US Army Corps of Engineers ®

BUILDING THE FOUNDATION OF OUR NATION'S READINESS

WORLDCLASSENGINEERING

In this, my first year as the 54th Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers (USACE), I am energized by the diverse and vital missions of Army engineers. A ready and resilient Army and Nation is kept ready and resilient through its engineers.

I serve as a principal adviser to the Secretary of the Army and other Principal Officials on matters related to general, combat and geospatial engineering; construction, real property, and natural resources science and management. I also serve as head of the Engineer Regiment and commander of the USACE.

These responsibilities require me to lead personnel who are, themselves, leaders among their peers; innovators at the forefront of science, engineering, critical infrastructure, national security, and public participation. **Together, we are 90,000 engineer soldiers within the active-duty Army, Reserve, and National Guard, and 32,000 civilians within the USACE.** We are a globally-engaged force, providing unmatched strength and value to our stakeholders. Our readiness will not fail. We exist to deliver vital public and military engineering services; partnering in peace and war to strengthen our Nation's security, energize the economy and reduce risks related to disasters. **We have been solving our Nation's toughest challenges since before America was a Nation.** We built early forts for defense and roads for commerce. We developed waterways for navigation and trade, built dams and levees to reduce loss of life and property due to flooding, and we identified and preserved natural resources for the benefit of the American people long before the founding of the National Park Service. With such an illustrious history, I recognize I must maintain the highest standards and clearly show how **the Army Engineer Total Force is delivering remarkable results through accountability, monitoring and evaluation.**

Currently within the USACE, we:

- Provide engineering, construction and real estate services for the Army, Air Force, various other government agencies and, where appropriate, foreign nations.
- Secure, operate and maintain water resources.
  - Maintain more than 12,000 miles of inland navigable waterways, 900 ports and harbors, 14,000 miles of levees, 700 dams, 230 lock chambers, 75 hydropower plants and 4,000 recreation areas.
  - Prevent an estimated $48.5 billion in damages annually from storms and severe weather.
  - Manage inland waterways that move about 15 percent of the Nation's freight at half the cost of rail and 1/10th that of truck transportation, all while reducing air pollution and traffic in the process.
  - Maintain harbors that handle 95 percent of America's import and export trade.
  - Operate hydropower projects that produce an annual average of 75 billion kilowatt-hours of clean energy a year. This makes USACE the nation's fifth largest electric supplier, with no greenhouse gas emissions, and yields about $1.5 billion in revenue to the Treasury.
- Protect, restore and enhance the environment.
- Provide timely engineering support for national response efforts to emergencies and disasters.
  - Obligated almost $1 billion in 2014 in recovery and risk reduction in areas affected by Hurricane Sandy and completed 120 related repair and recovery projects.
  - Completed the $14.5 billion New Orleans Hurricane & Storm Damage Risk Reduction System.
- Research, develop, transfer and leverage innovative technologies to solve national engineering challenges.
  - Warfighter protection
  - Dual use technologies

Lt. Gen. Todd Semonite, U.S. Army Chief of Engineers and Commanding General, tours sites July 29, 2016, at Fort Bragg, North Carolina. (U.S. Army photo by Hank Heusinkveld)

Each year, the list of stakeholders who rely on our unmatched expertise grows more diverse. In the last year alone, some of our stakeholders included:

- Every state in the union
- Combatant Commanders
- U.S. Department of Energy
- U.S. Department of Veterans Affairs
- U.S. Customs and Border Protection
- U.S. Department of State
- U.S. Agency for International Development
- U.S. Coast Guard
- U.S. Air Force
- NASA
- FEMA
- More than 110 foreign nations (for national security and humanitarian assistance purposes).

The Engineer Regiment, which includes the USACE, is a vital enabler, integrating capabilities across our vast portfolio to respond to the changing needs of the Nation. By combining civilian and military expertise across our military programs, civil works, contingency operations, and research and development missions, **we deliver scalable solutions to support the Army and the Joint Force in remaining ready, resilient, globally responsive and regionally engaged**.

Stakeholders rely on us because we deliver world-class engineering solutions, but I have urgent priorities for the Engineer Regiment that must be addressed to make sure we can continue to support a ready and resilient Nation, as we have for 241 years and counting.

Austere budgets will make achieving priorities more challenging, so we have redoubled efforts to employ ingenuity, prudent fiscal stewardship, insightful decision making, and robust collaboration with partners to achieve priorities despite challenges. We see constrained resources as an opportunity for current and potential stakeholders to see the incomparable value and service the Engineer Regiment offers them. Our value as trusted professionals and partners has become increasingly important to our stakeholders, such as the Joint Force, the U.S. Department of Veteran Affairs, U.S. Department of the Interior, and many other Federal and state customers as they strive to accomplish their missions in an environment of fiscal uncertainty, greater accountability, and increasing risk.

Within USACE, **we will continue to strategically execute, evaluate, and adapt our USACE Campaign Plan**, which guides how we organize, train, and equip our personnel; how we plan, prioritize, and allocate resources; and how we respond to emerging requirements and challenges

My top priorities for the 90,000 engineer soldiers within the active-duty Army, Reserve, and National Guard include continuing to develop engineer leaders who are highly capable of providing Brigade Combat Teams with world-class engineering expertise, significantly improving the readiness of the Army's terrain shaping capability, and realizing a combat vehicle modernization plan.

USACE ENGINEERS MUST:

- **Be recognized** as the engineering experts of the Combined Arms Team: Combined arms experts who are innovative, adaptive, and situationally-aware; leaders solving the most complex problems.
    - Engineers who support brigade combat teams (BCT) must be high-performance engineering subject matter experts and leaders; able to first advise the commander on the optimum use and integration of combat, general, and geospatial engineering and then aggressively execute as part of the combined arms team for decisive action.
- **Shape the Operational Environment:** To win decisively, U.S. forces must shape and control physical terrain. The degraded terrain shaping capability requires the reenergizing of Volcano and Gator Land Mine replacement, compliant with national policies and directives.
    - U.S. forces must visualize, understand, shape, and control terrain in order to most efficiently and effectively use forces and capabilities from and into numerous locations, presenting multiple dilemmas to an enemy, limiting options, and avoiding an enemy's strengths.
- **Develop and realize a feasible Combat Vehicle Modernization Plan**: Divest the M113 Armored Personnel Carrier and replace with the Armored Multi-Purpose Vehicle, Bradley Fighting Vehicle, or Stryker; field the Joint Assault Bridge; replace the Armored Combat Earthmover; complete fielding of the Assault Breacher Vehicle.
    - Engineers must have the same mobility, survivability, crew protection, mission command systems, and modernization levels as the supported maneuver forces.
    - Engineers must be able to execute multiple missions in support of the combined arms team across a broad range of areas including mobility, countermobility, bridging, route clearance, general engineering, and more. Highest priority is to transition those echelons above brigade (EAB) engineer forces out of the M113 as soon as possible. EAB engineer forces provide 75% of the required engineer effort to the BCTs.

USACE Omaha District is overseeing construction of the U.S. Strategic Command and Control Headquarters Complex. The project consists of three major components: a Sensitive Compartmented Information Facility, a Global Operation Center with a High-Altitude Electromagnetic Pulse shielding, and two secure data centers. Also included in the project is a 400-seat auditorium, conference center, training center, cooling tower and generator facilities, a loading and warehouse building, and a visitor center.

We will also continue to make great strides in gender integration and talent management, as well as optimize the use of geospatial science, technology, education and certifications.

WE ARE A WORLD-CLASS ORGANIZATION committed to improving the security and prosperity of our Nation. Everything we do supports the Army and our Nation's readiness. We fully understand the importance of the American people's voice in defining our missions and in our legislators and leaders to resource them. We will continue to support the readiness of the Nation as trusted and respected partners; members of the Army team.

Without engineers, much of civilization would be unrecognizable. Engineers can take great pride in the significant role they play developing, enhancing and protecting our Nation. The future will surely present more challenges, all while our infrastructure continues to age, our population continues to grow, and new threats emerge. Engineers will continue to hone our competitive edge and deliver vital engineering solutions to secure our Nation, energize our economy, and reduce risks associated with disaster. **WHEN ENGINEERS ARE NEEDED, WE WILL BE THERE, *NOW AND IN THE FUTURE.***

Author: Lt. Gen. Todd T. Semonite is the U.S. Army Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers. He is a graduate of the U.S. Military Academy and a registered professional engineer in Vermont and Virginia.

OUR FOUR BROAD GOALS WITHIN THE CAMPAIGN ARE:

1. **SUPPORT NATIONAL SECURITY**
   Deliver innovative, resilient, and sustainable solutions to the Department of Defense and the Nation.

2. **TRANSFORM CIVIL WORKS**
   Deliver enduring and essential water resource solutions using effective transformation strategies.

3. **REDUCE DISASTER RISKS**
   Deliver support that responds to, recovers from, and mitigates disaster impacts to the Nation while ensuring sustainable operations.

4. **PREPARE FOR TOMORROW**
   Build resilient People, Teams, Systems, and Processes to sustain a diverse culture of collaboration, innovation, and participation to shape and deliver strategic solutions.

Aegis Ashore, the land-based ballistic missile defense facility in Deveselu, Romania, was declared technically capable in December 2015. U.S. Naval Support Facility Deveselu is manned by about 200 U.S. military personnel, government civilians and support contractors. Phase three of the U.S. European Phased Adaptive Approach to ballistic missile defense will include a second facility in Poland, set to be complete in 2018. The projects in Romania and Poland are designed to support NATO and are part of a U.S. defensive strategy to provide protection for U.S. forces and allies in Europe. (U.S. Army photo by John Rice)

USACE Sacramento District construction crews at the Folsom Dam Auxiliary Spillway lowered six bulkhead gates into place Jan. 26, 2015. The Folsom Dam Auxiliary Spillway project is an approximately $900 million cooperative effort between the USACE and the U.S. Department of the Interior, Bureau of Reclamation, that will reduce flood risk for the Sacramento region. The Bureau has responsibility for dam safety as well as operation and maintenance of the Folsom Dam facility, while the USACE is responsible for flood damage reduction. By combining their efforts into a single project, the two agencies will complete the project faster and at a lower cost. The spillway project is scheduled to be ready for use by Oct. 2017. (U.S. Army photo by Seth Frank)

361st Multi-role Bridge Company (MRBC) raft an Infantry Assault force from the 1-17 Mechanized Infantry Battalion (Polish Army) across the Vistula River in Chelmno, Poland during Exercise Anakonda 16. This assault force will establish security on the far side of the river in preparation for follow-on forces who will cross over a Ribbon Bridge constructed by U.S., German, and Dutch Engineers. (U.S. Army photo by Maj. James Kadel)

Lt. Gen. Todd T. Semonite (left) looks at the Kentucky Lock Addition Project from a vantage point above the construction during a visit to the project in Grand Rivers, Ky., June 7, 2016. Project Manager Don Getty (right) points out the activities at the project site and updates the general on the progress of construction. (U.S. Army photo by Lee Roberts)

Steve Conger, Jacksonville District's engineering technical lead, stands inside a bucket aboard the dredge "New York" in Miami Harbor. The "New York" is a mechanical backhoe dredge that Great Lakes Dredge and Dock used to excavate the Miami Harbor channel. Miami Harbor is the first of four Eastern Seaboard ports deepened to accommodate larger container ships. The completed project enables the port to safely accommodate larger cargo vessels and other ships, ultimately facilitating a more efficient movement of goods. Channel construction and environmental mitigation work was completed in 2015. (U.S. Army photo by Randy Murray)

Floating drift clogged the Battery Park Underpass after Hurricane Sandy inundated lower Manhattan with a record level storm surge in the fall of 2012. As part of the national response framework, USACE in support of FEMA assisted local, city, and state officials in the aftermath of Hurricane Sandy, mobilizing more than 800 personnel to help with relief and recovery operations. In just nine days, 85 million gallons of water were removed from the Brooklyn Battery Tunnel; 10 million gallons of water were removed from the Battery Park Underpass. (U.S. Army photo by Patrick Bloodgood)

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441 G St NW
Washington, D.C. 20314-1000
www.usace.army.mil