NIDIS: the next Generation

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December 20, 2006

Public Law 109–430
109th Congress

An Act

To establish a National Integrated Drought Information System within the National Oceanic and Atmospheric Administration to improve drought monitoring and forecasting capabilities.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “National Integrated Drought Information System Act of 2006”.

PUBLIC LAW 113–86—MAR. 6, 2014

March 6, 2014

Public Law 113–86
113th Congress

An Act

To reauthorize the National Integrated Drought Information System.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “National Integrated Drought Information System Reauthorization Act of 2014”.

SEC. 2. NIDIS PROGRAM AMENDMENTS.
Three major tasks under NIDIS
(Public Laws 109-430, 2006; 113-086, 2014)

“Enable the Nation to move from a reactive to a more proactive approach to managing drought risks and impacts”

(i) Provide effective drought early warning systems
   (a) collect and integrate key indicators of drought severity and impacts; and
   (b) produce timely information that reflect local, regional, and State differences;

(ii) Coordinate and integrate as practicable, Federal research and monitoring in support of drought early warning systems

(iii) Build upon existing forecasting and assessment programs and partnerships
NIDIS Partnerships/Working Groups
(Federal, States, Tribes, Private sector)

Monitoring & Forecasting

Drought Early Warning Information Systems

Communication and Outreach

Drought and Flood Impacts Assessments and Scenarios

Engaging Preparedness & Adaptation
Governance Attributes: Agility, Alignment, Adaptability

Network coordination, Integrated Information (monitoring, forecasting, risk assessment), Drought risk management (capacity, communication) (e.g. outlook forums) and planning
WGA NIDIS (2004)

Integrating Observations and Data Systems

Key Variables for Monitoring Drought
- climate data
- soil moisture
- stream flow

Current Observations and Data Systems
Drought planning and mitigation will be based upon the gathering of high quality information related to a variety of physical phenomena. Effective drought monitoring and forecasting rely upon integrated observations and data systems. This includes digital maps, remote sensing, and the like.

February 2016
From Too Much to Too Little:
How the central U.S. drought of 2012 evolved out of one of the most devastating floods on record in 2011

“Climate Extreme Drought To Extreme Flood: Weather Whiplash Hits The Midwest”
Weather Underground Climate Guest Contributor Apr 19, 2013

NIDIS Reauthorization P.L. 113-086, 2014
“include monitoring and research relating to the role of extreme weather events and climate variability in drought”

2010-12: First time U.S. corn yield fell three years in a row since 1928-30 (USDA)
Memorandum of Understanding
Between the Western Governors' Association
and the National Oceanic and Atmospheric Administration

Collaboration on Drought, Flooding, and Wildfire Preparedness:
Sharing Information and Building Resilience in Planning for Extreme Events

June 9, 2014
Colorado Springs, Colorado

MOU Between DOC and USDA

MEMORANDUM OF UNDERSTANDING
BETWEEN THE
U.S. Department of Commerce
AND THE
U.S. Department of Agriculture

2012
Drought-Resilience Goals

Goal 1: **Data Collection and Integration** – key data platforms, modeling and prediction

Goal 2: Communicating Drought Risk to Critical Infrastructure

Goal 3: **Drought Planning and Capacity Building**

Goal 4: Coordination of Federal Drought Activity

Goal 5: Market-Based Approaches for Infrastructure and Efficiency

Goal 6: Innovative Water Use, Efficiency, and Technology

NIDIS lead role:
So where are we?

Coordination of a National Soil Moisture Network: Steps towards a National Network November 13-14, 2013 Kansas City, MO

- Develop a pilot monitoring system to guide the future design of a national system
- Develop a product from existing data to demonstrate the potential usefulness of a coordinated effort.

A reference architecture to inform the national network development

NIDIS Working Groups implementation plan development
April 26-27, 2016, Lincoln, NE (July 1 draft-Sep 19 final)
https://www.drought.gov/drought/calendar/events/nidis-working-groups-all-chair-meeting

National Soil Moisture Network Workshop
Progress and future directions May 24 - 26, 2016 Boulder CO

- Crafting a future direction and approach for a coordinated NSMN. Identify the next steps, addressing who will be involved, and how and what needs to be accomplished. Identify short-term, medium-term, and long-term goals of coordinating a NSMN.

(Strobel, Lucido, Quiring, Verdin, McNutt others....)
...AND THAT IS WHY WE LIFT ON THREE...

COMMUNICATION

Coordination