

# 2018 PEP Environmental Stewardship Awards



Partners For Environmental Progress

**On April 17, 2018,**

PEP recognized the contributions of area businesses and organizations at the Annual Membership Meeting and 14th Annual Environmental Stewardship Awards Presentation at the Five Rivers Delta Center. PEP Member Awards are presented to member companies that have made a significant and positive contribution to the Gulf Coast region's triple bottom line, economically, environmentally and socially. PEP Community Partner Awards are given to individuals or organizations that dedicate their time and resources to improve the sustainability and resiliency of Coastal Alabama.



## Fostering Employee Engagement in Environmental Stewardship

### Alabama Power Company

Employees at Alabama Power's Plant Barry have taken environmental stewardship into their own hands through creation of the Barry Environmental Stewardship Team (B.E.S.T.).

B.E.S.T. team members meet monthly to discuss, plan, and participate in environmental stewardship, awareness, and educational events both within the plants themselves and in the surrounding communities.

Environmental stewardship is a family affair at Alabama Power. "Entire families have come out to help the Alabama Coastal Clean-Up and Renew Our Rivers," said Tiffany Mackin, compliance and support manager at Alabama Power. "Many of the organizations and initiatives which BEST supports come from recommendations from employee's family members."

In the three years since inception, B.E.S.T. has provided nearly 5,400 hours of volunteer support to numerous agencies and projects in the Gulf Coast region. Highlights from 2017 include installation of wood duck boxes around the plant site, and participation in Renew Our Rivers, Alabama

Coastal Clean-Up, and Earth Day activities. B.E.S.T. also provides innovative outreach and education through their Environmental Stewardship Day.



## Process Optimization Recycle and Reuse Project

### The FMC Corporation

The FMC Corporation – Mobile Manufacturing Center produces high value agricultural chemicals and uses several solvents in these processes. In 2017, the Mobile Manufacturing Center took steps to reduce environmental impacts as well as manufacturing costs through a recycle and reuse strategy.

Through extensive process modeling and a modest investment of capital, the Mobile Manufacturing Center reduced hazardous waste generation in one manufacturing unit by 25% and in another by 12%. Reducing the volumes of waste treatment and fresh solvent consumption provided additional environmental advantages including reduced CO2 emissions from the transport and processing of source material.

The project serves as a model of how both environmental and financial stakeholders can be satisfied. "Investments in projects that positively impact the environment can be financially viable with short payback periods," said Rubayet Haider, Environmental, Health & Safety Leader for FMC. "These opportunities should be identified and pursued."



## Restoring and Reinvigorating Downtown Mobile

### Hargrove Engineers + Constructors

Hargrove Engineers + Constructors partnered with the City of Mobile, the Downtown Mobile Alliance, and other officials to renovate and restore a blighted building in downtown Mobile. Located on a prominent block near the Bankhead Tunnel on Government Street, the former WALA building

sat empty for 15 years. A complete renovation of the building has brought new life to the block, restoring an architectural elegance reminiscent of old Mobile.

A significant component of the restoration was the addition of a balcony facing Government Street that overlooks the Mardi Gras parade route and visually connects to similar structures on adjacent streets. The restored building serves as a state of the art facility for Hargrove Controls + Automation and adds to seven other restorations of repurposed facilities composing Hargrove's downtown Mobile campus.

"This project will improve the overall aesthetic of Government Street and will breathe new life into the entire corridor," said Mayor Sandy Stimpson, City of Mobile. "This effort is a crucial catalyst for investment in downtown Mobile that will spur economic activity and improve our quality of life."



## Innovative Waste Water Treatment

### McFadden Engineering, Inc.

PEP extends special recognition to Rich's Car Wash for their leadership on this project.

McFadden Engineering, Inc. developed the OxyShark®, an innovative wastewater treatment and reclamation system that removes up to 97% of pollutants from effluent. Originally developed to address environmental and economic concerns regarding water usage at Rich's Car Wash, the system is widely applicable and readily integrates with existing wastewater treatment processes. Systems are engineered to meet the exact specifications of each individual installation site.

In the case of Rich's Car Wash, wastewater treatment with the OxyShark® system allows the business to reuse 80-90% of its water. This translates into huge savings in water and sewer usage fees each month. Excess treated water is discharged into an adjacent stream, with the effluent exceeding National Pollutant Discharge Elimination System (NPDES) permit requirements. In fact, by some metrics, the discharged water is cleaner than water in the stream creating a positive scenario for the business and environment. The success of this project has led Rich's to explore installation of OxyShark® at other car wash locations.

OxyShark® incorporates oxygen in the treatment process to increase productivity of beneficial bacteria that digest organic waste materials. Capable of handling hundreds of thousands of gallons of wastewater per day, OxyShark® provides an

innovative solution to expensive wastewater treatment while delivering significant savings in water consumption and sewage fees.



## Restoration of Mon Louis Island Thompson Engineering

Thompson Engineering was selected by the Mobile Bay National Estuary Program (MBNEP) to lead the restoration of the northern tip of Mon Louis Island, a coastal marsh at the mouth of East Fowl River in South Mobile County. The area was severely eroded and close to breaching, which would have put wildlife and human lives in danger.

Coastal marshes provide critical habitat essential to native species and local fisheries. The marsh also serves as a buffer, protecting homes and infrastructure from storm tides and wave action. Primary goals of the project included stabilizing the shoreline along the bay side of the northern tip of Mon Louis Island and enhancing aquatic, wetland, and upland habitats.

Based on extensive research, Thompson recommended and completed the following solutions to meet project goals:

- Build a rock breakwater to protect the existing and restored marsh,
- Dredge the Fowl River navigation channel as a safety and recreational benefit, and
- Create four acres of new marsh to enhance habitat.

The resiliency of the site was tested months after completion when Hurricane Nate swept the coast. A post-storm inspection revealed the marsh was intact, proof of immediate project benefits. Thompson is working with a team to monitor the project for five years to document the success of plant and wildlife development.



## Converting to Natural Gas Fleet Waste Management

The Mobile/Theodore Hauling operation of Waste Management North America converted its fleet of 13 trucks from diesel to compressed natural gas (CNG) as part of the corporation's ongoing missions to create a near-zero emissions collection fleet across

the continent. Waste Management has the largest fleet of natural gas vehicles in the industry, and is a pioneer in the use of natural gas since the early 1990's.

The transformation has significant environmental impacts. Fleet vehicles powered by CNG emit nearly zero particulate emissions, cut greenhouse gas emissions by 15 percent, and are significantly quieter than diesel trucks.

"The CNG-fueled trucks at Mobile/Theodore will reduce local greenhouse gas emissions by over 280 metric tons of CO2 equivalents annually," said Mike Finley, District Operations Manager for Waste Management of Mobile/Theodore. "Natural gas-fueled trucks are also approximately 50 percent quieter than diesel and cut smog-producing nitrogen oxide emissions by up to 50 percent compared with the cleanest diesel trucks."

The use of diesel fuel is reduced by an average of 8,000 gallons per year per truck for each diesel truck replaced with a natural gas-fueled vehicle. The cost savings and reduction in greenhouse gases is a win for business and the planet.



## Advanced Emissions Monitoring Prism Systems

Prism Systems' Environmental Reporting Solution (ERS) software provides automated, real-time emissions monitoring and reporting to large scale manufacturing sites. Each site has specific limits on process emissions for any stack discharge to the air or any process discharge to nearby waterways or storm sewer. ERS is a software and tool to monitor environmental compliance while ensuring the plant is running efficiently, as designed. ERS was developed to seamlessly integrate process-level data collection with full-compliance regulatory reporting capabilities, allowing plants and processes of all types to meet emissions reporting requirements quickly and accurately.

Developed to assist Mobile's robust pulp and paper industry comply with reporting requirements of the Clean Air Act, ERS enables customers to automate many manual processes and consolidate management of environmental compliance throughout facilities, improving efficiency and lowering maintenance costs. As a web-based solution, ERS eliminates costly licensing for proprietary software by providing a website to manage, monitor, and report emissions data.

"The system pays for itself in time saved," said Randy Holland, Environmental Engineer at Georgia-Pacific Brewton, LLC., the first site to implement ERS. "It does everything other mills do with twenty to thirty spreadsheets, making the whole process of reporting much more manageable. When we are troubleshooting or working to improve emissions,

I can access months of data instantly," said Holland.

Real-time event updates and emails notifications are another benefit. "ERS is tied into performance equations and alerts me to events throughout the mill," said Holland. "This allows me to address problems quickly." A quick response translates into more production time and less overhead.



## 2018 Community Partner Award Alabama Oyster Shell Recycling Program, Alabama Coastal Foundation

The Alabama Oyster Shell Recycling Program (AOSRP) is a successful partnership designed and implemented by the Alabama Coastal Foundation (ACF) for the collection of oyster shells from participating restaurants in Mobile and Baldwin Counties that serve oysters on the half shell. After curing and cleaning, the shells are redistributed to restore oyster reefs and for other aquatic restoration projects in coastal Alabama.

"For years, people have wanted to return used shells to the reef, but there was no system in place," said Mark Berte, executive director of ACF. The AOSRP was developed as an affordable alternative for restaurants to recycle shells rather than sending them to landfills.

Oyster shells provide critical habitat to baby oysters (called spat) as they develop and grow, but historic oyster reefs or "beds" in the coastal waters of Alabama have experienced decline for many years. By collecting and redistributing oyster shells, participants are providing spat with prime habitat and helping to restore Alabama reefs. The reefs in turn clean and filter water, improving water quality and supporting a complex aquatic system teeming with life.

In addition to positive feedback from the community, participation also makes economic sense by significantly reducing waste disposal fees. "ACF approaches the project from a business perspective," said Cecilia Mace, Marketing Director for Original Oyster House.

To date, AOSRP has grown to include 31 member restaurants and has collected over 5.5 million oyster shells, which translate to over 14.1 acres of oyster reefs to be restored. A grant from the National Fish and Wildlife Foundation provided the initial funding to start AOSRP. Today, the AOSRP continues to operate with funds from the participating restaurants, donations from restaurant customers, and contributions from community supporters.

