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Omaha Outlook

Growth and development at Oahe Dam and reservoir seeded by partnerships

U.S. Army Corps of Engineers, Omaha District

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On the cover: Boater on Lake Oahe.
Photo by Eileen Williamson

OMAHA OUTLOOK

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Embracing integrity — a way of life

Joel R. Cross
Colonel
Omaha District Commander

This month we celebrated Corps Day 2013, Flag Day and the Army's 238th Birthday. In the midst of our celebration we need to acknowledge that we are coming off the five biggest production years ever for this district and we are still steaming full-bore ahead towards another blockbuster year.

To think of the significance of the historic workloads executed by fewer people carrying heavier burdens makes me proud to be part of such a great district.

We are relevant, ready, responsive and reliable. We do our job in peacetime and war and we do it in more than 100 countries. Your resiliency and diligence reflect a commitment that makes me extremely proud to be serving beside you.

Our Corps Day theme this year was "Keep Calm—Essayons." Many of you wore the shirt with that motto, submitted by Caleb White, a student trainee in Engineering Division. Candace Akins of Real Estate coordinated the contest, and I want to thank all who took part. That theme speaks to the patience and professionalism you have shown amidst the swirling budgetary issues that have impacted us this year. You have collectively kept your noses to the grindstone, your shoulder to the wheel and your focus on what is important. Thank you for coming into work each day saying "Let us try."

In this special month of focusing on who we are and where we come from, we should take a minute to take stock in and be proud of what we have accomplished for the Corps and our nation. It's easy to get buried in the details of our day-to-day work and a political scene which in recent months has been more of a hindrance than a help. Still, the results of your hard work shines like diamonds in the sun, and the grace and poise with which you deal with the uncertainty is inspiring. It says all that could ever be said about the Omaha District workforce.

We strive to recognize excellence by singling out special performers whose tenacity and drive highlight all that is epitomized in a dedicated public servant. I salute all those who received awards on Corps Day, and call attention to their many achievements.

I want to also salute those of you who deployed to other locations to work overseas or in stateside projects far from home; and those who stood in for you while you were gone deserve an extra pat on the back today.

Take a look at your co-workers who surround you—you have much for which to be proud and thankful. The Omaha District team is a world-class organization, filled with GREAT people; and we are building strong.

Let's not forget to celebrate our achievements, our relationships and our successes as we continue to uphold our commitment to our fellow man and continue to make the world a better place.

Your greatness isn't just because of ***what*** we do, but also because of ***how*** we do it. We do it with strong focus on quality, communication, public involvement, and teamwork among co-workers, state, local and federal agencies. We keep a keen eye toward safety and a final result which embraces integrity.

Thank you for all you do.

Essayons,

Joel R. Cross

By EILEEN WILLIAMSON, *Public Affairs Specialist*

Fighting drownings

It is a common misperception that firefighters merely fight fires. Actual firefighting takes up only a small percentage of the time firefighters spend on duty. Another important part of their time is spent educating others about fire prevention and fire safety.

This concept rings true for the park rangers and natural resource specialists at lakes areas across the Omaha District who include outreach and water safety education among their regular responsibilities.

"It's a lot of work, but we believe it is an important part of our job," said James Lindley, a park ranger at Fort Randall Dam near Pickstown, S.D. "The worst part of the job is when we do recovery missions. With teaching water safety, you hope you are preventing accidents. We educate to prevent drowning but the story about how water safety training or how a life jacket prevented a drowning doesn't always get told."

"Education is important," said Karla Zeutenhorst, a park ranger at Gavins Point Dam near Yankton, S.D. "Life jackets reduce the risk of drowning. When potentially half of all boating deaths might be prevented with the use of life jackets, we know each opportunity to share that message is possibly a life saved and education is how we share that message."

Education and Outreach

The Omaha District Water Safety program works with more than 30 Federal, state and local agencies as well as non-profit organizations and schools to promote water safety in six states. Each year, park rangers and natural resource specialists participate in more than 40 events to promote water safety for children and adults. Children are reached by incorporating the Corps mascots, Bobber the Water Safety Dog and Seamoor the Sea Serpent, in events such as field trips to recreation areas,

like a firefighter

visits to schools, preschools, youth organizations and attending multi-agency events such as family fishing nights. Omaha District Project Offices also sponsor "miniboats" where, after a lesson on sizing the correct lifejacket, hyperthermia and boating safety from the Corps and partner agencies, students get to take small electric boats through an obstacle course on the water. Students also learn "Reach, Throw, Don't go" hands-on rescue techniques using recycled milk jugs.

Water safety education for adults is just as important, nearly 80 percent of people who die from drowning are adult males ages 18-55. Outreach to this group takes place through public service announcements, boat and travel shows, billboards and social media such as Facebook and Twitter.

"We are currently focusing our message to this adult male population through our 'One drowning is too many' campaign," said Jolene Hulsing, a natural resource specialist for the Omaha District. "We have to get boaters past the stigma that life jackets are uncool, unnecessary and optional. One death, one accident, one unworn life jacket is too many, no matter the age."

Partnerships

As budgets tighten, Corps recreation areas remain focused on an accident-free environment. Partnerships have allowed the Corps to broaden its efforts to promote water safety.

Opposite: Many District recreation areas sponsor "miniboats" where, after related safety instruction from the Corps and partner agencies, students get to take small electric boats through an obstacle course on the water. U.S. Army Corp of Engineers photo.

Above: Families visited Westroads Mall in Omaha, Neb., in late April, 2013. The event offered families a chance to get reacquainted with practicing safety around water before returning to water recreation activities. U.S. Army Corp of Engineers photo.


TOMASITA'S
SANTA FE

One such partnership is with the Joshua Collingsworth Memorial Foundation to promote water safety within the Omaha District including Montana, North Dakota, Wyoming, South Dakota, Colorado and Nebraska. The Collingsworth Foundation, was formed to promote water safety and drowning prevention through for children and adults. The foundation's widely recognized mascot, Josh the Otter, has made appearances alongside Corps' mascot Bobber the Water Safety Dog.

Another regional partnership is with Bass Pro Shops. As part of the Water Safety partnership, Omaha District Park Rangers from Tri-Lakes Project near Denver, Colo., and the Missouri River Project near Council Bluffs, Iowa, hosted "Wear it Right" and "Safe Passage" seminars during Bass Pro Shops' Annual Go Outdoors event during National Safe Boating Week from May 18 to 24.

According to the U.S. Coast Guard, boating related accidents resulted in 651 deaths and 3000 injuries in 2012. More than 80% of the deaths occurred on boats where the operator had received no boating safety instruction and more than 1/2 of the deaths were drowning victims who were not wearing a life jacket.

The "Wear it Right" seminar taught participants the five important steps for choosing and fitting a life jacket. Children and families learned, during the "Safe Passage" seminar, to play it safe and to never go in or around water without an adult.

Taking the Message Home

Like firefighters, the Corps focuses efforts on prevention - teaching kids about water safety and hoping they take it home.

The biggest challenge is getting the message to the parents.

"One of the things that is toughest to see as a park ranger is the family that is out on a boat and has taken the time to put the kids in life vests but none of the adults is wearing one," said Bob Martin, a park ranger at Pipestem Dam in North Dakota. "Just like when you get in the car, you put your child in the safety seat, are you putting on your seatbelt? We want these safety measures to become second nature."

All these activities are fun, have the goal of promoting water safety but they are also aimed at avoiding the worst part of the job.

The opportunity to provide water safety education isn't limited to park rangers or recreation area personnel. The District water safety team has created teaching kits that will allow district employees to volunteer their time to speak to organizations and their children's classrooms and local organizations about water safety.

Opposite top: Omaha District park rangers and natural resource specialists regularly host local youth groups and students to teach water safety. U.S. Army Corp of Engineers photo.

Opposite bottom: Missouri River Project attended the Bass Pro Shops Go Outdoors Event and provded National Water Safety Seminars including Wear It Right and Safe Passage water safety seminars. U.S. Army Corp of Engineers photo.

By KEVIN QUINN, *Public Affairs Specialist*

Cleaning up old mines is ugly work, but "we like challenges"

"We must strive to remain the federal engineering service provider of choice."
—Col. Joel R. Cross, Omaha District Commander

With that oft-repeated charge engraved in the minds of the Omaha District workforce, glad tidings of excellence waft above a nasty old "cyanide heat-leach gold mine" in the Black Hills of South Dakota.

A new and challenging Omaha District project focuses on cleaning up the 360-acre site surrounding the Gilt Edge Mine. The District has cleaned up foul mining sites before -- it worked intensely on some dangerous mines such as the Eureka Mine in Utah and the Libby Mine in Montana.

And it is precisely that expertise and experience that made the district the service provider of choice this time, says Teresa Reinig. Ten years ago the company operating the mine became insolvent. The company left 150 million gallons of acidic heavy-metal-laden water in three open pits, as well as millions of cubic yards of acid-generating waste rock that requires clean up and long-term treatment.

Mining operations for gold, copper and tungsten were conducted in this small mining district starting in 1876. About a century ago, a series of small mines began dumping metals-laden mill tailing into Strawberry Creek and Bear Butte Creeks. By 1986, when the operating company began conducting larger-scale open-pit mining, off-site waters were already contaminated.

National Priorities List

When the company went bankrupt, the governor of South Dakota requested that EPA Region 8 propose the site for the Superfund National Priorities List. EPA proposed the site on May 11, 2000 and announced the site's final NPL designation in the Federal Register on December 1, 2000. The NPL is a list of sites with environmental contamination, commonly referred to as Superfund sites.

And now it is in Omaha's hands.

"We like challenges and we solve problems," says Reinig, the project manager from Special Projects Branch. "We will provide for the placement of a contract and we'll manage construction. Our expertise in acid rock drainage and experience in remediating complex mining sites are the reasons we are here."

The Omaha District will provide life cycle project management and support the project from initial project set up through closeout of contracts and the site interagency agreement. Support includes: planning and programming, including leading the project delivery team; overseeing development of designs, specifications, cost estimates; coordinating contracting strategy, acquiring contracts as needed and working with contracting on review of contractor proposals. Upon construction contract placement, the district will provide construction management and oversight.

"We can contract for construction, remediation, architect-engineering services and supplies. Most importantly, we are staffed with highly qualified professionals who are motivated and innovative," says Reinig.

"We have extensive construction management experience, robust training programs, and comprehensive understanding of the contractual requirements for enforcement of contract documents, all of which will contribute toward accomplishing Agency objectives," says Reinig. "We will incorporate a multi-phase approach to mitigate issues during construction. For example, we support partnering conferences, clearly defined lines of communication and established roles and responsibilities, ensuring the appropriate levels of authority are staffed in the field.

"To minimize the impact of problems during construction we use pre-project planning to identify potential issues early on, and we clearly delineate lines of communication so problems are not lost to miscommunications. Our staff in the field possess a clear understanding of the construction/remediation goals and objectives," she adds.

The district's Black Hills Area construction office in Rapid City, will provide personnel for construction oversight for the Gilt Edge Mine project. The Black Hills office has provided contract management and construction oversight on both mining and non-mining related projects. Specifically, three Bureau of Land Management stream remediation/mine tailings projects in Montana highlight their efforts.

They are: Lower Indian Creek Mine Reclamation, near Townsend, High Ore Creek Reclamation in Jefferson County and Linton Mine and Mill Site Reclamation, near Missoula.

The site

The Gilt Edge Mine Site is located in Lawrence County, South Dakota. The topography is rugged and mountainous, ideal for mining operations. The site straddles the headwaters of Strawberry Creek and Ruby Gulch, which are tributaries to Bear Butte Creek. Strawberry Creek and Bear Butte Creek are perennial streams classified respectively by South Dakota surface water quality standards as coldwater marginal fish life propagation waters and coldwater permanent fish life propagation waters. Ruby Gulch ranges from an ephemeral to intermittent stream where surface water is present during the spring and after large precipitation events. South Dakota surface water quality standards classify all streams including Ruby Gulch, Strawberry Creek, and Bear Butte Creek as irrigation, fish and wildlife propagation, recreation and stock watering waters.

Major features of the site include the 31-acre Sunday pit and the 14-acre Dakota Maid pit, both of which are underlain by extensive underground workings and a relic tailings repository, and the 28-acre Anchor Hill pit. There are also two smaller Langley pits that have been partially backfilled and a heap leach pad covering 37 acres and approximately 150 feet high. The Ruby Repository covers the Ruby Gulch Waste Rock Dump, is approximately 75 acres in size, and contains approximately 20 million tons of waste rock and spent ore. The site is also contaminated with tailings from historic operations in repositories near the Dakota Maid pit and the Sunday pit and on the banks of Lower Strawberry Creek.

The EPA has designated three operable units for the Gilt Edge Mine Site. OU1 is the Primary Mine Disturbance Area; OU2 involves Water Treatment, Groundwater, and Lower Strawberry Creek; and OU3 is Ruby Gulch Waste Rock Dump. The Omaha District's current work effort will focus on implementing the Selected Remedy for OU1, Primary Mine Disturbance Area identified in the September 2008 Record of Decision.

The selected remedy will address source materials including contaminated waste rock fill materials,

Looking downhill into the Dakota Maid Pit (Operable Unit 1). U.S. Army Corp of Engineers photo.

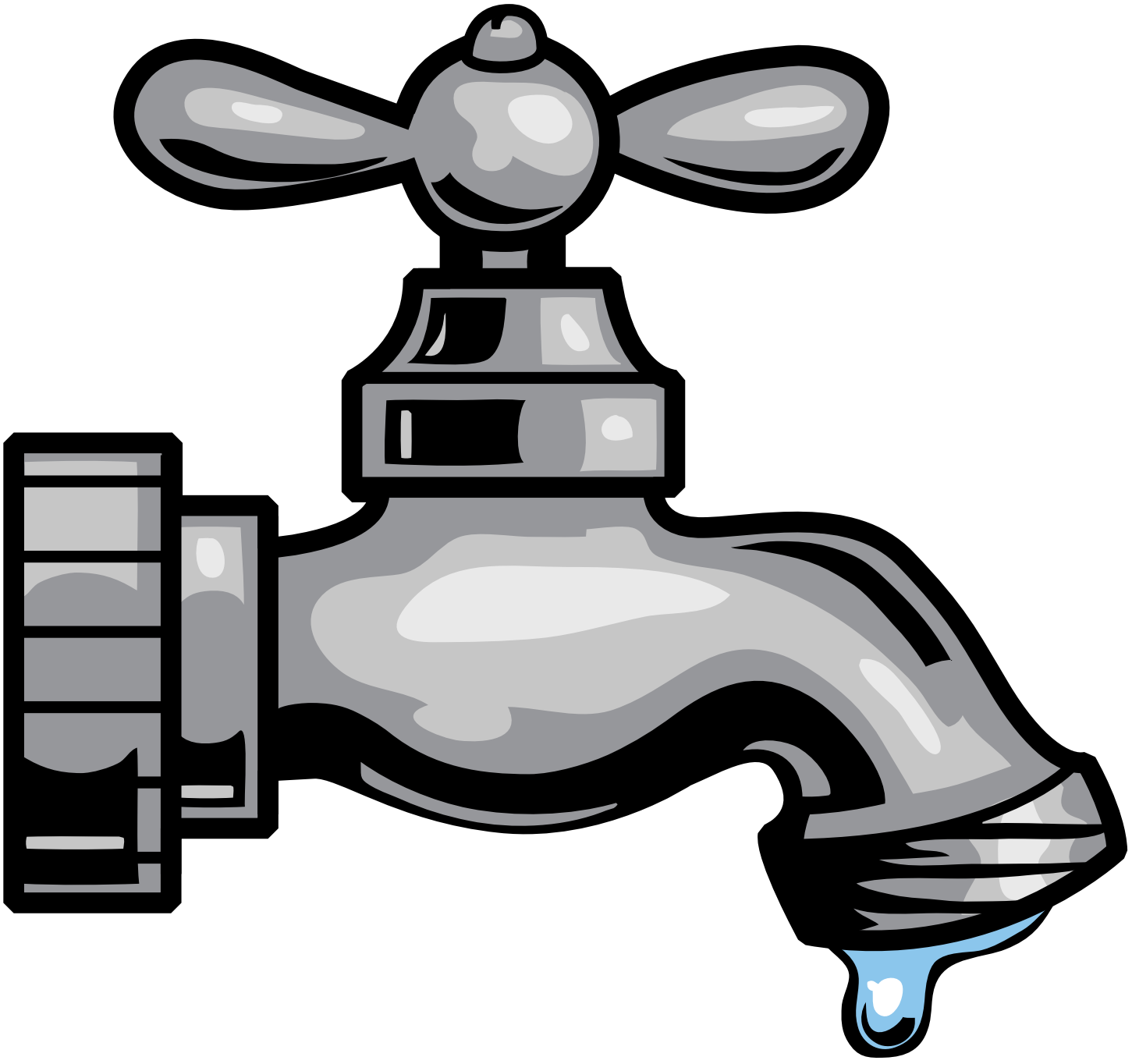
spent ore from the heap leach pad, exposed rock, tailings sludge, and underground mine workings to reduce the generation of acid rock drainage and to prevent potentially catastrophic releases of acid rock drainage from the Site. The primary objective of this remedy is to reduce the amount of acid rock drainage generated on the Site by preventing run on water from interacting with contaminated materials; draining, backfilling, and covering existing pit lakes; and creating clean water corridors within the Upper Strawberry and Hoodoo Gulch drainages. Acid-generating waste rock will be consolidated and placed into the Dakota Maid and Sunday pits along with the spent ore from the heap leach pad and covered. Waste rock will also be consolidated and covered at the Langley pits. Cover systems will be used at contaminant source consolidation locations to limit infiltration of precipitation and subsequent generation of acid rock drainage.

PDT design review

The project delivery team is composed of personnel with expertise in construction services, contract administration, field oversight, cost and general engineering specifications, environmental engineering, geotechnical, geology and sediment and channel stabilization. The team is providing an independent technical review of the Pre-Final Basis of Design Report for Earthwork, OU1 Gilt Edge Superfund Site, dated December 2012. The team has participated in both onsite design review meetings and web-based design review meetings with Environmental Protection Agency, South Dakota Department of Environment and Natural Resources and the Remedial Designer, CDM Smith. The team is on schedule for completion of the independent technical review by the end of the summer.

By MONIQUE FARMER, *Public Affairs Specialist*

"Wait a minute – Isn't the basin in a drought?"



Corps explains processing of water supply agreement requests during drought period

The question has come up on more than one occasion, "How can the Corps of Engineers manage the Missouri River reservoir system in a drought conservation mode while simultaneously entering into agreements for the temporary withdrawal of water from upstream reservoirs?"

It's a fair question, especially considering the complexity of the reservoir system as well as the eight competing congressionally authorized purposes for which the system is operated under the Flood Control Act of 1944. Those purposes are: flood control, water supply, irrigation, navigation, hydropower, recreation, fish and wildlife and water quality control.

The answer to the question? Water supply.

Under the Flood Control Act of 1944, the Corps must operate the Missouri River mainstem reservoir system for all eight of the congressionally authorized purposes. Water supply being one of those eight, it is equally weighed alongside the other seven purposes whenever operational decisions are made and implemented.

"When we receive applications from entities who desire to enter into agreements for the temporary withdrawal of water, we process those applications in alignment with our obligations under the 1944 Flood Control Act," said Project Manager Chris Wiehl.

But, doesn't the Corps decrease support to some authorized purposes for the sake of others, especially during periods of flood and drought?

"Yes, but that process considers many factors," said Wiehl. "The Missouri River Master Manual provides guidelines for operations during situations like flood and drought. These conditions were considered in the Final Garrison Surplus Water Report, which determined that the authorized purposes would not be significantly affected by the water withdrawal amount proposed."

The report anticipates that the maximum anticipated 10-year demand for municipal and industrial water out of Lake Sakakawea is 100,000 acre-feet per year (combination of existing water users plus new water users). Many of the new water requests have come from the oil and gas industry.

To put the amount of water into perspective, approximately 875,000 acre-feet of water evaporates from Lake Sakakawea alone every year, more than eight times the maximum anticipated demand for municipal and industrial water supply under the agreements for temporary withdrawal of water. To date, the Corps has only approved one temporary water withdrawal agreement in the amount of 4,950 acre-feet. Ten other withdrawal applications are currently being processed.

The Garrison Report used an 80-year period of record, which included the dustbowl period of the 1930s and 1940s to determine the amount of water that could be made available on a temporary basis (a period of up to five years) for withdrawal of water out of Lake Sakakawea. A five-year extension could be granted if needed.

Annual reporting of usage by each applicant that withdraws water from Lake Sakakawea is currently required to help ensure that water users do not exceed their water agreement or water right. The Corps also is monitoring average annual system runoff inflows into the Missouri River system to ensure that inflows do not fall below the drought period experienced during the dust bowl.

"Monitoring users' usage as well as average inflows puts us on alert to identify a trigger to determine whether we need to review agreements or cease processing applications to prevent adverse impacts to the congressionally authorized purposes," said Wiehl.

System storage in the Missouri River mainstem reservoir system remained below normal at the start of June despite above normal precipitation in the upper basin. Drought conditions vary across the basin, but in general have made some improvements.

"75,000 acre-feet of water evaporates from Lake Sakakawea alone every year, more than eight times the maximum anticipated demand..."

"The Missouri River has experienced these types of ebbs and flows for decades and analyses of drought periods were conducted and considered before the release and approval of the Final Garrison Report by the Assistant Secretary of the Army," said Wiehl. "Municipal and industrial water supply users have been withdrawing water from these reservoirs since the system was put into place. The primary difference between now and then is the need to enter into water withdrawal agreement."

By CHERYL MOORE, *Public Affairs Specialist*

Partnerships, teamwork plant seeds of growth and development

Growing more with less

Far from the flagpole, the pomp and circumstance and the attire of the District headquarters in Omaha, is an awe-inspiring place where the focus on relationships, commitment to stewardship and operations and maintenance is beyond belief.

First-time visitors to the Oahe Project office see the breadth and depth of the workload, from food plots to outdoor recreational upgrades, which is enlightening and encouraging.

Of plots and partnerships

There's a plot to every story. In this case at Lake Oahe, it involves the food plot, which was inundated with flood waters in 2011 and prevented producing a crop that year. Food plots are designed to provide forage for wintering wild turkeys to increase sportsmen opportunity.

Fast forward to 2012 when Michael Stanley, Natural Resource Specialist at Oahe, wrote a grant to assist with the plantings of the inundated fields.

The National Wild Turkey Federation granted the Army Corps of Engineers $1,000 to help with the rehabilitation of the fields. Another partner, Hughes County Conservation Service planted the fields for 2012. Those fields flourished, providing a good stand of food and cover coming into the spring season.

"Our partnerships will continue to grow," Stanley says. "We are looking to introduce several tree species and other foods into and around our food plots." He elaborated they are setting their goals for making the area more sustainable to turkeys and other wildlife that call the area home.

"By providing several tree species, we will get the hard mast that their diets need," Stanley said. "And hopefully those trees will provide more so the cycle continues." The Natural Resources team will continue to do its part and add other food sources until those trees are self-sustaining. "Even then, we will continue to plant the food plots so that other species will continue to have the food and cover needed to thrive," Stanley added.

The partnership with HCCS and NWTF should grow in the years to come as the team continues to provide quality habitat and places to enjoy viewing wildlife along Lake Oahe.

The Great Lakes of South Dakota Tourism Association and the U. S. Army Corps of Engineers teamed up to support viewing wildlife and other points of interest along the beautiful corridor.

The connection began in 2011, when Greg Carpenter, a former Oahe ranger, was in Pierre, S.D., on official business. As he was leaving his business meeting, he noticed the neighboring office was occupied by Great Lakes. Having just returned from partnership and interpretive training, he stopped in to introduce himself.

During the short conversation he learned the association was looking for alternative office space and their lease was due to expire in a few months. Carpenter saw an immediate opportunity and mentioned the possibility that they could occupy a portion of the Oahe Visitor Center.

According to Jonas Grundman, biologist for the Natural Resources Office at Omaha District, Great Lakes was "skeptical, at first, but Carpenter was able

Opposite: Fields planted in 2012 by Corps partner, the Hughes County Conservation Service, flourish. Photo by Michael Stanley

Above: The food plot inundated with 2011 flood waters, did not produce a crop. Photo by Michael Stanley

to get the approval from Natural Resources Section Chief Phil Sheffield and Oahe Operations Project Manager Eric Stasch. The discussions then continued with Great Lakes on how it would work."

It wasn't long before Great Lakes agreed to use the space and the project office carved out the office space. The tourism association opened doors at the Oahe Visitor Center in March 2012 and hosted a Grand Opening in May.

The partnership has blossomed. The Great Lakes Association enables the Visitor Center to be open year-round, and it's maintained by seasonal Corps staff and volunteers to include volunteers from Central South Dakota Retired and Senior Volunteer Program, providing interpretive programs and information to the many visitors to the Corps recreational area.

When Corps personnel and volunteers have other duties or are assisting visitors, the folks from Great Lakes, led by Karen Kern, Executive Director and Jenn Hanna, Administrative Assistant are able to step out from their office and provide visitor assistance.

During non-recreational season periods, Great Lakes staff have the Visitor Center open during normal business hours and are there to assist visitors. In a win-win situation, the Center has gone from a three to four month operation to a year-long operation, increasing the Corps' visitor contact significantly.

The Great Lakes staff volunteer for the Corps, so there are no additional costs, aside from additional utilities (nominal) associated with keeping it open year round.

Also, because Great Lakes of South Dakota operates to promote tourism in the region, they have fantastic community contacts. "By partnering with Great Lakes in this way, the project is able to further its own impact with the community", said Grundman.

The tourism association is no longer tucked away out of sight in a strip mall; rather, it enjoys high visibility along Oahe Dam, overlooking beautiful Lake Oahe.

A side note about the Corps employee who led the charge, Greg Carpenter. He is a Natural Resources Project Manager, ironically for the Great Lakes Division at the Louisville District.

Along the Corridor

Take a visit to 1804.

Not the year, but the scenic highway of the Lewis and Clark Trail. It begins a long and winding road to some of the best kept secrets existing between the capital of North Dakota—Bismarck—and the capital of South Dakota—Pierre.

As one of the largest federal providers of outdoor recreation, the Corps hosts some of the most spectacular recreation sites in the area.

Lake Oahe and Dam is one of those beautiful scenic areas boasting more than 230 lake miles, referred to as the "big water" by the South Dakota Tourism Association. Of the 52 recreation areas located along the Oahe reservoir, four are managed by the Corps of Engineers. They are Hazelton Recreation area, Badger Bay, Beaver Creek Recreation Area and Cattail Bay. All offer outdoor camping, picnicking, fishing, hunting, boating, water skiing, swimming, bird watching, hiking, biking and photo opportunities.

South Dakota's state slogan rings true—"Great Faces, Great Places." It defines the partnerships established, the volunteers donating time and resources, and the employees working at and around the Lake Oahe project.

***Voices* built the dock**

Continuing partnerships include the donation of a new dock, which has recently been installed at the lower water ramp, located on the north side of Beaver Bay, west of Linton, N.D. The 32-foot by 4-foot dock was built in February and donated by the *Voices for Lake Oahe*. *Voices* was established in 2003 to provide leadership in developing recreational, agricultural,

economic and environmental opportunities for Lake Oahe. The partnership with the Corps revolves around a mutual goal of improving the opportunities available to visitors along Lake Oahe.

Hazelton Recreation area, located on the east bank of the Missouri River on Lake Oahe, south of Bismarck, is home to a new fish cleaning station, thanks to sponsors such as Cenex of Hazelton, Lincoln Sportsmen's Club, VFLO and the Corps of Engineers working together. "*Voices* donated the table, while the Corps provided the concrete pad and supplied electricity," said Kris Cleveland, Chief of Technical Support.

Independence

But what are recreation sites along Lake Oahe without hunting? And what is hunting without those same partnerships in place? For more than 20 years, Lake Oahe has been the host of physically challenged deer hunts. Ten people per year are drawn thru the state's licensing program which includes 8 in-state tags and 2 out-of-state tags.

A few years ago the Corps was given $1,500 toward constructing new deer blinds—or structures used by hunters to conceal their presence in a deer's natural territory. At that time, six blinds were built —all donated. Four were donated by the Paralyzed Veterans' Association, one from Baumann Lumber of Fort Pierre and one from a hunter, James DeKay.

The partnerships grew and the following year four more deer blinds were donated. Two came from the Girl Scouts as part of their Gold project and two from volunteer families Hipple and Solberg.

Michael Stanley designed and enclosed the blinds so physically challenged hunters can get into the blinds and operate them independently. "The back door drops down and is a ramp for the hunters, all confined to wheelchairs, to get in and out", Stanley said. The side windows push out, and the front large window folds into the blind, creating a shooting bench for the hunters to steady their rifles and keep binoculars and other hunting apparel within reach.

Stanley said the physically challenged hunt takes place the opening weekend of the season. Hunters

Opposite page: Handicapped Hunter Dean Westfall, left is joined by his hunting buddy Jim Dekay with his whitetail doe. Behind from left Erik Richter, Henry (Tuck) Durham, Greg Stluka, Lowell Somsen, Molly Tschetter, Pat Buscher and Sydney McLaury. Photo by Michael Stanley

Clockwise from lower left: Mark Louder, Oahe Powerplant Electrician adjusts electrical wires in one of the powerhouse panels.; Dan Palecek, Electrical Engineer at Oahe Powerhouse, tests new relays for the Pierre Line; Jesse Roebuck, Civil Engineering Tech, reads an inclinometer. Photos by Cheryl Moore

show up on Friday night to have dinner, choose hunt locations and review rules and times to go to the blinds. Saturday morning the hunt begins. It could be just another cold day in Oahe or that day the hunter harvests a deer.

It's a community effort, everyone working together toward a common goal. It involves the people and businesses of Pierre to include Jerome Beverage Co., Pizza Ranch, The Donut Shop, Lynns Dakota Mart, Coke Co., PVA, the American Legion and Famous Daves.

"We hope to provide a physically challenged turkey hunt along with getting the younger kids out and enjoying hunting with the Jakes groups," Stanley added. Yet another partnership in the making...

Foundation

The story of Oahe, according to Great Lakes Tourism, focuses on people—from the early Native American tribes to the fur traders and pioneers, to those who manage, operate and use the facility today. All play an important role in shaping and developing this region.

Beneath the earthen Dam of Lake Oahe, encased in more than 1,045,000 cubic yards of concrete, lies the foundation where power house employees continue their daily tasks of operating the power plant by way of electricians, operators, engineers, and mechanics, all part of the operations and maintenance.

Maintaining the landscapes at Oahe are the men and women in the Technical Support section. Less than a dozen engineers and technicians, outside maintenance, equipment operators and maintenance personnel create the curb appeal.

And even smaller staffs oversee the Natural Resources. They are the lake managers, rangers, natural resource specialist and an archeologist.

Yet the smallest community—the Administrative staff, and the Operations Project Manager, oversees it all—the backbone of Lake Oahe.

By EILEEN WILLIAMSON, *Public Affairs Specialist*

Friendly competition
part of sturgeon broodstock collection

The boats don't sport names like the Northwestern or the Wizard, and the crews aren't as scruffy as found on the Discovery Channel, but the camaraderie and friendly competition of Pallid Sturgeon Broodstock efforts has a similar, yet much tamer feel.

Each year, personnel from the U.S. Army Corps of Engineers, Omaha District participate with the Nebraska Game and Parks Commission to assist with an effort to collect and ship reproductive-ready pallid sturgeon to the U.S. Fish and Wildlife Service hatchery near Gavins Point Dam or Missouri Department of Conservation's Blind Pony State Fish Hatchery.

This year, a few members of the District's 2013 Leadership Development Program class participated in the effort. LDP participant Josh Melliger, an engineer in the Hydrologic Engineering branch, participated in the effort in 2010. When the call for volunteers came in February, he led the charge to recruit members of the LDP class.

The LDP class is studying the Missouri River, its operations and its authorized purposes as a class project to develop a scope of work and storyboard for the development of a web-based simulator to help communicate the complexities of managing the river and balancing its authorized purposes.

Fish and wildlife is one of the eight congressionally authorized purposes for which the Corps operates the Missouri River reservoir system. When operational decisions are made, impacts to each of the purposes is considered and weighed before adjustments to operations are implemented.

"Our participation in the broodstock effort helped us gain a better understanding of the river, Corps projects along the river and the river's eight authorized purposes," said LDP participant and Realty Specialist Candace Akins.

Crews launch from Plattsmouth and Nebraska City, Neb. Each day begins with the distribution of life jackets and a briefing that ensures water safety is given top priority,

Once on the river, each crew checks the trotlines set by the previous day's crews. Each line is 210 feet long with hooks every 5 feet, totaling 40 hooks per line.

The boat led by Dane Pauley and Derek Tomes, from NGPC pulled in 10 lines with the potential of 40 fish per line. With each line, hooks are removed, cleaned and stored for re-use and the fish are placed

into a water tank until the line is in. Once the hooks are stored, the ropes rolled up and anchors and buoys put away, attention turns to the fish.

Volunteers learn how to differentiate between the shovelnose and pallid sturgeon, to look for tags and signs a sturgeon has come from a hatchery, how to measure and weigh the sturgeon and to measure the other fish that are pulled in. Unfortunately, it was a slow day with only 45 fish brought in.

Crews communicated throughout the day, jabbing each other on their counts. Still, Pauley and Tomes' boat brought in the most fish for the day including several shovelnose sturgeon - one that had been tagged, a few channel catfish, a smallmouth buffalo fish and one pallid sturgeon.

Each fish is measured, the sturgeon are weighed and the pallid sturgeon and tagged shovelnose sturgeon are scanned to read their tags so NGPC can log specific details related to the fish into a tracking database. Most pallid sturgeon in the river come from hatcheries so they are tagged at the hatchery and information is kept in a database tracking their growth progress along with water depths and flow rates where they are caught.

The pallid sturgeon measured 585 millimeters long and weighed 735 grams – not big enough to be reproduction-ready. It was returned to the river with the rest of the catch. A pallid should be at least 800 mm long before it is shipped to the hatchery. Three pallids were shipped to the hatchery this day, one of which weighed 13.9 pounds, the heaviest ever caught by NGPC.

This year, NGPC are also tracking four reproduction-ready female pallid sturgeon that have been tagged with sonic telemetry tags. As Pauley and Tomes' crew headed up the river to break for lunch, a couple more crews were headed down, following the signal of one of the female pallids.

Following lunch, the crew baited the 400 hooks and reset the 10 lines between the mouth of the Platte River and where U.S. Highway 34 crosses the Missouri River – using tips from the team tracking the female pallid. Pauley and Tomes' brought in 62 fish the next day, but no pallids.

The pallid sturgeon is often considered a fish from the time of dinosaurs - 70 million years ago – and is on the list of federally recognized endangered species. The pallid sturgeon is found along the Yellowstone, Missouri and the lower Mississippi rivers. They are white to silver in color, a little lighter than their shovelnose cousin, and can grow to measure up to 60 inches long and weigh up to 85 pounds. However, pallid sturgeons in the reach of the Missouri River south of Gavins Point rarely exceed 12 lbs.

The two-week effort began April 1 with 181 pallids caught as of April 11, and 31 shipped to the hatcheries.

Opposite: Omaha District Leadership Development Program participants, Candace Akins, Eileen Williamson and Josh Melliger display the pallid sturgeon they caught during broodstock collection efforts with the Nebraska Game and Parks Commission, April 8. Photo by U.S. Army Corps of Engineers, Omaha District

Above: Omaha District Leadership Development Program participant and Engineer in the Hydrologic Engineering branch, Josh Melliger helps bring in a channel catfish during Pallid Sturgeon broodstock collection efforts on the Missouri River, April 8. Photo by Eileen Williamson

Baited hooks are clipped to buckets before they are attached to trotlines and placed in the Missouri River during pallid sturgeon broodstock collection efforts with the Nebraska Game and Parks Commission, April 8. Photo by Eileen Williamson

By WILLIAM HARLON, *Environmental Specialist*

A Big Challenge

Oil and Gas Development at Lake Sakakawea, North Dakota

Lake Sakakawea, the reservoir behind the Garrison Dam in North Dakota is a valuable resource, to the people of North Dakota, the region and the Nation. It is the one that the staff at the Garrison project office has been tasked with preserving. Balancing the demands for recreation, wildlife, water supply, hydropower and flood risk reduction can be challenging at times and more recently these efforts have included balancing the demands of the oil and gas development taking place in western North Dakota and protecting the resources offered by Lake Sakakawea.

Acceleration of Oil and Gas Development

In North Dakota, the first barrel of crude oil from the Bakken oil reserve was produced in April 1951, the billionth barrel in October 1989 and the second billionth barrel in November 2011. In 1951 North Dakota had one producing well, in 1989 the number was 3,196 wells and as of May 2013 that number has increased to 8,492 producing wells. This acceleration in oil and gas development is changing the landscape of western North Dakota dramatically. The North Dakota Industrial Commission, the state agency responsible for regulating the drilling and production of oil and gas in North Dakota, estimates approximately 782,000 barrels of oil and 850 million cubic feet of natural gas are being produced daily. The oil industry is projecting it will take 200 drilling rigs 18 years to complete the full development of the Bakken. The state has already approved or is in the process of approving 6,000 future wells. Production numbers are expected to soar as 190, nearly 6 percent of all rotary drill rigs in the entire world, are currently working in North Dakota.

The Bakken oil reserve, commonly called the Bakken, is an oil-rich subsurface geologic formation located approximately 2 miles underground. The Bakken is essentially centered over Williston, N.D.,

Opposite: Fred Ryckman (ND Game & Fish), Steve Way (Region 8 EPA), Bob Rogers (EPA Contractor), Jeff Pritchard (EPA Contractor), Hattie Payne (Garrison Natural Resource Specialist), Jeff Keller (Williston Natural Resource Specialist), and Kris Roberts (ND Dept of Health). The group had pulled the boats onto shore to investigate whether it could be used as a future site to collect and/or capture material in the event a spill occurred on the River. This site is also one where oil/gas pipelines cross the Missouri River. Photo by William Harlon.

and covers approximately 200,000 square miles in western North Dakota, eastern Montana, and southern Saskatchewan. Recent advancements in horizontal drilling and hydraulic fracturing have made this one of the best producing and lucrative oil formations in the world. Each well installation can require up to 2 million gallons of water and up to 3 million pounds of sand per well. The acceleration in development has thrust North Dakota to the number two state for oil production in the United States.

Change is Happening

This modern day oil boom has brought an influx of people, along with commercial and industrial activities and subsequently led to a set of historically uncommon challenges to this part of America. Serving the Nation's energy needs, increased state and tribal revenues and increased visitation at recreation areas must be balanced against increased costs of living, crime rate and traffic. More people places more stress on infrastructure such as schools, hospitals, roads, sewer and water. Increased industrial activity, such as oil and gas development, also increases the potential risks to Lake Sakakawea.

It is a daily challenge for North Dakotan's to balance the pros and cons of the oil boom. Local, state and federal managers are taking this challenge head on. The Garrison project is setting its own all time records. One example is the number of secondary industrial permit requests. Although most oil pads are currently located off of Garrison property owned and managed by the Corps, the amount of secondary industrial permit requests on the project have increased exponentially. This year Garrison is receiving an all time record number of access requests and water withdrawal requests, increasing 300 percent more from 2010. To meet the growing demand, many counties and municipalities are expanding power lines, highways, sewer outfalls, etc., which are typically located on Corps owned lands and result in access requests to the Garrison project office. Responding to the increased requests has been difficult due to a shrinking workforce, which is the result of retirements, high employee turnover and difficulties in recruiting qualified people in a highly competitive market. In the past two years, the Garrison project alone has had the need to fill as many as 18 job vacancies.

A Big Challenge

With the acceleration of oil and gas development, infrastructure development near Lake Sakakawea is increasing. Beyond the wells and tanks associated with the drilling, infrastructure development includes miles of conveyance lines, collection lines, gathering points, truck washout locations, transfer stations and oil tank storage locations, all increasing the risk for a major uncontrolled release of oil. The Garrison Project is keenly aware of the risk and working to prevent and prepare for this challenge.

To prepare, the Garrison project recently partnered with the Environmental Protection Agency, Region 8, to host a multiagency Contingency Plan meeting at the project office in Riverdale, N.D. During that meeting, a field tour provided partners an opportunity to better understand, see and identify these risks. The agencies reviewed sensitive environmental and natural resource management information and applied that information toward developing oil spill response strategies within Lake Sakakawea and the surrounding area. Agencies represented in the meeting included U.S. Army Corps of Engineers, Garrison Project staff, the U.S. Fish & Wildlife Service, the Environmental Protection Agency, the North Dakota Game & Fish Department, the North Dakota Health Department, Three Affiliated Tribes Environmental, Three Affiliated Tribes Water Quality, U.S. Forest Service and North Dakota Department of Emergency Services.

The group collectively reviewed data topics, mapped and unmapped, along the reservoir including municipal, agriculture and industrial water intake locations, threatened and endangered species critical habitat data, sensitive fisheries habitat data,

Right: Representatives from local, state, federal, and tribal agencies at the Subarea Contingency Plan Meeting which was held at Garrison on May 7. The group is viewing data from an EPA website that has been established for agencies to use in the event of an emergency. This particular map shows estimated distances that an oil spill on the Reservoir would travel. The points of origin are actual pipelines which cross the Reservoir and distances are determined based upon Corps and USGS average hydraulic flow rates. Photo by William Harlon.

recreational and other sensitive environmental information. A smaller subset of the group also spent time performing field research by land and boat. The end goal of the meeting and fieldwork was to gather a wide array of raw data that will be used to better refine specific response strategies if a major oil spill were to enter the primary waterways in and around Lake Sakakawea.

As the group forms its Oil Spill Response Plan, the purpose of balancing the needs of the public while protecting the resource, Lake Sakakawea, remains prevalent. Considerable work is needed to collaboratively develop an effective emergency response spill plan. An EPA and industry consultant said, "There is a large quantity of oil located immediately adjacent to the lake and river…A spill is in the future for this area, it may be due to an act of God, equipment failure, or and individual mistake. Mistakes happen and will happen. When it does, due to the remoteness of the area, lack of access, lack of trained responders and available equipment, it will be very costly to address." This is an enormous task, but together the group is developing the plan to be prepared if disaster strikes and to work together to overcome the challenges they may face.

The Garrison Project will continue its efforts of being an effective steward of the Nation's resources, even in the midst of an oil boom that is changing the landscape of western North Dakota. The project's mission will continue to be balancing the needs of the public while protecting Lake Sakakawea.

By BRANDON SELLERS, *Special Projects Office Project Engineer E.I.T.*

Investing in the future
through leadership development

What began on January 15, 2013 was the beginning of a year-long learning experience for the 12 selected applicants in the 2013 U.S. Army Corps of Engineers, Omaha District's Leadership Development Program (LDP).

The program kicked off with a two day retreat to the University of Nebraska Omaha's campus. Here, the Omaha District's selected applicants were introduced to each other and their course instructors from Nebraska's Business Development Center.

This year's LDP class comprises a diverse group originating from a variety of professions and different divisions within the District. The class includes a program manager, a public affairs specialist, a real estate specialist, a biologist, a program analyst, a geographer, an environmental resources specialist, and of course, a few engineers.

Each year, the LDP class is required to select and take on a project that will benefit the Omaha District, and the class members from a leadership aspect. The project selected by the class requires a significant amount of time and effort outside of normal work hours for the duration of the year. Upon completion of the project, the final product is presented to the District's Corporate Board. The 2013 class decided to complete the project acquisition process associated with the development of a virtual, web-based Missouri River simulator game.

The Missouri River Mainstem System is very complex, with numerous competing priorities among stakeholders, and is bound to legal and congressional authorizations and appropriations. The complexity and challenges inherent in the management of the Missouri River System are not well understood by the general public, media and stakeholders. Additionally, within the Omaha District, employees whose roles fall outside Missouri River water management can often be expected to answer questions on a topic outside their area of expertise. The purpose of the game is to give individuals, within and outside the District, a general knowledge of the seemingly simple, but rather complex and frustrating nature of managing such a tremendous system that, in the end, is governed by Mother Nature.

Above: Members of the 2013 Leadership Development Class Front Row: Eileen Williamson, Candace Akins, Trinity Houska, Joslyn Gantt, Michelle Schultz, Aaron Quinn Back Row: Jonas Grundman, Sean Denning, Ryan Buckley, Jake Wiegmann, Brandon Sellers, Josh Melliger.
Photo by U.S. Army Corps of Engineers, Omaha District

The Omaha District's Leadership Development Program represents an opportunity for the selected candidates to focus on, develop, and have the confidence and courage to utilize their leadership strengths in a manner that will contribute to the execution of the Organization's and the District's mission.

A former General of the Army, Sir Douglas McArthur once said, "A true leader has the confidence to stand alone, the courage to make tough decisions, and the compassion to listen to the needs of others. He does not set out to be a leader, but becomes one by the equality of his actions and the integrity of his intent."

Ultimately, through the Leadership Development Program, the Omaha District is enabling the next generation's willing and competent leaders to invest themselves in a program that will assist in providing the tools necessary to lead a future successful organization at the U.S. Army Corps of Engineers.

By DOUG CLEMETSON, *Chief, Hydrology Section*

A *tribute* and a *thank you* to all **Veterans**

Editor's Note: *The Omaha District is comprised of many men and women whose families served in the armed forces. Any organization is only as good as its people, and some of our very best Omaha District employees draw inspiration from their family history of armed service. The benefits touch the lives of millions across the nation. The Army Corps of Engineers works for everyone – its people are of rich character stock and deep commitment. Hydro engineer Doug Clemetson's article highlights the past and his father, but speaks to today as well as Doug performs diligently in his 34th year of giving outstanding service to the nation.*

This May marked the 68th anniversary of the end of World War II in Europe, the end of the Holocaust, and the end of Hitler's Nazi regime. World War II was the deadliest conflict in history as some 60 million people perished (2.5 percent of the world population).

This included more than 400,000 Americans who died fighting for our freedom and six million Jews that were tortured and executed.

A few years ago, I borrowed some old photographs from my Mom so I could scan and preserve them for digital copies. Shown is one of the old photographs I found in the box of treasures. On the back, it was labeled "Bales & I" in my Dad's handwriting. My Dad, who passed away 23 years ago, is on the left . He was 19 when this photo was taken and a recent high school graduate.

Oftentimes, while I was growing up, I would ask Dad what he did while he was in the Army. He would always say "I don't want to talk about it". After finding this photograph, I began researching my Dad's military history. This research was hindered because all of my Dad's official military records were destroyed in a 1973 fire at the National Archives warehouse in St. Louis. Fortunately, I was able to put pieces together through other sources.

This photo was taken in 1943 at Camp Laguna, Arizona. Camp Laguna was located near Yuma, Ari. in the Sonoran Desert. Camp Laguna has been described as a "God-forsaken sector of land" with the extreme desert heat, dust, scorpions, and snakes. At Camp Laguna, the Soldiers slept in tents and kept their tools in buckets of water during the day to prevent them from getting too hot to touch. Their training consisted of practicing maneuvering and firing their tanks and was geared towards preparing them to fight in the desert sands of North Africa. However, before their training completed, the Nazi's were driven out of Africa and my Dad's unit, the 743rd Tank Battalion was re-assigned to destroy Hitler's armies in Europe. In November 1943, the 743rd Tank Battalion moved to Camp Shanks, N.Y. and on to England to prepare for the invasion of Europe.

In the European Theater of Operations, the 743rd Tank Battalion was instrumental in nearly every major battle from Omaha Beach in Normandy on D-Day to the end of the war on V-E Day, May 8, 1945 in Germany. On D-Day at H-Hour minus 6, the first tanks from the 743rd arrived on Omaha Beach. Their tanks were some of the first to land on Omaha Beach in order to blast the Nazi's big guns and clear the roads and barriers allowing the invasion to be successful. At 2200 the first tanks were able to leave the beach after 16 hours of heavy fighting.

Although 54 tanks from the 743rd were scheduled to land on D-Day, only 30 actually left the beach with the others being lost in the English Channel or immobilized on the beach. More than half of the tanks were 32-ton Sherman DD tanks designed to float and swim to the beach for a surprise attack. Many sank or capsized in the rough seas before reaching the beach. After a brief pause to bury their dead from the D-Day invasion, the 743rd fought and cleared the way for the Allied Forces through the

hedgerows in Normandy and led the infantry into the major battles at St. Lo, Mortain, the Siegfried Line, and the Battle of the Bulge in the Ardennes. They liberated many towns and villages throughout Normandy, France, Belgium, Holland, and Germany

During WWII, the 743rd Tank Battalion was described as one of the "cockiest" battalions in the Army. They became so feared by Hitler that the German armies were directed to take no prisoners that wore the 743rd patch on their uniforms. They were to be executed on the spot.

Because of Hitler's edict, the commanding officers directed the Soldiers to tear off their patches. Instead, the Soldiers sewed the 743rd patches on their uniforms with wire so no one could tear them off. The men of this battalion had the courage to do an ugly but necessary job in the face of death during the world's most violent war. They faced a very dangerous enemy to bring us the freedom and liberty we have today.

On April 13,1945—three weeks before the war ended—the 743rd captured a "Death Train" near Farsleben, Germany packed with 2,500 Jews from the Bergen-Belsen Death Camp. Bergen-Belsen is the camp where Anne Frank died from Typhus a few weeks earlier along with thousands of other Jews. The Germans had loaded these remaining victims on the train and were transporting them so the Allied Forces would not find out about the Death Camps. They were being transported back and forth across Germany on the train for several days before it was captured and the Jews were freed by my Dad's unit.

These starving Holocaust survivors were packed in the railroad cars so tightly that they did not have room to sit or lay down. They stood upright until they collapsed and crumpled to the floor from exhaustion. Their bodies and clothing were totally infested with lice. They had no sanitary facilities except a single bucket in one corner of the railroad car, which most could not even reach if sudden necessity arose. Most of them needing to relieve themselves urinated and had bowel movements and let it run down their legs. The stench from the cars was almost unbearable, and many of the Soldiers had to rush away and vomit.

On May 7, 1945, one week after Hitler committed suicide, General Alfred Jodl from the German High Command signed the unconditional German surrender document at General Eisenhower's headquarters in Reims, France. The war in Europe ended with the 743rd Tank Battalion having liberated Magdeburg, Germany where they reached the Elbe River and met their objectives. The Elbe River is where the political boundaries between the Allied Forces and Russian Armies had been established.

My Dad's buddy "Bales" shown on the right in this photograph was Marvin E. Bales from West Virginia. Bales was Killed in Action in the war, as were 161 other Soldiers in my Dad's battalion. Nine Soldiers from the 743rd Tank Battalion are still listed as missing in action and another 316 were wounded. Nearly half of the men who served in the 743rd Tank Battalion did not survive the war or were wounded.

In summary, my Dad was truly a war hero...and he never told me...I fully understand why he did not want to talk about it. Thank you to all Veterans for your service and sacrifice to our Nation and for protecting our freedom and liberty.

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Photo by Cheryl Moore

Enjoy Independence Day!