(If a firm has branch offices, complete for each specific branch office seeking work.)

1. ***Annual Request for Qualifications***

a. FIRM (OR BRANCH OFFICE) NAME:	Errol L. Montgomery & Associates, Inc.
b. FIRM (OR BRANCH OFFICE) STREET:	1550 East Prince Road
c. FIRM (OR BRANCH OFFICE) CITY:	Tucson
d. FIRM (OR BRANCH OFFICE) STATE:	AZ
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	85719

f. YEAR ESTABLISHED:	1984

(g1). OWNERSHIP - TYPE:	Corporation
(g2) OWNERSHIP - SMALL BUSINESS STATUS:	Small Business

h. POINT OF CONTACT NAME AND TITLE:	Mark Cross, President
i. POINT OF CONTACT TELEPHONE NUMBER:	520-881-4912
j. POINT OF CONTACT E-MAIL ADDRESS:	mcross@elmontgomery.com

k. NAME OF FIRM *(If block 1a is a branch office)*:	

2. EMPLOYEES BY DISCIPLINE

a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees - Firm	d. No. of Employees - Branch
Geologist	P	21	21
Hydrologist	P	18	18
Total		39	39

3. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR

a. Approximate No. of Projects	b. Experience	c. Revenue Index Number *(see below)*
43	Water Resources; Hydrology; Ground Water	7

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.)*

a. NAME:	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
Mark Cross	Technical oversight	1. TOTAL: 35	2. WITH CURRENT FIRM: 26

d. LOCATION *(City and State)*: Tucson, AZ

e. EDUCATION *(DEGREE AND SPECIALIZATION)*:	f. PROFESSIONAL TRAINING - REGISTRATIONS
B.S., Geology, Northern Arizona University (1979) M.S., Hydrology, University of Arizona (1983)	Registered Professional Geologist #19193, AZ Registered Professional Geologist #4471, CA Certified Professional Hydrogeologist #249, CA

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*

2007–present: External Advisory Committees for the University of Arizona Water Resources Research Center and the Water Sustainability Program
1999: Honorary plaque from Tucson Regional Water Council for contributions to Advisory Council
1999: Certificate of appreciation from ADWR for outstanding community service on the Tucson AMA Regional Recharge Committee

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State):*
Tonopah Desert Recharge Project (Tonopah, Maricopa County, AZ)

(2) YEAR COMPLETED: 2009

Professional Services	Construction (if applicable)
2009	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Project Lead: Planned, managed, and provided technical oversight for hydrogeologic characterization studies, groundwater flow modeling, and technical reports to support the design and permitting of large-scale recharge and recovery facilities. The Tonopah Desert facility has the largest permitted capacity of any recharge project in Arizona. Recharge operations, which began in January 2006, have demonstrated that the facility is capable of storing the maximum permitted annual volume. Code 3 - $250,000 to less than $500,000

2.

(1) TITLE AND LOCATION *(City and State)*
CAP Recovery Wellfield Siting Study (Pinal County, AZ — Countywide)

(2) YEAR COMPLETED: 2009

Professional Services	Construction (if applicable)
2009	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Project Lead: Managed and provided technical oversight for a hydrogeologic assessment, an inventory and ranking of existing wells for potential use as recovery wells, and the conceptual design of a new wellfield for recovering stored CAP water. Code 2 - $100,000 to less than $250,000

X Check if project performed with current firm

3.

(1) TITLE AND LOCATION *(City and State)*
Water Supply Investigations & APP Support for the Willow Springs South Ranch Village Project (Oracle, AZ)

(2) YEAR COMPLETED: 2010

Professional Services	Construction (if applicable)
2010	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Project Lead: Conducted hydrogeologic investigations (characterization, aquifer testing, and groundwater modeling) to demonstrate an Assured Water Supply and provide technical oversight for design and permitting of an effluent recharge facility. Code 2 - $100,000 to less than $250,000

4.

(1) TITLE AND LOCATION *(City and State)*
Water Supply Acquisition Study & Program Implementation (AZ — Central / Western)

(2) YEAR COMPLETED

Professional Services	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Project Manager: Managed a consulting team for a study that entailed developing a water supply inventory, valuing and ranking water assets, and preparing a water acquisition strategy and plan; managed hydrogeologic investigations and technical feasibility assessments for selected high-priority water assets. ***Ongoing.***
Code 4 - $500,000 to less than $1,000,000

5.

(1) TITLE AND LOCATION *(City and State)*
Effluent Recharge Feasibility & Siting Study for Liberty Utilities (Sierra Vista, AZ)

(2) YEAR COMPLETED

Professional Services	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Technical Oversight: Provided technical oversight and support for a Phase 1 program for identifying, screening, and ranking candidate sites for recharging treated effluent by surface infiltration and injection. ***Ongoing***.
Code 4 - $500,000 to less than $1,000,000

X Check if project performed with current firm

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.)*

a. NAME:	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
Leslie Katz	Project management, technical oversight	1. TOTAL: 30	2. WITH CURRENT FIRM: 25

d. LOCATION *(City and State)*: Tucson, AZ

e. EDUCATION *(DEGREE AND SPECIALIZATION)*:	f. PROFESSIONAL TRAINING - REGISTRATIONS
B.S., Geology, University of Arizona (1983) M.S., Hydrology, University of Arizona (1987)	Registered Professional Geologist #28245, AZ

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*

2008: Contractor of the Year — award from Arizona Public Service (Cholla Power Plant) for successfully managing and completing a large-scale, fast-track wellfield relocation project that was critical to ongoing plant operations

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State):* North Indian Bend Wash (Scottsdale, AZ)

(2) YEAR COMPLETED:

Professional Services	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Project Lead: Managed and provided long-term technical leadership, from the initial characterization of VOC contamination through the final remedy design and implementation; analyzed data from various fluid movement, depth-specific sampling, and zonal testing programs to characterize conditions in a deep alluvial aquifer; oversaw a modeling effort to evaluate alternative remedial actions and a 5-Year Review of remedy effectiveness. ***Ongoing***.
Code 7 - $5 million to less than $10 million (last 5 years only)

2.

(1) TITLE AND LOCATION *(City and State)* Cholla Power Plant Wellfield (St. Joseph City, AZ)

(2) YEAR COMPLETED:

Professional Services	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Project Lead: Managed a comprehensive field program to characterize hydrogeologic and water quality conditions; led the installation and testing of 12 production wells and 20 monitoring wells; developed and implemented a long-term monitoring program. ***Ongoing***.
Code 6 - $2 million to less than $5 million (last 5 years only)

X Check if project performed with current firm

3.

(1) TITLE AND LOCATION *(City and State)* Industrial Wellfield Conversion (San Manuel, AZ)

(2) YEAR COMPLETED:

Professional Services	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Project Lead: As part of a site closure process, managed a large-scale field program to install new production wells and abandon old ones with the goal of creating a sustainable, high-quality water supply for future municipal and industrial uses; implemented interval-specific testing to identify zones with poor water quality and monitoring to evaluate surface water / groundwater interactions. ***Ongoing***. Code 5 - $1 million to less than $2 million (last 5 years only)

4.

(1) TITLE AND LOCATION *(City and State)* U.S. Air Force Plant 44, Tucson Airport Area Superfund Site (Tucson, AZ)

(2) YEAR COMPLETED

Professional Services	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Project Manager: Designed and oversaw a field program that entailed installing nine unit-specific monitoring wells at critical locations to characterize the vertical distribution of VOCs and 1,4-dioxane and verify plume containment; oversaw modeling analyses of flow, particle pathways, and fate and transport of VOCs and 1,4-dioxane in groundwater to evaluate plume-containment strategies and demonstrate the achievement of Remedial Process Optimization goals. ***Ongoing***.
Code 4 - $500,000 to less than $1 million (last 2.5 years only)

5.

(1) TITLE AND LOCATION *(City and State)* West-Cap, Tucson Airport Area Superfund Site (Tucson, AZ)

(2) YEAR COMPLETED: 2013

Professional Services 2013	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Technical Oversight: Designed two multiple-completion monitoring wells to evaluate VOC fate, transport, and remediation; oversaw well installation; conducted monitoring; reported on overall site conditions and data interpretation; provided a critical review of the remedial design work plan.
Code 2 - $100,000 to less than $250,000

X Check if project performed with current firm

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.)*

a. NAME:	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
Tim Leo	Project management, technical oversight	1. TOTAL: 25	2. WITH CURRENT FIRM: 6

d. LOCATION *(City and State)*: Tucson, AZ

e. EDUCATION *(DEGREE AND SPECIALIZATION)*:	f. PROFESSIONAL TRAINING - REGISTRATIONS
B.S., Geology, Bradley University (1983) M.S., Hydrology, University of Arizona (1988)	Registered Professional Geologist #33257, AZ Registered Professional Geologist #6163, CA Certified Professional Hydrogeologist #344, CA

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*
Courses: Optimization Modeling Short Course, Stochastic Modeling with Groundwater Vistas, Monitored Natural Attenuation, Fracture Flow Short Course, MT3D Computer Modeling Short Course

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State):*
Los Reales Landfill WQARF Site (Tucson, AZ)

(2) YEAR COMPLETED: 2014
Professional Services: 2014 | Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE
Project Lead: Evaluated the performance of a pump-and-treat system and the feasibility of various remedial alternatives; analyzed long-term site data; developed / calibrated a new groundwater model and used it to project the future effectiveness of pump-and-treat system under declining water table conditions; and recommended strategies for transitioning to a long-term groundwater monitoring remedy. Code 2 - $100,000 to less than $250,000

X Check if project performed with current firm

2.

(1) TITLE AND LOCATION *(City and State)*
U.S. Air Force Plant 44, Tucson Airport Area Superfund Site (Tucson, AZ)

(2) YEAR COMPLETED:
Professional Services | Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE
Modeling Lead: Directed the development of a three-dimensional flow-and-transport model to determine the relative historical contribution of TCE to supply wells in and near this Superfund site; reviewed models developed by other consultants. ***Ongoing***. Code 4 - $500,000 to less than $1 million (last 2.5 years only)

X Check if project performed with current firm

3.

(1) TITLE AND LOCATION *(City and State)*
Broadway Pantano Landfill — Environmental Technical Support (Tucson, AZ)

(2) YEAR COMPLETED: 2014
Professional Services 2014 | Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE
Project Lead: Reviewed and prepared comments on behalf of the City of Tucson Department of Environmental Services on the draft remedial investigation report for the landfill operable unit at the Broadway-Pantano Landfill site. Code 1 – Less than $100,000

X Check if project performed with current firm

4.

(1) TITLE AND LOCATION *(City and State)*
Environmental Technical Support for El Camino Del Cerro Landfill (Tucson, AZ)

(2) YEAR COMPLETED: 2014
Professional Services 2014 | Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE
Technical Reviewer: Reviewed and provided comments on behalf the County on the draft remedial investigation report for the El Camino Del Cerro Landfill. Code 1 - Less than $100,000

X Check if project performed with current firm

5.

(1) TITLE AND LOCATION *(City and State)*
Tailings Seepage Analysis for Confidential Mining Client (AZ)

(2) YEAR COMPLETED: 2013
Professional Services 2013 | Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE
Project Manager: Managed a comprehensive hydrogeologic investigation that entailed inventorying seeps and springs, measuring seep flow rates, characterizing water quality (for seepage, surface water, and groundwater), characterizing groundwater flow, developing a conceptual hydrogeologic model, and evaluating potential NPDES / APP compliance issues. Code 2 - $100,000 to less than $250,000

X Check if project performed with current firm

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.)*

a. NAME:	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
Hale Barter	Technical oversight, project management, hydrologic modeling	1. TOTAL: 27	2. WITH CURRENT FIRM: 20

d. LOCATION *(City and State)*: Tucson, AZ

e. EDUCATION *(DEGREE AND SPECIALIZATION)*:	f. PROFESSIONAL TRAINING - REGISTRATIONS
B.S., Hydrology, University of Arizona (1988) M.S., Hydrology, University of Arizona (1995)	

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*

Courses: Model Calibration and Predictive Uncertainty Analysis using PEST, Groundwater Vistas Training: "Optimization & MODFLOW-SURFACT" and "Calibration & MODFLOW2000," Applied Techniques for Model Calibration and Stochastic Simulation, Discrete Feature Data Analysis, Geometric Modeling, Exploration Simulation, and Flow and Transport Modeling

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State):*
Upper Agua Fria Recharge Project (Prescott Valley, AZ)

(2) YEAR COMPLETED: 2011

Professional Services	Construction (if applicable)
2011	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Modeling Lead: Characterized hydrogeologic conditions, modeled groundwater flow, and prepared a monitoring plan and permit applications for an effluent recharge facility (managed and constructed) along the upper Agua Fria River. Code 2 - $100,000 to less than $250,000

2.

(1) TITLE AND LOCATION *(City and State)*
Central Avra Valley Storage & Recovery Project / Southern Avra Valley Storage & Recovery Project (Tucson, AZ)

(2) YEAR COMPLETED: 2006

Professional Services	Construction (if applicable)
2006	

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Modeling Lead: Developed various models to simulate pilot- and full-scale recharge and recovery operations; conducted particle path and transport modeling to project water-quality impacts. Code 4 - $500,000-$1 million

3.

(1) TITLE AND LOCATION *(City and State)*
U.S. Air Force Plant 44, Tucson Airport Area Superfund Site (Tucson, AZ)

(2) YEAR COMPLETED:

Professional Services	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Modeling Lead: Led groundwater flow, particle-path, and solute-transport modeling to simulate TCE and 1,4-dioxane migration and containment, to optimize the pump-and-treat remediation system, and to estimate future exposure-point concentrations for risk assessment; using MODFLOW-SURFACT, modeled flow and transport (vapor and water-phase) to establish TCE cleanup levels at soil-vapor extraction sites. ***Ongoing.*** Code 2 -$100,000 to less than $250,000 (last 2 years)

4.

(1) TITLE AND LOCATION *(City and State)*
Water Supply Investigations for the Rosemont Mine (Tucson, AZ)

(2) YEAR COMPLETED: 2013

Professional Services: 2013	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Modeling Oversight: Designed and provided oversight for groundwater flow modeling to evaluate not only the feasibility of developing a wellfield to supply the mine but also drawdown impacts in a regional, basin-fill aquifer system. Code 5 - $1 million to less than $2 million

5.

(1) TITLE AND LOCATION *(City and State)*
Adequate Water Supply Investigations (Mohave County, AZ)

(2) YEAR COMPLETED: 2010

Professional Services: 2010	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Modeling Lead: Developed groundwater flow models, evaluated available water supplies, and provided data for permitting of a large, proposed development and solar power facility. Code 3 - $250,000 to less than $500,000

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.)*

a. NAME:	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
Jim Davis	Project manager, senior hydrogeologist	1. TOTAL: 36	2. WITH CURRENT FIRM: 28

d. LOCATION *(City and State)*: Tucson, AZ

e. EDUCATION *(DEGREE AND SPECIALIZATION)*:	f. PROFESSIONAL TRAINING - REGISTRATIONS
B.S., Hydrology, University of Arizona (1979)	Registered Professional Geologist #25060, AZ Registered Professional Geologist #5804, CA

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*

Served as the Tucson Section Chair of the Society for Mining, Metallurgy, and Exploration in 2002, 2003, and 2010; the Pacific Southwest Region Chair in 2006; Arizona Chapter Chairman in 2011; and At-Large Director in 2013

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State):*
Groundwater Availability Assessment for Liberty Utilities (Sierra Vista, AZ)

(2) YEAR COMPLETED:

Professional Services	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Project Lead: Evaluated groundwater availability and future drawdown trends in an existing service area; recommended locations and designs for new wells to meet anticipated future water demands. ***Ongoing.***
Code 1 - Less than $100,000

2.

(1) TITLE AND LOCATION *(City and State)*
Adaman Irrigation & Supply Wells (Goodyear, AZ)

(2) YEAR COMPLETED: 2013

Professional Services: 2013	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Project Lead: Designed, constructed, and tested four large-capacity irrigation and public supply wells to replace older wells that were displaced by the construction of Arizona Highway 303 (Outer Loop Freeway); ran zonal tests during drilling to provide information for designing the wells and optimizing water quality. Code 4 - $500,000-$1 million

X Check if project performed with current firm

3.

(1) TITLE AND LOCATION *(City and State)*
Water Supply Investigations for the Rosemont Mine (Tucson, AZ)

(2) YEAR COMPLETED:

Professional Services:	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Project Lead: Designed, drilled, and tested exploration and pilot water supply wells; worked closely with the client to develop a water supply plan; helped develop a community well protection agreement; designed/implemented monitoring program for community wells; designed a wellfield; and provided technical support for modeling the wellfield areas. ***Ongoing***. Code 7 - $5 million to less than $10 million

4.

(1) TITLE AND LOCATION *(City and State)*
Well Assessments at the Springerville Generating Station (Springerville, AZ)

(2) YEAR COMPLETED

Professional Services	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Project Manager: Evaluated well and pump maintenance issues; provided recommendations for well repair and rehabilitation; sited, designed, and installed new production wells; evaluated methods for optimizing wellfield production and performance. ***Ongoing.*** Code 5 - $1 million to less than $2 million

5.

(1) TITLE AND LOCATION *(City and State)*
Assured Water Supply Investigations (Tucson, AZ)

(2) YEAR COMPLETED: 2008

Professional Services: 2008	Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Technical Oversight: Investigated groundwater conditions to demonstrate an assured water supply for a development near Ryan Field; prepared an assured water supply application; designed, installed, and tested a new supply well.
Code 2 - $100,000 to less than $250,000

X Check if project performed with current firm

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.)*

a. NAME:	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
Dennis Hall	Project manager, technical oversight	1. TOTAL: 37	2. WITH CURRENT FIRM: 28

d. LOCATION *(City and State)*: Tucson, AZ

e. EDUCATION *(DEGREE AND SPECIALIZATION)*:	f. PROFESSIONAL TRAINING - REGISTRATIONS
B.S., Geology, Northern Arizona University (1979) M.S., Hydrology, University of Arizona (1983)	Registered Professional Geologist #23687, AZ Registered Professional Geologist #4999, CA

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*

Board member, Arizona Hydrological Society

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State):*
APP Support & Monitoring for the Solana Generating Station (Gila Bend, AZ)

(2) YEAR COMPLETED: 2012
Professional Services: 2012 | Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Project Manager / Technical Oversight: Managed and provided technical oversight for hydrogeologic investigations associated with an Aquifer Protection Permit for a 280 megawatt concentrating solar power plant; designed a monitoring network. Code 3 - $250,000 to less than $500,000

2.

(1) TITLE AND LOCATION *(City and State)*
Characterization & Impact Analysis for EIS (Grand Canyon, AZ)

(2) YEAR COMPLETED: 2012
Professional Services: 2012 | Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Technical Oversight: Provided senior technical oversight for an evaluation of regional hydrogeologic conditions to project the potential of uranium mining on groundwater, springs, and soils on a million acres of federal land adjacent to Grand Canyon National Park.
Code 4 - $500,000 to less than $1 million

X Check if project performed with current firm

3.

(1) TITLE AND LOCATION *(City and State)*
Groundwater Treatment System for the Deer Valley Computer Park (Phoenix, AZ)

(2) YEAR COMPLETED: 1999
Professional Services: 1999 | Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Senior Hydrogeologist: Investigated the feasibility of treating contaminated groundwater at a municipal production well using an advanced oxidation process; implemented and oversaw the operation of a pump-and-treat system; designed, constructed, and tested an extraction and recharge system for treating 3,000 gpm of contaminated groundwater.
Code 4 - $500,000 to less than $1 million

4.

(1) TITLE AND LOCATION *(City and State)*
Remedial Investigations — Hassayampa Landfill Superfund Site (Buckeye, AZ)

(2) YEAR COMPLETED: 2005
Professional Services: 2005 | Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

X Check if project performed with current firm

Project Manager / Senior Hydrogeologist: Managed and/or participated in remedial investigations, feasibility studies, remedial action plans, and remedial actions for soil and groundwater contamination; met substantive requirements for an Aquifer Protection Permit. Code 5 - $1 million to less than $2 million

5.

(1) TITLE AND LOCATION *(City and State)*
APP Support for Proposed Solar Power Plants (Glendale & Holbrook, AZ)

(2) YEAR COMPLETED: 2010
Professional Services 2010 | Construction (if applicable)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

Project Manager / Technical Oversight: Managed and provided senior technical oversight for hydrogeologic investigations in support of an Aquifer Protection Permit for a proposed solar power plant that would use compressed air energy storage (CAES) technology. Code 2 - $100,000 to less than $250,000

X Check if project performed with current firm

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED: **ONGOING**	
Groundwater Remediation at the North Indian Bend Wash Superfund Site (Scottsdale, AZ)	PROFESSIONAL SERVICES: **ONGOING**	CONSTRUCTION *(If applicable)*

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT:
Motorola Solutions, Inc.	Multiple ongoing contracts since 1983	Over $5,000,000 for the past 5 years

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

Located in the Salt River and Paradise Valley groundwater basins, NIBW was added to the EPA's Superfund list in the early 1980s after VOCs were detected at several municipal supply wells. Soil and groundwater characterization efforts uncovered a regional plume caused by multiple historical industrial facilities after VOCs were detected at several municipal supply wells. Working initially on behalf of Motorola and later representing the entire group of participating companies, M&A has been integrally involved in the project since its inception, providing hydrogeologic investigation, remediation, and strategic management services. We have played a key role in developing, gaining regulatory approval for, and implementing all aspects of the remedy. M&A provides ongoing support to evaluate and optimize the remedial actions.

- Evaluated aquifer properties, VOC distributions, and the potential for vertical contaminant migration at individual source areas and within the regional plume
- Developed capture / containment approaches for various components of the groundwater remedy using models and other analytical tools
- Identified potential source areas based on historical facility data and VOC concentrations in vadose zone sediments and the uppermost aquifer
- Designed and implemented long-term programs for monitoring water levels and water quality to track VOC migration; evaluated monitoring data to verify plume containment and compliance
- Selected favorable drilling sites for remedial extraction wells by evaluating hydrogeologic, water quality, and land ownership data, along with groundwater flow model projections; designed and oversaw the construction and testing of three large-diameter extraction wells
- Developed a strategy for pumping remedial extraction and municipal supply wells to optimize plume containment
- Implemented vadose zone models at various source areas to assess the potential threat to groundwater from VOCs and the need for continuing SVE
- Developed or helped develop several groundwater flow, particle tracking, and solute transport models to achieve remedial design / action objectives
- Used the models to evaluate groundwater and contaminant movement, to assess plume containment under a range of extraction regimes, and to compare the effectiveness of remedial alternatives
- Updated and recalibrated the flow-and-transport model to assess remedy performance as part of a 5-Year Review process
- Used the updated model to project the hydraulic capture of the operating groundwater remedy and assess optimization approaches

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED: **ONGOING**	
Hydrogeologic Investigations at the Cholla Power Plant (Joseph City, AZ)	PROFESSIONAL SERVICES: **ONGOING**	CONSTRUCTION *(If applicable)*

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT:
Arizona Public Service/ Pinnacle West Capital Corporation	Multiple ongoing projects since 2005	Over $2,000,000 in last 5 years

g. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

When a long-term land lease was terminated, threatening Cholla's wellfield, M&A provided a range of services to ensure that the plant would maintain continuity for its water supply. In addition to relocating production wells, M&A conducted analyses to support land-condemnation negotiations, implemented a comprehensive monitoring program, and developed a flow model to help assess pumping impacts and optimize wellfield operations. Under an expedited deadline, M&A not only shifted production to other wells, but we also helped APS expand the wellfield and develop redundancy to provide reliable backups. In addition, we helped replace the monitoring network, to the extent possible, on APS land and supported land-condemnation negotiations.

- Launched an exploration program to identify the best locations for new production wells
- Assessed hydrologic and water quality conditions, including fracture density, to support the siting and design of production wells
- Designed and implemented a borehole drilling, logging, and testing program to characterize fracturing and assess potential yields from the sandstone aquifer
- Designed, installed, and tested 11 new production wells and modified two existing wells
- Deployed downhole explosives in selected boreholes to enhance fracture connectivity and increase yields to more than 3,000 gpm in some wells
- Selected and managed the contractors who installed the distribution system, wellhead, and pumping infrastructure under extremely tight deadlines
- Designed, installed, and tested about 20 monitoring wells in the shallow alluvial and the deeper sandstone aquifers
- Equipped monitoring wells with data loggers and pressure transducers to continuously record the aquifers' response to pumping and streamflow runoff
- Evaluated water level and pumping data to develop recommendations for operating the wellfield more efficiently and sustainably
- Supported an evaluation of the potential for well casings and pumps to deteriorate because of water quality issues, including dissolved gases
- Equipped monitoring wells with data loggers and pressure transducers to continuously record the aquifers' response to pumping and streamflow runoff
- Equipped selected monitoring wells with continuous electrical conductivity probes to track changes in response to pumping
- Sampled production and monitoring wells to evaluate water quality
- Developed a groundwater flow model to simulate drawdown impacts from historical pumping and to identify operational strategies that would minimize the decline of water levels and the migration of poor-quality water
- Reviewed regional models to evaluate the validity of their assumptions and projections in wellfield area

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED: 2013	
Upper Agua Fria Recharge Project (Prescott Valley, AZ)	PROFESSIONAL SERVICES: 2013	CONSTRUCTION *(If applicable)*

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Town of Prescott Valley	Multiple ongoing contracts since 2010	$590,000

h. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The Town of Prescott Valley operates a wastewater treatment facility that discharges to the Agua Fria River, a source of recharge for the regional aquifer system. In recent years, the facility discharged about 2 million gallons per day (MGD) to the river; this rate will increase as the population grows. Over the past decade, M&A has provided a range of hydrogeologic services to support feasibility investigations and permit applications to meet this client's growing goals for storing effluent. We developed a phased approach that initially entailed acquiring a short-term Managed USF permit in 2003. This allowed the client to accrue storage credits while we collected the data needed to design full-scale facilities and obtain a long-term Constructed USF permit, which was issued in mid 2006. In 2007, we started investigations to evaluate additional recharge site(s). We identified a site near the existing in-channel facility where surface infiltration basins will be constructed. This location will allow the client to integrate management activities for the two facilities, maximizing effluent storage within the notable hydrogeologic and land ownership constraints. In 2011, we prepared and submitted permit applications for a new USF permit and amended APP..

- Analyzed land use and ownership data to identify potential recharge alternatives and develop a conceptual design for selected alternatives
- Characterized the lithologic conditions and infiltration capacity of near-surface soils via trenching and infiltration testing
- Compiled a database to evaluate hydrogeologic conditions, surface water flow, infiltration characteristics, and historic groundwater discharge from the Prescott AMA
- Worked closely with Prescott Valley and an engineering consultant to develop a preliminary design for the recharge facilities
- Evaluated hydrogeologic conditions in the vadose and saturated zones by drilling exploration and monitoring wells
- Modeled groundwater flow to project the effects of full-scale recharge operations
- Evaluated the potential for unreasonable harm to existing land and water uses

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED: **2010**	
Zone 4 Wellfield Evaluation & Replacement Well Installation (Glendale, AZ)	PROFESSIONAL SERVICES: **2010**	CONSTRUCTION *(If applicable)*

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
City of Glendale	$96,000	$61,100

i. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The City of Glendale's Oasis Water Treatment Plant was constructed in 2007 to supply to its Zone 4 distribution area. This phased project will eventually serve up to 30 mgd at full buildout in 2025. Under Phase 1, which was completed in 2007, facilities were constructed to treat about 10 mgd of surface water that is delivered to the plant via the Arizona Canal. Completed in 2011, Phase 2 was implemented to increase plant capacity by 10 mgd and ensure a reliable supply during canal dry-ups and periods of surface water shortage. It required augmenting supplies with groundwater. M&A served on a multidisciplinary team led by CH2M Hill to develop this groundwater supply. We began by evaluating and ranking 11 existing City wells that could potentially be used to supply this water; ranking criteria included distance from the treatment plant, registered production capacity, site dimensions, and anticipated configuration and condition. We then conducted field investigations at the four most viable wells to assess their physical condition, potential yield, site-specific aquifer properties, and logistical factors. M&A also assessed options for using these wells to supply the treatment plant, considering factors such as capacity, capital and O&M costs, risk, logistical issues, and water quality. We found that replacing the wells would incur the highest initial cost but offered the highest production potential, lowest O&M cost, and lowest overall risk. We ultimately developed specifications for four replacement wells and oversaw their drilling, installation, testing and development...

- Used the results of reconnaissance investigations, downhole video surveys, and various analyses to prioritize wells for further field investigations
- Identified sensitive well site issues (historic preservation areas, noise, and inconvenience to commercial, residential, and adjacent city service areas) and coordinated mitigation plans
- Developed and ranked alternatives for activating the Zone 4 wellfield based on several factors, including relative capital and O&M costs
- Prepared a report with recommendations for wellfield activation, and presented the results to City decision makers
- Evaluated downhole video surveys and borehole geophysical logs
- Prepared a construction report for the replacement wells
- Designed four high-capacity replacement wells up to about 1,700 feet in depth based on the zonal test results, lithologic descriptions and sieve analysis of drill cuttings, and borehole geophysical logs
- Provided field oversight for well construction
- Selected intervals for zonal testing in the pilot borehole, monitored water quality parameters, and collected samples for lab analyses
- Specified procedures for decommissioning selected old wells; oversaw and approved decommissioning
- Managed contractors who installed and operated test pumps, conducted video surveys, and performed minor well rehabilitation
- Prepared technical specifications for drilling, constructing, developing, and testing the new supply wells
- Prepared submittals for well and de minimus discharge permits
- Modeled the potential impacts of pumping on nearby wells to help site potential new wells

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED: **Ongoing**	
Well Inventory & Preliminary Capital Improvement Plan (Maricopa, AZ)	PROFESSIONAL SERVICES: **Ongoing**	CONSTRUCTION *(If applicable)*

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT: 1 -	e. TOTAL COST OF PROJECT
Maricopa-Stanfield Irrigation & Drainage District	$210,000	$120,000 (to date)

j. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The Maricopa-Stanfield Irrigation & Drainage District was formed in 1962 to supply water for meeting agricultural demands. The District owns a 200-mile conveyance system (canals, laterals, pipes, and wells) that delivers locally pumped groundwater and Colorado River water from the CAP. In the future, less CAP water will be available for irrigation as the "agricultural pool" is phased out and Colorado River shortages occur. In addition, CAP water will become more expensive as electrical costs rise in response to new emissions-reducing requirements at Navajo Generating Station, the source of nearly all of CAP's power. As a result, the District needs to significantly increase its groundwater pumping capacity. M&A and Carollo Engineers are working with the District's general manager to develop a phased, programmatic approach to improvements for the wellfield and conveyance system. This approach will enable the District to meet its goal for increasing its pumping capacity within a few years. We will be developing a preliminary CIP that identifies the well and conveyance infrastructure needed to deliver water at an economically viable cost. The CIP will consider performance requirements, anticipated water demands, and available CAP water supplies, and identify projects that will achieve the District's goals for increased production. It will prioritize the well and conveyance CIP projects developed in this study and identify locations of rehabilitated, replacement, and new wells. In addition to the CIP, M&A is developing an Excel-based interactive planning tool that the District can use to adjust CIPs as additional information becomes available and conditions change

- Characterized the general hydrogeologic conditions to identify strategic locations for groundwater production
- Established the requirements and protocols for rehabilitating or replacing wells and improving the conveyance system to transport irrigation water
- Inventoried wells and canals and developed databases and GIS layers that the District can manage
- Evaluated and ranked the condition of the District's operable and potentially operable wells, canals, laterals, and pipelines; identified wells that are a priority for further investigation, rehabilitation, or replacement

6. ADDITIONAL INFORMATION

a. PROVIDE ANY ADDITIONAL INFORMATION YOU FEEL MAY BE NECESSARY TO DESCRIBE YOUR FIRMS QUALIFICATIONS. *(ATTACH ADDITIONAL SHEETS AS NEEDED.)*

M&A offers services in the areas of Water Supply & Recharge, Environmental Hydrogeology, Water Policy & Economics, and Mining Hydrogeology. We also offer capabilities in groundwater flow modeling and instrumentation and monitoring.

Water Supply & Recharge: We develop sustainable water supplies — including Assured & Adequate Water Supplies — for municipal, industrial, and irrigation purposes in Arizona's most hydrologically complex and arid environments. We have the experience and expertise to characterize hydrogeologic conditions, identify potential sources and optimal sites for new groundwater supplies, design programs for installing wells, establish sustainable yield, and optimize pumping regimes. We also offer a range of design, construction oversight, and testing services for new wellfields. In addition, M&A has over 30 years of experience developing aquifer recharge and recovery solutions for CAP water, surface water, and effluent. We can assess the technical feasibility of recharge at selected locations and rank sites in the context of hydrogeologic conditions, costs, and other key criteria.

Environmental Hydrogeology: M&A has extensive experience assessing and remediating subsurface contamination (in groundwater, the vadose zone, and soils) at federal and state Superfund sites. We specialize in developing models to project contaminant behavior and evaluate effective remedial strategies in complex hydrogeologic environments. Our experience spans both traditional pump-and-treat and soil-vapor extraction to innovative, in-situ remediation approaches. M&A also designs and administer programs to satisfy requirements for Aquifer Protection Permits (APPs), AZPDES / NPDES permits, and Underground Injection Control (UIC) permits. We design and implement monitoring programs and data-acquisition systems.

Water Policy & Economics: M&A helps clients develop their water resources portfolio to ensure the long-term viability of their facilities, projects, and communities by considering policy, economic, and technical factors. We also offer unique capabilities in water demand analysis and forecasting. In addition, we provide a sound technical foundation for negotiations and legal proceedings involving water rights, stream adjudications, and other water-related disputes.

Mining Hydrogeology: M&A provides field testing, monitoring, and modeling support to clients who want to develop new mining operations or expand existing ones. We have extensive experience conducting hydrogeologic investigations to support the EIS process, developing data and analyses that not only document existing conditions but also project impacts to water resources and the environment.

Hydrologic Modeling: M&A has one of the largest, most experienced modeling teams in the Southwest. We use hydrologic models for a range of applications: to predict the impacts of pumping on surface water and groundwater resources, to assess recharge feasibility, and to identify dewatering requirements. Our models also allows us to predict the source, fate, and transport of vadose zone and groundwater contamination; evaluate alternate mitigation strategies; design remedial actions; and allocate environmental liability for litigation support. We use a variety of modeling tools, including MODFLOW, MODPATH, FEFLOW, PEST, MODFLOW-SURFACT, and others.

Instrumentation & Monitoring: M&A designs systems for measuring and recording water levels, barometric pressure, flow rates, injection rates, and water-quality parameters in groundwater, as well as for measuring and recording various environmental indicators at the surface and in the vadose zone. We collect and store sensor data using dataloggers and make data available on demand or at scheduled intervals via telemetry and manual downloads. We can also host web-based, user-friendly data portals so facility operators and managers can access real-time field data.

7. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

a.	Percentage of Total Work Attributable to State, Federal and Municipal Government Work:	<5%
b.	Percentage of Total Work Attributable to Non-Government Work:	>95%

8. AUTHORIZED REPRESENTATIVE. The foregoing is a statement of facts.

Signature: Mark M. Cross Date: 12/30/14

Name: Mark M. Cross Title: President