Crosscurrents

Serving the St. Paul District since 1977
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St. Paul District team supports Hurricane Ida recovery efforts

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US Army Corps of Engineers ®

St. Paul District

(Cover) Amy Heffernan, Northern Headwaters administrative assistant, supports Hurricane Ida recovery efforts as a housing monitor in LaPlace, Louisiana, Oct. 10. USACE photo by Patrick Moes

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Articles and photography submissions are welcome. Submissions may be mailed or emailed. Submissions should be in Microsoft Word format. Photos should be at least 5 in. x 7 in. at 300 dpi.

The mission of *Crosscurrents* is to support the commander's internal information program for the St. Paul District and its stakeholders. *Crosscurrents* also serves as the commander's primary communication tool for accurately transmitting policies and command philosophy to the St. Paul District community and its customers.

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Helping others win…it's what we do best!

In the Army, winning matters. Our nation depends on us to win, whether it be victory on battlefields overseas or in the civil works "backyards" here at home. Chief of Engineers Lt. Gen. Scott Spellmon defines winning in the U.S. Army Corps of Engineers as "Finishing quality projects on time, within budget…SAFELY." This definition is clear about the what, but not the why.

We seek to win in the Corps, because we are passionate about using our expertise to serve others – to solve tough problems and to make life better for our fellow citizens and our environment. This is a noble purpose and it's the 'V' in MVP…Value.

Helping others win is a win-win proposition, and it's the path to exceptional results and a feeling of fulfillment. The philosophy of "helping others win" connotates the attributes of humility, teamwork and optimism and our Army values – Loyalty, Duty, Respect, Selfless Service, Honor, Integrity, Respect, and Personal Courage. These attributes and values are cornerstones of our district's culture.

Each feature in this issue of *Crosscurrents* exemplifies how we are oriented toward helping others win. Here are just a few examples:

•Resettling displaced families in the aftermath of Hurricane Ida;
•A dedicated multi-disciplinary / multi-agency team celebrating 35 years of restoring the Upper Mississippi River;
•Delivering flood risk reduction to the community of Arcadia, Wisconsin;
•Bolstering our economy by supporting small business;
•Our Dredge Goetz enabling safe and efficient navigation on the Missouri River;
•Fast-tracking key steps in the regulatory permitting process;
•Supporting Department of Veterans Affairs facility upgrades in Minneapolis and St. Cloud, Minnesota

There are many other district program and project examples that embody this winning theme, such as our tribal partnership, Silver Jackets, environmental infrastructure, Recreation and natural resources and planning assistance to states programs, as well as our portfolio of disaster supplemental work assisting Sacramento, Rock Island, Vicksburg and New Orleans districts.

We also apply our 'Helping Others Win' philosophy within our organization. Our People First plan outlines a wide range of diversity, equity and inclusion initiatives; professional development opportunities; performance management programs; and healthy work environment initiatives, such as our recently revised telework and work schedules policies. These efforts all seek a common goal – to support our people being the very best they can be and thereby helping them win in their career and personal life. When our people succeed, or organization succeeds!

We anticipate the future will present St. Paul District many more opportunities to help others win. With the recent passage of an infrastructure bill along with the Hurricane Ida supplemental and the Infrastructure Investment and Jobs act, the Corps expects tremendous growth in our civil works program. Increasing staff and streamlining processes will only

go so far to accomplish the work. In some cases, assigned workload will overwhelm the capacity of a district or region, especially those in disaster prone areas.

The Mississippi Valley Division and our sister districts across the Corps will soon look to the St. Paul District to help assist during this critical time. Helping them win is our call to action, and I have no doubt we are up to the challenge. It's what we do best!

St. Paul District team supports Hurricane Ida recovery efforts

Story by Patrick Moes

Teamwork has taken on a special meaning for a group of employees from the St. Paul District that deployed in support of Hurricane Ida recovery efforts in Louisiana. Following Hurricane Ida's landfall Aug. 29 and after area emergency officials had a chance to understand the size and scale of the Category 4 hurricane, the district's housing project recovery team, or PRT, received a call to support the ongoing Louisiana recovery efforts. The team departed the district, Sept. 21. Andrew Huffman, St. Paul District quality manager and the team's leader, said the 16-person team's office is different from their normal conditions, but they adapted to the change.

Eric Dykman, Lock and Dam 8 head operator, monitors housing site inspections near New Orleans, Oct. 10. USACE photo by Patrick Moes

Huffman said temporary housing missions can be wide ranging, requiring the team to be flexible and ready to change course at a moment's notice. The team's primary mission is to gather the technical information needed to ensure a prefabricated unit can safely be placed on private property or at an existing commercial mobile home park.

Under the National Response Framework, the U.S. Army Corps of Engineers Temporary Housing teams assist the Department of Homeland Security and the Federal Emergency Management Agency, or FEMA, by providing technical assistance, engineering expertise, and construction management to prevent, prepare for, respond to, and/or recover from domestic incidents.

Huffman said the district's team is currently performing site assessment reports in several parishes in Southeast Louisiana. Once created, the reports are sent to FEMA to help them determine whether a location is feasible for the placement of a temporary housing unit. From there, he said a determination is made whether eligible survivors can receive a temporary housing unit on either their private property or if they are eligible for shelter within a qualified commercial park.

Megan Severson, park ranger, and Amy Heffernan, Northern Headwaters administrative assistant, conduct a housing inspection in LaPLace, Louisiana, Oct. 10. USACE photo by Patrick Moes. WATCH: USACE Housing Teammates Work Together at Home, While Deployed

New engineer learns on the job while supporting Hurricane Ida recovery efforts

Story by Patrick Moes

A little more than a year ago, Helen Walz was sitting in a classroom at the University of Wisconsin, Madison, as a soon-to-be graduate doing what most college seniors do, cramming for final exams while filling out resumes for a life after school.

For Walz, a Minneapolis native, that future would end up with a career just across the Mississippi River in St. Paul, Minnesota, where she now works as a civil engineer with the St. Paul District. Starting her job in March 2021, Walz said she has done and learned a lot of new things –all while in a virtual world due to COVID-19 – but nothing could have prepared her for her current role.

Walz is currently deployed to Louisiana in support of the Corps' Hurricane Ida response team where she is working as a housing team technical monitor. In this capacity, Walz and a small team from the St. Paul and Huntington districts are responsible for gathering critical infrastructure information needed to determine if a location is feasible for placing temporary housing units. Walz said her role is all about collecting the information the Federal Emergency Management Agency needs to make an informed decision as to whether a temporary home would fit on a property or not.

As an entry-level engineer, Walz said she's been continually learning on the job and emphasized the need to remain flexible and focus on the importance of helping people recover from the storm. "You need to be willing to learn new things, learn them quickly and then get in a pattern and get a rhythm going," she said. "I think the biggest learning experience [so far] has been learning about adaptability and flexibility. Things are changing every day, but the focus is all about gathering the information needed to help survivors get into a home as quickly as possible."

While the learning curve is a new one for Walz, she said it's been made a little easier because of the team she is working with in Louisiana. The team, to include an economist, park ranger, project scheduler, lock and dam operator and more, may have unique backgrounds and a wide range of work experience within their day-to-day jobs, but they all are starting from the same place. "I'm learning but everyone else is learning too," Walz said. "What we are doing is new to everyone. This is a new goal, and the entire team is eager to learn, so that encourages me to also learn what I need to know."

Andy Huffman, St. Paul District quality manager currently deployed to Baton Rouge, Louisiana, as the housing team mission manager, said he agreed with Walz on the uniqueness of the housing team and their willingness to do whatever is necessary to get the job done. "On a daily basis our teams are faced with

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Helen Walz, civil engineer, looks at infrastructure during a site inspection in Edgard, Louisiana, Oct. 3. USACE photo by Patrick Moes

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many challenges," Huffman said. "The unique backgrounds and experiences of the team members bring a flexibility of thought and openness, resulting in innovative solutions to complex issues. Our team is comprised of Corps employees committed to doing what they can to help."

Walz said that at the end of the day, it's all about people taking care of people. "We are bringing folks together for something that's unique to everyone," she concluded. "This is not what people are used to doing, but we are working together to make this mission happen. I think the mission is something that's really neat and has allowed me to meet a lot of different people and think about things in a lot of different ways which is valuable. I'll certainly take that back and remember it for whatever I do next."

Matt Clark, project scheduler, and Helen Walz, civil engineer, review data following a housing site assessment in support of Hurricane Ida recover efforts in New Orleans, Oct. 3. USACE photo by Patrick Moes

"It's humbling to meet with the people who live out here. The more people we talk with, the more meaning this type of work gives me."

-Matt Clark

St. Paul District project scheduler

Watch Matt Clark talk about his experience here.

District attorney selected for national award

Story by Melanie Peterson

The U.S. Army Corps of Engineers headquarters, in Washington, D.C., selected St. Paul District deputy district counsel, Vinai Vinlander, as the recipient of the Joseph W. Kimbel award. This national award recognizes the Corps of Engineers attorney who demonstrates the highest professional potential for future legal achievement.

Vinlander joined the St. Paul District in 2018. He serves as part of the office of counsel leadership team and regularly provides advice in the areas of civil works, interagency support agreements and regulatory. Prior to joining the district, he was an assistant division counsel at the Corps of Engineers Mississippi Valley Division and previously served as a legal extern in the Corps' Northwestern Division.

Prior to entering federal service, Vinlander practiced with a private law firm in New York from 2004 to 2013. He received his Juris Doctor from the University of Wisconsin Law School, Madison, Wisconsin, and a Master of Law in environmental and natural resources law from Lewis and Clark Law School, in Portland, Oregon.

"Mr. Vinlander is truly an outstanding attorney and a very deserving recipient of this distinguished award. Since joining the St. Paul District in 2018 he has demonstrated superb leadership and unlimited potential," said John Carrell, district counsel. "He is an expert in environmental law and the civil works program. He is a dedicated and selfless employee, and he brings a positive atmosphere to work every single day. As a graduate of the University of Wisconsin Law School, Vinai always cheers for the Badgers which sometimes clashes with the Minnesota Gopher fans in the office of counsel, but it makes for a fun rivalry within the office."

Vinlander said, "I am honored to be a recipient of the Kimbel award. I could not have earned it without the support of outstanding district teammates and the Corps' legal team. I am proud to be serving with the Corps and in the St. Paul District."

John Carrell, district counsel, presents Vinai Vinlander, deputy district counsel, the Joseph W. Kimbel award. USACE courtesy photo

The Upper Mississippi River Restoration program celebrates 35 years

Story by Melanie Peterson

Reflecting on the past

The Upper Mississippi River Restoration program, or UMRR, is celebrating 35 years since it was first authorized by the Water Resources Development Act of 1986.

The UMRR program, previously called the Environmental Management Program, or EMP, was the first environmental restoration and monitoring program undertaken on a large river system in the United States. The program consists of habitat rehabilitation projects and monitoring and research and is authorized under the Continuing Authorities Program.

Tom Novak, program manager, started with the Corps in 1988 and has worked on the UMRR program since 1999. The program has seen a lot of changes over the years, Novak explained. For example, islands are built lower and with more dynamic edges – compared to 30 years ago.

"We're using those lessons learned over the past 35 years, and we're getting better at it," Novak said. He said there are also a lot of changes, for instance with increased sedimentation in the river and the introduction of invasive species like zebra mussels. Policy and implementation guidance also changed. A report is due to Congress every six years regarding what has been learned and how the program can improve.

Novak recalled working on the Spring Lake Islands habitat rehabilitation enhancement project, near Buffalo City, Wisconsin, when he first began. The district celebrated the completion of the project with a ribbon cutting in October 2007. He also worked on the Pool 8 Islands project near Brownsville, Wisconsin, completed in 2012, and the Capoli Slough Islands restoration project, near Ferryville, Wisconsin, completed in 2016.

Although Novak retired in February 2020, he came back part time as a rehired annuitant to mentor other project managers and program managers. "The people come and go, but the program endures," Novak said. "People will build off of what I've done, and the program will keep accelerating and getting better and we will learn new things."

Work being completed on Capoli Slough Islands restoration project, near Ferryville, Wisconsin, Aug. 23, 2013. USACE photo by Patrick Moes

Novak, who studied architecture, said he enjoys building something from nothing. "On the island building side, you have some flexibility and creativity. There's more than one way to do it," Novak said. He also enjoys building relationships with partner agencies like the U.S. Geological Survey and the U.S. Fish and Wildlife Service and state resource agencies.

Celebrating the present

"For 35 years, the Upper Mississippi River system has provided cultural, recreational, ecological and economic value to communities and tribal nations who reside in the river's watershed. The UMRR program and partnerships improve and support these values for present and future generations," said Jill Bathke, planner.

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Community outreach programs are in place for the 35th UMRR anniversary celebration that include four short, themed, videos about the history of the UMRR, the science and the partnerships; a 35th anniversary flyer; and consistent talking points for partners to communicate unifying themes to the public.

"We're really excited to share the program's success with the public and highlight the strong partnerships established through the years, as well as the wide-reaching benefits and value of the program to the public," Bathke said.

Looking to the future

Since 1986, the UMRR program has completed 56 habitat projects that improved critical fish and wildlife habitat on 106,000 acres in Illinois, Iowa, Minnesota, Missouri and Wisconsin. From 2005 to 2015, UMRR projects benefited nearly 35,000 acres of habitat – nearly 50% of all habitat reported by the Corps nationally.

'It's an exciting program to work on. This is the largest river restoration project in the nation," said Angela Deen, UMRR St. Paul District program manager. "We are working hard to restore habitat that was lost and keep habitat that's existing in place, for the climate that we are forecasting."

Corps employees complete construction on Capoli Slough Islands restoration project, near Ferryville, Wisconsin, Sept. 20, 2012. USACE courtesy photo

The UMRR program has 22 projects in various stages of construction and design. These projects will benefit another 65,000 acres of habitat when implemented. The program encapsulates three Corps districts – St. Paul, St. Louis and Rock Island, with Rock Island serving as the program lead. In the St. Paul District, there are four projects in construction and two in the planning phase.

An excerpt for the 35th anniversary UMMR program flyer. USACE courtesy graphic

Reno Bottoms

The Reno Bottoms project is a forest-focused habitat restoration project to improve floodplain forest habitat and covers 14,000 acres in the Upper Mississippi River National Wildlife and Fish Refuge in Houston County, Minnesota, and Allamakee County, Iowa. The project is currently in its second year of planning. WATCH: Reno Bottoms video

Lower Pool 10

The Lower Pool 10 project is also in its planning phase and is currently out for public review with a draft feasibility report. This is a $30 million habitat restoration project near Guttenberg, Iowa. The proposed project would result in the protection and restoration of about 630 acres of riverine, backwater and floodplain habitat.

Harpers Slough

Construction of the Harpers Slough project was completed in 2017; however, high water in 2018 and 2019 prevented plantings from becoming established

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and caused significant breaches in three islands. The project is located in Pool 9 of the Mississippi River and within the Upper Mississippi River National Wildlife and Fish Refuge. A $2.4 million contract was awarded in May to complete repairs and the work is expected to be completed by December 2022.

McGregor Lake

McGregor Lake is a 200-acre backwater lake located on the Wisconsin side of the Upper Mississippi River near Prairie du Chien, Wisconsin. The project, which is about halfway through construction, will improve lake habitat for backwater fish species, increase emergent and submergent vegetation growth, increase age and species diversity of self-sustaining floodplain forest and protect aquatic and terrestrial habitat by reducing erosion. WATCH: McGregor Lake video

Bass Ponds

The Bass Ponds project, near Shakopee, Minnesota, and Savage, Minnesota, is almost complete, with a groundbreaking ceremony planned for spring 2022. Bass Ponds is a water level management project, which aims to improve habitat for aquatic vegetation and migratory waterfowl by providing water level management capabilities that target management goals of the Minnesota Valley National Wildlife Refuge. When completed, it will facilitate water level drawdowns on three lakes and one marsh.

Conway Lake

The island building and habitat dredging have been completed at the Conway Lake project, immediately upstream of Lansing, Iowa, and tree planting has begun and will continue into next year. The project will enhance and create 215 acres of floodplain forest and 93 acres of off-channel, backwater fisheries habitat.

A rock log structure connecting two islands at the Pool 8 Islands project near Brownsville, Wisconsin, June 22, 2010. USACE courtesy photo

McGregor Lake is a beneficial use of dredged material project. Material that is dredged from the Upper Mississippi River to maintain the 9-foot navigation channel is reused for the habitat at McGregor Lake to restore the fragile ecosystem.

Partnerships on the Upper Mississippi River advance soil research

Story by Melanie Peterson

"We've dug a lot of holes," said Aaron McFarlane, Corps biologist, "and that's just the beginning."

Upper Mississippi River Restoration program

The Corps is moving dirt near Conway Lake, a habitat rehabilitation and enhancement project immediately upstream of Lansing, Iowa. Conway Lake is one of the ongoing restoration projects under the Upper Mississippi River Restoration program, or UMRR.

"We've dug a lot of holes."
-Aaron McFarlane

One component of the UMRR program is island building to restore lost habitat. Over the 35 years of the program, this has included a granular, or sand, base that is topped with fine-grained sediments consisting of slit and clay typically dredged from backwater areas. This approach mimics natural conditions in which fine sediments are deposited in floodplain soils during flood events and natural conditions throughout the Mississippi River Valley. While restoration sites are successfully planted with grass species, many sites have exhibited slow growth, low survival and at times substantial tree mortality. Now, spurred on by the efforts of McFarlane, researchers are beginning to change that narrative.

New research and development at Conway Lake, in partnership with the Engineer and Research Development Center, or ERDC, is looking at different baseline soil characterizations. Three different experiment test areas have been established as part of the Conway Lake project. Each test plot has a different depth of fine material placed over the sand base. The ultimate goal, said McFarlane, is to better understand the science of soil conditions and how it relates to vegetative response.

The work on research and development started this field season at Conway Lake, and that work will be leveraged for additional work at the McGregor Lake restoration project, near Prairie du Chien, Wisconsin. If funding can be secured, this will be a long-term research project that will inform future restoration projects. "This collective effort will help inform multi-million-dollar decisions for the UMRR program and help us maximize the ecosystem restoration benefit throughout the district," said Zach Kimmel, program and project manager.

Aaron McFarlane, biologist, and Eric Hanson, ecologist, both in regional planning and environment division north, examine soils in Pool 8 of the Upper Mississippi River, near La Crosse, Wisconsin, July 22, 2020. USACE photo by Melanie Peterson

Ultimately, the UMRR program will have to weigh the benefits of the more expensive soil blending to see if the results are worthwhile. The blended soil can currently cost up to three times as much as a sand base, but the team also expects that costs may be reduced as new techniques are explored and implemented.

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"These studies will show what the soil looks like just after being constructed, and then we can watch them develop and observe how they change. I hope we can learn along the way, implement small improvements over time, and in the end greatly increase the likelihood of successfully establishing the prime habitat we are aiming for. This is a great example of adaptive management," McFarlane said.

While there are no results from Conway Lake yet, ERDC has concluded its testing from soil samples that were taken from natural islands in Pool 5, near Fountain City, Wisconsin, and Pool 10, near Guttenberg, Iowa, and man-made islands in Pool 8, near La Crosse, Wisconsin, and Pool 9, near Eastman, Wisconsin.

This research showed that in natural sites, there are looser, less dense, less compacted soils with higher amounts of sand in them in general, and they are mixed with fine soil organic matter. This supports the idea that a blended soil base more closely mimics a natural island setting.

Marissa Kneer and Nia Hurst, ERDC research biologists, consult a Munsell chart to characterize soils, at the Conway Lake restoration project upstream of Lansing, Iowa, Sept. 24. USACE photo by Aaron McFarlane

RELATED:
Comparing natural and man-made islands on the Mississippi River

Andy Meier, Corps forester, and Dr. Chuck Theiling, ERDC aquatic research ecologist, examine soil data at the Conway Lake restoration project upstream of Lansing, Iowa, Sept. 24. USACE photo by Aaron McFarlane

The ERDC Partnership

The St. Paul District is conducting experimental soil studies in partnership with ERDC, leveraging existing programs to inform the future of island building in the Upper Mississippi River.

McFarlane completed a six-month detail with ERDC University, which has been instrumental in kickstarting this research and creating those additional connections, Kimmel said.

"This soil data? It was a concern of a lot of other biologists, but it's difficult to complete that research at a project level. With the ERDC University detail, I was able to start that initial research and establish a partnership with a lab that had an expertise in soil. Then, I was able to bring that back to the district and continue that partnership," McFarlane said.

Programs being leveraged for the soil testing includes the Regional Sediment Management Program, Engineering with Nature, Dredging Operations Technical Support, and Dredging Operations and Environmental Research Program.

Geologists and Geotechnical engineers dig deep to provide flood risk management

Story by Melanie Peterson

At the Arcadia flood risk management project, in Arcadia, Wisconsin, geotechnical staff are gathering data using a unique method of subsurface exploration. The Cone Penetrometer Test, or CPT, is one method used to identify and characterize soils. The CPTs were conducted with assistance from the Savannah District geotechnical and geology branch. "We benefited from their expertise and cooperation," said Greg Wachman, senior geotechnical engineer.

Greg Wachman, senior geotechnical engineer in engineering and construction division, holds the cone for a cone penetrometer test, in Arcadia, Wisconsin, Nov. 12. USACE photo by Melanie Peterson

In CPTs, a device with a conical tip and metal sleeve measure penetration resistance as it's pushed into the ground. Those measurements are used to characterize the soils' engineering properties. For example, the forces on the device as it's pushed through a soft clay are very different from those as it's pushed through a dense sand, Wachman said. The device also records pore water pressure, which aids in understanding soil permeability and groundwater characteristics.

CPTs vs. soil borings

A CPT is most useful when used together with standard soil borings, Wachman explained. A soil boring drills into the ground to retrieve physical samples. In contrast, with a CPT, the soil is never seen. CPTs are significantly faster than standard borings and provide continuous test data with depth. With a soil boring, samples are collected about every 5 feet, or change in material, so it's possible to miss important information. One limitation of the CPT, due to excessive friction, is that it may not be extended to the same depth as a soil boring. The CPTs at Arcadia are being pushed to approximately 60-70 feet, whereas a soil boring can be performed in excess of 100 feet.

"By doing some CPTs next to soil borings – where we know what the soils are – we can increase the likelihood that we are correctly interpreting the CPT data at locations where we don't have any borings," Wachman said. "Ultimately, by combining the test data from soil borings and CPTs, we assign engineering properties to the soils and analyze the foundations for things like seepage, stability and settlement."

Seepage, stability and settlement

Wachman's job is to ensure that the levees and floodwalls for the Arcadia project have a stable foundation that can withstand the forces produced by a flood that reaches the top of protection. Soil can behave in unexpected ways when it is subject to water forces, he explained.

Three soil mechanisms that the geotechnical engineers are concerned with are seepage, global stability and settlement. With seepage, the concern is that the forces produced by water flowing through soil beneath a levee or floodwall could start to erode the soil and undermine the foundation, leading to failure.

When global stability is analyzed, they are interested in ensuring that stresses produced by construction of the levee or floodwall or by flood loading do not exceed the foundation soil strength. If the soil strength is exceeded, the structure could experience a collapse, Wachman said.

Settlement of the foundation, which can happen over a period of years, needs to be considered to ensure the structure is tall enough to provide the designed level of protection, he added.

Arcadia, Wisconsin

"We're getting a lot of useful data out here, and we have a lot of really good tools to help us construct something that will help the city of Arcadia," Wachman said.

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The city of Arcadia has a population of about 3,000 people and is home to Ashley Furniture. The city is in the driftless area in Wisconsin – one of the few regions in the upper Midwest that was not covered in ice during the last ice age – which is reflected in the topography of the region. Part of the city is located in the flood plain of the Trempealeau River and is vulnerable to flooding.

Under the Continuing Authorities Program, the Corps is working with the city of Arcadia to design and construct a system of levees and floodwalls that will provide flood protection to the city. The project is estimated at approximately $37 million and is currently in the design phase.

WATCH: Greg Wachman talks about CPT

Ken Diediker, Savannah District geologist, monitors the data collected from the cone penetrometer test in Arcadia, Wisconsin, Nov. 12. USACE photo by Melanie Peterson

Small business office hosts monthly matchmaking events

Story by Melanie Peterson

The small business program logo. USACE courtesy graphic

The St. Paul District small business office, spearheaded by Christine Davis, small business programs deputy, recently began hosting monthly matchmaking events where small business owners or contractors can be matched with St. Paul District offices that have upcoming solicitations.

"If a contractor reaches out and would like a matchmaking event, I speak with them about what the St. Paul District buys and the fiscal year projection, to see if that aligns with the services they provide. If it doesn't, I have the list of all Corps awards, and can help them identify which districts buy the types of services they provide," Davis said.

For example, a contractor recently reached out about environmental consulting, while the St. Paul District projection does not provide many opportunities, Davis was able to provide the contractor with six different Corps districts where environmental consulting is a top purchase.

The St. Paul District small business program is in place to ensure that small businesses have the maximum practicable opportunity to participate in St. Paul District acquisitions through contracts or sub-contracts. The district's program provides outreach to inform small businesses of our opportunities, as well as information on how to do business with the agency.

St. Paul District assists Kansas City District with Dredge Goetz on Missouri River

Story by James F. Lowe and Reagan Zimmerman

The U.S. Army Corps of Engineers, Kansas City District, collaborated with the St. Paul District, to bring the Dredge Goetz onto the Missouri River from late October through early November to participate in a pilot project to dredge sediment that created shallow areas in the shipping channel.

“The Goetz has provided critical assistance to the Kansas City District through this pilot program, and we thank them,” said Maj. John Chambers, deputy commander of the Kansas City District.

Chambers noted that as a learning organization, the district was able to assess the dredging effectiveness of the larger dredge normally used on the Mississippi River for its deeper channels and higher volume of commercial traffic.

Chambers said that while the Missouri River can self-maintain the shipping channel by a series of engineered structures, damage to those structures from flooding can prevent them from performing their intended job. When this happens, shallow areas form and prevent large barges from transporting their goods through these areas. By coordinating with the St. Paul District, they are assessing the effectiveness of dredging as another tool to maintain the Missouri River navigation channel.

The district coordinated the dredging with the U.S. Fish and Wildlife Service and took steps to minimize disturbances to sensitive areas due to fish and other habitat factors.

Dane Morris, program manager for repairing the structures of the Missouri River bank stabilization and navigation project, accompanied the deputy commander on a site visit in early November to bring the operations of the Goetz into full focus.

“Our challenge is that compared with the Mississippi River, the Missouri River has a rapidly changing river bed and by the time we move an asset there to disperse the materials, the channel has self-scoured the material already. By focusing the Goetz on the most difficult build ups on the lower Missouri River, we have been able to assess how effective it is in solving the trouble spots and how we can incorporate this type of work into our long-term maintenance of the channel. So far it works well, and we’re looking forward to evaluating the long-term success at these sites,” Morris said.

The Goetz looks like a built-up barge with its own control tower and a detachable discharge tube or tail that allows for dredged material to be released an adjustable distance away from the downstream edge of the boat. In its use on the Missouri, that tail was assembled to be about 500 meters. The work crew covers a 24-hour schedule with a quarter boat having beds and a dining facility to support the staff of about 25.

Jake Bernhardt, St. Paul District chief of physical support for the Dredge Goetz, explains the operations of the dredge to Maj. John Chambers, deputy commander for the Kansas City District, on the bow of the Dredge Goetz near St. Charles, Missouri, Nov. 3. USACE photo by James Lowe

Restructuring in engineering and construction poses challenges and opportunities

Story by Shannon Bauer

Things are moving and shaking in engineering and construction. The division has seen both growth and restructuring in the last year or two, due to an increased workload and a desire to limit the supervisory span of control to a more manageable number.

Hydraulics and Hydrology Branch added a third section in 2020; Geotechnical and Geology Branch added two sections this past year; the Western Area Office in Fargo, North Dakota, expanded; and the Eastern Area Office in Winona, Minnesota, divided into a resident office in Winona and a resident office in Hastings, Minnesota.

Design Branch will arguably undergo the biggest change with the addition of three new sections, said Mike Knoff, chief of Engineering and Construction Division. Under their reorganization, mechanical and electrical engineers and the cost and specifications section will now each be a stand-alone section. A technical services and support section was established that will cover computer-aided drafting and design technicians and surveyors. Additionally, a technical lead section was added, with the intent of improving engineering quality and performance.

“The Fargo-Moorhead project is a big factor behind the growth, particularly in the Construction Branch. If you look at construction placement, which is an indicator of staffing needs, it’s risen steadily from $26.8 million in fiscal year 2018 to $114 million in fiscal year 2021,” Knoff said. “On the engineering side of the house, Fargo-Moorhead is a major factor, but the growth is also reflective of work we are doing for others inside and outside of the Mississippi Valley Division, or MVD. Additionally, we support all of MVD through Engineering

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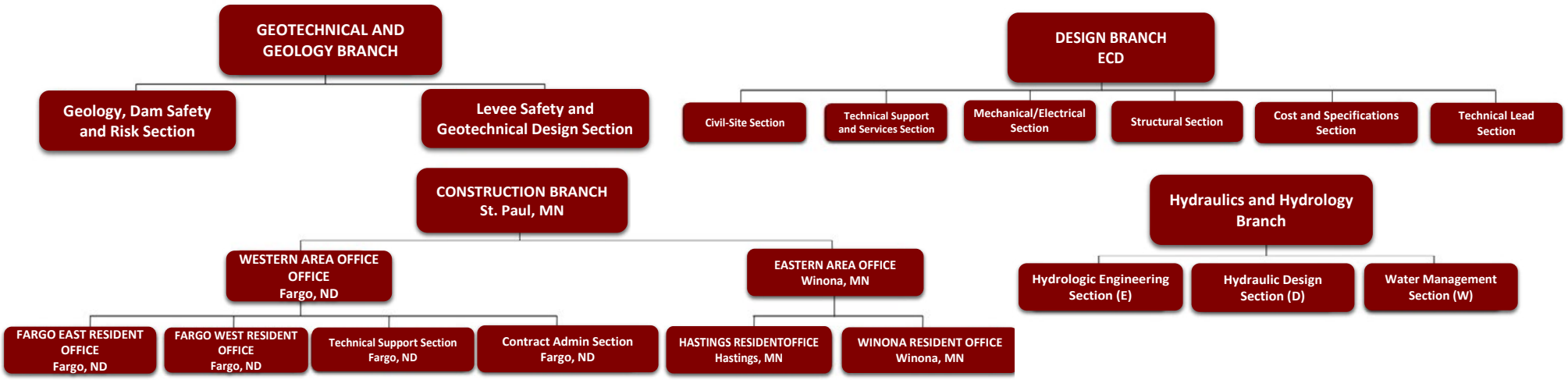
Engineering and Construction regorganization



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without Borders; the Inland Navigation Design Center; the Risk Management Center; the Modeling, Mapping, and Consequences Center; and various other enterprise activities, such as developing guidance and tools."

Knoff said he anticipates this upward trend to continue. "The work we already have underway or planned for the current and next two fiscal years surpasses our current capability and does not include new opportunities, such as an expanded mission with the Veterans Administration, possible continued support to Sacramento and other districts, the Navigation and Environmental Sustainability Program, unplanned work such as response to natural disasters or any projects that would be part of an infrastructure bill," he said.

Knoff said that restructuring the division was also required because, even with the current staff size, there were section chiefs and resident engineers supervising too many employees, sometimes as many as 20. "This is far too great a span of control for an individual supervisor and puts them in a situation where they are responding only to immediate needs and priorities and have little time to focus on mentoring, employee development, technical guidance, quality assurance or strategic actions to improve section performance," he explained.

Expansion and reorganization do not come without some challenges. Knoff said the biggest and probably only growing pain was that most of the new positions were filled from within. "Since January four high level technical leads, four section chiefs, the division deputy, a branch chief and two resident engineers were hired," he said. "All but two of those were filled with internal candidates, meaning that we had almost no net gain in staff. It also means that employees that were doing technical work on projects are no longer available to do that work, and supervisors must rearrange assignments, while they simultaneously work to recruit and fill behind the promoted employees."

At the end of fiscal year 2021, the division had around 144 out of 187 positions filled on the district's Integrated Manning Document. This, combined with the normal attrition that takes place every year between retirements and resignations, means the division will be doing a lot of hiring next year.

Mike Knoff, chief of engineering and construction. USACE photo by Emily Chavolla

Knoff selected to lead engineering and construction

Story by Melanie Peterson

Mike Knoff was recently selected as the new chief of the engineering and construction division. His responsibilities include overseeing the overall execution of the division's mission. This includes supervising and directing the activities of the division staff; monitoring work progress and project quality to ensure budget, schedule and customer needs are met; and conducting long range planning for the organization.

Knoff has worked for the Corps of Engineers since 1985 and in the St. Paul District since 1999. He was previously the chief of the district's hydraulics and hydrology branch and most recently the deputy chief of the engineering and construction division.

"My vision is to have a high performing workforce that's highly motivated, produces high quality products and meets the needs of the district's customers," Knoff said. "We are in the middle of many changes in the division as we respond to a large and growing workload. This is a challenging and exciting time in engineering and construction, and I'm fortunate to be able to lead an organization of outstanding, dedicated professionals that are up to meeting these challenges."

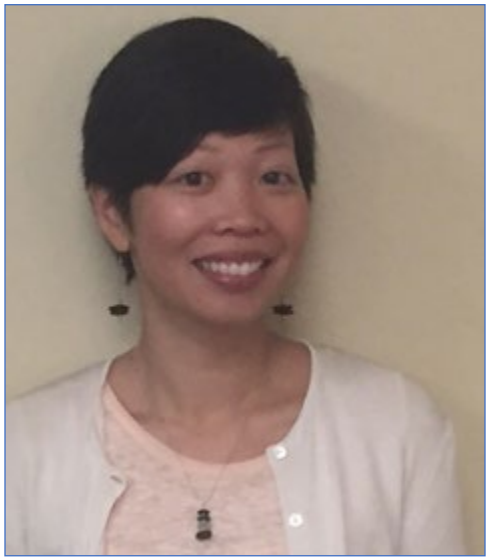
Knoff holds a Bachelor of Science in civil engineering and a Master of Science in engineering from South Dakota State University. He is also a registered professional engineer in the state of Nebraska and a member of the Society of American Military Engineers and the American Society of Civil Engineers. He enjoys biking, spending time with his children and grandchildren and spending time at the lake.

Lean Six Sigma green belt improves regulatory permitting process

Story by Melanie Peterson

For Marie Kopka her journey to become a Lean Six Sigma green belt was about improving the customer experience. Kopka is a biologist with regional planning and environment division north and was formerly a lead project manger in the regulatory division.

Lean Six Sigma, or LSS, is a process improvement program to help eliminate waste within an organization, said Andrew Huffman, district quality manager and LSS coordinator. “It’s very valuable



Marie Kopka, biologist. USACE courtesy photo.

to get people certified, because it identifies people that have the skillset to look at a process and determine where value is added and to identify non-value-added tasks within the process and eliminate those tasks,” Huffman added.

Kopka’s certification journey began with identifying an opportunity for improvement in the regulatory permitting process. The average time required to determine the need for a federal permit is 30 minutes, and the goal of the project was to reduce that time by 80%.

Meghan McKinney, environmental protection technician, served as the subject matter expert for the project. “I’m hopeful that when we’re able to implement this, it’ll be time saving in the intake process, for the project managers and ultimately the public,” McKinney said.

Implementation of the project will be in partnership with the Wisconsin Department of Natural Resources since the Corps receives joint online permit applications through their website.

Kopka’s project was identified in the LSS national newsletter as a Corps best practice, and the project form is being used as a template for the continuous improvement community of practice.

“I wanted to do a project that would have an impact on regulatory and that would also benefit the public. I really wanted to understand how to go through this process so that I could apply Lean Six Sigma concepts in other areas,” Kopka said. “The most valuable part of that were the discussions we had as a team and working through that process, challenging ourselves of our own assumptions.”

RELATED: Huffman continues his quest for process improvement

St. Paul District provides support to the Department of Veterans Affairs

Story by Melanie Peterson

According to Clay Tallman, project manager, the demand for St. Paul District's expertise is growing. Under the Economy Act of 1933, the U.S. Army Corps of Engineers is authorized to provide interagency and international services in support of projects, missions and interests of other agencies or nations. In the St. Paul District, that includes the International Joint Commission and support to other federal agencies such as the Department of Veterans Affairs, or VA.

The St. Paul District has provided support to the Minneapolis VA Medical Center since 2015 and recently began arrangements to provide support to the VA Medical Center in St. Cloud, Minnesota.

"From the enterprise level, we are the federal government's construction agent," Tallman said. "By supporting our sibling agencies, we can allow them to focus on their true duties. For the VA that means caring for our veterans. As a disabled veteran, it's important because by helping them, it serves the greater veteran community."

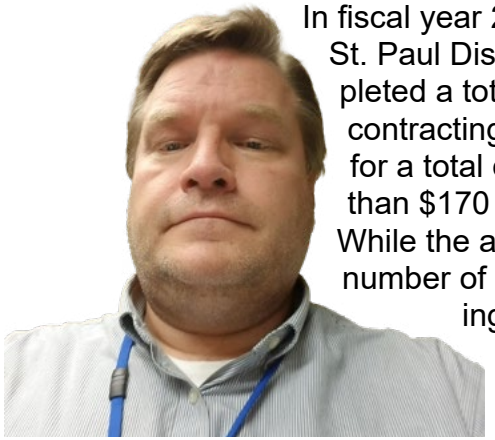
Current work for the Minneapolis VA Medical Center includes window replacements with a $5 million contract awarded at the end of fiscal year 2021 to finish the work. Previous support has included design for hospital ward renovations, construction support, roads and grounds projects and building base refreshment.

Todd Decosse (middle), St. Paul District construction representative, and two contractors, work on the Minneapolis VA Medical Center in Minneapolis, June 23, 2020. USACE courtesy photo

Support to the St. Cloud VA Medical Center will begin with direct construction support – which entails sending engineering and construction division staff to help full time until the medical center is able to be fully staffed. That agreement is expected to be in place by the end of the calendar year.

Corps awards record amount of money in contracting actions

Story by Melanie Peterson



Kevin Henricks, chief of contracting. USACE courtesy photo

In fiscal year 2021, the St. Paul District completed a total of 603 contracting actions for a total of more than $170 million. While the average number of contracting actions is usually right around 600, said Kevin Henricks, chief of contracting, that's the most dollar value he's ever seen awarded in his almost 20 years with the St. Paul District.

"About $69 million of that is in awards for the Fargo-Moorhead Metro Flood Risk Management Project," Henricks said. He anticipates that the higher dollar amount in contracts will continue with more awards for the Fargo-Moorhead project.

"My staff have a great wealth of contracting knowledge and are dedicated to completing the mission," Henricks said.

Recognizing our Employees of the Month: The MVPs of MVP

September
Ellie Tabako,
Operations

November
Calvin Halverson,
Engineering and Construction

Around the District

Tom Lyons, Minnesota Military Radio talk show host, interviews Kristen Moe, Mississippi River project operations manager, and Brian Gray, lockmaster at Lock and Dam 2, in Hastings, Minnesota, Nov. 9, for a special segment on navigation. USACE photo by Melanie Peterson

St. Paul District staff and partners conduct a site visit at Sturgeon Lake near Red Wing, Minnesota, Oct. 19. USACE courtesy photo

The tier 2 leadership development program participants visit the Detroit District in Duluth, Minnesota, Oct. 26. USACE courtesy photo

(Below) Rangers Tony Kilian, Ellie Tabako, Melissa Phelps and Javy Bermudez at Cross Lake Recreation Area, near Crosslake, Minnesota, Sept. 30. USACE courtesy photo

Gull Lake volunteers logged almost 5,000 hours this recreation season at Gull Lake Recreation Area, near Brainerd, Minnesota. USACE photo by Randy Urich

Byron Williams, cartographer, captures points of interest along the existing levee in Arcadia, Wisconsin, Nov. 3. USACE photo by Melanie Peterson

News and Notes

New Hires

Adele Braun, technical lead section chief, engineering and construction, St. Paul, Minnesota
Twain Cacek, civil engineer (geotechnical), engineering and construction, St. Paul, Minnesota
Benjamin Faughnan, clerk, contracting, St. Paul, Minnesota
Jordan Fluekiger, deckhand, operations, Fountain City, Wisconsin

Lindsey Gatzow, accounting technician, resource management, St. Paul, Minnesota
Jacob Jandl, deckhand, operations, Fountain City, Wisconsin
Jesse Kramer, lock and dam equipment mechanic, operations, Minneapolis, Minnesota
Thomas Loechler, deckhand, operations, Fountain City, Wisconsin
Eric Mccann, archeologist, regional planning and environment division north, Rock Island, Illinois

Benjamin Nelson, project manager, programs and project management, Sacramento, California
Zachery Rislove, deckhand, operations, Fountain City, Wisconsin
Rebecca Smith, construction support assistant, engineering and construction, Fargo, North Dakota
Andrea Sterling, secretary, regional planning and environment division north, St. Paul, Minnesota

Promotions

Brian Alberto, hydraulics section chief, engineering and construction, St. Paul, Minnesota
Steph Brunot, civil engineer, engineering and construction, St. Paul, Minnesota
Rebecca Graser, deputy division chief, regulatory, Brookfield, Wisconsin
Austin Hegenbarth, lock and dam operator, operations, Winona, Minnesota
Steve Heidbrider, lockmaster, operations, Minneapolis, Minnesota
Channing Helgeson, lock and dam operator, operations, Alma, Wisconsin
Bethany Hoster, biologist, regional planning and environment division north, Rock Island, Illinois
Michael Hvidhyld, lock and dam operator, operations, Red Wing, Minnesota
Michael Knoff, chief of engineering and construction division, engineering and construction, St. Paul, Minnesota
Kristin Moe, Mississippi River project operations manager, operations, Fountain City, Wisconsin
Kelsey Myers, archeologist, regional planning and environment division north, Rock Island, Illinois

Christine Nycz, archeologist, regional planning and environment division north, Rock Island, Illinois
William Odell, hydrologic technician, engineering and construction, St. Paul, Minnesota
Kacie Opat, civil engineer (hydraulics), engineering and construction, St. Paul, Minnesota
Dawn Polensky, program manager, programs and project management, St. Paul, Minnesota
Monique Savage, plan formulator, regional planning and environment division north, St. Louis, Missouri

Joseph Shoemaker, supervisory biologist, regulatory, Green Bay, Wisconsin
Chad Simon, heavy mobile and marine equipment mechanic, operations, Fountain City, Wisconsin
Alex Wallingford, lock and dam operator, operations, Minnesota City, Minnesota
Sean Wentworth, mechanical engineer, engineering and construction, St. Paul, Minnesota

Retirements

Scott Barr, heavy mobile and marine equipment mechanic, retired Sept. 28
Michael Dahlquist, supervisory civil engineer (structural), retired Sept. 30
Bryan Peterson, Mississippi River project operations manager, retired Oct. 30

News and Notes, continued

Congratulations

The Dredge Goetz was recognized at the national level by the Council for Dredging and Marine Construction Safety for their outstanding safety culture and impeccable safety record.

The St. Paul District received the Mississippi Valley Division Fiscal Year 2021 P2 Data Quality Award for being the most improved. P2 is the project management information system.

Mat Anderson, engineering and construction, received his Administrative Contracting Officer, or ACO, warrant.

Calvin Aulwes, operations, and his wife Kayla, welcomed their son Cooper Kenneth on Sept. 16. He weighed 7 pounds, 15 ounces and was 21.5 inches long.

Pat Dowd, engineering and construction, is now a registered Professional Engineer.

Chris Erickson, programs and project management, received the Minnesota Federation of Engineering, Science, and Technology Society's "Charles W. Britzius Distinguished Engineer Award!" Chris was nominated in recognition of significant contributions made over his more than 30 year career as a researcher, project manager, and leader with the Corps of Engineers.

Jilliane Jaeger, office of counsel, and Steve welcomed Lily Suzanne Jaeger on July 19. She weighed 9 pounds, 1 ounce and was 21.5 inches long.

Michelle Larson, engineering and construction, **Vanessa Alberto**, regional planning and environment division north, and **Monique Savage**, regional planning ad environment division north, graduated from the Mississippi Valley Division Emerging Leaders program.

Kelsey Myers, regional planning and environment division north, and Jason welcomed Bodhi Arthur Myers on August 30. He weighed 7 pounds, 5 ounces and was 19.5 inches long.

Michael Snyder, engineering and construction, and Emily welcomed Wendell Lawrence Snyder, on Sept. 11. He weighed 8 pounds,13 ounces and was 20.5 inches long.

Dustin Strand, safety and occupational health, married Melissa Samuelson on Oct. 10, in Belle Plaine, Minnesota.

Vinai Vinlander, office of counsel, and his wife Anne, welcomed Jasmine Elise Vinlander on Sept. 30. She weighed 7 pounds, 5 ounces.

News and Notes, continued

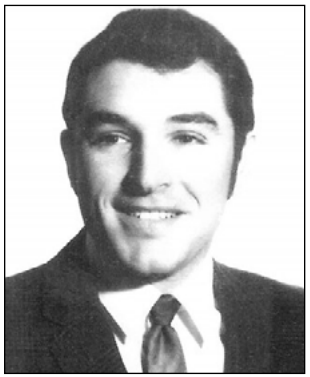
Congratulations, continued

The Summer 2020 issue of **Our Mississippi**, was selected for the 2021 APEX Awards for Publication Excellence. Read it here.

Taps

LuAnne Bearbower passed away Sept. 29. She worked at Lock and Dam 9 in Ferryville, Wisconsin, for 30 years and retired in 2009.

George Thomas LaBlonde, Jr., passed away Oct. 29. He was the deputy district engineer for the St. Paul District in the 1970s and retired as a colonel in 1990.



Lester Rathjen passed away Oct. 11. He worked at Lake Ashtabula as the lead park ranger.

Eula Jean Schriever passed away June 29. She was the first female lock operator for the U.S. Army Corps of Engineers and worked at Upper St. Anthony Falls in Minneapolis.