

EXPERIENCE
INTEGRITY
SERVICE



# Engineering + Hydrogeology Consulting Services



Hargis is a specialty hydrogeology and environmental engineering firm with deep technical expertise. We earn the trust of our clients by fiercely protecting their interests. Since 1979, we've provided environmental consulting services solving complex issues for a wide range of clients.

#### Hargis is a certified small business.

Contracting with a small business diversifies and strengthens your supply chain, contributes towards your sustainability goals, and provides access to government contracting opportunities.

## WHAT SETS US APART

Our mission is to provide expert advice and solutions to our clients with integrity and outstanding service. We deliver this mission with an unparalleled level of quality inspired by collaboration and employee-ownership. For more than 40 years, the outcome has been practical and workable solutions, resulting in long-term client relationships. We do this with an extreme dedication to experience, integrity, and service.

# Experience

The pride we take in our work comes from the experience and lessons we've learned in delivering excellent service. This experience is our foundation and we are dedicated to creating valuable work products for clients and a rewarding environment for our employees.

# Integrity

Hargis' solid reputation comes from believing in and standing by a simple principle: do the right thing. Hargis conducts business with honesty, professionalism, and respect. Our obligation to operating using these principals has bolstered our stellar reputation.

#### Service

For Hargis, client service represents the foundation of our business. Our success is grounded in client trust—formed as the result of our commitment to fully understand the needs of our clients' environmental concerns. Only then can we provide clients with the best possible service and solutions.

#### **Services**

- Environmental Investigation + Remediation
- Regulatory + Legal Support
- Remediation Engineering
- Groundwater Exploration + Development

#### Markets

- Aerospace
- Industrial Manufacturing
- Legal
- State + Local Government
- Mining
- Public Utilities

# SERVICES - Environmental Investigation + Remediation



Hargis has the experience and the expertise to solve your soil and groundwater contamination challenges. We are the experts known for successfully mitigating complex environmental issues from industrial discharges to waste disposal practices to naturally occurring water quality concerns. Hargis is proud to deliver cost effective solutions to some of the nation's largest industrial corporations and government agencies.



# RANGE OF SERVICES

# Site Investigations

Conducting traditional and innovative investigation approaches including large-scale groundwater characterization and remedy monitor well installations, various drilling methods, vertical profiling, and temporary small diameter wells.

# Vapor Assessments

Conducting vapor intrusion assessments and mitigation at residential, commercial, and industrial sites and buildings.

# **Program Management**

Performing overall environmental program management including designing, permitting, contracting, and construction of remediation systems.

# **Environmental Modeling**

Developing numerical and conceptual site models to support risk evaluations, feasibility studies, remediation pilot testing, and engineering design.

# **Financial Analyses**

Preparing environmental liability cost evaluations, including determinations for allocation, financial assurance, and environmental reserves.

# Compliance

Performing extensive groundwater and soil investigations for regulatory compliance at CERCLA/Superfund sites and RCRA facilities.

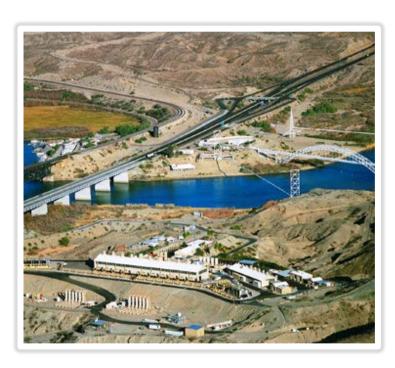
# **Environmental Sampling**

Performing comprehensive soil, soil vapor, groundwater, and separate phase liquids sampling for contaminant investigations.

#### **Waste Minimization**

Minimizing waste generation through the use of direct-push soil/soil vapor assessments and low-volume groundwater purge/sampling methods.

# SERVICES - Regulatory + Legal Support



Hargis is called upon regularly by clients, attorneys and potentially responsible parties to provide technical consultation related to environmental issues. Our approach is one that involves meticulous and thorough collaboration with the various stakeholders involved in these sensitive projects.

We help you navigate the regulatory framework to complete complex projects on time and on budget.



#### **RANGE OF SERVICES**

#### Assessments

Conducting environmental investigations as part of due diligence assessments for property transfers.

# Investigation & Remediation

Conducting site investigations in support of feasibility study remedial alternative evaluations and the selection of remedies under Resource Conservation and Recovery (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) programs.

#### Remediation

Planning, designing, coordinating, permitting, and implementing site remediation programs in compliance with regulatory requirements.

#### **Public Relations**

Preparing public participation plans and participating in agency-required public meetings.

### **Financial Assessments**

Assisting with cost allocation determinations among responsible parties for environmental site cleanup activities and long-term environmental liabilities.

## **Expert Witness**

Providing testimony and technical support for risk management, contaminant transport and hydrogeology as part of litigation, mediation and settlement negotiations.

## Response and Negotiation

Assisting clients in responding to notice of violations and negotiation of Remedial Action and Consent Agreements with regulatory agencies.

# Compliance and Permitting

Implementing required tasks included in enforcement or compliance orders and preparation of environmental permit applications.

# **SERVICES - Remediation Engineering**



Hargis engineers provide remediation expertise that spans a range of engineering services and disciplines. We work to develop site-specific goals, including the lifecycle implications of proposed remedial alternatives, to reach a successful project conclusion for our clients. Our engineering proficiency includes mechanical, civil, chemical, and environmental disciplines and our engineers have the ability to carefully evaluate our clients' problems and provide long-term solutions. Hargis routinely prepares engineering plans and specifications, obtains necessary permits, provides construction management services, and treatment system operation and maintenance.

#### What do I like best about Hargis?

"Hargis is a top-shelf technical consulting company, a true consultancy. They go beyond just completing a task and really advise on long-term strategy and outcome."

- Environmental Program Manager, Confidential Client

#### **RANGE OF SERVICES**

# System Design & Construction

Designing and implementing soil and groundwater remediation systems ranging in size from small pilot tests to large full-scale treatment systems.

# **Treatment Technologies**

Evaluating treatment technologies, ranging from simple filtration, liquid/vapor carbon absorption, and ion exchange resin systems to highly complex chemical oxidation, thermal oxidation, bioremediation, engineered wetlands, refrigeration/ condensation, fluidized bed reactors, and acid-gas dry scrubbing treatment technologies.

# Contaminant Experience

Treating various types of contaminants including metals, volatile and semi-volatile organic compounds, polychlorinated biphenyls, nitrate, sulfide, 1,4-dioxane, perchlorate and petroleum compounds, and evaluation of treatment alternatives for emerging contaminants including per- and polyfluoroalkyl substances (PFAS).

# Operations & Maintenance

Operating and maintaining remediation systems; including trouble-shooting, management and evaluation of data, preparation of regulatory documents, tracking of system operational metrics, tracking permit compliance, verification of health and safety practices, and making recommendations for system optimization.

# SERVICES - Groundwater Exploration + Development



Hargis assists clients with the identification and development of groundwater resources for sustainable water supply projects. Our engineers and hydrogeologists have steadfast reputations working with municipalities, water agencies, and private landowners to achieve their groundwater sustainability goals.

Hargis develops effective use of groundwater supplies using a variety of methods including groundwater resource evaluations, impact and mitigation analysis, and water well and recharge basin design. Hargis provides comprehensive groundwater monitoring networks, groundwater management planning, well design, well rehabilitation, and construction support services.

#### What does success look like to me?

"Success is making progress in a major objective by using data to answer questions and develop strategy. Hargis helps me do that.

- Chief of Hydrogeology, Major Metropolitan Water District

#### RANGE OF SERVICES

# Supply & Storage

Performing aquifer storage and recovery assessments, water budgets, inter-basin transfer studies, new source permitting, and assured water supply evaluations.

# **Impact Assessments**

Assessing groundwater-surface water interactions, saltwater intrusion assessments, and source water geochemical determinations.

# **Engineering & Permitting**

Designing, permitting, and construction oversight for water supply wells, recharge wells, infiltration basins, potable water treatment plants, and well-head treatment systems.

# Planning & Analysis

Performing regional and basin-wide groundwater modeling for source assessment, wellfield design, aquifer impacts, wellfield interference, recharge and dewatering, and sustainability determinations.

# **Construction Support**

Overseeing field activities for the construction of production wells, monitoring wells, well abandonments, pipelines, and water treatment facilities.

# **Groundwater Sustainability**

Evaluating management objectives to achieve groundwater basin sustainability and developing implementation plans.

# **MARKETS**

# **Aerospace**



Aerospace is the specialty market of some of our best in-house experts. Hargis professionals have spent 40 years accumulating the experience that helps aerospace companies achieve compliance and meet their business goals related to their environmental liabilities. Hargis' commitment is to develop practical programs for these clients that will meet current and emerging environmental compliance initiatives.

# **Industrial Manufacturing**



Hargis supports industrial clients of all sizes and segments and we understand that, regardless of what they manufacture, process, or manage, they all face pressures to reduce costs, increase efficiency, and make more with less. We assist in accomplishing these goals, by factoring into our services sustainability, dependability, efficiency, and success.

Hargis' goal is to assist clients as they push new boundaries. This includes a wide range of environmental expertise, a knowledgeable risk management team, and a comprehensive slate of engineering services.

# Legal



Hargis has 40 years of experience supporting clients in the legal arena. Our environmental and engineering staff experts routinely help lawyers develop a working knowledge of complex, scientific and technical issues that supports their case-winning legal strategies.

At Hargis we zero in on technical clarity. We grasp clients' most challenging problems quickly because, in addition to our comprehensive qualifications and capabilities, Hargis knows the key issues and can flesh-out the nuances that signal red flags.

# **MARKETS**

# State + Local Government



Hargis is very accustomed to working with state and local government agencies; including tribal entities. Our technical and professional experts have the capacity to deliver a wide range of services to support these agencies.

Hargis' extensive experience building relationships and learning the nuances of working with state and local governments enables Hargis to excel for these clients. We understand the importance of transparency in this sector and we know how to achieve compliance objectives accordingly.

# **Mining**



Hargis has provided hydrogeological and engineering services to assist mining clients since our founding in 1979. Excelling in this service area means staying abreast of the modern day mining needs to address not only technical and regulatory challenges, but also the issues posed by public affairs concerns. Hargis works collaboratively with its mining clients to plan and navigate their projects through strategic exploration, permitting, operations, and reclamation lifecycles.

# **Public Utilities**



Hargis has served public utilities including water providers and electrical generators for decades. We understand the everchanging regulatory framework and demanding nature of today's public utilities. Our team assists our public water utility clients in upholding their fundamental responsibility to provide safe, reliable, and secure water supplies. We develop and implement plans to augment groundwater supply; optimize wellfield and surface water operations to efficiently meet demand; and investigate and address groundwater contamination. We provide hydrogeological and engineering services to assist electrical utility clients to achieve regulatory compliance; and assist with property redevelopment to remain relevant in the industry.







# **Arizona Department of Environmental Quality**

# Central Tucson PFAS Project

Tucson, Arizona

Hargis has worked with the Arizona Department of Environmental Quality (ADEQ) on various projects to investigate and remediate per- and polyfluoroalkyl substances (PFAS) in the Tucson area including:

Marana Sampling Program Hargis conducted a reconnaissance sampling program along a 24-mile stretch of the Santa Cruz River in northwest Tucson and the Town of Marana for the presence of PFAS and 1,4-dioxane. Surface water samples along the Santa Cruz River and groundwater samples from monitor and irrigation wells were collected upgradient of the Marana municipal supply wells.

Tucson International Airport Superfund Site Hargis provides ADEQ and the Environmental Protection Agency (EPA) sampling, testing and consulting services for the presence of VOCs, 1,4-dioxane and PFAS at the Tucson International Airport Area Superfund Site. Specific tasks include evaluation of sampling protocols and establishing project specific sampling and analysis procedures, coordination with environmental laboratories and EPA consultants, and collection and analysis of groundwater samples from monitor wells and private water supply wells.

Central Tucson PFAS Project: Hargis is assisting ADEQ in protecting the Tucson Central well field by investigating the nature and extent of PFAS contamination in the regional aquifer and containing the plume by ex-situ treatment. The Central well field serves as the primary drinking water supply for over 65,000 people and the sole alternate drinking water supply for 600,000 people. The project was initiated after Tucson Water detected high concentrations of PFAS in supply wells just north of the Davis Monthan Air Force base. Hargis compiled a team of experts to conduct site investigations and remedial design in parallel to meet an accelerated schedule. Field investigations have included the collection of in-situ groundwater samples to evaluate the vertical extent of contamination; installation of a network of monitor wells; and sampling and analysis of groundwater from monitor wells. private wells, and municipal supply wells. Additionally, Hargis has teamed with Environmental Simulations, Inc. to construct a groundwater model to simulate the movement of PFAS and aid in remedial wellfield design. A pilot treatment system is currently under construction for the removal of PFAS by ion exchange technology and full-scale remedial design is on-going.

MARKET: State and Local Government

#### SERVICE AREAS:

- Environmental Investigation & Remediation
- Remediation Engineering
- Regulatory Support



# Confidential Client

Former Aerospace Facility

Fullerton, California

Hargis has provided assessment and remediation activities since the early 1980's for soil and groundwater contamination resulting from manufacturing operations at a former 313 acre aerospace facility and at a separate nearby satellite facility with complex hydrostratigraphy. Hargis determined the nature and extent of chlorinated solvent, petroleum hydrocarbons, and metals contamination across the sites and implemented remediation of soil and a perched groundwater zone, allowing redevelopment at both sites. Remediation of regional groundwater contamination at both sites is ongoing.

Hargis was responsible for implementation of a RCRA Facility Investigation and other due-diligence site assessments; humanhealth risk assessments; preparation of a Corrective Measures Study: negotiation with agencies and project stakeholders: assisting the agency with California Environmental Quality Act (CEQA) requirements and public participation; implementation of long-term groundwater treatment pilot testing; design, construction and operation of a full-scale groundwater treatment system for the satellite site; and in-process Corrective Measures Implementation with access negotiations, engineering design and permitting for the selected full-scale groundwater remedy at the main site. During these activities Hargis designed and oversaw the construction and operations of four soil vapor extraction (SVE) systems; a dual phase extraction (DPE) system; soil excavation; laboratory-bench and field pilot studies; a long-term GET pilot test that evaluated multiple treatment technologies; construction and development of over 100 groundwater monitor, injection, and extraction wells; numerical groundwater modeling; and assessment and mitigation of water quality impacts on a nearby deep municipal supply well.

# MARKET: Aerospace

- Environmental Investigation + Remediation
- · Remediation Engineering
- Regulatory Support
- Groundwater Exploration + Development





# Groundwater Investigations and Permitting Support Sierrita and Miami Mines, Phelps Dodge Corporation

Pima and Gila Counties, Arizona

Hargis provided hydrogeologic and engineering services for Phelps Dodge Corporation (now Freeport McMoran Inc.) that included assessments of potable water supply and disinfection systems, and environmental investigations in support of permitting and environmental compliance for the Sierrita and Miami copper mine operations. Groundwater quality was characterized via sampling of monitor, interceptor, and water supply wells. Hargis developed groundwater models to assess the presence and extent of sulfate-impacted groundwater and to evaluate the effectiveness of the interceptor wellfield at Sierrita mine. Hargis prepared a Feasibility Study to identify potential alternatives for managing and containing sulfate wastes. The groundwater models were also used to project future groundwater migration and water quality conditions at downgradient public supply wells. Hargis prepared an operations and monitoring plan for the Sierrita interceptor wellfield that outlined a strategy for optimizing the pumping regimen to improve the capture of sulfate impacted groundwater and associated performance monitoring.





MARKETS: Mining and Public Utilities SERVICE AREAS:

- Environmental Investigation + Remediation
- Groundwater Exploration + Development



# **Beckman Coulter, Inc. State Lead Site**

# Centrifuge Manufacturing Facility

Palo Alto, California

Hargis was retained in 2008 to evaluate the extent of soil contamination for closure. Hargis has since delineated and removed soil impacted with total petroleum hydrocarbons, volatile organic compounds, and polychlorinated biphenyls with oversight provided by the San Francisco Bay Regional Water Quality Control Board and U.S. Environmental Protection Agency.

More recently, Hargis has overseen several soil, soil gas, groundwater, and indoor air investigations to evaluate trichloroethene contamination. Hargis is currently evaluating remedial alternatives to control the migration and treatment of impacted groundwater and soil gas to reduce the potential for soil vapor intrusion in property buildings.

MARKET: Industrial Manufacturing

#### SERVICE AREAS:

- Environmental Investigation + Remediation
- · Remediation Engineering
- Regulatory Support



# Aerospace Client Former Manufacturing Facility

Long Beach, California

Hargis provided twenty years of consulting services to this aerospace client including oversight of extensive site investigations and remediation at a large former facility, historically used for aircraft manufacturing and testing.

Groundwater assessments included identification and characterization of fifteen groundwater plumes. Soil and groundwater remediation services included feasibility evaluations focused on reduction of the mass of volatile organic compounds and 1,4-dioxane in soil and groundwater. Hargis provided oversight for bench and pilot testing programs and developed soil vapor and groundwater flow and transport models to aid evaluations of in-situ and ex-situ remediation options. Engineering services included preparation of design packages for multiple soil vapor and groundwater extraction and treatment systems, permitting support, oversight of remediation system operation, and periodic optimization to ensure maximized remediation performance. Services provided by Hargis facilitated accelerated redevelopment of the property.

MARKET: Aerospace

- Environmental investigation + Remediation
- Remediation Engineering
- Regulatory Support









# **Arizona Department of Environmental Quality**

# Technical Review on Federal Superfund Projects

Locations throughout Arizona

Hargis has provided the Arizona Department of Environmental Quality (ADEQ) technical support at various federal Superfund sites including:

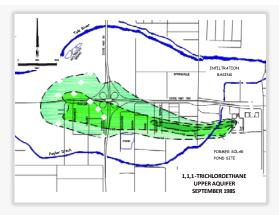
Phoenix Goodyear Airport and Motorola 52<sup>nd</sup> Street Superfund Sites: Hargis has served as a consultant to ADEQ's Federal Projects Unit for over 10 years providing technical review of documents including work plans, remedial investigations, monitoring reports, groundwater modeling reports, and EPA 5-year reviews. Hargis attended numerous focused technical meetings and community involvement group meetings.

Davis-Monthan Air Force Base: Hargis assists ADEQ with technical reviews of environmental investigations and remediation efforts being conducted by the Air Force at the Davis-Monthan Air Force Base located in Tucson. Hargis provides technical review of reports and activities related to containment of contamination from a closed landfill, cleanup and closure of petroleum release sites, review of work plans, and investigation of the nature and extent of PFAS contamination.

**Tucson International Airport Area (TIAA):** Hargis assists ADEQ with oversight of environmental investigations and remediation efforts being conducted at the TIAA federal superfund site located in Tucson.

MARKETS: State and Local Government; Legal SERVICE AREAS:

- Environmental Investigation + Remediation
- Regulatory and Legal Support



# **Beckman Instruments Superfund Site**Electronic Instruments Manufacturing Facility

Porterville, California

Hargis has provided over three decades of consulting services to Beckman Instruments including extensive site investigations and remediation at this Superfund site in Porterville, California. Services provided by Hargis included evaluation of hydrogeologic conditions and the extent of soil and groundwater contamination; performance of a Remedial Investigation/Feasibility Study (RI/FS); design and implementation of soil and groundwater remediation, and implementation of Resource Conservation and Recovery Act (RCRA) closure of a surface impoundment.

Extensive hydrogeologic investigations included soil and groundwater sampling, and installation of over 200 monitor wells and remediation wells. Hargis performed computer modeling to further evaluate groundwater conditions and assist with development and evaluation of alternative remedial wellfield designs. Hargis provided regulatory support and negotiated cleanup levels with the U.S. Environmental Protection Agency (EPA) and California regulatory agencies. A Consent Order was executed with the EPA, the lead regulatory agency, to remediate the site.

The RI/FS, Remedial Design, and Remedial Action included groundwater monitoring, extraction, treatment and discharge; and soil excavation and disposal at an off-site disposal facility. Interim and final remedial measures included construction and operation of three wellfields, two groundwater treatment systems, and several infiltration basins for discharge of treated water. The cleanup goals were achieved, and active remediation has been discontinued. The preferred remedy for the upper aquitard and lower aquifer is now monitored natural attenuation and is nearing completion.

MARKET: Industrial Manufacturing

- Environmental Investigation + Remediation
- Remediation Engineering
- Regulatory Support





# **Chatham Brothers State Superfund Site**

Escondido, California

Hargis has provided site investigation and remediation services at the Chatham Brothers State Superfund Site since 1994. Hargis was retained to conduct a Remedial Investigation (RI) to evaluate the extent of subsurface contaminants, and design and implement an interim groundwater treatment facility. Services provided during the RI include geologic mapping, aerial photograph analysis, drilling and installation of monitor wells, groundwater monitoring, aquifer testing, soil sample collection, regional survey of domestic water supply wells, sediment sampling, surface water sampling, a biological survey, characterization and disposal of on-site wastes in barrels and tanks, and preparation of a RI report. Hargis assisted with preparation of a Feasibility Study (FS) including evaluation of Applicable or Relevant and Appropriate Requirements (ARARs). The RI/FS was completed, a Remedial Action Plan (RAP) was approved by the California Department of Toxic Substances Control, and Hargis was retained to perform the Remedial Design/Remedial Action (RD/RA).

The scope of work for the RD/RA included design, installation, and implementation of a full-scale groundwater extraction and treatment system and a soil vapor extraction system. Hargis managed the excavation of poly chlorninated biphenyl (PCB) impacted soil that was removed for off-site treatment and disposal, and designed and facilitated the installation of a compacted soil cover. Hargis provides ongoing monitoring, reporting, and operation and maintenance services for both the soil and groundwater remediation systems at the site and regional irrigation wellhead treatment systems.

MARKET: Industrial Manufacturing

#### SERVICE AREAS:

- Environmental Investigation + Remediation
- Remediation Engineering
- Regulatory Support



# San Carlos Irrigation & Drainage District (SCIDD) Irrigation Well Replacement Coolidge

Pinal County, Arizona

Hargis is currently providing consulting services for SCIDD for the strategic replacement of poorly-producing or damaged irrigation wells. Replacement wells are necessary so that the district can satisfy its water demands largely with groundwater, as the future availability of Central Arizona Project (CAP) water diminishes. The initial phase of work includes the review of available hydrologic reports, groundwater data, well construction details, and well performance data.

Following completion of this review, and in consultation with SCIDD, Hargis identified six wells for potential replacement with recommendations for well construction and design specifications. Well replacement is ongoing with oversight of drilling and well installation provided by Hargis.

MARKET: Public Utilities

#### SERVICE AREAS:

- Groundwater Exploration + Development,
- Regulatory Support



# Aerospace Client Superfund Site Central California

Hargis provides ongoing turnkey management and implementation of a well drilling program at a large Superfund site in central California. Hargis manages the installation of all groundwater monitor and extraction wells to aid in remediation efforts. Hargis's services directly support the remediation infrastructure, which includes over 2,000 monitor wells and 170 extraction wells; with 25 million gallons per day pumped and treated through three on-site and four off-site groundwater extraction and treatment systems. Hargis staff directly manage, operate, maintain, and provide technical support for compliance and regulatory reporting for the operation and maintenance (O&M) program at the site. Management and implementation of standardized procedures for the O&M program has significantly reduced the client's annual spending for both routine and non-routine O&M.

Additionally, Hargis manages and conducts the soil vapor, landfill gas, and indoor air monitoring program for the site; conducts soil and groundwater investigations; and collects soil and groundwater samples. Hargis provides project staffing to manage and conduct field inspections, permitting, documentation, and provides technical hydrogeologic support on various projects.

MARKET: Aerospace

- Environmental investigation + Remediation
- Remediation Engineering
- Regulatory Support

# **TECHNICAL EXPERTS**

# You want a consultant who works as hard as you.

Hargis environmental professionals provide turnkey program support from science to compliance. We protect your interests by serving as your partner and an extension of your staff. Our expert team helps you navigate the regulatory framework to complete complex projects on schedule. Our staff includes approximately 50 hydrogeologists, geologists, engineers, technicians, and project support personnel. Biographical summaries for our Principals and Operations Directors are included in the following pages. Additional expert biographies can be found on our website. With Hargis as your partner, you have direct access to environmental experts in hydrogeology and remediation engineering at your fingertips. Connect with our experts today.



# Dave Hargis, President & CEO

With more than 50 years of experience in hydrogeology, Dr. Hargis is an expert in groundwater resource assessment and evaluation, groundwater flow, fate and transport of contaminants in groundwater, contaminant source determination, and allocation of contributions to multi-source groundwater contamination. Dr. Hargis has provided expert witness testimony in Federal and State courts throughout the United States in complex cases of groundwater contamination.

Dr. Hargis started Hargis + Associates in 1979. The Company has grown into the successful consulting firm it is today with his leadership in developing and maintaining the highest levels of expertise in hydrogeology and engineering, and overseeing a multi-state executive team of geologists, engineers, scientists, and administrative staff.

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### Leo S. Leonhart, PhD RG, CHG, Principal Hydrogeologist, Senior Technical Director

Dr. Leonhart has professional experience in geology, hydrogeology, and environmental science since 1974. His technical experience includes individual contributions and management roles in government, industry, and academia, and in operations and technical management in environmental consulting. His technical work experience is diverse including hydrogeologic investigations, watershed studies, and environmental assessments. He has managed technical teams of scientists and engineers and engaged in university teaching research as well as management of work by technical subcontractors and consultants. Additionally, he has consulted with various Native American Tribes providing technical workshops and recommendations for addressing cultural and environmental issues.

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### Michael R. Long, PG, CEM, Principal Hydrogeologist, Arizona Operations Director

Michael has professional experience in hydrogeology and geology since 1973. Current professional responsibilities include directing technical operations in Arizona including management of offices, supervision of technical staff, project management involving hydrogeologic assessments, soil and groundwater contamination studies, field investigations, environmental permitting, litigation support, and groundwater modeling. Areas of specialization include hydrogeologic assessments, groundwater and soil investigations, feasibility studies, wellfield design and construction, aquifer testing, and development of field methods for testing, sampling, well drilling, and well abandonment.

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# **TECHNICAL EXPERTS**



# Christopher J. Legg, MS, RG, Principal Hydrogeologist

Chris has over 26 years of hydrogeologic characterization and groundwater modeling experience. Chris' experience includes groundwater investigations at both state and federal Superfund sites, water supply projects, well rehabilitation, construction dewatering, landfill gas monitoring and remediation, groundwater remediation investigations at municipal and military landfills, and soil remediation investigations. Since 2018, Chris has worked as a consultant to Arizona Department of Environmental Quality (ADEQ) conducting some of the first PFAS investigation/characterization and remediation projects in the Arizona. His responsibilities have included project management, groundwater monitoring and assessment, installation of groundwater monitoring wells, interpretation of field data, analysis of aquifer tests, groundwater modeling, and report preparation. Chris has also provided extensive technical support to various clients during negotiations with state and federal agencies.

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## Anthony R. Rossi, MS, PE, Engineering Manager, Engineering Operations Director

Tony has professional experience in civil and environmental engineering since 2000 for federal, state and commercial clients. This experience has led to a knowledge of government regulations related to the industry and strong analytical and writing skills. Tony's experience includes preparation of environmental compliance documents including feasibility studies, remedial investigations, technical reports, and work plans. His experience also includes human-health risk and ecological assessments, operation and maintenance and optimization of soil/groundwater/vapor remediation systems and liquid industrial waste treatment systems. His responsibilities include directing California engineering operations, project and program management; strategic planning; project metrics and scheduling; stakeholder communication/coordination; engineering design; cost estimation; regulatory agency permit application, compliance, and reporting; preparation of work plans, feasibility studies, etc.); construction oversight of environmental remediation systems; remediation system startup; and remediation system performance reviews.

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## Steven P. Netto, MS, PG, CHG, Senior Hydrogeologist, San Diego Operations Director

Steven has professional experience in hydrogeology and geology since 1995. Current professional responsibilities include directing hydrogeology operations for the San Diego office, project management and technical oversight of Resource Conservation and Recovery Act (RCRA) Corrective Action and state Superfund sites for soil and groundwater contamination studies, Corrective Measures Studies and Remedial Design, and Corrective Measures Implementations; Conceptual Site Model development; numerical groundwater model development; remedial soil vapor and groundwater wellfield design; soil vapor and groundwater remediation systems and in-situ remediation performance evaluations and optimizations; and short- and long-term project cost forecasting.

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#### Daniel Toffelmier, Senior Project Hydrogeologist, Folsom Operations Director

Dan has professional experience in hydrogeology since 2006 and geophysics since 2002. Dan is the director of Folsom office operations and has provided environmental consulting services including program management, field investigation management and support, contractor evaluation and procurement, client liaison, data analysis and interpretation, and regulatory oversight communication on projects throughout the southwestern United States. In addition to project management experience, Dan is knowledgeable in the application of a wide variety of media collection and monitoring techniques including those used for the surface and subsurface investigations of soil, soil gas, indoor air, groundwater, and industrial materials. Dan is also experienced in the interpretation, remediation, and application of regulatory guidelines for numerous impacts to environmental media.

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# **LOCATIONS + CONTACT INFO**



Headquartered in San Diego, Hargis has other offices in the Sacramento area, Phoenix area, and Tucson.

## San Diego, CA

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## Tucson, AZ

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#### Folsom, CA

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# References available upon request

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LinkedIn: https://www.linkedin.com/company/hargis---associates-inc./

Manage your environmental projects with a partner who cares.