can program in several languages in both DOS and Windows environments. These languages include Visual Basic, FORTRAN, Clipper 5.x, Lotus 1-2-3, Visual dBASE, dBASE for windows, and Visual Basic for Application (VBA-Excel)
- I taught computer science at the collegiate level for eight years
- I designed and published web sites using FrontPage and Dreamweaver MX
- I have knowledge of numerous applications, including MS Office, FrontPage, PowerPoint, Dreamweaver MX, ArcGIS, Arc SDE, Crystal Reports, Microsoft Project and WBS Pro Chart
- I built computers from scratch

Biology/Botany

I administer support for the natural resources program at the U.S. Army at Dugway Proving Ground, Utah.

- I managed a federally funded environmental restoration program of abandoned coal mines for the State of North Dakota for over twenty years.
- I administered a research and development program for a non-profit to convert algae to biofuel for a year. Several research papers were authored and published based on this work.

Project and Personnel Management Skills

- Program Manager, Maden Technologies. Administered support for the natural resources program at the U.S. Army on the Dugway Proving Ground, Dugway, Utah.
- Director of the Abandoned Mine Lands Program for the North Dakota Public Service Commission for over twenty years. This program entailed management of project managers who oversaw multiple projects to reclaim abandoned coal mines each year.
- Used a team management approach to the administration of the North Dakota program and the R&D program for CEHMM. I subscribed to the position that employers should hire a trained and competent staff and let them do their work. As a supervisor, staff knew they can come to Dr. Ogaard with any problem, and he worked with them to attain a resolution.

CAREER PROGRESSION

Program Manager

Maden Technologies

10/2014 - 6/2016

I administered support for the natural resource program at the U.S. Army's Dugway Proving Ground in Utah. Work entailed the supervision of five scientific staff who support the base efforts to assess flora and fauna on the base, instituted fire management techniques, and environmental restoration of areas impacted by military activity. As a private contractor we helped the federal employees meet elements of the Sykes Act, which governs environmental issues on the base.

Environmental Consultant

Louis Adolph & Asociados Two years

- I was an environmental consultant in Bolivia where I provided advice and solutions for areas impacted by past mining and the use of biofuel as an alternative to petroleum-based fuel.

Senior Environmental Scientist

CEHMM Three years

- I administered a research and development program to convert algae to biofuel for a year. I supervised of nine staff of Ph.D. engineers, scientists and technicians in this endeavor. I handled permit compliance, data management and authored grant applications and research papers. I wrote a Windows-based database program to track data collected from open raceway algal ponds.

Director, Abandoned Mine Lands Div.

ND Public Service Comm. Twenty-one years 9 months

- I administered a federally funded environmental restoration program of abandoned coal mines for the State of North Dakota with an annual budget of 1.6 million dollars. I supervised a staff of five scientists and engineers who both designed and managed construction projects. Construction services were procured from the private sector using competitive sealed bidding procedures. I was the Chief Procurement Officer. Information For Bidders (IFB's) were published on the web site I designed for the North Dakota Public Service Commission.

Adjunct Professor of Mathematics

Bismarck State College Eight years (part-time)

I taught credit and non-credit computer science classes at the collegiate level. Credit courses included introductory classes in BASIC programming, spreadsheets, word processing and data management. Non-credit courses taught through an adult education program dealt with spreadsheets and advanced macro development, relational databases and their construction, and advance concepts in word processing. Software used included Lotus 1-2-3, dbase for Windows, Word Perfect and Word.

EDUCATION

Ph.D.

North Dakota State University

Major: Botany

G.P.A. 4.00

M.A.

University of Northern Iowa

Major: Biology

G.P.A. 3.79

B.A.

Saint Olaf College

Major: Biology

Graduated from Stevenson and Cate preparatory schools in California.

MEMBERSHIPS/AFFILIATIONS

Member, Sigma Xi, the Scientific Research Society
Lifetime Member, Beta Beta Beta, the National Honor Society of Biology
Member, Society for Conservation Biology
Nominated to Strathmore's "Who's Who", 1999 - 2000
Nominated to Cambridge's "Who's Who", 2010 - 2011

COMMUNITY INVOLVEMENT

Volunteer soccer coach, 1976 - 1981, Fargo, North Dakota
Volunteer soccer coach, 1981 - 1987, Bismarck, North Dakota
Boy's Varsity soccer coach, 1987 - 2000, Bismarck High School, North Dakota
Boy's and girl's soccer coach, 2000 - 2006, Mandan High School, North Dakota

LICENSES/CLEARANCES

Class C coaching license, issued by the United States Soccer Federation
Extra Class amateur radio license, issued by the Federal Communications Commissioners
Certified soccer referee
Driver's licenses in the United States and Bolivia
Top Secret DOD clearance, 1969 - 1972
Interim Secret, 2014 - Present

PUBLICATIONS/PAPERS

Ogaard, L.A. The ins and outs of job hunting. Iowa Association for School, College and University (IASCUS).

Ehni, R.J., L.A. Ogaard, and W.C. Nelson. Effects of alternative cropping patterns and management decisions on soil erosion and revenue, Region VII. Department of Agricultural Economics, Ag. Econ. Rpt. No. 136, North Dakota State University (NDSU), Fargo. 60 p.

Ehni, R.J., L.A. Ogaard, and W. Becker. Costs associated with the procurement, collection, and transportation of biomass materials. In Biomass Resource Availability Feasibility Assessment, Tri-College Center for Environmental Studies, NDSU, Fargo. 250 p.

Ogaard, L.A. Strip mining impact on rangeland: a computerized approach. Paper presented to the 11th Annual Meeting of the Mid-Continent Regional Science Association, Minneapolis.

Ehni, R.J., L.A. Ogaard, N.B. Nelson, and W.C. Nelson. Impacts of coal development in western North Dakota: development and application of the Resource Inventory Monitoring and Analysis System (RIMAS). Department of Agricultural Economics, NDSU, Fargo. (Prepared for the Environmental Protection Agency)

Ogaard, L.A. and W.C. Nelson. Rangeland inventory for the coal mining area of western North Dakota. Department of Agricultural Economics, NDSU, Fargo. (Prepared for the Environmental Protection Agency)

- Ogaard, L.A. A synopsis of selected methodology and research potentially applicable to the study of wetlands in the Prairie Pothole Region. Paper presented at a Wetlands Symposium, Department of Agricultural Economics, NDSU, Fargo. 24 p.
- Ogaard, L.A. Soils, microbiology, and chemistry of Prairie Pothole Wetlands: research methods and annotated bibliography. Agricultural Experiment Station Research Report No. 84, Agricultural Experiment Station, NDSU, Fargo. 30 p.
- Ogaard, L.A. Wetland vegetation of the Prairie Pothole Region: research methods and annotated bibliography. Agricultural Experiment Station Research Report No. 85, Agricultural Experiment Station, NDSU, Fargo. 50 p.
- Ogaard, L.A. Fauna of the Prairie Pothole Region: research methods and annotated bibliography. Agricultural Experiment Station Research Report No. 86, Agricultural Experiment Station, NDSU, Fargo. 23 p.
- Ogaard, L.A. Rangeland analysis and land cover: a computerized approach. Pages 1029-1034 in T. Braun(ed), Proceedings of the In-Place Resource Inventories: Principles and Practices, A National Workshop, University of Maine, Orono.
- Ogaard, L.A. Wetland forage importance in a drought year. Ag. Econ. Misc. Rpt. No. 56, Department of Agricultural Economics, NDSU, Fargo. 15 p.
- Costain, D.B., L.A. Ogaard, J.B. West and A.D. Klein. DEAR REV-1: a computer system to assist in reclamation planning of post-mine topography. Pages 139-142 in D.H. Graves (ed), Proceedings of the National Symposium on Surface Mining Hydrology, Sedimentology and Reclamation, Lexington, Kentucky.
- Ogaard, L.A. and N.M. Safaya. Computer applications in the regulation of surface coal mining and reclamation: the North Dakota experience. Proceedings of the American Society of Agronomy, Washington, D.C. (Abstract).
- Ogaard, L.A., S. Kahl, M. Spry, and M. Knell. Computer applications of the North Dakota AML and regulatory programs. Itinerant Reclamation Notes (3).
- Hirsch, K.J., L.A. Ogaard and N.M. Safaya. Standards for evaluation of revegetation success and recommended procedures for pre- and post-mining vegetation assessments. Public Service Commission, Bismarck, ND.
- Ogaard, L.A. Reclamation of abandoned coal mines in North Dakota. Paper presented to the Soil and Water Conservation Chapter of North Dakota, Mandan.
- Ogaard, L.A. The Abandoned Mine Program in North Dakota in Geology and Utilization of Fort Union Lignite, R.B. Finkelmann, S.J. Tewalt and D.J. Daley(Editors).
- Dodd, W. E. and L.A. Ogaard. Evaluating Reclamation Success at Three AML sites in North Dakota prepared for the Proceedings of the National Association of Abandoned Mine Lands Programs, 20th Annual Conference, Albuquerque, NM, 1998.
- Ogaard, L.A. North Dakota has a new look on the internet. Page 4 in NAAML Newsletter Vol. 22, No. 2, Fall, 2000.

Dodd, W.E. and Ogaard, L.A. 2003. Evaluating Reclamation Success at Three AML Sites in North Dakota in 1998 and 2003 prepared for the Proceedings of 25th Annual Meeting of the National Association of Abandoned Mine Land Programs, Louisville, KY.

Ogaard, L.A. 2007. A view from Bolivia. The Bismarck Tribune (26 August 2007), Section E.

Ferrell, J. and V. Sarisky-Reed. 2010. National Algal Biofuels Technology Roadmap. U.S. Department of Energy. Proceedings from national meeting, Baltimore, MD, December 9 - 10, 2008 - L. Ogaard participant. 124 p.

Ogaard, L.A. and M. R. Dowlapalli. 2009. Algal growth and harvesting in open raceway ponds in southeastern New Mexico. Prepared for RenewableEnergyWorld.com.

Ogaard, L.A. 2009. Algae Biodiesel: A Path to Commercialization. Paper presented at the Second Algae Initiative Workshop, Oregon State University, July 30, 2009.

Ogaard, L.A.. 2010. "Algae to Biofuel, United States", p. 74-75 in United Nations Food and Agriculture Organization (FAO) Environment and Natural Resources Management Working Paper 44, Algae-based Biofuels: Applications and Co-products, July, 2010. 121 p.

Lynn, D.C., L.A. Ogaard, W. L. Foster, G.L. Carrasco, C.M. Vasquez and R. D. Simmons. 2011. High Frequency Algal Pond Harvest Demonstration: A Proof-of-Principal in Culture Viability under Applied Algal Farm Management and Operations with Methodology Comparisons in the Evaluation and Prediction of Crop Productivity and Yield. Posted on <http://cehmm.org/docs/ponddemoreport.pdf>.