

# NWS Roadmap

## *Building a Weather-Ready Nation*

**Jim O'Sullivan**

*NOAA Surface Transportation Liaison*

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# The NWS Roadmap: The Vision

## Making the Extraordinary Ordinary

- **America is a Weather-Ready Nation through superior Impact-Based Decision Support Services (IDSS)**
- **Our accurate and timely forecasts, warnings, and information save lives and enhance the U.S. economy**
- **NOAA/NWS is the authoritative source for Federal, State, and Local Government partners for environmental information**



# The National Dialogue

- **NWS has started a National Dialogue with:**
  - *Broadcast meteorologists, researchers, Emergency Managers, and the Weather Industry*
- **National Dialogue enables us to:**
  - *Assess the 10 billion-dollar disasters in 2011 alone – all deadly events with 600+ fatalities and staggering economic impacts*
  - *Better prepare for the extreme and high-impact events striking areas of increasing population density*
- **By our 150th anniversary, we want a Weather-Ready Nation**
  - *We can accomplish this by working with our partners and customers to continue and improve our abilities to protect lives and livelihoods*

# Building A Weather-Ready Nation

## Flexible response to meet contingencies



- **Provide superior Impact-Based Decision Support Services**
  - *Utilize our unique relationship with Emergency Management to help them to better prepare our communities for high-impact/extraordinary events*
  - *Empower our workforce: accessible on-site and through remote technologies*
  - *Improve our understanding of societal impacts*
  - *Shift our focus to a services-centric paradigm*

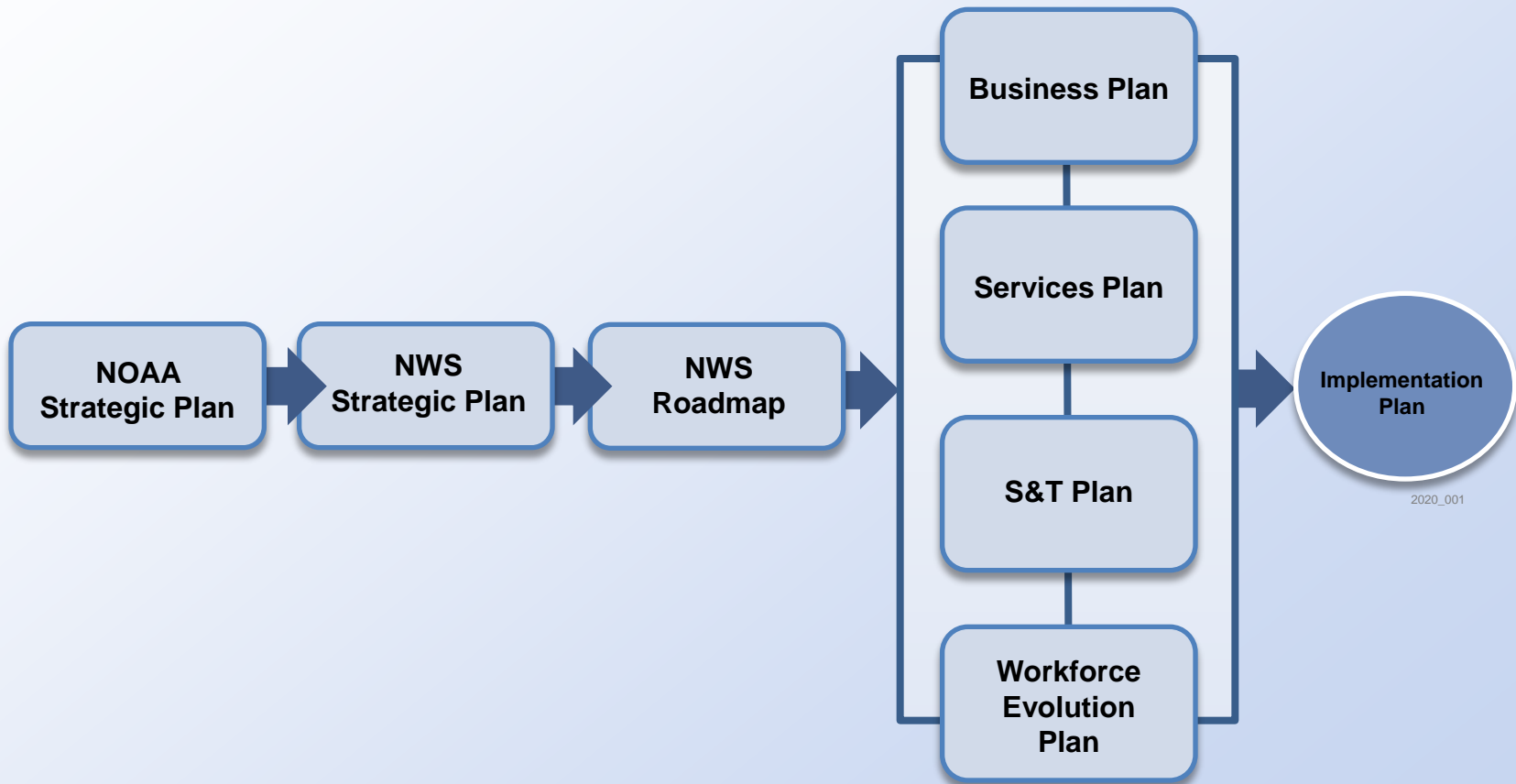
# Moving Forward



# Schedule - 2011

## Flexibility is key

- Initial Roadmap to be completed in October 2011



2020\_001



# Business Plan

- **Build a sustainable business model for NWS operations and services**
- **Develop cost model for NWS operations and new services**
- **Promote an environment of continuous improvement**
- **Develop a Quality Management System**
- **Conduct periodic audits to ensure that NWS activities align with core mission**



# Services Plan

- **Move toward IDSS through nine concepts:**
  - *Evolution to National Incident Management System (NIMS) Compliance*
  - *Integration of Social Science Principles*
  - *Emergency Response Specialists*
  - *Integration into the National Response Framework*
  - *Foundational Datasets*
  - *Impacts Catalog*
  - *NWS Operations and Services Proving Ground*
  - *Communications Strategy for High-Impact Events*
  - *Dissemination Requirements*





# Services Plan (cont'd)

- **Framework approach vs. a “catalogue of unique services” approach**
- **Adoption of NIMS-compliant method for NWS operations**
- **Interoperable foundational data sets enable existing and new service sectors**
- **IDSS = NWS in 2020**



# Science and Technology Plan

- **Situational Awareness:** An enhanced awareness and commonly shared view of the current (and forecast) environment and related hazards
- **Numerical Guidance:** State-of-the-science improvements in predictability; storm scale modeling; earth system framework modeling; space weather
- **Forecast Confidence:** High-quality forecast confidence estimates from analyses and forecasts for customized risk assessment and decision making



# S&T Plan (cont'd)

- **Forecast Knowledge Management Platform:** New capabilities and enhancements to AWIPS II and CHPS platforms to support future forecasting and IDSS
- **IT:** High-performance computing upgrades for operations and research; extensible, scalable and cost-effective infrastructure; discoverable, interoperable data and information
- **Research to Operations (and O2R):** Successfully leverage cross-cutting and R2O/O2R efforts



# Workforce Evolution Plan

- **Updating Staffing Profiles and Developing Training Programs**
- **Developing Workforce Diversity Programs**
  - *Diversity of disciplines and cultures, recruitment, on-boarding personnel, retention, and career and succession planning*
- **Improving Work Environment**
  - *Work-life balance, flexible and adaptable work schedules*
- **Communications Strategies/Planning Underway**
  - *Strategic communications plan under development*
  - *Communications tools (INWS, NWSNews, others)*
- **Developing Quality Management System**
  - *Establishing framework for continuous service performance audits*
  - *Adopting continuous improvement model*



# Pilot Projects

- **A total of nine pilot projects have been planned to support the key concepts of the NWS Roadmap**
- **Plans are underway to launch four of them by the end of the calendar year:**
  - *National Operations Center*
  - *Regional Operations Center*
  - *WFO Provision of IDSS in coastal environment*
  - *WFO provision of IDSS in urban environment*



# National Operations Center

- **Based in NWSHQ Silver Spring**
- **Defines the new decision support model**
- **Represents the first formal integration of decision support; allows NWS to reach out to external partners to enhance operations during emergencies**
- **NWS central point of contact for nationwide, high-impact meteorological and hydrological events on a 16x7 basis with surge capacity to 24x7 as needed.**



# NOC (cont'd)

- **Coordinates NWS resources at the national level.**
- **Proactively works in partnership with public affairs and legislative affairs to communicate high-impact weather events.**
- **Coordinates with Core Partners' operations centers to ensure timely, accurate information and decision support.**



# Regional Operations Center

- **Based at NWS Southern Region HQ-Ft. Worth, TX**
- **Defines the new decision support model and represents the first formal integration of decision support**
- **Allows NWS to reach out to external partners to enhance operations in the event of an emergency situation**
- **Serves as NWS's regional point of contact for high-impact meteorological and hydrological events**
- **Works in partnership with state-level public and legislative affairs to communicate high-impact weather events**
- **Covers field operations in long-term backup situations or to provide IDSS**
- **Informs NWS senior management, NOAA, and DOC**





# WFO Provision of IDSS in Urban Environment

- **Based in Sterling, VA**
- **Aligns urban Decision Support Services in a high-impact area**
- **Promotes further collaboration and both the national and local levels with external partners**
- **Emergency response services specifically tied to urban area IDSS; Federal agencies, urban environment, dispersion, transportation**
- **Provides opportunities for direct embedding with customers in the District of Columbia**
- **Integrates emerging decision support technology, as well as remote briefings, into operations**



# WFO Provision of IDSS in Coastal Environment

- **Based in New Orleans, LA**
- **Extends IDSS principles to a WFO, specifically targeting a marine/tropical environment**
- **Aligns with NOAA's Strategic Goal of Resilient Coastal Communities and Economies**
- **Emergency response service outlet designed to test HAZMAT, chemical, and health IDSS concepts**
- **Integrates IDSS with area Coastal Zone Managers**
- **Integrates emerging decision support technology, as well as remote briefings, into operations**



# Anticipated Outcomes

- **Align with NOAA's long-term goal of a Weather-Ready Nation**
- **Better integrate into Core Partners' response needs**
- **Test IDSS concepts in a pilot program**
- **Identify societal/economic impacts of our services**
- **Better integrate with other NOAA Line Offices**
- **Enhance our collaboration with the Weather Enterprise**
- **Create a comprehensive agency-wide Quality Management System**

# NWS Chat

The screenshot displays the NWSChat Live web application. The interface is divided into several sections:

- Top Bar:** Shows the browser address bar with the URL <https://nwschat.weather.gov/live/>.
- Left Panel:** Contains a list of chat rooms under the heading "Chatrooms". The "Bismarck (BIS) Chat (bischat)" room is currently selected.
- Center Panel:** Features a "Google Map Panel" displaying a weather radar map of the Northeastern United States. The map shows precipitation intensity with a color scale from green to red. A blue location pin is placed over the Bismarck, New York area.
- Right Panel:** Includes a "Layers Control" section with options for "Base Layer", "Satellite", "GOES Water", "GOES13 East", "GOES11 Wes", "GOES Visible", "GOES IR", "Precip/RADAR", "NWQ Q2 3 De", and "NWQ Q2 2 De". Below this is a "23 people in room" list showing active participants like "em-dave.hubery" and "em-wes.jones".
- Chat Window:** The main area displays a "Message -" section with a scrollable list of chat messages. The messages include:
  - (3:24 PM) media-doug.peters: with the pm update?
  - (3:24 PM) nwsbgm-forecaster: nothing yet doug
  - (3:24 PM) media-doug.peters: if you hear anything... lemme know
  - (3:25 PM) media-doug.peters: we're doing a 4pm update/cutin
  - (3:25 PM) nws-forecaster/imet: Still waiting but we expect significant increases in stages
  - (3:25 PM) nws-forecaster/imet: Major flooding in places
  - (3:25 PM) nwsbot: BGM: Maine [Broome Co, NY] nws employee [reports FLASH FLOOD](#) at 03:21 PM EDT -- route 26 just north of the town of maine...approximately 3 feet of water was in a country store and just south of maine... approximately 4 feet of water over route 26

# NWS Chat

The screenshot displays the NWSChat Live web application. The browser address bar shows the URL <https://nwschat.weather.gov/live/>. The interface is divided into several sections:

- Left Panel:** Contains navigation options like "Actions", "Available", "Buddies", "Chatroom Bookmarks", and a list of chatrooms. The "Burlington (BTV) Chat (btvcha)" chatroom is currently selected.
- Center Panel:** Features a "Google Map Panel" showing a weather radar map of the Northeastern United States. A dark green area indicates heavy precipitation over the region including New York, New Jersey, and Pennsylvania. Below the map are chat tabs for "sigeventchat", "bgmchat", and "bbchat".
- Right Panel:** Includes a "Layers Control" section with options like "Base Layer", "Satellite", "GOES Water", "GOES13 East", "GOES11 West", "GOES Visible", "GOES R", "Precip/RADAR", "NMQ Q2 3 Dec", and "NMQ Q2 2 Dec". Below this is a "21 people in room" list with names such as "em-clayton.p.bronson", "em-dave.hubery", "media-brent.mcgrady", "media-carrie.a.cheevers", "media-dave.longley", "media-doug.peters", "media-erick.adame", "media-joe.veres", "media-michael.e.gouldrick", "media-tom.esterguard", "NECN-matt.noyes", "NWS BTV 500 Paul Saa", "nws-brian.miretzky", and "nws-charles.chilton".
- Chat Room:** The main area displays a "Message -" header and a list of chat messages:
  - (4:55 PM) **nws-forecaster/imet**: Thanks Doug - I'll note that in the log
  - (5:00 PM) **nwsbot**: BGM: 4 S Greene [Chenango Co, NY] public reports [FLASH FLOOD](#) at 04:51 PM EDT -- page brook road is flooded at the chalker creek culvert. chalker creek has breached the culvert and is flowing down the road.
  - (5:02 PM) **media-brent.mcgrady**: From above... "SUNY Oneonta almost cut off on the hill above the flooding," what does that mean exactly, BGM?
  - (5:03 PM) **media-erick.adame**: I was just wondering the same thing.
  - (5:04 PM) **media-brent.mcgrady**: Does that mean the hill is giving way or that the flooding is all around the hill and the college is cut off from exit...
  - (5:04 PM) **nws-forecaster/imet**: The emergency manager reported that access to the campus is cut off by flood waters

# NWS Chat

The screenshot displays the NWSChat Live web application. The browser address bar shows the URL <https://nwschat.weather.gov/live/>. The interface is divided into several sections:

- Left Panel:** A sidebar titled "NWSChat Live" containing a list of chatrooms such as "Chicago (CHI) Chat (chicchat)", "Cleveland (CLE) Chat (clechat)", and "Dallas/Fort Worth (FWD) Chat".
- Top Center:** A "Google Map Panel" showing a weather map of the United States with a focus on the Great Lakes region. The map includes labels for cities like Detroit, Cleveland, and Toronto.
- Right Panel:** A "Layers Control" panel with options like "Base Layer", "Satellite", "GOES Water", and "Precip/RADAR".
- Chat Window:** A central area for messages. The current message is from **nwsbot** at 12:44 PM: "Thanks for the report, Robert. We're just awaiting the winds to shift." Other messages include a report on smoke from wildfires and a hurricane advisory for Katia.
- Bottom Right:** A "26 people in room" list showing active users like ham-chris.shanahan and ham-mike.heslett.

The Windows taskbar at the bottom shows the system time as 3:35 PM and includes icons for NWSChat Live, Clipboard, and other background applications.



# Contact

- **Jim O'Sullivan**  
**[Jim.OSullivan@noaa.gov](mailto:Jim.OSullivan@noaa.gov)**  
**301-713-1792 x126**

# Backup Slides



