

## The 1980s

### Birth of FRMAC

The Federal Register (50 FR 46542) (Nov. 8, 1985) declared the Federal Radiological Emergency Response Plan (FRERP) operational for use in the federal response to a radiological emergency. DOE was assigned the responsibility to coordinate offsite radiological monitoring and assessment data, and thus FRMAC was born.

### First Federal Field Exercise (FFE-1)

The first multiagency exercise planned to test the FRERP was conducted at Florida Power and Light's St. Lucie Nuclear Power Plant in March 1984.

### Second Federal Field Exercise (FFE-2)

The second large field exercise to test FRERP was held at Zion Nuclear Power Plant in Zion, Illinois, in June 1987. It was the first test of the FRERP in which two states (Illinois and Wisconsin) were supported at the same time.

### Responsibility for FRMAC Program Assigned to DOE Nevada Operations Office in 1987

The Nevada Office was established as the programmatic home of FRMAC. It had the physical resources required to set up a FRMAC and manage the emergency phase. EPA partnered with DOE to manage the late phase of the response.

### Not Just Nuclear Power Plant Accidents Anymore

In the late 1980s, FRMAC began working with the Department of Defense and participated in several exercises which had nuclear weapon accident scenarios.

### Stafford Act

Passed in 1988, the Robert T. Stafford Disaster Relief and Emergency Assistance Act established the Federal Emergency Management Agency's (FEMA's) on scene Disaster Field Office and created the position of the Federal Coordinating Officer.

## The 1990s

### A Decade of Plans and Procedures

Plans developed in the 1980s were formalized or revised in the 1990s. The Stafford Act was amended in 1994; a revised FRERP was published in 1996; EPA-400 was published in 1992, and several DOE Orders relating to FRMAC and Emergency Response were also issued.

### FRMAC and NASA

In the late 1980s and early 1990s, FRMAC began to support the National Aeronautics and Space Administration with its deep space launches that carried radiological devices.

### FRMAC-93

FRMAC-93 was sponsored by DOE and the Nuclear Regulatory Commission and held at the Fort Calhoun Power Plant near Omaha, Nebraska, in late June 1993. It was the first use of the Geographic Information System (GIS) in an exercise.

### Advisory Group for Environment, Food, and Health

Commonly called the A-Team, this group is not a part of the FRMAC but during the 1990s became increasingly associated with it. It co-locates with the FRMAC and includes representatives from EPA, CDC, FDA, and USDA. As an interagency entity, it provides recommendations to state and local decision makers based on FRMAC data products. It also supports the federal agency in charge.

### Beginning of Phased Response and DOE Consequence Management

In 1999, DOE created a phased approach to deploy an initial team rapidly to support the local response.

## The 2000s

### The Post-9/11 World

The establishment of the U.S. Department of Homeland Security promoted a number of changes in national emergency planning.

### NRP and NIMS

The National Response Plan and National Incident Management System (2002) required federal agencies to adopt the new plan and implement NIMS. States also had to adopt NIMS to continue to qualify for preparedness assistance grants. In 2005, the National Response Framework was issued to replace the NRP. Its purpose was to be an "all-hazards" response structure.

### Nuclear/Radiological Incident Annex

Added to the NRP in December 2004, this Annex superseded the FRERP as the guide for dealing with radiological emergencies and incident and reaffirmed FRMAC's role.

### Unified Command Exercises

Southern Crossing (2006) and Empire (2009) were the first Full Scale Exercises that operated under NIMS and folded FRMAC in to the Unified Command structure.

### 21<sup>st</sup> Century Technological Advances

The eFRMAC enterprise and CM Home Team have been established to provide faster and more reliable access to FRMAC capabilities and data products by states and locals even before field teams arrive. eFRMAC uses data telemetry and computer networking to gather, move, and archive data. The CM Home Team decreases the size of the deployed footprint and can remain active to also assist EPA after they have taken over management of the FRMAC in the late phase of the response.

## Timeline of Real-World Events



## Major Exercises with FRMAC Participation

St. Lucie-FFE 1, Florida	March 1984
Humble Servant, Ft. Smith, AK	March 1986
Mighty Derringer, NTS & Indiana	December 1986
Zion-FFE 2, Illinois	June 1987
Compass Rose, Camp Pendleton, CA	May 1988
Distinct Action, Plattsburgh, NY	August 1989
Digit Prime, Seneca, NY	June 1990
River Bend, Baton Rouge, LA	Aug. & Sept., 1990
Diamond Flame, Sierra Army Depot, CA	June 1992
Pu Valley-92, Nevada Test Site	November 1992
FRMAC-93, Ft. Calhoun, NB	June 1993
Fremont-93, DOE Hanford	September 1993
Diablo Canyon, San Luis Obispo, CA	Oct. 1993
Handshake I (NTS)	May 1994
Diagram Jump	August 1994
Mirage Gold, New Orleans, LA	October 1994
Display Select	September 1995
Dial Flinty	March 1996
Handshake II (SRS)	May 1996
Digit Pace I	November 1996
Digit Pace II	May 1997
Ventex-98, Nevada Test Site	September 1998
Calling Birds, Hanford, WA	December 1999
Diligent Warrior, Camp Guernsey, WY	Oct 2002
Joint Venture 02, Aiken, SC	April 2002
TOPOFF II, Seattle, WA	May 2003
Operation Synergy, Los Alamitos, CA	March 2004
Diligent Warrior 04, Great Falls, MT	Sept 2004
Dingo King, Kings Bay, GA	August 2005
Southern Crossing, Dothan, AL	August 2006
TOPOFF 4, Portland, OR	October 2007
Ardent Sentry, Indianapolis, IN	May 2007
Diablo Bravo, Bremerton, WA	July 2008
Empire, Albany, NY	June 2009
International Search & CM Workshop	May 2010



## FRMAC Then ... and Now



For more information on the FRMAC Program go to:  
[www.nv.doe.gov/nationalsecurity/homelandsecurity/frmac](http://www.nv.doe.gov/nationalsecurity/homelandsecurity/frmac)

## The Federal Radiological Monitoring and Assessment Center (FRMAC)

### The First 25 Years

November 1985

to

November 2010

