Subsurface Utilities Engineering

September 25, 2019

Dan Cotter
Principal Director
Office of Science and Engineering
Science and Technology Directorate
Topics

- DHS Science & Technology: Who are we

- Subsurface utility engineering and homeland security / community resilience

- How S&T works

- How to engage with us
SUE Mission Statement: The Subsurface Utility Engineering (SUE) Association is organized to promote knowledge, best practices, and the exchange of information in the profession; ensure the protection of public health, welfare, and safety; and educate clients and other stakeholders of the value and benefits of subsurface utility engineering services.

DHS Mission Statement: With honor and integrity, we will safeguard the American people, our homeland, and our values.

S&T Mission Statement: ...to enable effective, efficient, and secure operations across all homeland security missions by applying scientific, engineering, analytic, and innovative approaches to deliver timely solutions and support departmental acquisitions.

Created by Congress in 2003, S&T conducts basic and applied research, development, demonstration, testing and evaluation activities relevant to DHS.
Science & Technology Directorate

Under Secretary for S&T
Deputy Under Secretary for S&T

Chief Scientist

Strategy & Policy

Chief of Staff

Associate General Counsel

Office of Mission & Capability Support (MCS)
- Border, Immigration & Maritime
- CBP, USCG, ICE, USCIS
- First Responders & Detection
  - CWMD, FEMA, FLETC, Responders
- Physical & Cyber Security
  - CISA, TSA, I&A, USSS

Office of Science & Engineering (OSE)
- Operations & Requirements Analysis
- Systems Engineering & Standards
- Technology Centers
- Technology Scouting & Transition
- Test & Evaluation

Office of Innovation & Collaboration (OIC)
- Federally Funded Research & Development Centers
- Industry Partnerships
- International Partnerships (ICPO)
- Office of National Labs (ONL)
- University Programs

Office of Enterprise Services (OES)
- Administration & Support
- Chief Information Office
- Communications & Outreach
- Compliance
- Executive Secretariat
- Finance & Budget

DIVERSE PERSPECTIVES + SHARED GOALS = POWERFUL SOLUTIONS
National Infrastructure Protection Plan

NIPP 2013
Partnering for Critical Infrastructure Security and Resilience

Table 1 - Sector and Cross-Sector Coordinating Structures

<table>
<thead>
<tr>
<th>Critical Infrastructure Sector</th>
<th>Sector Specific Agency</th>
<th>Sector Coordinating Council (SCC)</th>
<th>Government Coordinating Council (GCC)</th>
<th>Regional Consortium</th>
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<tbody>
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<td>Chemical</td>
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<td>Commercial Facilities</td>
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<td>Communications</td>
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<td>Critical Manufacturing</td>
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<td>Dams</td>
<td>Department of Homeland Security</td>
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<td>Emergency Services</td>
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<td>Information Technology</td>
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<td>Nuclear Reactors, Materials &amp; Waste</td>
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<td>Food &amp; Agriculture</td>
<td>Department of Agriculture, Department of Health and Human Services</td>
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<td>Defense Industrial Base</td>
<td>Department of Defense</td>
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<td>Energy</td>
<td>Department of Energy</td>
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<td>Healthcare &amp; Public Health</td>
<td>Department of Health and Human Services</td>
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<td>Financial Services</td>
<td>Department of the Treasury</td>
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<td>Water &amp; Wastewater Systems</td>
<td>Environmental Protection Agency</td>
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<td>Government Facilities</td>
<td>Department of Homeland Security, General Services Administration</td>
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<td>Transportation Systems</td>
<td>Department of Transportation</td>
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Indicates that a sector (or a subsector within the sector) has a designated information-sharing organization.

DIVERSE PERSPECTIVES + SHARED GOALS = POWERFUL SOLUTIONS
Pipelines

The nation has about 2.7 million miles of pipelines carrying hazardous liquids.
DIVERSE PERSPECTIVES + SHARED GOALS = POWERFUL SOLUTIONS

FEMA Strategic Plan

2018-2022

Strategic Plan
Federal Emergency Management Agency

STRATEGIC GOAL 1:
BUILD A CULTURE OF PREPAREDNESS

Preparedness is the backbone of emergency management. The Nation’s ability to weather storms and disasters without experiencing loss significantly reduces our risk. The most successful way to achieve disaster resilience is through preparedness, including mitigation. Building a culture of preparedness within our communities and our governments will support a National effort to be ready for the worst disasters - at the individual, family, community, state, local, tribal, territorial (SLTT), and Federal level.

STRATEGIC GOAL 2:
READY THE NATION FOR CATASTROPHIC DISASTERS

Catastrophic disasters, including large and mobile incidents, can overwhelm the government at all levels and threaten National security. They are life-threatening incidents for those impacted, causing a high number of fatalities and widespread destruction. Catastrophic disasters strain lives and hurt our communities - economically and socially. Resilience is critical for FEMA and our partners to ensure that the response and recovery missions are appropriately executed and successful.

STRATEGIC GOAL 3:
REDUCE THE COMPLEXITY OF FEMA

The Nation faces an evolving threat and rapidly changing environment. FEMA must be flexible and adaptable to meet the needs of individuals and communities, and it must deliver assistance and support in a timely and efficient manner. We must innovate and leverage new technology to reduce complexity, increase efficiency, and improve outcomes.

DIVERSE PERSPECTIVES + SHARED GOALS = POWERFUL SOLUTIONS

FEMA

Home and Security
Science and Technology
Disaster Recovery Reform Act of 2018

H. R. 4460
[Report No. 115-1098, Part I]

To improve the provision of disaster and mitigation assistance to eligible individuals and households and to eligible State, local, Tribal, and territorial governments and certain private nonprofit organizations, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

November 28, 2017

Mr. BAGLEY (for himself and Mr. JOHNSON of Georgia) introduced the following bill; which was referred to the Committee on Transportation and Infrastructure, and in addition to the Committee on Financial Services, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as part of the bill within the jurisdiction of the committee concerned

December 21, 2018

Additional sponsor: Mr. GRAVES of Louisiana and Ms. GUILLEN-Cobos of Texas

December 21, 2018

Reported from the Committee on Transportation and Infrastructure with an amendment:

[Text enacted by the Senate and House of Representatives of the United States of America in Congress assembled]

A BILL

To improve the provision of disaster and mitigation assistance to eligible individuals and households and to eligible State, local, Tribal, and territorial governments and certain private nonprofit organizations, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Disaster Recovery Reform Act".

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title. Table of contents.

Sec. 101. National public infrastructure pre-disaster hazard mitigation.

Sec. 102. Additional disaster assistance.

Sec. 103. Relief provisions.

- National Public Infrastructure Pre-Disaster Hazard Mitigation (Section 1234):Authorizes the National Public Infrastructure Pre-Disaster Mitigation fund, which will be funded through the Disaster Relief Fund as a 6 percent set aside from estimated disaster grant expenditures. This allows for a greater investment in mitigation before a disaster. This new program is named Building Resilient Infrastructure and Communities (BRIC).
Developing the **Science** to inform investments in resiliency and security

**DHS Science and Technology Process**

- **Capability Gaps**
  - CISA
  - FEMA
  - TSA
  - CBP
  - USSS

- **Requirements**
  - Decompose
  - Validate
  - Prioritize

- **Tech Scouting**
  - Transition Feasibility
  - Performer Selection

- **Operate**
  - Transition
  - Testing & Evaluation
  - Development

**Bias to “buy” not develop**

The process starts with a DHS Component unmet need

DIVERSE PERSPECTIVES + SHARED GOALS = POWERFUL SOLUTIONS
Ways to Work With Us

Innovation is the driving force behind the work we do at S&T. Because potential solutions may exist outside the homeland security arena, S&T casts a wide, inclusive net to find and use the best technology. The S&T Industry Guide lays out DHS technology needs, describes S&T’s technical focus areas, and identifies tools and opportunities for industry to work with us. As a companion to the Industry Guide, our Innovation Programs & Tools booklet provides more detail on our tools for working with industry, including the process, eligibility, timelines, and how to apply.

Expand All Sections:

- Innovate S&T Video Series
- Prize Competitions
- Long Range Broad Agency Announcement (LRBAA)
- Silicon Valley Innovation Program (SVIP)
- Small Business Innovation Research (SBIR) Program
DIVERSE PERSPECTIVES + SHARED GOALS = POWERFUL SOLUTIONS