

2015 ENVIRONMENTAL STEWARDSHIP AWARDS



Partners For Environmental Progress

On April 16th, 2015, PEP presented the 11th Annual PEP Environmental Stewardship Awards during its Annual Membership Meeting at 5 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.



Avalisha Fisher and John Amsbury, Driven Engineering; Tiffany Macken, Alabama Power - Plant Barry; Mark Discon, Thompson Engineering; Beth Thomas, President, PEP Board of Directors; Lane Dorman and Jill Johnson, Geosyntec Consultants; Gerri Holland, OEC, Inc.; and Bill Pfister, Austal USA.

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PLANT BARRY

Hydrolox Traveling Water Screen Fish Impingement and Survival Case Study Alabama Power installed high-tech "fish-friendly" Hydrolox screens at two cooling water intake structures at Plant Barry. Plant Barry is not only the first company in the U.S. to install these screens but also pioneered techniques to evaluate performance of the screens. These screens are designed to protect juvenile and adult fish and very effective in removing fish and debris from the cooling water. They are unique because they utilize a cantilevered head for improved fish handling. With their mesh made of engineered polymer versus standard steel, the design makes them lighter, stronger and resistant to biofouling. The plant received two national awards from the Electric Power Research Institute (EPRI) for the use of the screens which will serve as a model for other U.S. utilities. Alabama Power is on the forefront for fish protection for the entire electric utility industry.



MMF LED Re-lamp

Lighting is a large part of the overhead expenses for Austal's 700,000 square foot Module Manufacturing Facility (MMF). Austal's vision of a future where lighting is an easily-managed asset that can be controlled down to the individual fixture level was satisfied by replacing the 776 existing 1,080w High Intensity Discharge (HID) metal halide light fixtures with Digital Lumens 480w LED light fixtures with intelligent control that allow the lighting to be managed individually, by zone or facility-wide. Digital Lumens custom tailored, LED intelligent lighting system does just that as a part of a comprehensive system that can be tuned to meet changing requirements. Additionally, Digital Lumens designed a custom LED fixture just for Austal's excessive high bay ceiling at 93'. The Digital Lumens system will provide Austal with savings up to 84% of existing MMF lighting costs with a projected annual energy savings of 5,686,503 kWh, or \$425,436. Austal gains efficiency and control in their lighting, while saving money and reducing their carbon footprint.



Low Impact Development for the Mobile County Recycling Center

Driven Engineering Incorporated put low impact development elements and environmentally sound practices into the design of the Mobile County Recycling Center. This project is a brownfield redevelopment of the former Brewer Center, which was highly impervious and had no provisions for the treatment or detention of stormwater. Encapsulating the theme of renewal while still managing to remain within the project budget, Driven designed the site utilizing low impact development and sound stormwater management techniques. The stormwater management system, as designed and constructed, will reduce long term maintenance costs for Mobile County and the City of Mobile with regards to roadway drainage systems. By reducing peak flows to pre-development flow rates, downstream property owners will be protected from potential flood hazards. The introduction of low impact techniques in contrast to traditional design methods will provide for improved water quality within the overall drainage basin. Plus, extensive landscaping was provided throughout the site to reduce the "heat island" of the asphalt areas required by this development.



Mahogany Mill Historic Park and Boat Ramp

Geosyntec consultants provided the environmental assessment and remediation for the redevelopment of the Mahogany Mill Historic Park and Boat Ramp. Funded by BP oil spill funds, this 3-acre brownfield was restored to provide community access to natural resources and recreational activities. Environmentally-friendly solutions were implemented to minimize environmental impacts, including: landscape design using native vegetation, pervious concrete to alleviate stormwater runoff, sanitary pump out station for proper sewage disposal, and installation of five breakwaters constructed of bagged oyster shells to protect the newly created living shoreline and promote water quality improvements and habitat creation. Also included were walkable community concepts with streetscaping sidewalks and destination objectives such as: historic monuments, picnic facility and handicapped accessible piers. Remediation of contaminated soil through onsite encapsulation diverted approximately 35,000 cubic feet of soil from landfill disposal, significantly decreased CO2 emissions, limited potential health risks, and saved over \$500,000 compared to traditional remediation techniques.



Reduce, Reuse and Recycle

Over the past few years, OEC, a small locally owned business and one of PEP's founding members, has implemented a new project designed to reduce the company's carbon footprint and the company's contribution to landfills. OEC restructured delivery routes to reduce the number of vehicles in use, optimized route patterns and partnered with other organizations in remote areas. The increased efficiency has saved more than \$12,000 annually in fuel purchases and reduced carbon dioxide emissions from their vehicles by 20%. OEC recycles more than 2600 gallons of plastic bottles a year by allowing their staff to recycle their personal bottles from home. OEC now repurposes cardboard boxes from incoming shipments to package outgoing supplies and collects those same boxes from clients to repurpose or recycle, allowing their customers to achieve their own green goals. Consumption of new boxes has been reduced by 950 per week, or almost 50,000 per year. OEC created green spaces in the front and rear space of their headquarters on I-65. While it's harder to see the building from the road, they are an oasis of oak trees in the middle of concrete and traffic. OEC has achieved their goal to serve as an example for other small businesses to find ways to be a good business steward of our environment while enhancing the financial bottom line.



Birmingham Northern Beltline

In February 2014, Thompson Engineering began work on the Birmingham Northern Beltline Phase 1, a 1.34-mile section north of Pinson, Alabama one of the most mountainous areas of the state and in the environmentally-sensitive Black Warrior watershed. Because of the ecological value of the river and its tributaries and that it provides more than half of Birmingham's drinking water, protecting water quality is of the highest concern. The environmental compliance aspects of this project involve more than 2.4 million cubic yards of soil that must be moved during this grade and drainage construction phase. Thompson Engineering provided the engineering oversight and quality assurance monitoring of the best management practices employed during construction to minimize the impact on the water quality of the watershed. The site has 78 stormwater discharge points that must be sampled following each rain event within certain parameters. As of February 2015, the project is 40% complete, and has had no compliance issues. In fact, in some samples, water discharged from the project is cleaner (with less NTUs) than when it entered.

2015 COMMUNITY PARTNER

Mobile County Commission and Goodwill Easter Seals of the Gulf Coast

Mobile County Recycling Center

The PEP Board of Directors is pleased to name the Mobile County Commission and Goodwill Easter Seals of the Gulf Coast as its 2015 Community Partners in recognition of their leadership in support of establishing and operating the new Mobile County Recycling Center as a model of best environmental practices and as a successful community and government partnership.

Instead of driving 25+ miles roundtrip downtown to reduce your carbon footprint, West Mobile residents now have a local drop-off recycling center which will receive most household recyclables: aluminum, paper, cardboard, glass and non-alkaline batteries. The project, championed by Mobile County



Commission President, Connie Hudson, was funded by \$2.4 million in federal grants from offshore gas and oil revenues.

In addition to the low impact techniques utilized for the site development, the building design included fully insulated walls in the processing area to reduce energy loss and promote sound attenuation; high efficiency toilets and urinals for reduced water consumption,

low energy lighting in the processing area, and interlocked fans and louvers to provide maximum air flow and reduced energy usage through the processing area.

Since opening in November, the Center serves more than 1,900 cars per week, and has received 690,000 pounds of material in just four months, outpacing the plan for 1.5 million pounds in the first year.

Goodwill Easter Seals manages and operates the facility and anticipates the Center will ultimately become self-funding. Seven staff members are assisted by 70 volunteers, 12 court-appointed community service workers and 11 students from August Evans School allowing the facility to operate more than 10 hours a day, 7 days a week.