OFCM Special Session

Atmospheric Transport and Dispersion Modeling Support for Homeland Security

Panel 1: Operational Requirements and the Current State of the Science

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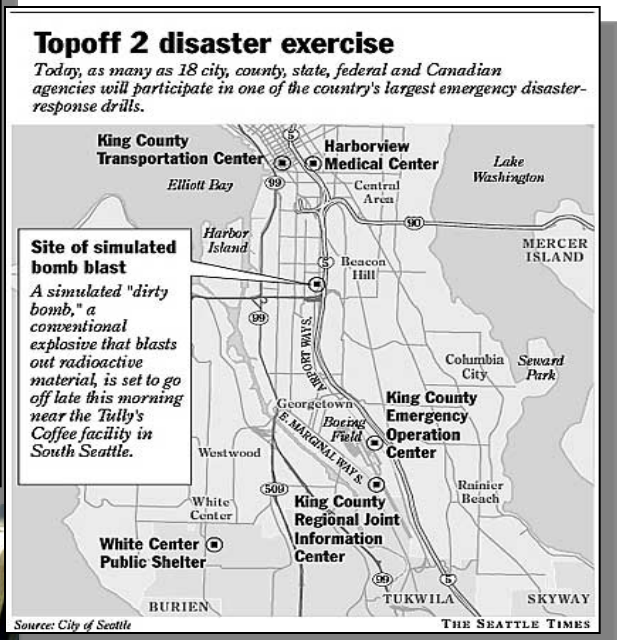
TOPOFF 2 Exercise Provided a Major Test of LINC & NARAC Support of Multiple Agencies

- Exercise on May 12-15, 2003 involved emergency personnel from the City of Seattle, State of Washington, King County, and 19 federal agencies, including sponsoring agencies: Department of Homeland Security and the Department of State
- Largest terrorism exercise undertaken since the terrorist attacks of September 11, 2001
- Radiation dispersal device explosion in Seattle
- NARAC predictions were used by 20 local, state and federal organizations



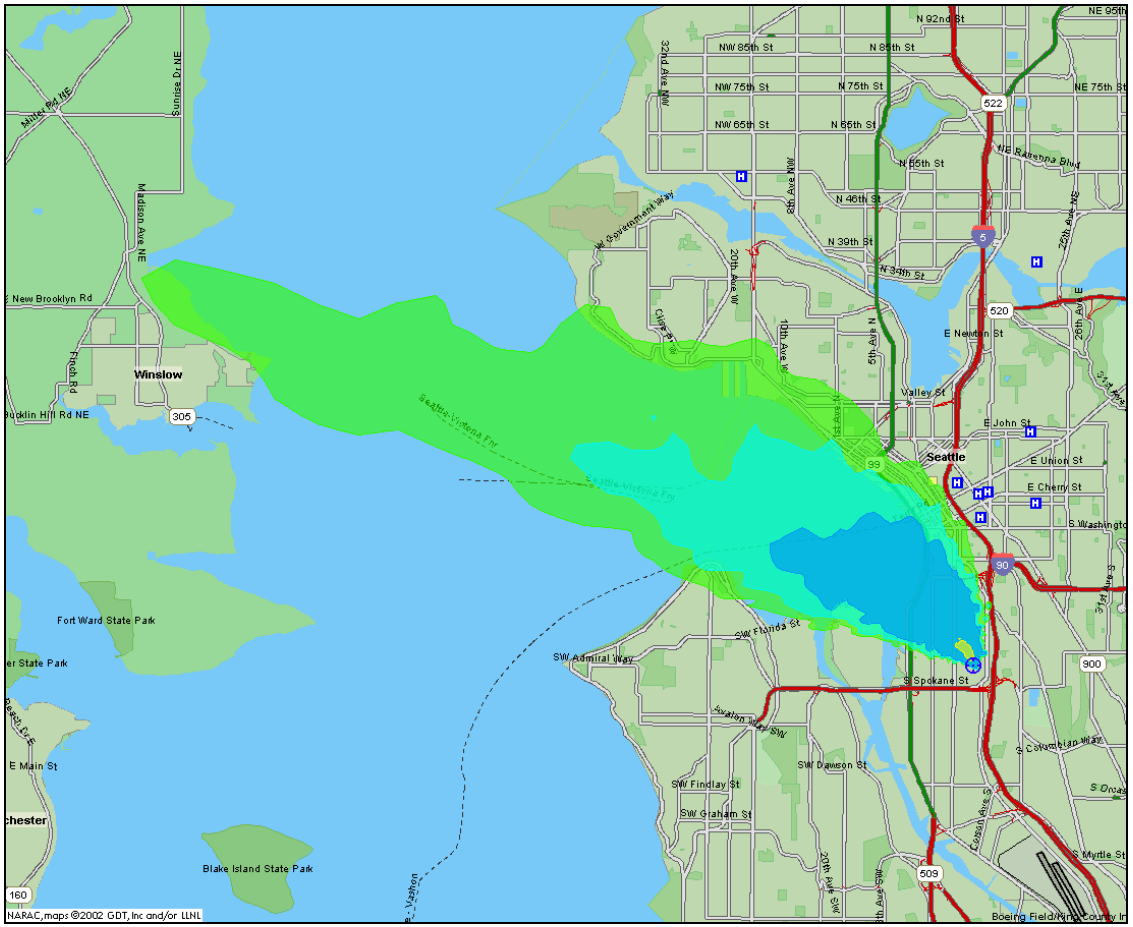
LINC/NARAC Provided Real-time Plume Predictions to Seattle Fire Department and EOC in TOPOFF 2

- Seattle Hazmat team and Incident Commander used wireless communication and laptop-based *NARAC iClient* software to access NARAC predictions
- Web-based distribution of NARAC plume predictions to Seattle Fire and EOC and other county, state and federal agencies in real-time
- Officials from the Mayor of Seattle, to DHS Secretary to the White House were briefed using NARAC predictions

Seattle Fire Hazmat Team

Seattle EOC

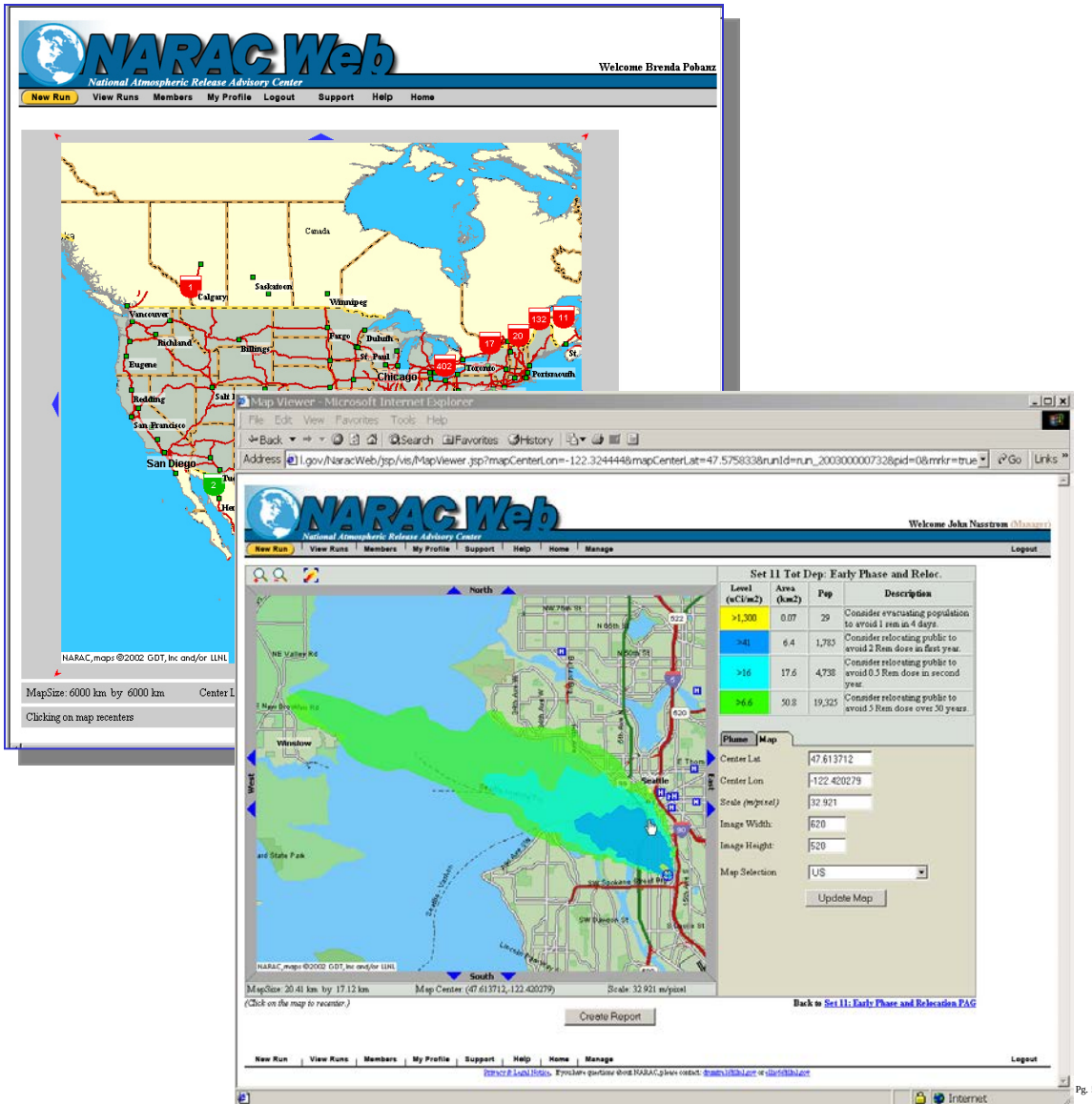
NARAC Simulation Was Used to Define EPA Protective Action Guidelines: Evacuation and Relocation Areas



Level (uCi/m2)	Area (km2)	Pop	Description
>1,300	0.07	29	Consider evacuating population to avoid 1 rem in 4 days.
>41	6.4	1,785	Consider relocating public to avoid 2 Rem dose in first year.
>16	17.6	4,738	Consider relocating public to avoid 0.5 Rem dose in second year.
>6.6	50.8	19,325	Consider relocating public to avoid 5 Rem dose over 50 years.

NARAC Web Provided Distribution of Plume Predictions During TOPOFF 2

- 20 local, state and federal organizations viewed predictions
- 35,000 hits on NARAC Web site during TOPOFF2 exercise
- User access requires Web browser and user name/password
- U.S.-wide high-resolution maps
- High-level of security and encryption (password controlled access)
- Plume predictions exported to GIS of other agencies



NARAC Provided Support to NNSA Nuclear Incident Response Teams (NIRT), and to Local, State and Federal through the FRMAC

- NARAC provided critical support to Federal Radiological Monitoring and Assessment Center (FRMAC) that produced protective action guidelines based on model predictions, field monitoring and Aerial Measurement System surveys
- Predictions were distributed to Local, State and Federal Agencies via NARAC Web and FRMAC GIS