



United States Department of the Interior

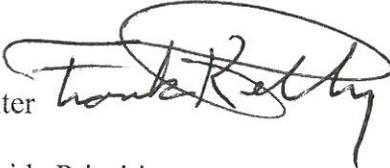
U.S. GEOLOGICAL SURVEY
National Center for Earth Resources Observation and Science
Sioux Falls, South Dakota 57198

In Reply Refer To:
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January 10, 2013

Memorandum

To: All

From: Dr. Frank P. Kelly, Director, EROS Center 

Subject: Fiscal Year 2014 USGS EROS Center-wide Priorities

The USGS Earth Resources Observation and Science (EROS) Center mission and goals remain unchanged for FY 2014 and beyond. They are:

EROS Mission Statement

Contributing to the understanding of a changing Earth.

Goals

1. To be the world's primary source of remotely sensed land images of the Earth.
2. To be authoritative providers of land change science information and knowledge.
3. To be leaders in understanding how changes in land use, cover, and condition affect people and nature.

This mission focus and associated goals are consistent with the USGS Climate and Land Use Change research focus on land change science, and are consistent with the USGS vision to provide "science for a changing world." The recognition of the need for improving the understanding and managing of climate and land change is longstanding, as it was identified by the National Research Council as one of the 21st century grand challenges. Specifically, the grand challenge is to track land changes (land use, cover, and condition) as it is occurring, and provide real-time intelligence to stakeholders on the potential threats and the management options to mitigate adverse consequences.

The mission focus and associated goals also signal a new era in which EROS transitions from its historical role as a data center to a Center focused on providing land change science data, information, and knowledge. The Center's FY 2014 priorities are organized by mission goals and strategic objectives. Recognize that many of these priorities will continue as a priority focus for the Center in years to come.

Goal 1. The world's primary source of remotely sensed land images of the Earth.

Strategic Objective A: Invest in the structured collection, preservation, and delivery of operational, timely and accurate remotely sensed land data.

1) Support Completion of Sustainable Land Imaging Architecture Study

In FY 2014, NASA is leading, and the USGS is supporting, the design of a system architecture for a sustainable, realistic, and affordable program that will provide future land imaging data compatible with the existing Landsat data record. The study is defining a programmatically sustainable system that balances measurement capability, likelihood of data continuity (minimizing risks of gaps to the extent possible), and mission cost/affordability with a final deliverable by August 2014. [Observing Systems Branch]

2) Perform Landsat Ground System and Mission Operations

Objectives are to collect, preserve, and deliver Landsat data to the remote sensing user community in an operational, timely and accurate manner. [Data Services Branch; Observing Systems Branch]

3) Implement the Nation's Land Imaging Requirements (NLIR) Infrastructure

Develop and operate a capability to elicit, characterize, manage, maintain, and prioritize user community requirements; and assess system capabilities. Earth Observation Requirements Evaluation System (EORES) will be developed and implemented to support the NLIR elicitation. An outcome from the NLIR process will be clearer definition of the "primary sources" for land imaging data. [Observing Systems Branch]

4) Preserve, Enhance, Provide, and Publicize the National Satellite Land Remote Sensing Data Archive (NSLRSDA)

As mandated by public law, the USGS is to ensure the long-term preservation, continued population, and timely access to the Nation's land remote sensing data holdings. The basic data holdings of NSLRSDA will be preserved at EROS in accordance with federal guidelines. The EROS archive content will be expanded in accordance with USGS appraisal policies, and all parties requesting data will have free and open access to the archive. The high priority for EROS this fiscal year is to raise the awareness of the NSLRSDA holdings. [Policy and Communications Office; Data Services Branch]

Goal 2. Authoritative providers of land change science information and knowledge.

Strategic Objective A: Invest in and maintain a state-of-the-art land change science information system.

1) Bring Initial Set of Climate Data Records and Essential Climate Variables to an Operational State

The land change science and information system (LCSIS) is an information processing system that generates science-quality information products from near-real time Earth observations. Develop and integrate science-quality, applications-ready, time-series information products of key terrestrial variables, i.e., essential climate variables (ECVs)

and climate data records (CDRs), using historical and current Landsat data on an operational basis. Science information products include: surface reflectance and temperature, land cover components, leaf area index, and land disturbance characteristics. Fundamental to the success of LCSIS is the evolution of the Center's data and information access paradigm. [Applications Branch]

2) **Define and Establish Prototype Capabilities for Detecting Land Change as it is Occurring**

The centerpiece of the LCSIS is the capability to provide near-real time land change information. A Landsat-based capability will be defined, prototyped, and evaluated that provides a suite of current and historical land change variables that are appropriate for understanding the dynamics of land use, cover, and condition change from local to global scales. [Applications Branch; Research Branch]

Strategic Objective B: Provide services and support on the use and understanding of land change monitoring products and future conditions for both USGS and non-USGS products.

1) **Understand Three-Dimensional (3-D) Structural Changes Over Time**

Create 3-D informational products and related research over multiple time periods and provide 3-D data and services as value-added products to others. While research and development will be conducted nationally, emphasis will be on the coastal zone, due to its dynamic nature and associated 3-D hazards and risks. Airborne lidar is currently the technology of choice to acquire and monitor 3-D changes over time; however, other current and future potential science drivers to technologies will also be assessed for 3-D land change research and development. [Applications Branch]

Goal 3. Leaders in understanding how changes in land use, cover, and condition affect people and nature.

Strategic Objective A: Develop and support a focused Land Change Monitoring, Assessment, and Prediction (LCMAP) program.

1) **Establish a Land Change Monitoring, Assessment, and Prediction Program**

The science objectives will be developed for a Land Change Monitoring, Assessment, and Prediction (LCMAP) program (institutional capability), i.e., an interdisciplinary team that uses Land Change Science Information System products to explain how the patterns, processes, and consequences of changes in land use, land cover, and land condition, at multiple spatial and temporal scales, affect people and nature. Initial assessment products will be initiated that address stakeholder-relevant topics [Applications Branch; Research Branch]

Support Objectives

In addition to the goals and strategic objective priorities for FY 2014, we must update, change, and strengthen several aspects of EROS support activities. The following specific areas of

emphasis critical to supporting the science and operations activities of the Center have been identified. The objectives are:

- 1) **Implement a Center-wide Process for Planning and Prioritizing our Work**
Good project management is all about “doing projects right,” and EROS has a very successful project management track record. We will bring added focused on selecting and “doing the right projects” to better focus our efforts on achieving the EROS mission. [Coordination and Requirements Office]
- 2) **Develop and Report on Supporting Performance Measures**
To reach our goals, we need objective performance measures that will provide a benchmark against which to evaluate our work, to act on, and inform our decisions. We will use metrics to track and report performance against our objectives, strategies, and goals. Our efforts in FY 2014 will provide us with baseline information to help us focus our work, take actions to improve where needed, and recognize achievements where they have occurred. [Branch and Office Chiefs]
- 3) **Define Science Product Maturity Model and Criteria for Transition to an Operational State**
Research and applications develop new products following understood maturity models to ensure thorough understanding, validation, feedback and acceptance. A common maturity model will facilitate integrated EROS planning across Branches. [Applications Branch; Data Services Branch]
- 4) **Launch an Enhanced Communication Strategy**
Fundamental to the success of EROS is implementing an enhanced communication strategy focused on the impacts of EROS activities to society, including the implementation of an EROS-focused, web-based training program. [Policy and Communications Office]
- 5) **Establish and Implement Improved Financial and Facility Processes, Controls, and Information**
Understanding the current and future state of our Center’s financial and facility needs is essential to demonstrating and remaining an important and viable asset to the USGS. To assist in accomplishing the EROS mission, we must continue to improve our financial and facility management processes, controls, and information. In FY 2014, a greater focus and emphasis will be placed on standard practices to better document, review, and communicate to EROS and Climate and Land Use Change Mission Area staff our progress in both these areas. [Program Control Office]

In support to the Bureau’s IT Transformation movement, the Center faces a great opportunity, if done right, when addressing its plan for data center consolidation. We must stay focused and place it as one of our high-priority objectives in FY 2014 as well:

- 6) **Establish and Execute a Data Center Consolidation Plan**
DOI is forging ahead with Data Center Consolidation as mandated by OMB. As a DOI network Gateway and key science center for the USGS Climate and Land Use Change

Mission Area, the EROS Center has been designated a DOI Core Center, the only USGS site so named. A plan will be established that addresses requirements, capabilities, and options to meet the project management and technical challenges of relocating IT data systems to EROS while maintaining operational continuity for scientists and science data users. [Program Control Office; Coordination and Requirements Office]

Guiding Principles

To further assist our efforts well into the future in terms of the people, science, data and information management, and business processes, I have defined a set of guiding principles that I am attaching for your reference. These principles will be used to guide our organization irrespective of changes in our goals, objectives, type of work, management, etc.

In closing, I would like to acknowledge and recognize the hard work and dedication of the entire workforce at EROS over this past year. It is through your efforts that we continued to bring focus and clarity to advancing our land change science and land change monitoring goals. Together, in one way or another, you all helped my management team define and roll-out a new government organizational structure that we believe will further our efforts towards establishing "One EROS."

Attachment

Guiding Principles

Steward Leadership

- Branches, teams, and our contract partners first, foremost, and always put the USGS and EROS Center mission first.
- Stewards, ensuring long-term preservation of land remote sensing data and information holdings, dedicated to understanding a changing Earth.
- Committed to the continuation of the Landsat record.

Requirements Focused

- Responsive to community requirements.
- Undertake projects that are appropriate mission-relevant activities.

Collection and Access to Data

- Underscore the Landsat archive as the centerpiece of EROS and the land change science program.
- Dedicated to timely access of the EROS archive holdings to all parties requesting data at no cost in the use of land change information and knowledge.

Science Relevance

- Emphasize the advancement of science, technology, and societal benefits of remote sensing products and services.
- As a USGS science center, ensure that stakeholder science needs and priorities are considered in all areas – operations, research, and administration.
- Adhere to science best practices, such as transparency, peer review, and communications.