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U.S. Army Corps of Engineers
Louisville District

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On the cover: *Plants are grown from seed at McAlpine Locks and Dam to eventually serve as habitat for bees, butterflies and other pollinators.*

Please conserve:
Think before you print.

Commander's Comments

Ladies and Gentlemen,

Back in December I sent you all an email summarizing the district's Strategic Outlook and where we were heading with our actions and initiatives. I want to let you know where we are in executing that plan for this fiscal year.

As you all know, in the first quarter of fiscal year 2016, the district's senior leaders dedicated a lot of effort reviewing the health of the district. Our assessments didn't just measure our status on a particular day or a particular month, it culminated into a two-day strategy meeting to produce the district's updated strategic plan. The resulting plan from this two-day meeting focuses the district's efforts trying to ensure we are healthy for years to come.

It's no accident the goal categories in the strategic plan spell leader. By almost any measure, the Louisville District is a very successful district. Why is this? Simply answered, because of our greatest asset – you.

Everyone in this district is a leader in one way or another, and for Louisville to remain one of the most successful districts in USACE, we must position and prepare you for the leadership role you play today and the one you will play tomorrow. Our strategic plan will better position the district for the next five years, but success hinges on one key component: each of us must fulfill our leadership role. These roles may be formal leadership positions, informal leadership roles, leading by excelling at your job each day, and/or preparing to be a leader for this district in the future.

An important piece missing in our district to develop our leadership bench—and work on our human capital efforts—is Leadership Development Program I. A key question was addressed through our strategic planning: why should LDP only be directed at employees in GS11 and above positions? The answer was simple: it shouldn't be.

Col. Christopher G. Beck
Commander and District Engineer
Louisville District
U.S. Army Corps of Engineers

A specialized project delivery team is developing the course roadmap for LDP I implementation this summer. If you're an employee below GS11, you should think strongly about applying if you want to grow as a leader for the future. If you're a supervisor, you should position and encourage your employees to apply the very moment a blank application hits your inbox. This LDP I effort will be the last piece to our overall integrated district leadership development, which includes Supervisory 101 training, LDP I, LDP II, and LDP III.

We are also ramping up our training efforts. Each division is now required to

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implement an annual training plan. The annual plans are designed to address topics of specialized interest and to provide refresher training on topics we may be rusty on. Soon, we will roll out a centralized calendar of all training events within the district to give you the opportunity to participate in a wide array of events. There are two key aspects to these training sessions. First, they are really geared toward discussions so that you can learn from and interact with your peers (regardless of what organization in the district is conducting the training) and second, and most importantly, you drive the training topics. If you have a training idea, submit it to your supervisor and division chief for consideration because this will only be value added if we are hitting the topics that matter to you all.

Another key strategic goal for the district's success is outreach. Our outreach plan is aggressive – it requires more than 400 contacts by our outreach staff per calendar year. These contacts are for new opportunities, to further build existing relationships, to collaborate with organizations with joint interests and to strengthen our connection to the stakeholders within our area of operation.

It's no secret federal budgets are reducing, impacting our workload projections for future years. Therefore, it was imperative that a substantive outreach plan be developed as part of our strategic plan. I'm happy to report that not only did we accomplish delivering the district's first substantive outreach plan, it has already yielded results. We have seen our work for other governmental agencies grow to more than $50 million in total requirements this year. This will be difficult to sustain, and I certainly don't expect every year to be this successful, but based on our reputation and quality delivery, we will build strong and lasting relationships with these partners.

Also, as part of this strategy, we will offer outreach training to every district employee. Why? Because you're a leader and a representative of this district at all times so each of us should have the tools and capabilities to identify and cultivate a district partner. The training will include an overview of the district's full capabilities and how to identify and communicate with a potential partner.

A key process missing from the district's capabilities is knowledge management. In our strategic plan, we directed specific actions to take place in developing this process and program. Our current LDP II class is developing a strategy for the district. I'm excited about their progress thus far and the lasting legacy their product will have on the district. In addition, we've hired a knowledge management officer to implement the LDP class' strategy when the project is completed this summer.

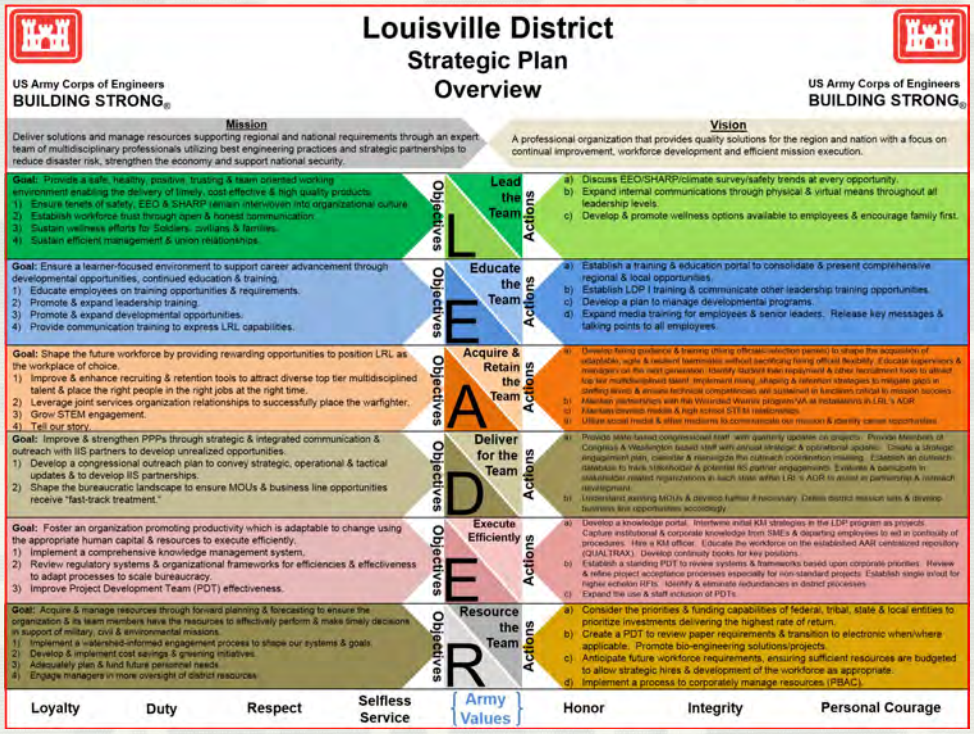
Another initiative from our strategic plan is to elevate our internal communication strategies. As a result, late last year, I began conducting in-person town hall meetings. I will conduct one physical town hall per division and site per calendar year. In addition, in May, I will begin conducting district-wide virtual town halls. We will also use this medium to conduct more brown bag trainings and leadership development opportunities.

Last, earlier this calendar year, we began leading interdivision and contractor partnering meetings to identify key areas for improvement in conducting business and communications with particular stakeholders. We identified key areas to apply process emphasis and reviews. This effort is resulting in a rewrite of our work acceptance and PDT processes. The rewrites will increase our effectiveness and product delivery quality. This will also incorporate an ability for contractors who perform work for us to evaluate the district and provide feedback, enabling us to incorporate another way to look at ourselves.

Here is the key take away: four months removed from developing our strategic plan, 50 percent of the initiatives are in process or complete. When I announced our strategic plan in November 2015, I immediately received concerns from some that this was just another exercise or check the box activity. If you shared this concern, this progress report should put you at ease. We will not rest now. Our senior leaders are working hard to really analyze how we do our work and make adjustments where needed to continually make us a better organization. We are only able to make these adjustments because we are a well-performing district and have a strong foundation of quality and competence to build on.

I'm happy to relay that in the recent history of this district we have never proceeded so quickly to implement a strategic plan or given one the dedication that we are now. We are honoring our commitments to you and will continue honoring them by implementing this plan. But remember, you are a LEADER, and you have a significant role in the implementation of this plan and the future of our district. We need each of you to remain committed to this district and fulfill this leadership role to see the continued success we are all striving for each and every day.

Col. Chris Beck



What's "growing on" at McAlpine Locks and Dam?

Keith Chasteen, operations division

Plans are in place to improve and provide habitat for bees, butterflies and other pollinators on nearly 12 acres of land within the Falls of the Ohio Wildlife Conservation Area and McAlpine Locks and Dam on the Ohio River at Louisville, Kentucky. Lockmaster Dewey Takacy and project personnel are growing pollinator plants from seed in the Resident Engineer Office building located at the viewing and interpretive area. Plants include purple coneflower, gray-headed coneflower, Black-eyed Susan, swamp milkweed, common milkweed, butterfly weed, rattlesnake master, Maximilian sunflower and New England Aster.

Pollinator declines over the past several years have become a worldwide concern. In May 2015, the White House announced the National Strategy to Promote the Health of Honey Bees and other Pollinators. This strategy outlines a comprehensive approach to tackling and reducing the impact of multiple stressors on pollinator health, including pests and pathogens, reduced habitat, lack of nutritional resources and exposure to pesticides. Overarching goals of the strategy include reducing honey bee colony losses, increasing the Eastern population of the monarch butterfly and restoring or enhancing seven million acres of land for pollinators.

The initial 600 potted plants being grown at McAlpine will be planted among existing grasses directly below the viewing and interpretive area, adding habitat benefit to the sloped 1.5 acre area that is next to the new 1200-foot lock chamber. Planting will take place May 14, 2016, through a combination of volunteer groups, individuals and project staffs from McAlpine, Taylorsville Lake and other projects. USACE team members are encouraged to bring their families out to participate in the planting activities.

The Pollinator Planting Day event will take place with other participants providing information on honey bees, butterflies, water safety, locking and other topics. Local businesses will provide a BBQ lunch for all participants.

Management support within operations division for creating and improving pollinator habitat is strong. Along with benefits to the pollinators, other benefits will result from these actions, pointed out Locks and Dams Operations Manager Waylon Humphrey.

"While the pollinator project at McAlpine is going to provide an excellent habitat for many species, the priority benefit for the navigation mission is rooted in reallocating Operations and Maintenance funding," said Humphrey. "In years past, the steep hillside adjacent to the visitor overlook was only maintained through labor intensive weed eating or through renting brush clearing equipment. By converting this area to pollinator habitat we will reduce the dependency on O&M dollars to keep the area maintained which allows that money to be spent on maintenance that can increase the life cycle of our navigation equipment."

At the project level, Takacy has taken the lead in ensuring that plants are watered weekly and that the growing facility is monitored for temperature and humidity for optimal growth. Takacy also checks the grow lights and makes sure the oscillating fan is operating twice a day. The fan provides a "breeze" for the growing plants so that their stems gain strength rather than being flimsy and flopping over once planted outside.

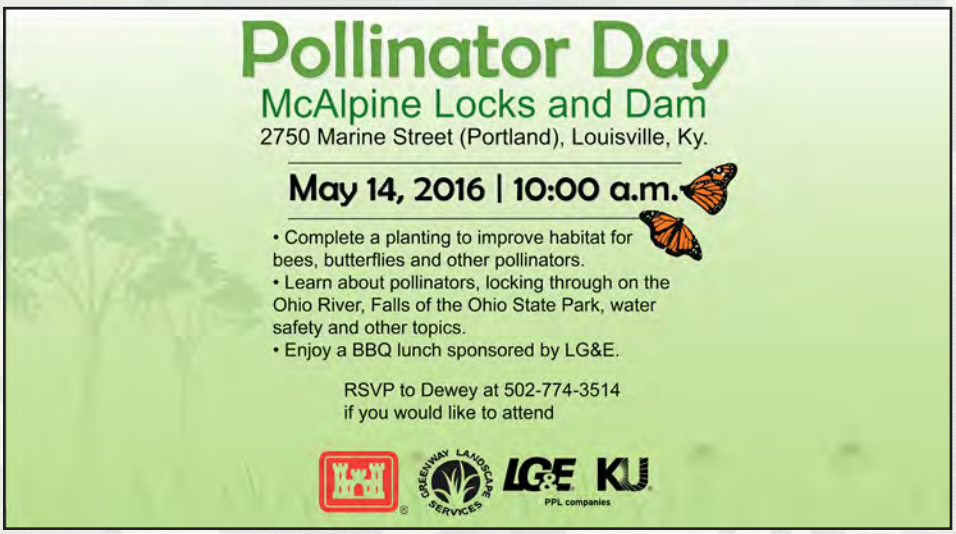
Keith Chasteen

McAlpine Lockmaster Dewey Takacy checks the temperature and humidity level among the growing pollinator plants.

Takacy is excited to take this project on, "Upon coming to McAlpine Locks and Dam, I saw the opportunity to enhance our Environmental Stewardship program by creating pollinator habitat," he said. "Not only will this activity improve habitat, but I anticipate it will reduce labor and mowing costs, will reduce CO2 emissions and fuel use, and will provide an opportunity to get the local community involved. I hope to see Scouts and school groups utilizing the pollinator habitat as an outdoor learning laboratory. Working with Lisa Freeman, Falls of the Ohio National Wildlife Conservation Area manager, and district staff has helped me to learn how to develop partnerships that can be utilized in the future for additional enhancements."

Not only will this pollinator habitat enhancement be good for the Corps, it will also be good for the community and especially good for the bees, butterflies and other pollinators.

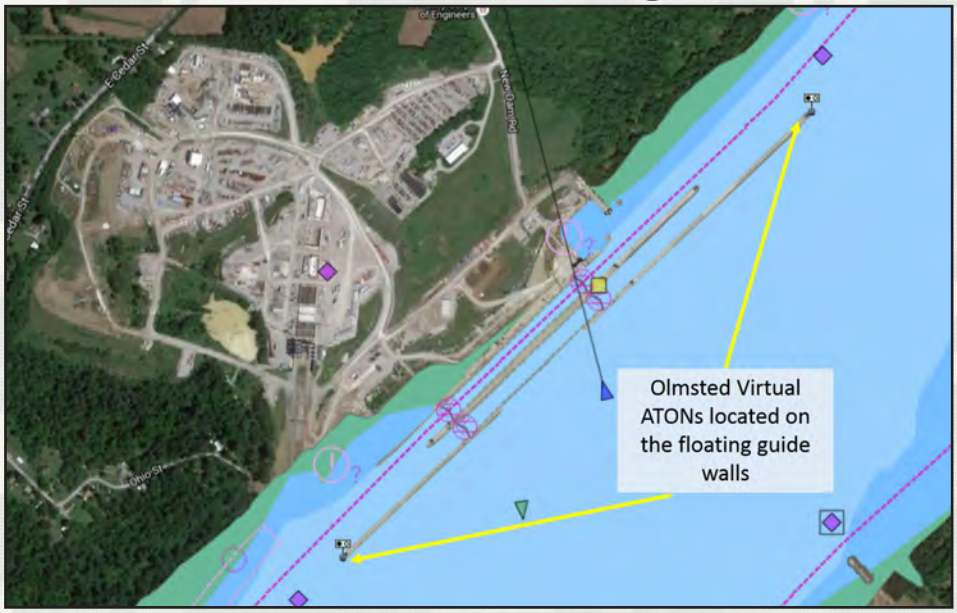
For more information on creating pollinator habitat or to obtain details on participating at Pollinator Day at McAlpine Locks on May 14, contact Keith Chasteen, operations division, at 315-6724.



Olmsted project is test site for AIS navigation aids

Carol Labashosky, public affairs

The Olmsted Locks and Dam project, Olmsted, Illinois, is participating in the next wave of testing aids to navigation being transmitted by Automatic Identification System (AIS). After successfully establishing the inland waterways' first virtual Aid to Navigation (ATON) on a ship wreck in the lower Mississippi River, the U.S. Coast Guard and Army Corps of Engineers are eager to test and develop a process for implementation at other locations. Olmsted is part of the Ohio River electronic Marine Safety Information (eMSI) demonstration. The goal of the eMSI project is to improve the safety and efficiency of maritime operations via the dissemination of navigation-related information that can be displayed on an electronic charting system.



USACE

Electronic navigation charts display virtual buoys on the Olmsted Locks and Dam floating guide walls. These markers are the first wave in a project to improve safety and efficiency of maritime operations.

The Lock Operations Management Application (LOMA) transceivers that are located at USACE locks will transmit locations of both virtual and synthetic ATON's via AIS. When a transceiver signal is broadcast to coincide with an existing physical aid it is known as a synthetic AIS ATON. When a signal is broadcast to a location in a waterway where there is no physical aid, it is known as a virtual AIS ATON. Olmsted will have both types of ATONS being broadcast. Electronic charting systems for commercial boats display the transmissions and allow the Coast Guard to mark hazards with "virtual buoys" when high water, floods, or swift currents prevent the removal of the hazard or the safe placement of a physical buoy.

"The success of the virtual ATON in the lower Mississippi opened up the possibility in areas that have changes in the navigation lane for commercial ships, thus, Olmsted provides the perfect test location," said Capt. Chelsey O'Nan, executive officer, Olmsted Division. The navigation lane at Olmsted is adjusted to accommodate the intricate construction of the project, its specialized equipment and many moving parts.

LOMA was developed for the U.S. Army Corps of Engineers to provide an operational real-time information system to support USACE lock operations.

Scott Ohlemacher, head lock operator for Olmsted Lock and Dam and Lock and Dam 53, noted that before modern technology, lock and dam operators didn't know whether a steamboat was headed in their direction unless they could see smoke from the stacks.

Today, the lock operators rely on LOMA to track boats, orchestrate the successful movement of commercial traffic through otherwise congested areas, and investigate accidents. "This (system) enables us to pass traffic through this area and reduce delays," said Ohlemacher.

Zones are set in place to track times. Estimated time of arrival is automatically calculated for vessels and used to help track times and movements.

"The bottom line is, we as lock operators can aid in the movement of vessels to help keep the delay times down," said Ohlemacher.

"Additionally, the playback mode can be used to track a vessel's movement to help us see what course was taking place prior to an accident or near miss," said Ohlemacher.

The lessons learned from accidents are shared with USACE and the Coast Guard to prevent future incidents and provide industry with additional information in times of poor visibility to assist in safe navigation.

USACE

The complex construction and many moving parts of the Olmsted Locks and Dam project make it an ideal test site for AIS navigation aids.

Salamonie River Watershed Group wins award

Scot Dahms

John Scheiber, Salamonie Lake Project Manager, pours prairie grass seed into the no-till drill specifically designed to plant prairie species. The drill was purchased using Handshake Partnership funding along with funding from the National Wild Turkey Federation.

Scot Dahms, operations division

Seven years ago, a grass roots movement to improve water quality in Salamonie Lake, Indiana, grew into a partnership between the Corps of Engineers, other government agencies and members of the surrounding communities united by that same goal. The group's commitment to the objective eventually led to the purchase of equipment for planting vegetation to reduce the erosion of the surrounding environment, directly contributing to improved water quality.

The Salamonie River Watershed Group received the Outstanding Lake Association Award from the Indiana Lakes Management Society for outstanding work to improve the Salamonie River watershed and the water quality in Salamonie Lake. Project Manager John Scheiber was recognized for his contribution to the effort. The award acknowledges Scheiber's contribution and commends the group's progress in improving water quality, soil health, agricultural sustainability and agricultural productivity. "Watershed groups are important to improving the water quality in the lakes that the Corps manages and provides an opportunity for surrounding communities to be involved in the improvements," said Upper Wabash Operations Manager Scot Dahms.

In 2014, Scheiber developed a handshake partnership agreement between the National Wild Turkey Federation, IDNR, Lower Salamonie River Watershed Group, and Huntington County Soil and Water Conservation District to promote prairie creation and restoration through purchase of a special seeder and prairie seed. Wild turkeys often use prairie habitat for feeding. An added bonus is that the planted prairie areas also serve as filter strips to help reduce erosion and sedimentation runoff. This directly correlated to the Salamonie River Watershed Group's goals to improve water quality in the watershed. In 2015, the package was funded and a no-till drill was purchased to facilitate the prairie plantings. Seed was later purchased to create a prairie area in parts of the Salamonie Lake emergency spillway and surrounding areas. The drill can be used by all partners and will help foster future ties with the associated groups and agencies.

The path to cleaner water

In 2009, a concerned citizen who was protesting a proposed confined animal feeding operation being built within two miles of Salamonie Lake, began to notice a foam which was developing on Salamonie Lake and in the river. She wanted answers as to what was causing the unpleasant film on the lake. At first, she contacted Dahms and then district water quality specialist Lisa Underwood.

The Corps began conducting tests for E. coli and other bacteria. After a few sample tests were complete, the citizen contacted Indiana Department of Environmental Management (IDEM) and later the US EPA about the strange foam which continued to increase on the lake. IDEM then put Underwood in contact with a college professor from Indianapolis who had extensive knowledge about the foam—commonly called Blue Green Algae—that was present during the hot summer months.

Once the cause of the foam was determined, district water quality specialist Jade Young (who replaced Underwood) met with the Natural Resources Conservation Service, Indiana Department of Environmental Management, Indiana Department of Natural Resources, and agencies from Huntington, Wabash, Grant, Wells, Jay, and Blackford counties in Indiana to discuss ways to reduce the causes of the blue green algae. Initial baseline testing was done on Salamonie Lake, river and tributaries. Areas of concern were established to decide where the focus of a watershed group was needed.

In 2010, the Lower Salamonie Watershed group was formed. Scheiber became a board member to serve as a local contact for the Corps. The group began sampling and studying the watershed to start building a proposal for a 319 Grant. A 319 Grant provides funding for water quality improvements to implement practices which decrease soil erosion and nutrient runoff. After a thorough proposal was submitted, a 319 Grant was awarded to the Lower Salamonie River Watershed group. Later the Upper Salamonie Watershed group was developed to assist communities along the Salamonie River in the upper reaches of the watershed.

In May of 2012, the Corps of Engineers Great Lakes and Ohio River Division developed a Harmful Algal Blooms (HAB) Response Plan in response to the increase in blooms throughout the division. In July 2012, Salamonie Lake made national news when two dogs died from ingesting water that contained toxic algae from a tributary to the lake. The watershed group began analyzing data collected, created more defined areas of concern throughout the watershed, and made priorities to provide funding for practices to reduce runoff containing high nutrient levels from nearby agricultural lands.

Corps continues rehab work at Rough River Dam

Carol Labashosky

The concrete batch plant is in the foreground atop the Rough River Lake Dam, Ky. The white PVC casings are installed through the embankment to allow drilling and grouting in the rock foundation.

Carol Labashosky, public affairs

The U.S. Army Corps of Engineers Louisville District is continuing work on the Dam Safety Rehabilitation project at Rough River Lake, Falls of Rough, Kentucky. Repairs are necessary to ensure the dam continues to function as it was designed. Currently, the Corps is working on the Phase 1B contract in which holes are drilled into the bedrock of the dam and grout is "injected" into voids. The yellow silos store cement and powdered bentonite which, along with water, are the primary ingredients in the grout. The exploratory drilling and grouting program helps define future repairs and improves the foundation conditions until the final repairs can be made.

More than 100 piezometers provide data to monitor water levels in and below the dam.

The Corps conducted a public meeting in March at the Rough River State Park where Corps staff from the district office and Rough River Lake explained the condition of the dam and a possible timeline for the next phase of the project.

Reserve

Honolulu Army Reserve Center project to get new roof

Carol Labashosky, public affairs

Later this month, the U.S. Army Corps of Engineers will begin replacing the 30,000-square-foot roof on Turner Hall at Fort Shafter, Honolulu, Hawaii, for the 9th Mission Support Command.

This $850,000 roof replacement project is funded through the Army Reserve Installation Management Directorate Operations and Maintenance and will replace roofing on the steep-sloped standing seam metal roof.

Jeff Bayers, project manager, who works with the national roofing program for the district says the revamp is needed to extend the useful life of current assets and to assure that our troops and their equipment are safe and dry.

"Inadequate, deteriorated, and often leaky systems are being replaced with high quality, durable systems that include 20-year 'no dollar limit' warranties—the industry's highest standard," said Bayers.

"Refurbishing and replacement construction is always a challenge, but the most challenging part of these projects is doing the work with little to no impact to the facility personnel or their operations," said Bayers.

USACE

This new roof is similar to the one that will be replacing the current roof at the Turner Hall project in Honolulu, Hawaii.

The facility is required to stay fully functional while the roof is being replaced which presents logistical challenges for construction, safety, operations and scheduling.

The district has been executing the national roofing program for nearly 10 years. Since initiated, the district has replaced nearly 135 million square feet of roofing with durable high-quality systems that will ensure the troops and their equipment stay dry.

Kingsolver Elementary designed for green, innovative learning

Courtesy of RS&H, Inc.

Adaptable open spaces and a flexible stage, which can be used for theater-in-the-round performances were incorporated into the school to promote a versatile learning environment.

Katie Newton, public affairs

Students at the new Kingsolver Elementary School at Fort Knox, Kentucky, will have the unique opportunity to learn about sustainability from the building around them. Every aspect of the new 115,000 square-foot school was designed with green features in mind—from energy dashboards that allow students to see how much water or energy their class is using to a composter that turns kitchen trash into plant food.

"The building's design is meant to be a learning tool for the kids," said Patrick Drury, U.S. Army Corps of Engineers Fort Knox Resident Office Project Engineer. "All of the features aim at teaching the students the different environmental aspects of the building around them."

The $32.7 million construction project, managed by USACE Louisville District, is being constructed by AWA Wilson Joint Venture to meet requirements for LEED Silver certification. Meeting LEED Silver certification means every aspect of the building's design, construction techniques and its future use was taken into consideration, from using high-efficiency toilets to low-VOC paint on the walls. At least 75 percent of the construction waste must be recycled when removed from the site.

The Department of Defense Education Activity (DoDEA) 21st Century School will include 635 student stations within the new concept of learning hubs or neighborhoods, as well as learning studios and open-area common spaces for students. This type of innovative learning environment coupled with the educational green features is a game-changer for today's students. There will be an interactive component to keep students engaged in the building around them and its effects on the environment with three energy dashboards showing energy and water usage for each neighborhood.

"It really shows the kids how much energy and water is being used in their neighborhood or by their class and gives them an appreciation for it," said Drury.

The building is estimated to have a 61 percent energy savings due to all of its green features. It includes a geothermal system using the ground to help heat and cool the school. LED and natural lighting with the help of tubular light wells bring the sunlight in through holes in the roof, and light-colored roofing helps reflect the sun's heat away from the building.

Twelve solar collection panels are on-site to heat more than 75 percent of the building's hot water, which saves money and energy.

The building's position on the 14.5-acre site also plays a role in energy conservation. The school is positioned horizontally across the site for optimal light and heat during different seasons. Learning spaces have north and south facing windows to take advantage of sunlight and provide picturesque views of the landscape, adorned with native plants.

Signage placed throughout the school will explain many of the features and green construction techniques. For example, one sign titled "Rain's Journey" will be fixed to a large clear storm drain pipe coming from the roof so students can better understand the water's path to the three large bioretention ponds for stormwater management.

Nothing has been overlooked. Even the kitchen has state-of-the-art equipment and a robust composter machine to grind up 90 percent of the school's food waste and cardboard, such as milk cartons, into organic material that can be used for mulch in the landscaping.

"All parties have endured and continue to make this project a success, including the designer, Fort Knox DPW, DoDEA, the contractor and USACE," said Drury. "This completed facility will be a great resource for DoDEA, the surrounding Fort Knox community, and the students of America's Soldiers."

The construction project is expected to be complete in August 2016.

Courtesy of RS&H, Inc.

Three energy dashboards throughout the school show energy and water use, allowing students to learn how the building around them affects the environment.

Flood simulation promotes agency coordination

Sarah Mattingly

Representatives from federal, state, local and private sector entities gathered March 29 for an exercise that simulated a levee breach in Louisville, Ky. The event was planned and hosted by Louisville Metropolitan Sewer District, the agency responsible for operation and maintenance of the levee, floodwall, pump stations and closures associated with the levee system.

Sarah Mattingly, public affairs

On March 29, 2016, the U.S. Army Corps of Engineers Louisville District participated in a tabletop exercise to improve emergency planning related to flood risk in the Louisville Metro community. The exercise, planned and hosted by the Louisville Metropolitan Sewer District, simulated a levee breach of the Louisville Metro levee system, assuming river levels equivalent to the Great Flood of 1937, the current flood of record. The simulation enabled the agencies that would be involved in such a scenario to discuss what coordination would be necessary before, during and after such an event to minimize risk to life and property.

"There are a few benefits from this exercise," said J.P. Carsone, Louisville MSD flood protection supervisor. "The first one is just getting everyone in the same room and having the opportunity to discuss everyone's roles and learn what support they will need. It also helps everyone understand how badly things could go quickly in such an event."

Time-stepped inundation maps were used to show how areas were likely to flood. They were modeled and produced by Louisville District hydraulic engineers and made possible by a $75,000 grant from USACE Headquarters through the Silver Jackets Program to enhance the Louisville Metro Flood Protection System's emergency preparedness plan.

"If something like this—God forbid—ever did happen, we're ahead of the game because we've gotten the players together," said Brandon Brummett, Louisville District outreach coordinator and USACE representative on the Kentucky and Indiana Silver Jackets teams. "The exercise provided a great what-if scenario that caused people to think about what actions they would need to take and how they would collaborate with other agencies if an event were to occur."

Along with the Corps of Engineers and MSD, multiple government agencies and private entities participated, including the National Weather Service, U.S. Geological Survey, Kentucky Emergency Management Agency, Kentucky Division of Water and Environmental Protection, Louisville Metro EMA, the fire and police departments, Louisville Water Company, LG&E and KU, and Jefferson County Public Schools.

The participants are hopeful this exercise will lead to more like it in the future.

"There has already been discussion with some of the partner agencies about doing another tabletop exercise next year focusing on a different inundation area which would require some additional folks to come to the table," said Brummett.

Carsone explained that the inundation study modeled levee breaches at two different locations and that the second location could be used in a future simulation.

Silver Jackets

The study and exercise have also been instrumental in jumpstarting the creation of a Louisville Metro Silver Jackets Team, the first of its kind.

Silver Jackets teams work to increase collaboration among agencies and improve response in times of crisis or disaster. Up to now, they have been organized at the state level and consist of representatives from federal, state and local organizations.

"I believe we have a tremendous opportunity with forming the first true local Silver Jackets Team, and we will be on the cutting edge of developing private and public partnerships in addressing flooding mitigation," said Carsone. "It is my hope we will be able to set the standard for others."

The Silver Jackets motto, "Many agencies, one solution," aptly describes the increased partnering and relationship building that resulted from the exercise.

"I am very pleased that the grant and study served as the catalyst for this," said Brummett. "I am glad to see that it didn't become just another document on a shelf somewhere gathering dust, but instead is driving real-life discussions and positioning Louisville to be more resilient."