

## Turbo FRMAC Expansion – Extending radiological assessment software to state & local response agencies

### Leveraging R&D Funding to Fill Critical Gaps in the Interagency Rad/Nuc Response and Recovery Architecture

Turbo FRMAC (TF) is a widely recognized radiological assessment software tool that can be used during a radiological or nuclear incident to access and calculate radiological data and to inform decision making, including evacuation and shelter-in-place recommendations, time workers can spend in a contaminated environment, and other significant public health questions. TF's value to local and state response agencies is limited in its current state because it is not readily available or easy to distribute. This project will work to ensure that Turbo FRMAC can be leveraged by local and state first responders.

### Partnering with Sandia National Laboratory to bring the Turbo FRMAC to State and Local Responders

DHS S&T is partnering with Sandia National Laboratory (SNL) to refine Turbo FRMAC so it can be an easily accessible and useful tool for state and local responders. This project will introduce improved shelter algorithms and other data developed by Lawrence Livermore National Laboratory (LLNL) into TF, prepare the software to function in a web-based, cloud environment, and develop additional training for users. A follow-on effort once the product is available is to test and demonstrate the capabilities of the tool with first responders around the country.

### Using R&D Efforts to Link Key Federal Information Resources with State and Local Responders

Although the outputs of TF are accessible to anyone in the first responder community following a radiological or nuclear incident, the ability to use the data to receive real-time decision-support tools for those closest to the incident is missing. SNL's development of technical requirements for a cloud-based TF solution will address this gap.

### Anticipated Results of this Project

Though this research, DHS S&T will provide first responders with:

- A finalized cloud-enabled version of Turbo FRMAC with updated shelter information
- An updated FRMAC Assessment Manual that includes shielding factors and partial occupancy factors
- A process for training users for TF use



### Building Critical Relationships and Partnerships to Support Rad/Nuc Preparedness

As with all projects in DHS S&T's Rad/Nuc Response and Recovery R&D portfolio, this work relies heavily on first responders and interagency workgroups to assist in the scoping and prioritizing of initiatives. The research and testing associated with this project is being conducted by the following DHS S&T partners:

- Sandia National Laboratory
- National Atmospheric Release Advisory Center (NARAC)
- Turbo FRMAC Assessment Working Group

