



USGS EROS Data Access and Availability

January 11, 2007

Presented by:

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USGS EROS Data and Application Support

Sioux Falls, South Dakota

**U.S. Department of the Interior
U.S. Geological Survey**

***Work performed under U.S. Geological Survey contract 03CRCN0001**

Topics:

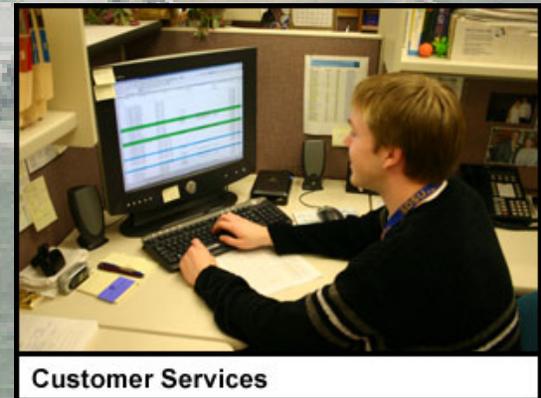
- Introduction of USGS EROS and NASA Land Processes DAAC User Services
- Overview of USGS EROS Data Products
- Overview of Online Data Search, Browse and Order Tools
 - Earth Explorer
 - GloVis
 - LP DAAC Data Pool
 - EOS Data Gateway
 - Seamless Data Distribution System
- Earth Explorer Profiles for Landsat Science Team
- Time for Questions

Aqua MODIS Direct Broadcast,
Sept. 13 – 19, 2005

Introduction of USGS EROS and NASA Land Processes DAAC User Services

■ Supporting our Customers

- Access to data products
- Web interfaces – search, preview, and ordering websites
- Providing online tutorials
- Educating through outreach



USGS EROS HOME PAGE

<http://eros.usgs.gov>

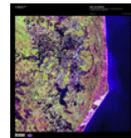


USGS Home
Contact USGS
Search USGS

Earth Resources Observation and Science (EROS)

Products Science NASA LP DAAC Satellite Missions NSLRSDA About EROS

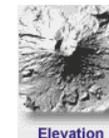
Image Gallery



Aerial



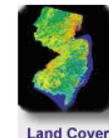
Map



Elevation



Satellite

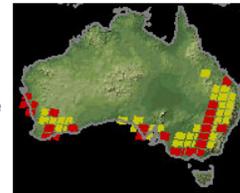


Land Cover

A leading source of land information for exploring our changing planet.

Featured Sites

The CEOS Working Group on Information Systems and Services (WGISS) and The USGS National Satellite Land Remote Sensing Data Archive have developed a web map service to view Earth Observation satellite and aerial imagery ground coverages. The service allows one to determine seasonal patterns, determine data rich areas as well as data gap locations. [CEOS WG on Information Systems and Services](#)



[Archive](#)

Featured Products

[Orthorectified Landsat data is now available for free download from the US Geological Survey](#)

In response to the USGS initiative to make more Landsat data readily available, the USGS is pleased to announce that Orthorectified Landsat data is now available for free download from the Global Visualization Viewer (GloVis) at <http://glovis.usgs.gov> and Earth Explorer at <http://earthexplorer.usgs.gov>.

[Archive](#)

Accessibility FOIA Privacy Policies and Notices

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

URL: <http://eros.usgs.gov/>

Page Contact Information: custserv@usgs.gov

Page Last Modified: February 2, 2006



LP DAAC HOME PAGE

Land Processes Distributed Active Archive Center

- About LP DAAC
- Data Products
- Order Data
- Data Tools
- Help/Education
- Links
- Contact Us

The Land Processes Distributed Active Archive Center (LP DAAC) was established as part of NASA's Earth Observing System (EOS) Data and Information System (EOSDIS) initiative to process, archive, and distribute land-related data collected by EOS sensors, thereby promoting the inter-disciplinary study and understanding of the integrated Earth system. The role of the LP DAAC includes the higher-level processing and distribution of [ASTER](#) data, and the distribution of [MODIS](#) land products derived from data acquired by the Terra and Aqua satellites.



<http://LPDAAC.usgs.gov>

Data Access

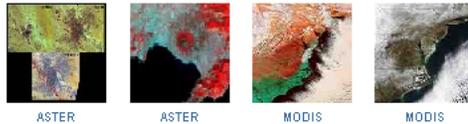
- [EOS Data Gateway](#)
- [Data Pool](#)
- [GloVis](#)

Search LP DAAC

LP DAAC FAQ

[Site Map](#)

ASTER & MODIS Image Galleries



- News!**
- [EOS Data Gateway Display Change](#)
 - [MODIS Reprojection Tool Swath v2.1](#)
 - [ASTER Pricing Announcement](#)
 - [MODIS Reprojection Tool v3.3 Available](#)

**Scenes Available
April 21, 2006**
[ASTER](#) Over 1,457,000
[MODIS](#) Over 13,205,000



- [LP DAAC](#)
- [EROS Home](#)
- [About](#)
- [Products](#)
- [Data Tools](#)
- [Order Data](#)
- [News](#)
- [Help/Edu](#)
- [Links](#)
- [Contact Us](#)

This site is hosted by the [USGS](#) - [NASA](#) Distributed Active Archive Center
[U.S. Government: Public Information Exchange Resource](#)
[NASA: Privacy Policy and Important Notices](#)
[USGS: Privacy Statement, Disclaimer, Accessibility, FOIA](#)
[DOI: Privacy Statement, Privacy Disclaimer, No FEAR Act, FOIA, Performance Plan, Children's Privacy](#)
URL: <http://LPDAAC.usgs.gov/main.asp>
Technical Contact: LPDAAC@eos.nasa.gov
Last Update: Wednesday, February 01, 2006
[Download Adobe Acrobat Reader](#)



Overview of USGS EROS Data Products

Satellite - <http://eros.usgs.gov/products/satellite.html>

- ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer)
- AVHRR (Advanced Very High Resolution Radiometer Sensor)
- Declassified Satellite Imagery 1959-1980
- EO-1 - Hyperion and ALI (Advanced Land Imager)
- Landsat 1-5, 7
 - MSS (Multispectral Scanner)
 - NALC (North American Landscape Characterization)
 - TM (Thematic Mapper)
 - ETM+ (Enhanced Thematic Mapper Plus)
 - Landsat Orthorectified (MSS, TM, ETM+)
- MODIS (Moderate-Resolution Imaging Spectroradiometer)
 - Terra and Aqua
- SIR-C (Spaceborne Imaging Radar C-Band)



Overview of USGS EROS Data Products

Aerial - <http://eros.usgs.gov/products/aerial.html>

- Digital Orthophoto Quadrangles (DOQs)
- High Resolution Orthoimagery
- Historical Aerial Photographs
- Index/Mapping Photography
- NAPP (National Aerial Photography Program)
- NHAP (National High Altitude Photography)
- SCAR (Scientific Committee on Antarctic Research)
- Space Acquired Photography



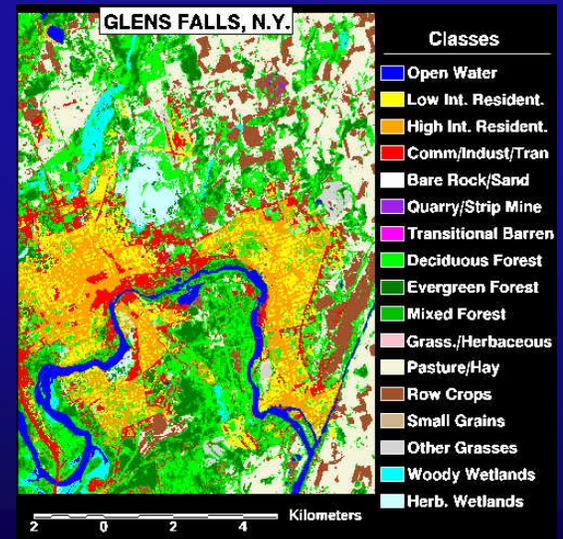
Overview of USGS EROS Data Products

Maps - <http://eros.usgs.gov/products/map.html>

- Digital Raster Graphics (DRGs)
- Digital Line Graphs (DLGs)

Land Cover - <http://eros.usgs.gov/products/landcover.html>

- National Land Cover Dataset (NLCD)
- Multi-Resolution Land Cover (MRLC)
- Global Land Cover Characterization (GLCC)
- Land Use and Land Cover (LULC)

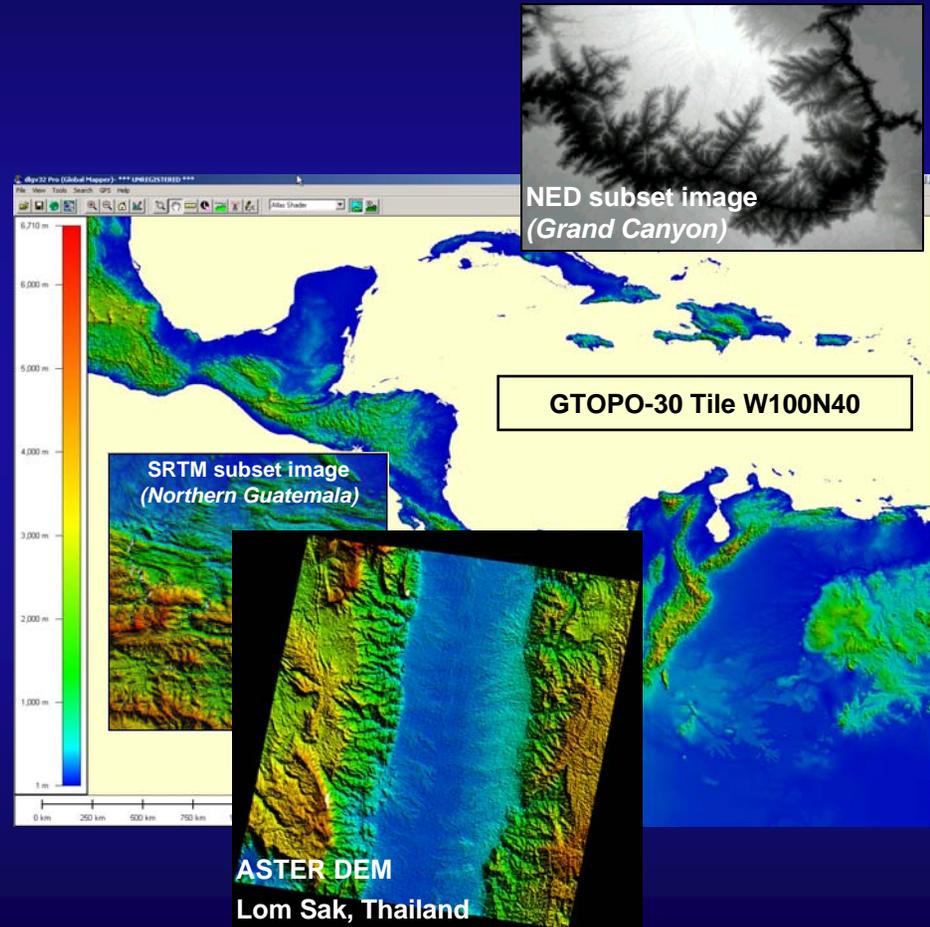


Subset image of NLCD 92 classification
(Glens Falls, NY)

Overview of USGS EROS Data Products

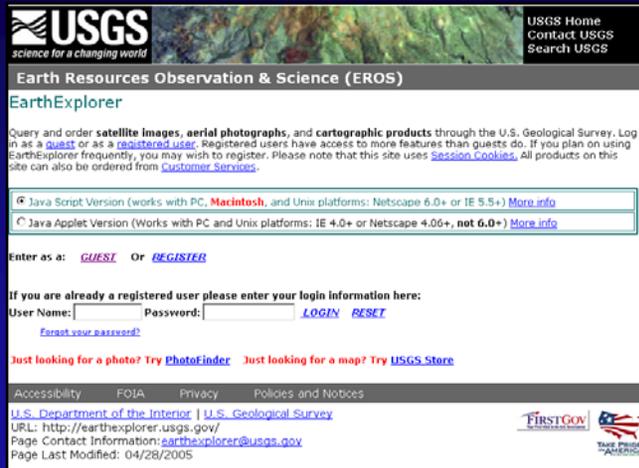
Elevation - <http://eros.usgs.gov/products/elevation.html>

- National Elevation Dataset (NED)
 - 1 Arc Second
 - 1/3 Arc Second
 - 1/9 Arc Second
- Shuttle Radar Topography Mission (SRTM)
- Global 30 Arc-Second Elevation Data Set (GTOPO-30)
- ASTER Digital Elevation Model



Earth Explorer

Online Data Search, Browse and Order Tools



Attributes:

Search multiple data sets at one time

Preview browse images

Retain order preferences and user profile information

Submit standing order requests

Refine and save search criteria and results

Send search results & search criteria to other EE users

Track Orders

<http://earthexplorer.usgs.gov>

Current Inventory includes

AVHRR

- Declassified Satellite Imagery
- EO-1 ALI & Hyperion
- Landsat 1-5, 7 (MSS, TM, ETM+)
- Landsat 7 International Ground Stations (search only)
- Tri-Decadal Global Landsat Orthorectified (MSS, TM, ETM+, & TM Mosaics)
- NLDC (search only)
- NALC
- SPOT (search only)
- SIR-C
- USGS Commercial Data Purchases
- ASAS (search only)
- Historical Aerial Photos
- Aircraft Scanners (search only)
- DOQs
- NAPP
- NHAP
- Space Acquired Photography
- DLG (1:100K & Large Scale)
- NED Predefined Areas
- DRGs
- National Atlas of the United States
- MRLC2001 Terrain Corrected

UPCOMING:

**SLC-off Standard L1T product
Segment-based Fill Product**



Earth Explorer

Online Data Search, Browse and Order Tools

Search criteria

- Define area on map, enter Lat/Long, or Place name
- Select required data types

Narrow search results:

- Data image ID
- WRS Path/Row
- Cloud cover
- Preview availability

Search results:

- Save results
- Send results to another EE Registered user
- Set up standing request
- Display one or all of the searched data types

Attributes:

- Preview browse images
- Review metadata
- Access data definitions
- Order selected items
- Track placed orders



Global Visualization Viewer – GloVis

Online Data Search, Browse and Order Tools

<http://glovis.usgs.gov>

USGS
science for a changing world

Center for Earth Resources Observation & Science (EROS)

USGS Global Visualization Viewer

Select a Sensor, then click on the Global Locator Map to view satellite browse images in that area.

Latitude Longitude Select Sensor Landsat ETM+ View Images

World map visualization

What's New! | Browser Requirements | Help | Download Source Code
Quick Start Guide | About Browse Images | Forum

DOI | USGS HOME | Biology | Geology | Mapping | Water

Search Attributes:

- **Locate area of interest:**
 - Enter Lat/Long
 - Click on map
 - Enter Path/Row
- **Preview browse images**
- **Narrow search results:**
 - Choose date range
 - Adjust cloud cover
- **Cross-inventory searching of products**
- **Add map layers to help locate area of interest**
- **Search by swath mode:**
 - ASTER
 - Landsat
- **JavaScript – initial page necessary to run tool**

USGS

Global Visualization Viewer – GloVis

Online Data Search, Browse and Order Tools

Current inventory includes:

- Landsat 1-5, 7 (MSS, TM, ETM+, SLC-Off)
- ASTER VNIR & TIR
- EO-1 ALI & Hyperion
- MODIS Aqua & Terra
- Landsat Orthorectified (TM, ETM+)
- MRLC – TC, RA, 1992
- NAPP Aerial

**UPCOMING: SLC-off Standard L1T product
Segment-based Fill Product**

USGS Global Visualization Viewer

Sensor Resolution Map Layers Tools File Help

Aerial ASTER EO-1 Landsat MODIS Aqua MODIS Terra MRLC Orthorectified

Free Scene Download

WRS-2 Path/Row: 21 36 Go

Lat/Long: 34.6 -87.4 Go

Max Cloud: 100%

Scene Information:
ID: EPP021R036_7F20010929
Cloud Cover: 20%
Date: 2001/9/29

Sep 2001 Go

Prev Scene Next Scene

PanSharp ETM+ Scene List

EPP021R036_7F20010929

Add Del Order Download

1000m No Limits Set

LP DAAC Data Pool

Online Data Search, Browse and Order Tools

<http://LPDAAC.usgs.gov/datapool/datapool.asp>

Attributes:

- Download ASTER and MODIS data FTP direct
- Enter search criteria
- Preview browse images
- Convert data:
 - Reformat, subset (MODIS) & reproject
- No charge for data

The screenshot shows the LP DAAC Data Pool website. At the top, there is a navigation bar with links: Home, About, Products, Data Tools, Order Data, News, Help/Edu, Links, and Contact Us. Below the navigation bar is the title "DataPool @ LP DAAC". The main content area is divided into two columns. The left column contains a list of links: About Data Pool, Data Types, Data Pool Help, Release Notes, Glossary, and EOS Data Gateway. The right column contains a welcome message and a description of the Data Pool. Below the description is a search and FTP section with buttons for "SEARCH" and "FTP". The "SEARCH" section has buttons for "ASTER & MODIS" and "MODIS". The "FTP" section has buttons for "ASTER", "MODIS: Aqua", "Terra", and "Combined". At the bottom of the page, there is a footer with links: LP DAAC, EROS Home, About, Products, Data Tools, Order Data, News, Help/Edu, Links, and Contact Us.

Land Processes Distributed Active Archive Center

Home About Products Data Tools Order Data News Help/Edu Links Contact Us

DataPool @ LP DAAC

About Data Pool
Data Types
Data Pool Help
Release Notes
Glossary
EOS Data Gateway

Reformat, Reproject & Subset

Welcome to the Data Pool at the Land Processes Distributed Active Archive Center (LP DAAC). The Data Pool is an online archive that provides FTP access to selected LP DAAC data products. ASTER Data Pool coverage includes the United States and Territories. MODIS coverage is global. For these Terra and Aqua sensors, there are several [data types available at no charge through the Data Pool](#). MODIS daily products are retained for 4 days, all others for 12 months. There is no scheduled removal cycle for ASTER products.

A simple 'drill-down' web interface is used to quickly locate data of interest. Metadata and most browse data can be viewed directly in your browser. Data granules can be downloaded via ftp. If you are new to the Data Pool, please read [Data Pool Help](#) and [Release Notes](#) to get a quick overview of the 'drill-down' interface. Note that the contents of the Data Pool will not always match the contents of the EOS Data Gateway. If the desired data is not found in the Data Pool archives, try searching the [EOS Data Gateway](#) (EDG). Missing granules cannot be inserted into the Data Pool archive.

SEARCH **FTP**

ASTER & MODIS MODIS ASTER MODIS: Aqua Terra Combined

Please note that scheduled downtime occurs every Wednesday from 7 a.m. to 11 a.m. Central time.

LP DAAC EROS Home About Products Data Tools Order Data News Help/Edu Links Contact Us

EOS Data Gateway (EDG)

Online Data Search, Browse and Order Tools

<http://edcimswww.cr.usgs.gov/pub/imswelcome/>

Attributes:

- Access to LP DAAC's complete archive of ASTER & MODIS data
- Access over 1500 data products from multiple NASA DAACs and affiliated centers
- Retain order preferences and user profile information
- Refine and save search criteria
- Preview browse images

Land Processes Distributed Active Archive Center

NEW!

[EOS Data Gateway Display Change](#)

[New ASTER Pricing Policy Announcement](#)

[Version 0 Products Transmitted To USGS](#)

[For orders](#)

Important Information from LP DAAC

[Scheduled Down Time \(CST\)](#)
Wednesdays 7-11am

[ASTER V002 Data Removal](#)

[MODIS Aqua V003 Data Removal](#)

[ASTER Data Available Within Five Days of Acquisition](#)

[Current LP DAAC Data Center Names](#)

Notice: If you are new to the EOS Data Gateway, or are having difficulties placing an order, please refer to the [quick-start tutorial](#) for assistance. For questions and answers please visit the LP DAAC's [customer support center](#).

Earth Observing System Data Gateway
Search for and order earth science data products from NASA and affiliated centers

- **Enter the Data Gateway**
Enter as guest
Enter as a registered user
Other Data Gateway Sites
- **My Account**
Become a registered user
Forgot my password
- **What's New**
[Use Warehouse Inventory Search Tool \(beta\)](#): Give us feedback
New Data Sets
Data Gateway News
EOS Program News
- **How-to**
User Support
FAQ
Tutorial
Browser check-out
- **Useful links**
Earth science data sources and archives
NASA Earth Observing System
Sample data
Outreach and education
Information for data providers
Calendar updates (data providers only)
- **Data Center Status**

Alerts

- **GSFC:**
The MODIS Ocean Color product suites are no longer available for ordering from the GES DAAC, as these particular products are outdated. The agreed NASA Ocean Color products are those being produced and available at the Ocean Biology Processing Group at <http://oceancolor.gsfc.nasa.gov>.
- **LP DAAC:**
[New ASTER Pricing Policy Announcement](#)

Due to high demand, Ftp shipment notifications for ASTER On-Demand orders placed prior to January 25, 2006, may be delayed. We appreciate your patience as we continue to process these orders.

[EOS Data Gateway Display Change](#)

This is a U.S. Government Computer System. Users are authorized to use this system for search and acquisition of earth science data and services. Access to this system constitutes the user's consent to monitoring, keystroke recording or auditing. Any attempt toward malicious use on this system is prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986.

Also, please read the NASA [Privacy, Security, Notices](#) and the EOS Data Gateway [accessibility policy](#).

Comments, Questions, or Problems? [Email us](#) (opens a new window)
Created by EOS Data Gateway, Version 3.6.5
Webmaster: Chao-Hsi Chang (chao-hsi_chang@gst.com)
Responsible NASA Official: Medora Macie (Mail Code 423, NASA/GSFC, Greenbelt, MD 20771)



Seamless Data Distribution System

Online Data Search, Browse and Order Tools

<http://seamless.usgs.gov/>

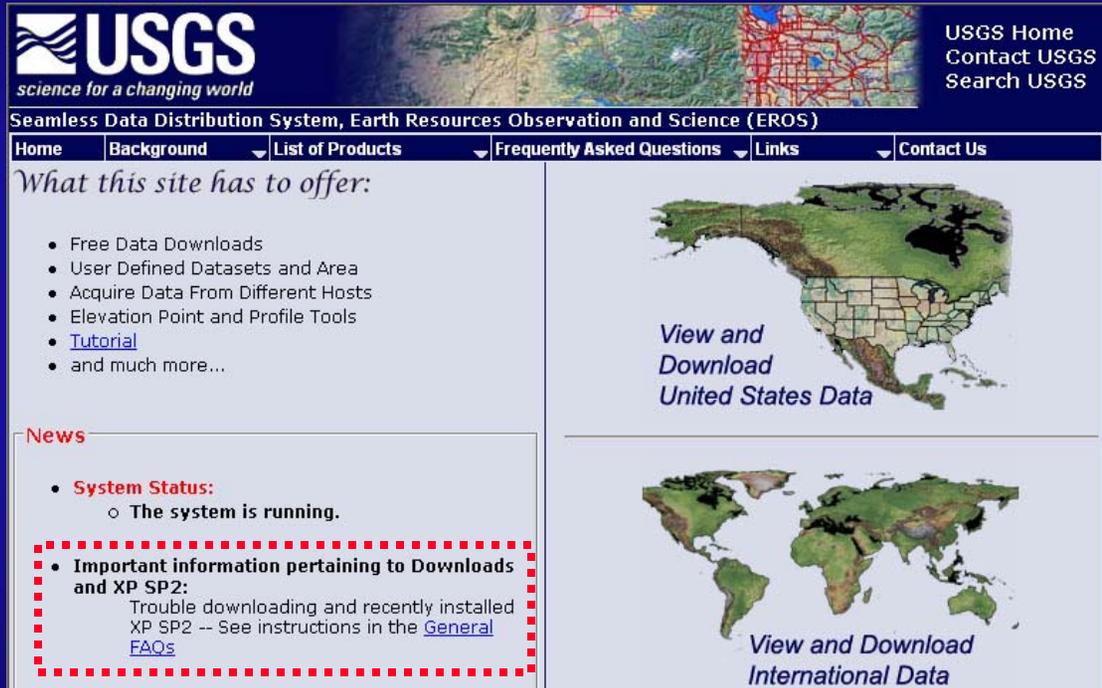
Attributes:

- Search multiple data sets at one time
- Download data at no cost
- Preview imagery

Current inventory includes:

- 1-meter Orthoimagery
- Bureau of Transportation Statistics (BTS) Roads
- High Resolution Orthoimagery
- LP DAAC MODIS
- MODIS NDVI Direct Broadcast
- National Atlas
- National Elevation Data (NED)
- National Land Cover Dataset (NLCD)
- Shuttle Radar Topography Mission (SRTM)

- **UPCOMING:** Landsat Image Mosaic of Antarctica (LIMA)



The screenshot shows the USGS Seamless Data Distribution System website. At the top left is the USGS logo with the tagline "science for a changing world". To the right are links for "USGS Home", "Contact USGS", and "Search USGS". Below the logo is the title "Seamless Data Distribution System, Earth Resources Observation and Science (EROS)". A navigation menu includes "Home", "Background", "List of Products", "Frequently Asked Questions", "Links", and "Contact Us". The main content area is divided into three sections: 1. "What this site has to offer:" with a bulleted list of features like "Free Data Downloads" and "User Defined Datasets and Area". 2. "News" with a "System Status" update stating "The system is running." and a highlighted "Important information pertaining to Downloads and XP SP2" section. 3. Two map-based sections: "View and Download United States Data" with a map of the US, and "View and Download International Data" with a world map.



Seamless Data Distribution System

Online Data Search, Browse and Order Tools

Search criteria:

- Select required data types
- Define area on map
- Enter Lat/Long
- Zoom to Region, State or Locale

USGS
Seamless Data Distribution [Back to Main Page](#) [Tutorial](#)

Zoom
Query
Tools
Downloads
Documents

Scale Information
Out In
Scale = 1:156,203,885

Layers
Display Download
Places (Names)
Layer Extent
Structures
Transportation
Boundaries
Hydrography
Orthoimagery
Land Cover
Elevation

Zoom to Region: Select a Region
Zoom to State: Select a State
Zoom to Locale: Select a Locale

U.S. Department of the Interior | U.S. Geological Survey | USGS for Earth Resources Observation and Science (EROS)
URL: /Website/Seamless/ | Last Update: Dec 23, 2004 | Maintainer: Comments and Suggestions | Disclaimer.

Search and Order Tools

<http://eros.usgs.gov/about/customer/search.html>



Earth Resources Observation and Science (EROS)

Products Science NASA LP DAAC Satellite Missions

- Aerial Products >
- Map Products >
- Elevation Products >
- Satellite Products >
- Land Cover Products >
- EROS Image Gallery >
- Business Partners >
- Customer Services >

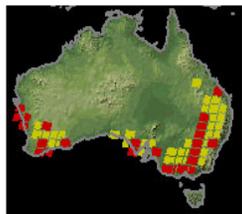
A leading source of land information for



- Search & Order
- Payment Options
- Delivery Times
- Shipping & Handling
- Product Returns
- Data Citation
- Certification Service
- Feedback
- Customer Service

Featured Sites

The CEOS Working Group on Information Systems and Services (WGISS) and The USGS National Satellite Land Remote Sensing Data Archive have developed a web map service to view Earth Observation satellite and aerial imagery ground coverages. The service allows one to determine seasonal patterns, determine data rich areas as well as data gap locations. [CEOS WG on Information Systems and Services](#)



Archive

Featured Pro

[Orthorectified Land download from th](#)
In response to the data readily available that Orthorectified download from the <http://glovis.usgs>, <http://earthexplore>



Earth Resources Observation and Science (EROS)

Products Science NASA LP DAAC Satellite Missions NSLRSDA About EROS

Search & Order

Choose from the options listed below to search and order data. More than one tool may be available for a given product. To help determine which option will best suit your needs, please select from the following categories of products:

Aerial	Satellite	Elevation	Land Cover	Maps
EarthExplorer	A complete search and order tool for aerial photos, elevation data, and satellite products distributed by the USGS. Supports secure online credit card ordering!			
EOS Data Gateway	A complete search and order tool for accessing earth science data products from NASA and affiliated centers.			
USGS Global Visualization Viewer (GloVis)	A quick and easy search and order tool for a growing satellite database. Current inventory includes Landsat 4/5 TM, Landsat 7 ETM+, ASTER VNIR and TIR. Supports secure online credit card ordering!			
MODIS Direct Broadcast	FTP download information for real-time MODIS products.			
Seamless Data Distribution System Enhanced	A system for ordering seamless digital data. Supports secure online credit card ordering!			
PhotoFinder	A quick and easy way to find and order USGS National Aerial Photography Program (NAPP) Photos. Supports secure online credit card ordering!			
USGS Geographic Data Download	FTP download site for select USGS digital cartographic data.			
USGS Web Mapping Portal	A developmental web site that allows metadata searches for multiple USGS datasets.			

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey
URL: <http://eros.usgs.gov/>
Page Contact Information: custserv@usgs.gov
Page Last Modified: February 1, 2006

USGS Home
Contact USGS
Search USGS



Other Websites of Interest

EarthNow! - <http://earthnow.usgs.gov/>

Spectral Characteristics Plotter - <http://ldcm.usgs.gov/plotter.html>
Information - http://ldcm.usgs.gov/spectral_plotter.html

LDCM - <http://ldcm.usgs.gov/LDCMHome.html>

Landsat - <http://ldcm.usgs.gov/LDCMHome.html>



Earth Explorer

Landsat Science Team Profile Details

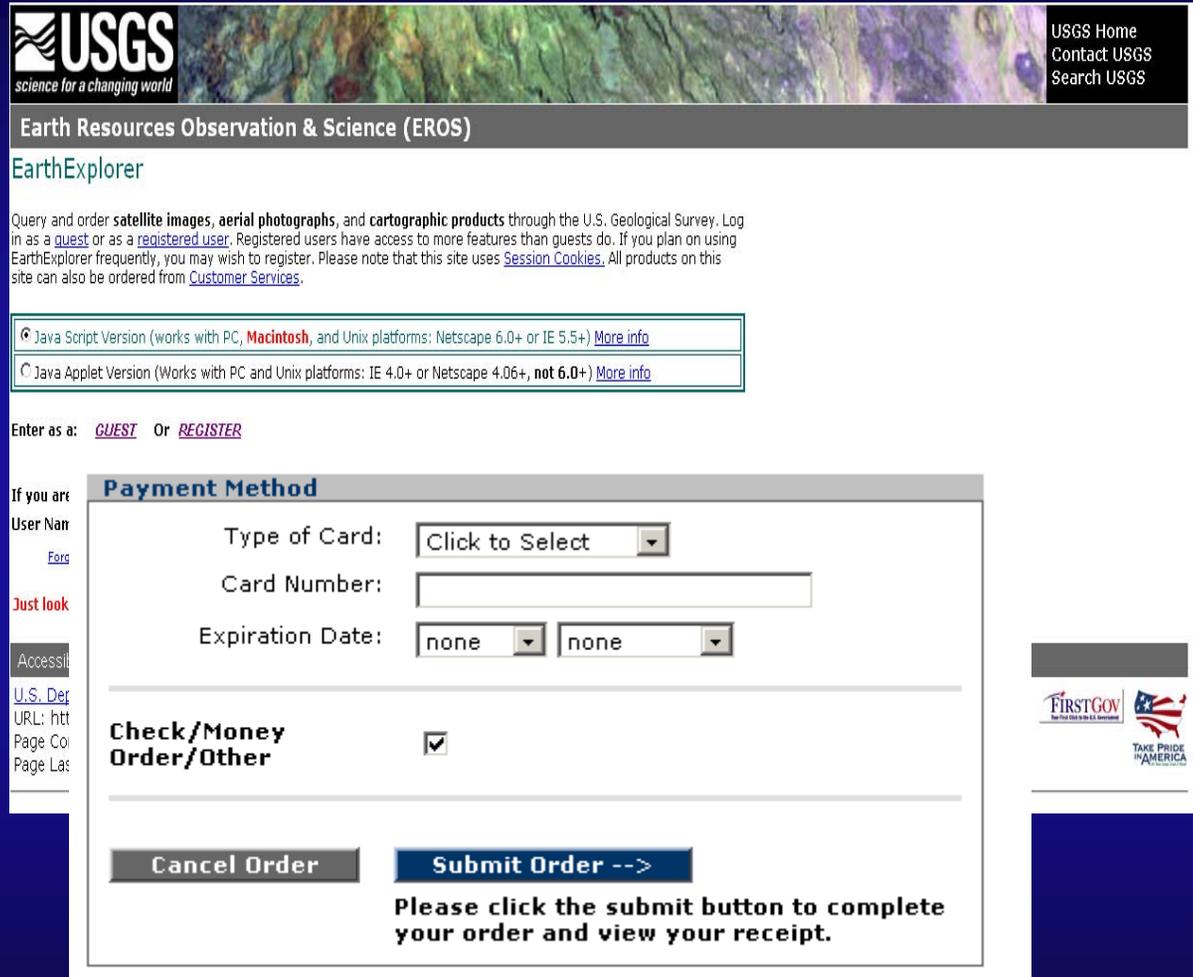
Profile Allows:

- Searching and Previewing of datasets
- Use of the funding set up for Science Team research

Ordering Procedure

- Standard Search/Preview of imagery, adding items to the Shopping Basket
- Step 4 – Payment page
 Select Check/Money Order/Other
- Web and email order confirmation

EOS Data Gateway –does not use EE profile!



The screenshot shows the Earth Explorer website interface. At the top, there is a USGS logo with the tagline "science for a changing world" and a navigation menu with links for "USGS Home", "Contact USGS", and "Search USGS". Below the logo is the text "Earth Resources Observation & Science (EROS)" and "EarthExplorer". A paragraph of text explains that users can query and order satellite images, aerial photographs, and cartographic products through the U.S. Geological Survey. It mentions that registered users have access to more features than guests and provides links for "Session Cookies" and "Customer Services".

Below the text are two radio button options for browser versions: "JavaScript Version (works with PC, Macintosh, and Unix platforms: Netscape 6.0+ or IE 5.5+) More info" and "Java Applet Version (Works with PC and Unix platforms: IE 4.0+ or Netscape 4.06+, not 6.0+) More info".

The "Enter as a:" section has links for "GUEST" and "REGISTER".

The "Payment Method" section is highlighted. It contains a "Type of Card:" dropdown menu with "Click to Select" selected, a "Card Number:" text input field, and "Expiration Date:" dropdown menus with "none" selected for both. Below this is a "Check/Money Order/Other" checkbox which is checked.

At the bottom of the payment section are two buttons: "Cancel Order" and "Submit Order -->". Below the buttons is a note: "Please click the submit button to complete your order and view your receipt."

On the right side of the screenshot, there is a "FIRSTGov" logo with the text "The First Step with U.S. Government" and a "TAKE PRIDE IN AMERICA" logo with an American flag.

USGS Commercial Data Purchases Imagery Collection

- Makes imagery purchased by several US Government agencies available to other Federal Users.

- IKONOS
- OrbView
- Quickbird
- AWiFs

- Requires Agency Certification Form

- <http://edc.usgs.gov/products/satellite/ucdp.html>
- <http://crssp.usgs.gov/>

- Shapefile coverage maps available:

ftp://edcftp.cr.usgs.gov/pub/metadata/satellite/ucdp/UCDP_Shapefiles/



Customer Services Contact Information

Linda Jonescheit
jonescheit@usgs.gov
1-800-252-4547, Ext 6967
1-605-594-6967
Fax 1-605-594-6589

U.S. Geological Survey
Center for Earth Resources
Observation and Science (EROS)
47914 252nd Street
Sioux Falls, SD 57198-0001

USGS Customer Services

Toll free: 800-252-4547
Tel: 605-594-6151
TDD: 605-594-6933
Fax: 605-594-6589
Email: custserv@usgs.gov
<http://eros.usgs.gov>

NASA LP DAAC User Services

Toll Free: 866-LPE-DAAC (573-3222)
Tel: 605-594-6116
TDD: 605-594-6933
Fax: 605-594-6963
Email: LPDAAC@eos.nasa.gov
<http://LPDAAC.usgs.gov>

Business Hours: Monday thru Friday, 8:00 a.m. to 4:00 p.m., Central Time

