

Stuart D. Smith, Ph.D.

4644 Grand Fir Lane, NW
Olympia, Washington 98502
(360) 951-5131

I have a strong science background coupled with twenty-five years of experience in Geographic Information Systems (GIS) applications and information technology management. I am the author of numerous scientific publications, including articles on GIS-related technology. I combine an excellent understanding of current GIS issues with a strong background in team leadership, research, and training.

GIS EMPLOYMENT:

GIS Business Proprietor, 2003 to date, True North GIS, LLC

I started and own True North GIS, LLC, a full-service spatial analysis and consulting firm. Please see www.truenorthgis.net for more details. Clients include:

Alaska Bird Observatory
Kenmore Air
Marine Mammal Research Consultants
Renewable Resources Coalition
The Wilderness Society
Trout Unlimited
Trustees for Alaska
University of California, Davis
Washington State Department of Archaeology and Historic Preservation

GIS Analyst, 2001, Thurston Regional Planning Council, Olympia, Washington

I provided the GIS support for a wetland mapping and analysis project across Thurston County. Utilizing Arc/Info, AML programming, and Arcview, and in consultation with senior planning staff, I was responsible for data manipulation and editing, as well as map design and creation.

GIS Analyst, 1997 - 2000, Washington State Office of Archaeology and Historic Preservation, Olympia

I was recruited to design and create GIS capability to inventory, analyze, and help protect Washington's 60,000 prehistoric and historic sites. I was responsible for all aspects of GIS program development and implementation, including budgeting, staff training, determining resource needs, database design, data acquisition, hardware and software administration, and analytic strategy. I instituted several new mapping technologies, including the use of Global Positioning System information as a GIS data source, the ARC Regions data model, and the ARC GRID raster analysis module. I redesigned and consolidated several disparate electronic databases into a single GIS-based database, correcting several thousand errors. I conducted

spatial data analysis involving the location and extent of known archaeological sites. I guided the office's six archaeologists in prioritizing their data acquisition and analysis needs. I designed and implemented security protocols for sensitive archaeological data.

GIS Manager, 1988 - 1997, Washington Department of Natural Resources, Olympia

I managed the GIS, image processing, and computer networking functions used by the agency to regulate forest practices on 12 million acres of private and state-owned forest land in Washington. I co-managed the creation and operation of a \$2 million GIS project that automated the tracking and analysis of forest practices activities statewide, the first project of its type anywhere in the country. I was responsible for the integrity and functionality of 5 statewide GIS data layers (vector and raster) worth approximately \$6 million. I supervised a nine-person spatial technology team, where I was responsible for budgeting, staff development, workload assignments, and project coordination.

GIS Scientist, 1987 - 1988, U. S. Geological Survey, EROS Data Center, Sioux Falls, South Dakota

I researched and developed GIS programs that analyzed a complex regional soils database, thereby validating that nationwide soils databases maintained by the Natural Resources Conservation Service could be imported into a GIS environment and subsequently analyzed to assist with statewide planning efforts. I was responsible for database design, spatial analysis, map production, and GIS education.

NON-GIS EMPLOYMENT:

Position	Date	Employer
Commercial Bush Pilot	Summers, 2003-2013	Promech Air, Ketchikan, Alaska, Kenmore Air, Seattle, Washington
Flight Instructor	2001- 2003	Clover Park Technical College, Puyallup, Washington
College Instructor	1981	University of Idaho, Moscow, Idaho
Research Technician	1977 - 1979	U. S. Forest Service, Oregon
Forest Fire Fighter	Summers 1970 - 1976	Oregon State Dept. of Forestry, U. S. Forest Service

EDUCATION:

Degree	Major	School	Year
Postdoctoral Research	Geographic Information Systems	University of Nebraska	1987
Ph.D.	Rangeland Ecology	University of Nebraska	1986
M.S.	Rangeland Resources	University of Idaho	1982
B.S.	Botany	Oregon State University	1977
B.S.	Rangeland Resources	Oregon State University	1977

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PUBLICATIONS:

- Civille, J.C., K. Sayce, S.D. Smith, and D.R. Strong. 2005. Reconstructing a century of Spartina invasion with historical records and contemporary remote sensing. *Ecoscience* 12(3):330-338.
- Civille, J.C., S.D. Smith, and D.R. Strong. 2004. Remote Sensing, LiDAR and GIS Inform Landscape and Population Ecology, Willapa Bay, WA. Proceedings, 3rd International Invasive Spartina Conference, San Francisco, CA.
- Green, K., S. Bernath, L. Lackey, M. Brunengo, and S. Smith. 1993. Analyzing the cumulative effects of forest practices. *Geo Info Systems* 3(2):30-41.
- Bernath, S. C., M. Brunengo, S. Smith, and L. Lackey. 1992. Using GIS and image processing to prioritize cumulative effects assessment. Proceedings, GIS '92 Symposium, Vancouver, B.C.
- Brunengo, M., S. D. Smith, and S. C. Bernath. 1992. Screening for watershed analysis -- a GIS-based method of modeling the water input from rain-on-snow storm, for management and regulation of clearcut forest harvest. Open-file report 92-2, Washington State Department of Natural Resources, Olympia.
- Brunengo, M. B., S. D. Smith, and S. C. Bernath. 1992. A GIS-based method of modeling water input from rain-on-snow storms, for management and regulation of clearcut forest harvest. Proceedings, 60th annual Westwater Snow Conference, Jackson Hole, WY.
- Smith, S., S. Bernath, M. Brunengo, and L. Lackey. 1992. Analyzing basin-wide cumulative effects resulting from forest practices with ARC/INFO and ERDAS. 1992 ESRI User Conference, Palm Springs, CA.
- Smith, S. D., and J. Stubbendieck. 1990. Production of tall-grass prairie herbs below eastern redcedar. *Prairie Naturalist* 22:13-18.
- Smith, S. D., and J. Stubbendieck. 1989. Control of eastern redcedar in mixed prairie. Pages 147-150. *In* T. B. Bragg and J. Stubbendieck (eds.). Proceedings of the eleventh North American prairie conference. University of Nebraska, Lincoln.
- Smith, S. D., S. C. Bunting, and M. Hironaka. 1987. Evaluation of the improvement in sensitivity of nested frequency plots to vegetational change by summation. *Great Basin Naturalist* 47:299-307.

Smith, S. D. 1986. Ecology and control of eastern redcedar (*Juniperus virginiana* L.). Ph.D. Dissertation, University of Nebraska, Lincoln. 188 p.

Smith, S. D., S. C. Bunting, and M. Hironaka. 1986. Sensitivity of frequency plots for detecting vegetation change. *Northwest Science* 60:279-286.

Minore, D. M., A. E. Abee, S. D. Smith, and E. C. White. 1982. Environment, vegetation, and regeneration after timber harvest in the Applegate area of southwestern Oregon. Pacific Northwest Forest and Range Experiment Station, Research Note PNW-399.

Smith, S. D. 1982. Evaluation of the frequency plot method as an improved technique for measuring successional trend. M.S. Thesis, University of Idaho, Moscow. 95 p.

SELECTED PRESENTATIONS:

Smith, S. D. 1998. Protecting archaeological resources with GIS technology. Association for Washington Archaeology Annual Meeting, Spokane, Washington.

Smith, S. D. 1996. Implementing a GIS-based process to track and analyze forest practices activities. University of Idaho GIS Seminar Series, Moscow, Idaho.

Smith, S. D. 1994. The human side of GIS. Northwest Computer Aided Mapping Association Annual Meeting, Seattle, Washington.

Smith, S. D. 1993. Geographic information systems as a forest mapping tool. Washington Farm Forestry Association Annual Meeting, Everett, Washington.

Smith, S. D. 1991. Geographic information systems. Environment, Regions, and Governance Program workshop, The Evergreen State College, Olympia, Washington.

Smith, S. D. 1988. Utilizing geographic information systems for natural resource management. 1988 Westwide State Forest Planners conference, Salt Lake City, Utah.

Smith, S. D., and J. Stubbendieck. 1987. Herbaceous production under eastern redcedar. Proceedings Abstract, Society for Range Management, 40th annual meeting, Boise, Idaho.

Smith, S. D. 1986. Using principal components analysis to quantify changes in species composition. School of Biological Sciences, Ecology and Evolution Seminar Series, University of Nebraska, Lincoln.

Smith, S. D., and J. Stubbendieck. 1986. Potential allelopathy in eastern redcedar. Proceedings Abstract, Society for Range Management, 39th annual meeting, Orlando, Florida.