EUGENE N.J. ST.GODARD, L.G., L.Hg.

EDUCATION

M.S., Geology, Eastern Washington University, 1990
B.A., Geology, Mansfield University of Pennsylvania, 1986

REGISTRATION

Registered Hydrogeologist: Washington (129) and California (593)
Registered Geologist: Washington (129), Idaho (862), California (6247), Oregon (1630), Wyoming (1690)
Certified Water Right Examiner (#134), Idaho
Registered UST Site Assessor, Washington
PADI Certified SCUBA Diver

TRAINING/CERTIFICATION

80-Hour OSHA for Hazardous Waste Operations
Radiation Safety and Nuclear Gauge Certified
Washington Water Law (CEU), 2002
Tribal Energy (CEU), 2004
Water Right Transfers in Washington State (CEU-Faculty), 2006

MEMBERSHIPS

American Water Resource Association
Association of Groundwater Scientists and Engineers
Society of Inland Northwest Environmental Scientists (SINES)
Society for Sedimentary Geology (SEPM)

EXPERIENCE

Gene has more than 19 years of experience as a Hydrogeologist and Project Manager in the environmental consulting business. He has experience in conducting assessments and evaluations of natural resources in the northwestern United States and has extensive experience in facilitating public meetings for watersheds, presenting technical data to stakeholders and agencies, acting as a regulatory liaison between private industry and regulatory agencies, and preparing technical documents that accompany assessments and planning projects. His experience in natural resources includes conducting watershed planning presentations, facilitating public meetings, evaluating water quality impacts to surface and groundwater, evaluation of water rights, evaluating aquifer characteristics for storage, velocity, flow direction and yield, assessing surface and ground water quantity and quality, and assisting with the various state and federal permitting processes related to water. Gene has managed multi-disciplined projects and has a unique understanding of the different sciences of hydrology, biology, and engineering that is required for many water resource projects.

Gene has extensive experience in the evaluation of water quantity and quality data in order to determine compliance with state and federal water quality laws and regulations. He has extensive experience in the delineation and interpretation of geological and hydrogeological units to determine both stratigraphic and structural controls for unconfined, semi-confined, and confined aquifer systems. Gene's combined geologic and hydrologic experience allows for easy interpretation of hydrogeologic controls such as basin margins vertical migration pathways, and regional correlation of water resources within watersheds. His combined hydrologic and regulatory experience allows for a simple straightforward approach to solving water-related issues. His experience includes groundwater computer modeling, water resources and water quality evaluations, preparation of grant proposals, and development of technical and planning reports. Gene has acted as the technical author and/or senior reviewer for over 250 technical reports in his career. His combined hydrogeologic and regulatory experience allows for a simple straightforward approach to water-related reporting and planning issues.

WATER QUALITY ASSESSMENT AND PLANNING - GENERAL EXPERIENCE

Gene has conducted numerous projects to evaluate surface and groundwater for water resource evaluations related to hydrogeologic and watershed evaluations. His experience encompasses the characterization of surface water with respect to quantity, quality and morphology. His primary experience includes the characterization of the relationship to surface and groundwater for water balance. Gene has also conducted numerous pump tests and slug tests on both shallow and deep aquifers (unconfined, semi-confined and confined systems) to determine hydraulic conductivity, transmissivity, and groundwater velocity. Installation and monitoring of wells were also involved to determine hydraulic gradient and water quality. Most aquifer and surface water characterizations were completed for the design and feasibility of groundwater remediation, and/or stream restoration and relocation projects. Groundwater studies were also completed for land use applications. Hydrologic investigations include detailed modeling of contaminant plumes and the use of computer programming for the interpretation of aquifer characteristics. Hydrologic and hydrogeologic studies have been completed in the states of Washington, Idaho, Oregon and California. Gene has also completed water balance studies in order to determine underflow of potential impacted groundwater to sensitive areas such as salmon spawning areas. In addition, surface hydrology studies have been conducted in order to determine surface water fluctuations entering subject properties for erosion and sediment control, surface water monitoring programs, and stream diversion projects.

RELEVANT PROJECT EXPERIENCE

HYDROGEOLOGY

Hydrogeologic Evaluation/Critical Aquifer Recharge Area Delineation, Stevens County, Washington

Gene conducted an evaluation for Stevens County to assist with Growth Management and the delineation of Critical Aquifer Recharge Areas (CARA) in Stevens County. The project includes a Best Available Science Review of aquifers throughout Stevens County, and a hydrogeologic evaluation of the Sheep Creek Subbasin to delineate the CARA designation within the watershed. Project involved the identification of aquifers, assessment of aquifer characteristics, determination of hydraulic continuity of aquifers, location of current uses of aquifer, development of CARA rating, and delineation of CARA boundaries. Project also involved assisting with the determination of mineral lands within the county, and assisting with writing of hydrogeologic/geologic sections of the Comprehensive Plan and the Draft Environmental Impact Statement.

Hydrogeologic Evaluation of Bedrock Aquifer Flow in Underground Mining Facility, Ferry County, Washington

Gene conducted a bedrock aquifer evaluation to develop a conceptual model of the potential static water conditions throughout the mine shafts of an underground mine. The project was conducted in order to assist with a determination if static water conditions would rise to a level above existing adit entrances for the mine, causing a surface water discharge of the groundwater. The project encompassed mapping the fault zones in the facility of the mine, developing a regional groundwater flow evaluation from existing data, and applying known seepage rates in the mine facility to potential groundwater contributions. An estimate was made of the potential elevation of static water conditions in order to assist with engineering requirements for abandonment of the facility.

Hydrogeologic Review of Storage Facility, Chewelah, Washington
Gene conducted a review of hydrologic and hydrogeologic data to determine if the constructed 33-acre lake facility could maintain water elevation for a fly fishing business, while still capable of maintaining an instream flow permit criteria at the outfall of the lake. The review consisted of determining lake level declines during permit required releases to determine if potential harm would occur to the fish population in the lake.

Western Nuclear, Sherwood Mine, Hydrogeologic Evaluation/Water Resource Review
Wellpinit, Washington
Gene has conducted closure proceedings on an impacted aquifer for a mine facility near Wellpinit, Washington. He prepared several presentations for meetings attended by the private mining company, EPA, Bureau of Indian Affairs, and the Spokane Tribe. After presenting technical data for characterization of the aquifers and water resources on the southern area of the reservation, Gene facilitated the meetings in order to achieve a common agreed upon solution to proceed with closure of the mining facility and allow for transfer of the property back to the Spokane Tribe.

Iowa Beef Processors, Hydrogeologic Evaluation/Land Use Application
Wallula, Washington
Project manager for a hydrogeologic investigation at beef processing facility in Wallula, Washington relevant to land application permit. Application submitted for use of wastewater in processing facility to be used for land application purposes such as on crops in surrounding areas. Study revealed series of shallow perched zones above primary aquifer located at depths up to 200 feet below grade. Perched aquifers determined that land application in these areas may adversely affect groundwater quality. However, most area within proposed permit zone contained groundwater at depth in aquifer containing low transmissivity values. Aquifer beneath valley drainage adjacent to permit zone determined to be higher yield due to stratigraphic facies changes resulting in ability of aquifer to transmit applied wastewater to Columbia River.

Morgan Stanley, Washington Power Generation Facility, Hydrogeologic Investigation
Frederickson, Washington
Gene provided hydrogeologic services to investigate the groundwater beneath a proposed power generation facility to be constructed in Frederickson, Washington. Project tasks included the design and installation of eight recovery and monitoring wells, conducting a step drawdown and constant rate pump test, and conducting aquifer modeling to determine aquifer parameters. Study was utilized for permitting of facility over the Clover Creek aquifer recharge area. Additional tasks include preparation of detailed hydrogeologic report, and development of a groundwater-monitoring plan for permitting of the facility.

Colville Confederated Tribes, Hydrogeologic Investigation
Elbow Lake, Washington
Gene provided hydrogeologic services to investigate the groundwater and surface water issues surrounding a 52-acre lake that lost over 750 acre-feet of water in 2001, causing the lake level to drop over 15 feet. Lake conditions resulted in only two small “ponds” in the former lake area. The project involved constructing a conceptual model of the groundwater-surface water interactions in the drainage basin to determine the cause of the lake drying up. In addition, a geoprobe investigation was completed in order to construct the conceptual model. The project was completed in order to determine if mitigation could be conducted to protect the lake, or if management practices should be enacted to manage the fisheries of the lake for future events.

Time Oil Company, Bremerton Jackpot, Hydrogeologic Evaluation
Bremerton, Washington
Gene served as the technical lead for a hydrologic study for valley in Bremerton, Washington in order to determine amount and velocity of underflow through impacted site. Site located approximately ¼-mile upgradient of salmon spawning area. Study revealed that high precipitation rates within steep valley floor would result in elevated groundwater velocities. Recommendations from study resulted in immediate action for installation of groundwater control systems in order to protect impact to salmon habitat.

WATER RIGHT EVALUATIONS

Water Right Transfer, C&M Group, Colville, Washington
Gene conducted a due diligence review for a proposed water right transfer of a groundwater withdrawal near Colville, Washington. The project involved determining if the existing water right withdrawal was valid, conducting an ACQ analysis to determine the actual consumptive use (beneficial use) of the crops irrigated, determining actual amount of water withdrawn over the past 5 years through electrical records, and determining if adequate infrastructure was in place to utilize the water right. Gene prepared a report of findings to accompany the water right transfer application prepared.

Water Right Transfer, Chewelah Golf Course, Chewelah, Washington
Gene conducted a due diligence review for a proposed water right transfer of a surface water diversion on the North Fork of Chewelah Creek near Chewelah, Washington. The project involved determining if the existing water right withdrawal was valid, conducting an ACQ analysis to determine the actual consumptive use (beneficial use) of the crops irrigated, determining actual amount of water withdrawn over the past 5 years through electrical records, and determining if adequate infrastructure was in place to utilize the water right. In addition, irrigation needs for the golf course were calculated. A review of the clients existing water rights were also conducted to determine the amount of water that would be required for purchase. The analysis was used to determine if the Golf Course needs could be met with the purchase and transfer of the identified water right.

Water Right Transfer, Longview Fibre, Winton, Washington
Gene conducted a hydraulic continuity evaluation for a proposed water right point of diversion change on Skinney Creek (tributary to Chiwaukum Creek and the Wenatchee River) near Winton, Washington. The project involved determining if a change to a groundwater withdrawal from the existing surface water diversion was still hydraulically connected to the Skinney Creek. The site is located in a unique hydrogeologic setting on the saddle of two major drainages. Preliminary evaluation of existing hydrogeologic conditions determined that the new proposed withdrawal site was in hydraulic continuity with the stream, but would have minimal affects on flows.

Water Right Evaluation, Kimberly Mill Site and Rescue Mine, Warren, Idaho
The WNR Group was retained by Kimberly Mines to assist them with a BLM challenge to the validity of a water right at the Kimberly Mill site. The a Form 1 objection was filed by the US BLM and the US Forest Service during the Basin 77 Adjudication. The challenge was based on the validity of the water right as relevant to a time lapse in the claims on which the mill is situated. The WNR Group assisted Kimberly Mines with responding to the BLM challenge and filing the appropriate court documents for a water right hearing in the SRBA court.

Richard Price, Attorney at Law
Water Right Transfer – Hydraulic Analysis, Harms Property, Riverside, Washington
Gene conducted a hydraulic analysis of a groundwater withdrawal location to the Okanogan River. The project was conducted to support a transfer of a groundwater right to a surface diversion downstream of the existing water right location. The project determined that the groundwater withdrawal was in direct hydraulic continuity with the Okanogan River.

Water Right Transfer, Dominion Golf Course, Colville, Washington
Gene conducted a preliminary due diligence review for a proposed water right transfer of a surface water diversion on a tributary to the Colville River near Colville, Washington. The project involved conducting a review of a previously denied water right transfer to assist the legal team with an appeal of the Ecology ROE. In addition, a review of other available water rights within the basin was conducted.

Water Right Transfer, Wright Property, Okanogan River, Washington
Gene conducted a preliminary hydraulic continuity evaluation for a proposed water right point of diversion change on the Okanogan River near Tonasket, Washington. The project involved determining if a change in point of withdrawal to a groundwater withdrawal from the existing surface water diversion was still hydraulically connected to the Okanogan River. Preliminary evaluation of existing hydrogeologic conditions determined that the new proposed withdrawal site was in hydraulic continuity with the river, but would have minimal affects on flows. The transfer of the point of withdrawal was determined to be beneficial to flows within the Okanogan River.

Water Right Transfer, Daniels Nursery, Colville River, Washington
Gene was the Senior Project Manger on a transfer application for the Daniels Nursery in Stevens County, Washington. The project included coordinating with the client's attorney to submit the water right transfer application to the Washington State Department of Ecology, and to conduct an evaluation of actual water use on the irrigated property. The water use evaluation included determining quantity of applied water, and consumptive use of crops located on the 185 acre property. Results determined that all of the 74 acre feet of water could be transferred from the Colville River, down stream to another surface water diversion on the Columbia River.

Assessment, Colville Indian Power and Veneer Property Water Rights Investigation, Colville Confederated Tribes
Gene was the Project Manager to attain the history and standing of the water rights associated with this property located in the western portion of the Reservation near the Okanogan River. The City of Omak has permitted water rights dependent upon the original water right claims filed with the State of Washington. The Colville Confederated Tribe requested an investigation be conducted into the validity of the water rights associated with the points of withdrawal on the Colville Indian Reservation. Project involved meetings with tribal representatives and investigating and documenting the actions taken and requested by previous property owners, the City of Omak, and the Tribe in relation to this property and water rights.

Palouse Conservation District, Assessment of Water Rights, WRIA 34
Whitman County, Washington
Gene was the senior project manager on this project to evaluate and give preliminary interpretations of the Ecology WRATS database for the WRIA 34 Planning Unit. Project involved compilation and review of claims, certificates, and permits and the associated uses of the water rights as presented in the

WRATS database. GIS maps of surface water and groundwater diversions prepared showing quantity of withdrawals per Section throughout the entire watershed. Results of assessment of papered water rights presented in a report and presented at a public meeting.

WATERSHED PLANNING

Lincoln County (Upper Crab Creek), Phase III Watershed Plan Development - Watershed Planning, WRIA 43, Lincoln County, Washington
Gene St.Godard is currently developing the Phase III Watershed Plan for WRIA 43. Project tasks include the development of issues and goals. After prioritization of issues and goals, solutions were developed to be addressed within the Plan. Project tasks also include the facilitation of monthly Planning Unit meetings and subcommittee meetings, coordination of planning activities with initiating governments and other stakeholders, and writing of the Watershed Plan

Lincoln County (Upper Crab Creek), Phase II-Water Storage Evaluation - Watershed Planning, WRIA 43, Lincoln County, Washington
Gene assisted the consultant team retained to evaluate storage alternatives within WRIA 43 (Lincoln County). Project included the evaluation of small vs. large scale water storage alternatives, discussion of feasibility within watershed, ranking of priority areas that are most feasible for storage alternatives, and presentation of cost-benefit of storage alternatives to stakeholders within the watershed. Storage alternatives primarily focused on engineered options (both in-stream and off-stream) which could recharge shallow aquifers to subsequently increase base flow to Crab Creek and its tributaries. Floodplain storage alternatives to increase moisture content of floodplain soils for higher agricultural productivity was also evaluated.

Lincoln County (Upper Crab Creek), Phase II Watershed Planning, WRIA 43
Lincoln County, Washington
Gene was the senior project manager on the Upper Crab Creek Watershed Planning (ESHB 2514) process for the instream flow and habitat assessments. Gene coordinated the development of the instream flow studies in order to determine potential recommendations for flows within the Upper Crab Creek Watershed.

Ferry County, Phase II Watershed Planning, WRIA 60
Ferry County, Washington
Gene served as the technical lead for the Phase II Level I Assessment for the Kettle River Watershed. He led a multi-disciplinary team to develop a technical assessment protocol (TAP), collect and evaluate existing technical documents relative to the Kettle River Watershed. Gene also provided hydrogeological assistance for the development of the water budget within the watershed and assisted with development of the instream flow technical study for the Kettle River and its tributaries.

Pend Oreille Conservation District, Phase II-Level II Watershed Planning, WRIA 62
Pend Oreille County, Washington
Gene served as the Principal in Charge for the Phase II Level II Water Quality and Quantity Assessment for seven tributaries to the Pend Oreille River. A one year monitoring program was designed and implemented for flow, dissolved oxygen, temperature and turbidity.

Development of Watershed Plan, WRIA 59, Colville River, Washington

Gene was the Principal in Charge in the initial scoping for the Phase III Plan in the Colville River Basin. Gene assisted in the development of the scope, goals and objectives for plan development. The plan development was scoped for addressing water quantity, water quality, and water storage issues throughout the Colville River Basin.

WRIA 59 Multipurpose Water Storage Opportunities Assessment, Washington
Gene was the Principal-in-Charge of an assessment of the multipurpose water storage opportunities in the Colville River Watershed for the Stevens County Conservation District and the WRIA 59 Planning Unit. The assessment included assessing storage projects proposed in the past for feasibility, developing new multipurpose storage alternatives that meet the goals and objectives of the planning unit, and analyzing a select subset of the multipurpose storage alternatives for potential environmental impacts and cost. The result of this assessment included recommendations of prioritized potential water storage projects based on least amount of environmental impacts and cost to construct and maintain. The project also included a discussion of the programmatic approaches and activities that can be taken in the basin to maintain, protect, and enhance natural storage processes in the Colville River Watershed.

Grant, Adams, Franklin, and Stevens Counties, Watershed Pre-Planning
Various Locations, Washington
Gene served as project manager on a multi-county watershed pre-planning analysis to support preparation of a management plan for six major drainages in central and eastern Washington. In completing this project, he was responsible for public relations with over 20 different private and public entities associated with the program. In addition, he served as technical specialist for answering stakeholders concerns regarding water quantity, water quality, habitat, and in-stream flow issues in relation to Washington States Watershed Planning Act (ESHB 2514). Gene also acted as facilitator during multi-agency watershed planning meetings in order to evaluate and coordinate stakeholder concerns for the formation of a multi-WRIA watershed planning council. Subsequent tasks included the preparation off a watershed presentation that will be presented to the public stakeholders in the watersheds. Project also involved the development of questionnaires for public input into the watershed planning process and the evaluation of stakeholders concerns.

NATURAL RESOURCES

Stream Restoration Design and Construction Oversight, Lower Bridge Creek, Ferry County, Washington, Colville Confederated Tribes
Gene was the project manager of a multidiscipline team for design of the lower 1350 feet of Bridge Creek. Design of the stream was focused on passage for adfluvial fish to reach new habitat mitigation projects conducted upstream. The client requested a fast track schedule in order to prepare final design plans within 5 weeks of contract award. In order to meet the time constraints, the project team met within three days of project award and began the site inspection to locate former stream channel locations within the drainage. An inspection was conducted in order to determine which path may be the preferred alternative. An elevation survey was then conducted in order to begin design criteria for the new channel. Once a preferred alignment was determined, a biologist then visited the site to determine most feasible prescriptions for enhancement of passage and habitat for the adfluvial fish to access the preferred spawning habitat upstream of the project location. Engineered drawings with prescriptions for habitat improvement were then developed. The stream design included a more sinuous path with log vanes, log weirs, rock weirs, instream boulders, and root wads prescribed to enhance habitat conditions. Engineered drawings and specifications were developed for client to use in bidding for construction of

the project. The WNR Group then provided construction oversight for restoration of the lower portion of Bridge Creek.

Buffer Evaluation for Critical Area Ordinance, Stevens County, Washington.
The WNR Group was retained by the Stevens County attorney to develop a team of professionals to review Best Available Science and develop recommendations for buffers on wetlands and streams. These recommendations were developed on the review of existing scientific documents in order to develop buffer recommendations for the four categories of wetlands and the five classifications of stream type. Recommendations were used in development of the Title 13 Ordinance for Stevens County.

Avista, Biological Assessment, Power Line Right-of-Way, Montana-Idaho-Washington.
The WNR Group was retained by Avista to conduct a Biological Assessment to assist in the approval to combine and renew three Special Use authorizations on 922 acres of right-of-way through three National Forests (Lolo, Kootenai, and Idaho). The BA assessment was completed for terrestrial plants on behalf of Avista for the US Forest Service. The BA was used to reissue Special Use Authorization permits.

Bridge Design and Culvert Replacement, Barnaby Creek, Ferry County, Washington, Colville Confederated Tribes
The WNR Group led a team of scientists and engineers to evaluate the replacement of a culvert on Barnaby Creek which was a identified as a fish barrier. The project involved the design of removing the culvert and returning the creek to its natural condition. In addition, a bridge passage was identified down stream, the area surveyed and a single span bridge designed for vehicle traffic to cross Barnaby Creek.

Stream Restoration Implementation, Bridge Creek, Ferry County, Washington, Colville Confederated Tribes
Gene was the Principal in Charge on the implementation phase of approximately 2,550 feet of Bridge Creek located in Ferry County, Washington. The project included coordinating contractor, providing staff for field documentation of activities, and preparing implementation reports for the installation of weir structures, root wads, and log vanes throughout the reach of the creek for fish habitat and water quality improvements.

Confidential Client, Water Resource Planning
Central Washington
Gene served as the project manager on a large water resource-planning project in north central Washington. This project included the management of a multi-discipline project team which determined aquifer boundaries, water budgets for several drainages, setting in-stream flows for salmon recovery, conducting an inventory and database construction for water wells throughout the area, creation of a water right database, and assisting in determining appropriate water management for future policy making decisions.

Assessment, Colville Confederated Tribes' Hydraulic Permitting Act (HPA), Chapter 4-9of the Tribal Law and Order Code, Colville Confederated Tribes
Gene was the Project Manager to evaluate and make recommendations on how to update the Colville Confederated Tribes' current HPA Code. Project involved review of existing code and evaluation against other Tribal codes and the Washington State HPA. Recommendations in regard to changes to the existing code were prepared and presented to the Tribe for consideration. The Tribe requested their current standards be rewritten to reflect a number of the recommendations presented. Project involved

meetings with tribal representatives and investigating and documenting the differences and similarities with other standards, documenting findings, making recommendations based on findings, and presenting the conclusions to the client. The Code was then prepared for the Administrative Process on behalf of the Tribe.

Confidential Client, Hydrologic Evaluation/Erosion and Sediment Control
Oroville, Washington
Assisted in a hydrologic investigation on flows of existing perennial creeks, intermittent drainages, surface drainage divides and adit discharges for evaluation of erosion and sediment control plan. Investigation used to verify location of sediment traps, drainage channels and BMP design for plan.

Confidential Client, Hydrologic Evaluation
Mullan, Idaho
Project Manager for a surface hydrologic study completed in a valley near the Idaho-Montana border in order to determine surface water flows for design of stream diversion channels. Project involved monitoring of streams, seeps and water from adits in order to determine water balance throughout the drainage. Study revealed zones of gaining then losing portions within the valley and delayed fluid input from adit drainage. Areas of underflow within the drainage determined that diversion may not be most feasible alternative within drainage.

WATER QUALITY

Preparation of QAPP and SAP for Fecal Coliform Monitoring in Adams County, Adams County Conservation District, Ritzville, Washington
Gene prepared a 3-year Centennial Grant for the Adams County Conservation District to develop a baseline of fecal coliform in surface and groundwater throughout Adams County. To initiate the project, he was the primary author of a QAPP completed in accordance with Ecology guidelines. The QAPP outlined a Sampling and Analysis Plan (SAP) of where to collect water samples, frequency of sampling, sampling procedures, packing and shipping procedures, laboratory procedures, and data management procedures. The QAPP was completed in accordance with new Ecology guidelines for projects conducted under state funding.

Assessment, Colville Confederated Tribes' Water Quality Standards, Chapter 4-8 of the Tribal Law and Order Code, Colville Confederated Tribes
Gene was the Project Manager to evaluate and make recommendations on how to update the Colville Confederated Tribes' current water quality standards. The existing standards were evaluated against the EPA guidance, a number of other northwest Tribes' standards, and the State of Washington's current and proposed standards. The Colville Confederated Tribes' water quality protection program was also evaluated for omissions or weaknesses. Recommendations in regard to changes to the existing code and programmatic approach were prepared and presented to the Tribe for consideration. The Tribe requested their current standards be rewritten to reflect a number of the recommendations presented. Project involved meetings with tribal representatives and investigating and documenting the differences and similarities with other standards, documenting findings, making recommendations based on findings, and presenting the conclusions to the client.

Eisen Property, Aquifer/Surface Water Evaluation

Oroville, Washington
Project manager for a hydrologic research investigation on three water bodies in Okanogan County to determine effects of groundwater beneath property in Oroville, Washington. Study involved historical research on effects of flows in the Similkameen River and Okanogan River in addition to Lake Osoyoos surface levels with regards to impacted sites located between rivers. Study used to determine potential plume migrations and commingling of plumes for remedial cleanup.

Davenport Hotel, Litigation Support/Hydrogeologic Evaluation
Spokane, Washington
Project manager for a hydrologic investigation in shallow unconfined aquifer for determination of direction and velocity of Bunker C migration pathways in hummocky subsurface bedrock/silt in downtown Spokane. Study utilized in potential litigation over impact to subject properties from migrating contaminants 400 to 800 feet from site. Study involved determining flow direction, preferential flows in different bedrock channels and velocities of shallow groundwater throughout the site and at locations along property lines where contaminant may cross. Project also consisted of participating in numerous public meetings to answer concerns of public to impact of downtown properties.

Time Oil Company, Richland Jackpot, Well Field Evaluation/Hydrogeologic Study
Richland, Washington
Gene served as the technical lead in a hydrogeologic investigation to determine effects of former public well field, Yakima River, Columbia River and Lake Wallula surface water fluctuations on migration of contaminant plumes identified in Richland, Washington. Study revealed several groundwater migration direction shifts through time due to use of public well fields and from lowering and raising of lake levels over the last 50 years. Historical study determined at which times commingling of plumes and reversal of groundwater occurred. Study used for potential litigation for PRPs.