Evapotranspiration

An Essential Observation for Climate Understanding and Efficient Water Management

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A USDA-NASA Sponsored Workshop

Workshop Objectives

- To define the needs and requirements for evapotranspiration data in weather and climate studies, in natural and agro-ecoystem monitoring, and in water resource management
- To review the methods used to measure and model evapotranspiration.
- To assess surface and satellite observation systems required to support ET measurement, modeling and evaluation.
- To assess the feasibility of developing a proposal for a task on evapotranspiration for the 2012-2015 GEO Work Plan.
- To explore the level of support and consensus for developing a strategy for establishing evapotranspiration as an Essential Climate Variable (ECV) within the Global Climate Observing System (GCOS) framework.

Workshop Objectives-NASA PM

- Develop an applied research community of ET, and the Thermal Band in general
- Better understand the applied research requirements (near-term to long-term)
- Continue to build a strong argument for ET-related observations, research, and technology to support water resource applications

Upcoming NASA Water Resources Workshops

Global Drought Monitoring, Hilton Washington DC/Silver Spring MD on April 11-12, 2011.

- In coordination with the U.S. Drought Monitor and NIDIS meetings
- http://www.watercycleforum.com

The 2nd SMAP Applications Workshop, Washington, DC on October 12-14, 2011.

- http://smap.jpl.nasa.gov/applications/

A.34 EARTH SCIENCE APPLICATIONS:WATER RESOURCES

NOTICE: NASA plans to solicit for this program element in ROSES-2011

NASA will issue an amendment to ROSES-2011 to provide specific information about the element

The proposal due date will be at least 90 days following the announcement of the amendment

1. Program Objectives (…)
2. Scope of Program Element

……

In this solicitation, the program will request applications of Earth science research results to improve decision-making activities on **topics related to drought, drought policy and management decision making**. **The program will initially support one-year feasibility studies of possible applications. The program will then down-select and continue support for a subset of innovative, impactful applications for a three-year effort to develop and transition the application.** The amendment to this program element will describe this feasibility-to-decision support project arrangement more fully. The Water Resources program website is available through the website listed above.

Applied Sciences Program

Discovering Innovative & Practical Applications of NASA Earth Science

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NASA Partnership Sends Earth Science Data to Africa
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Welcome

The Applied Sciences Program promotes and funds activities to discover and demonstrate innovative uses and practical benefits of NASA Earth science data, scientific knowledge, and technology. The Program's portfolio of projects deliver results in applying NASA Earth science to support improvements in aviation safety, malaria early warning, agricultural productivity, water management, earthquake response, and many other important topics.

Earth Science Serves Society

The Applied Sciences Program partners with public and private organizations on ways to apply data from NASA's environmental satellites and scientific findings in their decision-making activities and services, helping to improve the quality of life and strengthen the economy.

Applied Sciences Program Areas

Applications Areas:

The Program focuses on economic, health, natural resources, and other themes to support both applied research and targeted, decision-support projects in 8 areas of national priority

Capacity Building:

The Program sponsors specific activities to improve skills and capabilities in the US and developing countries on how to access and apply environmental satellite data, including DEVELOP, SERVIR, and the Gulf of Mexico Initiative.

News & Events

The Value of Information Findings - PDF

NASA data used to help avert famine

NASA studies air quality using satellites in space

Gulf Oil Spill Satellite Time Lapse

+ News Archive
+ Blog Archive
+ Events Archive

Applied Sciences Calendar

Calendar:
Earth Science Events for 2010
+ Visit Calendar

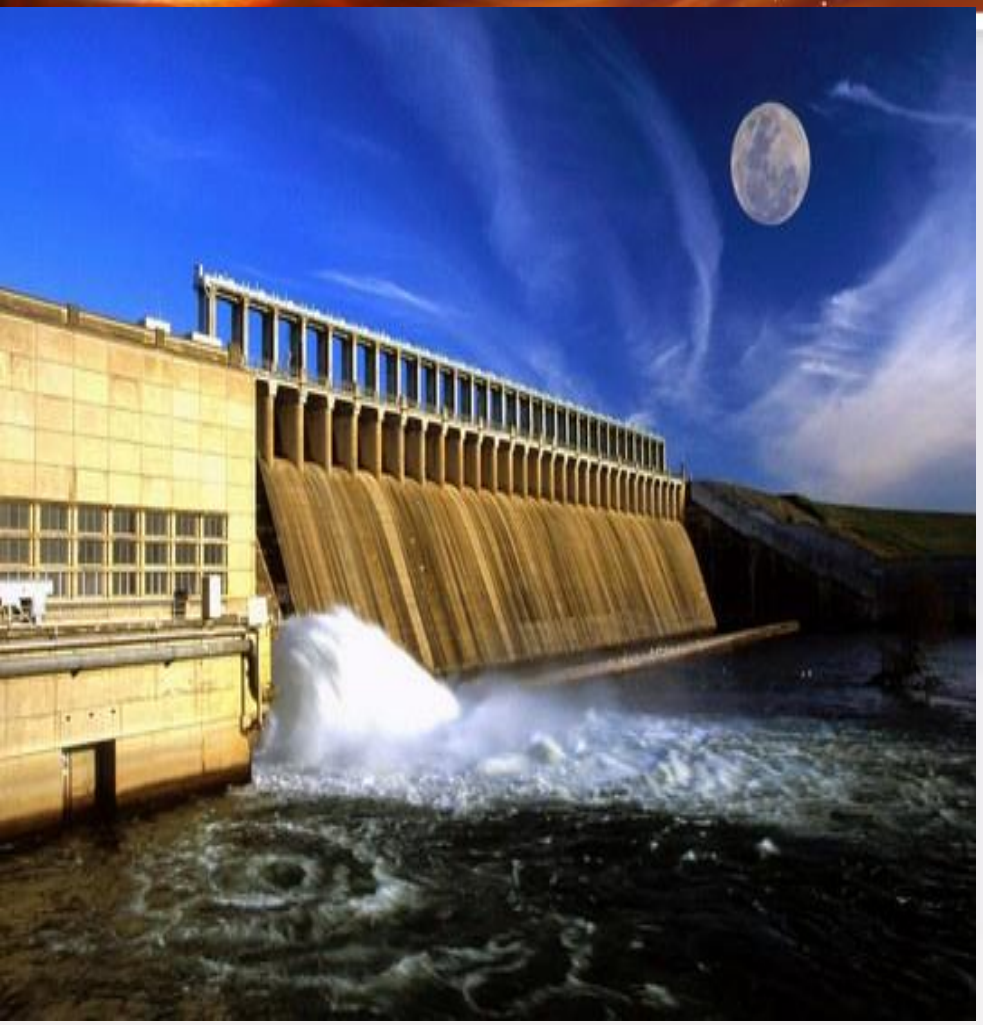
GEO GROUP ON EARTH OBSERVATIONS

Federation of Earth Science Information Partners
MAKING DATA MATTER

earthzine
FOSTERING EARTH OBSERVATION & GLOBAL AWARENESS

BACKUP SLIDES

NASA Water Resources



The Water Resources program addresses concerns and decision processes that are related to water availability, water forecast, and water quality. The goal of the Water Resources program is to apply NASA satellite data to improve the Decision Support Tools (DSTs) of user groups that manage water resources. The Water Resources program partners with Federal agencies, academia, private firms, and international organizations.

SMAP
Soil Moisture Active & Passive

Applications Working Group (AppWG)

SMAP has the potential to enable a diverse range of applications including drought and flood guidance, agricultural productivity estimation, weather forecasting, climate predictions, human health risk, and defense systems. Applications across agencies are a unique feature of SMAP. Some of these applications are summarized on the Applications page.

Planning for SMAP applications has been initiated to identify early adopters, current partners, and future potential users of SMAP data. A SMAP Applications Working Group (AppWG) has been formed that includes the following objectives:

- Assess current applications benefits and requirements for SMAP products
- Develop a community of end-users that understand SMAP capabilities and are interested in using SMAP products in their application
- Target partners who can work with the SMAP project during the pre-launch period, particularly to assess impacts on their applications
- Provide information about SMAP to the broad user community

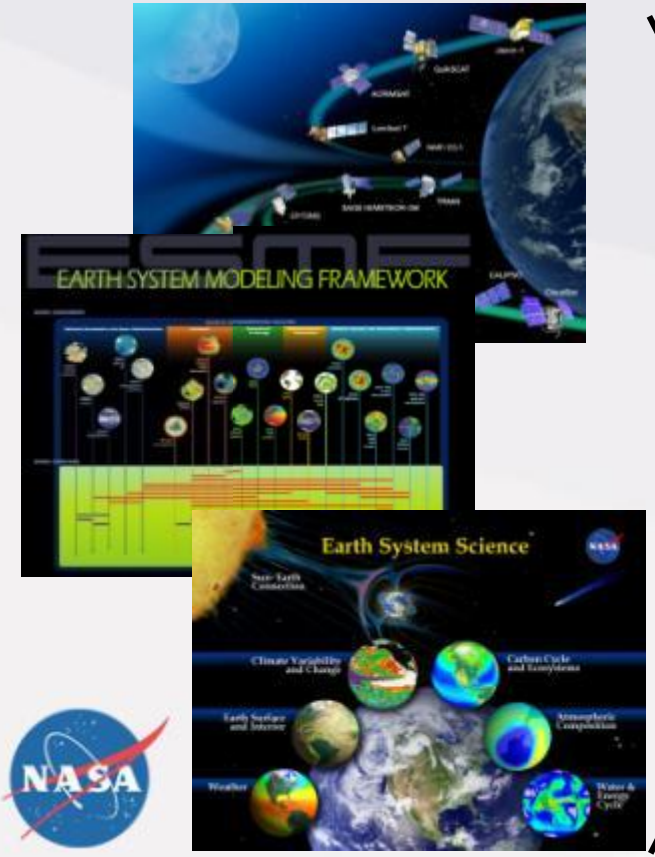
SMAP AppWG activities will be carried out mainly through emails and telecons. The AppWG will also take advantage of member attendance at conferences such as AGU and IGARSS to meet in person when possible.

NASA Applied Sciences Program

A Pathway Between Earth Science & Society

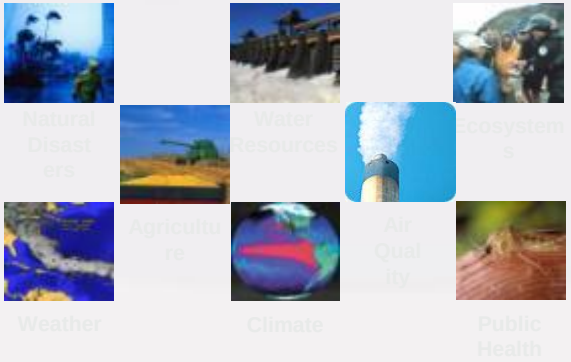
Results of NASA Earth Science Research

Uses by Partners and Stakeholder Communities



NASA Applied Sciences Program

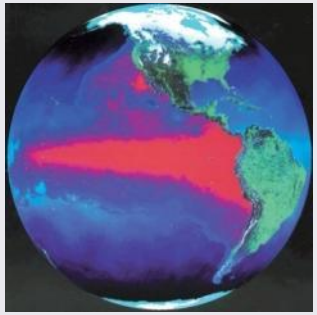
GEOSS Societal Benefit Areas



Applied Sciences Program

USGEO Societal Benefit Areas

Agriculture



Climate

Disasters

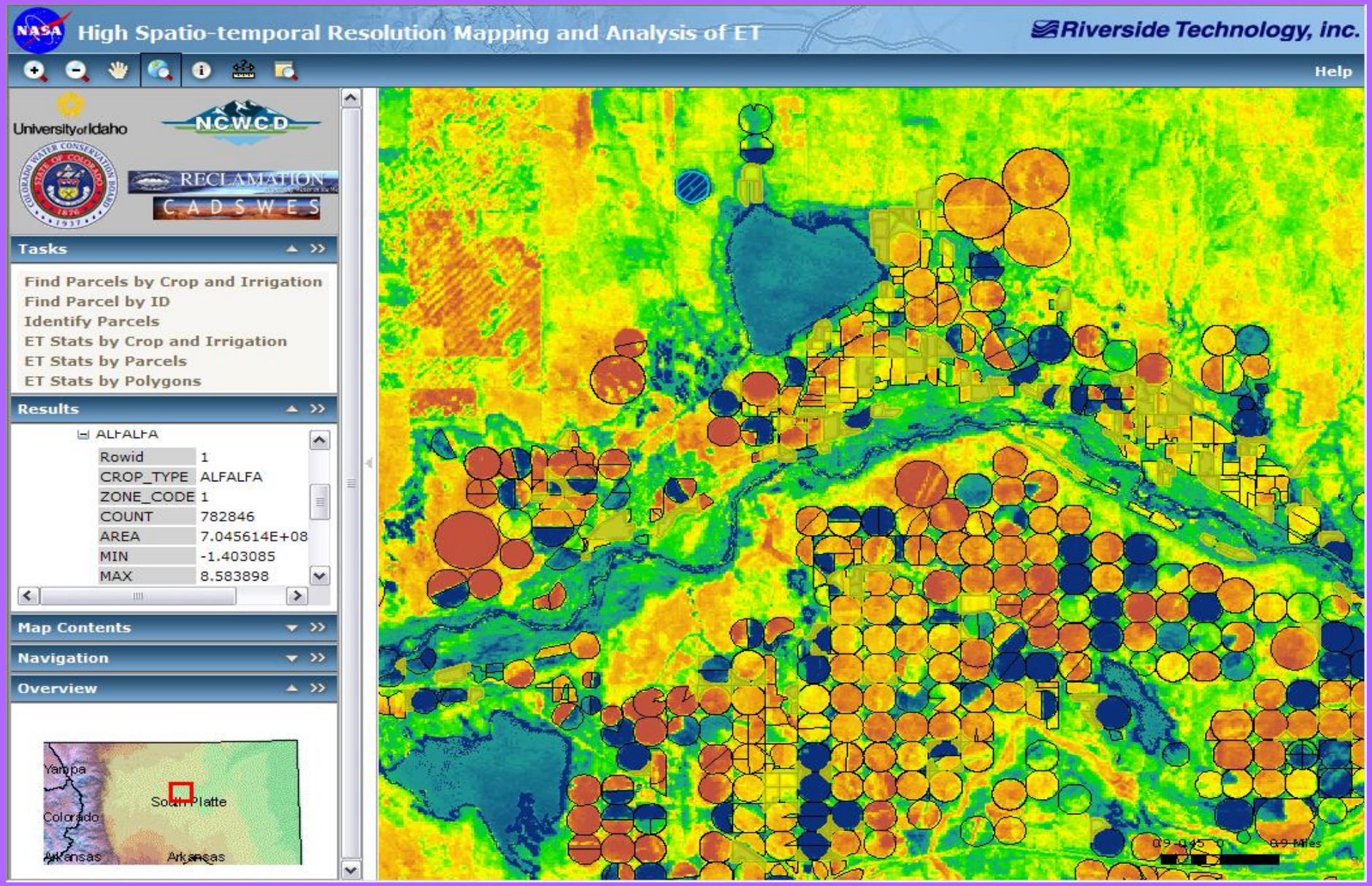
Ecosystems

Energy

Health
(incl. Air Quality)

Oceans

Water
Resources

Weather

Using NASA Evapotranspiration (ET) for Agriculture Water Consumptive Use