



JACKSONVILLE DISTRICT

Making Tomorrow Better

ANNUAL REPORT 2015



Col. Jason A. Kirk, Commander



I am humbled and proud to serve as the Commander and District Engineer for your U.S. Army Corps of Engineers Jacksonville District. The Corps of Engineers has been active in developing and protecting the water resources and military infrastructure of the Florida and Antilles region since the 1850s. While much has changed in 160 years, the combined purposes towards which we work, supporting national security, energizing our economy and increasing our resiliency, have always been at the heart of our efforts. Since joining the Jacksonville team this past July, I have had the pleasure of meeting with many of our stakeholders. Feedback from the public-at-large, our project sponsors and our elected officials is invaluable to gauging the success of our efforts. I have also spent time with our district leadership discussing and refining our vision and mission statements to succinctly capture and communicate why and how we complete our important work.

First, our vision: Our vision is to be **a team of professionals making tomorrow better.**

- We are a **team**-a group of individuals working toward a common goal.
- We are **professionals**-the Corps of Engineers is the finest civil engineering organization in the world, and the 760-plus members of the Jacksonville District are a shining example of this excellence. Many members of our team have advanced degrees and professional accreditations, and a number are recognized as worldwide experts in their specialties.
- We are **making tomorrow better**- the Corps and Jacksonville District are future-oriented organizations. Our work addresses not only today's national defense, navigation, flood control, environmental and coastal protection challenges, but those the Nation will face years and decades in the future.

Now on to the mission statement.

Our mission is to **deliver value to the nation by anticipating needs and collaboratively engineering solutions that support national security, energize our economy and increase resiliency.**

To expand:

- We **deliver value to the nation** - Corps projects go through rigorous cost/benefit analyses at our district, division, and national headquarters, before Office of Management and Budget review. On average, Corps projects deliver \$8 of value for every \$1 invested.
- We **anticipate needs** - this statement reflects our vision of making tomorrow better. We look forward to determine future challenges and needs, and develop solutions now to mitigate those challenges and meet the needs. An example is our effort to champion a south Atlantic comprehensive coastal study, which would look now at areas at risk along the eastern seaboard from North Carolina to Florida to establish strategies for protection and for rebuilding... so those strategies are in place before the next major hurricane strikes or before sea level rise has irreversible negative impacts.
- We **collaboratively engineer solutions** - this part of the mission statement stresses the collaborative and intellectually rigorous nature of our business. The district team comprises a wide range of professionals—engineers, biologists, economists, program and project managers and other scientists and managers—who collaborate intensively with each other, with many different local and regional non-federal sponsors, a wide range of other stakeholders, and with other Corps agencies, laboratories and districts, and other federal agencies. Working within this collaborative framework, we engineer solutions - not all our solutions are civil engineering projects, but all embody a data-driven, systematic, rigorous perspective.
- Our solutions **support national security, energize our economy and increase resiliency.** District projects may directly support national security, through work for Department of Defense organizations, or indirectly, through work that ensures the viability of our economic system. Corps projects return, on average, eight dollars for every dollar invested. Our navigation projects are critical to national economic well-being. Our flood control projects protect billions of dollars of infrastructure that make up the built environment, while our regulatory efforts and environmental restoration projects protect and preserve the priceless resource that is our natural environment.

I am privileged to serve as your 59th Jacksonville District Engineer and leader of our team of professionals. We are inspired by our vision and focused on our mission in service to our nation.

Jacksonville District is not only BUILDING STRONG®, we are JAXStrong!!!

Timothy Murphy, DPPM

I was selected to serve as the senior civilian in the Jacksonville District in January 2015, half a year before Col. Kirk took command. Like Col. Kirk, I am extremely proud of this district. We are, quite simply, an organization that makes things happen. Last year, the district awarded over \$330 million in contracts, while completing \$440 million of work. We manage more than 70 construction contracts, with slightly less than \$2 billion under construction. Next year, our placement, the amount of work actually completed toward finishing contracts, will increase. In old-fashioned terms, in 2016 much of our focus will be on “turning dirt,” moving projects forward toward completion.



We will be building on major accomplishments in 2015:

- We completed construction of the Miami Harbor deepening, marking the completion of the first project in the southeast United States to the 50-foot depth that today's larger ships require. The district is moving forward on a number of similar projects, most notably at Port Everglades, and Jacksonville Harbor.
- We gained approval of a major study that provides a clear way to the finish line for the rehabilitation of Herbert Hoover Dike. The district now has a plan that will guide its efforts to ensure the safety of the dike, and the thousands of people and billions of dollars of infrastructure around the dike.
- The district continued to make significant progress in Everglades restoration. We broke ground on the C-44 reservoir in November 2015, and in January 2016 will break ground on a detention area that will connect the C-111 South Dade project to the Modified Water Deliveries to Everglades National Park (Mod Waters) project. These projects move us, together with many local, state and federal stakeholders and partners, closer to the goal of restoring natural flows to central and south Florida, and preserving the natural wonder that is America's Everglades.
- We awarded additional contracts for restoration in the Kissimmee River Basin. Our environmental restoration work has proved to have substantial benefits, including the return of long-legged wading birds along the Kissimmee River north of Lake Okeechobee, and a resurgence of native plants and animals within the Picayune Strand restoration project.
- We continue to protect Florida coastlands and to dredge waterways to ensure they remain navigable. We are leading the way in combining dredging and coastal protection when appropriate. In 2015, Corps of Engineers designated Jacksonville District as a regional center of excellence for regional sediment management. Jacksonville District has that knowledge and expertise, as well as the will to drive this important program forward for the nation.
- Our regulatory division issued more than 3,500 general permits and nearly 500 individual permits, while working to streamline processes for permit applications. The regulatory division oversees about 147,000 acres of wetlands in mitigation banks, the largest area of wetlands mitigation banks of any Corps district, and a vital asset in the effort to prevent net loss of wetlands.
- Our Military, Interagency, International and Environmental Services Branch saw their portfolio expand by over 200 percent, and added two new customers, Fort Buchanan, Puerto Rico and Veterans Affairs National Cemetery Administration.
- Our Real Estate Division managed a wide range of complex issues, including acquisition of real estate necessary for projects, out-grants, which provide usage rights for marinas and other facilities on Corps-controlled lands, and Department of Defense real estate needs in the district area of operations, including support to recruiting, National Guard and Reserve units.

As you can see, we are very busy, and as I said, we are an organization that makes things happen, for Florida and for the nation. But we are not just an organization. As Col. Kirk writes, we are a team of some 760 highly professional, highly dedicated individuals. I am proud of the great things we accomplish. Together, we are the Jacksonville District, and we are JAXStrong!



Who we are...

Commander:

Col. Jason A. Kirk

Chief, CCO:

Mark Ray

Corporate

Communications Staff:

John Campbell

Susan Jackson

Jennifer Miller

Nakeir Nobles

Amanda Parker

Erica Skolte

Layout and Design:

Aaron Church

VISION

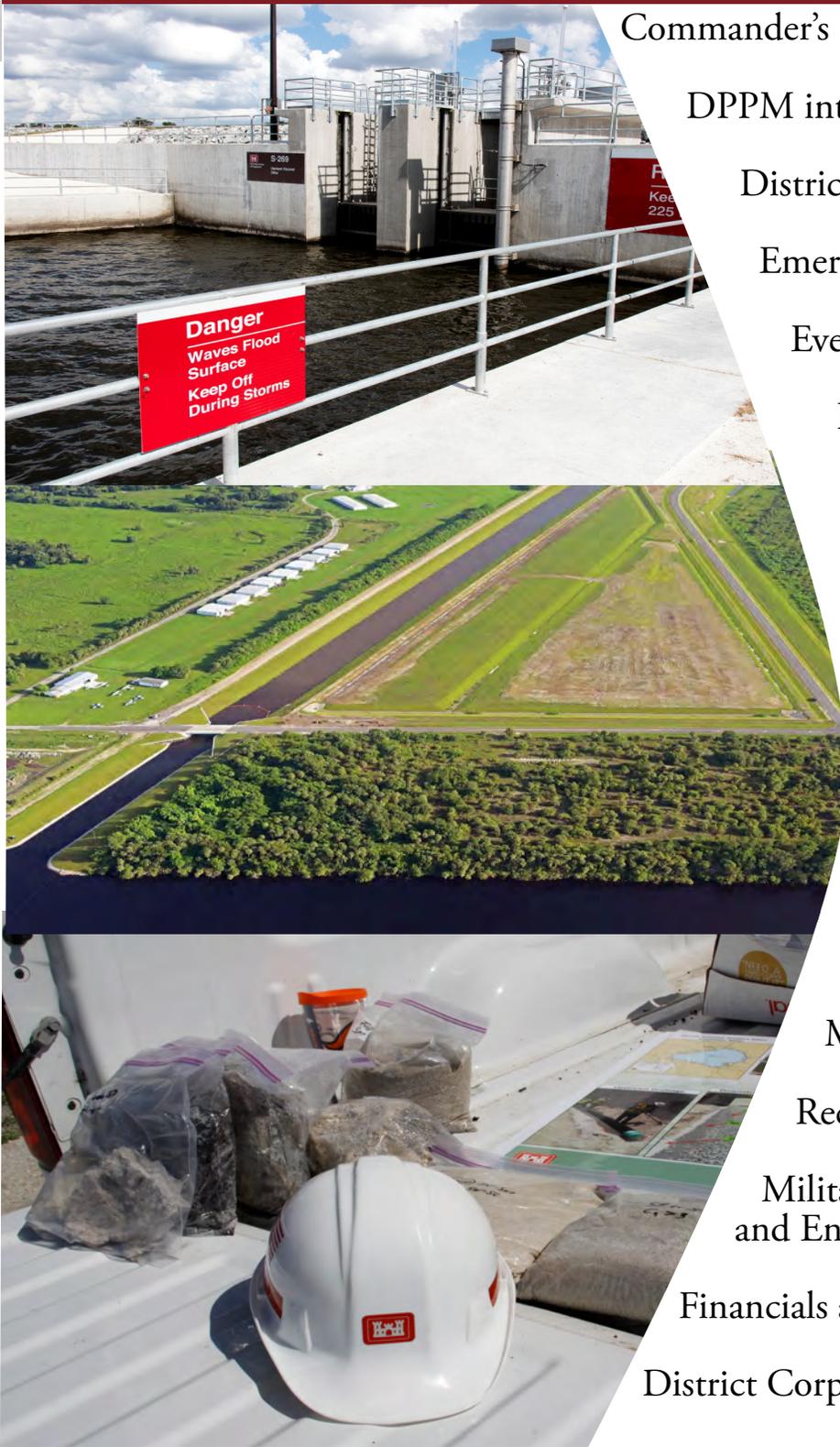
A Team of Professionals Making
Tomorrow Better

MISSION

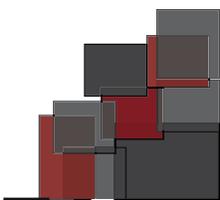
Deliver value to the nation by
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Emergency Management

Ready to Respond

EMERGENCY OPERATIONS

US Army Corps
of Engineers

Jacksonville District's Emergency Management Branch helps the organization prepare for and respond to natural disasters and national emergencies. Hurricanes, floods, and droughts occur frequently in the district, and the district staff must be ready to respond.

When heavy rains, fueled in part by Hurricane Joaquin, caused major flooding in South Carolina in early October, Jacksonville District responded, along with other Corps elements. The district sent its Unmanned Aerial System (UAS) team and several engineers and geologists to conduct safety inspections of damaged dams and levees.

The deployment to Columbia, S.C. marked the first time the Federal Emergency Management Agency had requested the UAS team use its monitoring capability during a disaster. The team spent five days in Columbia, flying missions over breached dams to provide imagery that helped authorities plan the response to the disaster.

Three engineers and geologists from Jacksonville joined others from Savannah and Wilmington to help inspect more than 650 dams in South Carolina. The team joined state authorities in assessing storm damage and determining the need for emergency repairs.

The district also maintains a 41-person emergency response team that can provide temporary housing support in the aftermath of disasters. The team was on standby during the South Carolina flooding, but ultimately was not needed.

During the first half of 2015, emergency management staff undertook one of the most aggressive exercise schedules in recent memory. The team held a continuity-of-operations (COOP) exercise with senior district personnel on March 4. During the exercise, the leadership discussed how they would respond if a disaster or human-caused event rendered the Jacksonville District headquarters building unusable.

Other exercises in the spring required district

officials to determine their responses if a hurricane took a path similar to the 1928 storm that killed thousands as it traveled through Puerto Rico and Florida. Such a storm could severely stress or possibly breach Herbert Hoover Dike. District staff talked through a scenario involving a breach of the dike and the actions the district would take in response.

For 2016, emergency managers are reviewing options for conducting additional exercises. One such event would have responders review techniques and tactics for using rock to fill a potential breach at Herbert Hoover Dike.

Planners are also looking to have the UAS team demonstrate its capabilities as part of the Florida state hurricane exercise. Finally, Jacksonville District is working toward gaining accreditation for its emergency management program. The Emergency Management Accreditation Program uses measurable standards and a peer-reviewed process to improve emergency management and create safer communities. As part of the accreditation process, the district will review its plans and procedures to ensure it is applying the best practices in its emergency management activities.



Thomas Spencer (left) and Travis Barnett (right) launch one of Jacksonville District's Unmanned Aerial Vehicles (UAVs) as they perform a survey at Lake Katherine Dam in Columbia, S.C. (USACE photo)

Everglades Ecosy

The Jacksonville District continues to move forward in its efforts to restore America's Everglades. The district is the lead federal agency for the South Florida Ecosystem Restoration (SFER) program, which includes the largest ecosystem restoration project to date, the Comprehensive Everglades Restoration Plan (CERP).

In total, the district executed a total of \$87.6 million this past fiscal year for its Everglades restoration program. This expenditure is federal dollars at work to plan, design and build critical infrastructure to restore historic flows to the Everglades and provide much-needed ecological and economic benefits for the region.

Projects within the SFER program fall into three categories:

- Foundation Projects, which CERP builds upon to deliver essential ecosystem benefits
- CERP Generation 1 projects, authorized by Congress in 2007
- CERP Generation 2 projects, authorized by Congress in 2014

Momentum remained strong in the Corps' Everglades restoration efforts this past year, with the district making substantial progress on projects within all three of these categories.

Moving Foundation Projects towards the finish line

The district is working hard to bring the Foundation Projects to completion. In 2015, the district awarded two construction contracts for the Kissimmee River Restoration Project, a massive restoration project that will restore more than 40 square miles of river floodplain ecosystem, including almost 20,000 acres of wetlands and 44 miles of historic river channel. The final two construction contracts should be awarded within the next two years.



Construction continues on the Kissimmee River Restoration project.

The district awarded one of the three remaining contracts for the C-111 South Dade project in October. The contract, known as Contract 8, involves constructing the North Detention Area, an important piece of infrastructure that will connect



System Restoration

the C-111 South Dade project to the Modified Water Deliveries to Everglades National Park (Mod Waters) project. Together, these projects will create a hydraulic ridge that will reduce groundwater seeping out of eastern Everglades National Park. This will allow additional water to flow into the Park and will enable additional operational flexibility in the southern portion of the Everglades ecosystem.

Collecting vital data to enhance water deliveries into the Everglades

Water management is a key element to restoring historic flows to the Everglades. The district initiated an incremental water operations field test this year to take a deeper look at possible operational refinements to provide increased ecological benefits to the Everglades ecosystem.

The first increment of the G-3273 and S-356 Pump Station Field Test started October 15. The test aims to increase flows to Everglades National Park and is a collaborative effort between the U.S. Army Corps of Engineers, Department of Interior and the state of Florida.

The data collected during the field test will be used to develop the Combined Operating Plan, a comprehensive integrated water management plan for the

southern portion of the Everglades ecosystem. This operational plan will enable additional water to be sent south to Everglades National Park and will provide optimal restoration benefits and operational flexibility for the southern Everglades ecosystem.

Maintaining construction momentum on CERP Generation 1 Projects



The district, alongside federal, state and local officials, celebrated the start of a major construction contract Nov. 20 for the reservoir component of the C-44 Reservoir and Stormwater Treatment Area project.

The 3,400-acre reservoir will store an additional 16.5 billion gallons of water from the C-44 basin and is the largest water storage component of the C-44 project. In terms of cost, the \$197 million construction contract is the largest single contract award for the district, and Corps-wide, is the



Everglades Ecosystem Re

second largest contract award for a project this past year. When completed, the C-44 project will capture, store, and treat local basin runoff and improve conditions in the St. Lucie Estuary and Indian River Lagoon, the most biologically diverse estuarine system in the continental United States.

Working collaboratively to move Generation 2 Projects forward

Congress authorized the CERP Generation 2 projects under the Water Resources Reform and Development Act (WRRDA) of 2014. The projects are currently awaiting congressional appropriations. In advance of congressional action, the Corps has worked alongside the South Florida Water Management District (SFWMD), which serves as the 50/50 cost-share partner on CERP, to advance construction on the CERP Generation 2 projects.

This past year, the Corps facilitated an agreement that will enable the SFWMD to initiate construction on the first phase of the C-43 West Basin Storage Reservoir project. The C-43 project will capture and store basin stormwater runoff, along with some water from Lake Okeechobee, in a 10,500-acre reservoir. The stored water will be slowly released into the Caloosahatchee River, helping to restore the natural water flow to the Caloosahatchee Estuary.

The SFWMD has already constructed portions of the Biscayne Bay Coastal

Wetlands and C-111 Spreader Canal projects in advance of congressional action. The Corps has also been working on the designs of the Broward County Water Preserve Areas and remaining components of the Biscayne Bay Coastal Wetlands projects.

Using science to determine future opportunities

The Corps released a comprehensive study on research related to the use of Aquifer Storage and Recovery (ASR), an Everglades restoration component proposed as part of the CERP to recharge, store and recover water underground for ecological restoration uses.

The Corps and SFWMD developed the ASR Regional Study, which documents the results of over a decade's worth of scientific and engineering investigations. The report will serve as a technical guide to possible ASR implementation as part of future Everglades restoration efforts.

Science serves as the foundation for restoration efforts. A robust system-wide monitoring and assessment program is a critical component of the CERP Adaptive Management Program and in determining the success of restoration efforts.

The multi-agency Restoration, Coordination, and VERification (or RECOVER) Group tracks key attributes that indicate system health ("indicators"). To understand ecological health of the ecosystem and track restoration



Restoration

progress, a System Status Report on the key indicators, and ecological “report card” on restoration success, is prepared every two years. Restoration leaders take these findings and, linking science to decision-making, work to improve the probability of restoration success.

Aligning priorities

When looking towards the future, a formal sequencing strategy is essential. A re-evaluation of this strategy, known as the Integrated Delivery Schedule (IDS), was completed this past year. The IDS synchronizes program and project priorities with the State of Florida and is needed to request required funding to plan and build SFER projects. It provides the sequencing strategy for planning, designing and constructing federal projects cost-shared with local sponsors as part of the SFER program, based on ecosystem needs, benefits, costs and available funding.

The IDS does not require an agency action or a decision document, but is a tool that provides guidance to decision-makers for scheduling, staffing and budgeting. It is a living document that is updated as needed to reflect progress and program changes.

Through Congressional appropriations, the U.S. Army Corps of Engineers has invested nearly \$2 billion to date into ecosystem restoration in south Florida. This investment includes costs for planning, designing and constructing projects under

the SFER program, along with corresponding science and monitoring programs.

Restoration progress depends on maintaining momentum. The district will continue to work alongside partnering agencies and stakeholders to align project priorities and move restoration efforts forward. Together, we accomplished a lot this past year. We will maintain this momentum not in only 2016, but for many years to come.



A water operations field test is underway to refine operations in the southern portion of the Everglades ecosystem.



Invasive Species Management

Invasive Species Management branch fighting battles on many fronts

Combatting invasive species is a worldwide challenge. Biologists in the Jacksonville District Invasive Species Management branch are fighting battles in that conflict here in Florida, and seeing success on many fronts:

- In south Florida, a program to remove aquatic growth treated more than 13,900 acres of water hyacinth and water lettuce on Lake Okeechobee at a cost of \$1.4 million.
- The district worked with partner agencies and stakeholders to release *Megamelus scutellaris*, a small insect effective as a biocontrol agent for water hyacinth, on Lake Okeechobee.
- The district also worked with partners and stakeholders on prescribed burns on more than 10,000 acres of cattail treated on the lake, improving fish and wildlife habitat.
- In 2015, the district collected a record number of alligator weed flea beetles (more than 114,000) and shipped them to 29 agencies in eight southern states, where the insects cannot overwinter due to cold. The beetles help control alligator weed, classified as a federal noxious weed. Since the program began in 1981, the district has collected approximately 1.6 million flea beetles from the St. Johns River and distributed them throughout the southeast

United States.

- District biologists are using genetic testing to address the emerging challenge of distinguishing invasive from native species of water primrose.
- The district leads an early-detection rapid-response effort to eradicate salt cedar from the state, and reaches out to partners in an effort to systematically eliminate all populations of the invader. The district has seen success in its management of areas where it places dredge spoil, eradicating salt cedar on Bartram and Buck Islands in Jacksonville Harbor. We continue to fight salt cedar at Mayport Naval Station, and on Blount and Dayson Islands, and recently increased our efforts in Tampa Harbor and Manatee Harbor.



Angie Huebner collects alligatorweed flea beetles for areas where the insects cannot survive cold winters. (photo by James Harris)



Water Management

Although flood risk reduction is not the sole driver of Jacksonville District's management of water in Lake Okeechobee in south Florida, it plays a major role in the decision-making process, along with navigation, water supply, and enhancement of fish and wildlife. This year was like many others in that Jacksonville District water managers faced challenges in balancing the sometimes competing purposes of the lake.

The district uses guidance found in the 2008 Lake Okeechobee Regulation Schedule (LORS) as the basis for formulating its water-management decisions. Under LORS, Jacksonville District water managers strive to keep the lake between elevation 12.5 and 15.5 feet for most of the year. LORS provides guidance on how much water to release based on lake level, the time of year, how much water is flowing into the lake, and how much rain may fall in the coming weeks and months to compound potential issues of having too much water.

At the end of 2014, the lake was elevated due to heavy rains that fell in the Kissimmee River basin in October, topping out at an elevation near 16.0 feet. The Corps worked with its partners at the South Florida Water Management District to move lake water through canals to the south. This action took several inches of water off the lake, but frequent, heavy rains created inflows that slowed the recession. By the time the new year arrived, the lake level was still elevated at 15.2 feet, the highest for that time of year since 2006.



Faced with the need to create storage for the upcoming wet season, Jacksonville District started releasing water from the lake to the Caloosahatchee and St. Lucie Estuaries. The low-level releases helped bring the water level in the lake down about a foot, putting it in a better position to handle the beginning of wet season in May. Water managers closely monitored flows and worked with local scientists on both coasts to keep environmental impacts to a minimum.

However, wet season was slow to arrive in south Florida in 2015. Fortunately, good decisions ensured enough water remained to help alleviate the impacts of a drought that impacted many areas along the east coast from West Palm Beach to Miami. The lake hit its low in mid-July, just below elevation 12.0 feet. More frequent and sometimes heavy rains during the summer caused the lake to rise again. The latest peak occurred in early October at 14.8 feet. The lake started another recession, which was reversed when heavy rains fueled by El Niño conditions arrived.

Water managers continue to utilize a decision-making process that considers all of the Congressionally-authorized purposes for the Central & Southern Florida Project (which includes Lake Okeechobee). With a strong El Niño forecast for the dry season, water managers will face another challenging year in 2016.

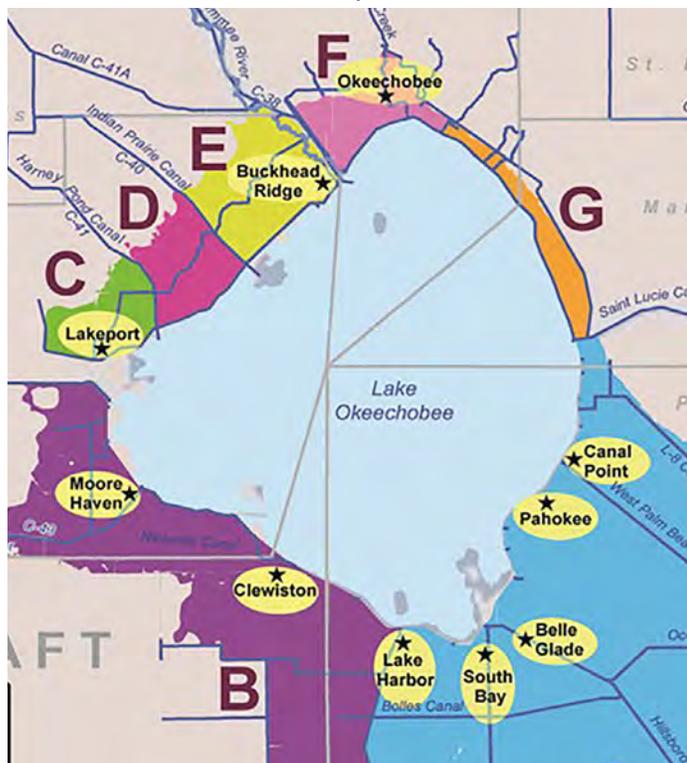


Flood Risk Management

In 2015, Jacksonville District increased the nation's resiliency by executing more than \$145 million in flood-risk management projects, which reduce risk and effects of heavy rain and flooding.

Most of the district's flood-risk reduction work involves a major rehabilitation project at Herbert Hoover Dike, a 143-mile earthen structure surrounding Lake Okeechobee in south Florida. The Corps has been strengthening the dike, initially constructed in the 1930s, since 2007, and has invested more than \$550 million in risk-reduction features.

One such feature is a 22-mile seepage barrier, also known as a partial cutoff wall,



between Belle Glade and Port Mayaca on the southeast side of the lake. The cutoff wall reduces seepage of water through the dike, decreasing erosion and reducing the overall risk of dike failure. The district completed the partial cutoff wall in 2013.

Since 2013, the district has focused on replacing more than two dozen water control structures around the lake. These structures, commonly known as culverts, provide water and drainage for nearby property owners. The district considers these 32 structures to pose the greatest threat for dike failure. In 2015, the Jacksonville District contracted to replace two additional culverts, bringing the total completed or under contract to 21 structures. Over the next three years, the Corps plans to begin replacement of five additional structures, and to abandon three others. The district removed one structure in 2011, and replaced two others in 2009.

Much work remains on the dike. The Corps is currently conducting a dam safety modification study to identify the additional structural and non-structural measures to reduce the impacts from dike failure. The district plans to release the final study report in 2016. However, as the study has progressed, Jacksonville District identified an opportunity to accelerate construction on an extension of the existing cutoff wall. A six-mile extension of the wall west of Belle Glade will allow property owners to fully realize the benefits of already completed work. The district expects to begin the extension of the cutoff wall in 2017.



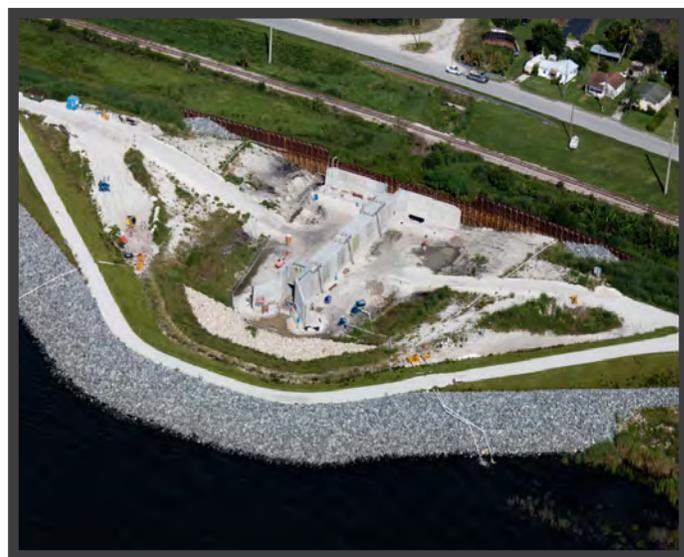
The district is also actively pursuing flood risk reduction projects in Puerto Rico. The Rio Puerto Nuevo project in San Juan reached another milestone in 2015 with the completion of the Bechara Middle Section. The middle section contract was extremely challenging work that included relocation of a 96-inch sewer line that serves hundreds of thousands of people in the city. This work, combined with earlier efforts on the Margarita Channel and the de Diego Bridge, has measurably reduced flooding of area homes and businesses.

West of San Juan, the district has completed excavation of a channel and construction of two miles of levee as part of the Rio de la Plata flood control project. The levee helps protect residents in the community of Dorado from flooding associated with heavy rain. On the south side of the island near Ponce, Jacksonville District continues operational testing on Portugués Dam in advance of turnover to the Puerto Rico Department of Natural & Environmental Resources in 2016. The district completed construction of the thick-arch, roller-compacted-concrete dam in 2014.

With construction projects, the Jacksonville District engineers also manage levee and dam safety programs to reduce flood risk. In 2015, Jacksonville District completed initial periodic inspections of the 90 federal levee systems, consisting of 181 segments. This project has been underway since 2009.

Levee safety engineers also supported the Corps' Sacramento District with assessments of its

levee systems. Dam safety engineers also completed an assessment of St. Lucie Lock and Dam, using new Corps dam safety criteria.



Construction continues at the Herbert Hoover Dike on Water Control Structure S-272, the replacement for Culvert 13 located near Canal Point on the southeast side of Lake Okeechobee. S-272 is one of 21 culvert replacement projects that were under contract with Jacksonville District at the end of 2015. (USACE File photo)



Regulatory

The Corps of Engineers' regulatory program is part of the nation's commitment to protect and ensure the wise use of aquatic resources. Jacksonville District oversees the largest regulatory program within the Corps of Engineers with jurisdiction over Florida, Puerto Rico and the U.S. Virgin Islands.

The U.S. Army Corps of Engineers has the responsibility for regulating structures and work in navigable waters of the U.S., the discharge of dredged or fill material into waters of the U.S. (including wetlands) and the transportation of dredged material for environmentally sound disposal.

The regulatory program is responsible for protecting the nation's aquatic resources while authorizing development through fair, flexible and balanced permit decisions. Wetlands protection is a major part of this effort.

General Permits

The Corps issues general permits on a nationwide or general basis for activities that are similar and cause minimal individual and cumulative impacts, such as minor road activities. These types of permits reduce the burden of the regulatory program on the public and ensure timely permit issuance. The Corps issues general permits for five-year periods, after which they are subject to review.

During fiscal year 2015, the Jacksonville District regulatory program staff issued 3,516 general permits. District regulators completed 2,919 of those permits (83 percent) within 60 days.

Individual standard permits

Activities that do not qualify for a general permit may qualify for a standard individual permit. The Corps issues standard individual permits for activities that have more than minimal adverse effects. The district issued 472 individual permits during fiscal year 2015, completing 34 percent of the permits within 120 days of receipt of a complete application package.

A particular success was the permit the district issued to Duke Energy Florida for the discharge of fill material, necessary for the construction of a natural gas-fired combined-cycle plant. This new 400-acre facility will affect a very small area of wetlands (3.76 acres).

Mitigation and mitigation banking

When a proposed project permit or action will cause unavoidable impacts to the nation's aquatic resources/wetlands, the Corps may require mitigation as a condition of the permit. Mitigation is a key part of the Corps' efforts to protect wetlands and comply with the nation's goal of "no net loss."

A mitigation bank is a wetland, stream or other aquatic resource area that a banking entity (typically a private business) has restored, established, enhanced or preserved. Before the Corps allows mitigation bank credits to offset wetland losses, the bank must fully meet performance criteria, ensuring that the mitigation fully offsets wetland losses and provides optimal ecological function.



Annually, the Corps of Engineers authorizes more than 20,000 acres of wetlands impacts and requires almost 50,000 acres of compensatory mitigation to offset the effects. Nationwide, the Corps oversees nearly half a million acres of wetlands in mitigation banks.

The Jacksonville District is responsible for nearly one third the total area, with about 147,000 acres in 68 banks. The district currently has another 32 banks in review. The average size of the banks in Florida is over more than 900 acres. The largest is 24,000 acres.

Fiscal year 2015 concluded with the district finalizing two mitigation banks and establishing two In-Lieu Fee programs with 11 associated In-Lieu Fee projects. In-Lieu Fee mitigation allows a permit applicant to make a payment to a program that will conduct wetland, stream or other aquatic resource restoration, creation, enhancement or preservation activities.

Enforcement Program

One of the strengths of the permit program that it is backed up by a strong enforcement is effort. The Corps is committed to enforcing compliance with the permits it issues. The enforcement program ensures entities that harm aquatic resources without getting the needed permits fix the damage.

In 2015, the Jacksonville District's enforcement section resolved 70 enforcement and 41 non-compliance cases.

Continuous improvement

The district takes its regulatory role very seriously. We have more than 100 employees in the regulatory program, and a dedicated seven-person team whose sole focus is overseeing the federal wetlands mitigation bank program in the district. The team works to continuously improve the district's mitigation program and ensure the efficient review, management and long-term sustainability of mitigation within the district.

By protecting the nation's aquatic resources, while allowing development through fair, flexible and balanced permitting decisions, the Jacksonville District regulatory team maintains the balance among competing interests and meets the needs of local communities, Florida, Puerto Rico and the U.S. Virgin Islands, and the nation as a whole.





The district completed a study for Port Everglades expansion improvements and advanced two new port expansion studies.





Ports and Waterways

The Corps invests in the maintenance of coastal and inland commercial navigation channels and in their improvement. The emphasis is on investment in those projects that will provide the greatest economic and environmental return to the nation. These channels operate in tandem with other federal and non-federal assets, forming an intermodal transportation network. The network supports imports and exports globally through the nation's ports, as well as cargo movement in the United States.

The Corps also maintains harbors and waterways to guarantee access and transportation capability in support of our national defense. Jacksonville Harbor, for instance, is home to the U.S. Army's 832nd Transportation Battalion, which provides ship operations in deploying units and directly supports U.S. Navy and U.S. Marine Corps elements. Jacksonville District is responsible for 17 deep draft harbors and 20 shallow draft harbors in Florida and the Caribbean, as well as about 900 miles of navigable inland waterways.

A highlight of Operations & Maintenance (O&M) in 2015 is the aggressive use of navigation dredged material from navigation projects for shore protection and environmental benefit. Some examples include:

- Beneficially using dredged material from Palm Beach Harbor for beach nourishment south of the inlet. The nourished beach helps protect the shoreline and creates habitat for sea turtle and shorebird nesting, and recreation.
- Placing dredged material from Tampa Harbor channels onto critically eroded Egmont Key shoreline to help protect the culturally significant island.
- Beneficially using dredged material from Jacksonville Harbor to protect the beach at U.S. Naval Station Mayport.

The District received 2016 funding for ten O&M projects:

Canaveral Harbor:	\$4,430,000
Jacksonville Harbor:	\$6,100,000
Manatee Harbor:	\$400,000
Miami Harbor operations:	\$250,000
Palm Beach Harbor:	\$3,200,000
Panama City Harbor:	\$1,840,000
Port Everglades Harbor:	\$300,000
Tampa Harbor:	\$9,500,000
Intracoastal Waterway: Jacksonville to Miami	\$700,000
Okeechobee Waterway:	\$2,750,000





Port Modernization and Expansion

The Corps is tasked to seek navigation improvements such as deepening and/or widening the channels to accommodate existing and future vessel movement, and resolve other navigation restriction problems. To meet increasing demands of the growing global economy, the shipping industry continues to progress to larger, more efficient vessels.

The completion of the Panama Canal expansion in 2016 will facilitate these mega vessels and also open the U.S. east coast to a new era of shipping. The new Panama Canal will handle vessels with a maximum length of 1,200 feet, width of 160 feet, and draft of 50 feet. Most Corps of Engineers deepening projects that are trying to accommodate these vessels are in the range of 45-50 feet deep.

In 2015 Jacksonville District celebrated construction completion on the Miami Harbor deepening and widening project, making it the first federal navigation project in the southeast built to a 50 feet depth. The two year project removed over 5 million cubic yards of rock and sand. Miami Harbor is the first of four eastern ports that will accommodate larger vessels. The project is also the first of its kind in the nation to combine federal, state and local funds in advance to get the work done.

The District made solid headway with the Jacksonville Harbor deepening project. The pre-construction, engineering and design phase is scheduled for completion in spring 2016. The project didn't make the President's 2016 Budget; however, JaxPort is actively seeking non-federal funding under an advanced funds agreement. The port and the state of Florida advanced funds to start construction on the Mile Point project, which began in September 2015. Located on the St. Johns River near Naval Station Mayport, the Mile Point area of the channel limits navigation during ebb tide due to difficult cross-currents at the convergence of the river with the Intracoastal Waterway. In addition to improving navigation, this project will restore historic channel flow and increase marsh habitat by up to 34 acres above required mitigation. The team anticipates project completion in October 2016.

Port Everglades' navigation improvement project is also moving forward to accommodate existing and future vessel movement. Integrated in the plan are lessons learned from the Miami Harbor project. Interagency team members anticipate learning more as monitoring and assessment continues. This project awaits authorization from Congress for future authorization.

Two new harbor studies advanced in 2015. The **Manatee Harbor** and **San Juan Harbor**, Puerto Rico, studies are assessing the feasibility of implementing harbor improvements. Efforts to complete re-evaluation reports on improvements to Tampa Harbor and Lake Worth Inlet are also ongoing.

Coastal Shore Protection

The goal of federal shore projects is to reduce risk and promote coastal resilience. Jacksonville District has the largest shore protection program in the nation, constructing and maintaining more than 30 percent of the nation's total shore protection projects. The program includes 17 counties and more than 125 miles of shoreline.

Shore protection projects have an added benefit of energizing the economy. Studies show that if Florida was a country, it would have the most tourist visits in the world! More tourists visit Florida beaches than all the national parks combined. Florida beach tourists generate billions of dollars in local, Florida state, and federal taxes annually. Annually, federal beach projects in Florida rate in the top ten most visited beaches in the United States.

Shore protection projects not only help provide economic stability and opportunities, they restore critical habitat for shorebird and marine turtle nesting. The Corps partners with local, state and federal agencies and community volunteers to monitor and help

protect these important wildlife resources.

Team members completed a Venice Beach shore protection renourishment in 2015 that placed beach quality sand on 3.2 miles of Sarasota County shoreline. The Fort Pierce Shore Protection Project completed its tenth renourishment, which placed sand on 1.3 miles of critically eroded beach in St. Lucie County. Federal participation for this ongoing project expires in 2020.

St. Lucie County is preparing a report for this same 1.3 miles of shoreline, which could potentially recommend an additional 50 years of federal participation. In addition, there is an ongoing feasibility study for the shoreline south of this project, adjacent to Martin County. Study milestones in 2016 include completing the draft report with required NEPA coordination and receiving a higher headquarters review.

Jacksonville District moved forward with the Sarasota County Lido Key Hurricane and Storm Damage Reduction (HSDR) Project, hosting public meetings on sand sources and federal requirements. The project includes dredging material from the Big Sarasota Pass for placement on 2.4 miles of Lido Key critically eroded beaches.

Erosion is threatening State Road A1A, an essential hurricane evacuation route and a necessary component of post storm emergency response and recovery. The Corps recommends additional armoring and protection of infrastructure, including SR A1A, along 2.6 miles of central Flagler Beach. This study awaits authorization by Congress and appropriations to initiate the pre-construction, engineering and design phases.





Regional Sediment Management

Sand, or better said, sediment, is money. Sand on beaches protects structures and shorelines from erosion, provides habitat for many species, and supports the Florida and national economy through billions of tourist dollars.

The Corps of Engineers spends millions of dollars annually placing sand on beaches to provide coastal protection. Communities and states want more, but federal funding for such projects is becoming scarcer.

Sand and sediment are also a nuisance. They shoal up and clog navigation channels, impeding water-borne commerce. The Corps of Engineers also spends millions on dredging navigation channels, but historically has disposed of sediments and sand through off-shore or on-shore placement in what are known as Dredge Material Management Areas.

Regional sediment management brings dredging and coastal protection together. The concept is straightforward: use the sand or sediment (if it is of appropriate quality) that must be dredged from navigation channels and place it on or near shorelines in the area to renourish beaches and provide coastal protection.

Regional sediment management provides a number of benefits:

- It mimics to a large degree natural regional flows of sediments that navigation features may have disrupted
- It keeps valuable sediment in the system, with considerable environmental benefits
- It leverages funded dredging projects to also support unfunded coastal protection or ecosystem projects

While the concept is straightforward, and the benefits are immediate and considerable, the execution of regional sediment management projects can be difficult.

Jacksonville District has proven expertise in gaining approval of and executing regional sediment management projects. In 2013, for example, the district leveraged well over 1 million cubic yards of sediments from \$22 million in navigation dredging projects to create an estimated \$27 million in flood risk management benefits on Florida beaches. The district's Water Resources Branch constantly seeks opportunities to leverage dredged sediment for shore protection and other suitable projects.

In 2015, the Corps of Engineers recognized the district's efforts and expertise, and designated the Jacksonville District as a regional center of expertise for regional sediment management.

"It is a hard truth that shore protection projects have to compete with many other national priorities for funding," said Jackie Keiser, Deputy Chief of the Water Resources Branch and the district's champion for regional sediment management. "As the regional center of expertise, we want to educate stakeholders inside and outside of the Corps about the proven benefits of regional sediment management."



Recreation

People drive the recreation mission

People are the heart of Jacksonville District's recreation mission. The Corps team, including natural resource staff, park rangers and volunteers, work together to provide safe and enjoyable experiences at Corps recreation facilities in south Florida. The Corps has recreation areas at the W. P. Franklin Lock and Dam, Ortona Lock and Dam, Port Mayaca Lock and Dam, and St. Lucie Lock and Dam on the Okeechobee Waterway.

This year was a busy one for the park rangers and volunteers who hosted nearly 9,000 guests at Visitors Centers in south Florida. Almost 5,000 visited W.P. Franklin and close to 4,000 stopped by St. Lucie, where guests explore the operation of locks and dams, water safety and the natural environment through interactive exhibits. More than 250 people visited the South Florida Operations Office in Clewiston.

Park ranger Brian Scott Older initiated and coordinated a National Public Lands Day event with Corps staff and volunteers. More than 90 volunteers from ages 8 to 80 planted native trees and shrubs at W.P. Franklin Lock and Dam. In 2015, 69 volunteers at the W.P. Franklin, St. Lucie and Ortona Lock and Dam worked a total of 25,939 hours, providing service that represents a savings of more than \$598,389.67 in labor. Park rangers and volunteers reached out to more than 58,423 people during 550 different programs this year.

Visitor safety at Corps parks and recreation areas is our highest priority. Our park rangers, volunteers and partners continuously promote water and boater safety and education. Water safety volunteers taught 504 water safety programs at 77 schools, reaching more than 33,000 students and helping to save lives.

Almost six hundred people participated in 28 interpretive programs on site, including Corps missions, lock operations, tours of facilities, visitor center tours, water safety, trail walks, National Public Lands Day, and Scout groups. More than 1,382 people attended 17 Corps programs offsite, during festivals, community meetings and schools, and learned about Corps missions, careers and water safety. Park rangers had more than 14,200 additional contacts with guests at Jacksonville District recreation areas.

Our lock and dam operators locked through more than 42,000 vessels on the Okeechobee Waterway and Canaveral Lock, and more than 33,000 of those were recreational vessels.



Volunteers plant native shrubs and trees to provide shade and enhance the Volunteer Village and recreation areas at W.P. Franklin Lock and Dam during the National Public Lands Day event.



More than 90 volunteers, aged 8 to 80, helped make the National Public Lands Day event at W. P. Franklin Lock and Dam a success.



(photos by Paulina Older)

Military Interagency, Inter



The Jacksonville District's Military/ Interagency, International and Environmental Services (MIL/IIES) branch executes one of the largest and most diverse programs of its type in the Corps of Engineers.

The branch is unique in its ability to acquire work and support various agencies at home and abroad. The MIL/ IIES branch is responsible for the majority of the district's work accomplished on a 100 percent reimbursable basis for agencies and Department of Defense (DoD) entities. The branch typically works on projects requiring speed and efficiency for program execution, with customers who rely on the program to deliver quality work on time and within budget. In 2015, this team saw their revenue more than double, executing \$60.1 million in work.

They also added several new customers. The branch represents only 10 percent of the district workforce, but executed 40 percent of district contract actions in 2015. The branch's program consists of four distinct components: reimbursable civil projects primarily to other federal agencies; reimbursable military projects; hazardous and toxic waste and environmental compliance for agency customers; and international infrastructure and water resources related projects in the Caribbean Basin. Military missions provide premier engineering, construction, real estate, stability operations, and

environmental management products and services for DoD organizations.

In 2015, the district gained a new military customer at Fort Buchanan in Puerto Rico. We will be constructing an obstacle course on Fort Buchanan in 2016.

The branch continues to oversee construction of the Antilles Elementary School at Fort Buchanan, Puerto Rico. The project is now 95 percent complete, with completion expected in 2016. The state-of-the-art school is one of the first Department of Defense Education Activity schools to incorporate 21st century design elements.

It will serve approximately 890 students and a staff of 120 and will include a gym, health services, art rooms, flexible studio learning areas and exploratory and outdoor spaces. The MIL/IIES branch expects the completed school to achieve a Leadership Engineering and Environmental Design Silver rating as an energy-efficient and environmentally-sustainable facility. In the coming year the branch will also continue to support the U.S. Navy, executing \$11 million of work at Naval Air Station Jacksonville.

The district's Interagency program provides reimbursable technical services to other federal agencies, matching the Corps' engineering and related services to the evolving needs of other federal agencies. Partnerships and interagency collaboration are key to the success of the program.

In 2015, the branch saw support to the Department of Agriculture's National Resources Conservation Service (NRCS) and the Environmental Protection Agency (EPA) Region 4 result in two new Participating Agency Service Agreements. The new partnership agreement with NRCS and four amendments to existing agreements brought \$20.2 million of work for the district, while the new partnership agreement and three amendments with EPA resulted in \$950,000

National and Environmental Services

of work for the district.

We also gained a new interagency customer the Veterans Administration's National Cemetery Administration. This partnership will allow us to support and execute \$3.3 million of work. The district will renovate and construct a new addition to the administration building at the National Cemetery in Bushnell, Florida. In addition, the branch will execute \$12 million in work for the Defense Logistics Agency in 2016.

The International Services program allows the district to provide reimbursable program and project management and technical services to international governments located in the Caribbean Basin and to private U.S. firms working overseas. In Haiti, we continue to support the United States Agency for International Development effort to renovate the Port of Cap Hatien. The Corps conducted and submitted for approval an Environmental Assessment for the port project.

The branch continues to seek out opportunities to support the administration security assistance program of the Caribbean Basin. The Defense Environmental Restoration Program for Formerly Used Defense Sites (FUDS) program in Jacksonville is the fourth largest in the Corps. With one of the most active and robust programs in the nation, the FUDS team continued making incredible gains in 2015.

With over 30 years of combined technical hazardous, toxic and radioactive waste (HTRW) experience, we can safely and efficiently execute projects from a simple tank removal to a sophisticated soil vapor extraction system, or disposal of unexploded ordnance.

The FUDS team executed 98 active project phases; processed contract actions on more than 40 projects; and successfully managed several high profile sites, including Culebra, Puerto Rico.

At the beginning of 2015, the FUDS program was scheduled to execute \$5.7 million in work; and by the end of the year the team executed \$12.6 million.

For 2016, the district expects to see a further increase in the FUDS program, as the Corps begins to implement an extensive effort to inform landowners whose properties are on formerly used defense sites. Overall, the branch expects continuing growth in the demand for its diverse portfolio of services, from DoD and other governmental agencies, from international customers and for FUDS education and remediation, in 2016 and beyond.



Financials and Small Business Office

Financial Overview of District Program

Program	FY 15 (actual)	FY 16 (projected)
Civil Direct	\$ 454 million	\$384.1 million
Military Direct	\$ 42.8 million	\$ 28.2 million
Civil Reimbursable	\$ 69.8 million	\$ 19.5 million
Military Reimbursable	\$ 54.6 million	\$ 55.7 million
American Recovery and Reinvestment Act	\$ 4.6 million	\$ 0
Total	\$625.8 million	\$487.5 million

Small Business Office

The federal government and the Jacksonville District are eager to offer assistance and support small businesses.

“Responsiveness and quality small business solutions are always a top priority for the Jacksonville District’s Small Business Office,” said Beth Myers, the district’s deputy for small business.

“By increasing the number of capable firms that know how to do business with us, we effectively increase competition. Increased competition ensures the best value in terms of price and capability,” said Myers.

The district’s Small Business Office advocates for small businesses, and educates and assists businesses, guiding them through the federal contracting process. Small business programs can assist qualified businesses in a number of categories, including:

- Small businesses
- Small disadvantaged businesses
- Historically Underutilized Business Zone (HUBZone) businesses
- Veteran-owned businesses
- Service-disabled veteran-owned businesses
- Woman-owned small businesses

The district awarded a total of close to \$75 million to small business firms in fiscal year 2015, a 32 percent increase over fiscal year 2014. During the same period, the Small Business Office reviewed 106 Small Business coordination actions, with 78 percent of all actions between \$150 thousand and \$10 million set aside for small business.

The district exceeded all its small business goals in fiscal year 2015, except for the category of the woman-owned small business program. The woman-owned program still saw the contract dollars awarded double from \$5 million in fiscal year 2014 to \$10 million in 2015.

Myers works closely with Corps contracting and project management divisions to promote market research. Her work in 2015 resulted in:

- eight 8(a) direct matches,
- one Historically Underutilized Business Zone set-aside,



- four service-disabled veteran owned small business set-asides,
- one woman-owned small business set-aside.

The Small Business Office initiated the district's first large business and small business matchmaking forum, which followed the Herbert Hoover Dike pre-proposal meeting. The forum provided an opportunity for small businesses to meet with the contractors working on the dike and increase their subcontracting opportunities, while helping large businesses meet their Small Business subcontracting goals. It was a win-win-win situation for everyone large business, small business and the Corps.

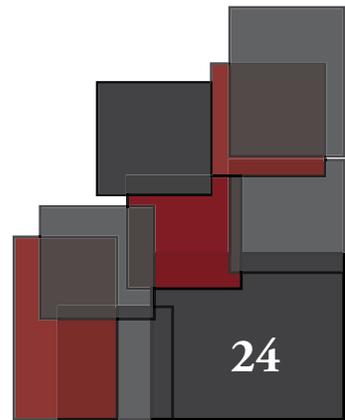
In all, the Small Business Office participated in 18 outreach events, including an Industry Day for the Mile Point Project in Jacksonville. Myers served as an expert speaker or panelist at 14 of those events. She provided briefings on small business requirements during pre-proposal meetings for the Herbert Hoover Dike Culvert 10A, C-44 Reservoir and Storm water Treatment Area and C-111 South Dade Projects. Her office also coordinated the district's pre-proposal meeting for the \$188 million Multiple Award Task Order Contracts (MATOC) for the Regional Environmental Acquisition Strategy Tool, to educate small business firms and empower them with the knowledge of how to submit competitive and winning proposals.

During the past year, the Small Business Office reached out to 27 small business firms, meeting with and counseling eight small businesses, four service-disabled veteran-owned firms, 13 Small Business Administration-certified 8(a) firms and two woman-owned business concerns.

While businesses learn about the district's

programs, the district has the opportunity to identify technically qualified small business solution providers. It is critically important for the district to have a broad base of capable suppliers, especially when situations emerge that must be addressed immediately, and the district has to award contracts a relatively short timeframe.

The Small Business Office helped sixteen businesses learn about business evaluation factors so the business are more likely to make successful submittals in the future. The office also shared its expertise, collaborating with other districts to create work tools for the benefit of the Corps nationwide.



District Corp



Col. Jason Kirk
District Commander



Lt. Col. Mark Himes
Deputy District
Commander



**Lt. Col. Jennifer
Reynolds**
Deputy District
Commander
South Florida



Tim Murphy
Deputy District
Engineer
for PPM



**Lauren
Boročaner**
Chief
Engineering Division



Carlos Clarke
Chief
Contracting
Division



Donald Kinard
Chief
Regulatory Division

orate Board



Eric Summa
Chief
Planning Division



John Pax
District Counsel



Stephen Duba
Chief
Construction
Division



Jim Jeffords
Chief
Operations Division



Billie Jo Fagan
Chief
Resource
Management



Audrey Ormerod
Chief
Real Estate Division



701 San Marco Boulevard
Jacksonville, FL 32207
1-800-291-9405

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