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Omaha Outlook

Omaha District Commander Col. Joel Cross (left) with famed broadcast journalist and author Tom Brokaw (center) and Operations Project Manager Tom Curran.

U.S. Army Corps of Engineers, Omaha District

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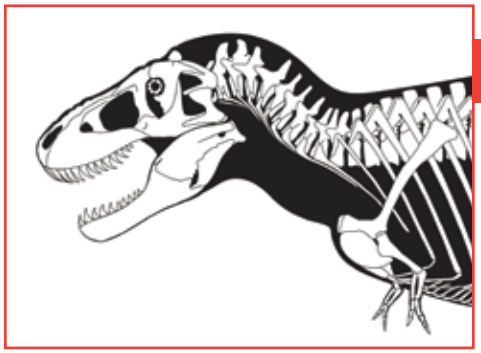

On the cover: Omaha District Commander Col. Joel Cross (left) with famed broadcast journalist and author Tom Brokaw (center) and Operations Project Manager Tom Curran. (Photo by Cheryl A. Moore)

OMAHA OUTLOOK

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Relevance: Investing in people

Joel R. Cross
Colonel
Omaha District Commander

Earlier this month, I bid a Happy Corps Day to the members of the Omaha District. As we celebrated our 80th year of dedicated service to the Country, we took time to remember those who served before us, and we reflected on those who will continue to serve long after we leave.

Our stakeholders and our workforce clearly understand that the sustained health of our District depends on our relevance to the Nation and our customers. That relevance is essential in providing the best value to the Nation and today, the Omaha District does this in a superb manner.

We are relevant now, quite frankly, because of a workforce dedicated to serving and making America a better place every day. The TEAM accomplishes its missions better than others and it shows in the strength of our program and requests for our services by customers, even those outside our area of responsibility.

The key to sustaining relevance is to invest wisely in people. People are the organization's most important, dynamic, adaptable and capable asset. They deserve top-notch training, experience and leadership. To ensure long-term relevance, the Omaha District must continue investing in our workers while recognizing their amazing contributions and setting the conditions for continued success.

This year is titled the "Year of the First Line Leader" and we are deliberately investing in our workforce. From changing the leadership development program to conducting three novel 2-day courses on management, we are putting words into action.

There is a strength of character in our team that allows us to persevere even during the toughest times with professionalism, grace, and the personal courage to stand up for what's right. As I told the workforce on Corps Day—"Don't ever change."

As the U.S. Army and the Army Corps of Engineers celebrate their 239th birthday, and as the Omaha District celebrates its 80th year of proud service, I am reminded of the many brutal, tough times through which our Nation has overcome adversity, adapted and survived. We were successful because we had flexible, resilient and innovative employees and patriots. People like the Omaha District TEAM members, who have worked and created and served in 100 countries. We are all part of something great and I am happy and proud to serve with our team in today's Army and the Corps of Engineers.

I asked employees to reflect humbly on what they have accomplished...take stock of the many proud achievements and accomplishments. To acknowledge that, through all levels of the organization, we rose to meet the challenges and produce great work despite unusual work circumstances and conditions. The team members care for each other and work together with great pride and determination. A grateful Nation notices, too.

It was a tough year and our District family lost several cherished friends, co-workers and family members of co-workers. I applaud and admire the team's strength and resilience. Through it all, the challenges, the frustrations and the tremendous accomplishments, most would acknowledge that this is a great place to work and grow.

I salute this team for its character, resolve and dedication...the team remains upright amidst fierce gales of change. The Omaha District team will hold on to our values, our principles, our work ethic—and to each other.

WE ARE MAKING A HUGE DIFFERENCE IN THE WORLD.

Essayons.

Joel R. Cross

CULTURAL *RESOURCES*

By EILEEN WILLIAMSON, *Public Affairs Specialist, Omaha District*

What's the Army doing with dinosaurs?

Early morning April 15, a truck carrying a 66 million-year-old fossil arrives at the Smithsonian's National Museum of Natural History loading dock in Washington D.C.

Along with other dignitaries on-hand to unveil the Nation's Tyrannosaurus Rex, is Lieutenant General Thomas Bostick, U.S. Army chief of engineers and commander of the U.S. Army Corps of Engineers.

Why?

In short, the fossil was found on USACE-managed land. Thus, it belongs to the American people.

"Welcoming the Nation's T.rex to the Nation's capital brings together our efforts to get students excited about Science, Technology, Engineering and Mathematics careers, our role in preserving the environment and the Nation's paleontological resources as well as our long-standing relationship with the Smithsonian," Bostick said.

But, there's more.

USACE manages 12 million acres of public lands and waters nationwide with 422 lake and river projects in 43 states. These natural, cultural and developed resources are managed in the public interest offering special protection for migratory birds, threatened and endangered species as well as historical and archeological relics and specimens. As steward of these lands, USACE is responsible for ensuring proper care and treatment of discoveries such as the Nation's T.rex.

"It's an important role often overlooked by the public," said Julie Price, USACE's Omaha District Cultural Resources Program Chief. "We work to protect these items for future generations and respect the history or cultures that brought them here."

USACE preserves and protects trust resources and complies with the laws and regulations ensuring reasonable access to sacred sites while working to repatriate remains and burial or ceremonial artifacts to their respective Tribes.

USACE-managed items are in more than 165 museums nationwide. Next to the Smithsonian, USACE is the largest holder of archaeological artifacts with items that could fill 50,000 cubic feet of space and more than 3,000 linear feet of records. These artifacts and records are managed through USACE's Mandatory Center of Expertise for the Curation and Management of Archaeological Collections (MCX-CMAC) in St. Louis.

In 1988, Kathy and Tom Wankel discovered exposed fossils near the Nelson Creek Recreation area of Fort Peck reservoir.

"Twenty-five years ago, before fossils were wildly popular, we figured the chances someone would come to a remote location on the shores of Fort Peck to look at something a rancher found and "thought" was a fossil were slim so we made the decision to take the bones to the museum," said Kathy.

The Wankels knew removing fossils from Federal land was prohibited but, believing they had a "mega

Opposite: Pat Leiggi, director of exhibitions and administrator of paleontology at Montana State University's Museum of the Rockies, checks the packing arrangement for a crate containing fossilized bones from a tyrannosaurus rex on Tuesday, April 7, 2014, in Bozeman, Mont. The Wankel T.rex was found on federal land near the Fort Peck Reservoir in 1988 by Kathy Wankel, a rancher from Angela, Mont. (Montana State University photo by Sepp Jannotta)

Inset: Tyrannosaurus rex femur from the Peck's rex specimen owned by the U.S. Army Corps of Engineers and housed within the Federal repository at Montana State University's Museum of the Rockies. Peck's rex is slated to go on display to the public in 2015. (U.S. Army Photo by Eileen Williamson)

Above: T. rex skeleton. (Courtesy of Smithsonian Institution)

Top: Graduate student Scott Sampson, foreground, describes skeletal structures of exposed Wankel T.rex fossils for visitors and U.S. Army Corps of Engineers officials at the excavation site near Fort Peck, Mont., June, 1990. (Photo by Museum of the Rockies)

Bottom: The U.S. Army Corps of Engineers and the Smithsonian National Museum of Natural History welcomed the arrival of a nearly complete Tyrannosaurus rex skeleton on April 15, 2014 in Washington, D.C. Lt. Gen. Thomas Bostick, chief of engineers and commander of USACE, speaks with Tom and Kathy Wankel. The Wankel family discovered the fossils in 1988 on USACE property in Montana. (U.S. Army Photo by F.T. Eyre)

find," took a few pieces to the Museum of the Rockies (MOR) where Pat Leiggi, director of Exhibits, administrative director of Paleontology, and crew chief for the Wankel T.rex excavation and Jack Horner, curator of Paleontology and Montana State University Regent's Professor, had the required permits to excavate on Federal land.

"As our country and the world become more populated, it's increasingly important to protect the lands that are shared by all of us and exist for everyone to enjoy," she said.

Their decision enabled paleontologists to uncover a rare, almost complete T.rex skeleton that has been shared and studied through MOR and will now be shared with 8 million visitors each year at the Smithsonian.

As designated Federal repositories, agreements such as those with MOR and the Smithsonian allow fossils or historical artifacts discovered on Federal lands to be placed within collections where they can be shared with the public and studied,

evaluated, protected and preserved. Since 1906, numerous Federal laws and regulations identify nonrenewable heritage resources as significant components of history requiring they be preserved for the education and use of future generations.

The Paleontological Resources Preservation Act of 2009, co-authored by Leiggi, places fossils found on Federal land in the public trust and establishes stronger penalties for their non-permitted removal. The law helps protect fossils as rare and nonrenewable resources that are part of the Nation's natural heritage and belong to the American people, Leiggi explained.

"We hope sharing the Wankel T.rex with the Nation will emphasize the value of protecting these scientifically important specimens, and the need for placing discoveries made on Federal lands within the public trust through federally approved repositories," he said.

Michael Trimble, Ph.D., MCX-CMAC Director, works to establish agreements with agencies to help preserve and protect items of historical significance and, when possible, make them available for public viewing.

"These agreements allow us to place these items in public exhibits nationwide," Trimble said, "which helps people understand the past and preserves the items for the future."

The 50-year Wankel T.rex loan to the Smithsonian's National Museum of Natural History reinforces USACE efforts to protect and preserve the Nation's paleontological resources.

Another USACE T.rex, dubbed "Peck's Rex" because it was also found near the Fort Peck Reservoir, is among the MOR collections and slated to go on public display in 2015.

Top: Jack Horner, Curator of Paleontology at Museum of the Rockies, provides scale for Tyrannosaurus rex fossils at excavation site near the Fort Peck Reservoir, Fort Peck, Mont., June 1990. (Photo by Museum of the Rockies)

Bottom: The U.S. Army Corps of Engineers and the Smithsonian National Museum of Natural History welcomed the arrival of a nearly complete Tyrannosaurus rex skeleton on April 15, 2014 in Washington, D.C. Each crate is surveyed to verify its contents. (U.S. Army Photo by F.T. Eyre)

Left: The left maxilla, or upper jaw bone, of the Wankel T.rex. The crate containing this fossil was the final crate to be inspected and sealed before the fossil was shipped from the Museum of the Rockies in Bozeman, Mont., to the Smithsonian's National Museum of Natural History in Washington D.C. (U.S. Army Photo by Eileen Williamson)

By JENNIFER SALAK, *Outreach Specialist, Omaha District*

Collaboration leads to flood risk solutions in Schuyler

Rain and chilly temperatures couldn't dampen the warmth of the smiles radiating from the team as the ceremonial shovels broke ground in Schuyler, Neb., March 27. This was an important day for the city of Schuyler, the Lower Platte North Natural Resources District (NRD), and the Omaha District, all partnering on a project to reduce flood risks in Schuyler.

The formal groundbreaking ceremony took place at the Oak Ballroom, a Roosevelt-era structure built on the north shore of Lost Creek by the Works Project Administration. Schuyler Mayor Dave Reinecke, a speaker at the ceremony, recounted stories of watching his neighbors lose their homes to flooding from Shell Creek in 1990 and the fire department filling his basement with water to prevent the foundation from caving in during that same flood. Reinecke said that over his 16-year term in office, he has watched his entire community suffer through numerous devastating floods from the water overflowing the banks of Shell Creek and Lost Creek.

Other speakers included staff members from the offices of U.S. Representative Jeff Fortenberry, Senator Mike Johanns, and the Lower Platte North NRD. Tim Culp, owner of TJC Engineering, the contractor hired for constructing the project, also spoke. Closing remarks were given by Omaha District Commander, Col. Joel Cross.

As each speaker addressed the crowd of approximately 50, one simple message consistently emerged – the spirit of collaboration that was shown by everyone involved with the project.

As the crowd left the Oak Ballroom and made its way to the rain-soaked project site, TJC Engineering had been hard at work removing trees and clearing ground cover for the project. The Louisville, Ky.,-based company, which has extensive experience working with other USACE districts around the country, was awarded the $3.2 million construction contract in September 2013 for the first phase of the project. Phase 1 consists of a new 2.18-mile levee located north and east of Schuyler designed to reduce flooding risks posed by Shell Creek.

Project Feasibility

Construction planning for this new levee involved extensive collaboration between numerous stakeholders. The partnership began in the early 2000s when the city of Schuyler and the Lower Platte North NRD approached the Omaha District about conducting an initial assessment of Platte River flooding and evaluating levee alternatives to reduce flood risk along the southern portion

of Schuyler. According to Mark Nelson, Planning Branch Project Manager, "The results of that study indicated that there was federal interest in pursuing a comprehensive feasibility study."

Schuyler and the NRD agreed to be cost-share sponsors with the Omaha District for a Section 205 flood risk management feasibility study. As the Platte River study progressed, a major flood from Shell Creek in May 2008 caused property damage in the northeastern part of the city. Because of the extensive flood devastation, Schuyler added Shell Creek to the feasibility study.

While residents were completing repairs to their homes and businesses from the 2008 flood, they were hit again in 2010 with flooding in the north from Shell Creek and in the south from Lost Creek, a minor tributary of the Platte River.

In 2011, with input from the cost-share sponsors and the public, the Omaha District completed the Section 205 feasibility study, which identified an economically-feasible project consisting of two levee systems, one to reduce risks from Shell Creek flooding and another along the south side of the city to address Platte River flooding.

Above: Schuyler officials, Lower Platte North NRD members, USACE, and TJC Engineering break ground on the Schuyler flood risk management project. (U.S. Army photo by Jennifer Salak, USACE, Omaha District, Outreach Specialist)

Opposite: Shell Creek flooding May 31, 2008, looking northwest from near its confluence with the Platte River. (Photo courtesy of Nebraska State Patrol)

Team Collaboration

"Collaboration on this project has been key, and every single member of the Project Delivery Team has been fully engaged with the sponsors, landowners impacted by the project and residents affected by years of flooding," said Nelson.

Tommy Aldmeyer and Andrew Barry, Geotechnical Engineers in the Geotechnical Engineering Branch, spent many hours in the field working with landowners laying out a final levee alignment that would have the least impact on each person's property. They also worked extensively with landowners to ensure their irrigation equipment would continue to be able to water crops on both sides of the levee.

Curtis Miller, a Hydraulic Engineer in the Hydraulic Engineering Branch, worked with residents of Rogers, a community of 95 people located 8 miles downstream from Schuyler, to demonstrate through hydraulic modeling that the Shell Creek levee would not contribute to an increased likelihood of flooding.

"Other team members played an integral part in getting this project to the groundbreaking," said Nelson. "Candace Akins in Real Estate negotiated tirelessly with the city, the NRD and landowners to obtain the required real estate for the project. Christian Davenport in the Engineering Division coordinated with the Nebraska Department of Roads to ensure no traffic safety concerns were created with the road raise. Tom Gorman, also in the Engineering Division, worked with the Federal Emergency Management Agency to make sure the new levee would comply with that agency's floodplain regulations."

By adhering to FEMA standards, the new Shell Creek levee can be accredited, which will benefit Schuyler residents in the area with greatly reduced flood insurance premiums.

Two-Phase Project

Phase 1 construction of the Shell Creek levee is expected to be complete in the fall of 2014. Phase 2, once funded, would involve constructing a new levee, approximately 2.5 miles long, south and west of Schuyler along Lost Creek. The Omaha District is working on the design of the Platte River levee. Once the total project is fully implemented (Phase 1 and 2), the risk of flooding in the majority of Schuyler will be greatly reduced, and the potential for annual flood damages will be lowered by approximately $1.9 million.

By CHERYL A. MOORE, *Public Affairs Specialist, Omaha District*

Museum dedication brings a town, a legend, and the legacy of a dam together

It's been said that if you dream it, it will happen.

More than 500 people from across the country descended on the small town of Pickstown, S.D. in June to attend the dedication and grand opening of the Pickstown Museum, which tells the story of the town and its close connection to Fort Randall Dam.

Many people attending the ceremony were former Pickstown residents who worked on the construction of the dam more than 60 years ago.

"This museum is a tribute to them, their foresight, innovative spirit, and their vision to harness the powers of a waterway and improve living conditions for millions," said Col. Joel Cross, Commander, Omaha District.

Former NBC News Anchor Tom Brokaw attended the dedication and served as a keynote speaker. A former resident of Pickstown, he moved there with his family in 1948 so his father could work on the Fort Randall Dam. Brokaw's remarks referenced the work ethic and commitment of Americans in the post-WWII era who made a difference for generations to follow.

Pickstown was named for Lt. Gen. Lewis Pick, a chief architect of the Pick-Sloan 1944 Flood Control Act, which authorized the construction of the Missouri River Dams. In attendance were Charles Pick, the grandson of the general, and Frances Pick Dillard, the general's daughter-in-law and mother of Charles.

Other notable attendees included Matt Michels, Lieutenant Governor for the State of South Dakota, and members of the Everist family, which owned Western Construction Company.

Cross also provided special remarks at the dedication. "I would like to say thanks to those who had a hand in this region's history—and, yes, this great country's history. I speak of those brave and hearty men and women who built Fort Randall and the other five Missouri River Mainstem Dams," he said.

"Those of you sitting here today can tell stories about your family and the hard times, challenges, team work, craftsmanship, sacrifice, and a lot of flexibility" said Cross. "However, it was difficult to be flexible in summer temperatures that soared to 100 degrees or winters of below zero temperatures."

Tom Curran, Operations Project Manager of the Fort Randall Dam, welcomed Brokaw and Pick family members to the powerhouse and provided them a tour of the facilities before they were whisked away by NBC affiliate station KDLK news for interviews. "It's an engineering marvel," Brokaw said of Fort Randall.

Guy Rhoades and Art Trautman, both former residents, that also worked on the dam, led the effort to make the museum a reality. They spent more than three years gathering historical information from former residents, and sifting through more than 1,300 photos furnished by the Corps.

The museum traces the chronological history of Pickstown and Fort Randall area, starting with the old Fort Randall, which existed from 1856 through

Opposite page: Family members of Lt. Gen. Lewis Pick were on hand for the ceremony. (U.S. Army photo by Cheryl A. Moore)

Above: A glance at a Fort Randall Dam display in the Museum. (U.S. Army photo by Cheryl A. Moore)

1892. Vintage photos and memorabilia illustrate the construction of Pickstown and its early residents during the 1940s and 1950s to bring the town back to life. The construction of the Fort Randall Dam, the ground breaking ceremony in 1946 and the dedication ceremony in 1956 are also depicted.

Tucked away in the museum's back corner, as you pass the "local hangout"—a simulated café—is the Pickstown Theater. Although it doesn't have a projector and a white screen as it did in the old days, it does have a modern television and video player which plays DVDs of old 8 and 16 mm films of the town and dam construction.

The museum also includes a simulated schoolroom, in reference to the Pickstown School where more than 1,600 students once attended and jump started their paths to success. Although Pickstown held a population of 3,600 during the decade that the Fort Randall Dam was being built, the population is now about 200.

The museum provides a trip down memory lane for those with family ties to Fort Randall and Pickstown, as well as those who want to learn more about the people of Pickstown and their role in the construction of the Fort Randall Dam.

Top: Tom Brokaw came home to cut the ribbon to a museum that was very close to his heart. (U.S. Army photo by Cheryl A. Moore)

Bottom: The scissors, encased. (U.S. Army photo by Cheryl A. Moore)

By JENNIFER DAVIS, *Hydrological Engineer, Omaha District* and
By EILEEN WILLIAMSON, *Public Affairs Specialist, Omaha District*

Engineering, more than a full-time job

Also, personally-rewarding volunteer opportunity through Nebraska Engineers without Borders

Engineers are needed around-the-world for their knowledge and expertise. Their skills and talents are honed through formal education and job experiences and many choose to share their talents through volunteering. Jennifer Davis, a hydrological engineer with the U.S. Army Corps of Engineers, Omaha District is a volunteer with the Nebraska Chapter of Engineers without Borders (EWB-NE).

In June 2013, a team from the EWB-NE spent two weeks in Uganda working on rain harvesting projects. Traveling to Uganda were eight representatives of the Nebraska chapter: two students, a student chapter advisor from the University of Nebraska at Lincoln and five members of the Nebraska professional chapter, including Davis.

The team's implementation and surveying trip included repairing an existing system at the St. John's clinic in Gayaza, installing a new rain harvesting system on three of four main buildings at the St. Kizito primary school in Makinkee and surveying four sites to plan future improvements.

Students draw water from the large underground tank at St. Kizito for use at the school using 20 liter Jerry Cans. Improvements to the St. Kizito rain harvesting system will provide an additional 2.9 million liters annually to the school. When the overall cost of the system is calculated, assuming a 10-year life and a 5 percent annual maintenance cost along with the $27,000 capitol cost, the school saves 35 to 235 Uganda Shillings per Jerry Can (20 liters) of water compared to purchasing water at a hand pump during the dry season. (Photo by Jennifer Davis)

Uganda

Uganda's population is 34.8 million people and it is located in east Africa north of Lake Victoria, one of the sources of the headwaters of the Nile River and the second-largest freshwater lake in the world. Kampala, Uganda's capitol city, has a population of 1.5 million people where pedestrians, bicycles, motorcycles, cars and vans all jockey for position on crowded paved streets with no lanes. "Traffic was chaos; motorcycle taxis carried men talking on cell phones and women wearing skirts riding sideways with babies balanced on their hips," said Davis. Traffic is controlled mainly by roundabouts especially outside of Kampala where there is little to no access to electricity. Few people make enough money to own vehicles, van and motorcycle taxis are rented to drivers at a daily rate and most people walk. Taxi vans are usually overfilled and very dangerous. Davis said many vans had signs on their back windows saying things like: "Hope for the Best", "Sit Down Boss" or "Trust in God".

The team obtained materials from Kampala, which is south of their project sites. Father Francis, the team's contact in Uganda, found a small truck to retrieve the supplies. With three people in the truck's cab and the bed filled with PVC pipe and gutters for the clinic and school, the team was stopped by traffic police three times while traveling to Gayaza and twice between Gayaza and Makinkee. Traffic police don white uniforms, stand at the edge of the road and wave drivers over for traffic citations. "Of all the vehicles that could have been stopped - motorcycles hauling passengers, chickens, bananas and 2-meter boards as well as vans full of more people than seats - our team's truck was cited for an 'unsafe' load," said Davis. "Once I explained that the materials were for a school, all was forgiven and we weren't ticketed."

Students thank EWB-NE team member Jennifer Davis for the team's efforts. Following construction, the St. Kizito students took part in a celebration dance. (Courtesy Photo)

Water and Sanitation

The equator passes through Uganda making the climate pleasant with daily highs ranging between 70 to 85 degrees Fahrenheit. Water availability fluctuates seasonally with two wet seasons and two dry seasons. Dry seasons last about two months each and, with wet seasons, the average annual rainfall in Kampala is about 48 inches. During dry seasons, the main sources of water are private hand pumps, which become more expensive as demand increases, and, for the poor, unsanitary drainage ways. About 28 percent of the population does not have access to clean drinking water and 66 percent lack access to hygienic sanitation. As a result, infectious disease is high and the average life expectancy is 54 years.

St. John Clinic, Gayaza

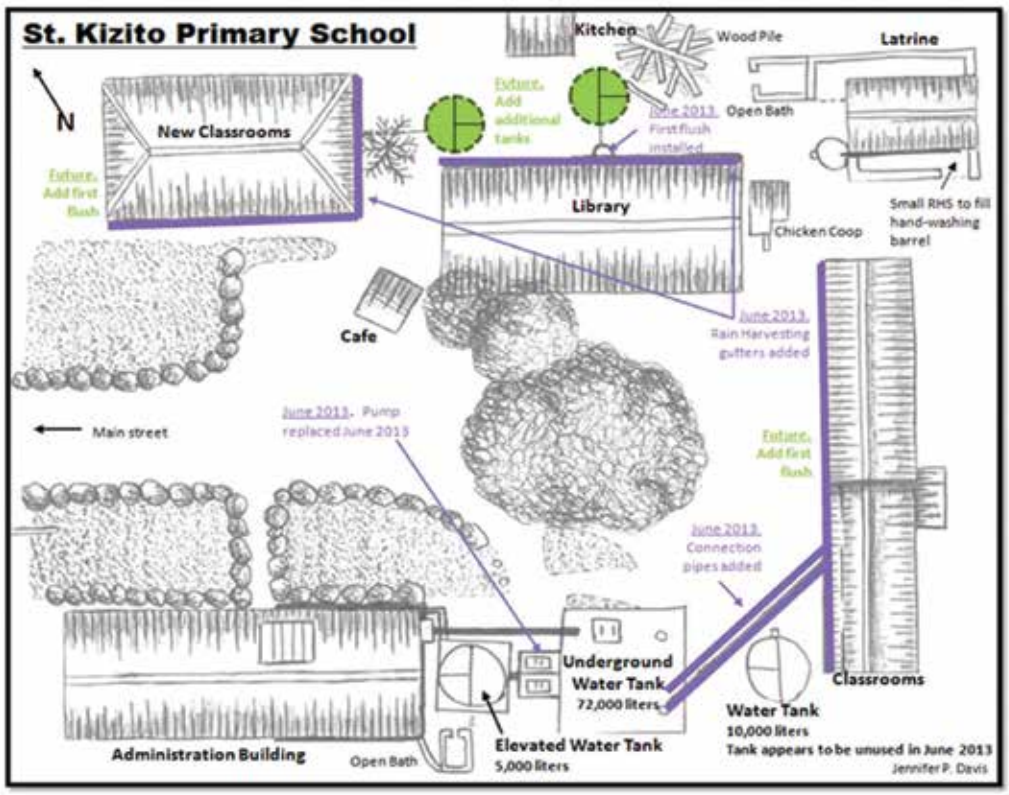
The rain harvesting system at the St. John's Clinic in Gayaza was installed by an EWB-NE team three years ago. Part this team's implementation trip was to repair and improve the vertical pipe of the first flush system for the rain harvesting system to prevent it from pulling loose from the gutter.

Two of four first-flush pipes had become disconnected from the gutters because they continuously held water. "We increased the length of the vertical pipe so it could be supported by a bench surrounding the clinic instead of hanging loosely from the wall," said Davis.

Engineers without Borders emphasizes sustainable projects so efforts to monitor system problems are an

Top: Jim Goedert, EWB-NE Professional; Dwight Hanson EWB-NE-P President; and Ben Pavlik EWB-NE Student install the modified first flush piping on St. John's Clinic. The first flush system is a vertical pipe into which the first rainfall from the roof washes at the beginning of a rainfall event. The water from the first flush contains dirt and debris that accumulates on the roof during the dry period. Once the vertical pipe of the first flush system fills; cleaner water flows over it and into the water tanks. The first flush system helps prevent the tanks from filling with dirt and keeps the water in the tank cleaner. (Photo by Jennifer Davis)

Bottom: Father Francis, the team's contact in Uganda, found a small truck to retrieve the supplies. With three people in the truck's cab and the bed filled with PVC pipe and gutters for the clinic and school, the team was stopped by traffic police three times while traveling to Gayaza and twice between Gayaza and Makinkee. (Photo by Jennifer Davis)



important part of all projects. "The clinic staff told us two of the three 10,000-liter tanks overflow during the wet season, and the 40,000 liter system runs out of water after 8 weeks during the dry season," said Davis. "They also told us that water pressure against the cap of the first flush system made it difficult to empty after rainfall and that cows would rub up against the horizontal tubes stressing the system." The team also discovered that the brick and concrete pads for a few of the tanks had cracked because the contractor had not added rebar to counter the tensile forces.

To address these problems, small holes were drilled in the horizontal first-flush tubes to drain water after rains and relieve some of the pressure against the clean-out caps. The new first-flush tubes were modified to no longer overhang the concrete bench and discourage cattle from rubbing against them. Additional braces were added to the vertical and horizontal pipes adding stability. A local contractor replaced the cracked water-tank pads with steel webs to increase their structural integrity.

St. Kizito Primary School, Makinkee

The EWB-NE team spent most of their trip installing a new rain harvesting system at St. Kizito Primary School in Makinkee, north of Kampala and west of Gayaza. The school has about 350 students, but requires 500 students to be self-sustaining. Dry season water shortages limit the school's growth potential.

The team only installed gutters on the front of three of the school's four primary buildings to discourage thieves. They also developed conceptual drawings for future improvement projects.

"While one of the classrooms was receiving gutters, we overheard a teacher giving English lessons ask the class, 'How are our American friends working: quickly or slowly?' The children answered in unison, 'Slowly!' But, the children seemed very impressed with how both the woman and men of our EWB-NE team went up and down ladders and used tools," said Davis.

Improvements to the St. Kizito rain harvesting system will provide an additional 2.9 million liters annually to the school. When the overall cost of the system is calculated, assuming a 10-year life and a 5 percent annual maintenance cost along with the $27,000 capital cost, the school saves 35 to 235 Uganda Shillings per Jerry Can (20 liters) of water compared to purchasing water at a hand pump during the dry season.

Above: Pedestrians, bicycles, motorcycles, cars and vans all jockey for position on crowded paved streets with no lanes. "Traffic was chaos; motorcycle taxis carried men talking on cell phones and women wearing skirts riding sideways with babies balanced on their hips," said Davis. (Photo by Jennifer Davis)

Opposite: Conceptual view of St. Kizito and rain harvesting system improvements. The conceptual drawing shows improvements completed during the June 2013 trip and future plans to increase the storage capacity at the school. (Photo by Jennifer Davis)

Future Projects

General meetings for the Nebraska Chapter of Engineers without Borders are held the third Monday of each month at different engineering firms in Omaha.

Engineers without Borders works closely with representatives in the communities they serve to determine needed improvements. Projects must be locally sustainable in terms of technology and funding. The EWB-NE Professional Chapter has finished four of its five-year commitment in Uganda. "We hope to have funding and enough participants willing to make a return trip this fall," said Davis. "We're planning a final monitoring trip to complete the rain harvesting system at the St. Kizito Primary School, collect feedback on the installed systems, and assess the rain gage system monitoring effort." The team also hopes to implement a pilot project for composting toilets for the staff at the clinic.

The Chapter may choose another location after this year or remain in Uganda.

To become involved in the Nebraska Professional Chapter of Engineers without Borders, please contact Jennifer Davis at *Jennifer.P.Davis@usace.army.mil*

The EWB-NE implementation team took a few days off from their work to visit Queen Elizabeth's Wildlife Preserve, the Equator, and the headwaters of the Nile River. Queen Elizabeth's Wildlife Preserve is located in southwestern Uganda. The team took a boat along the Kazinga Channel and a Safari. Animals seen within the Preserve include elephants, Uganda Kobs (antelope), hippos, crocodiles, water buck, hyenas, pumba (wild pigs), storks, egrets, Kingfishers, and many types of other birds.

Another trip included a trip to Lake Victoria south of Uganda. Lake Victoria is said to be the headwaters of 30 percent of the Nile River. The team took a boat from the city of Jinja to observe the wildlife and lifestyle of people around the lake. Additional side trips included a stop at Mubende, a whole town made economically viable by feeding travelers on the highway between Kampala and Queen Elizabeth's Preserve, eating lunch at several crater lakes historically infamous for releasing suffocating/lethal quantities of carbon-dioxide and a Uganda Martyr's Shrine in Namugongo dedicated to twenty-two martyrs including the child saint, St. Kizito.

Map of Uganda and the areas where the EWB-NE team constructed rainwater harvesting systems. Uganda's population is 34.8 million people and it is located in east Africa north of Lake Victoria, one of the sources of the headwaters of the Nile River and the second-largest freshwater lake in the world. Kampala is Uganda's capitol city and has a population of 1.5 million people. (Photo by Jennifer Davis)

By STAFF REPORT

Dye and Frana recognized for rescuing efforts

In April Steven Dye and Raymond Frana were recognized at a Quarterly Awards Ceremony and presented a Commander's Coin for their outstanding response actions that saved the life of a fellow human being.

On March 5, Dye and Frana were performing a routine inspection at Holmes Lake Dam in Lincoln, Neb. The men noticed that a woman had fallen through the ice on the lake and they took action to rescue her from the icy water.

According to reports, the woman was walking her dog when it ran onto the ice and fell into the lake's cold water.

As she went to rescue her dog, the ice cracked and she fell in.

Frana and Dye saw the woman and her dog as they drove along the crest of the dam. By the time they reached her, she had started to become weak.

The rope in the back of their truck was too short to throw out to reach the woman. To prevent falling through the ice themselves and attempt a speedy rescue, they tucked the rope under her dog's collar and had her call him over.

Once she grabbed the rope, Frana lay on the ice on his stomach, which helped distribute his weight across the ice preventing the ice from cracking, and he pulled her to safety.

They stayed with the woman and her dog having her warm-up in their truck until emergency crews arrived. She was taken to the hospital as a precautionary measure.

A week later, the woman expressed her gratitude to Frana and Dye on a local television channel. She told reporters they were calm and compassionate and she couldn't thank them enough.

On presenting the award, District Commander Col. Joel Cross said, "Your expedient and selfless actions undoubtedly saved her life. This selfless and heroic act exemplifies your integrity and personal courage and reflects great credit upon you, the Missouri River Project Office and the United States Army Corps of Engineers."

Top left: Steve Dye shows the short length of rope he, Ray Frana and "Sparky" used to help rescue Sparky's owner from Holmes Lake in Lincoln, Neb., after she fell through the ice on March 5 (Photo Courtesy KETV Channel 7, Omaha, Neb.)

Bottom left: "Sparky" helped Ray Frana and Steven Dye rescue a woman who fell through the ice at Holmes Lake in Lincoln, Neb. The dog ran out onto the ice and fell in. His owner fell through while attempting to rescue her dog (Photo Courtesy KETV Channel 7, Omaha, Neb.)

Opposite page: Ice chunks and open water on Holmes Lake in Lincoln, Neb., March 5, 2014 (Photo Courtesy KLKN Channel 8, Lincoln, Neb.)

Top right: Ray Frana helped rescue a woman who fell through the ice on Holmes Lake in Lincoln, Neb., with the assistance of her dog. After the dog brought her the rope, Frana lay on the ice on his stomach and he pulled her to safety (Photo Courtesy KETV Channel 7, Omaha, Neb.)

Bottom right: Thin ice and open water on Holmes Lake in Lincoln, Neb. (Photo Courtesy KLKN Channel 8, Lincoln, Neb.)

Former deputy advises stakeholders, clients how to deal with the Corps

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Lt. Gen. Bob Flowers, who commanded the U.S. Army Corps of Engineers from 2000 to 2004 and is now retired, tells a humorous anecdote about a Mississippi landowner in the mid-1990s who was especially impatient about a future flood-protection project. Flowers was commander of the Mississippi Valley Division and agreed to meet with him.

"We had just received authorization for the project, and I told him I would request an appropriation of $28 million, which would allow the Corps to proceed," he said. "The gentleman then reached in his pocket, pulled out his checkbook and wrote me a check for $28 million." Not wanting to become tomorrow's front-page news, Flowers wisely returned the check and explained the Corps' process for funding civil-works projects.

That anecdote is a reminder that the Corps of Engineers has clear rules to follow, and, as with all federal agencies, it is constrained by law, policy and regulation. Outside parties who work with the Corps but do not understand the Corps' operating limits can make common mistakes that lead to significant problems, including delays in decisions and failure to attain otherwise reachable goals. Project sponsors and permit applicants can be frustrated for years because of their lack of understanding of federal responsibilities and limitations.

Federal regulatory policy and processes can be complex. In many ways, they are seen as "bureaucratic," but that is usually a result of procedures to ensure the Corps prevails in potential litigation.

During nearly 20 years of working with the Corps on active duty and in the private sector, I have seen frustrated permit applicants, project sponsors and stakeholders respond in ways that hurt their cause.

Common Errors

One of the most common errors involves misunderstanding the constraints of established rules and procedures the Corps must observe. Failing to appreciate laws, regulations and decision

authority can waste huge amounts of time and money as you deal with the Corps. Never try to push the leaders into areas outside their purview.

Another crucial mistake is to fight rather than listen. I've seen many people approach the Corps with a mix of hubris, naïveté and combativeness. Yes, the Corps can sometimes be wrong, but threatening correspondence and general disrespect rarely succeed and usually halt meaningful progress. It is far better to use a compelling rationale and transparency, sequentially raising your issue to higher-level leaders as necessary. Then, Corps leaders can develop a mutually beneficial solution.

Still another misstep is to ignore the action officer and field personnel. As in any organization, many Corps staff are experienced, some are new, and some are set in their ways, but most are overworked. To succeed, you must work with them and treat them as partners. If you have a disagreement, inform them that you would like to present your case to their supervisor and invite the Corps field agent to participate.

Think twice about approaching senior decision-makers before exhausting options at the field and district offices. Before approaching the Corps, some people try to kick-start an issue with Congress in the hope of bringing pressure on the Corps. That tactic often backfires. Congress usually chooses not to intervene, and you are left with ill will from the beginning.

When you ask for help from any senior federal official, especially in Congress, he or she will seek an answer from the Corps. Going around the Corps usually increases the chances for an undesired answer. At that point, in order to succeed, you will need to turn that answer around, which is tough.

Finally, don't forget to elicit support from other stakeholders before approaching the Corps. The more public support you can generate early in the process, the more you help your project. Relying on the Corps to be an advocate for your side is a mistake. You must shoulder this burden, and more work early on will save time later.

There is no way to guarantee success. But with knowledge, patience and especially respect for the Corps' processes, viable solutions are almost always possible.

By DON RILEY, *Formerly the deputy commanding general of the U.S. Army Corps of Engineers, Don Riley is now senior vice president at Dawson & Associates, Washington, D.C., which advises clients dealing with federal agencies, including the U.S. Army Corps of Engineers. He can be reached at 202-289-2060.*

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BUILDING STRONG®

Monika Seeba of Real Estate headed up the Corps Day team; it brought us sunshine, a splash pool, pizza, great tunes, talk of personal and professional resilience and district relevance. In addition, two superb award winners from projects in the field were on hand, and the late Shirley J. Smith was inducted to the Gallery of Distinguished Civilian Employees—and they're still clapping for her. In all, a super day. (Photos by Harry E. Weddington)