

RECLAMATION

Managing Water in the West

Technical Service Center Directory of Services



Vision

Be the world-recognized center of technical excellence in water and related resources.

Mission

Provide technical services for managing, developing, and protecting water and related resources.

Core Value

Deliver the greatest value to every customer.

Technical Service Center Profile

Created	October 1994												
Agency	United States Department of the Interior Bureau of Reclamation												
Contacts	Civil Engineering Services, Lowell Pimley, 303-445-3111 Water and Environmental Resources, Craig Albertsen, 303-445-2267 Geotechnical Services, Karen Knight, 303-445-3044 Infrastructure Services, Mark Boyle, 303-445-2828												
How to Contact Us	Internet address www.usbr.gov/pmts/tech_services Telephone 303-445-2720 Faxogram 303-445-6379 Address Denver Federal Center, Bldg 67 PO Box 25007 (86-68000) Denver, CO 80225-0007												
Our Business	World-class engineering, science, research, and support services for projects related to water resources												
How We Operate	The Technical Service Center recovers our operating costs through fee-for-service arrangements with clients without profit												
Number of Employees	500												
Our Clients	Reclamation's Commissioner; Regional and Area Offices; Safety of Dams Program; Office of Program and Policy Services; Science and Technology Program; Office of Security, Safety and Law Enforcement; International Affairs Office; Management Services Office Other government agencies, such as the National Park Service, the U.S. Fish and Wildlife Service, the U.S. Geological Survey, Department of Energy, Bureau of Indian Affairs, the U.S. Environmental Protection Agency International Customers												
Annual Revenues	\$82 million												
Billable Rates (FY08)	<table><thead><tr><th>Skill Level</th><th>Hourly</th><th>Daily</th></tr></thead><tbody><tr><td>1 (GS-10 or below)</td><td>\$74</td><td>\$592</td></tr><tr><td>2 (GS-11 or 12)</td><td>\$96</td><td>\$768</td></tr><tr><td>3 (GS-13 or above)</td><td>\$116</td><td>\$928</td></tr></tbody></table>	Skill Level	Hourly	Daily	1 (GS-10 or below)	\$74	\$592	2 (GS-11 or 12)	\$96	\$768	3 (GS-13 or above)	\$116	\$928
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Technical Service Center

Condensed Directory of Services Contacts

		303-	FAX 303-
86-68000	Technical Service Center	Director	445-2720 445-6379
86-68010	Client Support and Technical Presentations Office	Christi Young, Manager	445-2561 445-6356
	TSC Business Manager	Tom Luebke (86-68010)	445-2600 445-6356
	Client Liaisons		
	Great Plains Region	Roger Burnett (86-68210)	445-2508 445-6351
	Lower Colorado Region	Scott Irvine (86-68120)	445-2253 445-6489
	Mid-Pacific Region	Dan Maag (86-68170)	445-3084 445-6475
	Pacific Northwest Region	Joe Lyons (86-68210)	445-2531 445-6351
	Upper Colorado Region	Chuck Borda (86-68270)	445-2728 445-6380
	International and Native American Affairs	Bill Bouley (86-68360)	445-2754 445-6473
	Non-Reclamation Clients, P&A, PPS, S&T, and Reclamation Other (TR, MSO, HRO)	Gay Ann Martinez (86-68010)	445-3006 445-6456
	SSLE, Dam Safety Office, BIA Dam Safety, and K88 (TSC Working Capital Fund)	Tom Luebke (86-68010)	445-2600 445-6356
	NPS Dam Safety	Tim Tochtrop (86-68312)	445-2990 445-6472
	TSC Environmental, Health, and Safety Officer	Andrew Montano (86-68220)	445-2219 445-6328
86-68100	Civil Engineering Services Division	Lowell Pimley, Division Chief	445-3111 445-6379
68110	Structural Analysis Group	John Baals, Manager	445-3222 445-6489
68120	Plant Structures Group	Dick LaFond, Manager	445-3226 445-6489
68130	Waterways and Concrete Dams Group	John LaBoon, Manager	445-3235 445-6490
68140	Water Conveyance Group	Dave Edwards, Manager	445-2750 445-6490
68170	Estimating, Specifications, and Construction Management Group	Bob Baumgarten, Manager	445-3076 445-6475
68180	Materials Engineering and Research Laboratory Group	Bill Kepler, Manager	445-2386 445-6341
86-68200	Water and Environmental Resources Division	Craig Albertsen, Division Chief	445-2267 445-6379
68210	Water Resources Planning and Operations Group	Joe Lyons, Manager	445-2531 720-544-0266
68220	Environmental Applications and Research Group	G. Chris Holdren, Manager	445-2178 445-6328
68240	Sedimentation and River Hydraulics Group	Tim Randle, Manager	445-2557 445-6351
68250	Flood Hydrology and Meteorology Group	Dave Fisher, Manager	445-2542 445-6351
68270	Economics and Resource Planning Group	Rick Vinton, Manager	445-2738 445-6380
68290	Fisheries and Wildlife Resources Group	Steve Hiebert, Manager	445-2206 445-6328
86-68300	Geotechnical Services Division	Karen Knight, Division Chief	445-3044 445-6472
68311	Embankment Dams & Geotechnical Engineering Group 1	Bob Dewey, Manager	445-2976 445-6472
68312	Embankment Dams & Geotechnical Engineering Group 2	Chuck Redlinger, Manager	445-2768 445-6472
68313	Embankment Dams & Geotechnical Engineering Group 3	Dan Osmun, Manager	445-2980 445-6472
68320	Engineering Geology, Geophysics, & Seismotectonics Group	Lloyd Crutchfield, Manager	445-3074 445-6507
68321	Geophysics and Seismotectonics	Jerry Wright, Manager	445-3161 445-6507
68323	Yucca Mountain Mapping Group	Steve Beason, Supervisor	702-295-4088 702-295-2626
68360	Instrumentation and Inspections Group	DeWayne Campbell, Manager	445-3036 445-6472
68361	Geotechnical Computer and Technical Support	Elizabeth Ouellette, Manager	445-3036 445-6473
86-68400	Infrastructure Services Division	Mark Boyle, Division Chief	445-2828 445-6468
68410	Mechanical Equipment Group	Dave Hulse, Manager	445-2881 445-6469
68420	Hydraulic Equipment Group	Dan Drake, Manager	445-2874 445-6469
68430	Electrical Design Group	George Girgis, Manager	445-2310 445-6420
68440	Hydropower Technical Services Group	Jim Zeiger, Manager	445-2850 445-6468
68450	Hydraulic Investigations and Laboratory Services Group	Cliff Pugh, Manager	445-2151 445-6324

86-68000

Technical Service Center

Technical Service Center	303-445-2720
86-68100 Civil Engineering Services Division Lowell Pimley, Division Chief	303-445-3111
86-68200 Water and Environmental Resources Division Craig Albertsen, Division Chief	303-445-2267
86-68300 Geotechnical Services Division Karen Knight, Division Chief	303-445-3044
86-68400 Infrastructure Service Division Mark Boyle, Division Chief	303-445-2828
86-68010 Client Support and Technical Presentations Office Christi Young	303-445-2561
TSC Business Manager Tom Luebke	303-445-2600
Client Liaisons and Budget Support Staff (see page 6)	
TSC Environmental, Health, and Safety Officer Andrew Montano, (86-68220)	303-445-2219

86-68000 Technical Service Center

The Technical Service Center (TSC) provides Reclamation wide and Interior Department wide scientific, applied research, and engineering services related to water resources management support; and provides technical support for broad areas of water and power resources management, including geotechnical engineering, dam safety, civil engineering, environmental engineering, mechanical and electrical engineering, social and environmental science, and laboratory services.

86-68010 Client Support and Technical Presentations Office Christi Young

This office provides a variety of support services to the TSC and its clients.

TSC Business Manager Tom Luebke

The Business Manager advises management on business strategies and tactics necessary for the successful operation of the TSC. Key aspects of TSC business include operating costs, billing rates, markets, staffing, outsourcing, and project delivery. Performance measures are developed, monitored, and reported on a real-time basis to aid individual managers in the implementation of the annual TSC business plan.

Client Liaisons

Client Liaisons coordinate workflow activities between the TSC and its clients. They are the primary points of contact for initiating work within multiple technical groups. Client Liaisons are involved in the following activities:

- Facilitating communication between clients and TSC teams
- Verifying product quality and client satisfaction
- Identifying the technical groups needed to perform the work
- Developing service agreements
- Monitoring schedules and budgets for ongoing work
- Distributing monthly management reports to clients and TSC team leaders
- Coordinating administrative functions such as establishing charge numbers

Budget and Program Analysts

Budget and Program Analysts assist client liaisons in the above activities and provide budget support to TSC team leaders.

Client Support Staff and Areas Represented

Client Liaison	Client	Budget Support	
Roger Burnett, (86-68210) 303-445-2508	Great Plains Region	Jacque Wright (86-68010) 303-445-2604	
Scott Irvine (86-68120) 303-445-2253	Lower Colorado Region	Marlene Johnson (86-68010) 303-445-2117	
Dan Maag (86-68170) 303-445-3084	Mid-Pacific Region	Janice Carson (86-68010) 303-445-3446	
Joe Lyons (86-68210) 303-445-2531	Pacific Northwest Region		
Chuck Borda (86-68270) 303-445-2728	Upper Colorado Region	Marlene Johnson (86-68010) 303-445-2117	
Bill Bouley (86-68360) 303-445-2754	International Affairs and Native American Affairs		
Gay Ann Martinez (86-68010) 303-445-3006	P&A (Policy and Administration; includes Manuals and Standards)		
	S&T (Science and Technology)		Janice Carson (86-68010) 303-445-3446
	PPS (Policy and Program Services)		Dianne Parson (86-68010) 303-445-2302
	Reclamation Other (Technical Resources, MSO, WO, HRO, etc.)		
Tom Luebke (86-68010) 303-445-2600	Other Government Agency (OGA) and Non-Reclamation Clients		
	SSLE, SEED/SOD, BIA, Dam Safety, and K88 (TSC Working Capital Fund)	Jacque Wright (86-68010) 303-445-2604	
Tim Tochtrop (86-68312) 303-445-2990	NPS Dam Safety	Dianne Parson (86-68010) 303-445-2302	

TSC Environmental, Health, and Safety Officer Andrew Montano (86-68220)

This officer coordinates hazardous material disposal, medical surveillance, and environmental, industrial hygiene, occupational health, and safety services to meet Federal, State, and local government regulations.

Technical Presentations

The technical presentations staff includes technical writers, editors, illustrators, and editorial assistants with extensive publications experience, varied technical backgrounds, and a broad knowledge of Reclamation policies, procedures, and projects. They are experts in Reclamation's Visual Identity requirements. Services and products provided by these staff members include:

- Technical reports
- Environmental Impact Statements and other environmental documents
- Manuals and handbooks
- Journal articles and proceedings
- Presentations and speeches
- Web page design and modification
- Exhibits and interpretive text
- Brochures
- Policy, instructional, and other non-technical documents
- CD mastering and duplication
- Video editing and reformatting
- Multimedia enhancements
- Conversion of hardcopy documents into electronic formats
- Creation of documents using optical character recognition (OCR) applications
- Electronic graphic presentations
- Visual graphics for meetings, conferences, displays, litigation cases, and other purposes

86-68100

Civil Engineering Services Division

Lowell Pimley, Division Chief

303-445-3111

86-68110 Structural Analysis Group

John Baals

303-445-3222

86-68120 Plant Structures Group

Dick LaFond

303-445-3226

86-68130 Waterways and Concrete Dams Group

John LaBoon

303-445-3235

86-69140 Water Conveyance Group

Dave Edwards

303-445-2750

**86-68170 Estimating, Specifications, and Construction Management
Group**

Bob Baumgarten

303-445-3076

86-68171 Ronan, Montana

406-676-2600

86-68172 Butte, Montana

406-491-1933

86-68180 Materials Engineering and Research Laboratory Group

William Kepler

303-445-2386

86-68110 Structural Analysis Group
John Baals

This group provides structural engineering specialists for the design and analysis of new and existing concrete arch, multiple arch, gravity and buttress dams, powerplants, pumping plants, and other buildings and structures.

The Structural Analysis Group has experience in structures designed and constructed using mass, roller- compacted, reinforced, post-tensioned, and prestressed concrete, steel, timber, and masonry materials. Group expertise includes:

- Seismic performance evaluations of structures
- Finite element analyses
- Nonlinear dynamic analysis of dams, appurtenances, and buildings
- Seismic modification designs of dams, appurtenances, and buildings
- Seismic risk analyses

86-68120 Plant Structures Group
Dick LaFond

This group of structural and environmental engineers, architects, landscape architects, and technicians provides a wide array of services including:

- Project management and planning – appraisal, feasibility, and final design.
- Building and site layouts and design. Expertise includes powerplants, pumping plants, water and wastewater treatment facilities, visitor centers, and office buildings.
- Analysis and design of reinforced concrete, precast/prestressed concrete, masonry, structural steel, miscellaneous metalwork, and timber structures.
- Analysis and design of conventional and advanced water, wastewater, and hazardous waste treatment systems, including membrane purification and concentrate management applications.
- Analysis, design, and testing of pilot and demonstration-scale water treatment plants.
- Conservation and water reuse and recycling program planning.
- Rural water planning and planning designs for municipal, rural, and industrial (MR&I) systems.
- Civil and structural design of switchyards and substations.

- Recreation site development.
 - Wetlands site landscape design.
 - Structural evaluation of existing facilities.
 - Evaluation, design, and retrofit of water treatment systems for compliance with the Safe Drinking Water Act (SDWA) and Clean Water Act (CWA).
 - Evaluation, design, and retrofit of buildings and recreation facilities for accessibility compliance in accordance with guidelines established by the Architectural Barriers Act (ABA) and Americans with Disabilities Act (ADA).
 - Evaluation, design, and retrofit of buildings for life safety compliance in accordance with the National Fire Protection Code (NFPA 101 – Life Safety Code).
 - Technical assistance for contract development and administration, including statements of work, evaluation of proposals, and oversight as Contracting Officer’s Technical Representative (COTR).
-

86-68130 Waterways and Concrete Dams Group
John LaBoon

This group specializes in structural and hydraulic analyses, evaluations, and designs of appurtenant structures (such as spillways and outlet works) for both concrete and embankment dams. In addition, the group works in concert with the Structural Analysis Group when designing or evaluating new and existing concrete dams. Typical structures analyzed, evaluated, or designed are composed of mass concrete, roller-compacted concrete, and reinforced concrete. The group analyzes, evaluates, and designs new structures and rehabilitates, removes, replaces, and upgrades existing structures.

The Waterways and Concrete Dams Group has the expertise to effectively undertake and complete technical work, ranging from long-term, complex activities to quick-turn-around activities. A large portion of the group's experience relates to safety of dams modifications to existing structures that are evaluated, analyzed, designed, and constructed in a risk framework.

86-68140 Water Conveyance Group
Dave Edwards

This group provides engineering services for design and analysis of water conveyance systems, river improvements, and roads and bridges. The Water Conveyance Group performs work on:

- Irrigation and power canals and associated structures
- Transmission pipelines, pipe distribution systems, and pipeline control systems
- Tunnels, underground chambers, and shafts for all purposes
- Fish facilities (screens, ladders, and lifts)
- Hydraulic transient analysis (open channel and closed conduit)
- Water diversion structures
- Wetlands water conveyance features
- Bridge design

The Water Conveyance Group also provides engineering support for inspection and rehabilitation of existing facilities, including open channels, canal automation and control systems, roads, bridges, tunnels, underground structures, diversion dams, and pipelines.

In concert with diverse professional disciplines from the TSC and other Reclamation offices, the group provides planning engineering services to integrate physical resources and environmental intangibles into viable alternative solutions.

**86-68170 Estimating, Specifications, and Construction
Management Group
Bob Baumgarten**

This group provides numerous distinct areas of services from project conception through design and construction to project close-out. The group prepares Independent Government Cost Estimates (IGCE) at the appraisal, feasibility, percent design, prevalidation, engineers estimate, and contract modification levels. Services include preparing or reviewing detailed cost estimates, providing support for negotiated procurement, and analyzing bids and proposals. The group tracks cost indexes, which provide a rapid means of determining the current cost of construction of various properties based on previous estimates.

Maintains selected guide specifications and coordinates, prepares, and reviews specifications for a variety of purposes:

- To maintain, rehabilitate, and improve water conveyance systems infrastructure, powerplant and pumping plant structures, substations, and switchyards
- To modify embankment dams and concrete dams for safety; to rehabilitate and improve roads and bridges
- To clean up hazardous waste sites; and for plants and architectural buildings

Coordinates and manages Reclamation's Value Engineering/Value Analysis (VE/VA) Program in support of design and construction. Where appropriate, the group promotes the use of VE/VA to serve as a management tool, to ensure realistic budgets, to identify and remove nonessential capital and operating costs, and to improve and maintain optimum quality of program and acquisition functions. Value Program staff provide training to Reclamation staff who carry out VE/VA operations, lead VE studies, and provide consultation. Provide facilitation services for Group Objectives and Logistics (GOAL) and Project Alternative Solutions Study (PASS). These services help quantify user input, develop viable alternatives, and resolve conflicts for the complex situations.

The group provides a full range of construction management type services and support for design activities. Construction/PMP/ project administration, and environmental experts provide specific activities including:

- Constructability and specifications reviews
- Construction scheduling, tracking, and time impact analyses
- Contract dispute analysis and claims resolution
- Developing and monitoring detailed workplans, budgets, contract correspondence and reviewing contractor' submittals
- Interagency support for BIA, NPS, FWS, and EPA
- Project Management/Earned Value Analysis

**86-68180 Materials Engineering and Research
 Laboratory Group
 Bill Kepler**

This group provides specialized expertise on all of the engineering materials used to build Reclamation facilities. It provides a wide variety of services and assistance related to the testing, evaluation of engineering materials. The Materials Engineering and Research Laboratory Group is divided into seven teams that work in different areas:

- Corrosion Technology team—designs and specifies corrosion monitoring and cathodic protection systems. In addition, they evaluate existing cathodic protection systems, and investigates corrosion problems.
- Coatings Technology team—prepares specifications and review submittals pertaining to paints and coatings. They also conduct applied research to evaluate proposed coatings systems. This team also provides technical and troubleshooting assistance related to paints and protective coatings.

- Geosynthetics Technology team—conducts applied research to evaluate new, improved, or conventional materials and methodologies to effect more economical construction, less frequent maintenance, and new rep air or design approaches. This team also provides technical and troubleshooting expertise related to the proper use of geosynthetic/polymeric materials (sealants, waterstops, roofing, gaskets, and plastic pipe).
- Concrete Technology team—evaluates and tests concrete and concrete making materials, prepares and reviews specifications, and provides concrete mixture proportions for unusual design or construction requirements. It also provides concrete technology training, supplies inspection and calibration services, and assists with procurement of unique testing equipment.
- Concrete Repair team—provides guidance and technical advice in failure analysis, condition assessment, maintenance, repair, rehabilitation, and preservation of concrete infrastructure
- Rock and Soil Testing team—tests and evaluates the physical properties of rock and soils
- Structural Testing and Evaluation team—provides unique testing capabilities for the evaluation of concrete and steel. Capabilities include, dynamic loading, non-linear loading, biaxial, triaxial, and shear loading. Testing of unique structures, field dynamic loading, and nondestructive testing capabilities.

Standard and customized testing is available in the areas listed above. Special equipment includes a 5-million-pound universal large-scale testing machine, a vibration laboratory, and walk-in environmental and adiabatic test chambers.

86-68200

Water and Environmental Resources Division

Craig Albertsen, Division Chief

303-445-2526

86-68210 Water Resources Planning and Operations Support Group

Joe Lyons

303-445-2531

86-68211 Remote Sensing and Geographic Information Team

86-68220 Environmental Applications and Research Group

Chris Holdren

303-445-2178

86-68221 Water Treatment Engineering Research Team

86-68240 Sedimentation and River Hydraulics Group

Tim Randle

303-445-2557

86-68250 Flood Hydrology and Meteorology Group

Dave Fisher

303-445-2542

86-68270 Economics and Resource Planning Group

Rick Vinton

303-445-2738

86-68290 Fisheries and Wildlife Resources Group

Steve Hiebert

303-445-2206

86-68210 Water Resources Planning and Operations Support Group
Joe Lyons

This group provides hydrologic engineering technical services to decisionmakers on water resources planning and management, reservoir and river system operations, water supply issues, surface water and groundwater uses, hydrological watershed analysis, watershed hydrology, water conservation planning, water and land resources development and suitability assessments.

The professional staff includes hydraulic engineers, hydrologists, agricultural engineers, environmental engineers, geologists, physical scientists, and engineering technicians.

The Water Resources Planning and Operations Support Group also develops and applies innovative methods for water resource investigations, including advanced development and application of water resource computer modeling systems, analysis tools, and integrated data management systems.

Specific areas of technical expertise include:

- Technical team leadership and/or participation in complex water resources investigations and feasibility studies.
- Studies of stream flow and aquifer conditions to determine natural flows, consumptive uses, influences of changing watershed conditions on runoff, water quality, and aquifer recharge.
- Modeling tools and decision support for integrated operations of river systems, multipurpose reservoirs, water delivery and return flows, and conjunctive surface and groundwater use.
- Evaluating beneficial and consumptive uses of water for agricultural, domestic, commercial, industrial, hydropower, environmental, recreational and other purposes.
- Analysis of availability and dependability of water supplies for meeting historical, present and future water demands including uncertainty and risk analysis.
- Utilization of advanced mathematical techniques such as stochastic hydrology and optimization for managing water resources and analysis of improved water operations to conserve water supplies and manage water more efficiently to meet competing demands.
- Evaluation, quality assurance, and enhancements of hydrological databases including measure and natural streamflow, water uses and demands, precipitation and evaporation evapotranspiration.

- Technical assistance for design, construction, operations and maintenance of wells, well fields, subsurface irrigation drainage, dewatering, and infiltration systems.
- Conducting drainage investigations, canal seepage testing, and analysis to assess infiltration seepage losses, drainage systems, groundwater flow, and quality.
- Conducting water supply and use investigations for National Environmental Policy Act (NEPA) compliance to support construction, operation, and maintenance planning activities.
- Laboratory analyses on soil and sediment for land resource and watershed investigations including chemical and physical properties, particle size distribution, and leachate trace element.
- Investigating soil, water, and plant interactions and compatibility on lands experiencing crop production problems, salinity control measures, and for revegetation studies.
- Providing Reclamation-wide technical guidance and standards for hydrologic information, supply and utilization, surface water/groundwater studies, land resources, irrigation suitability and drainage investigation.
- Providing technical training on request for Reclamation staff and stakeholders.
- Conducting applied research and technology advancement in the areas of water resources planning and operations.
- Providing support to Native American water right negotiations.
- Evaluating opportunities for improved water delivery and water use efficiency in water conservation planning activities.

Remote Sensing and Geographic Information Team

86-68211 Mike Pucherelli, Team Leader

This group designs and compiles tabular and graphic spatial databases. Basic data are gathered using existing maps, aerial photography, airborne videography, satellite imagery, and Global Positioning Systems (GPS). Information can then be extracted from these data using the analytic capabilities of geographic information systems (GIS).

A short list of applications for remote sensing and GIS available from the Remote Sensing and Geographic Information Group includes:

- Resource inventories
- Lake limnology
- Endangered fish habitat studies
- Water spreading
- Environmental change detection

Other services provided include high resolution scanning, plotting maps/drawings, and GIS and remote sensing training.

86-68220 Environmental Applications and Research Group

G. Chris Holdren

This group uses applied research to examine the interrelationships between the environment and regulated aquatic systems. Studies and research conducted by the group help Reclamation staff, stakeholders, and cooperators understand environmental conditions and issues, develop measures to protect and enhance water quality, and adopt solutions to improve water deliveries. The group designs wetlands for water treatment and wildlife habitat, provides techniques to control the spread of invasive species, and provides recommendations on reservoir management techniques to maintain or enhance water deliveries.

The Environmental Applications and Research Group's specialized expertise includes:

- Aquatic ecology
- Aquatic plant management
- Bioassessment
- Environmental chemistry
- Invasive species management
- Reservoir management
- Terrestrial, riparian, and aquatic plant ecology and management
- Water quality
- Wetlands construction and management
- Characterizing substances in soil, sediment, and water to assess regulatory standards and criteria, and planning investigations for aquatic, wetland, and riparian restoration, point source controls, non-point best management practices (BMPs), and watershed loading (TMDL) plans.
- Developing and adapting numerical, statistical, chemical, and hydrodynamic models to evaluate water quality in reservoirs, rivers, other aquatic systems and for drainage analysis.

The Environmental Applications and Research Group's specialized resources and equipment include biological laboratories, a greenhouse, environmental chambers for plant and aquatic weed studies, boats, and extensive field monitoring and collection equipment.

Water Treatment Engineering Research Team

86-68221

M. Kevin Price, Team Leader

This team researches and designs desalination, water treatment, and wastewater treatment systems. These systems remediate water containing hazardous chemicals and compounds to meet current requirements, including the Safe Drinking Water Act, Clean Water Act, and quality requirements for water reuse or discharge. The group's work includes researching pretreatment biocides for membrane storage, membrane cleaning, methods for reducing fouling, and reducing operation and maintenance costs. Research contracts with universities and private industry are managed to cost share research studies and testing projects.

The Water Treatment Engineering Research Team's services include:

- Advanced treatment workshops on desalination, reuse, concentrate management, and other issues
- Research studies, laboratory testing, and pilot and demonstration testing
- Testing and demonstration of brackish water, seawater, irrigation return flows, produced water, and reclaimed water treatment
- Standards setting
- Technology transfer

The team installs and tests pretreatment systems using a mobile water treatment pilot plant, water treatment and desalting pilot plants, low-grade heat brine disposal systems, salt-gradient solar ponds, and renewable energy-driven pumping and desalting systems.

86-68240 Sedimentation and River Hydraulics Group

Tim Randle

This group conducts studies on how rivers and reservoirs have or will respond to changes in river flow, sediment supply, or channel modification. Studies are prepared for a variety of purposes including operation and maintenance, dam safety, and fish and wildlife habitat restoration. Many studies focus on Reclamation facilities; their physical impact on river channels and endangered species habitat, recreation, wetlands, and cultural resources.

The Sedimentation and River Hydraulics Group assists in planning effective water and sediment management programs including:

- Reservoir sedimentation surveys;
- Sediment management studies for rivers, reservoirs, and structures;
- Flood inundation mapping and emergency planning;

- Reservoir and river channel surveys;
- GIS and data analysis;
- Geomorphic analysis;
- Research and development:
 - Numerical model development,
 - River channel process investigations, and
 - River structure design criteria;
- Numerical Modeling (1D, 2D, and 3D):
 - River and floodplain hydraulics,
 - Sediment transport,
 - Channel migration, and
 - Vegetation and habitat;
- Environmental impact analysis; and
- Dam safety and loss of life analysis.

See our Web site for more information at <<http://www.usbr.gov/pmts/sediment/>>

Sediment impact studies of rivers and reservoirs link changes in stream flow and sediment supply to processes controlling changes in channel shape and bank erosion. Applied research and customized investigations range from simple technical advice to in-depth, multi-year studies integrating diverse disciplines.

Investigations focus on the hydraulic and sediment impacts to fish and wildlife habitat, recreation, wetlands, or cultural resources and can incorporate assessment, planning, and design of water resource facilities. Staff participate in interdisciplinary and interagency teams in evaluating ecological systems and providing input for environmental impact statements and assessments.

Dam break and flood inundation studies are used for emergency planning, hazard classification, and guidance in selecting risk reduction alternatives for dams. The group has also developed procedures for estimating the loss of life from dam failures.

A wide range of modeling and analysis software tools are applied including an extensive suite developed and maintained in-house. In-house software allows us to customize and optimize numerical models to solve specific problems. Software packages are designed to work together and provide an integrated view of river hydraulic and morphological processes.

86-68250 Flood Hydrology and Meteorology Group
Dave Fisher

This group provides technical investigations, designs, reviews, and related work in flood hydrology, hydrometeorology, paleohydrology, meteorology, and emergency management.

The Flood Hydrology and Emergency Management Group provides information on a range of flood-related hydrology and emergency management including:

- Extreme precipitation and extreme flood event studies up to the probable maximum flood
- Hydrologic input for risk assessments of dams
- Inflow design hydrographs and cross-drainage analyses
- Flood frequency and statistical hydrological analyses
- Early warning system planning, design, installation, and maintenance
- Drought index development and application, hydrometeorology, and hydrology research
- Various other activities associated with flood hydrology
- Conducting fluvial geomorphology studies and paleohydrologic investigations
- Meteorological water analysis and forecasting
- Cloud physics analyses of precipitation processes
- General meteorological studies including field program evaluation and analysis
- NEXRAD precipitation processing application
- Emergency Action Plan (EAP) development
- EAP exercise development and facilitation including orientation, tabletop, functional, and full scale exercises
- Continuity of Operations (COO) Planning and support

The staff provides expertise for the hydrological aspects of Reclamation's Dam Safety Program and services to other Department of the Interior agencies as well. They also develop flood hydrology, hydrometeorology, and dam safety standards and criteria and coordinate these with other Federal agencies. General meteorological studies are also performed. Emergency Management activities from planning to operations including policy development/support are also conducted.

86-68270 Economics and Resource Planning Group
Rick Vinton

This group provides a wide range of expertise in water resource-related planning, economic and financial analyses, recreation, cultural resources, multidisciplinary team management, public involvement, conflict resolution, social analysis, facilitation, and conference planning. It provides a wide range of analyses to assist in decision making for project planning and evaluation. The group also provides studies and other associated services necessary for compliance with the National Environmental Policy Act (NEPA).

The Economics and Resource Planning Group staff consists of a broad range of experts providing the following services:

- Economists who derive benefit-cost analyses for feasibility studies, apply economic models to estimate NEPA impacts in environmental impact statements, compute ability-to-pay of irrigators and rural domestic water users, determine the value of environmental resources such as wetlands and endangered species, determine recreation use benefits, value the costs of hydropower generation changes, evaluate actions affecting Native Americans, prepare project final cost allocations, develop economic standards for land classification, evaluate the economic benefits of improvements in water quality, and provide economic decision making for Safety of Dams Programs.
- Resource managers who manage and facilitate multidisciplinary water resource planning and environmental compliance teams. They prepare environmental impact statements and environmental assessments including needs and key issue identification, alternative formulation, scoping, and scheduling.
- Cultural resources staff that provide expertise in historic, architectural, archeological, and ethnographic resources. Services include comprehensive field surveys; archival research; consultation with the Advisory Council on Historic Preservation and with Tribal and State Historic Preservation Offices; determinations of significance; repository evaluations; *National Register* listings; curation and compliance with the National Historic Preservation Act; historic context statements, and oral histories.
- Recreation specialists who are experienced in the principles, concepts, and methodologies of outdoor recreation planning, management, and administration. This includes recreation master and conceptual planning, interpretive planning and design guidance, NEPA analysis of recreation impacts, recreation needs assessments, and recreation facility design guidance. Recreation specialists also provide expertise in resource management planning and team management.
- Public involvement staff who provide expertise in soliciting public opinion, conflict resolution, consensus building, and issue identification. The group assists in scoping for environmental compliance, and developing and implementing public involvement programs.

- Social analysis staff who evaluate societal changes resulting from proposed or ongoing Reclamation activities. They provide consultation and analyses for NEPA compliance and planning studies, including environmental justice and Indian Trust Assets.

Staff members have successfully conducted numerous conferences of various sizes and complexity. They have the knowledge and capability to manage all aspects of a conference or can customize services to meet specific needs.

The staff also includes agricultural and natural resource economists, all with advanced degrees and many years of experience.

86-68290 Fisheries and Wildlife Resources Group

Steve Hiebert

This group conducts investigations to understand and develop technologies to reduce impacts, sustain, and improve aquatic and terrestrial communities associated with Reclamation's water development facilities and operations. Group member fisheries scientists, wildlife biologists, NEPA specialists, and environmental chemists work together with hydraulic, civil and design engineers to perform studies and projects that provide information for Reclamation to maintain water and power deliveries in an environmentally sound manner.

The Fisheries and Wildlife Resources Group provides specific research and services, including:

- Investigating fishery and avian interactions with Reclamation operations and facilities
- Evaluating habitat needs, use, and upstream-downstream movements for native and rare bird and fish species
- Assessing and assisting in designing fish protection technology (fishways, fish louvers, crowders, and screens)
- Evaluating new fish screening technology and other fish protection methods for irrigation canal diversions.
- Performing NEPA process and documentation: Environmental Impact Statements, Environmental Assessments, Categorical Exclusions, Section 7 ESA Consultation
- Determining methods for separating and removing debris, invasive species (including exotic mitten crabs), and other unwanted materials from fish at protection facilities
- Aquaculture of fish for live evaluation testing in hydraulic models
- Developing a fish friendly pumping technology for water diversions

- Performing environmental chemistry studies and interpretations
- Testing, validating, and designing environmental, biological, and fisheries computer models

The group's specialized resources include boats (electrofishing, inflatable, survey), DIDSON (Dual Frequency Identification Sonar) underwater imaging system, hydroacoustic survey gear; avian, herpetological, and fisheries biotelemetry systems, fish and bird sampling equipment, water quality probes, laboratory research equipment, and aquaculture facilities.

86-68300

Geotechnical Services Division

Karen Knight, Division Chief

303-445-3044

86-68311 Embankment Dams and Geotechnical Engineering Group 1
Bob Dewey

303-445-2976

86-68312 Embankment Dams and Geotechnical Engineering Group 2
Chuck Redlinger

303-445-2768

86-68313 Embankment Dams and Geotechnical Engineering Group 3
Dan Osmun

303-445-2980

**86-68320 Engineering Geology, Geophysics, and Seismotectonics
Group**

Geology
Lloyd Crutchfield

303-445-3074

86-68321 Geophysics and Seismotectonics
Jerry Wright

303-445-3161

86-68323 Yucca Mountain Support
Steve Beason

702-295-4088

86-68360 Instrumentation and Inspections Group
DeWayne Campbell

303-445-3052

86-68361 Geotechnical Computer and Technical Support
Elizabeth Ouellette

303-445-3036

Embankment Dams and Geotechnical Engineering Groups

86-68311 Group 1 – Bob Dewey

86-68312 Group 2 – Chuck Redlinger

86-68313 Group 3 – Dan Osmun

These highly experienced groups provide cost-effective geotechnical studies and analyses for embankment dams and a wide range of other water resource and environmental mitigation projects. The groups are substantially involved in the support of Reclamation's Dam Safety Program. The groups perform dam safety evaluations, including probabilistic risk analysis, for over 300 high and significant hazard embankment dams in Reclamation's current inventory, many of which are over 50 years old. The groups also provide design support services for dam safety modifications to Reclamation and other agency dams resulting from these and other agencies dam evaluations. The groups provide experienced team leaders to lead multidisciplinary technical teams actively engaged in the support of Reclamation's mission as well as those at other Federal agencies and tribal authorities.

The Geotechnical Engineering Groups' projects include:

- Embankment dams and foundations (geotechnical analysis and design of new and modifications to existing dams, construction support services, dam safety evaluations including probabilistic risk analysis, and security evaluations)
- Embankment dam risk analysis
- Emergency incident response
- Geotechnical analysis and design for concrete dams, pumping plants, powerplants, and other civil structures, canals, pipelines, and related features
- Environmental restoration of mining and other hazardous waste sites
- Natural soil and rock slope, including landslide, stability analysis and improvement
- Underground excavations, rock slopes, landslides, and other projects requiring the application of rock mechanics

The highly experienced geotechnical engineering staff also has specialized expertise in the areas of static and dynamic (earthquake loading) stability analyses of embankments and natural slopes; numerical modeling of structures and foundations; groundwater, dewatering, and seepage analyses related to structures; geosynthetics design; security-related evaluations; applied rock mechanics for foundations, slopes, and tunnels.

86-68320 Engineering Geology, Geophysics, and Seismotectonics Group

Geology

Lloyd Crutchfield

This group leads planning, executing, and coordinating geologic site characterization activities, evaluates, and portrays geological and geotechnical conditions. Geologic services are integrated with seismotectonic and geophysical studies.

The Engineering Geology Group provides a range of services, including:

- Field mapping and subsurface exploration and sampling
- Close-range stereographic geologic mapping
- Computer-aided design (CAD) and Computer-aided design and drafting (CADD) three-dimensional modeling using GIS, GPS, and related databases for subsurface conditions, pollutants, and other physical data
- Geologic interpretations for planning, design, and specifications
- Foundation mapping and approval during construction
- Geologic analyses for rock mechanics issues, blasting and grouting programs, foundations, borrow investigations, seepage studies, dewatering systems, and environmental restoration

The Engineering Geology Group's investigation and analysis expertise includes dams; water conveyances; bridge, building, and plant foundations; excavation stability; landslide studies; and characterizing sites for hazardous and toxic wastes. The group has broad expertise in technical project management.

Geophysics and Seismotectonics

86-68321 Jerry Wright

This group provides specialized geological, geomorphological, seismological, and geophysical expertise for site-specific and regional earthquake and geomorphology studies, Quaternary geology, and engineering geophysics.

Information and services that the Seismotectonics and Geophysics Group provides include:

- Natural hazards for risk analysis through probabilistic earthquake hazard studies

- Numerical and statistical analysis and modeling, including software for flood-frequency analysis, two- and three-dimensional flow modeling, ground motion synthesis, and seismic tomography
- Earthquake loadings, including site-specific ground motions and response spectra
- Probabilistic risk analyses for dam safety and design evaluations
- Seismic monitoring of Reclamation facilities for real-time structural response information for post-earthquake assessment and emergency notification
- Paleoseismic investigations to define earthquake hazards
- Geomorphology, geomorphological processes, and Quaternary history for stream evaluation and restoration, site characterization, environmental impact, and other investigations
- Complete geophysical site characterization services including data acquisition, processing, analysis, and integration with borehole and other geologic and hydrologic information
- Surface, borehole, cross-hole, and surface-to-borehole geophysical surveys to determine a wide range of subsurface physical properties and conditions, including centimeter-level global positioning system surveys in support of scientific and engineering investigations

The group directly operates regional seismic networks in the Western United States and maintains an extensive network of digital and analog strong-motion recorders.

Yucca Mountain Support

86-68323 Steve Beason

The Yucca Mountain Support Group is located in Las Vegas, Nevada. This group provides engineering geologic services to the Department of Energy (DOE) and U.S. Geological Survey (USGS) for characterization of Yucca Mountain to determine the suitability of long-term storage of spent nuclear fuel and high-level radioactive wastes. The group also provides data and input into geology-related issues of the repository design being conducted by DOE's management and operations contractor.

The Yucca Mountain Mapping Group's services include:

- Full-peripheral geologic mapping
- Stereographic photography
- Consolidated sampling
- Detailed line surveys
- Geotechnical, geologic, and engineering geology investigations
- Data presentations
- Foundation investigations

The group is now working with USGS scientists to produce a report summarizing the fracture and lithophysical characteristics of the repository host horizon. The paper will summarize the results of 15+ years of detailed structural and lithostratigraphic studies at Yucca Mountain in preparation for DOE's license application for the nation's first high-level, nuclear-waste storage facility.

86-68360 Instrumentation and Inspections Group

Dewayne Campbell

This group provides a wide range of instrumentation and inspection-related services for dams and other facilities.

Instrumentation-related services include:

- Routine dam performance monitoring:
 - Reviewing data for validity and performance anomalies
 - Troubleshooting questionable data to assure accurate information
 - Maintaining a database of visual and instrumental monitoring information
 - Reporting and presenting routine data results
- Periodic in-depth analyses of monitoring results, including dam safety analyses
 - Participating in the failure mode analysis/performance parameter process
 - Participating in comprehensive facility reviews
- Instrumentation design:
 - Determining the type, number, location, and reading frequency of instruments required
 - Preparing drawings and specifications for procuring, installing, maintaining, and repairing instrumentation systems
 - Designing automated data collection and transmission systems for both short and long term monitoring
- Field assistance including:
 - Calibrating, installing, and inspecting instrument systems
 - Providing guidance on field installation techniques
 - Maintaining lab facilities for instrument repair, testing, calibration, and assembly
 - Troubleshooting and consulting on special problems
 - Providing training on instrumentation matters

The group's engineers and technicians have extensive experience in designing, installing, and monitoring over 70 types of instruments used to provide information in categories such as water pressure, earth/total pressure and load, deformations (internal and surface), temperature, and seepage quantity and quality. The group also has expertise developing monitoring systems for special purposes and unique applications.

Inspections-related services include:

- Registered professional engineers performing a variety of activities, including:
 - Coordinating and performing dam safety and operation and maintenance (O&M) inspections of Reclamation dams as a part of the Comprehensive Facility Review Program, and inspections for other Department of the Interior and other agency dams upon request
 - Participating in transfer inspections of facilities from construction to O&M status
 - Performing preliminary hazard classifications and hazard reassessments of low- and significant- hazard dams
 - Providing technical advice and assistance on O&M items
 - Updating the Technical Priority Ratings of all Department of the Interior dams
- Coordinating and providing training to Reclamation staff and others, including:
 - Annual Safety Evaluation of Existing Dams (SEED) seminars for Federal, State, and private personnel, and biennial seminars for international personnel
 - Onsite O&M training for dam tenders, operating personnel, and water systems managers
 - Client-tailored onsite dam safety and emergency management training programs domestically and abroad

The group also provides data and document management services, including:

- Development and maintenance of the Dam Safety Information System (DSIS) and the Dam Safety Document Management System (DSDaMS) databases
- Maintenance and updating of the official record copies of Standing Operating Procedures and Designer's Operating Criteria
- Development and maintenance of O&M technical standards, bulletins, and guidelines
- Maintenance of other dam safety and O&M files and databases of information, including landslide surveillance data and O&M cost trends

Geotechnical Computer and Technical Support

86-68361 Elizabeth Ouellette

This group provides technical and computer services and support to the geotechnical, geological, geophysical, and instrumentation and inspections groups in the Geotechnical Services Division and to other clients throughout Reclamation.

The Geotechnical Computer and Technical Support Group is integrated with the Geotechnical Services groups to support a wide variety of activities including:

- Two- and three-dimensional analyses for design representations
- Computer aided design and drafting (CADD)
- Three-dimensional terrain modeling of surface and subsurface features and properties
- Contouring surfaces and developing surfaces and presentation of alignments, profiles, and cross sections
- Global Positioning Systems (GPS) surveys and map creation
- Image processing
- Slope stability analysis

The group's staff members include highly trained technicians and scientists with significant experience in the geotechnical, geological, and geophysical fields.

86-68400

Infrastructure Services Division

Mark W. Boyle, Division Chief

303-445-2828

86-68410 Mechanical Equipment Group
Dave Hulse

303-445-2881

86-68420 Hydraulic Equipment Group
Dan Drake

303-445-2874

86-68430 Electrical Design Group
George Girgis

303-445-2310

86-68440 Hydropower Technical Services Group
Jim Zeiger

303-445-2850

86-68460 Hydraulic Investigations and Laboratory Services Group
Cliff Pugh

303-445-2151

86-68410 Mechanical Equipment Group

Dave Hulse

This group provides engineering services for mechanical equipment and systems related to new and existing dams, powerplants, pumping plants, fish handling facilities, water conveyance structures, and other building facilities. They also provide factory inspection and equipment installation expertise; operation and maintenance support, finite element studies; and produce technical manuals and standard operating procedures (SOP).

Systems and equipment that the Mechanical Equipment Group designs and services include:

- Compressed air, cooling water, service water, oil lubrication, fire suppression, gravity drainage, heating, ventilating, air conditioning, and building plumbing systems
- Cranes and hoists
- Engine generators
- Trashrakes, conveyors, and traveling water screens
- Fish and moss screens and fish handling equipment
- Water temperature control devices and selective withdrawal systems
- Water flow meters and temperature sensors
- Stoplogs, draft tube gates, and bulkhead gates

Mechanical operation and maintenance (O&M) support and program services are provided in coordination with the Power Resources Office. These include Facilities Instructions, Standards, and Techniques (FIST) volumes, Power Equipment Bulletins (PEBs), power O&M reviews and incident investigations, technical advice and assistance, training, unit alignment and balancing, mechanical speed governor adjustment, unit vibration testing and analysis, welding procedure analysis, penstock inspection program management, penstock guard gate and valve testing program management, pressure vessel inspection, and underwater inspection services using a remote-controlled vehicle.

86-68420 Hydraulic Equipment Group

Dan Drake

This group provides mechanical engineering services for water delivery equipment. Engineering services include budget estimating, design, and specifications writing, as well as equipment installation and field assistance.

The Hydraulic Equipment Group's services include engineering analysis and design for:

- Hydraulic transients in power system waterways including stress analysis
- General stress analysis for large gates, turbine/pumps, and other equipment
- Equipment life analysis using field test data, fatigue analysis, and fracture mechanics
- Onsite testing for pumps and turbines during new equipment startups
- Performance testing for pumps and turbines to confirm warranted characteristics

The staff works on a variety of equipment including pumps, hydroelectric turbines, pump-turbines, and turbine governors; large custom-designed gates and commercial slide gates; sleeve, hollow-jet, and butterfly valves; and steel penstocks.

86-68430 Electrical Design Group

George Girgis

This group provides designs, drawings, technical specifications, and construction/installation support for electrical equipment and systems.

The Electrical Design Group's electrical engineering services include:

- Generator rewind/uprates
- Neutral grounding transformers
- Power transformers
- Power circuit breakers
- Substations, switchyards, switchgear, and station service equipment
- Excitation (voltage regulator) and governor systems
- High and medium voltage cable and bus
- Motor control centers, adjustable speed drives, and reduced voltage starters
- Factory inspection of electrical equipment
- Warranty inspections of generators
- Control system interface
- Wiring checkout, startup, and acceptance testing
- On-site inspection services
- Design Summaries, Designer Operating Criteria, and Standing Operating Procedures
- Support of Reclamation's Western Electricity Coordinating Council control system requirements

The group also provides electrical engineering services for low voltage circuit breakers; station batteries and battery chargers, distribution panelboards; dry type transformers; electrical equipment grounding; instrumentation and annunciation systems; and electrical features of mechanical equipment (such as speed governors, cranes, gates, valves, heating and ventilation, elevators, trash rakes, etc.).

86-68440 Hydropower Technical Services Group

Jim Zeiger

This group performs a wide range of electrical hydropower technical services including onsite technical assistance, diagnostics, troubleshooting, failure investigation, and inspection. It also offers program consultation, training, unique in-house support services, power system studies, and design and installation support for plant Supervisory Control and Data Acquisition (SCADA) systems.

The group's electrical engineering services include:

- Power system modeling (e.g., arc-flash analysis, fault studies, circuit transient, synchronous stability, harmonic system performance, insulation coordination, power flow studies, and facility design rating reviews)
- Protective relay system recommendations and settings
- Protective relay system calibration, functional testing, and commissioning
- SCADA system and Programmable Logic Controller (PLC) system design
- SCADA system evaluation, analysis, software support, and security accreditation
- Plant automation, embedded systems, and efficiency-based water/power control and modeling software
- Technical support for Reclamation's Western Electricity Coordinating Council power reliability requirements
- Machine startup, acceptance, and diagnostic testing
- System staged-fault testing
- Voltage regulator, power system stabilizer, and speed governor tuning
- Equipment and personal protective safety grounding evaluation
- Plant control battery system diagnostics
- In-house electrical/electronics equipment design and fabrication
- Machine condition monitoring
- Life extension
- Development of related training

- Dam safety (e.g., development and evaluation of dam safety tools including emergency spillways, dam-overtopping protection, and rock and alluvium scour)

The engineers and technicians in the Water Resources Research Laboratory (WRRL) work on over 100 projects per year. Some recent projects include model studies to incorporate new valves, which were invented in the WRRL, into Arrowrock Dam outlet works; Tracy Fish Handling and Sorting Facilities model studies; stilling basin abrasion research; and fish passage methods for the endangered Silvery Minnow.

Laboratory Shops

This team constructs and fabricates models and specialized testing equipment to support Reclamation's technology development program and project studies conducted in the TSC.

Laboratory shop products include:

- Custom-designed scale models
- Testing facilities
- Instruments
- Special items

The shops are equipped and staffed for carpentry, pattern making (plastics), machining, welding, instrumentation, electrical work, and other disciplines. The Laboratory Shops are assigned to the Hydraulic Investigations and Laboratory Service Group.

Technical Service Center Subject Matter Areas and Contacts

Subject Matter	Code 86-	Contacts	Number 303-
A			
Ability-to-pay	68270	Rick Vinton	445-2738
Abrasion testing	68180	Bill Kepler	445-2386
Accessibility	68120	Al Bernstein	445-3275
Acid mine drainage	68311	Mike Gobla	445-3032
Activity managers (see resource management)	68270	Rick Vinton	445-2738
Aerial photography	68211	Mike Pucherelli	445-2267
Aggregate quality evaluation	68180	Bill Kepler	445-2386
Aggregate testing	68180	Bill Kepler	445-2386
Agrometeorology	68250	Richard Stodt	445-2474
Alignment, hydroelectric units	68410	Roger Cline	445-2293
Amphibian/reptile	68290	Dave Moore	445-2242
Ancillary service monitoring	68440	Toby Steves	445-3258
Aquaculture systems	68290	Chuck Hueth	445-2183
Aquatic systems research	68220	G. Chris Holdren	445-2178
Aquifer/stream interaction analysis	68210	Jack Cunningham	445-2510
Aquifer tests, characteristics	68210	Bob Talbot	445-2518
Arc flash	68440	Gary Cawthorne	445-2817
Archeologic resources and analysis	68270	Jim Bailey	445-2704
Architectural design	68120	Jim Neumaier	445-3280
As-built drawings	68361	Elizabeth Ouellette	445-3036
AutoCAD (Committee, TSC drawings, records management)	68361	Stu Nitta	445-2979
Automated Data Acquisition Systems	68360	DeWayne Campbell	445-3052
Automation, irrigation	68460	Cliff Pugh	445-2151
Automation, powerplant and generation control	68440	Buford King	445-2318
Avian surveys and research	68290	Darrell Alhers	445-2233
B			
Bank and bed stabilization	68240	Tim Randle	445-2557
Battery testing	68440	Nathan Myers	445-2643
Bioassessments	68220	G. Chris Holdren	445-2178
Bird resources	68290	Dave Moore	445-2242
Brackish water desalination	68221	M. Kevin Price	445-2260
Bridges—Water Conveyance	68140	Jesus Romero	445-3124
Brochures, writing	68010	Peter Martin	445-2588
Budget and schedule monitoring	68010	See specific client area for contact (pages 5-6)	
Building design	68120	Dick LaFond	445-3226
Building Seismic Safety	68110	Tim Brown	445-3709
Bullchase gate, stoplog design	68410	Dave Hulse	445-2881

Subject Matter	Code 86-	Contacts	Number 303-
C			
Cable testing	68440	Eric Eastment	445-2324
CAD, computer-aided design	68361	Stu Nitta	445-2979
CAD, drawings and standardization	68361	Elizabeth Ouellette	445-3036
CAD three-dimensional modeling	68361	Dave Martinez	445-2997
CALSIM optimization system model	68210	Nancy Parker	445-2532
Calibration, instrumentation	68360	DeWayne Campbell	445-3052
Calibration, testing machine	68180	Bill Kepler	445-2386
Canal lining	68180	Bill Kepler	445-2386
Canal seepage testing analyses	68210	Delbert Smith	445-2516
Canal system modeling	68460	Cliff Pugh	445-2151
Canals—Water Conveyance	68140	Steve Robertson	445-3123
Cathodic protection	68180	Bill Kepler	445-2386
CD mastering and duplication	68010	Christi Young	445-2561
Cement testing	68180	Bill Kepler	445-2386
Charge numbers established	68010	See specific client area for contact (pages 5-6)	
Chemical processes	68221	M. Kevin Price	445-2260
Chemistry, data analysis	68220	Kevin Kelly	445-2017
Chemistry for hazardous waste products	68170	Margaret Lake	445-2181
Chemistry, quality assurance	68220	Kevin Kelly	445-2017
Circuit breaker testing	68440	Jim DeHaan	445-2305
Circuit breakers	68440	Shawn Patterson	445-2311
Circuit breaker design	68430	Lisa Gamuciello	445-2835
Civil Engineering Services Division	68100	Lowell Pimley	445-3111
Claims, contract	68170	Nancy Lender	445-3299
Class 3 cultural survey	68270	Jim Bailey	445-2704
Client Liaisons (pages 5-6) Client Support	68010	Christi Young	445-2561
Climate analysis and simulation	68210	Levi Brekke	445-2494
Closed circuit television (CCTV)	68130	Chuck Cooper	445-3262
Coatings and paint	68180	Bill Kepler	445-2386
Coatings School	68180	Bill Kepler	445-2386
Coatings technology	68180	Kurt von Fay	445-2399
Commissioning tests, generators	68440	Jim DeHaan	445-2305
Commissioner's Office client liaison	68010	Gay Ann Martinez	445-3006
Computer modeling, power system generation	68440	Shawn Patterson	445-2311
Computer modeling for water quality	68220	Merlyn Bender	445-2460
Computer models, develop, improve, implement	68210	Don Frevert	445-2473
Computer-aided design (CAD)	68361	Stu Nitta	445-2979
Concession management	68270	Rick Vinton	445-2738
Concrete construction	68180	Bill Kepler	445-2386
Concrete dam foundations	68312	Gregg Scott	445-3233
Concrete dams	68130	John LaBoon	445-3235
Concrete pipe—investigations	68140	Jim Keith	445-3121
Concrete pipe design	68140	Dave Edwards	445-2750
Concrete repair	68180	Bill Kepler	445-2386
Concrete technology	68180	Bill Kepler	445-2386
Cone penetration testing (CPT)	68320	Jeff Farrar	445-2333
Conference planning	68270	Rick Vinton	445-2738
Conjunctive relationships, surface and groundwater	68210	Bob Talbot	445-2518
Conjunctive use opportunities evaluation	68210	Bob Talbot	445-2518
Construction control/materials test - concrete	68180	Bill Kepler	445-2386

Subject Matter	Code 86-	Contacts	Number 303-
Construction control/materials test – earthwork	68180	Bill Kepler	445-2386
Construction control/materials test – rock	68180	Bill Kepler	445-2386
Construction Cost Index	68170	Dan Maag	445-3084
Construction management	68170	Dave Paul	445-3296
Construction support, subsurface drains and wells	68210	Roger Burnett	445-2508
Contract claims consultation services	68170	Nancy Lender	445-3299
Contract schedules	68170	Nancy Lender	445-3299
Control system analysis and testing	68410	J.C. Agee	445-2309
Control system design	68430	Larry Rossi	445-2820
Conveyance systems automation	68140	Dave Edwards	445-3750
Coring	68180	Bill Kepler	445-2386
Corrosion control	68180	Bill Kepler	445-2386
Corrosion School	68180	Bill Kepler	445-2386
Corrosion technology	68180	Bill Kepler	445-2386
Corrugated plastic drain pipe (approval)	68210	Roger Burnett	445-2508
Corrugated plastic drain pipe (testing)	68140	Dave Edwards	445-2750
Cost allocation	68270	Rick Vinton	445-2738
Cost estimates	68170	Dan Maag	445-3084
Cranes and hoists	68410	Dave Hulse	445-2881
Critical path method (CPM) schedules	68170	Nancy Lender	445-3299
Cross-drainage studies	68250	John England	445-2541
Cultural resources	68270	Jim Bailey	445-2704
Cultural survey	68270	Jim Bailey	445-2704
Cutoff wall design	68311	John Cyganiewicz	445-3025
D			
Dam break inundation studies	68240	Wayne Graham	445-2553
Dam instrumentation database	68360	DeWayne Campbell	445-3052
Dam removal design (concrete dams)	68130	Tom Hepler	445-3281
Dam removal design (embankment dams)	68311	Steve Young	445-3043
Dam removal sediment dynamics	68240	Tim Randle	445-2557
Dam safety - Inspections	68360	Chris Danley	445-2755
Dam safety analysis of instrumentation data	68360	DeWayne Campbell	445-3052
Dam safety client liaison	68010	Tom Luebke	445-2600
Dam Safety Document Management System (DSDAMS)	68360	Andrea Martinez	445-2762
Dam Safety Information System (DSIS)	68360	Andrea Martinez	445-2762
Dam safety research, hydraulic models	68460	Tony Wahl	445-2155
Dam safety technical priority rating system	68360	Chris Danley	445-2755
Dam safety training	68360	Chris Danley	445-2755
Dam safety—Reclamation SEED and SOD client liaison	68010	Tom Luebke	445-2600
Dam seepage geochemistry	68220	Kevin Kelly	445-2017
Dam tender training	68360	Bill Bouley	445-2754
Demonstration testing	68221	M. Kevin Price	445-2260
Desalination and Water Purification Research and Development (DWPR) Program	68221	Frank Leitz	445-2255
Desalting pilot plants	68221	M. Kevin Price	445-2260
Desktop publishing and printing	68010	Peter Martin	445-2588
Dewatering construction	68312	Chuck Redlinger	445-2768
Dewatering system study and design	68312	Chuck Redlinger	445-2768
DGA (dissolved gas analysis)	68440	Jill Smith	445-2307
Diversion structures	68140	Steve Robertson	445-3123

Subject Matter	Code 86-	Contacts	Number 303-
Diving Team	68130	Walt Heyder	445-3246
Doble Program	68440	Jill Smith	445-2307
Document conversion	68010	Peter Martin	445-2588
Document preparation and publication	68010	Peter Martin	445-2588
Document scanning, high resolution	68211	Mike Pucherelli	445-2267
Drainage, Ground Water	68210	Roger Burnett	445-2508
Drawing conversions	68361	Elizabeth Ouellette	445-3036
Drawings, technical engineering, specifications, as-built	68361	Elizabeth Ouellette	445-3036
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Dynamic analysis of embankment dams	68313	Dave Gillette	445-2986
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Earth School	68180	Bill Kepler	445-2386
Earthquake loading	68321	Larry Anderson	445-3170
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Editing	68010	Peter Martin	445-2588
Electrical Design Group	68430	George Girgis	445-2310
Electrical equipment component and design selection	68440	Shawn Patterson	445-2311
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Elevators	67410	Dave Hulse	445-2881
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Environmental documents, writing and editing	68010	Peter Martin	445-2588
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Environmental impact assessment	68270	Rick Vinton	445-2738
Environmental hydraulics	68460	Brent Mefford	445-2149
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Environmental modeling	68290	Mark Bowen	445-2222
Environmental research	68220	G. Chris Holdren	445-2267
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Environmental studies	68220	G. Chris Holdren	445-2178
Environmental testing (thermal, humidity)	68180	Bill Kepler	445-2386
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Equipment, mechanical	68410	Dave Hulse	445-2881
Equipment, special for field studies	68320	Jeff Farrar	445-2333
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Estimating, Specifications, and Value Program	68170	Bob Baumgarten	445-3076
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Factory inspection	68170	Nancy Lender	445-3299
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Feasibility studies	68270	Rick Vinton	445-2738
Field exploration (geologic)	68320	Peter Shaffner	445-3152
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Field testing, cathodic protection	68180	Bill Kepler	445-2386
Field testing, coatings and paints	68180	Bill Kepler	445-2386
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Field testing, corrosion	68180	Bill Kepler	445-2386
Field testing, electric power	68440	Jim DeHaan	445-2305
Field testing, geotechnical	68180	Bill Kepler	445-2386
Field testing, hydraulics	68460	Warren Frizell	445-2145
Field testing, soil	68180	Bill Kepler	445-2386
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Financial analyses of projects	68270	Rick Vinton	445-2738
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Fish and moss screens	68410	Dave Hulse	445-2881
Fish evaluations and impacts on operations, compliance	68290	Steve Hiebert	445-2206
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Fish facilities	68140	Dave Edwards	445-2750
Fisheries and Wildlife Resources Group	68290	Steve Hiebert	445-2206
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Flash boundary calculations	68440	Gary Cawthorne	445-2817
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Flowmeters	68410	Dave Hulse	445-2881
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Foundation design	68312	Bill Engemoen	445-2960
Foundation improvement methods	68313	Mark Bliss	445-2988
Foundation material testing and research	68180	Bill Kepler	445-2386
Foundation treatment	68320	Lloyd Crutchfield	445-3074
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Geographic Information Systems (GIS)	68211	Mike Pucherelli	445-2267
Geographic Information, Remote Sensing	68211	Mike Pucherelli	445-2267
Geological expertise for earthquake hazards	68321	Larry Anderson	445-3170
Geology, Engineering	68320	Lloyd Crutchfield	445-3074
Geosynthetics	68180	Bill Kepler	445-2386
Geosynthetics materials	68180	Jay Swihart	445-2397
Geotechnical Services Division	68300	Karen Knight	445-3044
Geotechnical testing	68180	Bill Kepler	445-2386
Geotextile testing	68180	Bill Kepler	445-2386
Geotextiles	68180	Bill Kepler	445-2386
GIS based wildlife management models	68290	Kathy Fenton	445-2274
GIS, geographic information system	68211	Mike Pucherelli	445-2267
Global positioning systems (GPS)	68211	Mike Pucherelli	445-2267
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Governor alignment program (mechanical)	68410	Roger Cline	445-2293
Governor system design	68430	George Girgis	445-2310
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Graphic spatial database	68211	Mike Pucherelli	445-2267
Green Building Design	68120	Al Bernstein	445-3275
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Grounding, plant and personal protective	68440	Jim DeHaan	445-2305
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Grouting	68180	Bill Kepler	445-2386
Grouting for dam foundations	68311	Chris Slaven	445-3046
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Hazardous and toxic substances in soil and water	68220	Jim Yahnke	445-2015
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Hydropower Technical Services Group	68440	Jim Zeiger	445-2300
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IDIQ (Indefinite Delivery Indefinite Quantity) client liaison	68010	Christi Young	445-2561
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Indian Trust Assets evaluation	68270	Becky Redhorse	445-2710
Inflow design hydrographs	68250	John England	445-2541
Information, systems support	68010	Christi Young	445-2561
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Innovative technologies for water treatment	68221	M. Kevin Price	445-2260
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Instream flow studies	68290	Ron Sutton	445-2495
Instrumentation and Inspections Group	69360	DeWayne Campbell	445-3052
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Instrumentation, materials testing	68180	Bill Kepler	445-2386
Instrumentation, probes	68440	Jim DeHaan	445-2305
Instrumentation, wireless	68440	Jim DeHaan	445-2305
Insulation, high-voltage testing and diagnostics	68440	Eric Eastment	445-2324
Integrated atmosphere-watershed ecosystem models	68210	Richard Stodt	445-2474
Integrated database systems	68210	Dave King	445-2471
Intergraph CADD	68010	Dave Martinez	445-2997
International Affairs client liaison	68360	Bill Bouley	445-2754
Interrelationships between environment and aquatic systems	68220	G. Chris Holdren	445-2178
Invasive species	68220	Fred Nibling	445-2202
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K88 Working Capital Fund	68010	Tom Luebke	445-2600

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Laboratory testing, coatings and paints	68180	Bill Kepler	445-2386
Laboratory testing, concrete	68180	Bill Kepler	445-2386
Laboratory testing, geosynthetics	68180	Bill Kepler	445-2386
Laboratory testing, rock	68180	Bill Kepler	445-2386
Laboratory testing, soils	68180	Bill Kepler	445-2386
Laboratory tours	68460	Cliff Pugh	445-2151
Land classification for irrigation	68210	Roger Burnett	445-2508
Landscape architectural design	68120	John Pattie	445-3273
Landslides (geology) Landslide Register	68320	Lloyd Crutchfield	445-3074
Landslides(geotechnical)	68311	Karl Dise	445-3030
Layout and design of publications, reports	68010	Peter Martin	445-2588
LC Region client liaison	68120	Scott Irvine	445-2253
Life analysis of existing and new equipment	68420	Dan Drake	445-2874
Life extension	68440	Jim Zeiger	445-2850
Lift safety evaluations	68120	Al Bernstein	445-3275
Lighting systems	68430	Larry Rossi	445-2820
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Lining	68180	Bill Kepler	445-2386
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Machine condition monitoring	68440	Jim DeHaan	445-2305
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Manual writing, editing, publication	68010	Peter Martin	445-2588
Maps/drawings, plotting	68211	Mike Pucherelli	445-2267
Materials Engineering and Research Laboratory	68180	Bill Kepler	445-2386
Materials instrumentation	68180	Bill Kepler	445-2386
Materials properties	68180	Bill Kepler	445-2386
Materials properties databases	68180	Bill Kepler	445-2386
Materials research	68180	Bill Kepler	445-2386
Matrix team management	68270	Rick Vinton	445-2738
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Mechanical Equipment Group	68410	Dave Hulse	445-2881
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Membrane storage and cleaning	68221	M. Kevin Price	445-2260
Meteorology	68250	Richard Stodt	445-2474
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Mineralogy	68180	Bill Kepler	445-2386
Miscellaneous metalwork	68120	Dick LaFond	445-3226
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MODSIM river simulation model	68210	Nancy Parker	445-2532
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Multidisciplinary team management	68270	Rick Vinton	445-2738
N			
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Natural channel processes	68240	Tim Randle	445-2557
NEPA Compliance	68270	Rick Vinton	445-2738
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Newsletter production and publication	68010	Peter Martin	445-2588
NEXRAD precipitation analysis	68250	Richard Stodt	445-2474
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Nonlinear structural analysis	68110	Larry Nuss	445-3231
Nonparametric statistical analysis	68210	Don Frevert	445-2473
Numerical analysis of geotechnical structures	68311	Ashok Chugh	445-3026
Numerical modeling–fluid flow	68460	Cliff Pugh	445-2151
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Operation and maintenance program, power	68440	Gary Cawthorne	445-2561
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Operations support functions client liaison	68010	Christi Young	445-2754
Optimizaton, powerplant	68440	Toby Steves	445-2561
Other Government agencies client liaison	68010	Gay Ann Martinez	445-3006
Outlet works	68130	John LaBoon	445-3235
P			
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Paint and coatings	68180	Bill Kepler	445-2386
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Phreatophyte control	68220	Fred Nibling	445-2202
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Plastics technology	68180	Bill Kepler	445-2386
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PN Region client liaison	68210	Joe Lyons	445-2531
Power and transmission systems	68440	Shawn Patterson	445-2311

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Program and Policy Services client liaison	68010	Gay Ann Martinez	445-3006
Project management	68270	Rick Vinton	445-2738
Program analysts and assistants	68010	Christi Young	445-2561
Protective coatings (paint) technology	68180	Bill Kepler	445-2386
Protective relaying	68440	Shawn Patterson	445-2311
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PRSYM Power and Reservoir Modeling System	68210	Don Frevert	445-2473
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Public meeting facilitation	68270	Rick Vinton	445-2738
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Regional Atmospheric Modeling System (RAMS)	68250	Richard Stodt	445-2474
Relay testing	68440	Jim DeHaan	445-2305
Remote Sensing and Geographic Information Team	68211	Mike Pucherelli	445-2267
Replacement, rapid, of malfunctioning components	68360	DeWayne Campbell	445-3052
Report writing, editing, publishing	68010	Peter Martin	445-2588
Research, ecological	68220	G. Chris Holdren	445-2178
Research, electric power	68440	Jim DeHaan	445-2305
Research, environmental chemistry	68220	Kevin Kelly	445-2017
Research, fisheries	68290	Steve Hiebert	445-2206
Research, hydroelectric	68440	Jim DeHaan	445-2305
Research Laboratory, Earth Sciences	68180	Bill Kepler	445-2386

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Research Laboratory, Water Resources	68460	Cliff Pugh	445-2151
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Research, water treatment engineering	68221	M. Kevin Price	445-2260
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Resource Management and Planning	68270	Rick Vinton	445-2738
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Risk assessment (dams)	68311	Karl Dise	445-3030
Risk-based profiling	68311	Karl Dise	445-3030
Risk reduction alternatives at unsafe dams	68311	John Cyganiewicz	445-3025
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Rock research	68180	Bill Kepler	445-2386
Rock testing	68180	Bill Kepler	445-2386
Roller-compacted concrete	68180	Bill Kepler	445-2386
S			
Safe Drinking Water Act	68120	Bob Jurenka	445-2254
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Safety Officer, TSC	68220	Andrew Montano	445-2219
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Sampling hazardous waste site investigations	68320	Mark Vandenberg	445-3306
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SCADA software evaluation and development	68440	Buford King	445-2318
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Science and Technology client liaison	68010	Gay Ann Martinez	445-3006
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Sealants/sealers	68180	Bill Kepler	445-2386
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Security, Facility assessments	68130	Dave Hinchliff	445-3256
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Sedimentation and River Hydraulics Group	68240	Tim Randle	445-2557
SEED and SOD client liaison	68010	Tom Luebke	445-2600
SEED examinations	68360	Chris Danley	445-2755
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Seismic analysis of concrete dams	68110	Larry Nuss	445-3231
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Selenium removal research	68221	Andy Murphy	445-2259
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Shotcrete	68180	Bill Kepler	445-2386
Site characterization for hazardous wastes	68320	Mark Vandenberg	445-3306
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Site selection for hydraulic structures, etc.	68140	Dave Edwards	445-2750
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Slope stability	68313	Dave Gillette	445-2994
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Soil research	68180	Bill Kepler	445-2386
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Soil, rock, and foundation testing	68311	Tom Lippert	445-2330
Soil testing	68180	Bill Kepler	445-2386
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Specifications preparation reviews	68170	Greg Gulsvig	445-3082
Specifications constructability reviews	68170	Nancy Lender	445-3299
Speeches and presentations	68010	Peter Martin	445-2588
Spillways	68130	John LaBoon	445-3235
Stability analyses of embankments	68313	Dave Gillette	445-2994
Statistical analysis	68250	John England	445-2541
Statistical analyses-hydrology	68250	John England	445-2541
Stochastic hydrology applications	68210	Don Frevert	445-2473
Stream restoration	68240	Tim Randle	445-2557
Streamflow forecasting	68460	Cliff Pugh	445-2151
	68250	David Raff	445-2461
Strong motion instrumentation	68321	Chris Wood	445-3187

Subject Matter	Code 86-	Contacts	Number 303-
Structural Analysis Group	68110	John Baals	445-3222
Structural design – buildings	68120	Dick LaFond	445-3226
Structural design—hydraulic structures	68140	Dave Edwards	445-2750
Structural materials research	68180	Bill Kepler	445-2386
Structural testing	68180	Bill Kepler	445-2386
Subsurface exploring and sampling	68320	Lloyd Crutchfield	445-3074
Sustainable building design	68120	Al Bernstein	445-3275
Swimming performance, fish	68290	Zak Sutphin	445-2141
Switchyard and Substation Civil Design	68120	Rod Barthel	445-3221
Switchyard, switchgear, and station service electrical design	68430	Lisa Gamuciello	445-2835
T			
Tailings dams	68311	Mike Gobla	445-3032
Technical engineering drawings	68361	Elizabeth Ouellette	445-3036
Technical presentations	68010	Peter Martin	445-2588
Technical reports	68010	Peter Martin	445-2588
Technical team management	68270	Rick Vinton	445-2738
Technical update lectures	68300	Karen Johnson	445-3289
Tectonic settings of features	68321	Larry Anderson	445-3170
Terrestrial photogrammetry	68320	Pete Shaffner	445-3152
	68312	Joe Kottenstette	445-2966
Testing geotechnical	68320	Jeff Farrar	445-2333
Testing machine calibration	68180	Bill Kepler	445-2386
Testing, power system and apparatus	68440	Jim DeHaan	445-2305
Testing, structural materials (concrete, steel, soil, rock, plastics)	68180	Bill Kepler	445-2386
Thermal properties testing	68180	Bill Kepler	445-2386
Toxicity evaluation of aquatic systems	68220	G. Chris Holdren	445-2178
Track existing work for accomplishment	68010	See specific client area for contact (pages 5-6)	445-2386 445-2386
Training, coatings	68180	Bill Kepler	445-2386
Training, concrete	68180	Bill Kepler	445-2386
Training, corrosion	68180	Bill Kepler	445-2847
Training, earth and geotechnical	68180	Bill Kepler	445-2305
Transformer design	68430	Terry Williams	445-2597
Transformer diagnostics	68440	Jim DeHaan	445-2305
Trashracks and cleaning equipment	68410	Dave Hulse	455-2881
TSC Environmental, Health, and Safety Officer	68220	Andrew Montano	445-2219
Tunnel communications	68440	Jim DeHaan	445-2305
Tunnel mapping	68320	Steve Beason	702-295-4088
Tunnels	68140	Kevin Atwater	445-3113
Turbine design	68420	Dan Drake	445-2874
Turbines, efficiency testing	68410	Dave Hulse	445-2881
U			
UC Region client liaison	68270	Chuck Borda	445-2728
Underground excavations	68312	Gregg Scott	445-3233
Unit commitment (generation)	68440	Toby Steves	445-3258
Uprate studies	68430	Larry Rossi	445-2820
Underwater blast analysis	68110	Barb Mills/Bria	445-3229
Underwater inspection services	68410	Roger Cline	445-2293

Subject Matter	Code 86-	Contacts	Number 303-
V			
Value engineering/analysis studies	68170	Norm Hyndman	445-3251
Value engineering/analysis training	68170	Norm Hyndman	445-3251
Value engineering program administration	68170	Norm Hyndman	445-3251
Vibration, structural	68180	Bill Kepler	445-2386
Vibration, testing and analysis	68410	Roger Cline	445-2293
Video editing	68010	Bonnie Gehringer	445-2621
Voltage regulator alignment and troubleshooting	68440	J.C. Agee	445-2309
Visual presentations	68010	Bonnie Gehringer	445-2621
W			
Wastewater treatment systems	68120	Bob Jurenka	445-2254
Water and Environmental Resources Division	68200	Craig Albertsen	445-2526
Water conservation analysis	68210	Mark Spears	445-2526
Water conservation research	68460	Cliff Pugh	445-2151
Water Conveyance Group	68140	Dave Edwards	445-2750
Water delivery equipment	68420	Dan Drake	445-2874
Water hammer analysis	68140	Jim Keith	445-3121
Water quality analysis	68221	Michelle Chapman	445-2264
Water quality chemical analyses	68220	Kevin Kelly	445-2017
Water quality models for rivers, etc.	68220	Merlyn Bender	445-2860
Water requirements	68210	Mark Spears	445-2514
Water resource suitability	68220	Eric Stiles	445-2458
Water resources, hydraulic	68460	Cliff Pugh	445-2151
Water Resources Planning and Operations Support Group	68210	Joe Lyons	445-2531
Water Resources Research Laboratory	68460	Cliff Pugh	445-2151
Water reuse and recycling	68120	Bob Jurenka	445-2254
Water Reuse and Recycling, Title XVI	68221	M. Kevin Price	445-2260
Water rights	68210	Joe Lyons	445-2531
Water stops	68180	Bill Kepler	445-2386
Water treatment – design	68120	Bob Jurenka	445-2255
Water treatment – research	68221	M. Kevin Price	445-2260
Water Treatment Engineering Research Team	68221	M. Kevin Price	445-2260
Water use efficiency	68210	Mark Spears	445-2514
Watershed analysis	68210	Tom Perry	445-2567
Waterways and Concrete Dams Group	68130	John LaBoon	445-3235
Weather forecasts	68250	Richard Stodt	445-2474
Web based graphics and page design	68010	Pete Martin	445-2588
Web page design and development	68010	Pete Martin	445-2588
Weed control research	68220	Fred Nibling	445-2202
Welding procedures	68410	Roger Cline	445-2293
Well and well field design	68210	Bob Talbot	445-2518
Well-head protection studies	68210	Bob Talbot	445-2518
Wetlands	68220	Eric Stiles	445-2458
Wetlands enhancement and creation	68220	Eric Stiles	445-2458
Wetlands research	68220	G. Chris Holdren	445-2178
Wetlands – site landscape design	68120	John Pattie	445-3273
Wetlands – water conveyance features	68140	Dave Edwards	445-2750
Wildlife studies	68290	Darrell Alhers	445-2233
Workflow coordination in TSC	68010	See specific client area for contact (pages 5-6)	
Writing and editing assistance	68010	Peter Martin	445-2588

Subject Matter	Code 86-	Contacts	Number 303-
Y			
Yucca Mountain Project	68320	Steve Beason	702-295-4088
Z			
Zebra mussel and corbicula control	68220	Fred Nibling	445-2202

TECHNICAL SERVICE CENTER – 86-68000
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Client Support and Technical Presentations
86-68010

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 Lyons, Joe (PN) 86-68210 2531
 Maag, Dan (MP) 86-68170 3084
 Martinez, Gay Ann (OGA, RO, S&T, P&A,
 PPS) 86-68010 3006
 Tochtrop, Tim (NPS Dam Safety) 86-68312 2990

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TSC Environmental, Health, and Safety Officer

Montano, Andrew 86-68220, Building 56,
 Room 2010 2219

Client Support and Technical Presentations
86-68010 – continued

Technical Presentations

Alexander, Patty	2574
Armentrout, Tina	2575
Berg, Glenna	2577
Brown, Charlie	2620
Clark, Dianne	2579
Credit, Jim (contract employee)	2619
Gehring, Bonnie	2621
Gray, Cindy	2615
Larsen, Deena	2584
Leffel, Sharon	2585
Lewis, Lonnie	2586
Manross, Teri	2587
Martin, Peter	2588
Petersen, Tyna	2573
Ward, Susan	2690

**NOTE: All numbers are 303-445- unless
 otherwise noted.**

CIVIL ENGINEERING SERVICES DIVISION – 86-68100

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Structural Analysis 86-68110

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Gold, David	3131
Guerra, Andres	3269
Jones, Eric	3132
Koltuniuk, Roman	3225
Latham, Steve	2519
Mills-Bria, Barbara	3229
Munoz, Rich	3230
Nuss, Larry	3231
Payne, Terry	3232
Reynolds, Rose	3239
Schneider, Jason	3211
Stowell, Hillery	3281
Toothman, Adam	3596

Waterways and Concrete Dams 86-68130

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Cohen, Bitsy	3247
Cooper, Chuck	3262
Ellingson, John	3264
Fiedler, Bill	3248
Godaire, David	3249
Hall, Ernest	3244
Hepler, Tom	3261
Heyder, Walt	3246
Hinchliff, Dave	3256
Huggins, Jennifer	2169
Johnson, Stacy	3277
Mares, Dan	3252
Markley, John	3254
McGovern, Bob	3243
Percell, Phoebe	3033
Scobell, Tom	3706
Stanton, Doug	3265
Trojanowski, John	3263

Plant Structures 86-68120

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Bernstein, Al	3275
Dham, Ribha	2638
Dundorf, Steve	2263
Goplen, Brian	3271
Huerta, Olaff	3270
Irvine, Scott	2253
Jurenka, Robert	2254
Lajimodiere, Bernard	2996
Neumaier, James	3280
O'Shea, Mike	3272
Pattie, John	3273
Pierce, Mary Lou	3274
Rodriguez, Robert	2262
Ruchti, Paul	3290
Snyder, Gary	3282
VanOtterloo, Brad	3179
Yokoyama, Ken	2014

Water Conveyance 86-68140

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Baysinger, Jeff	3194
Bowles, Linda	3114
Calhoun, Tedd	3115
Cha, Chou	3129
Clough, Nicholas	3112
Duke, Chris	3120
Gemperline, Joe	2483
Gesundheit, Dave	3119
Keith, James	3121
Leavitt, Mark	3227
Pavol, Anne C.	3116
Robertson, Steve	3123

CIVIL ENGINEERING SERVICES DIVISION – 86-68100 - continued

**Water Conveyance
86-68140 – continued**

Romero, Jesus	3124
Sayer, Ken	3125
Streifel, Art	3126
Wagner, Jason	3136

**Estimating, Specifications, and Construction
Management
86-68170**

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Carbone, Linda C.	3739
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Carlson, Rob	3077
Chavira, Betty	3078
Cook, Tom	3292
Donaldson, Dan	3080
Foreman, John	3297
Grush, Craig	3081
Gulsvig, Greg	3082
Haley, Keith	2899
Hanke, Thomas	3083
Hyndman, Norman	3251
Lake, Margaret	2181
Lender, Nancy	3299
Maag, Dan	3084
Magalong, Connie	3085
Mar, Daniel	2872
McKelvie, David	3099
Morris, Jeff	3373
Paul, Dave	3296
Power, Kate (contract employee)	3276
Siebert, Gary	3089
Smith, Carlton	3303
Zander, Gerald	3088
Zlomke, Lonnie	3087

**Estimating, Specifications, and Construction
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86-68170 – continued**

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86-68172**

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**Materials Engineering and Research Laboratory
86-68180**

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Jim, Ellen M. 2006

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Dolen, Timothy P.	2380
Dominic, Stephen	2379
Dooley, Todd	2390
Erdogan, Zeynep	2348
Hurcomb, Doug	2336
Little, Daryl	2384
Madera, Veronica	6341
Mitchell, Kurt D.	2387
Pepin, Richard A.	2391
Reo, Steven C.	2392
Skaja, Allen	2396
Strauss, Tom	2343
Swihart, John J. (Jay)	2397
Travers, Fred A.	2398
Turcotte, Roger	2383
Von Fay, Kurt F.	2399

WATER AND ENVIRONMENTAL RESOURCES DIVISION – 86-68200

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Water Resources Planning and Operations Support 86-68210

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Cortez, Patsy	2469
Brekke, Levi	2494
Brower, Al (contract employee)	2507
Burnett, Roger	2508
Cunningham, Jack	2510
Fahy, Juli	2188
Frevert, Don	2473
Harrison, Alan	2459
King, Dave	2471
Kinkel, Brenda	2530
Nuanes, Sharon	2533
O'Connor, Dennis	2480
Osterberg, John	2462
Parker, Nancy	2532
Perry, Thomas	2567
Pruitt, Tom	2512
Rappmund, Ronnie	2513
Smith, Del	2516
Spears, Mark	2514
Talbot, Bob	2518

Remote Sensing and Geographic Information Team 86-68211

Pucherelli, Michael, Team Leader	2267
Bell, Alan	2268
Carlson, John	2270
Clark, Douglas	2271
Eckhardt, David	2273
Goettlicher, Bill	2275
Lawallen, Joyce (contract employee)	2018
Miller, Ronald	2279
Salas, David	3619
Whitesell, Bruce	2287
Wright, Patrick (contract employee)	2288

Environmental Applications and Research 86-68220

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Building 56
Room 2010

Holdren, G. Chris choldren@do.usbr.gov	445-2178
Casement, Joan	2017
Andersen, Doug*	2209
Bender, Merlyn	2460
Boutwell, John	2224
Broderick, Susan	2235
Carpenter, Jeanette*	2230
Horn, Mike	2203
Hosler, Denise	2195
Kelly, Kevin	2017
Lair, Kenneth	2005
Lieberman, Davine	2223
Mangan, Patrick	2236
Montano, Andrew	2219
Mueller, Gordon*	2218
Nelson, Mark S.	2225
Nibling, Frederick	2202
O'Meara, Scott	2216
Simonavice, Mike	2196
Sisneros, David	2228
Stiles, Eric	2458
Thullen, Joan*	2212
Wydoski, Richard	2207
Yahnke, James W.	2015

*U.S. Geological Survey

Water Treatment Engineering Research Team 86-68221

Price, M. Kevin, Team Leader	2260
Benko, Katherine	2013
Bunnelle, Thomas	2249
Cantin, Lisa	2011
Chapman, Michelle	2264
Delagah, Saied	2248
Goloskewitsch, Alex	3618
Gonzales, Daniel	2250
Jorgensen, Erik	3604
Leitz, Frank	2255
Murphy, Andrew	2259
Porras, Yuliana	2265
Tiffenbach, Andrew	2393

WATER AND ENVIRONMENTAL RESOURCES DIVISION – 86-68200 – continued

Sedimentation and River Hydraulics 86-68240

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Room 570

Randle, Tim trandle@do.usbr.gov	445-2557
Haragara, Jessie	2536
Baird, Drew	2564
Bauer, Travis	3672
Bountry, Jennifer	3614
Collins, Kent	2549
Feinberg, Bruce	3241
Ferrari, Ron	2551
Fotherby, Lisa	2476
Graham, Wayne	2553
Greimann, Blair	2563
Hilldale, Robert	3135
Holburn, Elaina	2550
Huang, Victor	2158
Klumpp, Cassie	2554
Lai, Yong	2560
Makar, Paula	2555
Oliver, Jan	2281
Russell, Kendra	2552
Samad, Mohammed	2559
Sixta, Mike	2568
Varyu, David	2535
Wille, Kurt	2285

Flood Hydrology and Meteorology 86-68250

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Building 67
Room 582

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Collins, Colette	2540
Daniels, Jeffrey	2848
England, John	2541
Godaire, Jeanne	3164
Kamstra, Lex	2544
Klinger, Ralph	3173
Leverson, Verne	2487
Raff, David	2461
Stodt, Rich	2474
Sutley, David	2464
Tisdale-Hein, Rinda	2241
Wanker, Patrick	2594
Wright, Joseph	2463

Economics and Resource Planning 86-68270

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Room 678
(Room 590 after July 2008)

Vinton, Rick rvinton@do.usbr.gov	445-2738
Hunt-Williams, Sheri	3141
Bailey, James	2704
Black, Susan	2705
Borda, Charles	2728
Davis, Rob	2730
Engel, Paula	2732
Flynn, Kurt	2605
Harpman, David	2733
Lichtkoppler, Richard	2792
Munger, Dawn	2734
Nelson, Dennis	2735
Piper, Steve	2736
Platt, Jonathan	2737
Redhorse, Rebecca	2710

Fisheries and Wildlife Resources 86-68290

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Building 56
Room 2010

Hiebert, Steve shiebert@do.usbr.gov	445-2206
Casement, Joan	2017
Ahlers, Darrell	2233
Bark, Raymond	2204
Bernal, Yvonne	2205
Best, Eric	2179
Bowen, Mark	2222
Callahan, Debra (contract employee)	3645
Fenton, Kathleen	2274
Hueth, Chuck (contract employee)	2183
Johanson, Vicky (contract employee)	2292
Karp, Catherine	2226
Kennedy, Seth (contract employee)	2182
Lyons, Judy	2210
Moore, Dave	2242
Portz, Donald	2220
Reed, Gregory	2208
Ryan, Stephen (contract employee)	2234
Sechrist, Juddson	2198
Sutphin, Zachary	2141
Sutton, Ronald	2495
Zehfuss, Katherine (contract employee)	2240

GEOTECHNICAL SERVICES DIVISION – 86-68300

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Cyganiewicz, John	3025
DeWolfe, Giorigia	3027
Dise, Karl	3030
Dixon, Lief	3071
Gagliardi, Jack	2969
Gobla, Michael	3032
Jensen, Navead	3142
Lippert, Tom	2330
Muzzy, Matt	3047
Slaven, Chris	3046
Stevens, Scott	3039
Wormer, Jeff	3691
Young, Steven	3043

Embankment Dams and Geotechnical Engineering Group 2 86-68312

Building 67
 Room 1181

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Davidson, Ryan (STEP)	2963
Engemoen, Bill	2960
Kiene, Al	2965
Kottenstette, Joe	2966
Major, Jeanne	2972
McDaniel, Tom (contract employee)	3556
Oaks, Ron	2975
Powell, Chris	2968
Romansky, Mike	2970
Scott, Gregg (4th flr)	3233
Tochtrop, Tim	2990
Torres, Roger	2967
Touseull, Jack	2346
Moody, Chuck (86-68700)	2258

Embankment Dams and Geotechnical Engineering Group 3 86-68313

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Barraclough, Mark	2987
Bliss, Mark	2988
Carter, Russ	2991
Curran, Dave	2992
Eddy, Greg	2984
Gillette, Dave	2994
Gonzalez, Cesar	3228
Harris, Jonathan	2959
Hanneman, Dennis	2958
Lee, Kevin	3022
McFarland, Tara	2995
Pabst, Mark	2998
Tierney, Tuti	3016
Wilson, John	3018

Engineering Geology, Geophysics, & Seismotectonics 86-68320

Building 67
 Room 1075

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Farrar, Jeff	2333
Heisler, Rebecca	3172
Lowther, Lynne	3151
Pearson, Ronald	3147
Russell, Gary	3146
Shaffner, Peter	3152
Shanahan, Tony	2340
Sullivan, Chuck, II	3145
Turlington, Gary	3203
Vandeberg, Mark	3306
Willcut, Steve	3204

Plotter Room, 11th floor 3206, 3207

GEOTECHNICAL SERVICES DIVISION – 86-68300 – continued

Engineering Geology, Geophysics, & Seismotectonics 86-68320 – continued

Geophysics and Seismotectonics

86-68321

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Anderson, Larry	3170
Block, Lisa	3171
Copeland, Dave	3163
Jones, Jim	3168
Jones, Matt	3198
Liechty, Daniel	3214
Liu, Pengcheng	2962
Mahrer, Ken (contract employee)	3215
Markiewicz, Rich	3167
Piety, Lucy	3185
Schubitzke, Paul (contract employee)	3365
Su, Feng	3209
Wood, Chris	3187

Yucca Mountain Support

86-68323

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Instrumentation and Inspections

86-68360

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Danley, Chris	2755
Davis, Roy	3055

Instrumentation and Inspections

86-68360 – continued

Fischer, Jerry	2748
Gagner, Kevin	2746
Goins, Danny	3057
Kelsic, Rick	3059
Klish, Dave	3060
Krest, Lisa	3260
MacDonald, Bob (contract employee)	3404
Martin, Gary	3707
Martinez, Andrea*	2762
Mogck, Larry*	3107
Priest, John	2978
Purto, Gerri	3051
Rosenfield, Jack	3061
Ross, Karen	3062
Sewell, Jim	3063
Sharman, Jerry*	2749
Stateler, Jay	3064
Suggs, John	3065
Swanson, Charlie*	2757
Tucker, Anne	3278
Weingardt, Dennis	3599
Welch, Randy	3066
Woodby, Bob	2758
Young, Wayne	2743

*10th Floor after July 2008

Geotechnical Computer and Technical Support*

86-68361

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Kellstadt, Dave	2385
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Monson, Marshall	3200
Nitta, Stu	2979
Schwairy, Ken	3015
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Villalobos, Roger	2644
Whitfield, Jim	2630

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Building 67
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Slater, Barb	2896
Aguirre, Victor (contractor)	2856
Christensen, Rick	2858
Cline, Roger	2293
Delzer, Wayne	2860
Egan, Randall	2855
Germann, John	2295
McStraw, Bill	2294
Reed, Shaun	2873
Ritt, Alex	2866
Schlein, Paul	2868
Shisler, John	2869
Stephen, Ryan	2867
Walp, John	2871
Weems, Mike	3617

Electrical Design 86-68430

Building 67
7th Floor North

FAX 445-6420

Girgis, George ggirgis@do.usbr.gov	445-2310
Snodgrass, Elizabeth	3721
Berk, Darrell	2269
Crawford, Doug	2290
Dam, Kim Lien T.	3633
Gamuciello, Lisa	2835
Heckler, Bill	2833
Maurer, Cory	2834
Nguyen, Kimmi	2851
Noi, Richard	2819
Patterson, Jay	2753
Perkins, Remeshian	2714
Rex, Andrew	2815
Rossi, Larry	2820
Schuette, Gunter	2822
Schuh, Mike	2821
Toland, Dan	2823
Vaughn, Eric	2816
Williams, Terry	2847

Hydraulic Equipment 86-68420

Building 67
7th Floor West

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Drake, Dan d Drake@do.usbr.gov	445-2874
Slater, Barb	2896
Brooks, John	2878
Durham, Shanna	2876
Fehr, Richard	2861
Frisz, Richard	2879
Hoffmann, Peter	2880
Hummel, Terry	3103
Joyce, Charles	2863
Nakamoto, Nathan	3692
Read, Don	2884
Rood, Gary	3102
Smith, Ken	2885
Turnage, Toby	2864
Zelenka, Bob	2886

Hydropower Technical Services 86-68440

Building 56
Room 2730

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FAX 445-6468

Zeiger, Jim jzeiger@do.usbr.gov	445-2850
Snodgrass, Elizabeth	3721
Agee, J. C.	2309
Bechtel, Ted	2319
Cawthorne, Gary	2817
Clair, Kyle	2813
DeHaan, Jim	2305
Eastment, Eric	2324
Flaherty, Dan	2829
Hartman, Joseph	3291
Hidalgo, Allison	2326
Hoang, Vince	2836

INFRASTRUCTURE SERVICES DIVISION – 86-68400 – continued

**Hydropower Technical Services
86-68440 – continued**

Keller, James	2838
King, Buford	2318
Myers, Nathan	2643
Patterson, Shawn	2311
Schmidt, Jason	2843
Shusterman, Dmitry	2323
Smith, Jill	2307
Steves, Toby	3258
Travers, Benjamin	2347
Uchiyama, Joe	2845
Voorheis, Pete	2846
Vu, Hoa	2312

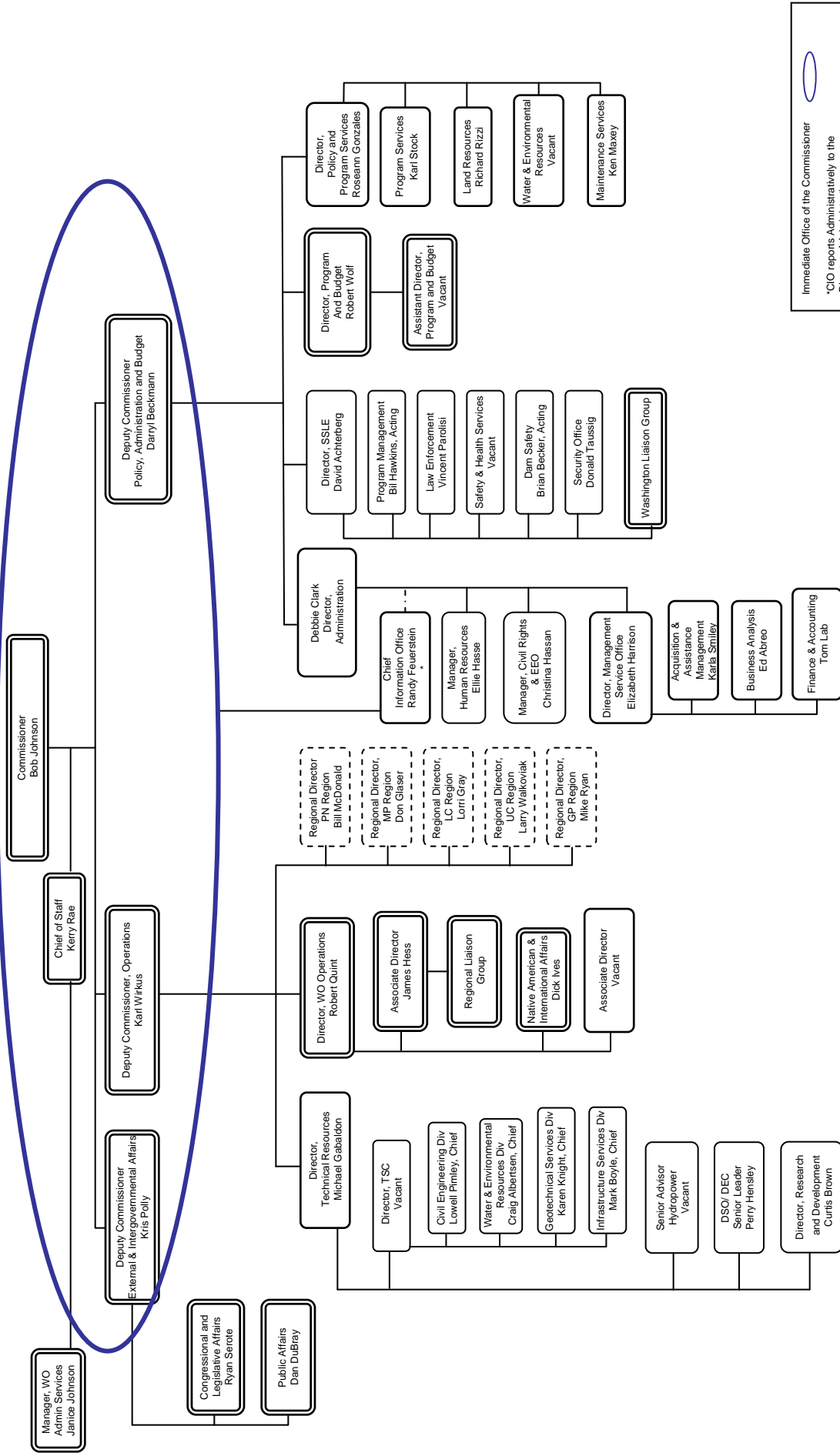
**Hydraulic Investigations and Laboratory Services
86-68460**

Phone	445-2150	Building 56
FAX	445-6324	Room 1300

Pugh, Clifford	cpugh@do.usbr.gov	445-2151
Secretary, Vacant		xxxx
Armstrong, Neal*		2160
Baca, Billy		2331
Black, Jason*		2166
Cheek, Dane*		2162
Cuny, Richard*		2163
Demoyer, Connie		2152
Einhellig, Robert F.		2142
Frizell, K. Warren		2145
Frizell, Kathleen		2144
Gill, Tom		2201
Hanna, Leslie		2146
Higgs, James (5th floor)		2147
Kubitschek, Joseph		2148
Mefford, Brent		2149
Poos, Marty* (contract employee)		3623
Vermeyen, Tracy		2154
Wahl, Tony		2155

*Lab shops

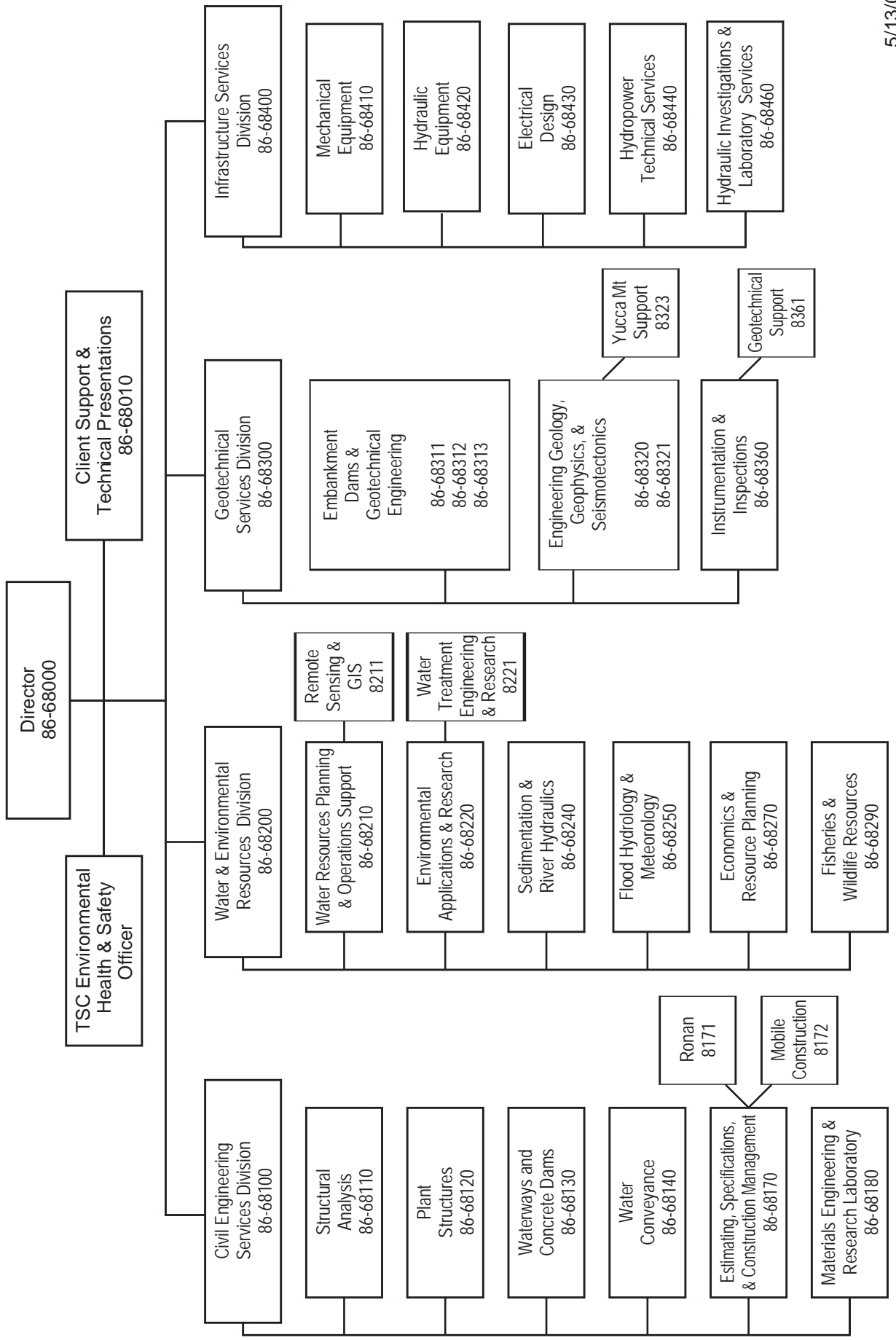
Bureau of Reclamation June 4, 2008



Immediate Office of the Commissioner
 *CIO reports Administratively to the Director of Administration

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 Regions - - - - -

Bureau of Reclamation Technical Service Center



**United States Department of the Interior
Bureau of Reclamation
Regional Boundaries**



**BUREAU OF RECLAMATION
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Bureau of Reclamation Mission

To manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American Public.