

Technical Capabilities

A

Ability-to-pay	8270
Accessibility compliance& evaluations	8120
Acid mine drainage	8313
Acoustics	8560
Administrative record management	8270
Aerial photography	8250
Aggregate testing	8530
Agrometeorology	8250
Amphibian studies & surveys	8290
Ancillary service monitoring	8440
Aquatic restoration & systems	8290
Aquifer / stream	8320
Arc flash	8440
Architectural design	8120
Architectural models	8560
As-built / TSC drawings	8322
Atmosphere / watershed ecosystem models	8250
AutoCAD	8322
Automated Data Acquisition Systems	8320
Automation, irrigation	8560
Automation, powerplant & generation control	8450
Avian surveys & research	8290

B

Bank & bed stabilization & bed material sampling	8240
Bathymetric surveys	8560
Battery testing	8450
Bearing cooling systems	8410
Biocontrol	8560
Blasting requirements	8312
Borescope inspection	8410
Borrow area development	8311/8320
Borrow, bridge, & building investigations	8320
Bridge & building foundations, geologic analysis	8320
Bridges	8150
Budget & schedule developing	8010
Building additions, modifications, rehabilitation, & design (green)	8120
Building earthquake safety & structural, risk, & seismic analysis	8120/8150
Bulkhead gates	8410
Bullchase gate, stoplog design	8410

C

Cable testing	8450
Cableways	8410/8430
CALSIM (optimization system model)	8210
Canal system modeling	8560
Canals, cofferdams, & pipelines, geotechnical engineering	8311
Canals, water conveyance	8140
Cathodic protection	8540
Cavitation detection	8560
Cement/Pozzolan Evaluation	8530
Chemical Inventories	8540
Chemical processes & testing	8190
Chemistry for hazardous waste products	8540
Chemistry, quality assurance	8190
Circuit breaker design	8430
Circuit breaker ratings & testing	8440
Clean Water Act compliance	8190
Client liaisons & client support	8010
Climate analysis, simulation & change	8210
Climate studies	8250
Closed Circuit TV (CCTV) inspection & evaluation	8130
Coatings & Corrosion School	8540
Coatings Testing, Inspection, & Evaluation	8540
Composite Materials	8540
Comprehensive Facility Reviews, mechanical equipment	8410
Compressed air systems	8410
Computer-aided design (CAD)	8322
Concrete & Concrete Repair Schools	8530
Concrete Coring	8530

Concrete dam foundations	8312
Concrete dams & concrete structure inspections	8130
Concrete dams, seismic analysis	8110
Concrete pipe design & investigations	8140
Concrete Repair, Testing & Technology	8530
Concrete, High Performance	8530
Concrete, precast	8120
Condition Assessment, Materials or Structures	8530/8540
Cone penetration tests (CPT)	8320
Construction cost estimates & proposal reviews	8520
Construction cost trends, index	8520
Construction geologic mapping	8320
Construction management & contract schedules	8510
Construction quality assurance/ materials testing	8530
Construction support & inspections	8510
Consumptive use	8210
Contract claims consultation services & management	8510
Control system analysis & testing	8440
Control system design	8430
Controlled Low Strength Materials (CLSM)	8530
Conveyance systems automation	8140
Conveyors	8410
Core recovery	8320
Corrosion Protection/Monitoring	8540
Corrosivity Testing of Soils & Waters	8540
Cost allocation benefits & evaluation	8270
Costs vs. benefits	8270
Cranes & hoists	8410
Critical Path Method (CPM) schedules	8510
Cross-drainage studies	8250
Cutoff walls	8313

D

Dam & diving inspections & diving team	8130
Dam breach modeling	8560
Dam decommissioning planning, removal, or modification (sediment transport)	8240
Dam failure inundation studies & maps	8250
Dam foundations, grouting	8312
Dam instrumentation database	8320
Dam overtopping protection	8560
Dam removal design (embankment dams)	8313
Dam safety & Operations & Maintenance	8320
Dam safety research, hydraulic models	8560
Dam safety, hydrological aspects	8250
Dams & water conveyance investigation & analysis	8320
Dams, hydraulic structure designs & modifications, safety, removal design	8130
Dams, overtopping	8312
Dams, risk assessment	8300
Data acquisition systems for condition monitoring	8450
Debris control	8410
Decision support systems	8210
Desalination	8190
Design natural channels & habitat	8140
Designs & specifications	8314
Dewatering	8320
Differential water controls	8410
Disaster response services	8313
Dispersive soil	8320
Dissolved gas analysis (DGA)	8440
Diversion structures	8150
Diversion structures (hydrologic modeling)	8240
Doble Program	8440
Dozer trench mapping	8320
Draft tube gates	8410
Drainage, ground water & drought analysis	8210
Dredges	8410
Drilling specifications & format	8320
Drought indices	8250

E		Footings, geotechnical engineering	8311
Early warning systems	8250	Forecast precipitation & runoff	8250
Earned Value Management (EVM)	8510	Forensic evaluation of failures	8530/8540
Earth & concrete dams, geotechnical engineering	8300	Foundations	8314
Earth School	8530	Foundation materials testing & research	8530
Earthquakes	8330	Freeboard, geotechnical engineering	8313
Earthwork construction control/materials testing	8320	Fuel cells	8450
EAs & EISs	8240/8270/8290	Fuse plugs	8313
Ecological research	8290/8560	G	
Economics—values, studies, investigations	8270	Gate & valve design	8420
Ecosystem models	8250	Gate valve testing program, bullchase, stoplog design, & clamshell	8410
Editing & writing	8270	Generator analysis	8430/8440/8450
Effects of water pricing structures on water demand	8270	Generators	8430
Electric power research & field testing	8440/8450	Geographic Information Systems (GIS)	8260
Electrical & Mechanical Engineering Division	8400	Geologic/geotechnical projects	8313
Electrical Design Group	8430	Geologic mapping, interpretations, planning, specifications, & geotechnical conditions	8320
Electrical equipment component, design selection, condition monitoring, & inspection	8440	Geological expertise for earthquake hazards	8330
Electrical equipment factory inspection	8430	Geomorphology	8330
Electrical maintenance advice, assistance, & safety	8450	Generator air coolers	8410
Electromagnetic fields measurement	8450	Geophysics & Seismotectonics Group	8330
Electronics	8440/8450	Geosynthetic Materials & Geomembranes	8540
Elevators	8410	Geosynthetics design	8314
Embankment dams	8300	Geotechnical engineering	8300
Embankment dams, dynamic analysis	8314	Geotechnical engineering, studies, & designs	8314
Embankment dams, piping & seepage	8311	Geotechnical Integrator (gINT), geologic log software	8320
Embankment zoning	8300	Geotechnical services & publications	8300
Embankments, stability analysis	8314	Geotechnical specifications drawings & paragraphs	8314
Emergency management	8250	Geotechnical Support	8322
Endangered species	8290	Geotechnical Testing	8530
Endangered species, economic values	8270	Global Positioning Systems (GPS)	8260
Engine generators	8410	Governor alignment program, mechanical	8410
Engineering estimate	8520	Graphic presentations	8270
Engineering Geology	8330	Gravity, micro-gravity measurements	8330
Environmental Compliance & Management	8540	Ground improvement	8314
Environmental hydraulics	8560	Ground motions & ground-penetrating radar	8330
Environmental impact remediation & restoration	8540	Grounding, plant & personal protective	8450
Environmental Site Assessment/ Impact statements	8540	Groundwater	8210
Environmental studies	8290	Groundwater banking; data acquisition-piezometers; flow models; & recharge	8320
Evapotranspiration (ET) analysis & prediction	8210	Grouting	8530
Excavation	8320	Grouting design & foundation, geologic analysis	8320
Excitation system design	8430	H	
Excitation system testing	8440	Hazard classification	8320
Exotic/Non-native species	8290/8560	Hazardous Energy Control Program	8450
Extreme precipitation	8250	Hazardous Materials Testing & Management	8540
F		Hazardous waste site characterization,	8320
Facilities, Instructions, standards, & Techniques (FIST)	8410/8440/8450	Hazardous waste site remediation & removal actions	8313
Factory inspection	8510	Hazardous waste treatment	8190
Failure Analysis of Construction Materials	8530/8540	Headcut erosion modeling	8560
Fatigue failure evaluations	8560	Heap leach pads, geotechnical engineering	8313
Fault activity assessments & mapping	8330	Heating, ventilating, & air conditioning equipment	8410
Feasibility studies	8270	HEC-HMS model applications	8210
Feedback control system modeling & analysis	8440	Herpetological studies	8290
FERC relicensing cases, economic investigations	8270	High voltage facilities & diagnostics	8450
Field exploration/monitoring programs & mapping	8300	High-voltage facilities electrical design	8430
Field sampling protocol, geologic	8320	Historic preservation considerations & evaluations	8120
Filter & drain analyses	8311	Hoists	8410
Financial analyses of projects	8270	Hydraulic analyses for dams	8130
Finite element analysis	8110	Hydraulic Equipment Group	8420
Fire detection & alarm systems	8430	Hydraulic Investigations & Laboratory Services Group	8560
Fire suppression systems	8410	Hydraulic laboratory & modeling	8560
Fish & wildlife	8290	Hydraulic modeling (1D, 2D, 3D)	8240/8560
Fish facilities, civil design	8120	Hydroelectric research	8450
Fish moss screens, equipment, & ladders	8410	Hydroelectric units, alignment	8410
Flash boundary calculations (arc flash)	8440	Hydrographic surveys	8240
Flood hydrology	8250	Hydrographs	8250
Flow meters application & operation	8560		
Flow meters, design & specifications	8410		
Fluvial geomorphology	8330		

Hydrologic engineering, studies, & models	8210	O	
Hydrology, flood & statistical analyses	8250	Oil purification & lubrication systems	8410
Hydrometeorology, hydrometeorological studies & threat forecasting	8250	Operation & maintenance manuals (water systems)	8320
Hydropower Diagnostics & SCADA Group	8450	Operation & maintenance training (power systems)	8440/8450
Hydropower generation, cost evaluation modeling investigations	8270	OPSTUDY	8210
HYDROSS-HSS modeling system	8210	Optimization, economic investigations	8270
I		Outlet works	8130
IGSM	8210	P	
Incident & serious accident investigations	8450	Paints & Protective Coatings	8540
Independent Government Cost Estimates (IGCE)	8520	Paleoflood Hydrology	8330
Indian Trust Assets (ITA) evaluation	8270	Particle imaging velocimetry	8560
Infrared Inspection Program	8450	Penstock & Pipe Inspection Program	8410
Inspections & damage survey reports	8320	Petrography of Concrete/Rocks/Soils	8530
Instrumentation & inspections	8320	Photogeologic mapping	8320
Insulation, high-voltage testing & diagnostics	8440	Photogrammetry	8320
Interior building design	8120	Piezometers	8320
Invasive species	8290/8560	Pipe design	8312
Irrigation structures	8150	Pipelines	8140
K		Pipelines, specification drawings, geotechnical	8311
KPSIM	8210	Piping & seepage, embankment dams & foundations	8313
L		Plant control & automation	8430
Laboratory models,tours, & shops	8560	Plant foundations, investigation & analysis	8320
Land classification for irrigation, land resources	8210	Plants, electrical	8430
Landscape architectural design	8120	Plants, seismic analysis	8120
Landslides geology & register	8320	Plastics & Polymeric Materials	8540
Landslides, geotechnical	8314	Plumbing systems	8410
Large-scale dynamic & structural testing, 1- & 5-million pound capacity	8530	PMPs & Service Agreements	8010
LAST Program	8250	Pollutant discharge elimination system permits	8540
LiDAR acquisition & processing	8250	Population at risk (flood)	8250
Life cycle cost estimates	8520	Power System Analysis & Control Group	8440
Life extension	8450	Power system waterways hydraulic transients	8420
Lift safety compliance & evaluations	8120	Power systems, electrical design	8430
Lighting systems	8430	Power transformers design	8430
Line surveys, detailed	8322	Powerplant & pumping plant layout	8120
Liquefaction analyses	8313	Powerplant automation, feedback control & system testing, & optimization	8440/8450
Logic controller applications & training	8440	Powerplant auxiliary mechanical equipment	8410
Loss of life estimates (flood)	8250	Precipitation analysis, prediction, & frequency	8250
Lubricating oil systems	8410	Pressure vessel testing & inspection	8410
M		Probability analysis	8330
Machine condition monitoring	8450	Propane & diesel engines, generators	8410
Magnetic fields exposure	8450	Protective relaying	8440
Masonry structures	8120	Public safety assessments	8320
Mass Concrete	8530	Publications & Presentations	8270
Materials engineering & research	8530/8540	Pumps & turbines, efficiency testing	8410
Materials Property Databases	8530	Pumps, hydraulic equipment	8420
Mechanical Equipment Group	8410	Q	
Membrane filtration	8190	Quagga mussel	8560
Metals & Metallurgy	8540	Quaternary geology	8330
Metalwork	8120	R	
Meteorology & meteorological support	8250	Radio telemetry	8290/8560
Microstations	8330	Real-time control & data acquisition software	8450
Mine sites & mineral processing facilities	8313	Reclamation Auto Modified Einstein Procedure (BORAMEP)	8240
Modeling & models (hydraulic)	8560	Reclamation of underground & surface mines	8313
Modernization & uprate consultations	8430	Recreation analysis	8270
MODFLOW & MODSIM river simulation model	8210	Recreation site landscaping	8120
Monetary benefits of actions	8270	Regional Atmospheric Modeling System (RAMS)	8210
Motors (electric) motor starters, adjustable speed drives	8430	Reinforced concrete, civil structures	8150
N		Reinforced concrete, hydraulic structures	8130
National Environmental Policy Act (NEPA)	8270/8290/8540	Reinforced concrete, plant structures	8120
Natural soil & rock slopes & landslides	8311	Relay testing	8440
NEXRAD precipitation analysis	8250	Remediating	8313
Non-consumptive use demands & non-use water values	8270	Remote camera	8330
Non-Destructive Testing of Materials	8540	Remote sensing & geograph information	8260
Nonlinear structural analysis	8110	Remote terminal unit (RTU) (custom programmable)	8450
Numerical analysis & modeling of earthen structures & foundations	8314	Repayment capacity studies, economic investigations, & irrigated agriculture	8270
Numerical modeling-fluid flow	8560	Replacement, Operations, & Maintenance (RO&M)	8320
		Report editing, writing, graphics, publishing	8270
		Reservoir current measurements & selective withdrawals	8560

Reservoir lining	8530	Soil & rock slope landslides	8314
Reservoir sedimentation & operations	8240	Soil Cement	8530
Resistivity	8330	Soil classification	8320
Restoration & river & reservoir modeling & surveys	8240	Soil dating	8330
Retaining wall	8314	Soil instrumentation analysis & layout	8320
Riparian & wetland studies	8290	Soil modification	8313
Rip-rap & erosion control, & slope protection	8314	Soil Testing	8530
Risk analyses of dams	8250	Soil, rock, & foundation material research & testing	8311
Risk analyses, assessment, & reduction dams (RATS)	8300	Soil-structure interaction modeling	8110
Risk-based profiling	8300	Solar powered pumping	8190
River basin applications & simulation models	8210	Specialized testing	8530/8540
River hydraulics	8240	Specifications	8510
River improvements & restoration plans	8140	Specifications drawings	8322
Riverware	8210	Speed governors	8410/8430/8440
Roads	8150	Spillways	8130
Rock map classifications	8320	Standard drawings	8510
Rock material testing & mechanics (geotechnical)	8312	Standard penetration tests (SPT)	8320
Rock mechanics & blasting design (geologic analysis)	8320	Standing Operating Procedures (SOPs)	8320
Rock mechanics analysis & design	8312	Statements of work (SOWs)	8510
Rock Testing	8530	Static stability & stress analyses	8311
Roller Compacted Concrete (RCC)	8530	Stochastic Analysis, Modeling & Simulation (SAMS)	8250
Rope access	8320	Stoplogs	8410
S		Stream gauging	8560
Safe Drinking Water Act compliance	8190	Stream restoration	8240
Safety of Dams (SOD) inspections	8320	Streamflow forecasting	8250
Safety of Dams, economic investigations	8270	Stress measurement & nondestructive testing	8410
Safety of Existing Dams (SEED) examinations	8320	Strong motion monitoring & instrumentation	8330
Safety, grounding & plant electrical	8450	Structural behavior & instrumentation	8320
Satellite imagery & scanning high resolution	8250	Structural foundations	8311
Satellite network	8450	Structural modeling	8110
SCADA	8450	Structural steel	8120
Scale models	8560	Subsurface exploration & sampling	8320
Scour & degradation predictions	8240	Sump pump	8410
Sealants/Sealers	8530/8540	Surface & groundwater modeling	8210
Sealing mine shafts & adits	8313	Sustainable design features	8190
Sedimentation & river hydraulics	8240	Switchyard & substation civil structural engineering design & layout	8120
Seepage	8312	Switchyards (design)	8430
Seepage geochemistry	8220	Synchronous motor starting & testing	8450
Seepage measurements	8320	T	
Seepage studies, geologic analysis	8320	Tailings dams, geotechnical engineering	8313
Seepage/groundwater modeling	8314	Technical climbing services for dams, spillways, & powerplants	8540
Seismic & seismological studies	8330	Technical presentations & reports	8270
Seismic analysis & design	8314	Technical publications library	8313
Seismic evaluation of buildings	8120/8150	Tectonic settings of features	8330
Seismotectonic mapping & studies	8330	Temperature sensors	8410
Selective withdrawal structures power & pump plants	8120	Terrestrial photogrammetry	8320
Selective withdrawal structures, outlet works	8130	Testing machine calibration	8530
Selective withdrawal systems	8410	Thermal properties testing	8530
Self-Consolidating Concrete (SCC)	8530	Timber structures	8120
Service/unit/plant water systems	8410	Tomography	8330
Settlement & bearing capacity analyses	8311	Track existing work for accomplishment	8010
Settling basin design	8240	Training of foreign technical specialists	8530/8540
Shear strength	8320	Transformer design	8430
Shear wave velocity	8330	Transformers (testing)	8450
Sheet pile walls, cellular, & other types of cofferdams	8312	Trashracks, conveyors, & cleaning equipment	8410
Shops, Laboratory	8560	Traveling water screens	8410
Shotcrete	8530	Troubleshooting mechanical equipment	8410
Site characterization	8311	TSC Business Manager	8010
Site selection for hydraulic structures	8140	Tunnel communications	8450
Site selection layout design, hydraulic structures	8130	Tunnel mapping	8320
Site selection layout design, powerplants & pumping plants	8120	Tunnels	8150
Site-specific river basin applications	8210	Turbine design & efficiency testing	8420
Slope protection evaluation & design	8314	U	
Slopes	8312	U2RANS	8240
Snow Estimation & Updating System (SEUS); & analysis & prediction	8250	Underground excavations & specifications drawings	8312
Social analysis	8270	Underground geologic mapping & methods	8320
Soil & rock sampling/in situ testing	8320		

Underwater blast analysis	8110
Undisturbed sampling	8320
Unit alignment, balancing, & vibration analysis	8410
Unit commitment (generation)	8450
Unit prices	8520
Unsteady & Unstructured Reynolds Averaged Navier-Stokes	8240
Uprate studies	8430
V	
Velocity estimates (modeling)	8240
Vibration testing	8530
Visitor centers & office buildings	8120
W	
Waste disposal & dumps	8313
Waste minimization & pollution prevention	8540
Wastewater Treatment	8190
Water conservation research	8560
Water conveyance structure foundations, geologic	8320
Water delivery equipment	8420
Water demand analysis	8270
Water hammer analysis	8140
Water level controls	8410
Water measurement consulting & training	8560
Water operation & maintenance program	8320
Water resources geotechnical projects	8314
Water Resources Planning & Operations	8210
Water resources, hydraulic	8560
Water surface profiles (modeling)	8240
Water temperature control devices	8410
Water, Environmental & Ecosystems Division	8200
Watershed hydrology & modeling	8210
Waterstops	8130
Weather analysis & forecasting	8250
Welding procedures	8410
Well & well field design	8320
Wetlands & site landscape design	8120
Wetlands delineation	8290
Wetlands, water conveyance features	8140
Wildlife & Fisheries studies	8290
Wireless instrumentation	8450
Writing & editing	8270
Z	
Zebra mussel & corbicula control	8560