



Unwatering Team

U.S. ARMY CORPS OF ENGINEERS

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Background

Chicago Tunnel Flooding (1992)

The U.S. Army Corps of Engineers (USACE) Unwatering Team was originally created to combat floodwaters in Chicago, Illinois, in April 1992, when water from the Chicago River poured into a breach in the 63-mile-long freight tunnel system that crisscrossed underneath the heart of the City of Chicago. More than 250 million gallons of water quickly flooded the basements and electrical controls of more than 300 buildings throughout the downtown area. An estimated 1.3 million people were evacuated from Chicago's loop. As a result, Chicago came to a standstill; the financial markets, the commodities markets, and banks and all of the major businesses closed. Two subway lines through the



Loop were also closed for several weeks due to the flooding. The city was unable to block the breach and President Bush signed a federal emergency declaration allowing the Federal Emergency Management Agency (FEMA) to officially mission USACE with finding a solution, and fixing the problem. Task Force Unwatering was born, Rock Island District personnel in support of Chicago District, and teaming with over 200 USACE personnel from across the nation closed the breach and unwatered the tunnels in about 30 days.

Hurricane Katrina (2005)

In August 2005, Hurricane Katrina devastated the Southeast Louisiana Coast and inundated much of the Greater New Orleans Metro Area (GNOMA) that lies below sea level. USACE received an unwatering mission from FEMA, and to accomplish this, the Mississippi Valley Division of USACE re-established Task Force Unwatering with lead responsibilities assigned to the Rock Island District. The mission of the Task Force was to unwater the GNOMA, and set the conditions for traditional recovery operations to begin. In support of the city, local and state authorities, and the Corps' New Orleans District, GNOMA was unwatered of an estimated 250 billion gallons in less than two months. The Rock Island District retains this on-going Task Force Unwatering contingency mission assignment for future storm events in GNOMA today, and has responded to Hurricanes Rita (2005), Gustav (2008), and Isaac (2012).

U. S. Riverine Flooding (2008, 2011)

Task Force Unwatering provided technical support and executed unwatering missions for FEMA along the Upper Mississippi River during the record 2008 Midwest Floods, and provided technical assistance to local and state authorities during the record 2011 Missouri River flood.

Hurricane Sandy (2012)

In late October 2012, storm surge from Hurricane Sandy flooded New York City's network of underground tunnels with up to 400 million gallons of water. Five subway tubes, two Amtrak tunnels and three of the city's primary roadways, including the longest coastal tunnel in North America was flooded by storm surge after the largest-ever Atlantic tropical system slammed into the U.S. East Coast. FEMA gave the unwatering mission to USACE, who turned to the Mississippi Valley Division and the Rock Island District because of their recent unwatering expertise in New Orleans coupled with New York District's local knowledge of the impacted area and relationships at the local, city and state levels, set the conditions for successful mission execution. Assisted by the United States Navy, and the U.S. Coast Guard, Joint Task Force Unwatering teamed with New York District; other federal agencies; and the city, local and state authorities to unwater the major tunnels under New York City in less than 2 weeks.

International Support

In 2011, Task Force Unwatering provided its first international assistance during the record floods in Thailand that year.

Task Force Concept

The core unwatering team comprises 10-12 Corps civilian professionals with expertise in civil, electrical, mechanical and hydraulic engineering; contracting; emergency management and public affairs; led by the District's commanding officer. However, the team size can increase at an exponential rate as it has the expertise of the entire U.S. Army Corps of Engineers and other services to draw from for additional support, assistance and manpower.

Task Force Unwatering's expertise has historically been specific to the GNOMA and the Midwest; having the engineering knowledge and situational awareness to react to most any set of events that will require an unwatering mission in the Gulf Coast region or America's Heartland. But, this unwatering expertise of the team has been expanding due to the demand for this unwatering capability on the U.S. East and West Coasts, and around the globe.

The Task Force represents engineering and contracting capabilities to mobilize private and coordinate public and military assets to execute unwatering activities related to:

- Creating strategic breaches in levees and embankments where needed to facilitate gravity drainage of receding floodwaters;
- Implementing emergency repairs of breached levees and floodwalls to prevent reoccurring storm surges from re-flooding the area;
- Initiating repairs to existing drainage and pumping facilities, providing temporary portable pumps as needed to unwater critical infrastructure; and
- Beginning intermediate repairs to a damaged flood protection system.

Of note, Task Force Unwatering does not have large pumping or construction equipment or operating manpower on staff or on contract standby; all such assets must be procured under emergency contracting provisions and personnel deployments.

Deploying the Task Force for Flood Events

The Unwatering Concept of Operations for GNOMA and other contingencies are basic engineering and contracting principles that would apply to similar applications of areas requiring mechanical assistance to remove trapped or contained floodwaters from an area, and measures to prevent a reoccurrence of flood inundation when feasible.

Situational knowledge of existing levee systems, pumping facilities and infrastructure to be unwatered would need to be garnered. From this information, engineering parameters regarding flood protection, pump repairs or temporary portable pumping needs (including pumps, fuel, and/or power generation for electric pumps, as required) would be scoped and an unwatering plan devised and executed.

Equipment and manpower for unwatering execution would be by available public, multi-national, military or private assets in the immediate vicinity.

If the Corps is given a mission by the U.S. Department of Homeland Security, FEMA, to undertake an unwatering mission, the Unwatering Team would provide the command and control of the mission assignment through deployed and virtual personnel across the required project management and engineering disciplines. (13 Nov 12)

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