NATIONAL WEATHER SERVICE FOCUS TOWARD IMPACT-BASED DECISION SUPPORT SERVICES; APPLICATIONS TO ALERT USERS IN CALIFORNIA

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EVOLVING TOWARD IMPACT-BASED DECISION SUPPORT SERVICES

• What does IDSS mean and why is the NWS changing?
• How does this make any difference to ALERT Users or public agencies in general?
HOW DID NWS GET HERE?

- Weather Service Modernization Act – 1992
  - Physical and field structural changes, installation of Doppler Radars
- National Academy of Public Administration (NAPA) – 2010
  - Congress directed NWS to conduct assessment
  - Recommendations to advance NWS with evolving weather, water, and climate services into the future
  - Improve NWS operations and services to the weather enterprise and core partners
HOW TO MEET SOCIETY’S NEEDS?

OWA - “The NWS must shift from a predominately production-oriented culture to a more flexible, agile, face-to-face and on-demand customer-centric one.”

WCM position written into law!

2017 WEATHER ACT

(1) IN GENERAL.—Subject to paragraph (2), consistent with the analysis described in section 409, and in order to increase impact-based decision support services, each warning coordination meteorologist designated under subsection (a) shall—

(a) be responsible for providing service to the geographic areas of responsibility covered by the weather forecast office at which the warning coordination meteorologist is employed to ensure that users of products of the National Weather Service can respond effectively to the outcomes from weather events.

(b) in consultation with users of products and services of the National Weather Service, such as the public, media outlets, users in the aviation, marine, and agricultural communities, and forestry, land, and water management interests, to evaluate the adequacy and usefulness of the products and services of the National Weather Service;

(c) collaborate with such weather forecast offices and State, local, and tribal government agencies as the Director considers appropriate in developing, proposing, and imple-
IT’S NOT EASY, MANY USERS WITH DIFFERENT NEEDS

**US Population and Growth Trends**
Change in county population, 1970-2030

Projected change in county population (percent), 1970 to 2030
- >+250% (highest +3.877%)
- +50% to +250%
- +5% to +50%
- -5% to +5%
- -20% to -5%
- -40% to -20%
- <=-40% (lowest -60%)

Each block on the map illustrates one county in the US. The height of each block is proportional to that county’s population density in the year 2000, so the volume of the block is proportional to the county’s total population. The color of each block shows the county’s projected change in population between 1970 and 2030, with shades of orange denoting increases and blue denoting decreases. The patterns of recent population change, with growth concentrated along the coasts, in cities, and in the South and West, are projected to continue.
PUBLIC AWARENESS & RESPONSE

Weather-Ready Nation

Society is prepared for and responds to weather-dependent events
EVOLVING TO ACHIEVE A WEATHER-READY NATION

• Many steps underway at NWS offices to meet IDSS demands
  • Building a more flexible workforce – tools and training
  • Streamline forecast processes – National Blend of Models
  • Match workforce to workload – collaborate national to local NWS
  • Supporting innovation, science, and technology – autolauncher, GOES16/17

• Engage, test, & implement changes to meet IDSS demand
HOW ARE PARTNERS LIKE YOU BENEFITING?

• Better heads-up storm awareness
• Better access to NWS staff
• Improving communication & messaging
• Resourcing for incidents and training exercises
This email is intended for:

Potential significant impacts:
- Flash flooding and urban flooding
- Urban roadway flooding
- Downed tree limb
- Winter driving conditions

WEATHER HIGHLIGHTS:
- First significant winter weather event
- Widespread impacts
- Early estimates of adverse impacts
- Strong and damaging winds
- High surf levels

POTENTIAL IMPACTS:
- High surf levels
- Strong and damaging winds
- Widespread impacts

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NOAA National Weather Service
Southwest California - NWS Los Angeles/Oxnard

AUG Conference 2018
ACCESS TO NWS STAFF

NWSChat viewer

January 5, 2018 press conference
COMMUNICATION & MESSAGING

Summary of Greatest Impacts

Rain: Mud/Debris Flows Recent Burn Areas

- None
- Limited
- Elevated
- Significant
- Extreme

NWS Los Angeles @NWSLosAngeles · Apr 12
As of 9 pm, strong northerly winds affecting many portions of LA county, including coastal areas. Wind gusts up to 52 mph at UCLA and 40 mph at LAX. Several reports of downed trees and power outages. #LAwind #LAWeather #cawx

Potential Impacts

- Moderate to heavy rain across the region.
- Urban flooding and ponding of water on roads.
- Flooding of creeks or streams.
- Mudslides or debris flows.
RESOURCING FOR INCIDENTS AND TRAINING
GOES-16 (EAST)/17 (WEST) IMPROVEMENTS

Launched Nov. 2017 and Apr. 2018

3X data, 4X resolution, 5X faster and lightning mapping
GOES-16/17 CAPABILITIES

Visible/Dust

Blowing dust in pink
GOES-16/17 CAPABILITIES

Fire/Smoke Detection
GOES-16/17 CAPABILITIES

Storm Intensity
DROUGHT & WILDFIRE IN THE WEST

U.S. Drought Monitor
West

April 10, 2018
(Released Thursday, Apr. 12, 2018)
Valid 8 a.m. EDT

Intensity:
- D0: Approximately Dry
- D1: Moderate Drought
- D2: Severe Drought
- D3: Extreme Drought
- D4: Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
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NOAA/NWS DMC/PC

http://droughtmonitor.unl.edu/

Last 7 Days % of Average Precipitation
Percent of Average Precipitation (%)
4/7/2018 - 4/13/2018

Last 30 Days % of Average Precipitation
Percent of Average Precipitation (%)
3/15/2018 - 4/13/2018

Oct 1 to Date % of Average Precipitation
Percent of Average Precipitation (%)
10/1/2017 - 4/13/2018

Preliminary Hazard Assessment

EXPLANATION
- Sedimentation Hazards
- Forest Fire
- Evacuation

Points in parentheses indicate updated data as of
MONTECITO, CA DEBRIS FLOW
JAN. 9, 2018
5-minute rainfall rates lead to NWS warning decision-making.

Montecito Rainfall
January 9, 2018
THANK YOU!

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