2022 Annual Report

Radiological Emergency Preparedness Program

July 2023

FEMA

Director's Letter

The 2022 Radiological Emergency Preparedness (REP) Program Annual Report highlights the work and accomplishments of FEMA in collaboration with state, local, and tribal communities surrounding commercial nuclear power facilities, to ensure the public's health and safety.

We experienced a higher-than-normal operational tempo year with the continuation of postponed (from 2020 to 2021) and regularly scheduled drills and exercise evaluations, updates to REP Program training courses, and several high-priority initiatives to ensure that offsite reasonable assurance was maintained.

The REP Program is addressing the ever-evolving landscape of emergency management by focusing on the 2022–2026 FEMA Strategic Plan and agency goals of advancing equity, diversity and inclusion, and data-driven decision making. These efforts will continue to expand in calendar year 2023 and beyond.

FEMA appreciates the vital roles that states, local communities, and tribal nations perform before, during and after disasters. The REP Program's ongoing success is heavily dependent upon our ability to communicate and closely collaborate in a whole-community approach. The strong working relationships we have formed and bolstered with stakeholders over the years are built on the strengths of offsite response organizations who are critical resources to our nation becoming more prepared and resilient.

This report illustrates FEMA's continuing mission to prepare the whole community for radiological emergencies. I look forward to continuing our work with internal and external partners to continuously improve and build upon the successes of the REP Program.

Sincerely,

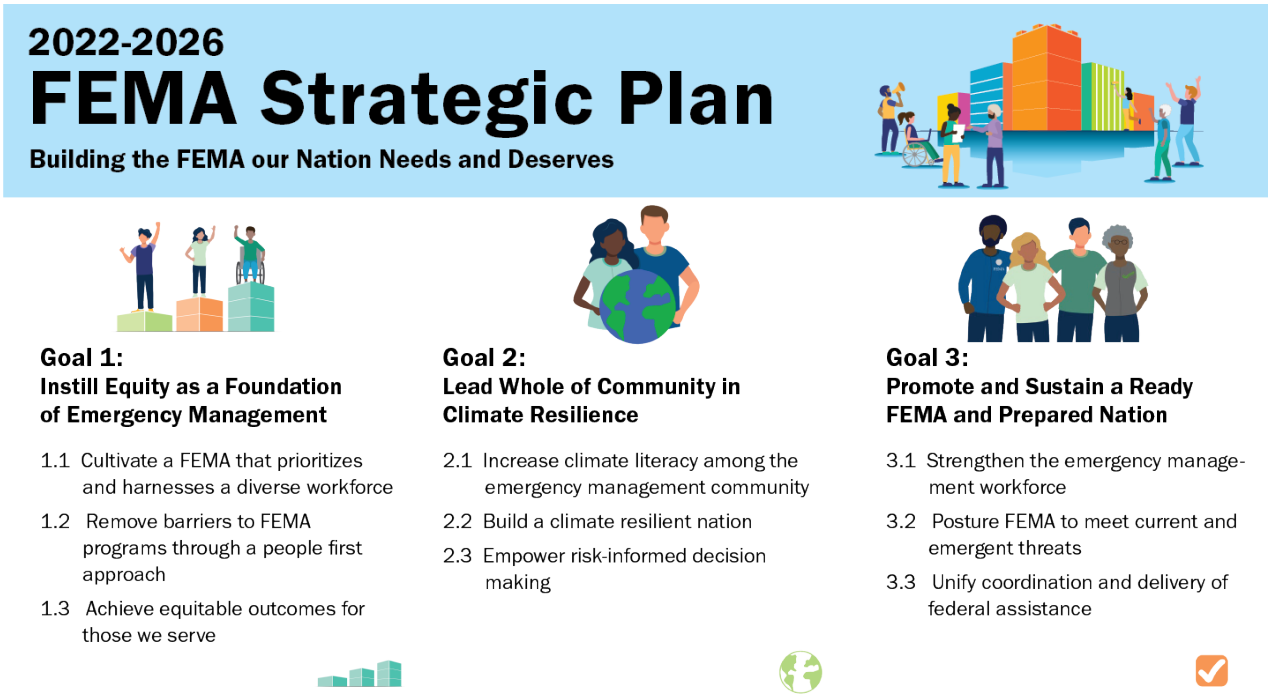
David Gudinas
Director (Acting), FEMA, Office of National Exercises and Technological Hazards

Contents

Executive Summary

For more than four decades, the Radiological Emergency Preparedness (REP) Program has assisted state, local, tribal and territorial (SLTT) governments in developing and implementing offsite radiological emergency preparedness activities within the emergency planning zones (EPZ) of U.S. Nuclear Regulatory Commission (NRC)-licensed commercial nuclear power facilities. This program is managed by the REP Program Branch of FEMA's Technological Hazards Division (THD), which exists to help the nation address the unique emergency preparedness and response requirements posed by technological hazards. The 2022 REP Program Annual Report showcases significant accomplishments, highlights the impact of the program within REP communities, and details initiatives and activities that align with the 2022–2026 FEMA Strategic Plan (see image below).

The snapshot on the following page is a summary of successes and demonstrates the REP Program's reach in the emergency preparedness community.



FEMA Strategic Goals and Objectives

2022 RADIOLOGICAL EMERGENCY PREPAREDNESS PROGRAM

The Radiological Emergency Preparedness (REP) Program community leads the nation in building a culture of preparedness while safeguarding the health and safety of the public in communities near commercial nuclear power plants (NPPs).

REP Program Community at a Glance

Nearly **4.2M people live within 10 miles** of a commercially operating NPP.

There are **54 operating NPPs** with **93 power reactors** in **9 FEMA regions** and **28 states**, producing approximately **18%** of the nation's power.

On average, a REP Program exercise includes evaluation at **54 locations**, with **134 agencies participating**.

What We Do

Educate jurisdictions to prepare for the possibility of an incident at an NPP.

Provide guidance and policies to strengthen capabilities to prevent, respond to, and recover from an incident at an NPP

Evaluate emergency plans and level of preparedness of jurisdictions to respond to an incident at an NPP

Partner with federal, state, local, and tribal government officials and industry stakeholders

What We Did

37 REP exercises evaluated

- **26** plume;
- **4** ingestion pathway;
- **6** hostile-action based;
- **1** recovery, reentry, and return

Conducted **2,736** assessments
Engaged **1,387** private organizations

Provided **88** trainings leading to **1,206 course completions**

40% of trainings were virtual

33 disaster deployments supported

- **5** virtual;
- **24** in-person;
- **4** virtual and in-person

Severe weather **Wildfires** **COVID-19** **Hurricanes**

A staff member was FEMA's detailee to the Senate Homeland Security and Governmental Affairs Committee. The staff member's perspective strongly informed development of the Technological Hazards Preparedness and Training Act, signed into law by President Biden on December 23, 2022.

2019 REP Program Manual Guidance Implementation

70% of exercises were evaluated using revised guidance

Programmatic Efforts

Educate staff, OROs, and federal partners

Leverage data and technology to inform decision making, understand needs and track progress

Become a "go-to" resource for expertise in emergency preparedness and response capabilities

Expand equity and inclusion efforts to understand and better serve all communities

Establish and strengthen interagency and external partners to address gaps as a whole community

FEMA REP Program

REP Program Initiatives

2019 REP PROGRAM MANUAL IMPLEMENTATION

2022-2026 FEMA Strategic Plan Goal 3: Promote and Sustain a Ready FEMA and Prepared Nation

The REP Program Manual (RPM) serves as the principal guidance for the Radiological Emergency Preparedness (REP) Program. The 2016 manual was revised in 2019 to reflect changes made to NUREG-0654/FEMA-REP-1, Rev. 2. These changes modernize general emergency planning information pertinent to nuclear power facilities and refocus the evaluation criteria on overall emergency preparedness program capabilities essential to meet the planning standards found in both FEMA and Nuclear Regulatory Commission (NRC) regulations. The 2019 RPM update includes revisions to the checklists and review guides used by FEMA staff to conduct assessments. In 2022, FEMA Regional Assistance Committee (RAC) Chairs and site specialists provided direction and ongoing assistance to offsite response organizations (OROs) involved in planning and assessment activities. As a result of division- and program-wide collaboration efforts, 26 exercises were evaluated using the revised guidance. The RPM will be further revised in 2023 to ensure guidance remains up to date.

FEMA Technological Hazards Division (THD) Policy and Doctrine Branch led the revised guidance rollout effort and provided REP staff and OROs with opportunities to understand changes and begin implementation. Those educational opportunities included a continuation from the 2021 Regional Policy Implementation Workshops, which provided training for FEMA staff. The REP Virtual Learning Sessions were collaborative discussions on policy implementation, and the Internal REP Policy Workshop helped to enhance the skills of exercise evaluators and site specialists. The FEMA REP Program Training Section and FEMA THD Policy and Doctrine Branch also partnered to develop and facilitate the Policy and Training Collaboration Sessions to review and discuss in greater depth the 2019 RPM changes and available templates. All courses taught through the REP Program Training Section were updated in 2020 and 2021 to align with the 2019 manual. Updates to align with the 2023 RPM changes are ongoing for the REP Core Concepts Course (RCCC) and REP Plume Plan Review (RPPR) course. Implementation resources can be found in the REPP RPM Implementation Community, a public folder on the Preparedness Toolkit (PrepToolkit).

9 FEMA Regional Policy Implementation Workshops

2 Internal Five-part Series Policy Learning Sessions

4 Internal REP Policy Workshops

3 External Policy Learning Sessions

4 Sessions at the 2022 National Radiological Emergency Preparedness Conference

8 Policy and Training Collaboration Sessions

ALERT AND NOTIFICATION SYSTEM MODERNIZATION

2022-2026 FEMA Strategic Plan Goal 3: Promote and Sustain a Ready FEMA and Prepared Nation

The FEMA REP Program continues to support nuclear power facilities and communities who decide to adopt the Integrated Public Alert and Warning System (IPAWS), a government-owned and operated system that connects the Emergency Alert System (EAS), Wireless Emergency Alerts (WEAs) and alerts from the National Weather Service, along with other approved alerting authorities. These systems alert the public in real time in the event of an emergency. Nuclear power facilities and REP communities have been approved to integrate IPAWS as either their primary or backup alert or notification system. In 2022, the FEMA THD Policy and Doctrine Branch updated the Alert and Notification System (ANS) Evaluation Report template to improve guidance provided to OROs who submit ANS change proposals to integrate IPAWS. A new frequently asked questions document was also released to address common questions from stakeholders during the evaluation report development process.

To mitigate communication gaps across the nation, FEMA THD is supporting the National Preparedness Assessment Division, which is leading the Communications Core Capability Working Group, a subgroup for the White House Infrastructure Implementation Team created from the Infrastructure Investment and Jobs Act of 2021. The purpose of the working group is to help identify gaps, standardize policies and create potential solutions for emergency management communities using communications including IPAWS.

IPAWS representatives partnered with the REP Program Branch's Geographic Information System (GIS) and Data Analytics teams to develop an internal data resource for IPAWS adoption. The IPAWS dashboard enables FEMA REP Program staff to review and monitor SLTT IPAWS performance across communities. This will help ensure REP Program-approved alerting authorities are maintaining their ability to alert the public during an emergency.

In FEMA Region 5, the Minnesota Homeland Security and Emergency Management demonstrated IPAWS capabilities during an annual siren test and received biennial exercise credit for a portion of Capability Target 3.2 (Alert and Notification of the Public) for Prairie Island Nuclear Generating Plant. The IPAWS system is a backup to sirens for the state.

The FEMA Region 1 Technological Hazards Branch Chief, who also serves as the Regional Advisory Council (RAC) chair, visited FEMA's IPAWS Technical Support Services Facility (TSSF) after licensees expressed interest in IPAWS. There, the Branch Chief learned more about the system and how it provides SLTT governments with relevant and executable planning, training, exercise guidance and policies regarding incidents at nuclear power facilities. The IPAWS TSSF also provides training and practice, including sending test messages and other resources for state, local, county, tribal governments who have questions. IPAWS TSSF staff can be reached at Fema-ipaws-lab@fema.dhs.gov or 1-84-IPAWSLAB (1-844-729-7522).

9 NPPs have been approved to use IPAWS

In 2022, Surry and North Anna Power Stations were approved to replace their primary siren system with IPAWS

On average, 3–4 proposals are submitted a year

THD DATA ANALYTICS PROGRAM INTEGRATION

2022-2026 FEMA Strategic Plan Objective 2.3: Empower Risk-Informed Decision Making

The THD Data Analytics Program established a suite of dashboards and analytical tools to develop a programmatic data infrastructure, support regional and community stakeholders, and drive strategic decision making. The datasets for the Regional Overview and Senior Leadership Dashboards contain key information from more than 160 after action reports (AARs) using a collection of tailored algorithms, including exercise findings, locations evaluated and participating agencies. In 2022, the REP Program Branch Operations Section's Data Analytics Program created the REP Program Analytics Working Group to educate FEMA staff and discuss needs in support of OROs with their radiological preparedness planning. This exchange of information allows for continuous improvement of data products. Overall, dashboards reduce time spent gathering information and streamline exercise-planning efforts.

FEMA regions are expanding ideas to leverage available data. For example, the THD Data Analytics Program team answered a request from FEMA Region 4's Technological Hazards Branch to develop the Social Vulnerability Index Pilot Dashboard. The region can track interactions with high-vulnerability counties through exercises, drills and eventually other types of interactions (e.g., staff assistance visits). This dashboard is designed to help FEMA Region 4 track its progress on instilling equity as a foundation of emergency management. The data have also supported the development of the region's first Biennial Preparedness Report and other datasets. In FEMA Region 3, the National Preparedness Division is developing a Regional Analytics Support Branch, which will assist all program areas in developing analytical methods, processes, and reporting products to enhance the region's capability to perform data-driven decision making and program evaluation. The FEMA Region 3 Technological Hazards Branch will leverage its expertise to help support ongoing

REP Program preparedness efforts. The following figure provides a closer look at how four specific dashboards impacted REP communities and highlights other accomplishments for the year.

Dashboards With Major Impact

Regional Overview: For RAC Chair and site specialist to track issues and findings, view exercise and drill progress over time, etc. Uses AAR data.

Senior Leadership: Program-wide view of activities conducted in FEMA regions, assessment results, evaluations, locations, and participating agencies. Uses AAR data.

REP Training: Track training courses, locations, changes in requested courses over time, etc.

IPAWS: Provides a comprehensive view of monthly proficiency demonstration results and certification and Memorandum of Agreement (MOA) expiration dates, known as Collaborative Operating Groups (COGs).

2022 Accomplishments

Conducted three educational workshops and trainings for Analytics Working Group.

Integrated capability targets as a result of the 2019 RPM guidance.

Exchanged ideas to leverage data analytics with the National Exercise Division.

Created an identified emergency preparedness issue tracker that regions can use to refer back to open and closed issues.

EQUITY AND INCLUSION IN THE REP PROGRAM

FEMA Goal 1: Instill Equity as a Foundation of Emergency Management

There are many factors that impact how communities experience and respond to disasters. Those elements include a community's history, geography, and culture. FEMA is committed to "instilling equity as a foundation of emergency management and striving to meet the unique needs of underserved communities [and] the emergency management community [to] build a more resilient nation." REP Program staff routinely and proactively engage with communities, giving personnel opportunities to become aware of, and responsive to, the needs of different individuals and groups. The relationships that are formed with OROs help to identify gaps or disparities in outcomes and work toward advancing equity and inclusion. Federal partners also contribute to this pursuit, which expands available resources and fosters more relationship building with communities that the program serves. Several diversity, equity and inclusion efforts occurred in 2022 throughout the REP Program, including FEMA Region 4's Social Vulnerability Index Pilot Dashboard and FEMA Region 6's review of public information materials to ensure the language meets diversity integration

standards. Engaging in ongoing dialogue to understand and educate tribal nations is also part of this critical work.

There are 574 federally recognized tribes in the United States. Currently, 33 federally recognized tribes encompass populations, lands and legal representation within the 50-mile EPZ of 22 commercial nuclear power facilities. In August 2022, FEMA released the 2022–2026 National Tribal Strategy to enhance collaboration with tribal nations. This strategy is another tool to help the REP Program build, enhance and sustain relationships with tribal communities. FEMA THD and the REP Program began working with the Federal Radiological Preparedness Coordinating Committee (FRPCC), NRC, and other federal agencies to expand engagement efforts with tribal nations. Those efforts include reaching out to tribes and consortiums and incorporating FEMA Regional Tribal Liaisons to engage and include in REP training and preparedness planning efforts. The FEMA Regional Tribal Liaisons and the National Tribal Affairs Advocate have also been instrumental in providing consultation requirements.

FEMA-NRC 2023–2024 JOINT STRATEGIC PLAN

FEMA Goal 3.2: Posture FEMA to Meet Current and Emergent Threats

In December 2022, FEMA THD and its NRC counterparts in the Division of Preparedness and Response (DPR) published the first joint strategic plan to establish common goals and a path forward to strengthen a long-standing partnership. The plan helps to communicate "mutual objectives, the vision for reaching those objectives, and measures of success." In addition, both agencies will have a reference for who is leading in respective areas and how to support one another and stakeholders.

Shared Vision

"[T]o be valued partners in promoting public safety and resilience through emergency preparedness and response for commercial nuclear power plants, other new technologies, and the surrounding communities."

Common Mission

To "[p]rovide reasonable assurance of adequate protection of public health and safety at commercial nuclear plants, other new technologies, and in the surrounding communities."

Collaboration that strengthens partnership

To collaborate on common mission areas related to radiological emergency preparedness through intentional partnership.

Ensuring mutual organizational resilience

To engage in deliberate and frequent communication to increase cross-organizational health.

Unifying strategic engagement and communications

To produce/engage in thoughtful and coordinated messaging that informs and engages all stakeholders.

GEOSPATIAL INFORMATION SYSTEMS & EDUCATION

FEMA Goal 2.3: Empower Risk-Informed Decision Making

FEMA REP Program trained partners through 11 virtual and in-person trainings to use the REP Public Information Map (PIM) for emergency planning and response. The PIM also supports a focus on all-hazards situational awareness and decision making at all levels, supports equity and vulnerable populations, and provides a workspace for mapping exercise scenarios. The GIS team's largest project for the year was the development of easy-to-follow tutorial videos, which guides users on how to use the PIM.

To meet specific regional needs, the GIS team developed Regional Preliminary Capability Assessment (PCA)/Disaster Initiated Review (DIR) maps that give DIR teams visual layouts of support facility locations. FEMA Region 6 offered invaluable insight to help the GIS team develop prototypes and refine products to best serve future needs of all regions to support resilience in those communities.

Throughout the year, FEMA participated in several engagements with the NRC to exchange mapping processes with the agency's GIS section and activation procedures with the NRC Emergency Operations Center. As a result, there will be better collaboration between the two agencies during activations of the FEMA National Response Coordination Center and the NRC's emergency operations center.

PREPAREDNESS TOOLKIT

FEMA Goal 3: Promote and Sustain a Ready FEMA and Prepared Nation

The Preparedness Toolkit is an online portal that provides the whole community with tools to aid in implementing all six areas of the National Preparedness System. For the REP Program, the Preparedness Toolkit offers states, local governments and tribal governments a platform to collaborate and manage exercises and document libraries in support of enhancing preparedness and response capabilities of nuclear power facilities. The REP Program Branch's Planning Section hosted a two-day Preparedness Toolkit super-user workshop in June 2022. The purpose of the workshop was to enhance the skills of the users (particularly during the creation and planning of exercises) and to help them become qualified to provide onsite support. REP exercises utilize Homeland Security Exercise and Evaluation Program based functionality, with customized evaluation methodologies that are aligned to the RPM. Exercise site features include:

- *Exercise data driven reporting: Exercise Evaluation Guides, AARs and evaluation narratives with custom workflows.*
- *Calendar: Enables participants to track events.*
- *Online collaboration: Documents and Media feature provides file storage, organization and versioning.*
- *Registration: PrepToolkit provides a registration form for each exercise that managers may opt to use.*

REP PROGRAM NATIONAL QUALIFICATION SYSTEM DEVELOPMENT

FEMA Goal 3.1: Strengthen the Emergency Management Workforce

The REP Program Branch's Operations Section expanded its efforts to develop the REP Program Exercise Evaluator position title through FEMA's National Qualification System (NQS) process. NQS guidelines provide a mechanism for the REP Program community to define and communicate staffing requirements, establish interoperability across the nation and improve the efficiency of sharing personnel resources through mutual aid. Through NQS, the overall goal is to formalize a process to increase workforce capabilities specifically for radiological emergency preparedness exercises.

The implementation and success of the qualification/certification process relies heavily upon collaboration, primarily through the REP Program NQS Working Group, which is responsible for developing processes, documents and tools that are consistent with NQS doctrine. The REP Program NQS Working Group, in conjunction with the National Integration Center (NIC), conducted discussions with internal and external stakeholders in an effort to further enhance cross collaboration and share best practices that contributed to the development of the evaluator resource tools. This includes a nationally approved REPP Exercise Evaluator position title and Position Task Book. Both documents are available to the REP community and can be found in the National Incident Management System (NIMS) Resource Typing Library Tool.

In the coming year, the Operations Section will develop NQS program guidance, engage partners, educate staff and continue working through the implementation process.

For more information, contact the Operations Team at FEMA-REPP-NQS@fema.dhs.gov.

REP PROGRAM VIRTUAL LEARNING SESSION

FEMA Goal 3.1: Strengthen the Emergency Management Workforce

The purpose of the REP Program Virtual Learning Session is to have an open, virtual platform to discuss REP Program topics, highlight lessons learned and share best practices with OROs to help support emergency planning and training obstacles for communities surrounding commercial nuclear power facilities. In 2022, 24 emergency management related topics were presented to 1,000 participants from 206 jurisdictions over five REP virtual learning sessions. The following sessions covered the REP Program and other divisions of FEMA:

- *REP Program Leadership 2022 Path Forward*
- *A-Team Fukushima Lessons Learned*
- *U.S. Department of Homeland Security (DHS)/FEMA Urban Search & Rescue*
- *FEMA REP Program Policy Updates: REP 21&22*
- *FEMA REP Program GIS Initiative*

FEMA Regional Highlights

The REP Program is carried out daily by the FEMA THD REP Program Branch and nine Technological Hazards Branches (THBs) located in FEMA regions. THBs work collaboratively with OROs, FEMA THD and federal partners to meet regulatory requirements, contribute to program initiatives and meet the mission of FEMA. "In the communities surrounding commercial nuclear power facilities, 44 Code of Federal Regulations (CFR) 350.5(b) directs FEMA's REP Program to review state, local, and tribal radiological emergency plans and preparedness." To meet this directive, REP Program staff verify the capabilities of OROs to implement their emergency plans through several activities, including observing and evaluating exercises and drills, providing staff assistance visits (SAVs), and facilitating trainings.

Regional THB staff play a significant role in directly engaging with REP communities. A big piece of this engagement is staff members' ongoing support of exercise planning and evaluation. In 2022, FEMA regions managed a compressed exercise schedule as a result of postponed exercises during the COVID-19 public health emergency. FEMA evaluated 37 exercises, which is a 23% increase from the annual average. Some counties and states experienced challenges due to staff changes and local emergencies such as wildland fires while executing other aspects of their jobs. Negotiations were key in the exercise and drill planning process.

FEMA addressed challenges by working with planners using out-of-sequence demonstrations, alternative approaches, and other solutions to ease the burden of evaluator and exercise player demands. States can receive assessment credit for participating in alternative demonstration activities, such as exercises and drills outside of the REP Program and actual incidents.

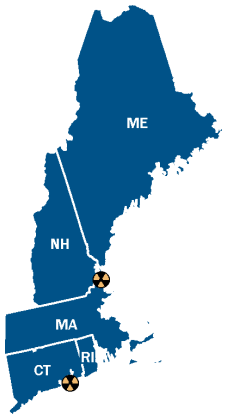
Site specialists within the regional branches conducted plan reviews to identify gaps. SAVs with OROs focused on guidance implementation, proper training and exercise preparation. Alignment with the revised guidance not only moved some OROs to take a closer look at their emergency plans, but also, their all-hazard plans. Training courses helped prepare OROs to rewrite plans by taking them

through crosswalks and checklists produced by the REP Program Training Section and the Policy and Doctrine Branch. Regional Training Liaisons worked to ensure requested REP trainings were accessible throughout the year. A schedule of trainings and educational opportunities can be found in the REP Training Newsletter.

In addition to the above activities, FEMA regions take part in other initiatives to expand knowledge, experience and support in the emergency management community. The following highlights describe a few of the many activities the regions conducted in 2022.

FEMA Region 1

For the first time, the FEMA THD REP Program and the NRC Nuclear Security and Incident Response (NSIR)/DPR hosted FEMA Region 1 for the annual Preliminary Capabilities Assessment (PCA)/Disaster Initiated Review (DIR) Tabletop Exercise (TTX). The exercise was held on June 9, 2022 and engaged more than 70 participants. The region worked closely with the facilitators to develop an exercise design aligned with typical response events in the region.



The chosen scenario and associated injects were used to facilitate discussions between FEMA, NRC, industry, and state governmental agencies. FEMA Region 1, the states of Connecticut and New York and Millstone Nuclear Power Station walked through coordination and communications that would likely occur prior to the deployment of DIR teams to local communities and the process for conducting a PCA/DIR.

The purpose of initiating a PCA and/or DIR is to determine whether a disaster significantly degraded emergency preparedness and response (e.g., a hurricane or earthquake that disrupts roads used for evacuation) in the vicinity of a nuclear power facility. The collaboration between players and facilitators demonstrated successful communication between FEMA and the NRC staff at all levels, as well as the OROs and industry staff throughout the PCA/DIR process. The virtual exercise was also a chance for observers to learn the PCA/DIR process in support of nuclear power facility restarts.

Prior to the TTX, FEMA Region 1 held a REP Program PCA/DIR training course for the region's OROs and internal stakeholders. The training was an opportunity to expand understanding of the process. The FEMA REP Program Training Section also conducts a PCA/DIR training every month beginning in April and throughout hurricane season. The PCA/DIR process is identified in the NRC Inspection Manual (IMC-1601) and FEMA's interim standard operating guide, "Assessment of Offsite Emergency Preparedness Infrastructure and Capabilities following an Incident in the Vicinity of a U.S. Nuclear Regulatory Commission-Licensed Nuclear Power Plant."

FEMA Region 2

FEMA Region 2 has worked to build a relationship with the government of Canada, which operates the Darlington and Pickering nuclear power facilities within the 50-mile EPZ of Robert E. Ginna, Nine Mile Point and James A. FitzPatrick nuclear power facilities. The collaboration between FEMA Region 2 and the Canadian government enhances relations to communicate effectively with a potential or actual radiological event involving Canada, the United States or both countries.

In 2022, FEMA Region 2 RAC Chair met with Public Safety-Canada (PS-CA), Ontario Regional Office personnel in support of the DHS Northern Border Strategy-Implementation Plan (DHS NBS-IP). Discussions were held with Canadian federal counterparts and included Preparedness Program responsibilities and coordination of Region 2 cross-border collaboration, coordination and reporting of DHS NBS-IP with PS-CA Ontario Regional Office supporting staff. Activities for discussion included the following:

- Cross-border emergency and disaster communications;
- Cross-border mutual aid support utilizing International Emergency Management Assistance Compact for utilization and processing of direct support for disaster response along a shared border;
- Radiological Emergency Preparedness exercises concerning U.S. and Canadian nuclear power facilities and their EPZs, which cross the northern international border;
- Opportunities for collaborative training and exercises that meet the initiatives indicated in the DHS Northern Border Strategy and the associated Implementation Plan;
- Continuity of operations (training, exercise, and certification of continuity managers); and
- Cross-border operational and common operational picture between FEMA R2 and PS-CA Ontario Regional Office.

FEMA Region 2 and PS-CA Ontario Regional Office discussed future visits and engagement opportunities. These will serve to further strengthen and foster cross-border emergency communications and preparedness in support of DHS NBS-IP.

FEMA exercises an agency-wide devolution process (transfer or delegation of responsibilities). FEMA Region 2 THB staff found an opportunity to establish a process specifically for the REP Program. As a result, the “Cyber Spear” Devolution Exercise was conducted on July 19, 2022. The exercise tested the capability to transfer operations from FEMA Region 2 to FEMA Region 5 for the REP Program and the Technological Hazards Branch. Both regions have a standard agreement to support the other. The devolution process includes the transfer of operations (continuance of operations, transition of responsibilities, activation of plans, etc.), partial devolution, full devolution (transition of roles and responsibilities, plans and procedures, remote capabilities, etc.), and reconstitution (transfer of personnel, functions are returned, status reports for senior leadership, etc.). The regions used the

PrepToolkit as a common depository for information sharing. Standard operating procedures provide guidance to turn over operations for both regions. Staff were identified to manage collaboration and handle tasks seamlessly. The exercise was created alongside FEMA GIS, a Region 2 continuity of operations specialist, and the Cybersecurity and Infrastructure Security Agency (CISA). CISA ran the exercise and FEMA was evaluated. The long-term goal is to have no gaps in operations and support for communities when there is an incident or unplanned event. Since the exercise the regions identified a gap where reciprocal contacts for state and local were in place, but not for tribal nations and licensees. FEMA Region 5 will devolve to FEMA Region 2 at the next exercise which may focus on a flood incident. The last steps are to conduct after action briefings and identify lessons learned.

FEMA Region 3

The commonwealth of Virginia submitted a significant plan change regarding its alert and notification system to notify the public of an incident at the North Anna and Surry Power Stations. The FEMA Region 3 Technological Hazards Branch staff evaluated the Virginia Alert and Notification Significant Plan Change Exercise and Field Activity held on June 28, 2022. The evaluation was held to validate the commonwealth of Virginia's proposed plan change to remove the existing network of sirens and implement FEMA IPAWS/WEA as the primary alert and notification method. The Virginia Public Notification System (Everbridge Resident Connect) would serve as the backup method for residential and transient populations in the 10-mile EPZ. The exercise was successful, and the plan change was approved by FEMA. The implementation of the new alert and notification system will help the commonwealth of Virginia be more prepared during all-hazards emergencies.

> *[We have] been involved in the REP program since the very beginning. In the shadow of Three Mile Island, we've always taken this nuclear power plant response very seriously. Participating in a REP exercise annually, (because we're also home to Peach Bottom Atomic Power Station), has strengthened our emergency preparedness and response for any incident that arises. Participation in the REP program has allowed us to build relationships with municipal EMAs, first responders, and local elected officials; all the people you want to know during a crisis.*
>
> *— Shen Kreiser, York County Pennsylvania Emergency Management Agency*

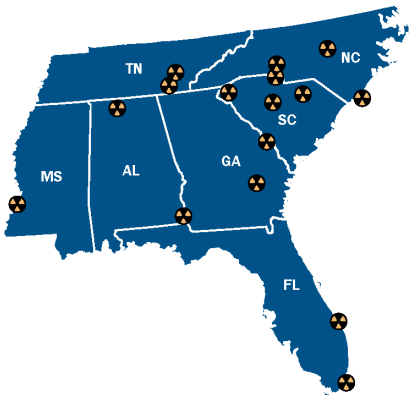
To further enhance cross-collaboration efforts with program partners, FEMA Region 3 accepted an invitation from the Centers for Disease Control and Prevention (CDC) to provide evaluation support for the West Virginia Nuclear Transformus Burman Community Reception Center Tabletop Exercise in Morgantown, West Virginia, on November 16, 2022. The exercise involved approximately 50 players, five facilitators and four evaluators/observers. This exercise used a CDC-designed Tabletop Exercise Simulation Tool (TEST), which is a board game, to teach emergency preparedness and response partners who may be involved in population monitoring about community reception centers (CRCs)

and expand their understanding of how to respond to a radiation incident. By engaging in this project, FEMA Region 3 staff were able to explore the cause and effect of incident decisions at a CRC and assist state and local agencies in identifying potential gaps in current plans and resource requirements.

Exercise feedback was overwhelmingly positive, and participants noted that the board game format of TEST increased player engagement and knowledge retention while enabling the identification of safety hazards, population needs, throughput capacity and staff requirements. FEMA Region 3 continues to collaborate and provide support to the CRCs by socializing the CDC TEST and related training opportunities to OROs in the region to achieve requirements for off-year drills and exercises.

Data analytics is an important piece to fostering informed decision making for the REP Program at all levels. FEMA Region 3 Technological Hazards Branch staff not only provides critical information from exercises and activities to the THD Data Analytics Program, but also supports a new initiative within the region. FEMA Region 3 stood up a Regional Data Analytics Branch in the National Preparedness Division. This branch will assist all program areas in developing analytical methods, processes, and reporting products to enhance the region's capability to perform data-driven decision making and program evaluation. At the branch level, staff developed several tools to identify and visualize trends in exercise results in near real time and prior to publishing an AAR. This tool has supported leadership in regional decision making and allowed the branch to have more targeted conversations with their respective OROs. The FEMA THD Data Analytics Program will leverage the regional expertise to enhance capabilities and support ongoing preparedness efforts.

FEMA Region 4



In July 2022, a community reception center (CRC) exercise was conducted in Rhea County, Tennessee. Planning began in late 2021, culminating in the full-scale exercise on July 14, 2022, with over 140 people from 35 agencies participating. Evacuees including individuals with access and functional needs and service animals moved through the CRC for 95 minutes. Instead of demonstrating reception center processes for only six individuals, which is the minimum requirement, 170 individuals moved through the portal monitor, and 25 people showered. CDC staff collected time measurements for each section of the CRC. Understanding how many trained people it would take to staff and operate a CRC was eye-opening to locals, states, and federal partners alike. This exercise demonstrated how critical plans and procedures are and the need to continually validate and revise them. Additionally, the data gathered will be used to help validate the CDC SimPLER tool to calculate more accurate congregate care center processing times. The tool can be used to interpret estimates, output comparisons, and resources needed for decision makers to better plan reception center needs.

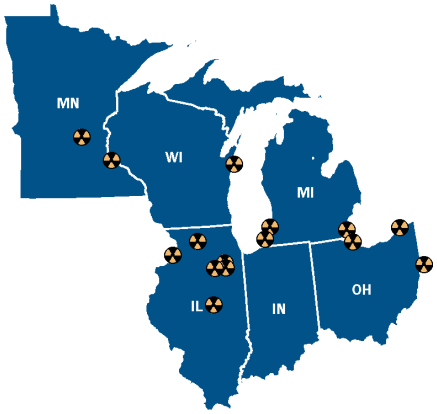
During another reception and congregate care center assessment, the Hamilton County Disaster Animal Response Team, a non-governmental animal support agency, participated in monitoring and decontamination of animals. Volunteer evacuees with dogs were directed to the animal monitoring, decontamination, and kenneling area. Personnel demonstrated initial screening with handheld monitors, simulated decontamination, and re-screening on multiple dogs. Additionally, volunteers from the Partnership for Families, Children, and Adults, another non-governmental organization that assists Chattanooga's communities with people with disabilities and others with access and functional needs, participated in the monitoring process. Evacuees with American Sign Language interpretation needs went through the monitoring/decontamination process. Two interpreters were staffed at the reception and congregate care center and provided American Sign Language instructions to evacuees.

All FEMA REP Program staff are emergency managers, and serving in a disaster deployment allows REP staff to gain experience and engage with their communities in a federally declared disaster. The commonwealth of Kentucky was one of many states that was granted federal disaster assistance "to supplement state, tribal and local recovery efforts in the areas affected by severe weather" through the Robert T. Stafford Disaster Relief and Emergency Assistance Act. FEMA Region 4 had five REP Program staff deployed to Kentucky during the flooding response in August 2022. The state of Florida sent one of its All-Hazards Incident Management Teams (AHIMT), which is the state direction and control component for the REP Program within the state, to assist Kentucky Emergency Management (KYEM). As a result of this existing relationship between FEMA and AHIMT, the deployed REP Program personnel were able to embed themselves with the AHIMT while completing the initial needs and damage assessments for Kentucky counties that experienced storms, flooding and mudslides. This relationship enabled deployed FEMA REP Program staff and AHIMT to serve side by side throughout impacted areas, providing critical incident management for KYEM and affected communities.

North Carolina and Tennessee site specialists developed a more standardized post-plume/ingestion pathway preparatory course to prepare OROs for upcoming ingestion pathway demonstrations. The ingestion training consisted of 3 days of accelerated training that included the REP Post-Plume Awareness Course and briefings from Federal Radiological Monitoring and Assessment Center (FRMAC), the U.S. Department of Agriculture (USDA), as well as American Nuclear Insurers (ANI). These ingestion trainings were key in bolstering the successful ingestion pathway exercises for Brunswick Nuclear Generating Station in North Carolina and the Sequoyah Nuclear Plant in Tennessee. Previously, preparatory familiarization courses for ingestion exercises were not included in site specialists' recommended milestone tasks to offer the states and OROs. The curriculum design was successful enough to be considered the new standard going forward before ingestion pathway exercises. The training content assisted in boosting knowledge and understanding of what a full-scale radiological response would look like, and OROs demonstrated this through successful fulfillment of their ingestion pathway exercises in 2022.

FEMA Region

The FEMA Region 5 THB developed a regional REP GIS project in 2017 through a secure portal that allows the whole community to share GIS data and maps. The portal allows REP stakeholders to view, use, update, and share over 170 validated, timely, and sensitive but unclassified datasets. The GIS project helps the communities surrounding the 15 commercial nuclear power facilities in FEMA Region 5 be better prepared if there is an incident. The system has critical infrastructure that helps communities respond to incidents at commercial nuclear power facilities.



In 2022, the FEMA Region 5 GIS team updated and reviewed over 8,000 data points for all nuclear power facilities within the 50-mile ingestion exposure pathway EPZ. Specifically, the team reviewed the REP-specific data points for each plant and systematically corrected any errors. This customer-centered effort directly improved REP planning and preparedness for over 24 million people in the communities surrounding the region's nuclear power facilities. In addition, the FEMA Region 5 GIS team has verified all GIS data points for FEMA Region 2 and has been assisting FEMA Region 4 with their REP GIS data verifications and updates.

The “Cyber Spear” Devolution Exercise occurred on Tuesday, July 19, 2022, and was conducted by CISA with participation from FEMA. The purpose of the exercise was to “evaluate and improve devolution plans and procedures between FEMA Regions 2 and 5 in the event a cyberattack renders FEMA Region 2 incapable of carrying out operations.” In 60 business days, FEMA Region 5 REP updated all documents, uploaded all state REP plans, and shared plans with the liaison team for the states of New York and New Jersey. All data is secured for continuity of operations plans (COOP) and teams deployed for an exercise or if a real-world event would occur. FEMA Region 2 and Region 5 will continue to work together and ensure the devolution documents and references remain current. Information will be reviewed and updated on a quarterly basis or as needed. Regional liaisons will attend state and local conference calls, as well as exercises, for their assigned location(s). This will allow each team member to make proper introductions and establish lines of communication in the event devolution of a region occurs.

FEMA Region 5 THB is developing a software-driven tool that allows data to automate tasks and add functionality to forms, reports, and controls to improve time management and reduce human errors. This software-driven tool (macroinstruction or macro) helps generate Evaluator Handbooks, AARs, Improvement Plans and other documents essential to the REP program. This effort will reduce labor costs associated with preparing reports and help automate input to the THD Data Analytics Program. The tool is complete with a user interface that staff can adjust the information within the document to match the appropriate nuclear power facilities. If adopted nationwide, the tool would easily save the community thousands of hours of work annually.

FEMA Region

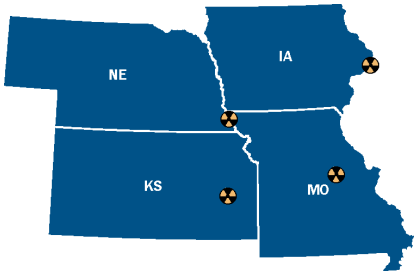
The REP Program works directly and consistently with communities across FEMA regions to understand local priorities, needs and barriers. FEMA Region 6 THB staff reviews the information disseminated to the public within the plume exposure pathway EPZ, including transient populations and those with access and functional needs, regarding how they will be notified and what actions should be taken. The information is disseminated using multiple methods, to include non-English translations per current federal guidance.

According to the 2022 U.S. Census, there was a shift in the demographics of communities in FEMA Region 6. Spanish language speakers make up approximately 25.6% (53,423 total population) and 8.5% (3,028 total population) of individuals living within the 10-mile EPZ of Arkansas Nuclear One Power Plant and South Texas Project Nuclear Power Facility, respectively. In the commitment to 2022-2026 FEMA Strategic Plan Goal 1: *Instill Equity as a Foundation of Emergency Management*, the REP Program continues to proactively engage stakeholders to advance equity for communities. The region's THB staff reviewed public information materials including Spanish-language REP brochures for Arkansas Nuclear One Power Plant and South Texas Project Nuclear power facility.

FEMA Region 6 THB staff used GIS data to track the Chalk Mountain Fire in Somervell County near Comanche Peak Nuclear Power Plant. The fire burned more than 6,000 acres in 2022. The data provided real-time information for leadership briefings. FEMA Region 6 staff worked with GIS subject matter experts (SMEs) to generate new maps for the Waterford Nuclear Generating Station to give visual layouts of support to facility locations.

FEMA Region 7

The FEMA Region 7 THB extended an invitation to the region's external affairs office to observe the Joint Information Center (JIC) during the 2022 Cooper Nuclear Station Plume Exercise. The Acting External Affairs Director observed a REP exercise from the JIC to increase their awareness of the REP program and how it closely relates to their daily work. In addition, FEMA Response staff often participate in REP exercises, simulating normal roles as a state liaison. FEMA Region 7 encourages state and ORO partners to identify additional opportunities for other FEMA staff to observe portions of exercises or other REP activities that relate to their normal tasks and expand their awareness of REP's contribution to emergency preparedness.



The region and the state of Iowa began leveraging quarterly meetings to collaborate in person, conduct site assistance visits, and conduct out-of-sequence evaluations. This reduced time and travel costs and enhanced the relationship between FEMA, the state, OROs, and the licensee.

FEMA Region 9

The FEMA Region 9 THB staff work closely with the OROs to meet the requirements of the REP Program at commercial nuclear power facilities. The FEMA Region 9 THB team assisted the OROs to prepare and implement plans and procedures by providing training, technical assistance, reviews, and staff assistance visits. These preparedness activities happen in person and virtually and are based on the personal connections and relationships staff have with the OROs.

The county offsite response organizations for Diablo Canyon Power Plant continue updating standard operating procedures to align with the 2019 RPM and NUREG 064/FEMA REP 1 Rev 2.

FEMA Region 9 THB staff engaged in implementation discussions with both Diablo Canyon Power Plant and Palo Verde Generating Station OROs related to instrumentation, calibration and air sampling standards. The Health Physicist and Senior Site specialist continue to work with communities to assist in training, technical assistance and standards on instrumentation and calibration to support 2022-2026 FEMA Strategic Plan Objective 3.1: *Strengthen the Emergency Management Workforce*, empowering and building a resilient whole community. Region 9 supported communities with technical assistance discussions of air sample standards and techniques to determine concentration of airborne radioactivity and how to evaluate those results to ensure the health and safety of the communities surrounding commercial nuclear power facilities.

FEMA Region 10

During an incident, communication with communities becomes critical. Utilizing and effectively delivering emergency messages can help ensure public safety, protect property, facilitate response efforts, elicit cooperation, instill public confidence, and help families reunite. The communication tools may include in-person events, printed materials, broadcasts, internet, and social media. Each has advantages and limitations depending on the communication objective and the intended audience. Communication limitations can happen, resulting in communities using continuity options such as radio broadcast systems and the amateur radio networks.

FEMA recognized this gap when normal communication channels were limited during the exercise. Amateur radio operators are active communication volunteers who engage with local public safety organizations but rarely engage directly with FEMA. To foster more continuity connections, the FEMA

Region 10 Technological Hazards Branch began integrating the FEMA Region 10 Response Division Communications team into REP exercises to work with the Amateur Radio Emergency Service and the Radio Amateur Civil Emergency Service volunteers. The local amateur radio operators were able to exchange data with their local contact and to the FEMA communications teams at the 2022 Columbia Plume Exercise.

The REP Program keeps OROs on their toes with their responses to other incidents. That especially includes incidents where they have had to evacuate people and shelter them due to incidents like fires. The risk counties have their designated emergency worker and assistance centers already planned out for the REP Program. They have all the equipment they need including tables, chairs, stations, barricades, and signage. One county even had their public works and road crews set up permanent road signs directing the public to the emergency shelter along the highway and local roads. The signs can be folded in half when not in use and easily opened when needed. – General comments from OROs

FEMA THD Initiatives Supporting the REP Program

Business Operations Branch

The FEMA THD Business Operations Branch administers and supports financial management, procurement of supplies and services, and personnel travel of the REP Program. Investments were made to enhance technology solutions, reduce operational cost, improve budget tracking and transparency, and allow for the more effective and efficient management of REP Program exercises and other support functions. The REP Program is financed from user fees assessed and collected from NRC licensees to cover budgeted costs for radiological emergency planning, preparedness, and response activities in the following year. The Business Operations Branch consistently receives input from FEMA REP Program staff, which helps to assess support and resource allocations. Overall, the following was accomplished in 2022:

- ❑ *Funded staffing and resource needs for 37 planned radiological emergency preparedness exercises, allowing the REP Program to maintain its regulatory requirement to evaluate and report the findings of exercises and drills to state and local governments*
- ❑ *Continued enhancement and integration of the Preparedness Toolkit, FEMA's exercise support information technology system*
- ❑ *Maintained accountability of user fee funds and managed procurement of professional labor, supplies and training materials*

Policy and Doctrine Branch

In 2022, the Policy and Doctrine Branch continued to execute its functions through collaboration with personnel across FEMA THD to meet internal and external stakeholder expectations. The Branch responded to policy and guidance questions from stakeholders providing policy clarification and interpretation of regulatory requirements. In addition to supporting the implementation of the 2019 RPM, the Policy and Doctrine Branch also focused on updating the RPM for a planned December 2023 release.

The Policy and Doctrine Branch partnered with regional THBs and FEMA THD to support several projects including updates to the RCCC course, which provides students with information on REP Program history and key events, federal regulatory policies, basic radiation principles, REP planning standards, and REP program assessment policies and guidance.

A partnership with CDC supported the effort to update portal monitoring standards through FEMA REP-21 ("Contamination Monitoring Standard for a Portal Monitor Used for Radiological Emergency Response") and FEMA REP-22 ("Contamination Monitoring Guidance for Portable Instruments Used for Radiological Emergency Response to Nuclear Power Plant Accidents") under the FRPCC Advisory Working Group.

Federal Radiological Preparedness Coordinating Committee

The FRPCC, co-chaired by THD and the FEMA Response Directorate, provides a national-level, interagency forum for the development and coordination of radiological prevention and preparedness policies and procedures. The Committee provides policy guidance to FEMA for federal radiological incident management activities in support of state, local and tribal governments' radiological emergency planning and preparedness activities. The members include the Environmental Protection Agency (EPA); United States Department of Agriculture (USDA); FEMA, FEMA's Chemical, Biological, Radiological, and Nuclear (CBRN) Office; THD; and Customs and Border Protection. At quarterly meetings, the FRPCC members reviewed lessons learned from the 2020 public health emergency, resulting in better methods to improve interagency coordination and collaboration, and accessibility to common technological platforms to share information and standardize reporting. FRPCC members also highlighted the potential gaps in technical capabilities of nuclear/radiological SMEs in the emergency management workforce. Those gaps include attrition and a limited pipeline of certified nuclear/radiological specialists supporting the REP Program. The Committee identified potential steps to remedy and mitigate those gaps.

Looking Ahead: The REP Program in 2023

The REP Program is adopting the following strategic priorities for our work in 2023:

1. Strengthen our culture with employee engagement and inclusion:

   REP Program staff play a critical role in leading efforts in emergency management to support communities. The REP Program continues to strengthen connections between employees and with the communities we serve through intentional engagement, and by investing in our people through training, education and professional development.

2. Enhance a culture of resilience:

   REP Program staff continue to work with offsite response organizations to align their emergency operations plans in accordance with the 2019 RPM. The intent is to continue identifying capability gaps through data collection and analysis, improving equitable access to resources, and providing training and program guidance to protect public health and safety.

3. Implementing the Technological Hazards Preparedness and Training Act of 2022:

   The Technological Hazards Preparedness and Training Act of 2022, S. 4166, expands FEMA's preparedness programming capacity to help state, local and tribal communities identify the highest risk of vulnerabilities and address technological hazards, such as from radiological or chemical sources. The bill also requires ensuring state, local and tribal governments are aware of the threat and the availability of FEMA technical assistance and training to address this threat and provide an annual report to Congress on the activities taken. This bill mitigates the gap by expanding FEMA THD's scope so that this assistance and preparedness programming can reach additional local communities that face risks from technological hazards. While the level of technical assistance provided to the REP Program and Chemical Stockpile Emergency Preparedness Program (CSEPP) communities exceeds that which is possible under the new legislation, these populations will still benefit from THD's existing support, training, CBRN data sharing network, interactive web tools, and hazard prediction models; be able to leverage lessons learned from the decades-long history of the two THD programs; and gain value from THD's extensive network of public and private sector partners and stakeholders. The REP Program (along with other THD and FEMA National Preparedness Directorate (NPD) components) will support the implementation of the Act and share knowledge (using appropriate non-REP Program funding).

4. Analyze Data to Inform REP Program Priorities:

   The REP Program continues to improve data collection and analysis capabilities and use data to inform program investments to meet the unique needs of the whole community. The REP Program will collaborate with other programs to find lessons learned and best practices within the agency to improve our systems.

Appendix A. Acronyms

AAR After-Action Report

AHIMT All-Hazards Incident Management Teams

ANS Alert and Notification System

CBRN Chemical, Biological,

Radiological and Nuclear

CDC Centers for Disease Control and Prevention

CFR Code of Federal Regulations

CRC Community Reception Center

CSEPP Chemical Stockpile Emergency Preparedness Program

DHS U.S. Department of Homeland Security

DHS EEP Department of Homeland Security Exercise Evaluation Program

DHS NBS-IP DHS Northern Border Strategy-Implementation Plan

DIR Disaster-Initiated Review

DPR Division of Preparedness and Response (of the NRC)

FEMA Federal Emergency Management Agency

EAS Emergency Alert System

EPA U.S. Environmental Protection Agency

EPZ Emergency Planning Zone

FRPCC Federal Radiological Preparedness Coordinating Committee

GIS Geospatial Information System

IPAWS Integrated Public Alert and Warning System

JIC Joint Information Center

KYEM Kentucky Emergency Management

NIC National Integration Center

NIMS National Incident Management System

NPD National Preparedness Directorate

NQS National Qualification System

NRC U.S. Nuclear Regulatory Commission

NSIR Nuclear Security and Incident Response

ORO Offsite Response Organization

PCA Preliminary Capabilities Assessment

PIM National REP Program Public Information Map

PS-CA Public Safety-Canada

RAC Regional Assistance Committee

RCCC REP Core Concepts Course

RPPR REP Plume Plan Review

RPM REP Program Manual

SAV Staff Assistance Visit

SLTT State, Local, Tribal and Territorial

TEST Tabletop Exercise Simulation Tool

THB Technological Hazards Branch

THD Technological Hazards Division

TSSF Technical Support Services Facility

TTX Tabletop Exercise

USDA U.S. Department of Agriculture

WEA Wireless Emergency Alerts

Appendix B. Glossary

Alternative approach: Provide an opportunity for state, local, and tribal governments, applicants, and licensees to meet the planning standards in a manner that is different from what the evaluation criteria recommend within this guidance document. While an alternate approach does not relax the requirements of the planning standards, it provides an opportunity to propose an alternative method for meeting the intent of the planning standards.

Assessment: The evaluation and interpretation of radiological measurements and other information to provide a basis for decision making. Assessments can include projections of offsite radiological impact.

Capability targets: Performance thresholds for each core capability. REP Program–specific capability targets are derived from the planning standards of 44 CFR Part 350, support evaluation criteria from NUREG-0654/FEMA-REP-1, Rev. 2 and are used as the baseline for assessing offsite response organizations' preparedness in terms of core capabilities.

Commercial nuclear power facility: A facility licensed by the NRC to use a nuclear reactor to produce electricity.

Core capabilities: Distinct critical elements necessary to achieve the National Preparedness Goal.

Drill: A coordinated, supervised activity usually employed to validate a specific operation or function in a single agency or organization.

Drills are commonly used to provide training on new equipment, develop or validate new policies or procedures, or practice and maintain current skills.

Disaster-initiated review (DIR): As addressed in the FEMA/NRC memorandum of understanding, the DIR's purpose is to formally determine the offsite emergency response infrastructure and capabilities to effectively implement approved emergency plans.

Evaluation: The process of observing exercise performance to document strengths and opportunities for improvement in an entity's preparedness and response capability. Evaluation is the first step in the improvement planning process.

Geospatial information system (GIS): A system designed to capture, store, manipulate, analyze, manage and present all types of geographical data.

Health physics: The science of recognizing, evaluating, and controlling health hazards from ionizing radiation.

Ingestion exposure pathway exercise: Exercises that include mobilization of state, local and tribal government personnel and resources and implementation of emergency plans to demonstrate response capabilities to a release of radioactive materials requiring post-plume phase protective actions within the ingestion exposure pathway EPZ. These exercises are conducted at least once every eight years. See evaluation criterion N.2.b for additional information.

Integrated Public Alert and Warning System (IPAWS): A comprehensive, coordinated, integrated system that can be used by authorized public officials to deliver effective alert messages to the American public. IPAWS is the nation's next-generation infrastructure of alert and warning networks and ensures that the president can alert and warn the public under any condition. IPAWS provides federal, state, local, tribal and territorial warning authorities the capabilities to alert and warn their communities of all hazards impacting public safety and well-being via multiple communication pathways.

Joint information center (JIC): A location that facilitates operation of the joint information system, where personnel with public information responsibilities perform critical emergency information functions, crisis communications and public affairs functions.

National Preparedness Goal: A DHS/FEMA doctrine describing what it means for the whole community to be prepared for the types of incidents that pose the greatest threat to the security of the nation, including acts of terrorism and emergencies and disasters, regardless of cause. The goal itself is: "A secure and resilient Nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to and recover from the threats and hazards that pose the greatest risk."

Offsite response organization (ORO): Any state, local or tribal governmental organization; private or voluntary organization; or licensee offsite response organization formed when state, local and/or tribal governments choose not to participate in the REP Program that is responsible for carrying out emergency response functions during a radiological emergency.

Radiological Emergency Preparedness (REP) exercise: An event involving organizational responses to a simulated commercial nuclear power facility incident with radiological consequences. The purpose of a REP exercise is to test the integrated capabilities of onsite organizations and offsite response organizations to implement emergency functions set forth in their radiological emergency response plans and procedures.

Radiological Emergency Preparedness (REP) Program: Refers to both FEMA and NRC programs that administer emergency preparedness for commercial nuclear power facilities and surrounding areas and encompasses the plans, training, exercises and resources necessary to prepare emergency response personnel to rapidly identify, evaluate and respond to radiological emergencies.

Reasonable assurance: A determination that NRC licensee or applicant onsite plans and state, local and tribal government and utility offsite plans and preparedness are adequate to protect public health and safety in the emergency planning areas of a commercial nuclear power facility.

Additional terms can be found in the 2019 REP Program Manual.