



DATA ENABLING SCIENCE

EROS data and systems drive management decisions
and science research for our changing world.



Technology and Infrastructure



Data Acquisition and Missions



Data Processing and Validation



Data Storage and Access



Partnerships and Collaborations



Welcome to EROS

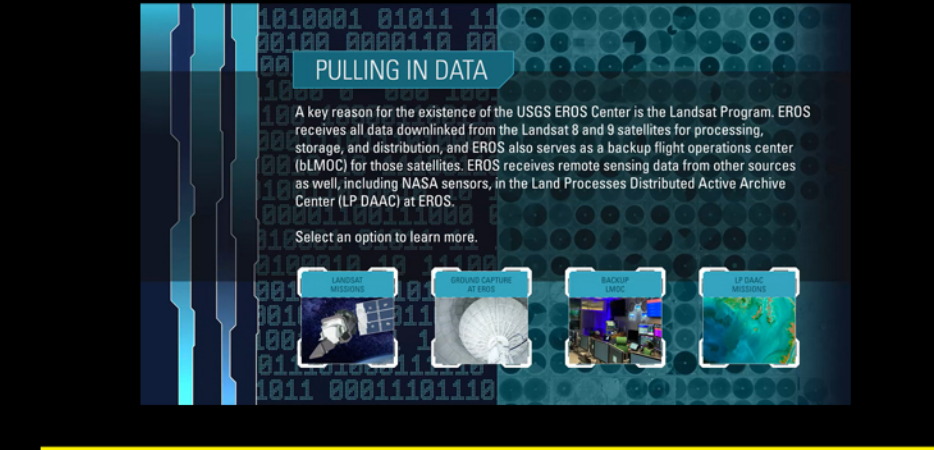
Explore the screens to your right
to learn more about the data and
systems managed by EROS.



TECHNOLOGY AT EROS

At the USGS EROS Center, our scientists have access to high performance computer technology capable of efficiently handling complex applications and large-scale workloads. These range from scientific applications and processing to artificial intelligence and machine learning.

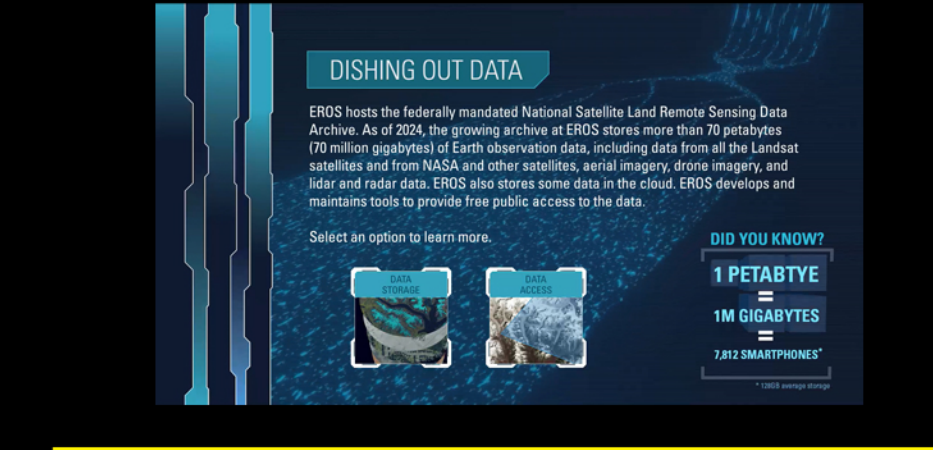
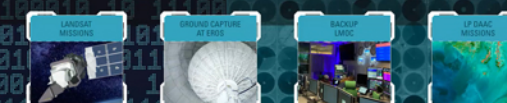
Select an option to learn more.



PULLING IN DATA

A key reason for the existence of the USGS EROS Center is the Landsat Program. EROS receives all data downlinked from the Landsat 8 and 9 satellites for processing, storage, and distribution, and EROS also serves as a backup flight operations center (BAMOS) for those satellites. EROS receives remote sensing data from other sources as well, including NASA sensors, in the Land Processes Distributed Active Archive Center (LP DAAC) at EROS.

Select an option to learn more.



DISHING OUT DATA

EROS hosts the federally mandated National Satellite Land Remote Sensing Data Archive. As of 2024, the growing archive at EROS stores more than 70 petabytes (70 million gigabytes) of Earth observation data, including data from all the Landsat satellites and from NASA and other satellites, aerial imagery, drone imagery, and lidar and radar data. EROS also stores some data in the cloud. EROS develops and maintains tools to provide free public access to the data.

Select an option to learn more.



DID YOU KNOW?
1 PETABYTE
=
1M GIGABYTES
=
7,812 SMARTPHONES*



WORLD-CLASS QUALITY

Landsat's north-to-south swath around the Earth is about 115 miles wide. Sensors onboard the Landsat satellites collect data from various parts of the electromagnetic spectrum that must be processed before they can be useful to scientists and land decision-makers. Each swath of data is broken into scenes that are 115 miles wide by 106 miles high, with each scene identified by a specific path and row number.

Select an option to learn more.



WORKING TOGETHER

EROS contributes data, technology, and expertise in partnering with other groups in the USGS and the Department of the Interior, other U.S. federal agencies, international organizations, and universities. While also gaining valuable insights from these collaborations.

One significant partnership is the USGS-NASA Sustainable Land Imaging Program, centered around the Landsat Program based at EROS. NASA develops and launches the satellites with input from the USGS—including the upcoming Landsat Next mission—and then turns ownership and operations over to the USGS, which includes data collection, archiving, and distribution. NASA's Land Processes Distributed Active Archive Center (LP DAAC) is also located at EROS.

Select an option to learn more about data-related partnerships.

