



S.S. Papadopoulos & Associates, Inc.  
Environmental and Water Resource Consultants

# GSA Environmental Services Contract

No. GS-10F-0462M

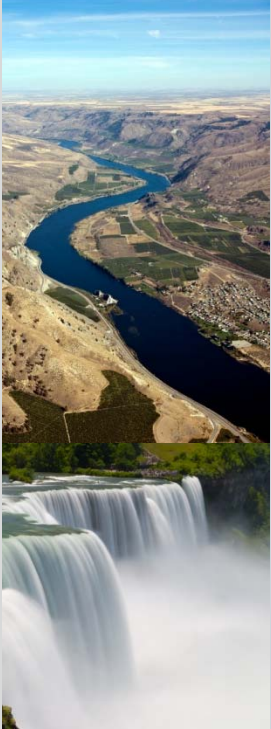
Small Business

Effective May 31, 2012

Corporate Offices  
7944 Wisconsin Avenue  
Bethesda, Maryland 20814  
(301)718-8900  
[www.sspa.com](http://www.sspa.com)

U.S. Locations  
Bethesda | Boulder | Portland | San Francisco | Albuquerque

International Locations  
Beijing | Waterloo | Montreal



## The Company

**S.S. Papadopoulos & Associates, Inc. (SSP&A)** provides specialty services in **water resource evaluation, geochemistry, and environmental remediation.**

SSP&A's reputation is built upon pioneering achievements in hydrology, from the development of innovative analytical test methods to determine aquifer properties, to the development of the precursors to today's standard groundwater modeling tools. SSP&A has continued its leadership through the development of numerical simulators that are used worldwide for flow and transport modeling; the development of software for hydrologic analyses; technical and professional training; R&D; and the successful completion of hundreds of complex and challenging projects for public and private entities in the USA and internationally.

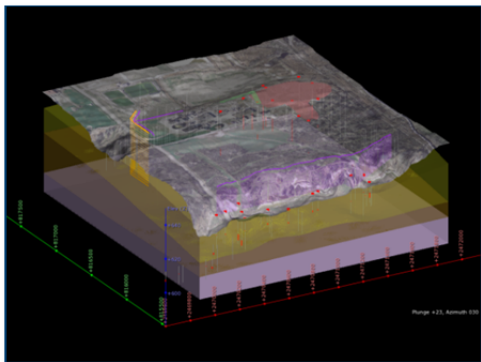
### SSP&A offers technical expertise in:

- Groundwater and surface water resource management and evaluation;
- Hydrology, hydrogeology, and geology;
- Environmental and forensic geochemistry;
- Numerical modeling for groundwater, surface water, conjunctive use, contaminant fate and transport, and geochemical reactive transport;
- Ecohydrology;
- Geographic Information Systems (GIS);
- Programming and software development for water resource applications;
- Groundwater, soil, and sediment remediation; and
- Regulatory compliance and negotiation.

### Leading the Industry for Over 30 Years

SSP&A has been at the forefront of the groundwater industry since 1979, successfully completing hundreds of projects in diverse environments throughout the United States and internationally.

We are proud of our reputation for innovative approaches to our clients' needs, the specialized technical expertise of our staff, and the recognition that we have earned over the years.



SSP&A's corporate office is located in Bethesda, Maryland. Regional offices are located in **Boulder, Colorado; San Francisco, California; Portland, Oregon; Austin, Texas; Montreal and Waterloo, Canada; and Beijing, China.** Our offices are closely affiliated, and staff work together to provide the optimum combination of technical expertise and experience to deliver innovative and effective solutions for our clients.

## Services offered under GSA

Specific services offered by **S.S. Papadopoulos & Associates, Inc. (SSP&A)** under the U.S. General Services Administration (GSA) Environmental Services Schedule 899 include the following Special Item Numbers (SINs):

### SINs 899-1 and 899-1RC: ENVIRONMENTAL CONSULTING SERVICES

#### WATER-RESOURCES EVALUATIONS

- Analysis of groundwater/surface-water relationships and conjunctive use.
- Identification of local and regional water uses.
- Identification of the direction and rates of groundwater and contaminant movement
- Development of groundwater supply, and evaluation of water-resources for irrigation, industrial and potable uses.
- Analysis and implementation of subsurface disposal/injection of liquids.
- Mine dewatering and slope stability.
- Testing and analysis of aquifers to define properties of water-bearing units, secondary permeability characteristics, leakage of confining units, storage capacity, and safe yield.



#### GROUNDWATER, SURFACE-WATER, SOIL AND SEDIMENT CONTAMINANT INVESTIGATIONS

- Identification of potential sources of contamination, and evaluation of the extent and fate of contamination in groundwater, soil and sediment.
- Identification and assessment of potential receptors.
- Identification and evaluation of light and dense NAPL contamination.
- Analysis of historical presence and transport of contamination.
- Analysis of soil/sediment/groundwater interactions and transport of contamination.

#### GEOCHEMICAL EVALUATIONS

- Evaluation of the origin(s), fate, and transport of contaminants.
- Geochemical and isotopic fingerprinting.
- Interpretation of chemical congeners (e.g., PCBs, Dioxins).
- Analysis of organic / inorganic contamination and solid-phase interactions.
- Evaluation of the natural and enhanced attenuation of contaminants.
- Geochemical modeling, including bench-testing and simulation of in-situ leaching.

#### Contract Number

GS-10F-0462M

#### Contract Duration

September 25, 2002 -  
September 24, 2017

#### Size

Small Business

#### Special Item Numbers

899-1 and 899-1RC:  
Environmental Consulting  
Services

899-7 and 899-7RC:  
Geographic Information  
Systems (GIS) Services

899-8 and 899-8RC:  
Remediation Services

#### DUNS Number

05-204-0714

#### Small Business

#### NAICS Codes

511210      541712

541330      541990

541511      562219

541620      562910

#### Other NAICS Codes

213112      213115

213113      221310

213114      562998

611420

#### Contractor Administration

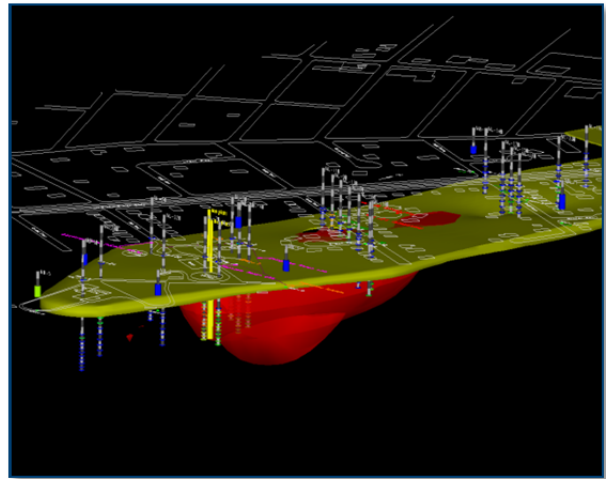
Jeanne M. Bailey  
Bethesda, Maryland

## MODELING OF GROUNDWATER/SURFACE-WATER AND SOLUTE TRANSPORT

- Simulation of groundwater flow and contaminant transport.
- Assessment of the effects of developing a groundwater resource.
- Simulation of aquifer management alternatives and design of resource development schemes, including conjunctive use evaluations.
- Evaluation of the impacts of waste disposal and mining activities on aquifer systems over time.
- Groundwater-recharge feasibility and design.
- Evaluation of the use of aquifers as reservoirs for heat energy storage.
- Evaluation of basin-scale water-quality issues.
- Simulation and analysis of storm-flow.
- Evaluation of river/aquifer interaction in riparian zones.
- Comprehensive watershed evaluations.
- Assessment of basin-scale river allocation.
- Evaluation of the movement of dissolved and/or immiscible contaminants.
- Assessment of the efficiency and response of aquifer remediation schemes.
- Assessment of saltwater intrusion into coastal aquifers, tidal mixing, and other near-shore effects.

## SINs 899-7 and 899-7RC: GEOGRAPHIC INFORMATION SYSTEMS (GIS) SERVICES

SSP&A provides services in geospatial analysis and cartographic production. Our analysts provide custom graphic output including large-format plots, 3-D visualizations, and temporal model simulations, and deliver products for internet use or on-site integration. These products support environmental programs including mitigation planning, best management practice, regulatory enforcement, and legal matters. SSP&A has state-of-the-art computing and data storage capacity, including Microsoft Visual Basic (.NET), C++, Python, R and Java for visual processing, ESRI's ArcView/ArcGIS, Spatial Analyst, 3D Analyst, Image Analyst and Intergraphs Spatial Metadata Management System, EVS/MVS, LeapFrog Hydro, and dot.Spatial applications. Printing capabilities include an HP DesignJet 650c plotter.



## GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

- Groundwater monitoring data visualization.
- Analysis of contaminant migration.
- Aquifer and watershed characterization.
- Digitizing and data manipulation (e.g. raster to vector).
- Spatial and temporal 3-D visualization.
- Mashups (integration of data from several sources).
- Project design including field GPS implementation and analysis, and custom database design.



## LAND USE AND LAND RECORDS MANAGEMENT WITH GIS

- Legal exhibits, publications, and courtroom graphics.
- Land use planning and zoning.
- Development of best management practices.
- CAD-based map interpretation and creation.

## SINs 899-8 and 899-8RC : REMEDIATION AND RECLAMATION SERVICES

SSP&A offers capabilities in the identification and screening of remedy alternatives, and the design, construction, and operation of remedies. SSP&A has managed characterization and remediation programs in compliance with federal, state, and local guidelines for many sites impacted by metals, chlorinated compounds, petroleum hydrocarbons, PCBs and/or light/dense NAPLs. SSP&A has been involved in all phases of remediation, including conceptual studies, development of design drawings and specifications, bid document preparation and evaluation, construction management, field supervision and inspection, and report preparation.

- Evaluation and design of remediation alternatives, and implementation of the selected system.
- Design, testing, and optimization of pump-and-treat and other remedies.
- Design and construction of passive treatment technologies for contaminated media.
- Implementation of enhanced reductive dechlorination for final site cleanup.
- Design, testing, and installation of soil-vapor extraction, air sparging, and surfactant systems.
- Design and implementation of large-scale contaminated soil excavation.
- Design and construction of innovative asphalt caps to prevent infiltration and allow industrial use of capped areas.
- Design and construction of large collection and treatment systems for contaminated spring and surface water flows.
- Phytoremediation of shallow groundwater contamination.
- Wetland restoration permitting and construction oversight.
- Development and evaluation of innovative technologies.



## Small Business Status

Since May 31, 2012, **SSP&A** is classified as a **Small Business** as a result of changes to the U.S. Small Business Administration's Small Business Size Standards, effective March 26, 2012. U.S. Census Bureau North American Industry Classification System (NAICS) codes associated with SSP&A's small business activities are:

| NAICS Code | NAICS Code Description   |
|------------|--|
| 511210     | Software Publishers  |
| 541330     | Engineering Services:  |
|            | General \$4.5m small business size standard  |
|            | Special \$17.5m size standard for Marine Engineering and Naval Architecture  |
|            | Special \$27m size standard for Military and Aerospace Equipment and Military Weapons  |
|            | Special \$27m size standard for Contracts and Subcontracts for Engineering Services Awarded Under the National Energy Policy Act of 1992 |
| 541511     | Custom Computer Programming Services   |
| 541620     | Environmental Consulting Services  |
| 541712     | Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)  |
| 541990     | All Other Professional, Scientific, and Technical Services   |
| 562219     | Other Nonhazardous Waste Treatment and Disposal  |
| 562910     | Remediation Services   |

### Descriptions of SSP&A's Small Business NAICS codes

#### 511210 Software Publishers

This industry comprises establishments primarily engaged in computer software publishing or publishing and reproduction. Establishments in this industry carry out operations necessary for producing and distributing computer software, such as designing, providing documentation, assisting in installation, and providing support services to software purchasers. These establishments may design, develop, and publish, or publish only.

#### 541330 Engineering Services

This industry comprises establishments primarily engaged in applying physical laws and principles of engineering in the design, development, and utilization of machines, materials, instruments, structures, processes, and systems. The assignments undertaken by these establishments may involve any of the following activities: provision of advice, preparation of feasibility studies, preparation of preliminary and final plans and designs, provision of technical services during the construction or installation phase, inspection and evaluation of engineering projects, and related services.

#### 541511 Custom Computer Programming Services

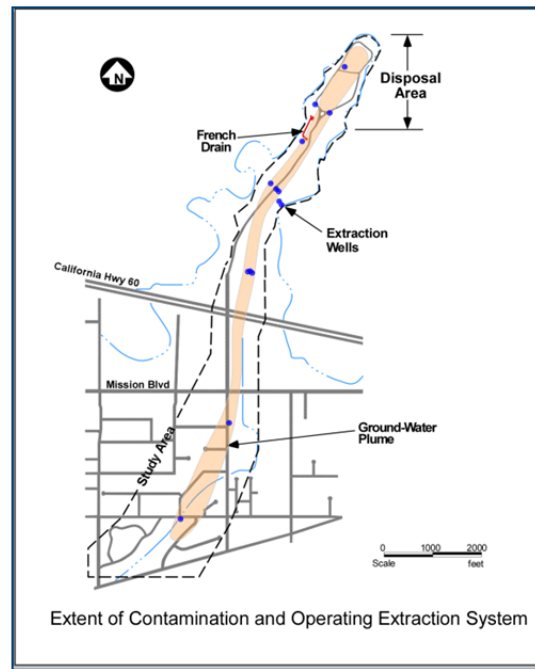
This U.S. industry comprises establishments primarily engaged in writing, modifying, testing, and supporting software to meet the needs of a particular customer.

### 541620 Environmental Consulting Services

This industry comprises establishments primarily engaged in providing advice and assistance to businesses and other organizations on environmental issues, such as the control of environmental contamination from pollutants, toxic substances, and hazardous materials. These establishments identify problems (e.g., inspect buildings for hazardous materials), measure and evaluate risks, and recommend solutions. They employ a multidisciplinary staff of scientists, engineers, and other technicians with expertise in areas, such as air and water quality, asbestos contamination, remediation, and environmental law. Establishments providing sanitation or site remediation consulting services are included in this industry.

### 541712 Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)

This U.S. Industry comprises establishments primarily engaged in conducting research and experimental development (except biotechnology research and experimental development) in the physical, engineering, and life sciences, such as agriculture, electronics, environmental, biology, botany, computers, chemistry, food, fisheries, forests, geology, health, mathematics, medicine, oceanography, pharmacy, physics, veterinary and other allied subjects.



### 541990 All Other Professional, Scientific, and Technical Services

This industry comprises establishments primarily engaged in the provision of professional, scientific, or technical services (except legal services; accounting, tax preparation, bookkeeping, and related services; architectural, engineering, and related services; specialized design services; computer systems design and related services; management, scientific, and technical consulting services; scientific research and development services; advertising and related services; market research and public opinion polling; photographic services; translation and interpretation services; and veterinary services).

### 562219 Other Nonhazardous Waste Treatment and Disposal

This U.S. industry comprises establishments primarily engaged in (1) operating nonhazardous waste treatment and disposal facilities (except landfills, combustors, incinerators and sewer systems or sewage treatment facilities) or (2) the combined activity of collecting and/or hauling of nonhazardous waste materials within a local area and operating waste treatment or disposal facilities (except landfills, combustors, incinerators and sewer systems, or sewage treatment facilities). Compost dumps are included in this industry.

### 562910 Remediation Services

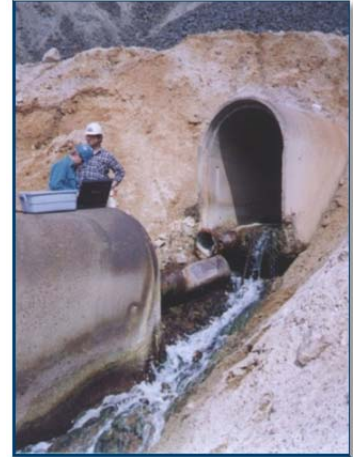
This industry comprises establishments primarily engaged in one or more of the following: (1) remediation and cleanup of contaminated buildings, mine sites, soil, or ground water; (2) integrated mine reclamation activities, including demolition, soil remediation, waste water treatment, hazardous material removal, contouring land, and revegetation; and (3) asbestos, lead paint, and other toxic material abatement.

## Manpower Availability

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The quality of SSP&A is based on its **highly qualified, nationally recognized** staff of specialists. The company currently employs approximately 40 technical staff, 3 technicians, and 8 administrative staff in 6 offices located throughout the United States and Canada. Our small size allows staff in all offices to be closely affiliated, calling upon individual capabilities to provide the technical expertise and experience needed to complete a project. We are proud of the specialized technical expertise of our staff, most of whom have been with the firm over 10 years. The technical training of SSP&A staff includes:

- Earth Sciences: Hydrogeology, Hydrology, Geology, Geochemistry, Geophysics, Ecohydrology.
- Water Resources Management, Environmental Science.
- Engineering: Civil, Chemical, Environmental, Geological.
- Technical Specialties: Modeling (groundwater, contaminant flow and transport), Software Development, Data Management, Geographic Information Systems (GIS).



The vast majority of SSP&A technical staff holds advanced degrees in related fields, with the majority possessing a Master's degree and nearly one third possessing a PhD in a directly relevant discipline.



## Job Qualifications and Labor Descriptions

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### Principal

More than 20 years of experience as a groundwater hydrogeologist and/or geochemist with an M.S. or more than 15 years of experience with a Ph.D. with a demonstrated record of superior achievement, national or international stature and peer reviewed publications. Performs independent peer and technical quality reviews of projects and written publications. Serves as the final technical authority, relying on extensive technical and project expertise. Identifies and collaborates directly with clients, contractors and subcontractors including communicating results, and managing budgets and schedules. Principals typically hold an active State or National Board license or registration and are owners and/or officers of the corporation, and lead company planning and executive management.

### Principal Engineer

More than 20 years of experience as an engineer with an M.S. or more than 15 years of experience with a Ph.D., national or international stature, and peer reviewed publications. Directs project teams in the performance and management of projects. Performs independent peer and technical quality reviews of projects and written publications. Identifies and directly collaborates with clients, contractors and subcontractors including communicating results, and managing budgets and schedules. Typically holds an active State or National Board license or registration.

### Senior Associate

Demonstrates outstanding competence in hydrogeology and/or geochemistry with reference articles and book publications, more than 15 years of experience with an M.S. or more than 12 years of experience with a Ph.D. Directs project teams in the performance and management of projects. Performs independent peer and technical quality reviews of projects and written publications. Collaborates directly with clients, contractors and subcontractors including communicating results, and managing budgets and schedules. Typically holds an active State or National Board license or registration.

### Associate

Demonstrates outstanding competence in hydrogeology and/or geochemistry including performing and managing superior caliber work, reference articles and book publications, more than 12 years of experience with an M.S. or more than 10 years of experience with a Ph.D. Directs project teams in the performance and management of projects. Performs independent peer and technical quality reviews of projects and written publications. Collaborates directly with clients, contractors and subcontractors including communicating results, and managing budgets and schedules. Typically holds an active State or National Board license or registration.

### Senior Scientist

Generally more than 10 years of experience with an M.S. or more than 8 years of experience with a Ph.D., and a record of performing superior caliber work. Conducts complex scientific assessments and analyses. Manages project tasks, budgets and schedules, and provides technical

supervision to junior staff. Prepares, or directs the preparation of, reports and proposals. Responsible for the synthesis and interpretation of site data and the development of valid and consistent conclusions and results.

### **Senior Project Scientist**

Generally more than 8 years of experience with an M.S. or more than 6 years of experience with a Ph.D., and a record of performing superior caliber work. Conducts complex scientific assessments and analyses; assistant management of project tasks, budgets and schedules; and provides technical supervision to junior staff. Prepares reports and proposals and/or manages the preparation of reports and proposals. Responsible for the synthesis and interpretation of site data and the development of valid and consistent conclusions and results.

### **Project Scientist**

Generally more than 6 years of experience with a B.S., or 4 years of experience with an M.S., or 2 years of experience with a Ph.D., and able to independently scope, schedule and undertake project tasks. Conducts complex scientific assessments and analyses; contributes to technical reports and proposals; and provides technical supervision to junior staff. Responsible for the synthesis and interpretation of site data and the development of valid and consistent conclusions and results.

### **Senior Staff Scientist**

Entry level with an advanced degree in related field, or with a B.S. and more than 4 years of experience. Undertakes project assignments and tasks, under supervision from senior staff, that require judgment and experience and ensures that they are completed correctly and on time. Contributes to technical reports and proposals. Responsible for spatial and/or temporal data preparation, evaluation and initial interpretation.

### **Staff Scientist**

Entry level with a B.S. or M.S. and an education background in the environmental sciences or engineering. Conducts project assignments and tasks under supervision from senior staff. Responsible for spatial and/or temporal data preparation, evaluation and initial interpretation.

### **Technical Editor/ Draftsman**

Two (2) years of experience with a B.S. and an education background in related field. Areas of expertise include: temporal / spatial data analysis, application of GIS software, and map and graphics design. Prepares Computer Aided Drawings (CAD) or graphics for technical reports. Uses advanced software to develop and design high quality graphs and maps to communicate complex technical information.

### **Administrative Support**

Educational background in related discipline and high school diploma required. Assures that administrative services are provided to the client within budget and on schedule. Prepares and reviews reports and correspondence for consistency and conformance with office templates and procedures. Composes correspondence requiring some technical understanding. Provides office support to technical staff. Other responsibilities include document reproduction, maintenance of project files, and miscellaneous non-technical tasks.