# San Francisco Bay Area


# PREVENTIVE RADIOLOGICAL AND NUCLEAR DETECTION

## REGIONAL PROGRAM STRATEGY

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# BAY AREA PREVENTIVE RADIOLOGICAL AND NUCLEAR DETECTION STRATEGY

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## OVERVIEW

The Bay Area's vision for homeland security is a secure, prepared and resilient region consistently developing regional capabilities based on an analysis of risk through collaboration and coordination. The Bay Area Urban Area Security Initiative (UASI) 2012-2015 Security Strategy identified strategic goals and objectives to address the terrorism risk faced by the Bay Area with an understanding that capabilities enhanced to combat terrorism often enhance the ability to also manage natural disasters. The UASI 2012-2015 Security Strategy identified the need to strengthen Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) detection, response, and decontamination capabilities. This need is reinforced by the 2012-2015 California Homeland Security Strategy.

### UASI 2012-2015 SECURITY STRATEGY

**Goal 4 Strengthen CBRNE Detection, Response, and Decontamination Capabilities**

*Objective 4.3 Enhance Screening Search and Detection Capabilities.*

***Apply for DNDO Securing the Cities grants***

***Ensure the region's radiological/nuclear detection plans and protocols are fully integrated with the State's PRND program***

***Develop intelligence and risk-based CBRNE screening, search and detection deployment protocols for major events, mass transit and other high profile events and CIKR***

***Develop plans and protocols for the NCRIC to notify appropriate personnel of CBRNE screening, search and detection data and results***

***Develop plans and protocols to acquire and distribute CBRNE issues or alarms and their resolution***

***CBRNE screening, search and detection operator/personnel specially trained and equipped with the ability to recognize potential CBRNE threats through equipment, education, and effective protocols are in place***

### 2012-2015 CALIFORNIA HOMELAND SECURITY STRATEGY

**Goal 5 Strengthen Catastrophic CBRNE and All Hazards Incident Planning, Detection and Response Capabilities**

*Objective 5.3 Implement the California Preventative Radiological and Nuclear Detection Program*

***Determine the resources and capabilities of all entities to assist with preventive radiological and nuclear detection and reporting activities.***

***Determine existing gaps in current preventive radiological and nuclear detection capabilities and identify solutions that directly support programs at the local and regional level.***

***Develop and sustain a collaborative framework supported by a Concept of Operations and guidelines for preventive radiological and nuclear detection.***

***Identify the recommended tools and resources available to interdict a potential threat to all state/local entities.***

***Establish a radiological and nuclear information sharing protocol among all partners.***

***Establish consistent operational guidelines for potential threat source notification and adjudication.***

***Incorporate preventive radiological and nuclear detection into training programs.***

***Incorporate preventive radiological and nuclear detection into exercise programs.***

The Bay Area recognizes that radiological and nuclear threats exist and is striving to detect and report unauthorized attempts to import, possess, store, develop, or transport nuclear or radiological material. To counter this threat, the Bay Area has partnered with the Department of Homeland Security's Domestic Nuclear Detection Office (DNDO) to develop a robust and coherent radiological/nuclear detection architecture. This partnership is part of a layered national defense system.

The Bay Area took the first step in this process in February 2014 by establishing a Preventive Radiological and Nuclear Detection (PRND) program, the development of which was managed by a PRND Executive Task Force comprised of Federal, State and local agencies from across the public safety and environmental protection disciplines. The purpose of this task force was to provide the leadership required for this program to function in a collaborative and effective manner. Due to the number of jurisdictions involved and the administrative tasks required in developing and sustaining the program, the PRND Program had several working groups including Concept of Operations, Equipment & Capabilities, Special Events and Training & Exercise. Once initial program development was complete, stewardship of the program transitioned to the Bay Area Urban Area Security Initiative (UASI) Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) and Training and Exercise working groups.

The concept of the PRND Program is to have a protection strategy, resourced with the capability to perform intelligence, threat and risk driven public safety interdiction, and surveillance and detection throughout the Bay Area. The PRND Program will provide a regional reporting mechanism that will allow Bay Area partners to share radiological data. This data will help identify a metric to inform resource deployment decisions and reduce the risk of radiation exposure to first responders and the public.

The complex and potentially catastrophic nature of the threat requires expertise and capabilities from a variety of disciplines. There is broad participation in the PRND Program among police, fire, and health disciplines throughout the region, the extent of which depends on jurisdictional authorities and funding.

The following program information and implementation details have been developed through broad interagency workshops and working groups that were facilitated by DNDO as part of the 2014 Bay Area PRND Program development effort. This Strategy is a living document; it will be updated as needed to address changes in strategy, program goals, risk information and program coordination.

## PRND RISK MANAGEMENT

Whether or not terrorist organizations are able to acquire nuclear or radiological material, their desire to do so is clear. Cooperative inter-agency PRND programs seek to not only deny the terrorists access to materials but also provide the ability to detect their movement or attempted use should they be successful in their acquisition attempts.

The nexus of weapons of mass destruction (WMD) and terrorism causes one of the gravest potential risks to the national security of the United States. A successful major WMD terrorist attack could result in hundreds or thousands of casualties and produce far reaching economic and political consequences. The U.S. Government places the highest priority on working with a broad range of international and domestic partners including state, local, and tribal governments as well as private sector organizations, to develop effective partnerships to meet the global challenge of WMD terrorism.

The U.S. strategy for combating WMD terrorism relies on several key objectives, including:

1. Detecting and disrupting terrorists' attempts to move WMD materials, weapons or personnel through expanding our capability to detect illicit materials or weapons traveling within the U.S.
2. Denying terrorists' access to materials, expertise, and other enabling capabilities required to develop WMD.
3. Developing a range of deterrence strategies tailored to various WMD threats (Chemical, Biological, Radiological and Nuclear) and the individual actors who facilitate or enable those threats.
4. Seek to contain, interdict, and eliminate the threat once a potential attack has been detected.

Some terrorist organizations, such as Al Qaeda, have openly stated their desire to acquire and use nuclear weapons. The diffusion of scientific and technical information, some of which is now available on the internet, has increased the risk that terrorists in possession of sufficient nuclear material may attempt to develop their own nuclear weapon. Terrorists may, however, seek to form ties with a variety of facilitators to develop their own nuclear capability. These facilitators may seek to profit from the sale of nuclear material, a completed device, or technical knowledge gathered from nuclear experts involved in a national nuclear program.

Additionally, some terrorists may seek to acquire radiological materials for use in a radiological dispersal device (RDD), such as a "dirty bomb". Although an RDD is far less destructive than the nuclear threat, the public panic and the economic disruption caused by an RDD would be significant. In order to manage the potential risk posed by the radiological/nuclear threat the PRND Program focuses on enhancing several of the core capabilities of Bay Area preparedness.

With more than eight million residents, over 12,000 critical infrastructure and key resources, and a variety of transportation pathways, the Bay Area is at considerable risk to the threat of a

radiological or nuclear device being transported through, or utilized within the area. Collaboration of Bay Area police, fire, and health disciplines from throughout the region via a unified and coordinated PRND program should help mitigate the radiological/nuclear risk to the region and the continental U.S.

## PRND PROGRAM MISSION

The mission of the Bay Area Preventive Radiological/Nuclear Detection (PRND) Program is to protect its residents, visitors, economy, critical infrastructure, and natural resources against threats posed by the unauthorized use of radiological or nuclear materials.

## PROGRAM OBJECTIVES

The ultimate goal of the PRND Program is to *enhance the radiological and nuclear terrorism prevention capacity in the Bay Area by expanding and coordinating radiological detection capabilities to detect and interdict illicit radiological and nuclear materials before they are employed.* Five key *Prevention/Protection Mission Area* PRND Program Objectives have been developed to achieve this goal:

1. Implement a regional Concept of Operations (ConOps) and guidelines for comprehensive PRND programs and alarm adjudication that are consistent with the State of California ConOps.
2. Support uniformity of protocols and equipment to foster interoperability, training consistency and efficient procurements.
3. Implement a PRND information-sharing protocol among regional partners to improve decision-making, response and reporting.
4. Promote best practice approaches for standardized training and operational response protocols among Federal, State, tribal and local law enforcement and first responders.
5. Identify key Rad/Nuc detection capability gaps (at a regional level) to help drive future funding and program development.

Additional objectives include the rapid detection and identification of a radiological release; the safety of first responders and citizens from radiation threats; and the detection of the hazardous use of legitimate sources to bring them into safe regulatory compliance.

## PROGRAM END STATES

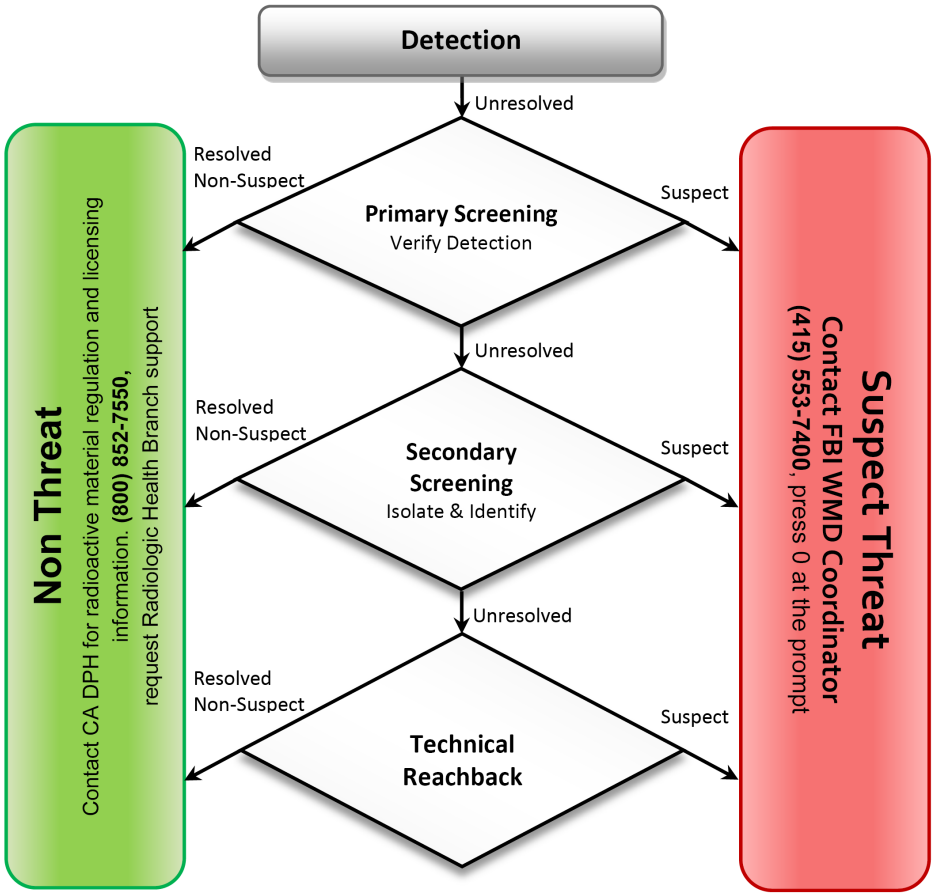
In support of the Bay Area and State of California Homeland Security Strategies, the Bay Area PRND Program strives for:

- A sustainable PRND Program that ensures that officers in the field have the equipment, training, and technical support structure to help them quickly and successfully resolve radiation detection issues.

- A robust and efficient program that minimizes impacts on commerce and the public while avoiding undue operational impacts on the agencies that perform PRND operations.
- Coordinated progression of potential radiological and nuclear threats to Federal support.
- Collaborative PRND data/intelligence sharing and incident communications, coordinated through local public safety agencies and regional fusion centers.
- Uniformity of protocols and radiation detection equipment to foster interoperability and efficient training.
- Leveraging of multi-agency support for special events to provide a baseline mechanism for PRND collaboration.
- A framework that supports the integration of additional agencies and regional partners.
- Sustained regional resources for surge and alarm adjudication that can be shared across the region.

## PRND CONCEPT OF OPERATIONS

The Bay Area PRND program has developed a unified, three phase PRND screening process to adjudicate and resolve radiation alarms, summarized in the figure and below.




**Unified Bay Area PRND Alarm Response Process**

Alarms can be adjudicated as Non-Threat or Threat, with the ability to adjudicate during any phase of the alarm response process. Bay Area stakeholders are requested to immediately contact the San Francisco Federal Bureau of Investigation (FBI) Weapons of Mass Destruction (WMD) Coordinator at the earliest indication of a suspect criminal/threat condition.

With proper training, most radiological/nuclear alarms will be adjudicated at the initial detection/primary screening level. Unresolved alarms will require secondary screening to further characterize the nature of the alarm, and may require additional technical reachback/support depending on the primary screening agency's capabilities. The process of resolving an alarm using secondary screening and technical reachback does not necessarily indicate a potential threat, rather it is due diligence to resolve the situation to the operator's satisfaction. Even after an alarm has been adjudicated as Non-Threat, follow up action may be required and can include operational and/or regulatory response activities to mitigate actual or perceived radiation hazards and risks to workers, the public, and/or the environment.

Bay Area State and local law enforcement agencies, such as the California Highway Patrol, county sheriff's offices and local police departments typically have the primary screening role. Secondary Screening resources may originate from within the primary screening agency, or from other local, State or Federal agency/jurisdiction via existing command and control of such resources and/or mutual aid agreement. County and local bomb squads and County Fire/HazMat Teams are typical providers of secondary screening resources. There are several State and Federal assets available to Bay Area agencies to support remote technical reachback. The National Nuclear Security Administration "Triage" and the Department of Homeland Security Joint Analysis Center provide remote analysis of site-specific data and other technical information to alarm adjudicators to aid in screeners' decision making process . The California Department of Public Health Radiologic Health Branch provides regulatory and technical support regarding licensed use of radioactive material, common sources of non-threat alarms, radioactive material safety and controls, and interpretation of reachback results for identification of regulatory or public health/exposure concerns..

## PROGRAM COORDINATION

There is a strong governance structure already in place in the Bay Area for homeland security grant funding and regional planning via the Bay Area Urban Areas Security Initiative (UASI). Bay Area governments and agencies have demonstrated the ability to work collaboratively and with a true regional and risk-based perspective.

Acknowledging that the PRND effort is a voluntary coalition, the participants recognize that while they are responsible to their local authorities and needs, they also contribute to the regional approach to prevention in the PRND effort. This is a hallmark of all Bay Area UASI sponsored grants and projects.

The UASI CBRNE Working Group, which meets in conjunction with the UASI Training and Exercise Working Group, will help lead regional PRND program coordination and sustainment. The CBRNE working group will act as the initial home for ongoing coordinative efforts, with formation of a PRND-specific subgroup and informal task forces (e.g. special events, equipment) coordinated, as necessary, to continue the PRND program development and implementation. Monthly meetings of the CBRNE/Training and Exercise Working Groups will be used to maintain awareness of PRND activities with regards to capability development, training and exercise. Periodic PRND subgroup meetings will be supported to focus on regional experiences and lessons learned, gap reviews and continued capability development

The UASI working groups will include agency representatives from Federal, State and local law enforcement, fire departments, core-city public safety based hazardous materials and explosive ordnance teams, and public health specialists that play a role in the PRND program. The UASI encourages agencies to designate an Agency PRND Coordinator (by name or function) to support equipment monitoring, maintenance, training, and oversight of the program within their agency and provide input into region-wide PRND activity planning.

The UASI CBRNE and Training & Exercise working groups have identified PRND as a gap in past regional assessments. Although agencies may participate in the PRND effort independently, the PRND philosophy will continue to be regional in filling gaps. The benefit is to avoid duplicate or missing grant requests and promote agency interoperability. This approach will encourage an annual regional UASI equipment grant application for PRND equipment, based on the reviews and recommendations of the PRND partner agencies through the CBRNE Working Group.

The UASI CBRNE Working Group will steward regional equipment procurement and distribution planning and participant responsibilities. The UASI CBRNE WG agrees to maintain an inventory of PRND equipment and sources and collect regional lessons learned, usage, training, and drill/exercise statistics from participating agencies.

The Bay Area UASI is responsible for performing periodic regional equipment gap analysis, technology review, and general capability evaluations to inform the on-going monitoring and procurement process. The CBRNE Working Group will facilitate equipment comparisons and demonstrations to ensure the Bay Area PRND Program appropriately advances with evolving technologies and capabilities.

## TRAINING AND EXERCISE

In support of the Bay Area PRND Program Strategy, preventive radiological/nuclear detection will be incorporated into regional training and exercise programs through:

- A Homeland Security Exercise and Evaluation Program (HSEEP)-consistent PRND exercise program.

- A process to coordinate the training and exercise activities of Bay Area jurisdictions in order to maximize efficiency and improve interoperability.
- Provision of training appropriate for specific roles within the PRND Program.
- Development of exercise scenarios that emphasize the need for well-defined roles and responsibilities.

PRND will be included in the Bay Area UASI Multi-Year Training and Exercise Plan development process to ensure appropriate prioritization of training efforts. It is the goal and intent of this strategy to bring cost effective, sustainable, and relevant training to the state and local agencies that includes Bay Area specific issues and conduct of operations information. The Bay Area will utilize a combination of Federal, regional and local training options to efficiently deliver effective training to the variety of Bay Area law enforcement and public safety disciplines.