

Science and Technology Support Annex

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1 **Annex Coordinator:** **Department of Homeland Security, Science and Technology**
2 **Directorate**

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4 **Cooperating Agencies:** Department of Agriculture
5 Department of Commerce
6 Department of Defense
7 Department of Energy
8 Department of Health and Human Services
9 Department of the Interior
10 Department of Justice
11 Environment Protection Agency
12 National Aeronautics and Space Administration
13 Nuclear Regulatory Commission
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15 **I. Introduction**

16 **A. Purpose**

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19 The Science and Technology Support Annex describes the national framework through
20 which the Department of Homeland Security Science and Technology Directorate
21 (DHS/S&T) coordinates with other Federal agencies, in consultation with State, local and
22 tribal entities and the private sector, to leverage the Nation's scientific and technical
23 resources to prepare for, respond to, and recover from events considered Incidents of
24 National Significance. It ensures that policy makers and responders at all levels receive
25 coordinated, consistent, accurate, and timely scientific and technical information,
26 analysis, advice, and technology support.
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28 **B. Scope:** This annex:

- 29 1. Describes how the Department of Homeland Security coordinates with other
30 Federal agencies and State, local, and tribal governments, the private sector and
31 academia, where applicable, for preparedness, response and recovery in support
32 of the NRP.
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- 34 2. Outlines roles and responsibilities in pre- and post-incident response and
35 recovery activities.
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- 37 3. Outlines a structure for coordination of scientific support and response for
38 Incidents of National Significance.
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- 40 4. Outlines a process to provide scientific and technical recommendations to
41 Federal Government decision-makers to assist them in determining what, if any,
42 protective measures are necessary during response and recovery operations.
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46 **II. Policies:** The underlying principles for the role of the Federal Government in coordinating 47 scientific and technical support are as follows:

- 48 **A.** Planning employs the most effective means to deliver scientific and technical support,
49 including the use of resources from private-sector, nongovernmental agencies, and other
50 resources owned or operated by Federal agencies.
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- 52 **B.** Planning recognizes State policies and plans used to deliver and receive scientific and
53 technical support, as well as State-established methods for determining support
54 requirements.
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- C. Support is centrally managed and regionally delivered. DHS manages and coordinates requests for scientific and technical support at the DHS National Headquarters (HQ) through the Homeland Security Operations Center (HSOC).
- D. The HSOC provides Federal scientific and technical support elements with relevant situational awareness and threat information reports.
- E. The Federal prediction for atmospheric hazards dispersion is developed and distributed by the Interagency Modeling and Atmospheric Analysis Center (IMAAC).

III. Concept of Operations

A. General: DHS/S&T is the action agent for planning, coordinating, and managing Federal scientific and technical support to Incidents of National Significance, including CBRNE incident management operations.

B. Organization

1. DHS/S&T provides the core architecture of the Federal scientific and technical support capability. To accomplish its mission, DHS/S&T works with a variety of Federal Government, private sector, and nongovernmental organizations that are capable of providing expert scientific and technical information, analysis, and advice, and state-of-the-art technology support.
2. The Federal scientific and technical support and its components are designed to provide a full spectrum of subject matter expertise and technical reach-back capability. The modular design allows the necessary redundancy and flexibility to accommodate the wide-range of requirements specific to the CBRNE WMD emergencies.
3. Using the NRP protocols, mission assignments for scientific and technical needs are coordinated through ESF #5 and passed on to the cooperating agencies for support.
4. Major science and technology components include:
 - a. **Homeland Security Operations Center (HSOC).** The HSOC is the primary entry point for all requests for Federal scientific and technical support. DHS/S&T provides a S&T Coordination Desk and an on-call S&T Coordinator for the HSOC. The S&T Coordination Desk Watch Officer serves as the principal staffer responsible for receiving, documenting, forwarding, and tracking scientific and technical support requests. While on-call scientific and technical support assets are mobilized, the S&T Coordination Desk Watch Officer may also serve as an emergency resource for delivering direct scientific and technical support to the field. The S&T Coordination Desk Watch Officer has access to extensive technical databases and reference materials on all topics related to Chemical, Biological, Radiological, Nuclear and High-Yield Explosive Weapons of Mass Destruction (CBRNE WMDs).
 - b. **Interagency Incident Management Group (IIMG).** DHS/S&T provides a senior S&T representative to the IIMG who provides direct operational scientific and technical support and coordinates CBRNE subject-matter expert (SME) augmentation.

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- c. **National Response Coordination Center (NRCC).** When the NRCC is activated for an Incident of National Significance, DHS/S&T assigns a representative to ESF #5 to coordinate and facilitate deployment of scientific and technical resources.
- d. **Headquarters S&T Coordination Team.** The S&T Coordination Team is a multidisciplinary staff that provides command and control, and operational coordination of Federal scientific and technical support programs and response activities. Operating from the DHS Headquarters, the S&T Coordination Team is responsible for staffing and coordinating requests for Federal scientific and technical support. The S&T Coordination Team serves as the central source of information at the DHS HQ level regarding the status of ongoing and planned Federal scientific and technical support operations. The S&T Coordination Team also facilitates coordination between regions in the event of multi-region scientific and technical support operations. All team deployments are coordinated with the NRCC, the Regional Response Coordination Center (RRCC), and /or the Joint Field Office (JFO) leadership.
- e. **Science and Technology Advisory and Response Teams (STARTs).** STARTs are composed of the experts in key specialty areas related to CBRNE WMD effects and countermeasures. The teams are primarily designed to provide rapid scientific and technical support through virtual links; however, they can be deployed to the field with short notice. Once activated, STARTs are coordinated and supported by DHS field components, the RRCC, and the JFO. The teams can provide expert scientific and technical information, analysis, and advice, and state-of-the-art technology support. STARTs function in an indirect response support capacity. They do not provide direct services, such as decontamination, medical and health care, or recovery. All activations and deployments are coordinated with the NRCC, RRCC, and or JFO leadership.
- f. **Interagency Modeling and Atmospheric Analysis Center (IMAAC).** The IMAAC is responsible for production, coordination and dissemination of consequence predictions for an airborne hazardous material release. The IMAAC generates the single Federal prediction of atmospheric dispersions and their consequences utilizing the best available resources from the Federal government.

IV. Responsibilities

- A. Primary Agency:** DHS serves as the Federal executive agent under the NRP to accomplish the scientific and technical support mission. When the NRP is activated in response to a potential or actual Incident of National Significance, DHS is responsible for:
 - 1. Orchestrating the Federal scientific and technical support to affected States/regions;
 - 2. Maintaining STARTs capable of providing short-notice SME assessment and consultation services;
 - 3. Supporting and keeping other Federal departments and agencies and DHS organizational elements informed of scientific and technical support operational priorities and activities;

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4. Providing DHS/S&T liaisons to other Federal, State and/or local emergency operations centers, as requested,
5. Deploying emerging technologies and utilization of advanced research facilities for Incidents of National Significance, and
6. Executing contracts and procuring scientific and technical support services consistent with the Financial Management Support Annex of the NRP.

B. Support Agencies: Support agencies, when requested, provide appropriate S&T personnel, equipment, and facilities.