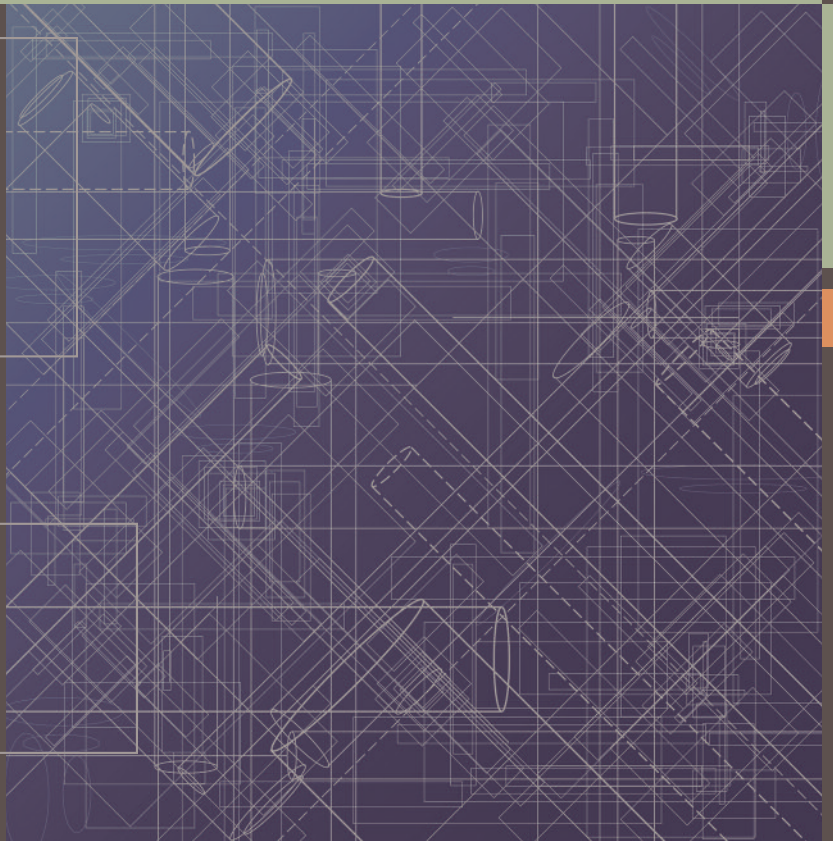




PROFESSIONAL ENGINEERING AND ENVIRONMENTAL CONSULTANTS, INC.

Engineers | Planners | Environmental Consultants



SERVICES

Since 1993, PEEC has provided a full range of professional engineering services to clients throughout the Gulf Coast region. Our technical team provides solutions to diverse engineering challenges, from civil and environmental engineering, to coastal restoration initiatives, to construction management. Our approach allows our clients to benefit from the latest technology, innovative solutions, and cost effective ideas. PEEC integrates the appropriate resources and technologies for each client, every time.

CUSTOMIZING PROJECTS TO FIT THE CLIENT'S NEEDS

Our team of experts performs in-depth feasibility studies that consider all aspects of the project. During this fact-finding phase, our team of experts analyze how the project will affect the environment and community stakeholders. This comprehensive review allows us to present options that truly match our clients' needs.

FINDING THE FUNDS TO MAKE PROJECTS HAPPEN

When necessary, our staff identifies state and federal funding sources and helps the client secure all needed grants and loans. This service has enabled many of our clients' projects to move from concept to reality.

MANAGING CONSTRUCTION TO ENSURE SUCCESS

Once our design has been completed and funding has been obtained, we monitor the construction process to make sure that the contractor implements the project in accordance with all approved plans. A pre-bid conference and monthly construction meetings with the contractor are all standard features of PEEC's construction management service. In this way, our staff keeps project construction on schedule and within budget.

MAXIMIZING RESOURCES THROUGH PROGRAM MANAGEMENT

In addition to construction of one-time projects, PEEC's team also takes a comprehensive look at client infrastructure and offers long-term strategies for making these systems work more efficiently. Our staff makes recommendations about revenue streams, links with economic development, options for improvement in energy efficiency, land use planning, and system operation and maintenance. For example, our assessment of the City of Westwego's sewerage system involved examination of fees, insurance rates, licensing needs, and employee management structure as well as technical recommendations for improving the system's effectiveness.

Civil Engineering

PEEC has a proven track record of providing the infrastructure that Gulf Coast communities need. Our diverse and experienced staff is skilled in civil, electrical, mechanical, and construction management, enabling us to direct projects from inception to completion.

Clients

- ▣ St. Tammany Parish
- ▣ Grand Isle Levee Board
- ▣ Grand Isle Port Commission
- ▣ Plaquemines Parish
- ▣ West Jefferson Levee Board
- ▣ City of Westwego
- ▣ Town of Grand Isle
- ▣ Town of Zwolle
- ▣ Jefferson Parish
- ▣ St. Charles Parish

Structural

Building strong, building smart — these are watchwords for new construction in the hurricane-prone Gulf Coast. PEEC's approach to structural projects ensures that the finished product exceeds the client's expectations — not just at the ribbon cutting but for many storm seasons to come.

Clients

- ▣ City of Westwego
- ▣ Jefferson Parish
- ▣ Jefferson Parish School Board
- ▣ St. Tammany Parish
- ▣ Town of Zwolle
- ▣ Town of Grand Isle
- ▣ Plaquemines Parish



Drainage Pump Station – Belle Chasse, Louisiana

LONG-TERM PLANNING YIELDS RESULTS

In Belle Chasse, PEEC developed a master drainage plan using hydraulic modeling and aerial photography to analyze the community's needs. Our plan presented solutions for reducing flooding and preventing property damage. Once the plan was approved, PEEC designed and constructed several projects, including improvements to a major canal that drained the majority of the lower Belle Chasse drainage basin. Our design for slope paving stopped recurring flooding and protected nearby homes from subsidence caused by changes in the water table.

PROBLEM SOLVING IMPROVES PARISH PUMPING STATION

PEEC's upgrade of the drainage pumps in Plaquemines Parish required a fraction of the budget that other firms proposed. By constructing a steel frame inside the pumping station, among other methods, we were able not only to preserve the original building but keep the pumps in operation while a new diesel engine was installed. The frame was left in place so that the parish can use the same cost effective system whenever the station's engines need to be replaced.

Civil Engineering Services

- ▣ Drainage System
- ▣ Drainage System Design
- ▣ Stormwater Analysis
- ▣ Hydraulic Modeling
- ▣ Pump Station Design
- ▣ Roadway Design
- ▣ Levee System Design
- ▣ Site Development
- ▣ Local, State, and Federal Funding Assistance
- ▣ Construction Management



Parish Government Facility – St. Tammany Parish, Louisiana

PRIZE-WINNING DESIGN GIVES MAXIMUM FLEXIBILITY TO CLIENT

Our design and construction of the St. Tammany Parish Government facility won the 1999 Award for Excellence from Associated Builders and Contractors, Inc. Our steel frame design provided an attractive, versatile space that allows the parish to simultaneously use the building as a satellite center for a regional university, a library, and a medical facility.

HISTORICAL PROPERTY RETURNED TO COMMERCE

Our restoration of a former corner store into the Westwego Historical Museum converted a blighted property into the centerpiece of a new tourist district. PEEC completely restored the turn-of-the-century general store, furnished a period upstairs living quarters, and created a main exhibit area. Since opening its doors in 2000, the museum has welcomed thousands of visitors from around the world.

Structural Services

- ▣ Bridges—Wooden, Concrete, Steel, and Precast—Design and Construction Management
- ▣ Commercial Facility Design and Construction Management
- ▣ Industrial Facility Design and Construction Management
- ▣ Governmental Facilities and Complex Design and Construction Management and Repair

Environmental

We bring our expertise to bear on all of the Gulf Coast's most difficult environmental remediation and permitting challenges. Long-standing relationships with regulators allow us to expedite paperwork and pinpoint optimal grant sources, allowing our clients to focus less on red tape and more on improving quality of life for their customers and constituents.



Sludge Volume Reduction – City of Westwego

Environmental Services

- ▣ 404 Permit Acquisition
- ▣ Wetland Delineation Determination
- ▣ Environmental Impact Statement
- ▣ Environmental Impact Analysis
- ▣ Air Quality Permit
- ▣ MWPP
- ▣ MS4 Permit Acquisition
- ▣ NPDES/LPDES Acquisition
- ▣ Needs and Alternative Analysis
- ▣ Phase I and II Environmental Site Assessment
- ▣ Brownfield Assessment and Remediation

Clients

- ▣ Citrus Land Company
- ▣ City of Westwego
- ▣ City of Gretna
- ▣ CLL Limited Partnership, Ltd.
- ▣ Daybrook Fisheries
- ▣ Dixie Machine Welding and Metal Works, Inc.
- ▣ Grand Isle Port Commission
- ▣ St. Tammany Parish

BROWNFIELDS REDEVELOPMENT EXPANDS LOCAL ECONOMIES

PEEC secured \$1.5 million in total EPA Brownfields Funds for the Cities of Gretna and Westwego, Louisiana. Our staff followed up this fundraising success with action on the ground, converting formerly contaminated and abandoned properties into productive sites that are now used for a variety of industrial, recreational, and government uses. The former Malter Chemical site is now slated to be the site of an expanded McCormick Foods facility.

ASBESTOS REMOVAL ALLOWS EXTENSION OF VITAL ROADWAY

PEEC directed the removal of asbestos along a key traffic corridor in Gretna, Louisiana. Until our remediation was complete, a state financed extension of this corridor could not be completed.

ENVIRONMENTAL ASSESSMENT AND CLEANUP CONVERT EYESORE INTO VIABLE PROPERTY

PEEC worked with the City of Westwego and citizens to clean up a long-standing hazardous waste site. Now that underground storage tanks, illegal dumping spills, and other contaminated materials have been removed, the city is planning to use the property for the site of the new City Hall.



Wetland Creation Project – Galveston, Texas

Coastal

With wetlands being lost every day and hurricanes arriving in force, the Gulf Coast is ground zero for coastal restoration. PEEC has been at the forefront of the movement to preserve the region's wetlands, and we have successfully implemented unique solutions in a variety of storm-prone habitats.

BENEFICIAL USE OF DREDGED MATERIAL PROTECTS SENSITIVE TIDAL ECOSYSTEM

PEEC designed and constructed a 230-acre marsh creation project in Galveston Bay. Our team of experts created 47 half-acre mounds of dredged material planted with vegetation and protected the mounds with breakwaters made of geotubes. Galveston Bay experiences high wave action every day, and in 2008 Hurricane Gustav sent a tidal surge through the area. Our project remained intact despite the storm, while adjacent, unprotected marsh areas were destroyed.

TERRACING PROJECT CREATES NEW MARSH

An open water area just south of Port Arthur, Texas, Bessie Heights was once the site of healthy wetlands. PEEC restored 100 acres of marsh in Bessie Heights using dredged material arranged in terraces. The project was built in 2002 and remains structurally sound, despite the wave action created by Hurricanes Katrina, Rita, Gustav, and Ike. We expect that the project will eventually build more than 200 acres of wetlands.

BREAKWATER SYSTEM PROTECTS COAST WHILE ALLOWING NATURAL ECOSYSTEM FUNCTION

PEEC designed a four mile long breakwater system for Grand Isle with a special overlapping design that allows tidal fluctuations to pass through. At the same time, the breakwaters protect the island from storm surge and help reduce erosion. The project was built in 1998 and is functioning as designed despite numerous hits from severe hurricanes.

Coastal Services

- ▣ Marsh Creation
- ▣ Marsh Enhancement
- ▣ Marsh Protection
- ▣ Barrier Island Protection
- ▣ Levee System Design and Construction
- ▣ Levee System Upgrade and Repair
- ▣ Breakwater System Design and Construction
- ▣ Marsh Management

Clients

- ▣ Grand Isle Levee District
- ▣ Louisiana Department of Natural Resources
- ▣ Plaquemines Parish Government
- ▣ Texas Parks and Wildlife Department
- ▣ Town of Grand Isle



Breakwater System – Town of Grand Isle, Louisiana

Water

Sending water where it needs to go—PEEC has pioneered several techniques, now in use throughout the region, to make sure our clients have the water resources when and where they need them.



New Water Line – Town of Grand Isle, Louisiana

Water Services

- ▣ Hydrogeology/Groundwater Modeling
- ▣ Water Well Design
- ▣ Water Intake Structure Design, Construction, and Repair
- ▣ Water Treatment Services
- ▣ Water Distribution Systems
- ▣ Lake and Reservoir Water Quality Management
- ▣ Storm Water Permitting and Compliance
- ▣ Water Resources Management/Water Rights Strategies
- ▣ Water Supply Planning
- ▣ Watershed Management/Source Protection

Clients

- ▣ City of Westwego
- ▣ Jefferson Parish
- ▣ Town of Grand Isle
- ▣ Town of Zwolle
- ▣ St. Charles Parish
- ▣ Plaquemines Parish



New Water Line – Town of Grand Isle, Louisiana

NEW WATER LINE BRINGS CLEAN WATER, ECONOMIC GROWTH TO TOWN

Grand Isle, Louisiana's only inhabited island, is a community of 1500 people that had no direct source of potable water. Residents were forced to purchase water, at high rates. A lack of potable water also made it difficult to accommodate the many tourists who visited the island. In 1999, PEEC installed a 32-mile water line that piped in Mississippi River water to Grand Isle, using an innovative design that maximized the line's durability. Now the town's residents receive up to two million gallons of water a day at a fraction of the rate charged by previous sources. Since the line was installed, eco-tourism in Grand Isle has doubled.

STREAMLINED SOLUTION PROVIDES MODEL FOR REGION

Grand Isle's water distribution system was at the breaking point when PEEC was hired to bring the system back up to full strength. Along with other measures, we repaired the system's main pipe, whose diameter had shrunk to only six inches due to build up in the line. We used a specialized cleaning device normally used for pipelines to clean out the pipe. Our method effectively doubled the pipe's capacity and is now used by municipalities throughout the area to keep water systems functioning at optimal levels.



Wastewater Treatment Plant – Zwolle, Louisiana

MICROBIAL ROCK PLANT FILTER PROVIDES CLEAN WATER AT LOW COST TO PARISH

A wastewater treatment plant in St. Tammany Parish was not meeting EPA effluent limits. Rather than constructing a costly new plant, PEEC used a design that employed crushed stone and rock already available within the parish. The four-acre treatment facility was designed to handle 1.5 million gallons of wastewater per day and provided an effluent quality in full compliance with all state and federal regulations.

SUSTAINABLE MEASURES REDUCE POLLUTANTS AND REDUCE PROJECT BUDGET

The town of Zwolle needed to improve the water quality of a 14.5-acre oxidation pond. PEEC designed a system using plants, which removed nitrogen and added oxygen to the wastewater, thereby cleaning the pond at low cost, with minimal disruption to the neighboring environment.

MICROBIAL APPLICATION PRODUCES WIN-WIN SOLUTION

The city of Westwego had a wastewater facility that was under functioning due to high sludge volume. PEEC reduced this volume by 50% using an application of specialized microorganisms. In a second phase, we used the microbial detritus this process created and used it as beneficial material for nearby earthen levee tops. The microbial sludge acted as fertilizer, spurring massive vegetation growth, which in turn reduced erosion on the levee and improved the city's storm protection system.

Wastewater

Wastewater challenges have provided PEEC with opportunities to use innovative and green technologies that not only produce clean effluent, they improve the surrounding environment — all while achieving significant cost savings for our clients.

Sewer Services

- ▣ Combined Sewer Overflow
- ▣ Design and Rehabilitation of Collection Systems
- ▣ Design and Rehabilitation of Treatment Systems
- ▣ Operability Design Reviews
- ▣ Operations Services
- ▣ Start-up Assistance
- ▣ Inflow/Infiltration Study

Clients

- ▣ City of Westwego
- ▣ St. Tammany Parish
- ▣ Town of Zwolle
- ▣ U.S. Steel
- ▣ Town of Sarepta
- ▣ Jefferson Parish
- ▣ Plaquemines Parish



Wastewater Treatment Plant – City of Westwego, Louisiana

PEEC, INC.

CIVIL

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- Drainage System Design
- Stormwater Analysis
- Hydraulic Modeling
- Pump Station Design
- Roadway Design
- Levee System Design
- Site Development
- Local, State, and Federal Funding Assistance
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STRUCTURAL

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- Commercial Facility Design and Construction Management
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- Governmental Facilities and Complex Design and Construction Management

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- Water Supply Planning
- Watershed Management/ Source Protection

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ENVIRONMENTAL
CONSULTANTS, INC.

1065 Muller Parkway, Suite B
Westwego, LA 70094

P | 504-347-1900

F | 504-341-5600

E | postmaster@peecinc.com

www.peecinc.com