AMS Washington Forum
APPLIED DECISION SUPPORT: MEETING USER NEEDS

NASA Water Resources Program Perspective

22 April 2015

Program Approach

The Applied Sciences Program funds projects that enable uses of NASA Earth science data in organizations' policy, business, and management decisions.

Applications Areas

The program focuses on economic, health, resource management, and

Proving-Out Applications: Demonstration of Applications Ideas, Realization of Socioeconomic Benefits, and Transitions

- *Feasibility Studies*
- *Applied Research Teams*
- *Mission Planning Support*

Capacity Building

The program sponsors specific activities to build skills, users, and

Building Customers: Creating Opportunities for New Users & Organizations to be Aware and Able to Use Earth Science

- *Gulf of Mexico Initiative*
- *Training Modules*

| 2

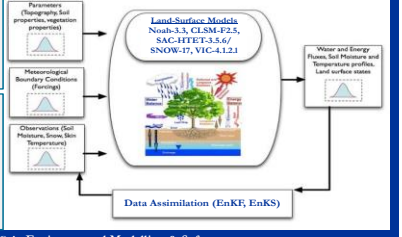
Observations Leading to Terrestrial Hydrology Understanding (Peters-Lidard, GSFC)

The Land Information System (LIS)

- LIS is a flexible land-surface modeling and data assimilation framework developed with the goal of integrating satellite- and ground-based observed data products with land-surface models.

1979-present NLDAS-2 Forcing and Parameters

Data assimilation of: soil moisture, snow depth/area, terrestrial water storage (TWS), and irrigation intensity



Reference(s): Kumar et al. (2006) in Environmental Modelling & Software
Peters-Lidard et al. (2007) in Innovations in Systems and Software Engineering

4

NASA Satellite Irrigation Management Support: Mapping Crop Water Requirements to Assist Growers in Optimizing Water Use

PROJECT TEAM: NASA Ames Research Center, California Dept. of Water Resources, Western Growers Association, California State University, Univ. of California Cooperative Extension, Desert Research Institute, USDA Ag. Research Service, USGS, Booth Ranches, Chiquita, Constellation Wines, Del Monte Produce, Dole, E & J. Gallo, Farming D, Fresh Express, Pereira Farms, Ryan Palm Farms

Landsat 8

Terra Satellite

California agricultural sector produced $46.4b in 2013

NASA SIMS web and mobile data services puts irrigation demand across 8 million acres of farm land directly into the hands of farmers and water managers

Students work hand in hand with growers to validate the system and quantify benefits

For more information, contact forrest.s.melton@nasa.gov, or visit https://c3.nasa.gov/water/projects/1/

Bradley Doorn, Ph.D.
Water Resources Program Element
Applied Sciences Program
Earth Science Division, NASA
300 E Street, SW
Washington, DC 20256

202.358.2187
Bradley.Doorn@nasa.gov