

RIVER STARS



2017

**SALUTING THE FINEST ENVIRONMENTAL
STEWARDS ON THE ELIZABETH**

SPONSORS

media (\$10,000+)

Inside Business

The Hampton Roads Business Journal

platinum (\$5,000)



gold (\$2,500)



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- CITGO Petroleum Chesapeake Terminal
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- Marine Oil Service
- Norfolk Redevelopment & Housing Authority
- Pam Boatwright
- Precision Printing
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- Savior Martial Arts/SK8 Dojo Roller Rink
- Sims Metal Management-Chesapeake
- Skanska USA Civil
- TransMontaigne
- VHB
- Vulcan Materials Company

The River Stars program made possible by

Chesapeake Bay Innovative Nutrient & Sediment Reduction Grant, National Fish & Wildlife Foundation; Dominion Virginia Power; HRSD; Elizabeth River Project

Congratulations, River Stars!

The Elizabeth River Project launched River Stars for business partners in 1997. Since then, River Stars have become the finest environmental stewards on the Elizabeth.

- Pollution reduced: 331 million pounds.
- Wildlife habitat restored, conserved: 1,787 acres.
- Other materials reduced, recycled or reused: More than a billion pounds.



Business partners "Doin' right by the river"

You too can be a star

Because the Elizabeth River is one of the mightiest military and industrial ports in the world, restoring this urban river to health depends on leadership from the business and government facilities that line its shore.

Thank you to the 120 facilities that together are making environmental stewardship the business standard on the Elizabeth. The nonprofit Elizabeth River Project salutes these business and government facilities for reducing pollution voluntarily by 331 million pounds since the program started in 1997. Each year a committee of business peers recognizes new efforts documented for its review. Often the business saves money while reducing pollution, such as last year's \$175,000 savings at Norfolk Naval Shipyard through an employee's innovations.

Free for any facility in the Elizabeth River watershed, River Star participation is most successful where it can make the most difference – with sites presenting large opportunities to reduce toxic pollution or restore and conserve wildlife habitat. If this sounds like you, there's a starring role for you in the restoration of your home river.

You'll read about River Star facilities that are stabilizing eroding shores with wetlands planted by volunteers, hosting oyster reefs to bring back the native oyster, adding stormwater controls, energy efficiencies and much more. In return, they often not only discovered cost savings, but also reduced liability, improved worker safety and morale. Not to mention the positive publicity awarded by publications like Inside Business, which each year sponsors this special report and a Hall of Fame award to the top business participant.

Recognition is just part of the program. Elizabeth River Project also provides free assistance to help you identify and carry out projects, with technical staff and peer mentors at the ready.

Find out if your company is right for River Star Businesses. Contact Pam Boatwright, River Stars Businesses Program Manager, Elizabeth River Project: 757-399-7487, pboatwright@elizabethriver.org or find out more at RiverStarBusinesses.org.

THE EVENT

Annual River Star Recognition Luncheon

Presented by Elizabeth River Project

When Thursday, Jan. 26, 11:30 a.m. to 2:00 p.m.

Where Renaissance Portsmouth-Norfolk Waterfront Hotel

Cost \$25 per person

To register 757-399-7487

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ADVANCING TO MODEL LEVEL 2017 | ★ ★ ★

Advancing to Model Level is this year's best of the best ... These River Star facilities lead the community in environmental stewardship through exceptional results in pollution prevention and wildlife habitat – and mentor others.

Norfolk Tug Company

Taking Eastern Branch of Elizabeth River in tow

EVERYBODY LOVES the jaunty sight of a tug boat. When you see Norfolk Tug's signature red-and-white boats, know they're not just towing cargo. The company is doing a model job of helping Elizabeth River Project improve the "lost branch" of the Elizabeth, the Eastern Branch.

Located along the Eastern Branch's industrial stretch, Norfolk Tug has earned Model Level River Star Business this year for reducing pollution by a whopping 3 million pounds in one year through super-efficient engines and generators on its tug fleet, while also enhancing native habitat for wildlife and practicing green building techniques.

Three of the tugs are powered by new "tier 3" engines, meaning they're the most efficient readily available. Live oaks, cone-flower, golden rod and marsh blazing star have been added to the company landscaping with more than 4,000 square feet of native plantings. And the company is growing six cages of oysters – that's 6,000 "spat" or young oysters – for placement on sanctuary reefs.



Norfolk Tug Company is headquartered on the Eastern Branch of the Elizabeth, a new focus area for restoration. Norfolk Tug is doing its part with reducing pollution, green building practices and planting native landscaping.

Portsmouth Parks, Recreation & Leisure Services

Paradise Creek Park showcases river revival

WE WAGER THERE ARE NO other municipal parks anywhere that are so completely dedicated to showcasing urban river revival.

River Star Businesses surround these 40 acres on every side. The marsh represents the largest restored wetland in the region that the community can explore by regularly scheduled kayak tours. The parking lot soaks in the rain, demonstrating green paving. More than 7,000 school children visit annually for field trips on how to do their part. And nearly 2,000 visitors came here for RIVERFest 2016.

Welcome to Paradise Creek Nature Park, paradisecreeknaturepark.org, operated by the City of Portsmouth's Parks, Recreation & Leisure Services. Not many cities would enter so fully into a partnership with a nonprofit, but this department achieves Model Level status this year in part for its extraordinary partnership with the Elizabeth River Project, which bought the site, raised funds for most amenities and takes the lead for education and volunteer programs, with unflagging city participation.

In addition, Portsmouth recently upgraded public access to the river at City Park including building a new pier.



LARRY J'ANSON

Kayakers enjoy the restored wetlands at Paradise Creek Nature Park. Portsmouth Parks, Recreation and Leisure Services operates the park, which not only features the restored wetlands, but also trails, permeable parking, kayak launch, environmental programs and more.

ADVANCING TO ACHIEVEMENT LEVEL 2017 | ★ ★

Achievement Level River Stars document significant results in both pollution prevention and wildlife habitat.



Host Terminals is revitalizing the Tidewater Tank Terminal site on the Southern Branch, improving tanks and adding stormwater controls.

Tidewater Tank Terminal

WHEN HOST TERMINALS took on the job of barging liquid waste from the Elizabeth River to New Jersey, the company included strong pollution prevention measures such as the use of double-hulled barges to reduce risk of spills.

In addition, for storage of the waste, collected from a Waverly landfill, the company upgraded tanks at Tidewater Tank Terminal and added extensive storm water controls.

To restore wildlife habitat, the new River Star planted 53 native wax myrtles.



The wildlife sanctuary planted three butterfly gardens, added a tree trail and environmental education signage.

Weyanoke Wildlife Sanctuary

THIS WILDLIFE SANCTUARY in West Ghent is out to recruit the community for pollution prevention. The all-volunteer crew has added 10 signs along its fence, instructing passers-by with messages such as: "Eliminate chemicals, fertilizers and pesticides – Weyanoke does," and "Walk or bike – your heart will love you."

The group continues to enhance the habitat value of its seven acres, adding more wildflower gardens with Girl Scouts and Master Gardeners. Further enhancing education, Weyanoke added a tree trail.



Lynn Gilbert, owner of Savior Martial Arts/SK8 Dojo Roller Rink, partnered on three oyster reefs on the Indian River.

Savior Martial Arts/ SK8 Dojo Roller Rink

NOT ONE, but three new oyster reefs have taken hold on Indian River, a top focus area for the Elizabeth River Project, thanks to this small business in the Eastern Branch drainage area or "sub-watershed."

Lynn Gilbert, owner, recruited two homes to join with her in hosting the new oyster habitats with the Elizabeth River Project, while growing 3,000 oysters for the new reefs. In addition, the roller rink switched to an environmentally friendly cleaner, up-cycled baseboards into tabletops and replaced two aging buses with more efficient ones.

Unity Renaissance Church

EARNING RIVER STAR status was so important to this inclusive spiritual community in the Eastern Branch area, Unity started a "Green Team" just for the purpose.

So far, results include a meditative nature trail, 4,000 square feet of lawn converted to trees, a "cool" roof (using a light color to reflect sunlight), more efficient heating and cooling, LED lighting, shared parking with a neighboring office complex and two rain barrels.



Unity Renaissance Church is incorporating environmental best practices from creating a meditative nature trail to shared parking with neighbors.

Virginia Wesleyan College

THERE CAN'T BE many other old-growth forests left in the Elizabeth River watershed, or drainage area – if any.

At Virginia Wesleyan, 12 acres of beeches are part of extensive woods. Another wood, the Wilson Arboretum, honors retiring professors.

The school's climate action plan sets the goal to be carbon neutral by 2050. Smithdeal Hall includes one of the region's first green roofs. Meanwhile, ice storage allows a chiller to shut down in daytime, saving energy. Composting, beekeeping and solar panels are among other achievements.



Virginia Wesleyan College, Hourigan Construction and Elizabeth River Project representatives look for conservation opportunities on campus.

Recertifying 2017

These River Stars "recertified" achievements documented three years ago. Stars reflect program level.

* Allied Concrete
* Bank Street Associates
* Colonial Pipeline

* East Coast Bikes
*** Hampton Roads Transit
** Lyon Shipyard

* Renaissance Portsmouth-Norfolk Waterfront Hotel
* South Norfolk Jordan Bridge

ENTERING AT COMMITMENT LEVEL 2017 | ★

Commitment Level River Stars documented significant results in either pollution prevention or wildlife habitat.



Alison Fechino with Chesapeake Humane Society poses with a kitten up for adoption. The nonprofit educates the community on pet waste and reuses donated pet supplies, saving resources.

Chesapeake Humane Society

THE CHESAPEAKE HUMANE SOCIETY works hard to inspire reuse of linens and pet supplies, accepting donated pet goods for reuse throughout the region.

The society promotes the behavior change to “scoop the poop,” with a pet waste station onsite, participation in regional education activities including a large annual event, Bark in the Park. The group eliminated Styrofoam to make this a Virginia Green event.



This coffee company with its U.S. headquarters in Portsmouth invented the world's first certified compostable single-serve coffee pod. The company also began recycling coffee “chaff” as organic fertilizer.

Massimo Zanetti Beverage USA

THE WORLD'S FIRST certified, compostable single-serve coffee pod was invented by a new River Star Business with Portsmouth as its U.S. headquarters.

Launched on Earth Day 2016, the PürPod100TM uses bio-based materials that will compost in less than six months. The company has begun small-scale recycling of coffee chaff as an organic fertilizer and implemented cardboard recycling.



This Y saves energy through efforts such as a tankless water heater, new efficient HVAC and natural light.

Taylor Bend Family YMCA

GETTING HEALTHY at this YMCA near the Western Branch also means helping the river get healthy. A tankless, on demand water heater, new energy efficient heating and cooling and skylights help conserve energy.

The Y has switched to less toxic cleaners where practical, recycles and practices green lawn care. The décor promotes the beauty of nature.



The historic civic league encouraged the city of Portsmouth in creating a waterfront park from an old crab processing site.

Park View Historic District Civic League

THE PORTSMOUTH neighborhood was instrumental in encouraging the city of Portsmouth to transform an old crab processing site into a waterfront pocket park. The civic league also installed a pet waste station at the park which it maintains, including emptying pet waste and regular cleanups.



This Virginia Clean Marina in Portsmouth is reducing harmful bacteria from reaching the river with a boat sanitation pump-out and two pet waste stations.

Ocean Yacht Marina

A TRANSFER OF OWNERSHIP brings us to welcome this marina as a new River Star Business. Also certified as a Virginia Clean Marina, the Portsmouth marina provides a boater pump-out station to help reduce the risk of bacteria in the river, has two pet waste stations and a campaign to reduce a leading source of litter, cigarette butts.

SUSTAINED DISTINGUISHED PERFORMANCE

Sustained Distinguished Performance is awarded when a River Star completes a significant new initiative with no change in recognition level. The stars reflect their level in the program.



BAE SYSTEMS NORFOLK SHIP REPAIR planted a wildflower meadow in an area that once stored propellers and scrap metal. The shipyard also documented more than 1 million kilowatt hours in energy savings through lighting and other upgrades.

***** BAE Systems Norfolk Ship Repair** – The inaugural River Star Hall of Fame winner this year reduced hazardous waste by 15,000 pounds and electricity consumption by more than 1 million kilowatts in one year. Conservation measures included replacing mercury vapor and fluorescent lights with LED and replacing aging steam propeller heaters with high-efficiency units. Among multiple habitat projects, the latest adds a wildflower meadow.

*** Bay Diesel & Generator** – This maritime engine service company reduced electricity usage by 17 percent over prior year by replacing shop fluorescent lighting with LED. It also expanded efforts to burn waste oil for heat.

***** Chesapeake Sheriff's Office** – Inmate labor including the "SoNo Crew" provided environmental cleanup for numerous city parks and public areas. In addition, the sheriff's office worked with multiple partners to eradicate the invasive common reed.

*** Colonna's Shipyard** – This shipyard on the Eastern Branch installed five concrete basins to capture and treat wash water during haul-out of vessels. New stormwater efforts also include street sweeping and a Vortech unit, an engineered device that retains debris, sediment and hydrocarbons.

***** Enviva Port of Chesapeake** – This wood pellet transfer terminal on Paradise Creek recycled 101,600 pounds of old conveyor belt, keeping it out of landfills and added 240 native plants along its entrance drive. The company added compost to landscape

beds to improve soil and help retain rain.

***** General Dynamics NASSCO-Norfolk** – This company operates two shipyards, one on the Eastern Branch and the other on Scotts Creek. General Dynamics more than doubled its oyster gardening efforts this year, raising 14,000 spat for river restoration. New stormwater basins and revitalized rain gardens were added to filter stormwater runoff.

***** Hermitage Museum & Gardens** – The museum on the Lafayette River has now reaped big financial rewards as the site of Virginia Outdoors Foundation's first permanent conservation easement in our urban area. The non-



HRSD ORGANIZED VOLUNTEERS to install interlocking oyster blocks to augment a new oyster reef on the Eastern Branch. The wastewater authority constructed 118 "oyster bergs" using excess concrete.

profit reports \$1.8 million in proceeds from the sale of conservation tax credits.

***** HRSD** – The wastewater treatment authority provided innovative monitoring to determine the source of bacteria in the Eastern Branch. After HRSD refined a locally designed mold for creating oyster habitat, the "Oyster Berg," the authority actually constructed 118 of them, then recruited volunteers from a regional conference to install them as part of an oyster reef with Elizabeth River Project at Chesterfield Heights.

***** Lafayette Wetlands Partnership** – The group helped organize volunteers and ongoing maintenance for a demonstration proj-

ect to reduce pollution to Knitting Mill Creek, with testing of various plantings and pervious walkways to determine what works best along a low-lying urban shore. The group also held a "BioBlitz" or citizen monitoring of wildlife at its restored shores on Colley Bay.

***** Naval Station Norfolk** – The world's largest navy base launched a new energy program called NERD, Naval Station Norfolk Energy Reduction Derby, to reduce energy consumption and increase awareness through a series of competitions. The base reduced energy consumption by 12 percent over the prior year and saved nearly \$6 million in the process. A new partnership with Virginia Industries of the Blind recycles spent fire extinguishers.

**** Naval Support Activity Hampton Roads, Lafayette River Annex** – This engineering arm of the Navy retrofitted boilers, installed a system to recapture condensate and upgraded controls resulting in a 30 percent decrease in natural gas usage over the prior year. Employees collected 600 pounds of trash and debris from their Lafayette shoreline on Clean the Bay Day.

***** Naval Support Activity Hampton Roads, Portsmouth Annex** – The nation's oldest naval hospital decreased generation of Regulated Medical Waste by 36 percent or 76,662 pounds. Now, many single-use medical devices are sent off-site for remanufacturing, resulting in cost savings of \$692,493 last year. New waterless mopping system improves infection control practices with no discharge to the sanitary system.



STEVE WALKER WITH COLONNA'S SHIPYARD and Pam Boatwright, left, with Elizabeth River Project discuss the shipyard's pollution prevention initiatives.



WORKERS FROM NORFOLK ENVIRONMENTAL STORMWATER MANAGEMENT, Lafayette Wetlands Partnership and Elizabeth River Project, along with with community volunteers, plant a demonstration buffer on Knitting Mill Creek.

***** Norfolk Environmental Commission/Keep Norfolk Beautiful** – The education center added a demonstration pollinator meadow and expanded oyster shell recycling for river restoration. Outreach efforts included wetland education workshops, tree giveaways and My Block is Beautiful to engage youth in litter cleanups, rain barrel painting and recycling. These efforts won the organization Affiliate of the Year, a national award from Keep America Beautiful.

***** Norfolk Environmental Stormwater Management** – Downtown Norfolk now features the area's first environmentally friendly dog park that has specially designed turf with an underdrain that uses plants to filter any remaining pet waste. Outreach includes a Retain Your Rain event to teach citizens how to install rain barrels, gardens and more to help reduce flooding. This department was a key partner in the demonstration buffer and walkways along Knitting Mill Creek.

***** Norfolk Naval Shipyard** – The country's oldest shipyard initiated a pilot composting program to reduce food waste being sent to the landfill. The compost will be used in beautification projects across the shipyard. The yard is replacing old forklifts with more sustainable models that will reduce air emissions and maintenance costs. More than 1,000 tree saplings were given to workers on Earth Day, along with environmental education on recycling, impact of litter, how to reduce idling time while driving, etc.



OLD DOMINION UNIVERSITY addressed erosion along the bank of a stormwater pond by installing coconut coir logs and adding wetland grasses and flowers. Other efforts on campus include rain gardens, composting and reducing landfill waste.

***** NRHA's Grandy Village and Learning Center** – The education center on the Eastern Branch not only hosts Elizabeth River Project's Learning Barge, but also helped host Virginia's First Lady in April. A new tide monitoring station will help the city with sea level rise planning.

***** Old Dominion University** – This former Hall of Fame winner addressed erosion in two of

its stormwater ponds by installing coconut coir logs and adding nearly 1,000 grasses and shrubs. Two landscape areas also help reduce standing water. Two new utility vehicles run on B20 (20 percent biodiesel) fuel. The campus also reduced landfill waste by more than 1 million pounds and composted 466,380 pounds of landscape material last year.

***** Port of Virginia** – In part-



ARIELLE WELLS OF ENVIVA PORT of Chesapeake helps plant native flowers near the terminal's entrance. The wood pellet transfer facility on Paradise Creek planted 240 shrubs and flowers and recycled 101,600 pounds of old conveyor belt instead of sending it to a landfill.

nership with Norfolk Tug, the port increased barging of containers to Richmond, reducing air emissions and fuel usage compared to trucking. The port also increased recycling of solvent, wood, paper and plastics. The port replaced an outdated harbor crane with a new hybrid crane and two new rubber-tired gantry cranes with more efficient engines.

**** Portsmouth Public Works/Stormwater** – The city installed a new "decanting" facility to separate water from debris in street sweeping operations that consists of a raised concrete drying bed, concrete entrance ramp, containment walls, drainage trench and a bio-retention basin for filtering.

**** SIMS Metal Management** – Chesapeake – The metal recycling facility at Money Point has added a new state-of-the-art component to the site's car shredder that includes a closed-loop air system with vacuum technology to remove dirt, plastic, foam (fluff), while reducing fugitive dust and air emissions. More recyclable material is separated, reducing the amount that must be sent to a landfill.

***** Skanska USA Civil** – The heavy/marine/industrial contractor completed numerous stormwater improvements to its yard on the Southern Branch, ranging from re-grading the site so runoff flows away to the river to a new stormwater pond, to installing check dams in ditches to allow pollution to infiltrate and adding multiple protections to high priority stormwater inlets. The company added aerosol can recycling at all major projects.

INSIDE BUSINESS | RIVER STAR HALL OF FAME

The Inside Business River Star Hall of Fame recognizes one business each year that best exemplifies the spirit of the River Star business program. Results of “Doin’ right by the river” can be cumulative.

Norfolk Naval Shipyard shines brightest among 2017 stars

AMONG TURNAROUND stories that are helping reverse the Elizabeth River’s infamy for industrial pollution, none is more dramatic than the turnaround of the nation’s oldest and largest naval shipyard.

Operating on the Southern Branch since before the American Revolution, Norfolk Naval Shipyard had made it to the U.S. Environmental Protection Agency’s “Superfund” or worst-of-the-worst list by the time the shipyard began working with the Elizabeth River Project in the early 2000s for not one, but a series of landfills on the river’s Paradise Creek.

Together, the shipyard, our nonprofit and other partners won a White House award for transforming the landfills into more than 70 acres of healthy new wetlands and wildlife meadows, while saving money over less green approaches. The shipyard has not stopped since.

Throughout the sprawling facility, modern approaches have been added steadily to reduce runoff and other sources of pollution. In one year alone, 2002, the yard added 234 different “Best Management Practices” for stormwater improvement. An Environmental Management System in 2009 allowed for a comprehensive approach to pollution prevention.

In 2012, the yard replaced lights in two parking lots with LED bulbs, for a savings of \$650,000 over the next 15 years, plus \$43,000 a year in material and labor. An employee devised a modified can for storing brushes in 2015 that reduced volatile organic compounds by 1,175 pounds and reduced solid waste by 7,500 pounds. The yard grows oysters each year for Elizabeth River Project’s nearby oyster reef on Paradise Creek.

The shipyard opened a super-green building this year, a “controlled industrial facility” that uses stormwater for urinals, and also includes solar panels and a charging station for electric vehicles.

“Being a historic facility starts them out with handicaps, since their systems are so old,” said Pam Boatwright, River Star businesses program manager. “On top of that, shipyards are highly industrial. This makes Norfolk Naval Shipyard’s environmental progress all the more remarkable.”



The nation’s oldest shipyard won a White House award for environmental progress on Paradise Creek and continues to exemplify “doin’ right by the river.”

Inside Business River Star Hall of Fame

2011 Inaugural Winner – BAE Systems

Norfolk Ship Repair

2012 Winner – Port of Virginia

2013 Winner – Kinder Morgan/Elizabeth River Terminals

2014 Winner – Old Dominion University

2015 Winner – Wheelabrator Portsmouth

2016 Winner – HRSD

2017 Winner – Norfolk Naval Shipyard

NEW! EASTERN BRANCH AWARD

NRHA Grandy Village Learning Center

AFTER HISTORIC PROGRESS on the Lafayette, the Elizabeth River Project and community partners are turning extra attention to a new branch of the Elizabeth. The Eastern Branch, also dubbed “the invisible” or lost branch, now shows the worst trends, according to the most recent State of the River report by area scientists.

The problem comes partly from a lack of attention to this branch, though it runs through three cities. Thus Elizabeth River Project’s new award, to be repeated the next two years, for the River Star business making the most progress to reduce pollution and restore wildlife habitat on the Eastern Branch.

The first winner is Norfolk Redevelopment and Housing Authority’s Grandy Village Learn-

ing Center, a Gold LEED (Leadership in Energy and Environmental Design) certified building with solar panels, geothermal heating and pervious sidewalks, surrounded by lush restored acres of tidal wetlands on the Eastern Branch.

A custom pier regularly welcomes students aboard Dominion’s Elizabeth River Project Learning Barge. Students also conduct volunteer plantings along the shore.

The Learning Center has become something of an unofficial headquarters for a \$120 million Coastal Resiliency project of the city of Norfolk, the Elizabeth River Project and other partners to improve shoreline resiliency in the face of sea level rise. A tide gauge was recently installed on the pier and the center routinely hosts related meetings and workshops.



NRHA Grandy Village and Learning Center – The green education building on the Eastern Branch of the Elizabeth is surrounded by restored tidal wetlands and partners with Elizabeth River Project in educating about resiliency.