



PROVIDENCE

PROVIDING FOR THE FUTURE

OUR SERVICES

ENVIRONMENTAL

ENGINEERING

TECHNOLOGY & SOFTWARE

SURVEYING

SUPPORT SERVICES

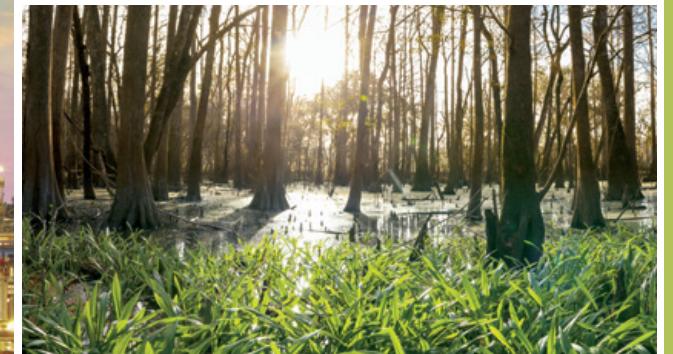
ENVIRONMENTAL

Providence offers a full range of environmental engineering and consulting services to address air, water, solid and hazardous waste, coastal and natural resources, and site evaluation and remediation regulatory matters.



Providence applies decades of expertise and experience to produce progressive solutions for complex environmental matters.

Our firm delivers services for initial planning stages and foresight for site selection, pre-engineering design consultation, facility permitting, and expansion permitting. Providence also provides assistance with post-closure and legacy issues.



Permitting and Compliance

Our comprehensive range of environmental services includes preparing permit applications, negotiating complex permitting conditions, and fulfilling reporting, monitoring, testing, modeling, risk management, and site evaluation requirements to ensure compliance long after a project ends. Our team has successfully completed numerous National Environmental Policy Act (NEPA) documents, from simple categorical exclusions to complex environmental impact statements (EIS) involving controversial projects. Providence completes permit applications for review and acceptance by the United States Environmental Protection Agency, United States Army Corps of Engineers (USACE), state departments of environmental quality and protection, state departments of natural resources, state historic preservation offices, United States Fish and Wildlife Service (USFWS), and many others.



Water Quality

Our water quality professionals have significant experience in protecting the world's largest resource through water quality permitting, sampling, modeling, and regulatory compliance. Projects involve National Pollutant Discharge Elimination System (NPDES) permitting, negotiations with regulatory agencies, and full compliance services. Services also include Stormwater Pollution Prevention Plan (SWPPP) development and implementation; Spill Prevention and Control (SPC)/Spill Prevention, Control, and Countermeasure (SPCC) Plan preparation; Facility Response Plans (FRP); environmental inspections and assessments; effluent sampling; and calculation of technology and water quality based permit limitations.

Approximate number of permits completed annually:

80+ WATER PERMITS

100+ AIR PERMITS

85+ WETLANDS PERMITS

Providence's water quality specialists conduct complex ambient sampling and modeling projects, are involved in wetlands assimilation projects, and have helped a multitude of entities effectuate actual water quality improvement through the implementation of detailed site-specific projects.

Groundwater

From groundwater sample collection for monitoring programs to soil collection for geotechnical analyses and site assessments, our focus includes solid and hazardous waste facilities and corrective action programs at Superfund, Resource Conservation and Recovery Act (RCRA), and nonhazardous solid waste sites. Projects include natural attenuation demonstrations, alternate source demonstrations, geologic and hydrogeologic subsurface investigations, groundwater remediation, monitoring well design and placement, sampling and analysis planning, and annual/semiannual report preparation.



Site Evaluation and Remediation

Our site evaluation and remediation team understands the interaction between environmental risks and the desired current and future uses of each property. From environmental due diligence services to property transactions and redevelopment, we strive to provide tailored solutions that meet each client's specific needs. Providence has developed and implemented plans for source characterization, delineation of the nature and extent of contamination, waste characterization in support of due diligence, Brownfields redevelopment, risk assessment, soil reuse, beneficial use, waste disposal, and assessment and closure of hazardous and solid waste permitted units. Providence has considerable knowledge in remedial alternatives analyses, feasibility studies, and cleanup planning activities, and has prepared and implemented a variety of corrective action plans.

Waste

Providence is an industry leader in permitting, design, construction, and multi-media compliance for solid and hazardous waste disposal facilities. Experience includes hazardous waste operating and post-closure permit renewals, Class 3 hazardous waste permit modifications, and pre-permit meetings for hazardous waste permit renewals. Providence also provides assistance with solid waste permit modifications and renewals, waste management and assessment, beneficial use and soil reuse, waste minimization, comprehensive waste management plans, waste permitting and regulatory compliance, and waste audits.



Coastal and Natural Resources

Providence offers professional services for coastal structures, coastal zone projects, and wetlands and waterways environmental permitting projects. Our solutions are derived from considerable experience and knowledge from our unique blend of environmental scientists and engineers.

Providence's environmental specialists routinely perform federal and state permitting, habitat value assessments, interpretation of state and federal wetland regulatory requirements, ecological studies, and environmental investigations. Our specialized expertise ranges from endangered species to adaptive management, and our scientists incorporate ecological and biological principles to address our clients' natural resource management concerns.

Providence coordinates with the USACE as well as the Louisiana Department of Natural Resources, the Office of Coastal Management, USFWS, and Louisiana Department of Wildlife and Fisheries officials regarding work on federal and state lands. Local entities also play an important role in the regulatory review process, and Providence coordinates with coastal zone parish programs and levee boards regarding requirements and authorizations.



Methods Used:

- *Charleston Method*
- *Hydrogeomorphic Classification*
- *Louisiana Rapid Assessment Models*
- *Wetland Value Assessment Model*

Air Quality

It is imperative to have a trusted resource to understand, execute, and comply with all environmental regulations as they become more complex. Our professionals can provide comprehensive air quality support from initial facility permitting through all aspects of compliance assurance.



\$4 Million

in air quality permitting
on average each year

2,500+

Air quality permits executed

Our experts are well versed in New Source Performance Standards (NSPS), National Emissions Standards for Hazardous Air Pollutants (NESHAP), Maximum Achievable Control Technologies (MACT), and all aspects of air quality regulations including permitting, monitoring, emissions tracking and inventory, modeling, recordkeeping, reporting, and auditing services.

Modeling services include regulatory, state implementation plans (SIP), meteorological, and technical training. Our modeling services also aid in site selection and location analysis. Our experts are well-versed with ISC, AERSCREEN, SCREEN3, and Calpuff models as well as photochemical models such as CAMx.

Providence's air monitoring expertise includes design, construction, installation, integration, and support of continuous emission monitoring systems (CEMS), cooling towers monitoring and evaluations for volatile organic compounds (VOC), and naturally occurring radioactive material (NORM) surveying and control. Our team has constructed, operated, and maintained many fixed-based and mobile ambient air monitoring stations, with instrumentation including single component analyzers, gas chromatography, and mass spectrometry. We also have trained personnel for leak detection using infrared cameras.

ENGINEERING

Providence integrates best practices and principles into all our engineering services across multiple disciplines. Our clients include state and local governmental agencies, industrial and commercial groups, as well as the private sector. Our project experience varies from water and sewer projects to landfills, drainage pump stations, levees, and residential developments.

Our team embraces the ethical responsibility to have a positive impact on the quality of life for all people and the environment. Our engineers and technicians are continually learning new technologies and new approaches to the projects with which we are tasked. This enables us to provide our clients with the highest quality services in the areas below.



Transportation

The importance of a well-planned, expertly designed transportation system is paramount for the continued health of the economy. Striking the balance between population growth and the environment, as well as the demand for improved transportation networks, is a significant responsibility. Providence is constantly improving its transportation methodologies to provide multiple solutions for these unique challenges.

- Planning
- Feasibility and Environmental Studies
- NEPA Documentation
- GIS
- Design
- Construction Cost Estimating
- Construction Engineering & Inspection (CE&I)

Construction Engineering & Inspection

Our CE&I professionals play a pivotal role during the construction process — providing a vital communication link between the owners, contractors, design engineers, and the public. Our team ensures compliance with plans and specifications and provides crucial quality assurance testing. Our CE&I group shares in Providence's overarching company theme, to complete all projects on time and within budget.

- Constructability Reviews
- Contract Administration
- Claims Analysis
- Quality Assurance Testing
- Scheduling and Cost Estimating



Coastal

Coastal and estuarine systems present complex issues and challenges. We offer a full scope of engineering services for coastal zone projects and structures. This includes project analysis, engineering design, and project and construction management. Notable coastal and estuarine experience includes bankline stabilization and design engineering using a combination of vegetative debris and dredge sediments, use of sand dunes supported by vegetative debris, and use of various rock breakwater, cut-off walls, and shoreline protection structures such as weir gates and sheet pile walls.

- Marsh Restoration
- Levee Construction
- Permitting and Environmental Compliance
- Surveying
- GIS
- CE&I

Public Works, Flood Control, and Drainage

Protecting people, property, and the environment is a fundamental goal for Providence. We have experience with flood control and levee challenges, drainage projects, watershed management, storm drain efficiencies, and proper land use planning. A few notable projects include drainage impact studies, sewer and forcemain rehabilitation and modifications, pump station design and construction, and site development for economic growth. Providence also has experience with construction administration of numerous public works projects from levees to landfills.

- Planning
- Permitting & Environmental Studies
- Rate Studies
- Surveying
- GIS
- Water
- Sewer
- Roads and Streets
- CE&I

Land Development

Land development and site conversion is an economic necessity. As a trusted land improvement and development resource, Providence gives special attention to ensure the longevity of any land site. Our professionals provide comprehensive site development services.

- Planning and Zoning
- Permitting and Environmental Compliance
- Commercial
- Residential
- Surveying
- Water
- Sewer
- Drainage
- Roads and Streets
- CE&I



TECHNOLOGY & SOFTWARE

Providence solves environmental challenges by meshing cutting-edge measurement technologies with unique, innovative applications. Our technology and software are unrivaled resources in accuracy and reliability. We specialize in implementing software technologies to meet our clients' data collection and management challenges — ultimately reducing costs and increasing efficiency.

REGULATORY KNOWLEDGE + **INSTRUMENTATION EXPERTISE** = **PROVEN SOLUTIONS**

Software

Providence offers a line of dispersion modeling products custom-developed to match the environmental industry's unique needs. From accidental release to continuous release dispersion modeling, our software has the strength behind the punch to get jobs done. Our air quality modeling-related products have small learning curves and the capability to satisfy the most comprehensive requirements.



BEEST Suite



PRO CALPUFF



**RMP
INPUFF2
SCREEN3
SLAB**



AERSCREEN



BEESTXpress

Trainings

Providence offers training for our air quality dispersion modeling products to help keep facilities in compliance. Trainings offered include AERMOD Modeling for Permits, Advanced AERMOD, and Modeling for Non-Modelers.

Photonics

Providence Photonics specializes in the development and utilization of advanced technology in the field of optical gas imaging while tackling some of the industry's most challenging environmental and safety problems. Using patented technology, advanced computer vision techniques, and state-of-the-art infrared single and multi-spectral imagers, Providence Photonics delivers solutions for many applications, including leak quantification, leak survey validation, autonomous remote leak detection, and flare combustion efficiency monitoring.



▲ Flare testing with Mantis™ featuring VISR technology



▲ Patented Quantitative Optimal Gas Imaging Technology



▲ IntelliRed™ Autonomous Remote Leak Detection

PLACEMENT

Government and industry clients often request on-site placement for assistance with planning, design, compliance, implementation, monitoring, and more. Providence can place managers or support personnel to help with these unique client needs.



SURVEYING

We research, visualize, and analyze geographic data into useful intelligence for our clients. Specialties include land title and boundary, topographic, pipeline and route, construction, hydrographic, right-of-way, utility location, elevation certificates, and permit drawings and applications.



SUPPORT SERVICES

Expert Witness

The professionals at Providence are leading experts in their respective fields. We know that legal situations can be challenging, and our scientists can offer objective and judicious counsel to ease the burden. Not only do our experts have the educational background, our team also has years of experience applying the science to understand the full scope of work, critically think through issue resolution, and offer best practices.

Public Outreach

Communication between clients and stakeholders is key for many projects, regardless of size. Our objective is to ensure all parties are well-informed throughout the project life cycle. Our proactive outreach approach is simple — begin with facilitating constructive dialogues between stakeholders and the client, address and mitigate any public concerns, and ensure all parties are well-informed and have reached a mutually beneficial consensus of the intent and outcome of the project.



GIS

Our approach to any GIS project is to tailor our expertise to meet our client's specific goal. Whether designing relations databases or performing inquiries, conducting statistical analyses, or satellite imaging interpretation, the GIS specialists at Providence are a trusted resource. Our Spatial Data Integration experience includes: Trimble Global Positioning Systems (GPS), ESRI ArcGIS, AutoCAD Civil 3D, AutoCAD Land Development, ERDAS Imagine, and Global Mapper.

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Providence Engineering and Environmental Group LLC