



Bulk Download Application Help Documentation

Version 1.0

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Document History

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1	June 2011	Original document 0.1
2	July 2011	Updated to include status messages and expiration notices
3	July 2011	Windows Firewall information; Additional minor updates
4	November 2012	Added verification of ports 4446 and 4448
5		
6		

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I. Introduction

Over the last two years, the projects at EROS have been directed to make more of its data holdings available to the public at no charge. Following this direction, projects began to “web-enable” data via the Earth Explorer (EE), Hazards Data Distribution Systems (HDDS), and GloVis access and distribution web portals. With the goal for making data more available, users are demanding easier ways to get access to the data. Users have requested bulk download of data to support their requirements for access to larger amounts of data. To support these requirements the Bulk Download Application has been integrated with the EarthExplorer and HDDS systems to allow specified users this capability.

The overall goal of Bulk Download Application is to streamline and enhance the capability for delivering bulk data to customers, while also managing the resources that store the data. The EROS Bulk Download service requires the user to use either the EarthExplorer or Hazards Data Distribution System (HDDS) as the front end systems for access to the query systems for the desired data. The Bulk Download Application interfaces with the EROS Mass Storage System and other storage systems to facilitate download of data through a simple JAVA applet.

A. Key Features

Some of the key features of the Bulk Download App:

- Login/Registration
- Operating System independent
- Simple user interface
- Allow the user to save files to a desired location
- Provide a fast, simple interface for unintended downloads
- Java interface

B. System requirements

The following are the hardware and software requirements required to use the EarthExplorer client:

- Hardware Requirements - Windows
 - 233mhz processor - 2Ghz or better recommended
 - Minimum of 256MB RAM - 4GB recommended
 - Minimum of 20GB of free space - 100GB recommended
 - Display capable of 800x600 with 256 colors, with 32MB of video RAM
 - Mouse
 - Keyboard
- Hardware Requirements – Apple Mac
 - Intel x86 or PowerPC G3, G4, or G5 - 2Ghz or better recommended
 - Minimum of 256MB RAM, 4GB recommended
 - Minimum of 20GB of free space, 100GB recommended
 - Display capable of 800x600 with 256 colors, with 32MB of video RAM
 - Mouse
 - Keyboard
- Hardware Requirements – Linux
 - Intel x86 or 2Ghz or better recommended
 - Minimum of 256MB RAM, 4GB recommended

- Minimum of 20GB of free space, 100GB recommended
- Display capable of 800x600 with 256 colors, with 32MB of video RAM
- Mouse
- Keyboard
- Network Requirements
 - Broadband connection 1.5Mbps
 - 3G network will impact display speed
 - Port 4448 is open to the internet
- Software Requirements
 - Operating System: Windows XP, Windows Vista, Windows 7, Windows Server 2000, Windows Server 2003, Windows Server 2008
 - Mac OS X
 - Unix
 - Linux
 - Solaris
 - Sun Java 6 JRE

II. EarthExplorer Bulk Order Process

The Bulk Download Application is available for download through the EarthExplorer and HDDS User Interfaces. The user for bulk download must be a registered user of the EarthExplorer system. In addition, the user's profile must be updated through the administration interface based on USGS approval, to allow the user access for bulk download of data.

A. Login

The Login process allows the registered user to logon to the EarthExplorer system. As mentioned earlier, as a registered user, you can use all of the EarthExplorer's features, including the ability to save your search criteria and results, download data, access to subscription services and to save specific parameters you may want to apply to a specialized item request.

1. Login Process

- a. To Login, select the 'Login' menu item from EarthExplorer menu. (Note: you are automatically logged immediately after you register for the first time).

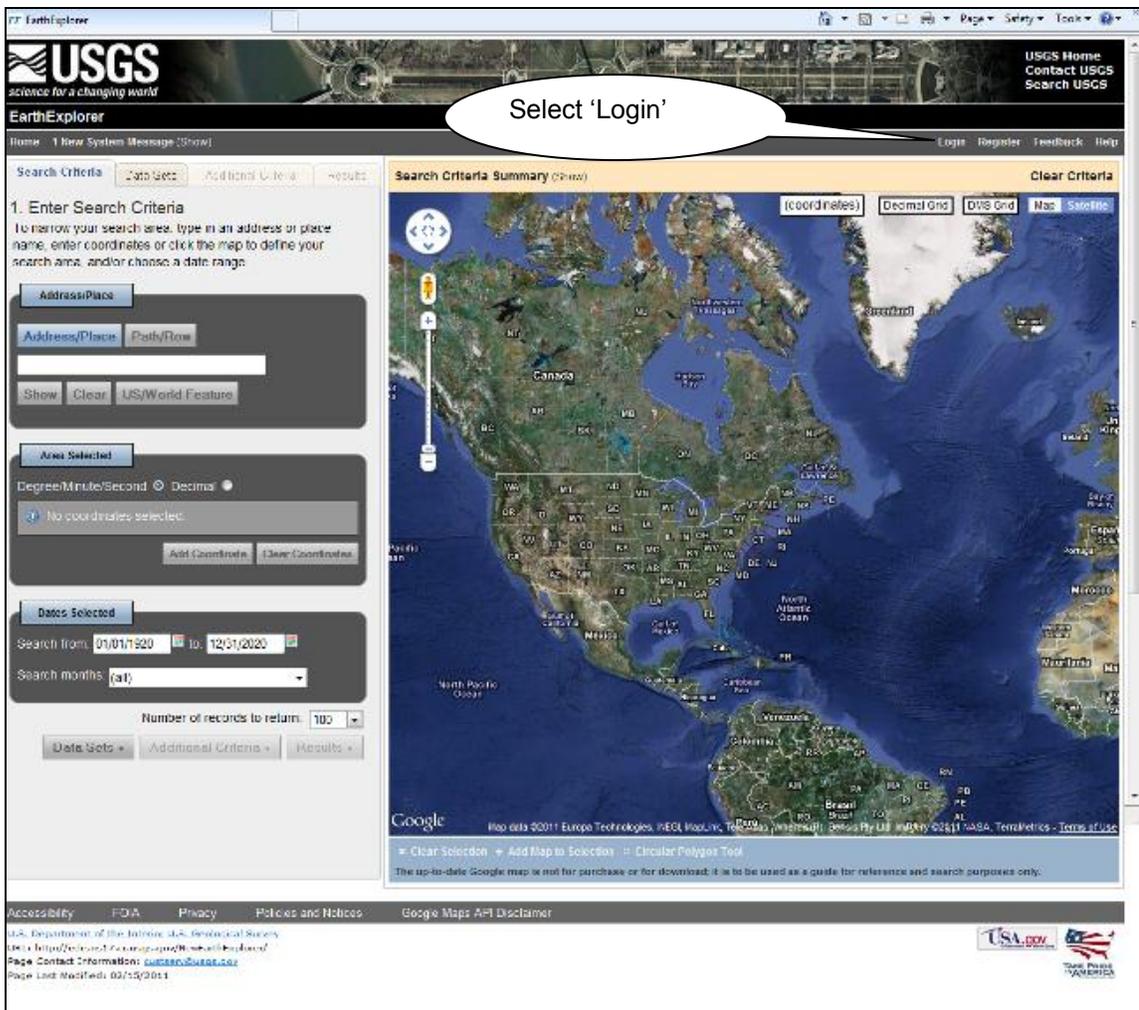
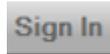


Figure 1 - Login

b. Fill in Username and Password then select the 'Sign In' button:



When you sign in using your user name and password, information in your profile can be used to access a specific USGS site or to place orders for USGS EROS products.

Sign in using your USGS registered username and password

Username:

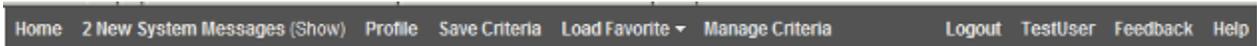
Password:

[Forgot your password?](#)

Figure 2 - Login/Password

c. Select the [Forgot your password?](#) link to receive directions for updating your password.

d. Once you are logged-in additional items will appear in the main menu bar:



After logging in to EarthExplorer, go through the normal process of searching for data and selecting a dataset.

B. Search Criteria

The EarthExplorer system allows users to search, download and order U.S. Geological Survey data through a number of query options. The EarthExplorer uses tabs in the application to facilitate stepping through each portion of the search process. The EarthExplorer search process is broken down into four (4) main areas:

- Search Criteria – Provides the interface for entering various search options.
- Data sets – Provides the interface for selecting the data type the user is interested.
- Additional Criteria – Provides an interface for entering additional search criteria specific to the selected dataset.
- Results – Provides the interface for displaying a textual and graphical view of the query results.



Figure 3 - EarthExplorer Search Tabs

C. Enter Search Criteria using Search Criteria tab

The Search Criteria tab allows the user to enter their search criteria for the area or location they are interested. Users have the option of either entering in their search criteria by entering in the textual information in the Search Criteria tab panel, or through the Google Map interface.

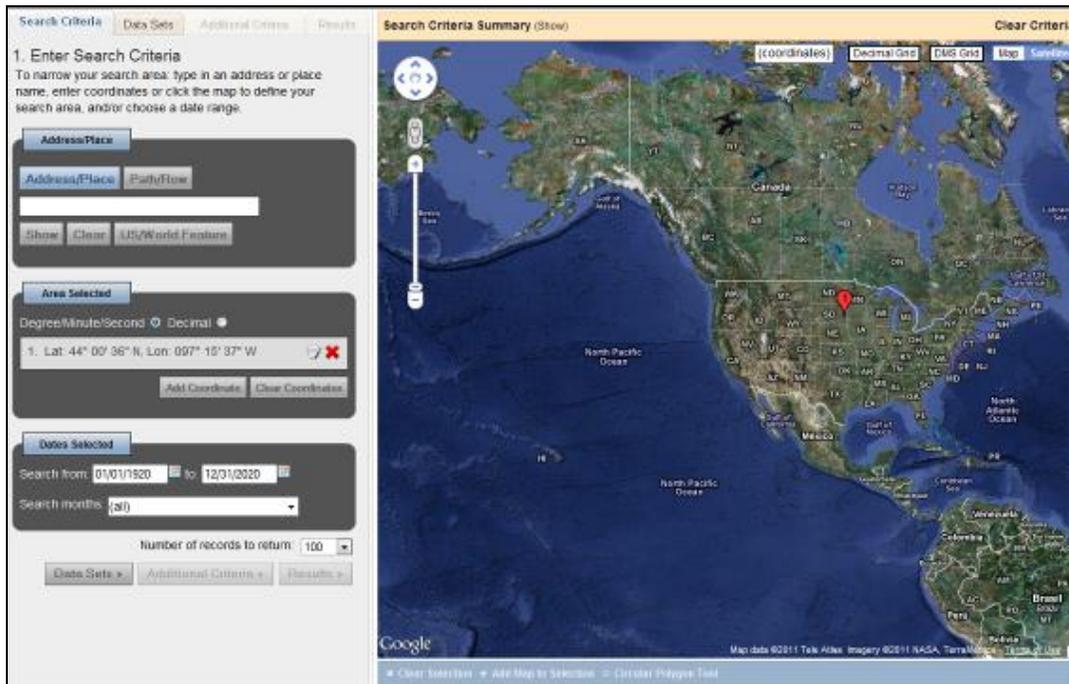


Figure 4 - EarthExplorer Search View

The search criteria options include:

- Google Map Interface – Allows the user to enter their area of interest through the Google Map interface.
- Address/Place – Allows the user to enter in an address or place name.
- Area Selected – Allows the user to enter coordinates to define their area of interest. In addition, this area is updated when the selecting areas on the map or when an address or place name is entered.
- Dates Selected – Allows the user to enter a date range.
- Number of records to return – Allows the user to modify the number of scenes to return from a search.

D. Select Data Set(s) Tab

The Select Data Sets(s) tab allows the user to select the data set(s) to perform the search identified from the Search Criteria tab.

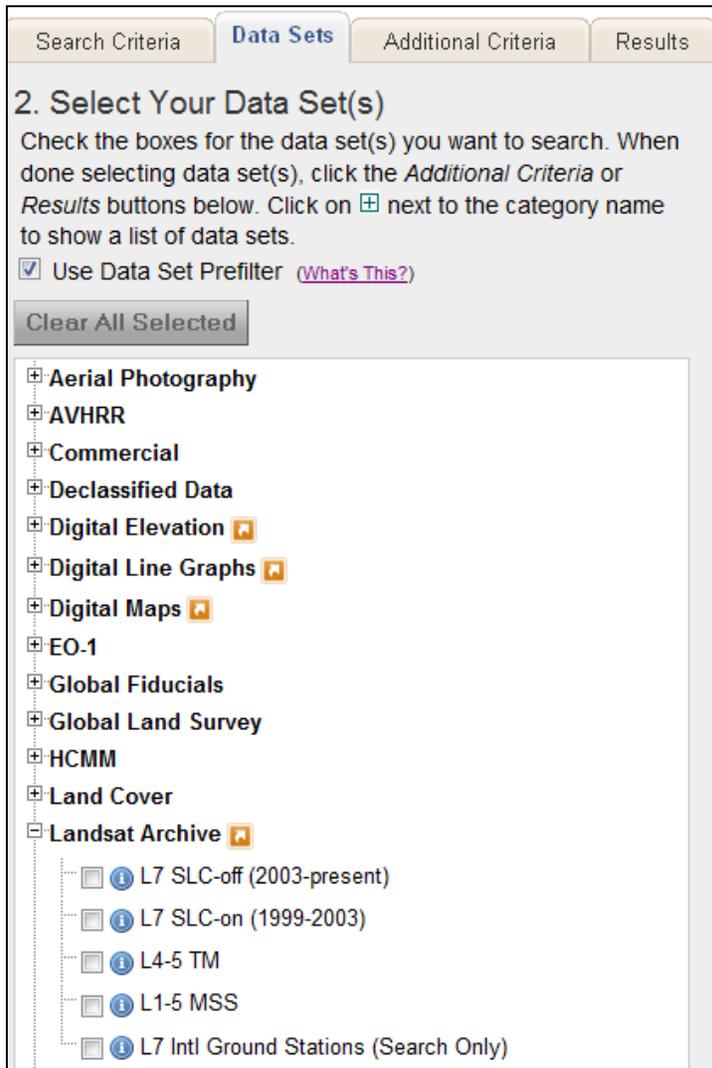


Figure 5 - Data Set Selection View

The data set menu categorizes data sets into similar data collections. The EarthExplorer system uses a dynamic tree menu with expandable/collapsible links for each major data collection. Click the 'plus sign'  next to the category name to expand the list of datasets for that collection. Click the 'minus sign'  next to the category name to collapse the list of datasets for that collection.

E. Enter Additional Criteria Tab

The Additional Criteria tab is an optional input area that allows entry of additional search criteria for the data set(s) selected. Selecting the 'Additional Criteria' tab displays the first dataset additional criteria form.

Search Criteria Data Sets **Additional Criteria** Results

3. Additional Criteria (Optional)

If you have more than one data set selected, use the dropdown to select the additional criteria for each data set.

Criteria Forms

Data Set:
L7 SLC-OFF (2003-present) Level 0 ▾

L7 SLC-OFF (2003-present) Level 0

All Landsat 7 ETM+ scenes acquired after July 14, 2003 were collected in **SLC-off mode**.

Landsat 7 ETM+ scenes acquired from 5/31/03 - 7/14/03 and 9/3/03 - 9/17/03 are not available.

WRS Path
 to

WRS Row
 to

Cloud Cover

All
Less than 20%
Less than 10%
Less than 30%
Less than 40%

Data Category

All
Normal Data
Partial Aperture Calibration Data

Day Night

All
Day
Both
Night

Landsat Scene Identifier

Figure 6 - Example Additional Criteria Form

Each dataset in EarthExplorer has additional criteria that can be filled in to narrow down the results of a search.

F. View Search Results Tab

The View Results tab displays the results of the specified search criteria for the area or location identified. The results panel displays the thumbnail and textual information for each scene returned from the search criteria on the left side of the panel. The right side of the form displays the Google Map interface with an outline of the area identified for the search.

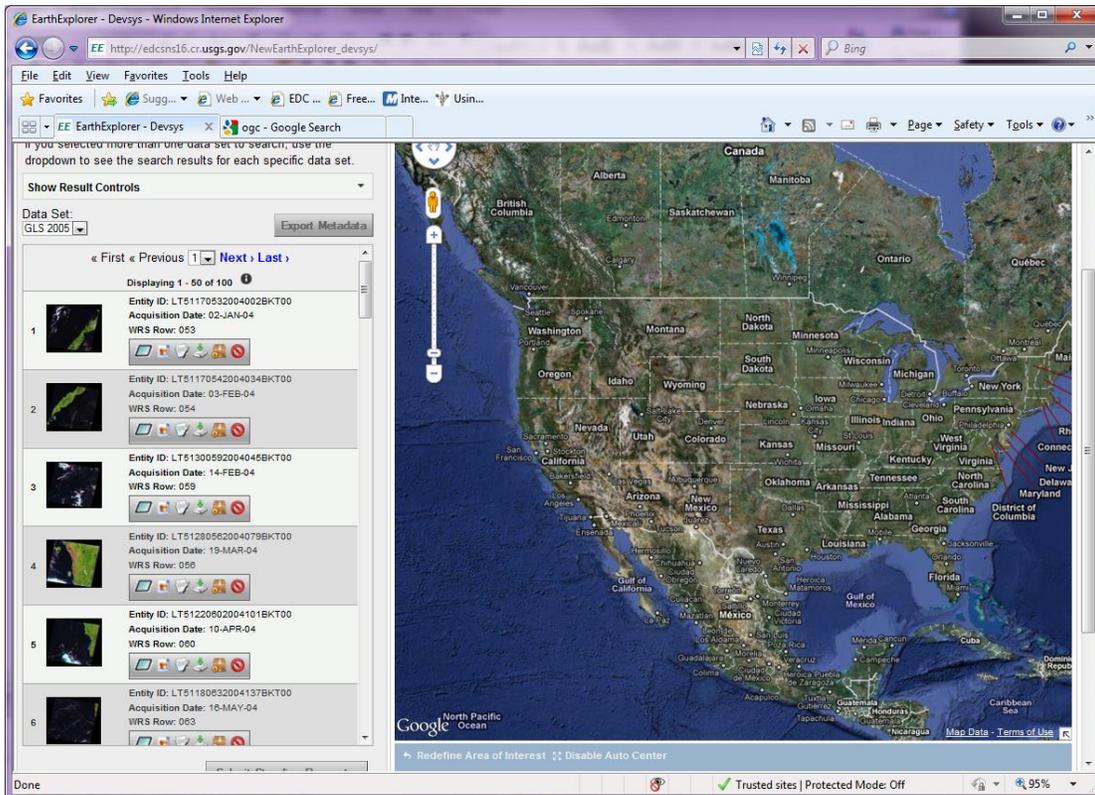


Figure 7 – Example Results

The Search Results options include the following components:

- Show Result Controls – Provide the option to show all footprints, browse, and modify browse opacity for all the search results.
- Search Results list – Displays the thumbnail, textual information, view details on each scene, view browse, request download of data, bulk download icon and other visualization controls for each record returned from the search.
- Google Map Interface – Allows the user to visually see the search area, look at the footprint on the map, and review the browse image for each scene through the Google Map interface.
- Download – The download of data allows the user to download the selected data. A user must be registered and logged in to download data.
- Order – The order option allows the user to request on-demand ordering of products.

G. Bulk Download through the EarthExplorer Results

Users authorized for bulk download must be a registered user of the EarthExplorer system. In addition, the user's profile must be updated through the administration interface based on USGS approval, to allow the user access for bulk download of data.

If a user is authorized for bulk download, the bulk download icon  will be available on the Show Results Control on the Results Tab.

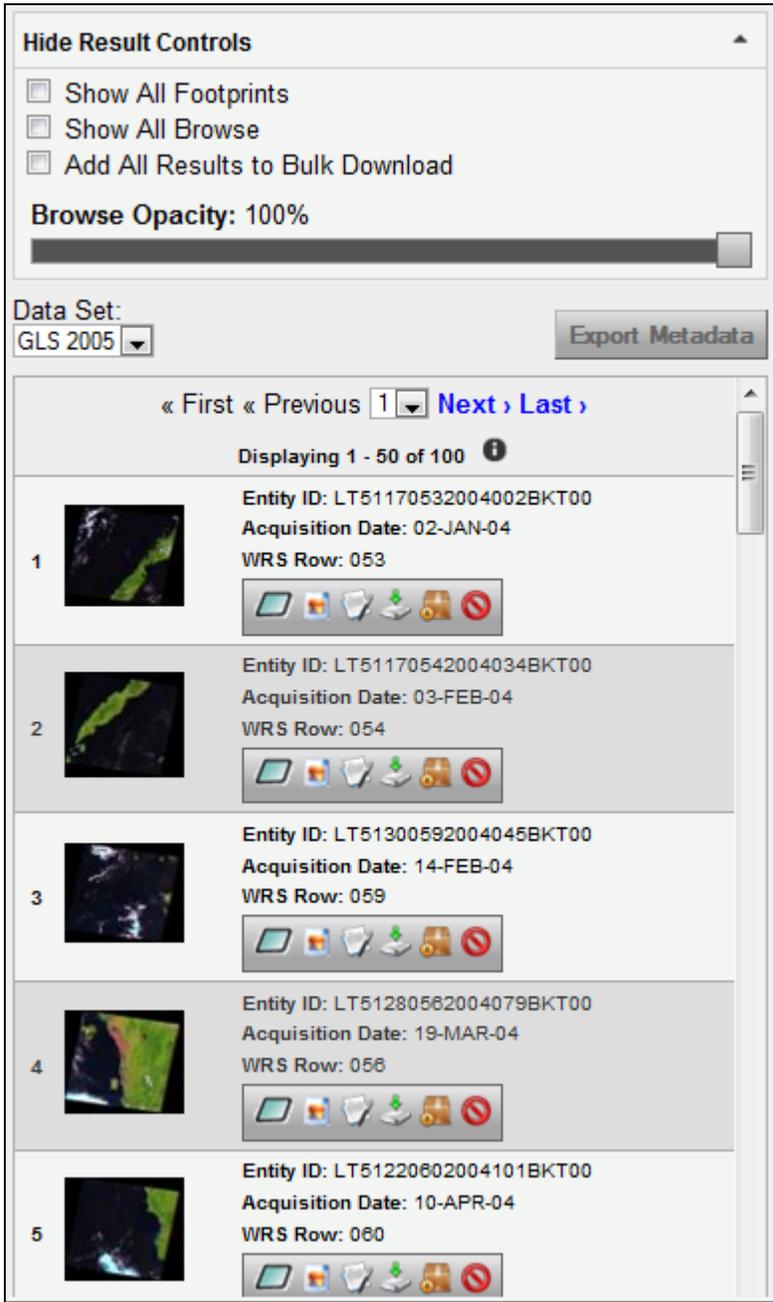


Figure 8 - Show Result Controls

To add individual scenes to the Bulk Item Basket, select the bulk download icon  next to the individual scene desired for bulk download delivery. To select all the scenes on the page for bulk download, select the Add All Results to Bulk Download selection box.

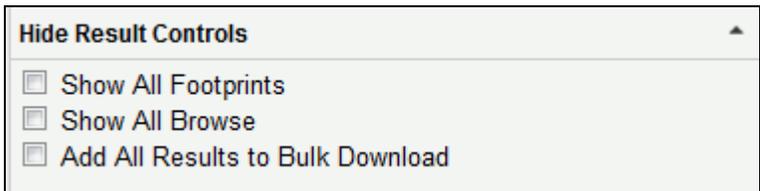


Figure 9 - Add All Results to Bulk Download

Adding all results will update the item basket based on the number of scenes displayed on the page.

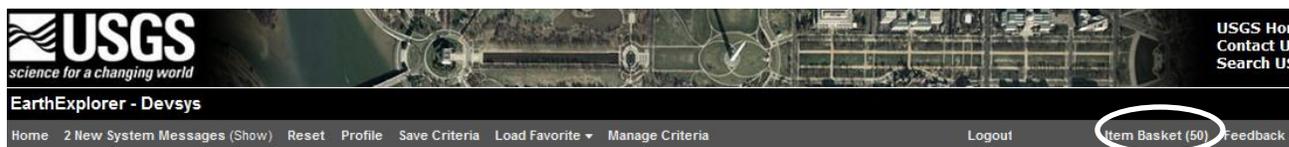


Figure 10 - Bulk Item Basket

After adding the desired scenes to the item basket, select the 'Item Basket' to submit the bulk order.

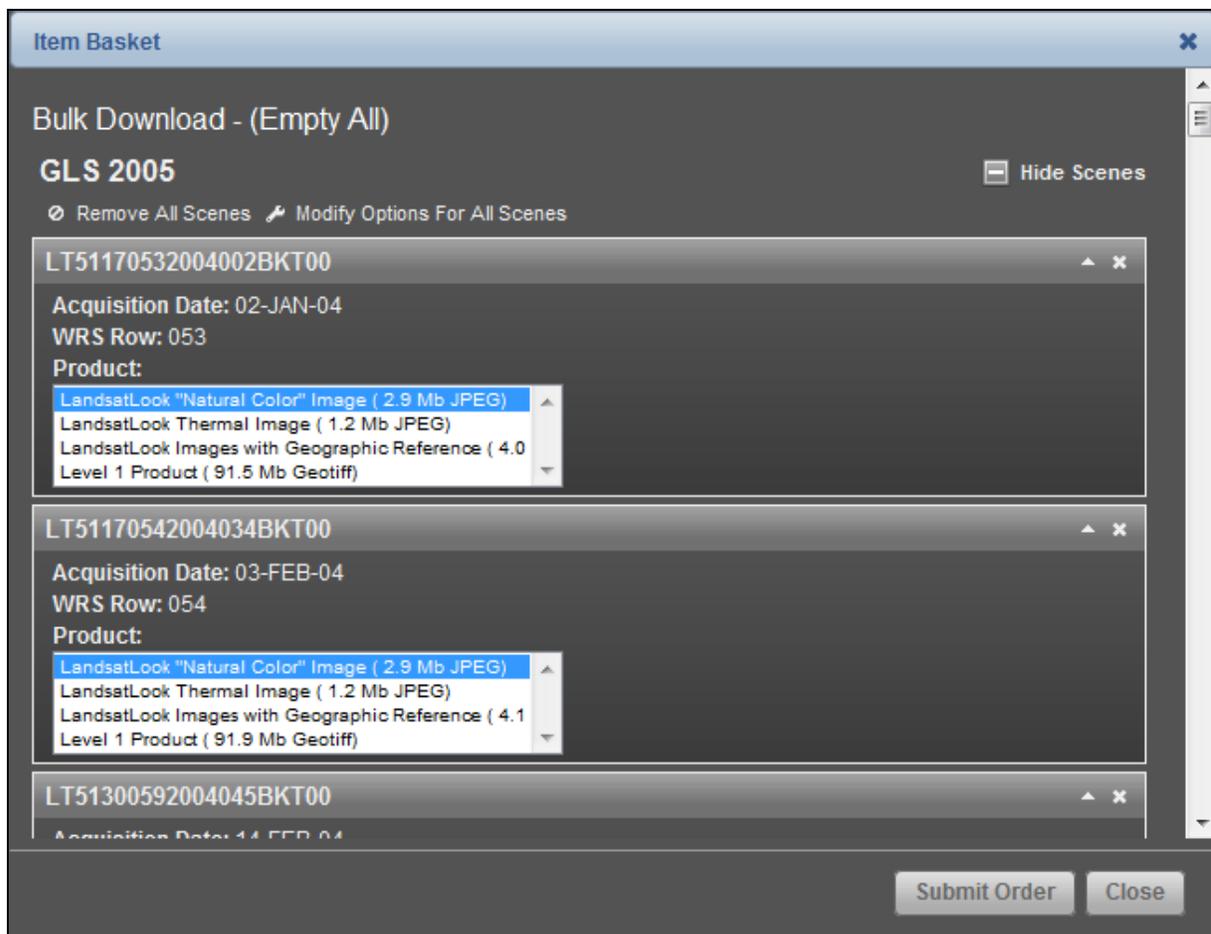


Figure 11 - Bulk Download Item Basket

Select the desired product for the scenes and then select the 'Submit Order' button. The scenes are then submitted for Bulk Downloading. The 'Modify Options for All Scenes' option will be displayed when more than one product is available for download. Selecting this tool allows the user to change the default product for dataset ordered to the desired product type for all the values in this dataset. Multiple product types can be selected for each item by depressing the 'shift-key' and selecting the desired product type.

After submitting the bulk order, the checkout summary page is displayed. The user will also receive an email confirmation verifying the items selected for the Bulk Download order.

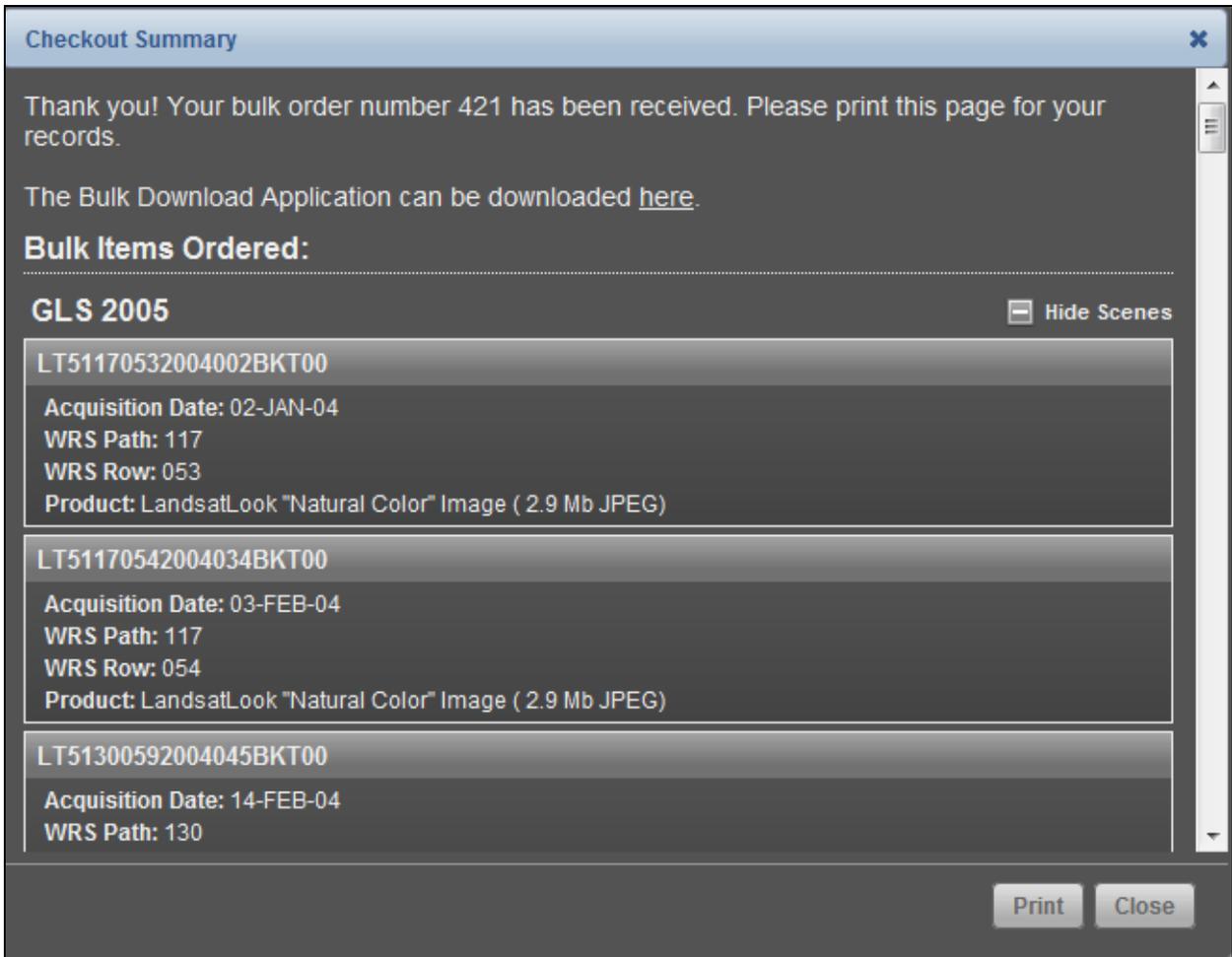


Figure 12 - Checkout Summary

The Checkout Summary page and Order confirmation have links to the Bulk Download Application.

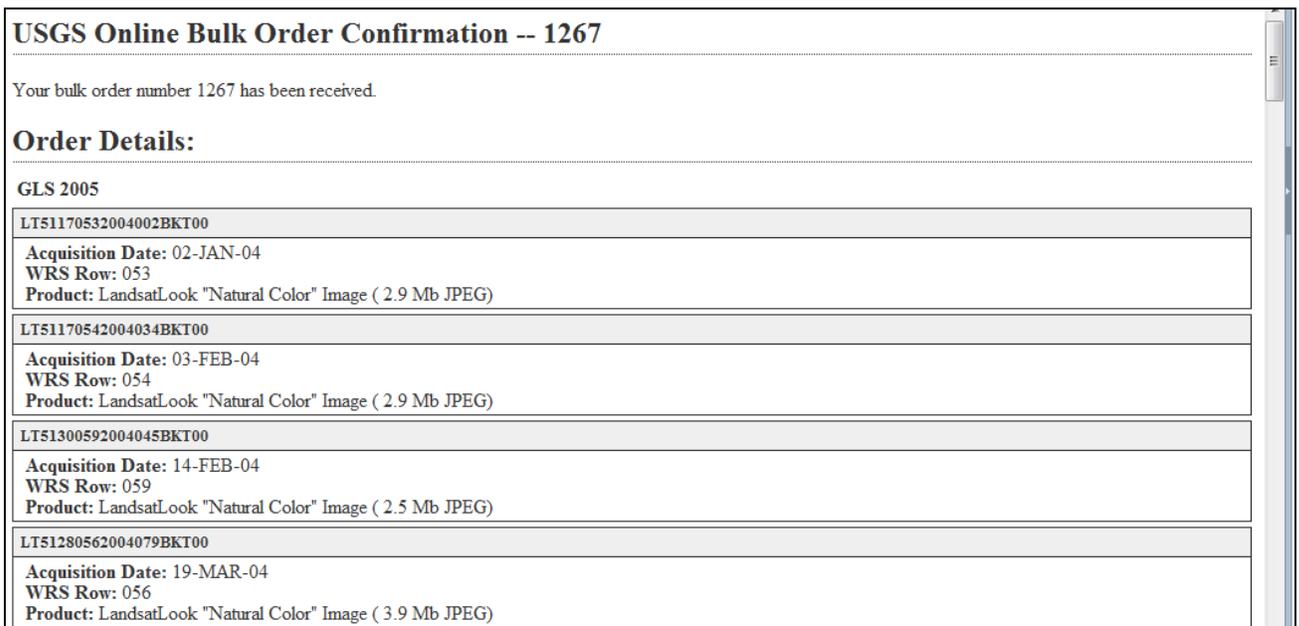


Figure 13 - Example Bulk Order Confirmation email

III. Installation of Bulk Download Application

The Bulk Download Application is available through links on the Bulk Item Basket page and in the Item Basket Confirmation pages in the EarthExplorer system.

Select the Bulk Download Application for the appropriate operating system the application will be running. The following is an example of the download page for the application.

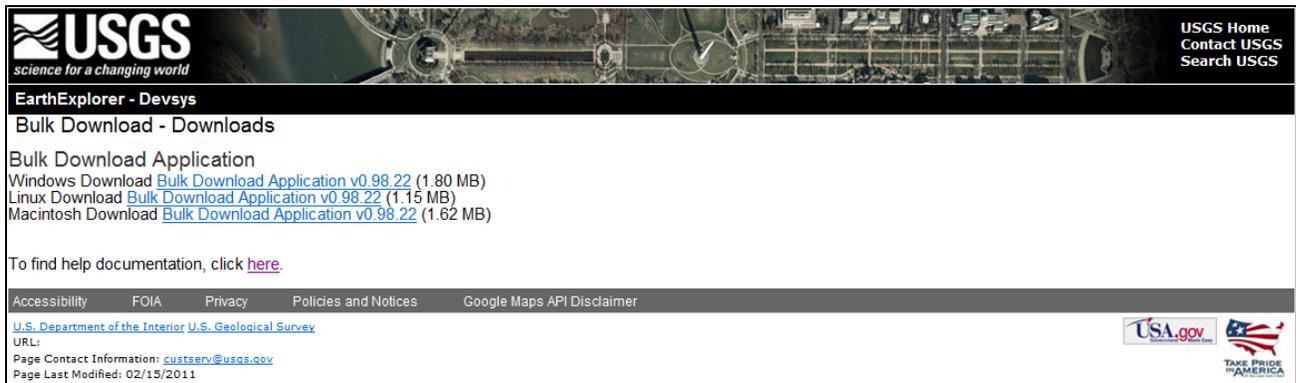


Figure 14 - Bulk Download Application Page.

Installation for each operating system is as follows:

- Windows - Double click the downloaded executable (.exe)
- Unix - Execute the downloaded shell script (.sh)
- Macintosh - Execute the downloaded .dmg

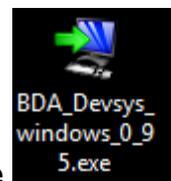
Running the Application after download:

- Windows - Run the installed .exe from the start menu or the install location.
- Unix - Run the installed application from the application menu (it may place the application under Lost & Found)
- Macintosh - Double click the application from the installed location

Network Requirements:

- Verify that port 4448 is open to the internet.

NOTE: The Bulk Download Application requires the Sun Java 6 JRE - third party versions of Java will not work.



Download the application to your desktop. Select the executable on the desktop. The following installation dialog form will be displayed:

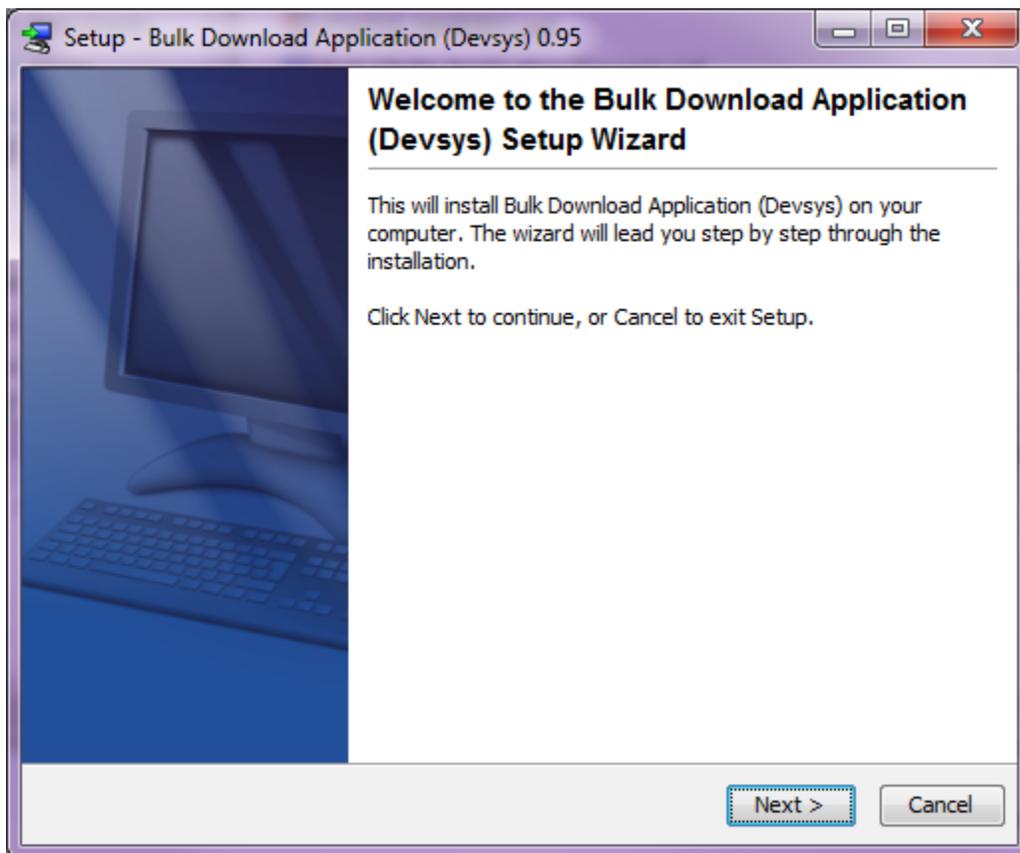


Figure 15 - Bulk Download Installation Wizard

Select the 'Next' button to continue with installation.

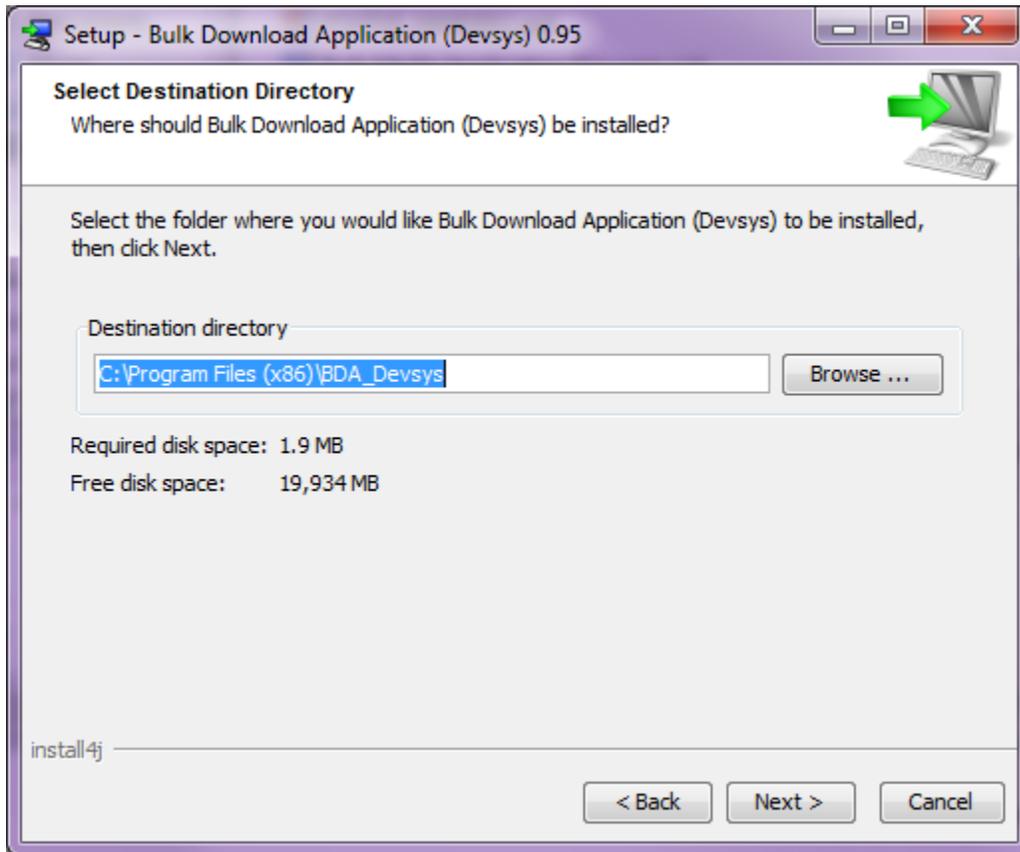


Figure 16 - Installation folder

The 'Select Destination Directory' allows the user to select the directory where the Bulk Download Application will be installed. Based on your installation's security guidelines, the installation directory may need to be changed. Modify the installation directory, then select 'Next'.

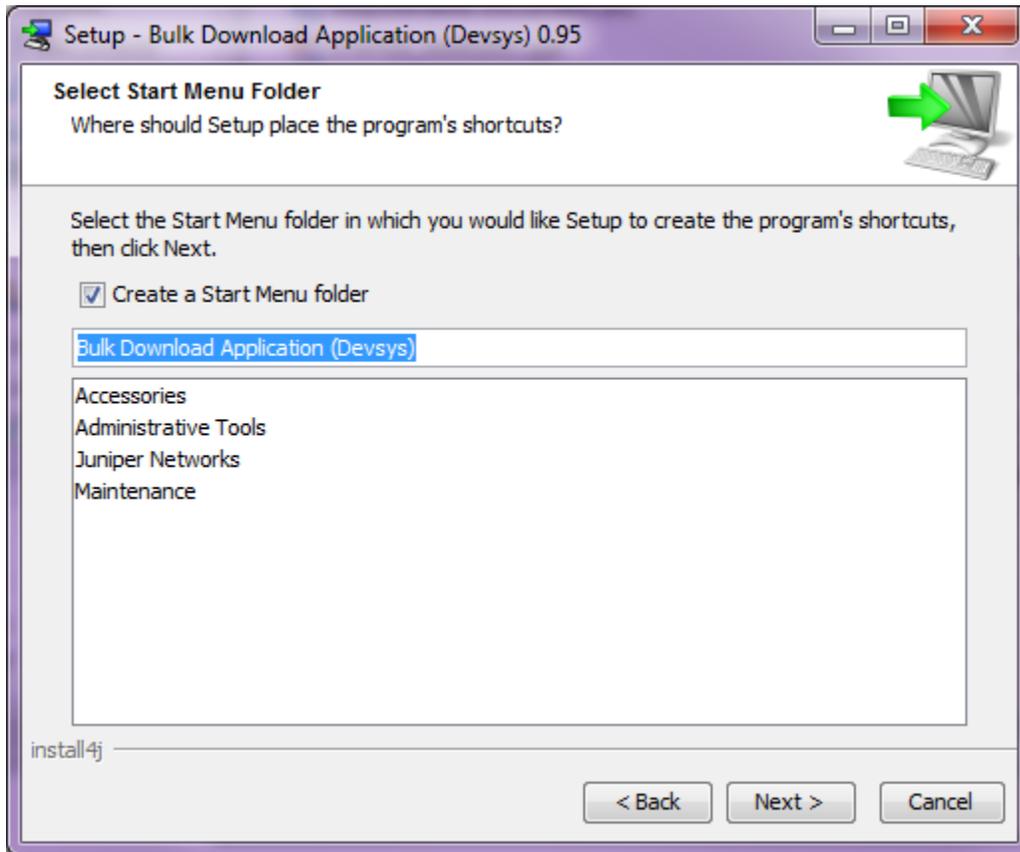


Figure 17 - Start Menu Folder

The Bulk Download Application installs an icon on the 'Start Menu'. Using the default options, will install an icon on your Start Menu and create a 'Bulk Download Application' folder on your 'Programs' menu. Select 'Next' to continue with the installation.

If you don't want an icon on your 'Start Menu', deselect the 'Create a Start Menu folder', and select 'Next'.

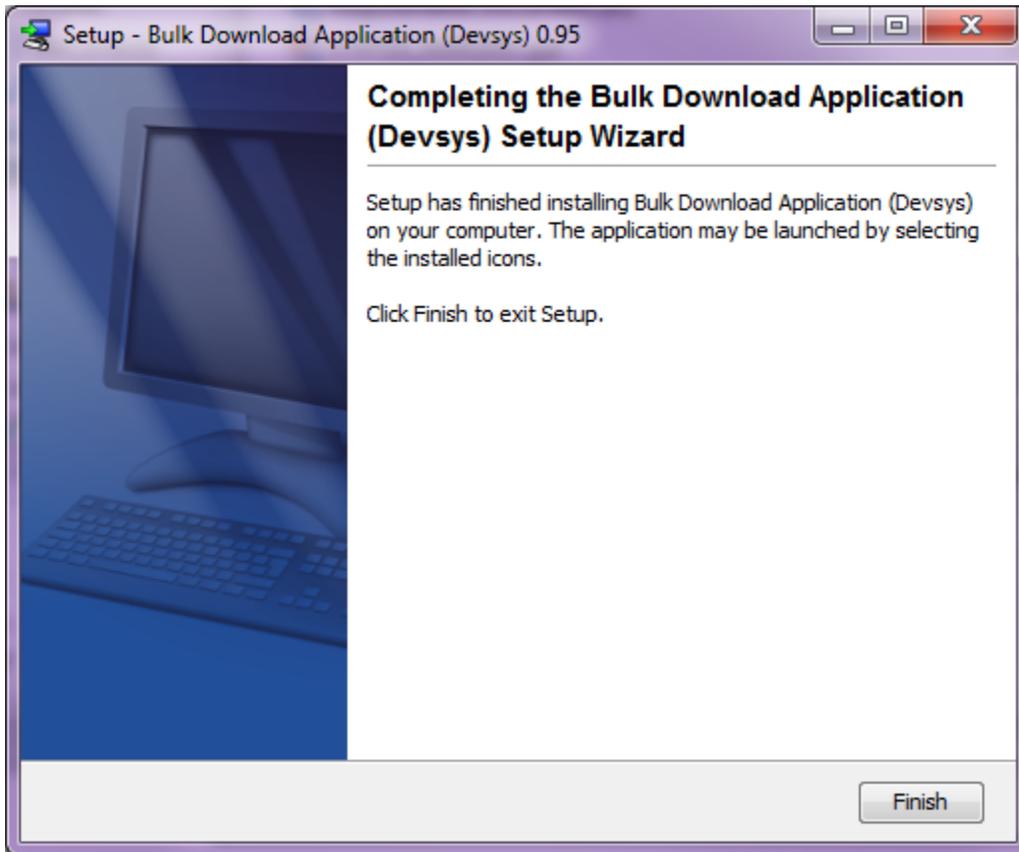


Figure 18 - Installation Complete

This is the final form for the installation of the Bulk Download Application.

The following icon should be displayed on your 'Start Menu'.

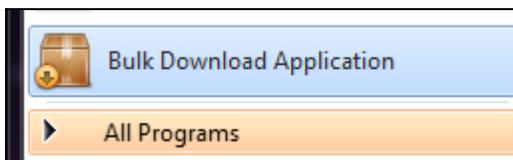


Figure 19 - Bulk Download App Icon on Start Menu

In some cases, the Windows 7 Firewall may indicate that it has blocked some features. The following screen capture is an example of the message.



Figure 20 - Windows Firewall Warning

This does not affect the installation or execution of the Bulk Download Application. Select the 'Cancel' button on the dialog box to continue.

IV. Bulk Download Application User Interface

The User Interface for the Bulk Download Application (BDA) provides the capability for users to review their download requests, select the download location, start their download requests, and monitor progress. The Bulk Download App EarthExplorer user interface is composed of the following key elements:

- Login/Registration form
- Order Selection form
- BDA Manager form
- Cleanup and Expiration of Orders

A. Bulk Download Login

The login screen allows the user to enter their EarthExplorer login and password for the BDA. The following figure is the login form for the BDA.

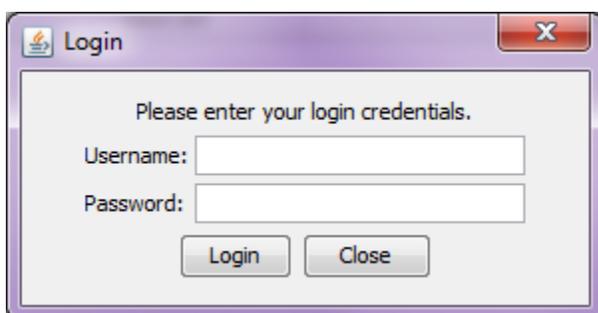
A screenshot of a Windows-style login dialog box titled "Login". The dialog has a purple title bar with a close button (X) in the top right corner. Inside the dialog, the text "Please enter your login credentials." is centered. Below this text are two input fields: "Username:" followed by a text box, and "Password:" followed by a text box. At the bottom of the dialog are two buttons: "Login" and "Close".

Figure 21 - BDA Login Screen

The user must be a registered user of EarthExplorer and must be assigned the privileges to allow bulk download data by the USGS.

B. Bulk Order Selection Form

Bulk orders submitted from external systems are organized by the users' user code and assigned an order ID to manage the groups of orders that a user may submit. The following figure is an example BDA Order Selection form.

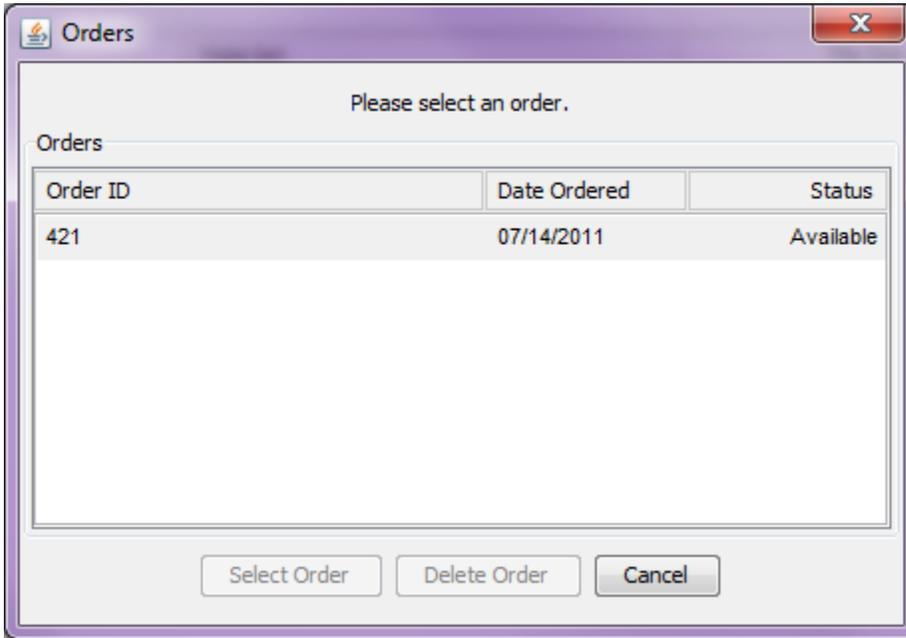


Figure 22 - BDA Orders Selection Form

The BDA Orders Selection form allows the user to select the bulk order to begin work on. Using the mouse, selecting the desired order on the form, and then select the 'Select Order' button to display the bulk order for review.

C. Bulk Download Manager

The BDA Manager form displays the list of scenes for download.

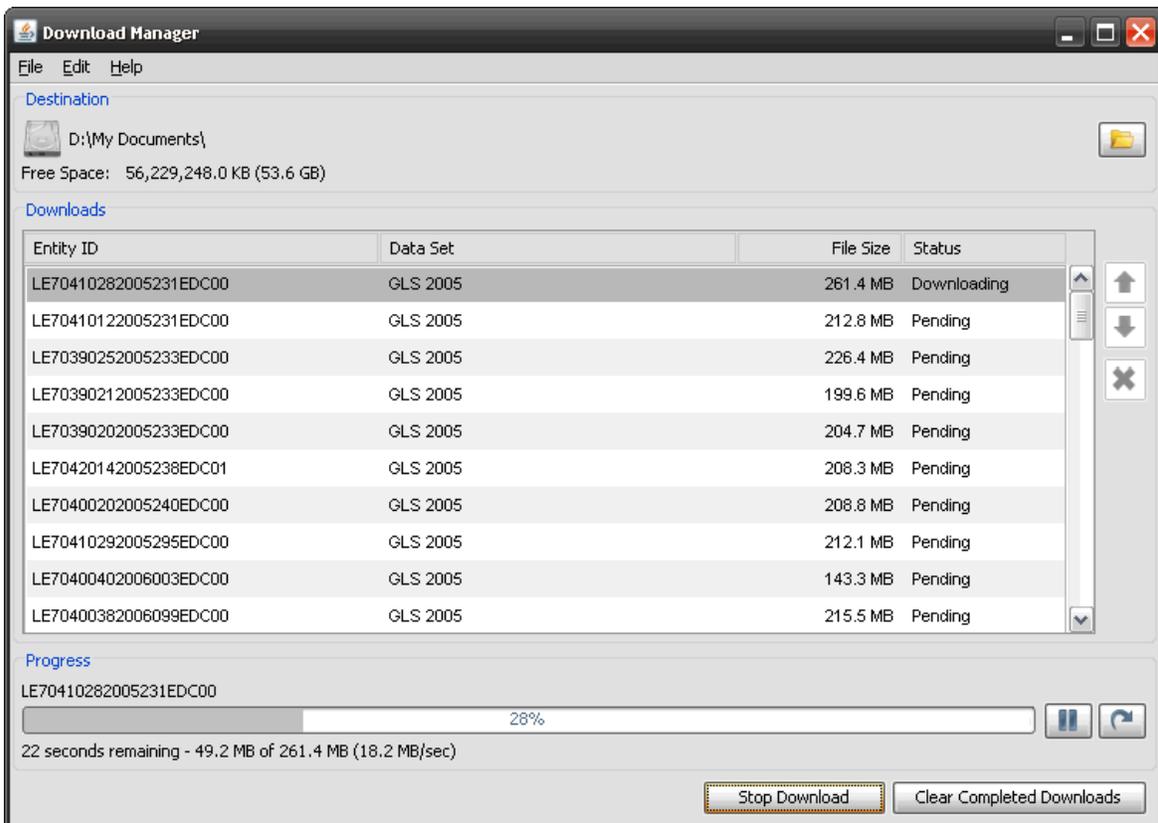


Figure 23 - BDA Manager Form

The form identifies the following attributes for the download session:

- Entity ID – Unique ID for each file
- Data Set – Dataset that this file is associated with
- File Size – File size of the scene
- Status – Status of the download session

The icon  on the upper right corner allows the user modify the location where downloads will be saved. Selecting the folder icon will display a standard form to select the location of where the downloaded files will be located. Select/modify the destination location where you want the downloaded files to be located.

At the bottom of the form is a 'Progress' Bar. The progress bar displays the progress for each file being downloaded.

The 'Begin Download' button starts the download process. After selecting the 'Begin Download' button, the process for downloading data will begin. After selecting the 'Begin Download' button, the button will change to a 'Stop Downloads' button. Select this button will stop the download process.

Each scene will be downloaded without user interaction. When all of the scenes for the order have been downloaded, the user can select the 'Clear Completed Downloads' button to clear the completed downloads from the screen or start the next order request for downloads.

To select the next order for download, select the 'File' menu option and select the new order for download.

D. Cleanup and Expiration of Orders

The Bulk Download Application automatically cleans up orders after all of the scenes have been downloaded. If a user desires to remove an order, the BDA allows the user to delete orders through the BDA Order Selection form.

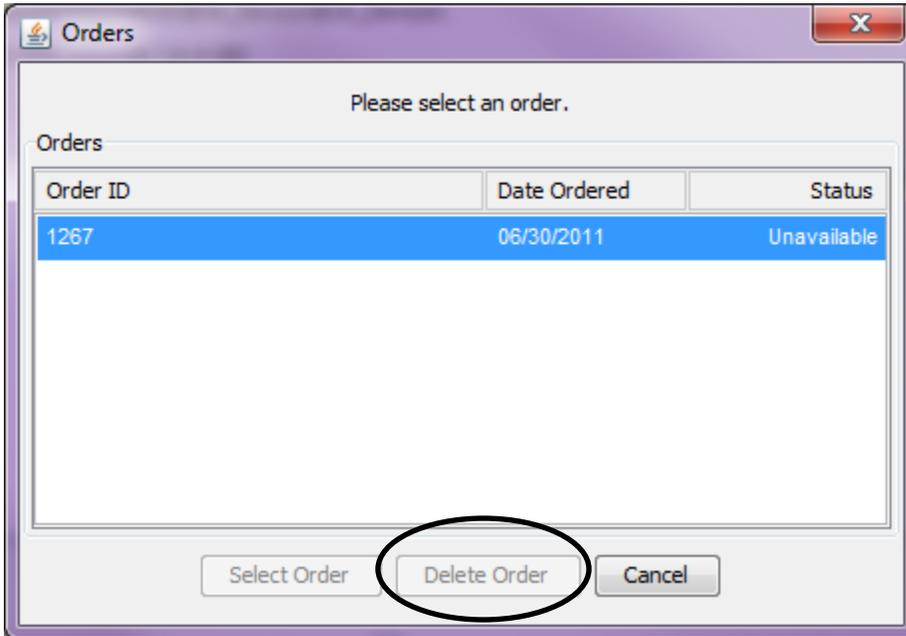


Figure 24 – BDA Orders Selection Form

If an order has not been accessed in 14 days, the Bulk Download System will notify the user when orders are set to expire. A notification will be sent to the user to indicate that the order will be expiring in 14 days.

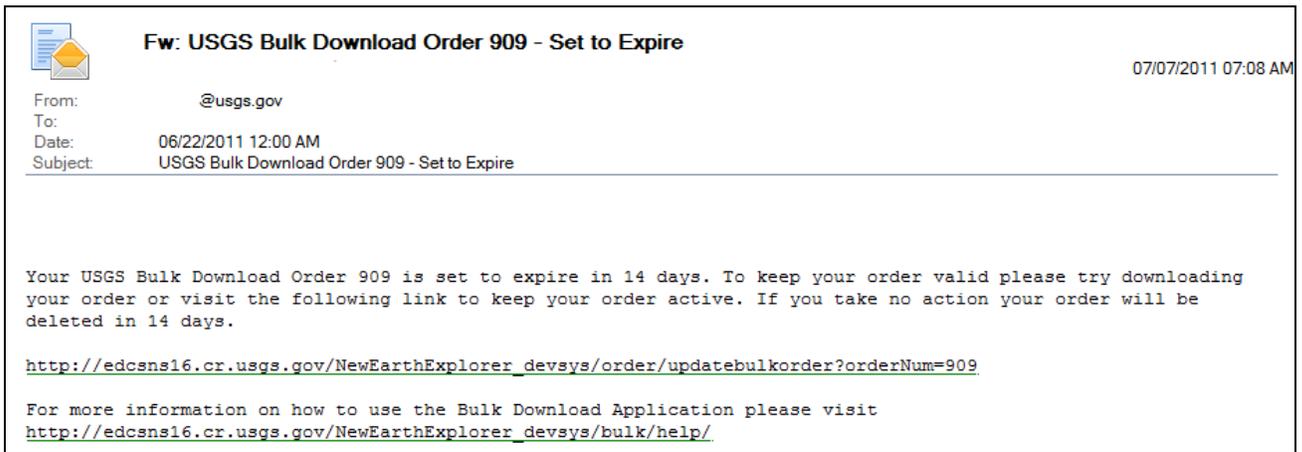


Figure 25 - Bulk Order Expiration Notice

To keep the order active, select the link in the email to extend the time period for downloading the bulk order.

If no action is taken the following email message will be received as notification that the order was deleted.



Fw: USGS Bulk Download Order 909 - Order Deleted

07/07/2011 07:09 AM

From: @usgs.gov
To: @usgs.gov
Date: 07/07/2011 12:00 AM
Subject: USGS Bulk Download Order 909 - Order Deleted

Jeff Burkman,

Your USGS Bulk Download Order 909 has been deleted.

Figure 26 - Bulk Download Order Deletion Message

V. Warning Messages and Errors

Cannot connect to the download service. – Please verify with your network service or firewall software that port 4448 is open to the internet.

Read timed out - Communication between the file server and the client's computer ceased, causing the server to time out the connection.

Preparing File - The file is being staged on the mass storage system or there aren't enough open slots for your download to begin. The client will check periodically for the file to try again.

Invalid Destination - The user does not have permission to write to the directory chosen.

Another instance is already running - The user is connected to the Bulk Download Server via another client on another computer. The user may choose to disconnect their previous client and start a fresh connection.

The bulk download service is unavailable at this time. - The Bulk Download Server is not available to accept incoming connections or requests.

There is not enough free space to download the scene X. - The download location on the user's computer does not have enough free space to save the next file.

You do not have permission to access the download for scene X on this server. It will be skipped. - The permissions on the server forbid the download of this file.

URL is null. The download will be skipped. - The Bulk Download Server did not provide a valid URL to access the file.

The download for scene X does not exist. It will be skipped. - There is no file at the specified URL on the file server.

The content header is missing for the scene X. Please notify customer service (custserv@usgs.gov) about this scene. - There is a data issue with this file that needs to be corrected on the file server.

Unable to reconnect to the Bulk Server in 5 attempts. The application will close.
- The client attempted to automatically reconnect itself to the Bulk Download Server but the server is no longer responding, meaning it is likely shut down for some reason.

The bulk download service is unavailable at this time. Please try again later. - The Bulk Download Server is not currently running.

Appendix

Acronym	Description
BDA	Bulk Download Application
EE	Earth Explorer
EROS	Earth Resources Observation and Science Center
GloVIS	USGS Global Visualization Viewer
HDDS	Hazards Data Distribution Systems
USGS	United States Geological Survey