



JAMES ARNDT

PH.D., PWS, LPSS, CPSS, PSC

▶ PROFESSIONAL EXPERIENCE

Dr. James Arndt specializes in Federal, state, and local environmental permitting and has expertise in applied soil science and acquisition, interpretation, and presentation of natural resources data. He has been involved in the analysis of large mining, high voltage electrical transmission power line, alternative energy, and other public works project impacts to aquatic and related natural resources in support of National Environmental Policy Act (NEPA) (Environmental Impact Statements/Environmental Assessments) compliance and securing environmental permits. Jim has specific technical expertise in the application of geochemistry, the genesis and morphology of hydric soils, general hydrogeology, soil survey and interpretations, and IT methods to natural resource evaluation along linear HVTL and pipeline projects. He has also worked on several large interstate pipeline projects in support of Federal Energy Regulatory Commission (FERC) Sections 7(c), 2.55 and 157 pipeline permitting, including the preparation of Resource Report 7 for the Alaska Pipeline Project (2011) and the Alaska Gas Pipeline Partners gas pipeline (2001). Jim has provided expert witness testimony and technical expert assistance on soils and land-use issues for various types of projects, and has published extensively. He regularly presents on natural resources topics to both technical and non-technical audiences.

▶ SELECTED PROJECT EXPERIENCE

Expert Witness/Technical Assistance

Millennium Pipeline Company, LLC -- Farm Yield Monitoring Evaluation, NY (2013)
Provided subject matter expert (SME) opinion and technical support to Millennium Pipeline on the evaluation of potential reasons for variations in yield monitoring results for a National Organic Program Certified Organic farm in New York. The post-construction monitoring was required by the New York State Department of Agriculture and Markets. Potential sources of yield variability included soil fertility, soil physical characteristics, climate and weather, pre- and post-construction pipeline reclamation practices, and farm management practices. Factors potentially causing initial yield variations were examined in detail, and recommendations were made regarding continued monitoring, evaluation of field drainage, and management practices.

Fredrickson & Byron, P.A. Law Firm for Xcel Energy - CapX2020 Electric Power Transmission Project (MN) (2012)

Provided expert witness testimony and SME opinion to support appropriate compensation for a landowner in Sterns County MN under the State of Minnesota's "Buy the Farm" legislation for Xcel Energy's CapX2020 345 kV electric power transmission St. Cloud to Monticello project.



Whyte Hirschboeck Dudek S.C. Law Firm for Confidential Client – Southern Access Stage 1 Pipeline Wisconsin (2012)

Provide SME and written testimony support to determine effects of pipeline construction on alleged reduction valuation of land in placed in the Wetland Reserve Program that was crossed by the pipelines in Jefferson County Wisconsin. The Southern Access Pipeline Project consisted of co-located installation of a 42-inch crude oil and a 20-in diluent pipeline from Superior Wisconsin to near Whitewater Wisconsin.

South Dakota Public Utilities Commission – Keystone XL Pipeline (2009)

Provide SME opinion, and written and verbal testimony to evaluate and resolve potential soils and agricultural issues associated with pipeline construction. Testimony addressed the suitability of the proposed Keystone XL crude oil pipeline South Dakota Agricultural Impact and Erosion Mitigation Plans. The Keystone XL Pipeline is a proposed 36-inch pipeline extending from Hardisty Alberta Canada, extending south to Steele City, Nebraska.

Confidential Client – Southern Access Stage 2 Project in Wisconsin (2005-2006)

Provide SME support to evaluate and resolve potential soils and agricultural issues associated with pipeline construction and reclamation. Train Agricultural Monitors in the use of field techniques developed to evaluate compaction and soil impacts to land productivity. Provide data to WI Department of Agriculture, Tourism, and Consumer Protection (DATCP) in support of their Wisconsin Agricultural Impact Statement. The Southern Access Stage 2 Project consists of a co-location of a 42-inch crude oil pipeline and a 20-inch diluent pipeline from near Whitewater, WI to near Flanagan, IL.

Hutchinson Utilities Commission – City of Hutchinson/Gislason Hunter, LLP Law Firm (2005).

Provide expert witness testimony and SME support to address alleged adverse impacts to soil quality, agricultural production, and land use valuation resulting from the construction of the Hutchinson Pipeline in support of condemnation hearings. Present direct and rebuttal testimony at condemnation hearings. The Hutchinson Pipeline consists of 16 and 2.75 inch natural gas pipelines constructed in Martin, Watonwan, Brown, Nicollet, Sibley, and McLeod counties, MN.

United States Department of Justice – Unauthorized Wetland Fill ND (2003)

United States v. David P. Burkel, Sr., Douglas Ackling and Duane Moench, Civ. Act. No. A3-00-165. Provide expert written testimony on the extent of historic and current wetlands on a section of land in North Dakota. Case involved review of historic aerial photographs, fieldwork on wetland delineation, forensic soils work, and development of a project GIS. Case involved unauthorized fill activities resulting from expansion of a turkey rearing facility in adjacent wetlands.

Electrical Power Transmission/Alternative Energy Permitting/Environmental Review/Mitigation Planning

Xcel Energy - Transmission Lines 0844 and 0861 Project (MN) (2011)

Project Manager responsible for performing wetland delineations and evaluating potential calcareous fen impacts associated with the rebuild of Xcel Energy's Transmission Lines 0844 and 0861 Project, including the installation and removal of 115 kV lines and structures east of Xcel Energy's



Black Dog Generating Station, Burnsville, Minnesota. Provided permitting, impact, and mitigation strategies under WCA, DNR, and COE 404 regulation.

Xcel Energy - Transmission Line 0478 Project (MN) (2011-2012)

Project Manager responsible for the wetland delineation and WCA, Section 404, and MDNR Protected Waters permitting for Xcel Energy's 69 kV Transmission Line 0478 Project, Brownston Minnesota. Prepared Joint Application, coordinated with WCA, Corps, and MDNR representatives, and secured all required wetland and water body permits.

National Wind, Haxtun Wind Energy Project, Haxtun Colorado (2010-2011)

Lead author for applicant-prepared EA for National Wind's Haxtun Wind Energy Project (30 MW wind farm), Logan and Phillips Counties, Colorado. EA prepared in collaboration with the Department of Energy and Western Area Power Administration. FONSI issued January 2012.

Xcell CAPX 2020 Project – MN Agricultural Mitigation Plan (2010-2011) St. Cloud to Monticello

Review, edit Agricultural Impact Mitigation Plan and provide Agricultural Inspector oversight to lead consultant for CapX2020 Agricultural Impact Mitigation Plan for the St. Cloud to Monticello 28 mile long, 345 kV project. Involvement at the request of Bob Patton, Supervisor, Minnesota Department of Agriculture.

Stillwater Photovoltaic Solar Project Churchill NV – Enel Green Power North America (2011)

Lead for developing a digital assessment and quantification of the impacts of reflected sunlight on potentially sensitive receptors (residences, commercial businesses, and state and county roads). The presence, magnitude, duration, and timing of reflected sunlight on sensitive receptors was determined with Ecotect™ software that specifically models sunlight reflections from reflective surfaces such as photovoltaic panels.

Vaughn Wind Project Guadalupe and Torrance Counties, New Mexico– First Wind, Inc. (2010)

Lead for preparing a scoping assessment of sinkhole and karst hazards, with recommendations. Field and geological data were used to identify potential karst formations. An evaluation of the environmental and cultural settings were used to propose avoidance measures.

Gas and Crude Oil Pipeline Permitting/Construction (Permitting/Environmental Review/Mitigation Planning)

Confidential Clients –

Southern Markets Pipeline Project (GA, AL, FL) (2015)

ExxonMobil Alaska Midstream Gas Investments, LLC – Alaska Pipeline Project (2011-2012)

Advantage Pipeline (ND) (2012)

Alliance Pipeline (ND, MN, IA, IL) (1996-1997)

Lead responsible for preparation of FERC Section 7(c) Resource Report 7 (Soils) pre-application filings. The Vantage Pipeline used FERC pre-filing procedures to prepare the EA required under the Presidential Permit.



Confidential Client - Flanagan South Pipeline Project (IL, MO, KS, OK) (2012-2013)

Responsible for updating the IL Agricultural Mitigation Plan, and Enbridge's Environmental Construction Plan for the project (included reclamation plan, SWPPPs, and spill plans). Provide oversight and assist in preparation of wetland delineation reports, several project permits (CWS Section 404) and Environmental Review. Task manager for Section 7 assessment of potential impacts to the American Burying Beetle in KS and OK, and the Indiana Bat in Missouri and Illinois. Led several Environmental Inspector (EI) training sessions on erosion control BMPs and agricultural impact mitigation plan compliance.

ExxonMobil Alaska Midstream Gas Investments, LLC - Alaska Pipeline Project (2011-2012)

Lead responsible for preparation of FERC Section 7(c) Resource Report 7 (Soils) pre-application filings for the proposed Alaska Gas Pipeline Project, with an emphasis on permafrost soil limitations for pipeline construction. Worked extensively with Worley Parsons Inc. arctic engineers to incorporate engineering limitations assessment into RR 7.

Minnesota Pipe Line - MinnCan Pipeline Project (MN) (2006-2008)

Responsible for preparation of Agricultural Impact Mitigation Plan and grower-specific Organic Farm Crossing Plans, managing field wetland delineation efforts, and securing CWA Section 404 and MN State wetland permits. Lead Environmental Inspector supervising pipeline construction through 5 Certified Organic farms in Minnesota. Develop and lead Environmental Inspector training sessions for erosion control BMP implementation and Agricultural Impact Mitigation Plan compliance.

Confidential Client - Alberta Clipper/Southern Lights Diluent project (MN, WI, IL) (2008-2010)

Lead for preparation of Agricultural Impact Mitigation Plans and Organic Farm Crossing Plans. Lead for drafting CWA Section 404 Individual Permit, QAQC review of over 1000 wetland delineations.

Confidential Client - Southern Access (Stage 2) Pipeline Projects (MN, WI, IL) (2007-2008)

Assist with preparation of Agricultural Impact Mitigation Plans and Organic Farm Crossing Plans, CWA Section 404 Individual Permit, QAQC review wetland delineations. Responsible for drafting Fen Management Plan required to authorize construction through the State-protected Gully 30 Calcareous Fen.

Confidential Client - Southern Access (Stage 1) Project (WI) (2006-2007)

Developed field testing methods and training materials for Agricultural Inspectors to assess soil texture, soil moisture content, and soil compaction in construction rights-of-way. Train Environmental Inspectors in Agricultural Impact Mitigation Plan compliance. Prepare documentation for WI DATCP Agricultural Impact Statement, Principal author of Agricultural Impact Mitigation Plan.



Multiple Pipeline Projects (1996 – 2015)

Technical Manager and Lead for use of NRCS digital soils products (STATSGO, SSURGO) to identify soil limitations (including preparation of Resource Report 7) for pipeline construction along proposed construction rights of way, Alaska, Louisiana, Wyoming, South Dakota, North Dakota, Minnesota, Iowa, Wisconsin, and Illinois for various projects.

SRF Consulting Group for Minnesota Department of Transportation – (2004-2006)

Lead responsible for determination of impacts of proposed TH41 road construction on the ecology, soils, and hydrology of the Seminary Calcareous Fen, a high quality fen in the Minnesota River Valley, Carver County (MNDOT). Included detailed coordination with MDNR and St. Paul District COE.

▶ **EDUCATION**

- Ph.D./Soil Science (Geochemistry)/North Dakota State University, 1995
- M.S./Soil Science (Geology. Chemistry)/North Dakota State University, 1987
- B.S./Soil Science (Natural Resource Management)/University of Wisconsin Stevens Point, 1980
- B.A./Psychology, Anthropology, English/University of Wisconsin Milwaukee, 1976

▶ **CERTIFICATIONS**

- Licensed Professional Soil Scientist, Minnesota #30684
- Licensed Professional Soil Scientist, Wisconsin #112
- Professional Soil Classifier, North Dakota #64
- Certified Professional Soil Scientist, ARCPACS, #24904
- Certified Wetland Delineator, Minnesota #1250
- Professional Wetland Scientist, Society of Wetland Scientists, #2420

▶ **PUBLICATIONS**

Over 40 publications and 22 invited presentations in the following areas:

- GIS, Database, Integrated Natural Resources Information Management, and Regulatory Compliance Strategies
- Hydric Soils, Hydrology, and General Soil Science
Soil and Water Biogeochemistry