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# MVD begins Civil Works transformation to meet 21st Century challenges

*By MVD Public Affairs Office*

The Mississippi Valley Division is facing a critical infrastructure challenge. With worn and rapidly aging water resources infrastructure assets (most projects are more than 50 years old), MVD must either recapitalize (replace) these assets to maintain their viability, repurpose them, or divest them.

MVD has critical responsibilities to plan, construct, operate and maintain a significant portion of America's water resources infrastructure. This infrastructure enables transportation of goods and commodities, such as food for people in the United States and abroad; reduces risk to communities from floods, hurricanes and droughts; provides clean, renewable hydroelectric power to homes and industry; restores significant aquatic ecosystems; and effectively supports millions of water-based recreation visits each year.

MVD's infrastructure transformation will:

- Develop reliable methods of assessing the current value and levels of service of our infrastructure systems to determine where priority investments need to be applied.
- Emphasize the interdependence and interrelationship of our assets within a watershed or system to provide reliable, resilient and adaptable infrastructure systems that deliver the required levels of service.
- Evaluate assets in terms of their value to the nation.
- Systematically evaluate infrastructure based on current performance in meeting original authorized project purposes, and how demands within the watershed or system have evolved and changed over time.

MVD will seek alternative and innovative funding that can complement federal budget allocations and meet the high-value needs of the nation over the next 20-to-50 years. MVD will also consider leveraging its federal appropriations with potential non-federal investments, and engaging non-federal leadership in support of the nation's water resources needs. This could include removing unnecessary administrative or regulatory obstacles, and streamlining procedures for non-federal parties to move forward on their own with important water resources activities, while ensuring federal interests are maintained. MVD will also use available technical assistance programs to help non-federal partners solve complex project and system challenges.

**Pictured above**—LaGrange Lock, Intracoastal Waterway (in Rock Island, Ill.) was constructed in 1938.

### Methods of Delivery

Improving the way the Corps delivers water resources infrastructure projects is an imperative under Civil Works Transformation efforts currently underway. HQ USACE recently conducted an evaluation of its competencies and capital investments, and determined the need to improve investments and performance in core mission areas. As a result, a program and project delivery transformation is required.

*(Continued to page 4)*

## Inside this issue...

## Around the Bend

**Maj. Gen. John W. Peabody**
Commander
Mississippi Valley Division
President-nominee
Mississippi River Commission

MVD Team,

Last month I testified in Washington before the House of Representatives' Subcommittee on Energy and Water, of the full Committee on Transportation and Infrastructure, on "How Reliability of the Inland Waterway System Impacts Economic Competitiveness."

The subcommittee was interested in understanding the risks to reliability associated with the nation's inland waterway infrastructure, and the potential economic impacts of failure. My testimony was designed to highlight the following key points:

- Inherent value of the Mississippi River watershed basin – largest navigable inland waterway system in world, providing the U.S. enormous economic advantages;
- Reality of declining reliability on aging (avg 60 years old) lock and dam system, supplemented with photographic, video – Lockport wall collapse – and actual evidence of deterioration;
- Multiple decades-long efforts / initiatives by USACE to gain efficiencies, improve effectiveness, improve construction and project management, and partner with industry, culminating with the Civil Works Transformation strategy which will knit all of these efforts together;
- Reality that current revenue constraints and deterioration trends are unsustainable, and we must make hard choices / trade-offs and focus limited resources on the highest-return elements;
- Indicated catastrophic failure was a real possibility at a few low-reliability projects, but at each of the ones with which I am familiar there is an on-going construction project to remediate the issue;
- Also indicated that hard choices and trade-offs may need to include placing some low-use projects in caretaker status in future years;
- Concluded by recognizing the amazing dedication and skill of our O&M professional work force who labor through incredible challenges and hardships applying their ingenuity to keep it all together.

If you are interested in seeing the testimony, you can find it at http://transportation.house.gov/hearings/hearingdetail.aspx?NewsID=1597

The Assistant Secretary of the Army for Civil Works, Ms. Jo Ellen Darcy, testified on this subject also last September. This recently increased interest by the Congress reflects a heightened understanding that the water resources infrastructure operated by the Corps is deteriorating at a pace faster than we can maintain it. But this is occurring at the same time as the nation is facing serious fiscal challenges.

Further, the Corps is coming under increasing criticism for our management decisions related to some of these projects, like the cost estimate escalation related to the massive Olmsted Locks and Dam project. Over the history of this project, the Corps did not clearly articulate the tremendous technical challenges with building a project in one of the most dynamic river locations in the world. Further, the project has been chronically under-funded throughout its history, in part because of the failure to index the Inland Waterway Trust Fund to inflation.

*(Continued to page 3)*

(Continued from page 2)

All of these factors and more make it extremely unlikely that more resources will be allocated to the Corps to address this challenge. The Corps has been and is continuing to make efforts to improve the efficient use of available resources, and we are working to accelerate those efforts.

As I said in my testimony, "For the last decade the Corps has been actively pursuing several initiatives to include more frequent periodic inspections, increased efforts to document project conditions and prioritize resources, reduce equipment and cut excess operations capacity, and regionalize assets across multiple districts."

"We studied lock and dam construction projects, which revealed some issues for improved construction management. Recently, the Corps partnered with the inland waterways navigation industry to develop ideas for a long-term approach to recapitalizing infrastructure. The report identified several ways to strengthen our project delivery processes and we have incorporated many of its recommendations."

"The Corps is also embarking on a Civil Works Transformation effort as part of a strategic plan to knit together these and other efforts. The desired end state will be more effective processes to deliver Corps projects and manage them with maximum efficiency."

"Current revenue trends make sustaining our full infrastructure portfolio unaffordable. We have made – and will continue to make – hard choices about prioritizing resources to deliver the greatest return, such as reducing hours of operation at some of our lower use locks. Without additional funding, we may be forced to put some projects in a caretaker status in future years."

I look forward to working with everyone on the MVD team to advance our efforts to most efficiently and effectively address this critical issue. We will need to make hard, unpopular, and perhaps controversial choices. But the failure to make such choices would be an abrogation of our responsibility, which is something the Corps has never done, and will never do.

Building Strong!


**Pictured left**—U.S. Army Corps of Engineers Mississippi Valley Division Commander Maj. Gen. John Peabody visits project sites in the St. Francis Levee District of Arkansas area of responsibility on April 11, 2012. Pictured in front of SFLD headquarters in West Memphis, Ark., are, left to right, Project Manager Clyde Hunt, Deputy for Project Management Tom Minyard, and Commander Col. Vernie Reichling from USACE Memphis District; Maj. Gen. Peabody; SFLD Chief Engineering Officer Rob Rash; USACE Mississippi Valley Division Programs Director Edward Belk, and USACE Memphis District Project Manager Dewey Powell.

# MVD begins Civil Works transformation to meet 21st Century challenges

(Continued from page 1)

The goals of the "Methods of Delivery" initiatives include: improving quality; maximizing use of risk reduction principles; ensuring consistency; enhancing, sustaining and maintaining technical competency within USACE; ensuring USACE expertise in critical areas; and improving infrastructure management and operation.

A National Technical Competency Team (NTCT) recommended ways to maintain the competency necessary to effectively support delivery of products to our nation. The team concluded that:

- Methods of Delivery must be balanced with future missions and roles, workload and technical capabilities.
- Challenging in-house work is required to recruit, retain and develop skilled employees.
- Communities of Practice (CoPs) are responsible for building a bench and providing the level of competency required.
- Shifting workloads in Regional Business Centers (RBCs) drive consolidation and managing work across boundaries.
- Local districts are the foundation for work when they are able to maintain technical competency and capability while meeting mission requirements.

Major Civil Works Methods of Delivery initiatives underway include Dam Safety Production Centers, Inland Navigation Design Centers and Deep Draft Navigation Economics.

### USACE's Planning Modernization

The USACE civil works project planning process informs Congress as it makes decisions for authorizing and funding water resources investments for the nation. USACE's planning modernization effort is focused on improving the processes and products that support timely and sound decisions regarding our nation's water resources needs.

Planning modernization will emphasize execution, instill accountability and improve the organizational and operational model regionally and nationally to ensure consistent quality. The effort will improve planner knowledge and experience through additional mandatory training, professional certification and an update of planning processes and planning guidance. This new management approach to development of projects will result in improved management, performance, execution and timely delivery of solutions to water resources needs.

Some measures under the modernization efforts include the 3x3x3 rule:

- All feasibility studies will be scoped with a target goal of completion within three years.
- The target cost for a feasibility study will be no greater than $3 million.
- The study team will use all three levels of the vertical team.
- The target length for the main report of the feasibility study will be 100 pages or less.
- Any schedule or budget exceeding these guidelines will require Headquarters, USACE, approval.

Headquarters is developing guidance and enhancing training requirements to support these efforts. A thorough review of the total number of studies in the planning portfolio will also be completed to help focus available resources on the most viable studies.

### USACE's Civil Works Budget Transformation

A key element in USACE transforming its civil works program is the transformation of its civil works budget development by focusing on national goals and objectives, and developing a comprehensive infrastructure strategy that prioritizes investments based on an evaluation of project value and level of service provided.

The civil works budget focuses on the construction, operation, maintenance, repair and replacement of major navigation, flood risk management and hydropower infrastructure, as well as on environmental mitigation and restoration of natural resources. As the infrastructure has aged and deteriorated, the funding to address these issues has decreased. These factors place a severe strain on USACE's ability to fully ensure the safety of the infrastructure, maintain the infrastructure to meet performance goals and efficiently provide the economic and environmental benefits for which projects were designed and constructed. As a result, a new approach to budgeting for the civil works program is essential to address 21st century needs.

The new budgeting approach will:

- Establish a program-based, goal-focused method to budgeting.
- Establish a vertical mapping/alignment of programs/business lines to national goals and objectives.
- Improve the justification and defense of budget allocations.
- Incorporate integrated water resource management concepts into systems thinking and investments.

This new budget approach establishes a systems-based, watershed approach to decision making, as well as consideration of alternative financing vehicles. Effective use of funding is not up to USACE alone; it will require input from and collaboration with stakeholders and other interested parties.

# Despite winter conditions, the district continues Tolna Coulnee outlet construction

*By Patrick Moes*
*St. Paul District*

Working through the North Dakota winter, the St. Paul District is nearing completion on the Tolna Coulee structure near Devils Lake, N.D.

Contractors are working on the remaining punch-list items and the entire project should be complete sometime in May, said Bill Csajko, Tolna Coulee project manager.

**Pictured above**—Maj. Gen. John Peabody, Mississippi Valley Division commander, left, and Bill Csajko, project management, discuss the ongoing construction efforts at Tolna Coulee, near Tolna, N.D., Jan. 30. The Corps plans to complete the construction within the next six weeks.

Violet Albright, New Orleans District employee and temporary project engineer for the majority of the project, said the 800-foot wide structure will regulate the amount of water that could flow through the coulee if Stump Lake were to reach 1,458 feet above sea level. She said the Tolna Coulee project is not a dam, nor will it initiate erosion along the coulee. What it will do, she said, is slow the flow down enough to prevent catastrophic flooding downstream.

Until recently, Stump Lake and Devils Lake were completely separate bodies of water. The boundary lines from the past have since dissolved because of the continued flooding. Since 1993, the lake has risen more than 30 feet, destroying roads and inundating more than 150,000 acres of farmland.

The lake reached record high levels last year with an elevation of 1,454.4 feet. The National Weather Service, or NWS, is currently forecasting that the lake will reach 1,453.8 feet this summer after dropping a foot to 1453.4 over the winter. Csajko said the lake level usually peeks sometime in June and then drops.

According to the NWS, there is less than a 10 percent chance that the lake will reach last year's record. Csajko said the lake fluctuates due to snow, rain and evaporation. Record inflows of 600,000 acre feet of water were recorded in 2009 and 2011.

With the NWS's forecast offering some breathing room because the lake isn't rising as fast as it has in previous years, Csajko said it's too early to celebrate. Historical lake level records indicate that this has happened before. "There have been relatively dry years in the recent past, including 2006 through 2008, but they were quickly followed by the two biggest years for inflow to the lake," said Csajko.

Csajko said the current lake elevation of approximately 1,453.4 feet, is merely five feet, or approximately one million acre feet, from naturally overtopping the coulee. If the lake levels continue to rise and the water overtops the natural outlet elevation, the subsequent erosion could cause severe impacts to downstream communities along the Sheyenne River to include Valley City, N.D., and Lisbon, N.D.

While the project is not favored by every citizen within the area, Csajko said he understands the concerns from both residents near the lake that want the water elevations dropped immediately and downstream groups that are concerned with increased water within the river. Despite resistance within the two groups, he said the control structure is needed. "It's critical in the fact that if we did have an event that caused the erosion within the coulee, the structure would save downstream communities from complete disaster," he said.

## *Vietnamese media crew tours Mississippi River, visits MVD*

**Pictured above**—A Vietnamese media crew toured the Mississippi River and visited MVD April 5, 2012, as part of a documentary on the people who work and rely on the river for their livelihoods.

**Pictured above**—From left to right, Stephen Gambrell, MRC Executive Director/MVD Executive Assistant, George Santulli, U.S. Department of State TV Producer/Director, and Bob Anderson, MVD Chief of Public Affairs, meet with the Vietnamese media crew to discuss aspects of the Mississippi watershed.

# Safety Corner

American Dog Tick

## The Dangers of Tick Bites

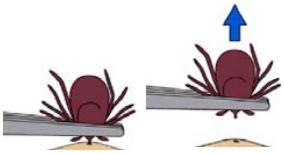
Blacklegged (Deer) Tick

Spring is a wonderful time of year – the weather is improving, the flowers are blooming, and folks are enjoying themselves by hiking, biking, and participating in a multitude of other fun activities outdoors. However, there is a downside to enjoying nature if you're not careful, and that is dealing with those blood-sucking parasites known as ticks. Don't let their miniscule size fool you. They are dangerous. Without proper precautions and appropriate responses, their bite can literally kill you.

Ticks are arachnids, relatives of spiders. They live primarily in wooded areas, tall grass/brush, and around your home, including on your pet. They live off the blood of their hosts and pass infections from one host to the next, including humans. The most common infections humans contract from tick bites in our area are Lyme disease, Anaplasmosis, and Babesiosis from the Blacklegged tick, also known as the Deer tick, and Rocky Mountain Spotted Fever and tularemia from the American Dog tick.

*What is the best thing to do to prevent a tick-borne illness?* Prevent tick bites! Here's how:

1. Avoid direct contact with ticks. Avoid wooded or bushy areas with high grass and leaf litter. Walk in the center of trails.
2. Use a repellent with 20% or more DEET (on skin or clothing) or permethrin (on clothing). *Always follow product instructions!* For additional repellents, check out the EPA website, http://cfpub.epa.gov/oppref/insect/.
3. Wear long sleeves, long pants, and socks when you're in tick-infested areas.
4. Check your body for ticks and remove any tick you find.
5. Shower soon after being outdoors, preferably within two hours.
6. Check your clothing for ticks. Check your pets, kids, and gear. Ticks can ride home on something and attach themselves to you later. Tumble clothes in a dryer on high heat for at least one hour to kill ticks.



*How do you remove a tick?* First, use fine-tipped tweezers to grasp the tick as close to the skin's surface as possible. Next, pull upward with steady, even pressure. Do not jerk or twist the tick; this can cause the mouth-parts to break off and remain in the skin. After removing the tick, thoroughly clean the bite area and your hands with soap and water.

*What are some common symptoms of tick-borne illnesses?* While they vary depending on the disease, the most common symptoms include fever/chills, aches and pains, and a distinct rash. For example, Lyme disease produces a circular rash in 70-80% of persons and begins at the site of the tick bite. Rocky Mountain Spotted Fever rashes vary greatly from person to person. Tularemia causes a skin ulcer at the tick bite site. Early recognition and treatment decreases your risk of serious complications, so see your doctor immediately if you have been bitten by a tick and experience any of these symptoms. Seek emergency medical treatment if you develop a severe headache, chest pain, trouble breathing, or paralysis, as these are signs of serious complications to tick-borne illnesses.

Additional Resources:

CDC: http://www.cdc.gov/niosh/topics/tick-borne/

FDA factsheet: http://www.fda.gov/downloads/ForConsumers/ConsumerUpdates/UCM143616.pdf

MedlinePlus: http://www.nlm.nih.gov/medlineplus/tickbites.html

# Corps' Vicksburg District Regulatory Team Members honor Earth Day

*By Kavanaugh Breazeale*
*Vicksburg District*

The U. S. Army Corps of Engineers' Vicksburg District's regulatory team members recently concluded their 2012 Earth Day celebrations with "Grocery Bags for Earth Day" being the theme.


**Pictured above**— Left to right are regulatory team members Cori Shiers, Jennifer Mallard and Jana Guynes holding grocery bags decorated by elementary school students.

Students from Bowmar and Beechwood elementary schools decorated paper bags donated by local grocery stores Corner Market and Kroger, with an Earth Day theme. Bowmar art teacher, Ms. Marla Bonelli, and Beechwood art teacher, Ms. Ashley Smith, facilitated the effort by granting time during art class for bag decoration and educating the students on Earth Day and the significance of our environment. The decorated bags were returned to the grocery stores resulting in over 1100 Earth Day themed paper grocery bags being used by customers on Earth Day, April 22, 2012, enhancing awareness of the importance of maintaining the environment.

This activity yielded an increased public regard of Earth Day and the significance of our environment by involving the students as well as others within the community. The Earth Day activities have provided a great opportunity for regulatory volunteers to reach out to the community, celebrate our natural resources and help others recognize the value of our environment.

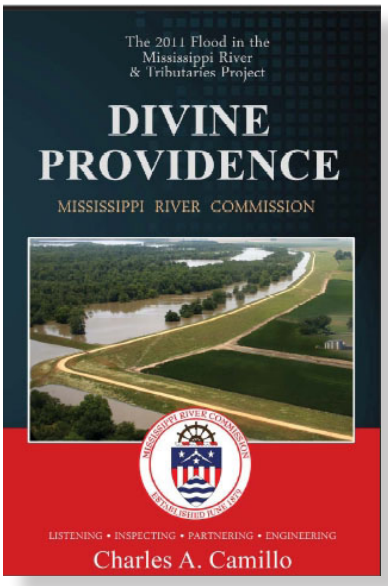
The Vicksburg District of the U.S. Army Corps of Engineers encompasses a 68,000-square-mile area across portions of Mississippi, Arkansas and Louisiana. For more information about the Regulatory program, please visit the Vicksburg District Regulatory website at http://www.mvk.usace.army.mil/offices/od/odf/main.htm.

## New MVD products available on the Internet!

Two new MVD products are now available on the Internet for your enjoyment.

- The Operation Watershed - Flood Recovery video, discussing the Flood Repair Plan, IRTF, Flood Communication, RFRM website and CorpsMap, can be found on YouTube at http://www.youtube.com/watch?v=NX39Je5m8u8&feature=youtu.be.

- The history book "Divine Providence" by Mississippi River Commission Historian Chuck Camillo about the Great Flood of 2011. Several readers have described the narrative as compelling, and it is now available online at http://www.mvd.usace.army.mil/mrc/history/docs/DivineProvidence2011MRFlood.pdf.



## Around the Division

**Pictured above**—Harold Riley, MVD Regional Logistics Manager, recently presented James Davis, maintenance work inspector, a Commanders Award for Civil Service for exceptionally meritorious service for 25 years of faithful and honorable duty in positions of military and government service. His dedication to Army Values contributed significantly in providing logistical support to the New Orleans District during emergency operational conditions. Davis' work was an outstanding achievement and accomplishment done in the spirit, dignity and sense of sacrifice and commitment to supporting the U.S. Corps of Engineers under extreme conditions.

# Did you know?

The population is approximately 21.5 million within the Mississippi Valley Division boundary.

Approximately 500,000 million tons of cargo are transported on the Inland Waterway System each year.


## Open Channels

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## *Dates to Remember*

# Holidays in May


**5—Cinco de Mayo Day** - On May 5, 1862, the Mexican army defeated the French army at the Battle of Puebla. This single military battle signified defeat of a European colonial power and a victory for the Mexican people. This single battle was the roots of Cinco de Mayo. What Cinco de Mayo has come to be is much more than one battle in the colonial history of Mexico. Rather, it has come to signify Hispanic and Mexican pride and a time to celebrate the rich culture.

**13—Mother's Day** - Mother's Day is often celebrated the second Sunday in May. Everybody has a mother, and absolutely no one is more special than mom. On this special day, spend time with and send flowers, cards, candy and gifts to your strongest supporter!

**28—Memorial Day** - Memorial Day is officially celebrated on the last Monday during the month of May. This day is dedicated to service men and women who gave their lives for freedom and country. It is also a time to remember loved ones who have passed away. Take time to remember lost loved ones on this day.