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## **Experience**

1979 began Land Surveying 1988 received Wyoming Land Surveyor registration number 5467 1989-1990 Computer Science & GIS graduate work at University of Montana 1994 founded Greenwood Mapping, Inc. providing GIS, database and web services

# County, State, and Municipal Government GIS Projects

**Teton County, Wyoming GIS, 1994 to present.** Greenwood Mapping, Inc. developed the Teton County GIS, a parcel based system, built from land records referenced to a geodetic control network. In addition to the land parcel theme, the GIS includes a Public Land Survey System layer, easements, zoning districts and overlays, conservation easements, digital raster graphics, digital ortho-photography, and digital elevation models.

**Sublette County, Wyoming 2005 to present.** Full county-wide GIS contract services. Beginning in 1996, GIS Consulting services for the design and implementation of a land parcel based GIS. Issues addressed included attribute data conversion and transfer, database design, and geo-referencing of spatial data.

State of Wyoming Decennial Redistricting - Wyoming County Clerk's Association, 2011- 2012. Creation of several state-wide House and Senate redistricting plans that met Federal population criteria while still honoring local election constraints, community character and geographic constraints.

**Fremont County, Idaho GIS, 1997 to 2010.** GIS Consulting services for the planning and deployment of a county-wide geospatial information system. Currently providing full GIS contract support for the county.

**Be Prepared Teton County, 2001-2002.** A GIS based Internet web site providing natural hazards information and encouraging public preparedness for natural disasters. Funded by FEMA.

**E911 Dispatch Mapping System 2000-2002.** Developed a GIS application based on MapInfo that provides emergency services dispatchers in the County Sheriff's Offices with an interactive digital map which automatically locates addresses generated by the Enhanced 911 (E911) system. Used by **Fremont, Teton** and **Sweetwater** Counties in Wyoming.

**Wyoming Secretary of State, 1999**. Contract GIS support and training for county participation the U.S. Bureau of Census TIGER Improvement Program and Block Boundary Suggestion Program. Rich has assisted Teton, Sublette, Park, Big Horn, Hot Springs and Carbon Counties in their preparation for the 2000 Census.

**Converse County Assessor's Office, 1997-1998.** Constructed a county-wide, parcel-based GIS which interfaces with existing UNIX based tax assessment software.

## **WEB Enabled GIS and Land Information Projects**

### GIS Web-Mapping

Beginning in 2000, development of a Map Server application which provides internet display, search and query of county GIS data. Based entirely on Open Source geo-spatial software. Currently in use by the following counties:

Big Horn County, Wyoming Fremont County, Wyoming Hot Springs County, Wyoming Johnson County, Wyoming Laramie County, Wyoming Park County, Wyoming Sublette County, Wyoming Sweetwater County, Wyoming Teton County, Wyoming

Custer County, Idaho

Fremont County, Idaho

http://maps.bighorncountywy.gov/mapserver/ http://fremontwy.greenwoodmap.com/ http://maps.hscounty.com/mapserver/ http://www2.johnsoncountywyoming.org/ http://arcims.laramiecounty.com/parcelviewer/ http://mapserver.parkcounty.us/

http://records.sublettewyo.com/mapserver/ http://www.sweet.wy.us/mapserver/ http://www2.tetonwyo.org/mapserver/ http://www2.co.custer.id.us/mapserver/ http://www.co.fremont.id.us/mapserver/

Firstcall Emergency Notification http://www.firstcall.net/ Software development of the mapping component of a reverse 911 system used state-wide by Delaware and Mississippi, and dozens of communities including San Mateo County, California and the Greater Portland Metropolitan Area.

#### Web Land Records

Beginning in 1997, development of a land records system that provides internet search and retrieval of scanned documents. Deeds, easements, mortgages, and other recorded documents can be searched by grantor, grantee, legal description or other criteria. The scanned image of the document can be displayed, downloaded or printed. Currently in use by the following counties:

Sublette County, Wyoming Teton County, Wyoming

http://records.sublettewyo.com/clerk/query/ http://www2.tetonwyo.org/clerk/query/

### Web Property Taxes

Developed an internet-based interface to county property tax information. Used by individual property owners as well as lending institutions, and other real estate professionals. The system provides current property tax information, payment status and historical tax data. Currently in use in the following counties:

Big Horn County, Wyoming Hot Springs County, Wyoming Sublette County, Wyoming Teton County, Wyoming http://maps.bighorncountywy.gov/treas/ http://maps.hscounty.com/treas/query/ http://records.sublettewyo.com/treas/query/ http://www2.tetonwyo.org/treas/query/

## **Wyoming Water Development Commission Projects**

*Indian Paintbrush Level I Study, Teton County 2012.* Greenwood Mapping, Inc. was the GIS contractor for the project. Integration of all field inventory data with existing County data.

**State-wide Framework Water Plan 2005-2007** Subcontractor to WWC Engineering. Responsible for all GIS, database and web components of the Water Plan.

Crowheart Area/Dinwoody Canal System Level I Study 2004-2005. Greenwood Mapping, Inc. was the GIS contractor for the project. Integration of all field inventory data into a GIS compatible with the Tribal Water Engineer's Office.

**Green River Supply Canal 2002 - 2004.** GIS subcontractor to Nelson Engineering. Field inventory data conversion, formatting and integration.

**Owl Creek Level I Master Plan 2003 - 2004.** GIS subcontractor to Nelson Engineering. Field inventory data gather by GPS was integrated with digital photos and scanned field sketches in an interactive, hyperlinked, ArcGIS project.

**Teton County Level I Master Plan 1998-1999.** Greenwood Mapping, Inc. was the GIS consultant for the Teton County Master Plan. The Master Plan inventoried existing public water systems and projected future water demand. The report included extensive GIS data in ArcView and MapInfo format.

### **Professional Involvement and Publications**

Keynote address to the Wyoming Association of County Officials, September 2012

U.S. State Department, Wyoming Council for International Visitors - Presentation to Nepali GIS delegation, September 2011

Presentation "Enhancing the User Interface with jBox and dBox" at the June 2004 MapServer Users Meeting in Ottawa, Canada.

Presentation "Using MapServer to Integrate Local Government Spatial Data" at the Open Source GIS - GRASS Users Conference 2002, in Trento, Italy, September 2002. The paper was selected for publication in "Proceedings in GIS".

Published in P.O.B. (Oct. Nov. 1992, "Grand Teton Remeasurement")

Published in Lines & Points (October 1992, "GPS on Gannett Peak")

Three terms on the Board of Directors of the Professional Land Surveyors of Wyoming.

Wyoming I-Team Cadastral advisory committee member.

Wyoming GIS Technical Advisory Group (TAG) member.

Free and Open Source Software for Geospatial (FOSS4G) delegate:

Denver Colorado 2011 Barcelona Spain 2010 Victoria Canada 2007 Lausanne Switzerland 2006