

Appendix D

How to Submit and Access Data and Metadata on the USACE Node of the National Geospatial Data Clearinghouse

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D-1. Introduction¹

a. The U.S. Army Corps of Engineers (USACE) has a server on the Internet on which they store and make available to all interested persons original geospatial data and metadata created and owned by USACE agencies. It is the USACE node of the National Geospatial Data Clearinghouse. Throughout this appendix the server is called the Geospatial Server or the Server. Its network name is corpsgeol.usace.army.mil and its Internet Protocol (IP) address is 144.3.144.20. It uses anonymous file transfer protocol (ftp), World Wide Web (WWW or Web), and limited-access ftp processes to enable users to submit and access geospatial data and metadata. This appendix is a detailed description of how to use the Server.

b. When metadata are submitted to the USACE node of the National Geospatial Data Clearinghouse, they are added to a national repository of geospatial data that is searchable and available electronically to anyone in the world with Internet access. Use of this database will eliminate duplication of data creation, enable more efficient use of resources, and make more information available for better decision making.

c. The multiple facets of the Server are described in this appendix, including the following:

- (1) Process for submitting geospatial metadata to the Server.
- (2) Process for submitting geospatial data to the Server.
- (3) Processes to find and access data and metadata from the Server on WWW pages at <http://corpsgeol.usace.army.mil>.

d. The webmaster of the Server mentioned throughout this appendix may be contacted in the following ways:

D-2. Responsibilities of the Geospatial Data and Systems Point of Contact

Engineer Regulation (ER) 1110-1-8156 requires that a Geospatial Data and Systems Point of Contact (GD&S POC) be designated by each Command. The GD&S POC responsibilities are defined in detail in the ER. The POC will act as the liaison between the geospatial data community of the command and Corps Headquarters, and thus will also be the POC between the Command and the Server administrators. In reference to the Server, the ER states that the GD&S POC's responsibilities include the following:

As new data pages are developed on the USACE Clearinghouse node by HQUSACE for the Commands, GD&S POCs will review the pages and provide corrections to the Webmaster. Annually, the GD&S POC will review the Command's geospatial data pages on the USACE Clearinghouse node and forward any updates to the Webmaster.

In addition, POCs should consider the following areas of concern within their Command's geospatial data community:

- a.* The system(s) of filenames used to name data and metadata files by persons within their Command.
- b.* Records of the Server filenames that will extend beyond each employee's time of service.
- c.* Coordination with their information management group.

D-3. Metadata Submission to the Server

Please note that data and metadata files are currently being accepted from USACE employees who are registered to submit files on the Geospatial Data Clearinghouse Server. If you have questions about anything in this document, you can ask your GD&S POC.

a. Accessing the Server for metadata submission. (This section is the same for metadata and data submission, paragraphs D-3 and D-4.) Users need to register only once to have access to the Geospatial Clearinghouse Server for metadata and data submission. Do the following three things to register:

¹ Please note that updates to this document will be available at <http://corpsgeol.usace.army.mil/howto/>.

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(1) Inform the GD&S POC for your organization that you intend to submit metadata and data to the Server. You can search for the name and contact information of the GD&S POC for your organization in the GD&S POC database at URL

http://dbserver.crrel.usace.army.mil:2000/owa_crrel/owa/gds.menu

(2) To put metadata files on the USACE Geospatial Server, you must get a Corps UPASS user ID and password, and register with the UPASS system as a user on the Geospatial Metadata and Data Server. This is the same UPASS user ID and password that are recognized by the Server for data submission. (They are also the same user ID and password used in CEFMS.) The Corps standard UPASS system will be used for issuing and controlling user IDs and passwords. To get a UPASS user ID, ask your UPASS administrator for a "UPASS user ID on the Geospatial and WWW Server." To find out who your UPASS administrator is, contact your information management group.

(3) The corpsgeo1 webmaster must have your e-mail address before the metadata submission process will work for you. You must submit your name, e-mail address, and USACE organization to the Corpsgeo1 webmaster. You can do this one of three ways:

- (a) Our web form at <http://corpsgeo1.usace.army.mil/user-id2.html>
- (b) E-mail webmaster@corpsgeo1.usace.army.mil
- (c) The corpsgeo1 webmaster at (603) 646-4320.

Satisfying these three requirements will enable you to put metadata and data on the Server.

b. Metadata file format: Requirements under Isite software.

(1) What are the file format requirements for metadata submission? There are three requirements for the metadata file format. Why these requirements are in place and suggestions on how to meet them are given in the following discussion. The output from CORPSMET95 conforms to these requirements. The requirements are as follows:

(a) Conformance with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata (the Standard), published 8 June 1994.

(b) Indention of each line in the metadata file according to the rules required by mp, a metadata parser software program which will be explained later (Schweitzer 1997b).

(c) Plain ASCII text file format. Most word processors enable a file to be saved in ASCII text format by saving to "Text Only."

(2) Why is each of these requirements necessary? Knowing why these formats are required could mean the difference between persistence and disillusionment in the future.

(a) The Content Standard. According to Federal Executive Order 12906 and ER 1110-1-8156, metadata must be created and made available to the public for all newly developed geospatial data and for selected older geospatial data created by the agencies of the Federal government. According to the Executive Order, all USACE geospatial metadata must conform to the FGDC Content Standards for Digital Geospatial Metadata, which can be viewed at the URL

<http://geochange.er.usgs.gov/pub/tools/metadata/standard/>

The Content Standard defines the specific required and optional descriptors (or records) needed to describe a geospatial data set to a data user who has no previous knowledge of the data. The Overview in the Standard says,

This standard specifies the information content of metadata for a set of digital geospatial data. The purpose of the standard is to provide a common set of terminology and definitions for concepts related to these metadata. Metadata are data about the content, quality, condition, and other characteristics of data.

The purpose for standardizing geospatial metadata is to be a part of the National Geospatial Data Clearinghouse (National Clearinghouse) and thus make the data we create accessible to the nation and the world electronically from a single source for better use of resources and better decision making. A data search initiated at the National Clearinghouse Web site can include a search of the USACE database as well as all other participating Federal agencies. Finally, a standardized format is necessary for the manipulation of the file by software, consistent use of terminology, and consistent presentation.

(b) The indentations. To function as a node of the National Geospatial Data Clearinghouse, the Server must

follow the protocol the Clearinghouse requires. The indexing software required on the National Clearinghouse Server and the USACE Server is Isite. Indexing software permits the metadata text and fields to be searchable by keyword. Isite software can index only metadata that is in Standard Generalized Markup Language (SGML) format. SGML tags will be added to your plain ASCII text-only metadata by a processing script when you put it on the Server. The indentations are needed to enable the processing software to add SGML to your file. Figure D1 shows an example of correctly indented metadata. The indentations are automatically generated by the USACE metadata creation software tool, CORPSMET95. When a metadata script is submitted to the USACE Clearinghouse Server, a program called the Sisyphus Program or SP is running to process it. The first thing that SP does is to run the metadata file through a program, mp, created by Peter Schweitzer, U.S. Geological Survey (USGS) (Schweitzer 1997b). Mp checks the metadata syntax according to the Content Standard and will output the file in SGML and Hyper Text Markup Language (HTML) format. SGML is needed for the Isite indexing software. HTML is needed to present metadata on the Web. Mp is the program that requires metadata to be in hierarchically indented format and will send back error messages if the metadata does not follow the Content Standard. Rather than require everyone submitting metadata to encode their metadata in the unfamiliar SGML, it was decided that metadata must have the hierarchical indentations.

(c) Text only. Metadata files must be in ASCII text format or they will be unreadable by SP, mp, and Isite. Word processor proprietary formats cannot be used. Files should not be in HTML or SGML format when they are submitted to the Server. No formatting codes should be embedded in the metadata file.

(3) How can I easily create metadata according to these requirements? The metadata generator software package, CORPSMET95, developed by the Corps, creates metadata in the correct format. It outputs the metadata file in the correct hierarchically indented format. It runs on Windows95 and NT operating systems. It is free of charge and menu driven. CORPSMET95 is highly recommended because of its ease of use and because the output is correctly formatted for the USACE Server. It can be downloaded from the URL

<ftp://corpsgeol.usace.army.mil/pub/corpsmet95/>

This file has to be unzipped before it is installed. For more information on this process, ask your information systems group.

c. *Filename conventions.*

(1) When metadata files are put on the Server, a program runs that uses the filename extension of each file to determine how it will handle the file. Original metadata files should have the extension .met. Other extensions are used for

(a) Files that are to replace files currently on the Server (.rep).

(b) Files to be deleted (.del).

(c) Data files (.dat).

(2) When a file is sent via ftp to the Server, the name can have up to 100 characters, and the extension .met can be added to the file name used on the PC. All file names should consist of a continuous string of characters, which may include numbers, letters, underscore (_), hyphen (-), and dot (.). File names are case sensitive. Other special characters should be avoided, including spaces.

(3) The GD&S POCs and persons submitting metadata are responsible for keeping track of the file names of the Command's metadata. The file name will be needed if the metadata has to be replaced, updated, or deleted in the future. The file names currently in a Command's metadata directory can be seen by using anonymous ftp to view the Command's metadata directory. (See paragraph D-5 for instructions on how to use anonymous ftp.)

(4) In the past, metadata file names were changed as they were moved by SP to the Server metadata storage area. (User ID, date, and time were added to the original name.) This no longer occurs.

d. *Submitting metadata to the Server.* To put a metadata file on the Geospatial Server after you have registered to access the Server as described in D-3a, follow these steps:

(1) Plan your file name. Remember to use the .met extension for metadata file submissions. You can submit multiple files during one ftp session, including metadata and data files.

(2) Use your computer's ftp utility. There are many variations of ftp software. It would be impossible to describe them all. For assistance with the ftp utility on your computer, ask your information management group.

Identification_Information:

Citation:

Citation_Information:

Originator: New Orleans District, U.S. Army Corps of Engineers

Publication_Date: 19941206

Title: Mississippi River Southwest Pass Hydrographic Surveys of 19941206

Edition: N/A

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: New Orleans, LA

Publisher: New Orleans District, U.S. Army Corps of Engineers

Online_Linkage: <http://www.lmn.usace.army.mil/ops/odt/nav-cond.htm>

Description:

Abstract:

The Mississippi River Southwest Hydrographic Surveys are compiled in order to monitor and maintain Mississippi River Channel conditions at South and Southwest Passes and Pass A Loutre.

Purpose:

The purpose of the Mississippi River Southwest Pass Hydrographic Surveys is to provide a current survey and map of the Mississippi River for the purpose of recording changes in channel conditions, secondarily as an aid to navigation, and to be used as an engineering and planning tool for future Flood Control, Navigation, and Hurricane Protection projects.

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 19941206

Currentness_Reference: Publication Date

Status:

Progress: In work

Maintenance_and_Update_Frequency: Daily

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -089.300000

East_Bounding_Coordinate: -089.070000

North_Bounding_Coordinate: +29.100000

South_Bounding_Coordinate: +28.530000

Keywords:

Theme:

Theme_Keyword_Thesaurus: Tri - Service Spatial Data Standard

Theme_Keyword: Boundaries

Theme_Keyword: Hydrography

[Note: Metadata file cropped here.]

Figure D-1. An example of correctly indented metadata. The original metadata file was created by the New Orleans District using CORPSMET95. Only a portion of the entire metadata file is shown here.

(3) Use the following parameters to ftp to your home directory on corpsgeol:

Host: corpsgeol.usace.army.mil
 Login ID: *yourUPASSid*
 Password: *yourUPASSpassword*

When you have successfully logged on to corpsgeol, you will be in your home directory. This is the only place on the Server where you can put files.

(4) You are now ready to submit the file to the Server. (The metadata file must be ASCII text, and must be sent in ASCII text mode.) In a command line view on a Windows3.x/Win95/NT or UNIX operating system, the command to send the file to the Server is

```
put filename.met
```

(5) When you are done putting metadata on the Server, close the session and exit from the ftp software. If you stop communicating with the ftp site for some period of time during the ftp session, you may be timed out; i.e., you will not be connected to the Server anymore. If this occurs, you will have to ftp to the Server again.

(6) SP will process new files approximately once an hour. If a metadata submission is successfully processed, you will receive an e-mail message within a few hours saying so. If the file is not successfully processed, you will receive an e-mail message within a few hours stating this and explaining why it was not successfully processed.

e. Replacing or deleting metadata files. To replace or delete a metadata file on the Server, you will need to know the exact file name of the file to be replaced or deleted. You can use anonymous ftp or use the World Wide Web and go to the URL ftp://corpsgeol.usace.army.mil to go to your organization's metadata directory to look for the file name you need. Login procedures and the directory structure for anonymous ftp on the corpsgeol site are given in paragraph D-5. If you are trying to replace or delete files that you did not put on the Server, you will have to contact the webmaster with proof that you are now responsible for these files.

(1) To replace (or update) a metadata file.

(a) Have the replacement file ready on your local computer. The file name of the replacement file should be in the format

```
filename(.met).rep
```

where filename(.met) is the name of the file to be replaced. The original file name will end with .met so the file name you type here will end with .met.rep. The extension .rep will cause the Server to replace the metadata file currently in your Command's metadata directory having the name filename.met with the file you just put in your home directory.

(b) Ftp to the Server. Use the following parameters to ftp to your home directory on corpsgeol:

Host: corpsgeol.usace.army.mil
 Login ID: *yourUPASSid*
 Password: *yourUPASSpassword*

(c) You are now ready to submit the file to the Server. (The metadata file must be ASCII text, and must be sent in ASCII text mode.) In a command line view on a Windows3.x/Win95/NT or UNIX operating system, the command to send the file to the Server is

```
put filename.met.rep
```

(d) When you are done putting metadata on the Server, close the session and exit from the ftp software.

(2) To delete a metadata file.

(a) First create a dummy file on your local computer. It does not matter what is in the dummy file. The file name should be in the format

```
filename(.met).del
```

where filename(.met) is the name of the dummy file you created on your local computer and the name of the file to be deleted. The file name of the existing metadata file will end with .met, so the name of the dummy file will end with .met.del. The extension .del will cause the Server to delete the metadata file you have named.

(b) Ftp to the Server. Use the following parameters to ftp to your home directory on corpsgeol:

Host: corpsgeol.usace.army.mil
 Login ID: *yourUPASSid*
 Password: *yourUPASSpassword*

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(c) You are now ready to submit the dummy file to the Server. (The metadata file must be ASCII text, and must be sent in ASCII text mode.) In a command line view on a Windows3.x/Win95/NT or UNIX operating system, the command to send the file to the Server is

```
put filename.met.del
```

(d) When you are done putting metadata on the Server, close the session and exit from the ftp software.

f. Editing collection metadata files. The USACE geospatial data and metadata available on the Web include *collection metadata* and *detailed metadata*. A collection metadata file is a single metadata file that describes a series of related data files that are routinely collected by an agency. For example, the data may be hydrographic files that have been collected for 20 years. A detailed metadata file describes a unique data file or a collection of data files that are not routinely collected by an agency. The corpsgeo1 team has created a series of templates of collection metadata for USACE Commands to edit or delete, as appropriate. Links to these are found under each Command's data pages. The changes to these pages can be made on a paper copy or electronic copy of the file. Electronic editing is preferred. You can make the changes to the electronic file as described below, then send the resulting file to the webmaster as an e-mail attachment.

(1) Electronic editing

(a) While browsers differ, general instructions for saving an electronic copy of a Web page to your local computer are given here. To download the Web page to your PC, use your browser to view the collection metadata file Web page. Save the file to your PC by using the browser menu options: File/Save as. Choose to save in the format type HTML or text. Note where in your directory structure the file is being saved and its file name. Press enter.

(b) When it is saved, the collection metadata file will have all the HTML tags necessary for viewing it from your Web browser on your local PC. To view the file on your PC using your browser, use the browser menu options File/Open File in Browser or File/Open/Browse to locate and open the electronic copy of the metadata file you just downloaded.

(c) You can then work in your word processor to make needed changes in the file and view the results from your browser. Please remember to open and save file in "Text Only" format in your word processing software. Any images in these files will not appear as you edit and view them on your local computer. This is normal. When the file

is placed back on the Server, the images will appear as they should.

(2) Editing a paper copy. Print a hard copy of the page from your web browser while you are viewing it. Edit it and fax the edited version to the corpsgeo1 webmaster at 603-646-4658. Please make your edits clearly. Please let the webmaster know the fax is coming.

D-4. Data Submission to the Server

Please note that data and metadata files are currently being accepted on the Corps Geospatial Server from USACE employees who are registered to use the Server. The producers of geospatial data are responsible for the quality, integrity, and maintenance of the data that they produce.

a. Accessing the Server for data submission. The process for registering to use the Server for metadata and data submission is exactly the same. The three requirements are described in paragraph D-3a.

b. Data file formats. Data in any format will be accepted on the Server. This includes output generated by any Computer-Aided Design and Drafting (CADD) system or Geographic Information System (GIS). It includes any data that contain geospatial coordinates. Please be aware of the file name conventions for placing data on the Server as described below. When you are sending binary data, remember to set the mode for binary. This may be done automatically by the ftp software.

c. Filename conventions.

(1) A UNIX script called SP, or the Sisyphus Program, is running on the Server at all times. This program scans the new files in your directory and uses the filename extension of each file to determine how it will handle the file. Original data files should have the extension .dat. Other extensions are used for

(a) Files that are to replace files currently on the Server (.rep).

(b) Files to be deleted (.del).

(c) Metadata files (.met).

(2) When a file is sent to the Server, the name can have up to 100 characters, and the extension.dat can be added to the filename used on the PC. For example, an Arc Info export file could be called white_riverVT19970607.e00.dat. If your local computer does not allow long file names, you

can change the name using your ftp utility when the file is on the Server. All file names should consist of a continuous string of characters that may include numbers, letters, underscore (_), hyphen (-), and dot (.). File names will be case sensitive. Other special characters should be avoided, including spaces.

(3) The filename will be needed if a data file has to be replaced, updated, or deleted in the future. You can look for your Command's data file names using the Web page at URL

<http://corpsgeol.usace.army.mil/cgi-bin/geodatalookup.pl>

d. Submitting data. The producers of geospatial data are responsible for the quality, integrity, and maintenance of the data that they produce.

(1) Data and the referring metadata file. When a data file is submitted to the Server, a metadata file that refers to that data file absolutely must be submitted to the Server at the same time. (A metadata file may be submitted without a data file.)

(a) Section 6 of a metadata file is the "Distribution Information" section. This section contains information about the distribution of and options for obtaining the data to which the metadata refers. Which of the optional data descriptors in this section will be used will depend on where the data are located. There is a section for "Non Digital Data" (6.4.1) as well as for "Digital Data" (6.4.2).

(b) When a data file and the referring metadata file are submitted to the USACE Geospatial Server, the metadata file must contain the following reference to the data:

<http://corpsgeol.usace.army.mil/filename.dat>

where filename.dat is the name of the data file to which the metadata refers. This reference has to be under the Distribution Information section of the metadata called "Network Resource Name." SP, the script that processes the files, takes this text and turns it into a link to the actual data file. (<http://corpsgeol.usace.army.mil> is just dummy text to alert SP as to what it needs to do.) When people read the metadata on the Server, they will be able to request a download of the corresponding data immediately, if the data are on the corpsgeol Server.

(c) If you are submitting data with metadata, your metadata Distribution Information Section options must look like this (notice the hierarchical indentation of the options):

6: Distribution Information:
 Standard Order Process:
 Digital Form:
 Digital Transfer Option:
 Online Option:
 Computer Contact Info:
 Network Address:
 Network Resource Name:
<http://corpsgeol.usace.army.mil/filename.dat>

where filename.dat is the filename of the data file to which the metadata file refers.

(d) For a clear, detailed description of "Distribution Information" of the Content Standard, see Peter Schweitzer's Web page (Schweitzer 1994) at

<http://geochange.er.usgs.gov/pub/tools/metadata/standard/06.html>

(e) The data and referring metadata files must be submitted at the same time to enable SP to process the information in the Distribution Information section of the metadata file.

(f) If there is no corresponding metadata file with a data file when it arrives at the Server, the data file will be put in storage for 2 weeks and you will be notified that you need to submit a metadata file with it. If you submit the metadata file within that 2-week period, you do not have to resubmit the data file; SP will take the data file from the temporary storage directory and process it normally.

(g) If you want to submit a data file that corresponds to a metadata file already on the Server, you will need to delete the old metadata file from the Server and resubmit it with the new data file. This will enable you to include the required text in the Network Resource Name section of the metadata file and allow SP to process the two files correctly.

(h) One metadata file may refer to multiple data files. If this is the situation, the metadata Distribution Information section will have more than one Network Resource Name, for example:

Distribution Information
 Standard Order Process
 Digital Form
 Digital Transfer Option
 Online Option
 Computer Contact Info
 Network Address

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Network Resource Name
<http://corpsgeo1.usace.army.mil/fname1.dat>
Network Resource Name
<http://corpsgeo1.usace.army.mil/fname2.dat>
Network Resource Name
<http://corpsgeo1.usace.army.mil/fname3.dat>

where `fname1.dat`, `fname2.dat`, and `fname3.dat` are the file names of the data files that correspond to the metadata file.

- (i) To summarize,
 - You can submit a metadata file without a data file.
 - If you submit a data file, you must simultaneously submit a referring metadata file.
 - One metadata file can refer to multiple data files.
 - Multiple metadata files can refer to one data file.

(2) To ftp a data file to the Geospatial Server.

(a) Plan your file name. Remember to use the `.dat` extension for data file submissions.

(b) Use your computer's ftp utility. There are many variations of ftp software. It would be impossible to describe them all. If you don't know how to use the ftp utility on your computer, ask your information management team.

(c) Use the following parameters in your ftp software to ftp to your home directory on the Server site:

Host: `corpsgeo1.usace.army.mil`
Login ID: *yourUPASSid*
Password: *yourUPASSpassword*

When you have successfully sent files via ftp to `corpsgeo1`, you will be in your home directory on the Server. This is the only place on the Server where you can put files.

(d) You are now ready to transfer the data file to the Server. The file must be sent as a binary file. In a command line view on a Windows3.x/Win95/NT or UNIX operating system, the commands to set the ftp to binary mode and send the file are

```
bi  
put filename.dat
```

If you do not send files by ftp using the command line, the binary setting may be chosen automatically by the ftp software.

(e) When you are done putting data on the Server, close the session and exit from the ftp software.

(f) SP will process new files approximately once an hour. If a data submission is successfully processed, you will receive an e-mail message within a few hours saying so. If the file is not successfully processed, you will receive an e-mail message stating this and explaining why it was not successfully processed.

e. Replacing or deleting data files. To replace or delete a data file, you will need to know the exact name of the file to be replaced or deleted. You can look for your Command's data file names using the Web page at URL

<http://corpsgeo1.usace.army.mil/cgi-bin/geodatalookup.pl>

Remember also to replace or delete the metadata file that refers to a data file you are removing or deleting. If you are trying to replace or delete files that you did not put on the Server, you will have to contact the webmaster with proof that you are now responsible for these files in order to replace or delete them.

(1) To replace (or update) a data file.

(a) Have the replacement file ready on your local computer. The name of the replacement file should be in the format

`filename(.dat).rep`

where `filename(.dat)` is the name of the file to be replaced. The original file name will end with `.dat` so the file name you type here will end with `.dat.rep`. The extension `.rep` will cause the Server to replace the data file currently in your Command's data directory with the file you just put in your home directory. The file name must match exactly for this to work.

(b) Log onto the Server using the following parameters in your ftp software:

Host: `corpsgeo1.usace.army.mil`
Login ID: *yourUPASSid*
Password: *yourUPASSpassword*

(c) You are now ready to transfer the replacement data file to the Server. The file must be sent as a binary file. In a command line view on a Windows3.x/Win95/NT or UNIX operating system, the commands to set the ftp to binary mode and send the file are

```
bi
put filename(.dat).rep
```

If you do not send the files by ftp using the command line, the binary setting may be chosen automatically by the ftp software.

(d) When you are done, close the ftp session and quit the ftp utility.

(2) To delete a data file.

(a) First create a dummy file on your local computer. It does not matter what is in the dummy file. The file name should be in the format

```
filename(.dat).del
```

where filename(.dat) is the name of the dummy file you created on your local computer and the name of the file to be deleted. The name of the existing data file will end with .dat so the name of the dummy file will end with .dat.del. The extension .del will cause the Server to delete the data file you have named.

(b) Use the following parameters in your ftp software to log in on the Server:

```
Host: corpsgeo1.usace.army.mil
Login ID: yourUPASSid
Password: yourUPASSpassword
```

(c) You are now ready to transfer the dummy data file to the Server. It does not matter if the file is sent in binary or text mode. In a command line view on a Windows3.x/Win95/NT or UNIX operating system, the command to send the file is

```
put filename(.dat).del
```

(d) Close your ftp session and quit the ftp utility.

D-5. Accessing Corps Geospatial Data and Metadata

Notice to data users: The data described in the metadata files produced by the USACE represent the results of data collection and processing for a specific USACE activity and indicate the general existing conditions. As such it is valid only for its intended use, content, time, and accuracy specifications. The user is responsible for the results of any application of the data for other than its intended purpose.

a. USACE geospatial data and metadata. The USACE geospatial data and metadata available on the Web include *collection metadata* and *detailed metadata*. These terms are defined in paragraph D-3f. All metadata files name the Point of Contact for the data set described and state how the data can be obtained. When the data reside on this Server, there will be a link in the metadata from the metadata to corresponding data set(s). These links will be in the Distribution Information Section of the metadata file. (See paragraph D-4 for details.) USACE Commands will decide which of their data products to make available on the Server.

b. Accessing data via metadata: keyword search, image maps, USACE Command list, and anonymous ftp. To determine if a data set is appropriate for your use, you can access the corresponding metadata file and read about the specifications of the data. There are four ways to search for data on the USACE Server: National Clearinghouse search form, image maps linked to USACE Command data pages, textual list of USACE Commands, and anonymous ftp.

(1) National Geospatial Data Clearinghouse. The USACE Server had a search form just to search our Server. However, compliance with the National Geospatial Data Clearinghouse policy requires that keyword searches start at the National Clearinghouse search tool. You can limit your search to USACE metadata only, to metadata developed by a particular USACE Command, or to all metadata containing a keyword by entering the appropriate terms in the search form, as described below. A link to the Clearinghouse keyword search form is available on the USACE Server home-page. A direct link to the Clearinghouse search tool is URL

<http://130.11.52.178/>

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(a) To choose to look only at USACE data holdings. Go to the section called *Databases*. In this section, choose the *Army Corps of Engineers* option. You will also need to put a keyword in the *Keyword and Fielded Search* section even if you are not interested in any particular keyword. Using the *FullText* or *Abstract* options in the *Text Search* box and the keyword *the* in the *Text Input* box will get you all the USACE holdings. (To do a keyword search, enter the keyword in the *Text Input* box.)

(b) To choose only to look at the data holdings of a particular USACE Command. Go to the section called *Databases*. In this section, choose the *Army Corps of Engineers* option. In the *Keyword and Fielded Search* section find the *Text Search* box and choose the option *Originator*. Put the name of the Command for which you want to search in the *Text Input* box.

(c) To select a specific geographic area. The National Clearinghouse is spatially indexed. This means that you can add geographic coordinates to the search statement, limiting the search to the geographic area in which you are interested. A section titled *Add spatial search?* enables you to do this.

(d) Submit. Click on the *Submit Query* button to start the search engine. The results will be a list of the metadata files from the database that fit the specifications you submitted.

(2) Image maps and textual list. There are links on the Server homepage to the textual USACE Command list at URL <http://corpsgeol.usace.army.mil/org.direct.html> and the image maps at URL <http://corpsgeol.usace.army.mil/metadata.html>. Both of these links start the data-seeker through a series of pages based on the USACE organizational structure and both lead to the same Command data pages. There is a data page for each USACE Command. On the data pages are links to the Command's collection and detailed metadata pages and GD&S POC contact information.

(3) Accessing Corps metadata using anonymous ftp. You also can get metadata by using anonymous ftp originating from your local computer. This will allow you to transfer metadata files to your computer. You do not need to have a Corps UPASS user id. The difficulty of using anonymous ftp is that if you do not know exactly where to find what you want, you must browse around the directories. When you find the metadata you want, you can copy it to your local computer using your ftp utility. To use anonymous ftp:

(a) Use your computer's ftp software. If you don't know how to use the ftp utility on your computer, ask your information management team.

(b) Use the following parameters to ftp to the anonymous ftp site:

Host: corpsgeol.usace.army.mil
Login ID: anonymous
Password: *your E-mail address*

(c) When you log on the anonymous ftp site, you are at the top of the Server anonymous ftp directory structure. Look at the directories and files in this directory. In a command line view on a Windows3.x/Win95/NT or UNIX operating system, the command to display the directory and file names is

```
ls
```

Here you will see the acronyms of USACE Command divisions, and the names *labs* and *foa* (field operating activities). Entering these directories will lead you to directories of the subordinate Commands, which in turn contain metadata directories. An example of changing directories, displaying the contents of the directory, and moving down to another directory in a command line mode is given here:

```
cd labs  
ls  
cd crrel  
ls
```

or

```
cd labs/crrel  
ls
```

(d) If you find a file that you want to load to your local computer, you can do so. To do this from a command line mode, type

```
get filename.met
```

The metadata file will be in ASCII text format, so it can be moved to your computer in text or binary mode.

(e) When you are done with the ftp session, close it and exit from the ftp software. If you stop communicating with the ftp site for some period of time during the ftp session, you may be timed out; i.e., you will not be connected to the Server anymore. If this occurs, you will have to ftp to the Server again.

D-6. Conclusion

The metadata and data on the USACE Server are developed and submitted to the Server through the hard work and determination of innumerable USACE employees. The USACE Geospatial Data Server is only in its inception. It is hoped that the Server will become a useful tool that will enable USACE, other Federal agencies, and the public to access USACE data. As the USACE Clearinghouse is further developed, there may be changes in software, the National Clearinghouse, and other parts of the process. USACE will maintain Web pages on the Server that report updates to the process of metadata and data submission and accession. These Web pages will be located at the URL

<http://corpsgeol.usace.army.mil/howto>

D-7. References

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