

Chris Watson, GISP

GIS Analyst, Geologist

AREAS OF EXPERTISE

- Project Management
- GIS Analysis
- Database Design
- Digital Imaging
- Computer Simulations
- Web Site Design & Implementation
- Public Education Graphics
- Geologic Evaluation
- Geotechnical Consultation
- Hydrologic Assessment

EDUCATION

Boise State University:
M.S., Geology, 1999

Southern Utah University:
B.S., Geology, 1996

PROFESSIONAL HISTORY

GeoDataScape, Owner & GIS Business Line Manager, 2003 - Present

URS Corporation, GIS Analyst and Field Geologist, 1999 – 2003

PUBLICATIONS.

White CM, CA Watson & B. Bonnicksen (2000)

REPRESENTATIVE EXPERIENCE

Mr. Watson a certified GISP, is a GIS Analyst/Programmer, Field Geologist and Principal at GeoDataScape with eleven years experience. His specialties include GIS mapping, 3D visualization, technical writing, geologic and hydrologic mapping, field data acquisition, data analysis, and integration of data from multiple sources ranging from personally gathered field data to archived historic data. He is particularly adept at data preparation for presentation and has assisted in the development of many technical permit and NEPA documents.

A William Burnham Grant for Boise Front Geology winner, Mr. Watson's technical background is in geology, hydrology, organic chemistry and petrogenetic research. He has a broad education and experience background that includes advanced studies in geographic information systems (GIS), field hydrology, hydrologic assessment, site evaluation, geologic hazards, hazardous materials, and environmental geology. He specializes in the assessments and solutions of environmental problems.

Project experience includes:

GIS / INTEGRATED SPATIAL TECHNOLOGIES

• **Whistling Ridge Energy Project**

GIS Manager directing map, analyses, and support efforts for the EFSEC and NEPA permit and environmental documents. Support has been provided for all disciplines of in the field. Support included visual impact analyses, wetlands, terrestrial biology survey mapping, transportation issues and more. This project also included tracking and dynamic update of impacts data. This high profile project received national visible due to its proximity to a national scenic area. Currently acting as experts for public hearings and EFSEC. Project is ongoing with EFSEC permits due to be completed in 2011.

Crustal assimilation at a Snake River Plain basaltic hydrovolcano and its relationship to eruptive style. IAVCEI, Bali, Indonesia, 2000, General Assembly, Exploring Volcanoes: Utilization of their Resources and Mitigation of their Hazards, Abstracts, p. 291.

White CM, CA Watson Evolution of the Guffey Butte tuff cone, Western Snake River Plain, Idaho GSA Abstracts with Programs, Vol. 32, No. 5.(2000)

The Evolution of the Guffey Butte Tuff Cone Complex, Western Snake River Plain, Idaho (1999) CA Watson

AFFILIATIONS

GIS Certification Institute

Geological Society of America

American Association of Petroleum Geologists

- **Middle Mountain Wind Project**

GIS Manager directing map, analyses, and support efforts for permit and environmental documents. Support includes visual impact analyses, shadow flicker and noise assessments. This high profile project received national visible due to its proximity to a national scenic area. The project was completed on time and under budget with a decision not to build.

- **Saddleback Wind**

GIS Manager responsible for spatial analyses and map production in support of site feasibility and turbine location exercises. Project was successful and moved into permitting phase as the Whistling Ridge Energy Project.

- **Riverbend Landfill**

GIS Manager directing mapping and support efforts for the permits and environmental documents required for a solid waste management facility expansion in Yamhill County. Duties included GIS analyses, mapping, and litigation support. Delivered on schedule and on budget.

- **Port of Vancouver**

GIS analyst, responsible for the groundwater modeling mapping. Provided temporal pollution plume visuals in support of the decision document. Provided quality assurance/quality control of GIS deliverables.

- **Key Peninsula**

Lead GIS analyst, responsible for the production of spatial analyses and mapping to be employed in basin delineations. Provided quality assurance/quality control of GIS deliverables.

- **Lower Columbia River Shallow Bathymetric Survey**

Project Manager directing the collection of shallow bathymetry in the Columbia between RM 17 and RM 43. Developed scope and budget. Managed contractor and deliverable schedule and budget. Project finished on time and under budget.

- **Bradwood Landing LNG Terminal & Pipeline**

GIS Manager directing map, analysis, and support efforts for permits and environmental documents required for a 35 mile pipeline, 2 mile transmission line and the LNG terminal facility. Map and analytical support was

rendered for all disciplines. GIS 3D simulation task lead responsible for producing computer models and visuals of proposed mitigation plans. Project is ongoing just entering FERC consultation summer 2009.

- **Newberg-Dundee Bypass DEIS**

Project Manager and lead GIS analyst, responsible for scope budget and schedule tracking. As lead analyst, responsible for graphics and mapping QAQC, directing staff efforts and methods, providing print ready mapping for supporting documents and EIS.

- **BP Terminal 22 Planting Plan**

GIS Visual Simulation Task Manager responsible for producing cross sections and 3D visual models and simulations for proposed planting plans at Terminal 22, Port of Portland.

- **West Eugene Parkway SFEIS**

GIS Area Task Manager for the West Eugene Parkway SFEIS Project. Responsible for a team of GIS analysts conducting natural resource impact analyses and supporting various NEPA processes and documents. Authored the database design and data loss and protection protocols.

- **Banks Lake Resource Management Plan, Washington**

Assisted in building maps for alternative and development plans.

- **Potholes Reservoir Environmental Impact Statement, Washington**

Compiled spatial data from multiple sources to develop a working database and resource plan maps for use in the EIS. Developed the methodology for the GIS portion of the historic vegetation study. Built alternative action maps for the EIS document.

- **East Side Portland Streetcar**

GIS lead for land use mapping and analyses for the East side Portland Streetcar project. Provided technical guidance and QAQC for land use impact analyses in a dense urban setting. Worked with Metro to ensure data was properly represented and results would stand up in court. Provided mapping for related environmental documents.

- **Highway 62**

GIS lead for the Highway 62 project. Provided analysis and mapping of the LiDAR data for the geotechnical consultant team. Provided field mapping and initial document mapping support.

- **Portland Streetcar Loop**

GIS sub consultant lead for the Portland Streetcar Loop project. Provided data acquisition assistance and technical guidance.

- **Oregon Bridges Replacement Project**

GIS development lead for the ODOT Bridges Internet Mapping Site. The site provides planners, managers and staff of all levels of agencies and private contractors involved in the bridges project, access to the spatial data, tabular data, project documents, and thousands of related photographs. Accessed via the internet, it allows the project participants to view and query the baseline spatial data on multiple mapping backgrounds including aerial photos, topographic maps, 3D topographic maps, hillshade, and physical relief.

- **City of Eugene Stormwater Basin Master Plans**

GIS lead for the City of Eugene Stormwater Basin Master Plans project. Responsible for GIS data design, data integration, data analyses, and GIS quality assurance/quality control. Took lead in map presentation and final data delivery.

- **Grants Pass Collection System Master Plan**

Lead GIS Analyst supporting the planning effort for the Collection System Master Plan. Provided GIS database support for the Phase 1 documentation. Provided mapping and database queries in real-time presentation meetings.

- **UC Merced EIS**

Lead GIS analyst, responsible for the production of spatial analyses and mapping to be employed in EIS. Provided quality assurance/quality control of GIS deliverables.

- **Central School District Boundary Relocation**

Project Manager responsible for scope budget and schedule.

- **Pioneer Eddyville Highway**

Lead GIS analyst, responsible for project setup and data management. Provided contractors and subcontractors with field mapping and discipline specific data for various analyses. Provided quality assurance/quality control of GIS deliverables.

- **Murray Blvd. – 217 Improvement Project**

Lead GIS Analyst for Murray Blvd. – OR 217 Improvement Project. The project is assessing proposed safety and operational improvements to the section of US 26 between Murray Blvd. and OR 217. Improvements include the construction of and widening of US 26 and construction of an on-ramp and braided ramps.

- **Newberg-Dundee Transportation Improvement Project LDEIS**

Lead GIS Analyst, responsible for natural resource impact maps for inclusion in NEPA publications and public meetings. Provided quality assurance/quality control of GIS data presentations for the project technical report. GIS has played an integral role in defining and analyzing eight potential solutions to traffic congestion along Highway 99W in Newberg and Dundee, Oregon. Responsible for litigation and hearing support mapping and presentation materials.

- **Spencer Creek Crossing**

GIS analyst, responsible for the base map production used in the initial resource impact investigations. Provided quality assurance/quality control of GIS deliverables.

- **Apex Abandoned Mine Survey**

GIS analyst, responsible for the base map production used in the investigations. Built initial field maps and setup project GIS. Collected field data utilizing real-time GPS. Produced final inventory database accompanied by spatial data displayed on aerial- and topo-base.

- **Williams Mountain Rock, LLC**

Planned and executed cut and fill volumetric analyses. Produced technical and environmental figures for public meetings and permit documents. Modeled project data in 3D with accompanying cross sections.

- **Copeland Highway Re-Alignment Project, Idaho**

Collected the resource data and built the database for the Geographical Information System (GIS) portion of the project. Planned and produced acreage analysis of impacts using cut and fill models. Provided all GPS and GIS field support, including differential corrections of field gathered data points. Produced plan maps under the following themes: wetlands and water resources, wildlife, land use, vegetation, rare-plant guilds, game corridors, vehicle accidents. Provided graphics for several public meetings.

- **CDOT GIS Inventory Needs Assessment**

Participated as a project coordinator to facilitate meetings, and project tasks. Provided the project expert GIS peer review and consultation.

- **Evolution of Guffey Butte Tuff Cone, western Snake**

Developed GIS for project and customized database for presentation of regional chemical signature data and 3D modeling of geomorphic structures. Natural Resources

- **Copeland Highway Re-Alignment Project, Idaho**

Performed the initial field hydrologic reconnaissance and assessment, including impacts by construction on stream drainages, soils, and wetland impacts. Wrote the geology, hydrology, and water quality sections of the EA document, and assisting with field observations for a wildlife movement study.

- **Potholes Reservoir Environmental Impact Statement, Washington**

Wrote the regional and local geology sections for the EIS including groundwater, groundwater quality, soils (edits and appends only), hydrology, geologic hazards, and topographic description.

GEOTECHNICAL EXPERIENCE

- **Banks Lake Resource Management Plan, Washington**

Edited existing geology related sections of the RMP. Wrote the impacts to ground water quality portion of document. Assisted in building maps for alternative and development plans.

- **AVISTA Site Feasibility Study**

Acted as the principal resource investigator for soils, geology, hydrology, and water quality. Gathered an inventory of these resources for five locations. Evaluated

each site by resource for environmental suitability and/or environmental issues. Provided client with technical write-up of resources, three weeks after start date. Used GIS to prepare graphics and diagrams of each site, to accompany the document.

- **Boise Cascade Road Coverage**

Developed secondary, unimproved, logging and fire service roads coverage. Roads were interpreted from digital orthophotos.

- **ITD Freezeout Hill, Highway 16 Lane Addition**

Acted as principal geotech and field engineer. Responsibilities included but were not limited to erosion assessment, surface water hydrologic assessment, materials and stability sampling, and the Geo-Phase one report writing.

- **Syringa Park**

Was responsible for Phase two test pit sampling and onsite soil consultation during footing construction.

- **Tesoro Geotech**

Acted as the principal field engineer and/or geotech on several Tesoro sites. Work included SPT and MC soil sampling, SPT environmental sampling, and bulk sampling. An OVA was used on some sites. Additional responsibilities included report writing and preliminary lab work.

- **Evolution of Guffey Butte Tuff Cone, western Snake River Plain, Idaho**

Developed hypothesis from field observations. Planned and managed project from start to successful finish. Field mapped study area. Sampled study area and prepared samples for laboratory testing. Analyzed laboratory findings and wrote thesis document. Publicly defended findings.

- **Treasure Valley Hydrologic Survey Project**

Assisted in field evaluation and interpretation of data.