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User's Manual
National Biological Information Infrastructure MetaMaker Version 2.30

Getting Started and Navigation Tips
May 1999

National Biological Information Infrastructure

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Getting Started and Navigation Tips

by

Diane M. Schneider
U.S. Geological Survey
Midcontinent Ecological Science Center
4512 McMurry Avenue
Fort Collins, Colorado 80525-3400

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NBII MetaMaker Version 2.30

Participating Offices

USGS Upper Midwest Environmental Sciences Center (UMESC),
La Crosse, Wisconsin
USGS Office of Biological Informatics and Outreach (OBIO),
Reston, Virginia
USGS Midcontinent Ecological Science Center (MESC),
Fort Collins, Colorado
USGS Biological Resources Division, Central Regional Office (BRD-CRO),
Denver, Colorado
USFWS Information Resources Management, Data Administration Office, Denver, Colorado

National Biological Inventory Infrastructure Coordinator

Anne Frondorf, OBIO

Program Development Team

Frank D'Erchia, Leader, BRD-CRO
Linda Leake, UMESC
Diane M. Schneider, MESC
Barbara White, USFWS

Programming

David E. Hansen, UMESC

Import/export functions
Scofield Business Services
Denver, Colorado

Help Functions

Douglas A. Olsen, UMESC

Report Production

NBII MetaMaker 2.30 Logo

Mi Ae Lipe-Butterbrodt,
University of Wisconsin–La Crosse, UMESC

Graphical Representation of the Standard

Susan Stitt, CBI

Technical Editing

Madelon Wise

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Preface

On April 11, 1994, President Clinton issued Executive Order 12906, requiring Federal Agencies to document geospatial data collected or produced, either directly or indirectly, using the standards developed by the Federal Geographic Data Committee (FGDC). This standardized documentation must be made electronically accessible to the National Geospatial Data Clearinghouse network. The Director of the National Biological Service (NBS) met this Order by requiring all NBS units to document newly collected or produced spatial data using the FGDC's metadata standards by January 11, 1995, and to make them available over the Internet. All NBS units were required to complete plans and priorities for how they would document and serve selected existing spatial databases by April 1, 1995. Additional guidelines were provided by the Assistant Director, Information and Technology Services, on documenting existing data and making them accessible through the National Biological Inventory Infrastructure.

Introduction

To meet the requirements of Executive Order 12906, the Upper Midwest Environmental Sciences Center (UMESC), in cooperation with the Midcontinent Ecological Science Center (MESC), developed MetaMaker, a metadata data entry program. Several available metadata programs were evaluated; none were found to fully meet the Federal Geographic Data Committee (FGDC) standards and other requirements, such as ease of use and portability, that are basic elements for an Agency-wide system. MetaMaker beta version 1.11 was developed to capture metadata fully compliant with the FGDC's June 8, 1994, *Content Standards for Digital Geospatial Metadata.* National Biological Information Infrastructure (NBII) MetaMaker Version 2.30, evolved from MetaMaker, and captures metadata compliant with the December 1995 *Draft Content Standard for National Biological Information Infrastructure Metadata.*

NBII MetaMaker 2.30 uses Microsoft Access (Microsoft, Redmond, Washington), a microcomputer database management system. The program provides data entry forms that represent the sections and elements of the draft NBII Content Standard and provides capabilities for printing reports. The compiled version runs on a microcomputer and is available at no cost.

This guide was developed to accompany the release of NBII MetaMaker 2.30 to assist the user with installation of the application. It provides tips on using the data entry forms to create a metadata database in the draft NBII Content Standard format. To provide the documentation and program as soon as reasonably possible, the guide and application were developed concurrently. Every attempt has been made to have the documentation reflect the menu names, button names, etc., included in the final distributed version of NBII MetaMaker 2.30. However, slight changes may have been introduced between the time the documentation was written using beta versions of the program, and the final version of the program was distributed.

Requirements and Getting Started

Requirements

Minimum hardware requirements for NBII MetaMaker 2.30 include a 486 IBM-compatible microcomputer, 12 MB of Random Access Memory (RAM), and between 20 and 53 MB of hard-disk space, depending upon the installation.

NBII MetaMaker 2.30 was developed and tested using Windows 3.1, but also runs on Windows 95.

Downloading from the Internet

NBII MetaMaker 2.30 and the Export Upgrade package are distributed over the Internet within the site:

http://www.umesc.usgs.gov/metamaker/download.html

If installing MetaMaker for the first time, simply download NBII MetaMaker 2.30 from the Internet. Installation instructions are available in a "Readme" file (READ230.txt). If updating a previous version (2.00, 2.10) of MetaMaker containing data sets, download the Export Upgrade package as well.

The compiled NBII MetaMaker 2.30 program and Export Upgrade package can be downloaded at no cost to the user. Because the programs are compiled, you need not purchase software to run them. Both programs are available in compressed download formats for either hard drive or diskette. The diskette option is available for those who cannot download the software directly onto the computer on which it will be run. If you can download the files directly, use the hard drive (single file) option.

Installation and Upgrading

If installing MetaMaker for the first time, install according to the (readme) directions provided on the Internet. If upgrading a previous version of MetaMaker, perform the following before installing NBII MetaMaker 2.30:

a) export data sets from previous versions of MetaMaker, and
b) prepare for Keyword "PickList" updates ("PickList" refers to a predefined list of values or keywords).

Upgrading from a Previous Version of MetaMaker

Export Data Sets from Previous Versions of MetaMaker. To move data sets from one version of MetaMaker to another, export the data sets using the Import/Export Menu in the older version of MetaMaker, install the new MetaMaker, and import the data sets using the new Import/Export Menu.

All versions of MetaMaker can be used to export and import data sets one at a time. This method can be used without upgrading the older MetaMaker software. To assist in migrating multiple data sets

from MetaMaker 2.0+ to 2.30, however, an Export Upgrade package is available that modifies the older database to allow exporting of more than one data set at a time. The Export Upgrade is available at the Internet address listed above. Download the file into an empty directory and click on the downloaded file to decompress it's contents. The text file "exportup.txt" describes how to complete the upgrade process. The database being upgraded is "metanbii.mdb" on the directory on which the older version of MetaMaker is installed. When the Export Upgrade is completed, export all data sets to a directory that will not be deleted when installing NBII MetaMaker 2.30.

Prepare for Keyword PickList Upgrading. Supplemented PickList values from the previous version of MetaMaker can be moved to the upgraded NBII Metamaker 2.30 database. To prepare for Keyword PickList upgrading, make a copy of the existing metanbii.mdb database file on a directory that will not be deleted when installing NBII MetaMaker 2.30.

Installation of NBII MetaMaker 2.30

Download the installation file (MM230DRV.EXE for the hard drive option, MM230DSK.EXE for the diskette option) to the computer hard drive and run the self-extracting .exe to extract multiple files. A readme.txt file, one of the files extracted, contains directions for extracting additional files and completing the installation process. In the hard drive option, the installation process is run directly on the hard drive. In the diskette option, the files are extracted so they can be transferred to diskettes and the installation process run from the diskettes.

For the hard drive option, 53 MB disk space is required to extract all files and run the installation process to create the NBII MetaMaker 2.30 program directory. After installation, delete the extraction directories. If the diskette option is used and each extraction directory is deleted after it is transferred to a diskette, only 20 MB are required. The final NBII MetaMaker 2.30 program directory requires 20 MB.

NBII MetaMaker 2.30 default directory is "c:\metanbii". The installation program allows the opportunity to specify a different drive:\directory. If specifying a different drive, use the System Menu upon MetaMaker startup and manually modify the drive listed to reflect the installation drive. Specifying a different directory is <u>not</u> recommended. Some files and all routines in the Preparser/Parser (CNS/MP) section of the program contain embedded paths and will not function if the program has not been installed on the "\metanbii" directory.

Starting NBII MetaMaker 2.30

Open Windows. To maximize the efficiency of MetaMaker, close all other Windows applications before double-clicking the NBII MetaMaker 2.30 icon to start the program.

If the default drive:\directories were changed during the installation, change them as follows on the System Information Form the first time NBII MetaMaker 2.30 is run after being installed. Click the System Menu button. Click the Edit Station ID and Directories button to open the MetaMaker System Information form. Enter a Station ID and modify the default drive:\directories as described below.

MasterKeys and Station ID's

To ensure that each data set is uniquely identified during the import and export functions of MetaMaker, unique, internal identifiers called MasterKeys are added to a data set the first time it is exported. Data-set names are also unique. Both the data-set name and MasterKey are used by MetaMaker to prompt the user about whether or not to overwrite existing data when importing.

Once the data-set MasterKey has been assigned and stored in the database (i.e., the data set has been exported), that MasterKey is never reassigned. MasterKeys are used for internal program checking and are not visible to the user in any MetaMaker form.

Enter a unique Station ID when first starting NBII MetaMaker 2.30. This becomes important if it becomes necessary to track the origin of a data set. Changing the Station ID after an export has been performed and reexporting the data set will not result in a revised Station ID being assigned to the data set.

A MasterKey field is a 15-character text field. The first five characters of each MasterKey, the Station ID, are user defined and can be modified using the System Menu. The remainder of the MasterKey is assigned by internal programming code. The default Station ID is "0001-". By altering the "0001-", the origin of each data set can be identified by anyone who can directly access the MetaMaker database tables. (This requires accessing the tables using ACCESS 2.0, the programming language in which MetaMaker was created.) The compiled version of NBII MetaMaker 2.30 distributed over the Internet does not include ACCESS. The ability to access the MasterKey data may be useful for anyone responsible for centralizing MetaMaker databases or tracking data set origin. Making the fifth character of the Station ID a hyphen ("-") is a common convention, but not required. Examples of how Station ID's might be used include: if a Center has multiple field stations, each field station may have its own unique identifier, or if an office has more than one copy of MetaMaker, each person entering Metadata may have a unique identifier.

Examples:

Station ID	indicates the data set was exported originally by
mesc-	Midcontinent Ecological Science Center
dixn-	Dixon, California Field Office
flag-	Flagstaff, Arizona Field Office
sta1-	Midcontinent Ecological Science Center
sta2-	Dixon, California Field Office
sta3-	Flagstaff, Arizona Field Office
0001-	Midcontinent Ecological Science Center
0002-	Dixon, California Field Office
0003-	Flagstaff, Arizona Field Office
0001-	Joe Green
0002-	Jane Billon
0003-	Kelly Wasserman

Although the data-set MasterKey is never reassigned, and the user cannot alter the MasterKey, the following two methods can be used to eliminate the MasterKey of a data set. The first method uses the duplicate data set option and the fact that a duplicated data set is, by definition, not the same data set. Therefore, to eliminate a MasterKey, rename the data set to a temporary name and duplicate the data set specifying the "real" name as the new name. The "new" data set will not have a MasterKey, although the old MasterKey remains assigned to the renamed data set. Method 2 is similar to method 1, but uses Import/Export. Export the data set, and import it back in. When importing, you will be warned "This data set already exists ... The existing name is ...". Choose the option to Create a New Data Set. The newly created data set will not have a MasterKey.

Default Paths

In addition to the Station ID, the System Information form identifies three drive:\directories. Even if a drive:\directory other than "c:\metanbii" was specified as the installation directory, the three default paths are:

c:\metanbii\export
c:\metanbii\import
c:\metanbii\print

The export and import paths are the default directories NBII MetaMaker 2.30 uses when exporting or importing data sets. These drive:\directories may be changed if desired.

The print directory is the default directory NBII MetaMaker 2.30 uses in the Report Menu when writing a data set to a file. If NBII MetaMaker 2.30 was installed to a drive other than c:, update the drive letter in this form. Changing the default print directory is not recommended. All routines in the Preparser/Parser (CNS/MP) section of the program contain embedded paths and will not function if the print directory is not "\metanbii\print".

The export, import, and print directories are not automatically created when NBII MetaMaker 2.30 is installed. Select OK in the System Information form when MetaMaker is run to create the directories.

Migrating from Previous Versions of MetaMaker to NBII MetaMaker 2.30

Data Sets

Import the export file(s) created as described above under "Export Data Sets from Previous Versions of MetaMaker" using the Main Menu Import/Export Menu, Import Metadata button as described in this document. A report titled "Import Transferred Report for Table Changes from Version 2.10 to 2.30" should appear. Each time Import is run and additional information is to be reported, the old report is overwritten with a new report based only on the data from the most recent Import run. This report can also be opened by selecting the Import/Export Menu button on the Main Menu and clicking the Open Report for Field Values That Are Relocated During Import From MM 2.00 and 2.10 button.

Data entered in a Field 5.1 Detailed Description in a MetaMaker 2.10 database when migrated to a 2.30 database may not appear in 2.30 in the order in which it appeared in 2.10. In addition, the association between the entities, attributes, and domain values may have been lost. For enumerated domain and range values, this report identifies the data sets and fields where the associations may have been lost. The associations may also have been lost for code-set and unrepresentable domains. All MetaMaker 2.10 data sets that had data entered in a Field 5.1 Detailed Description and were migrated to NBII MetaMaker 2.30 should be verified manually. If the associations were lost, or the order of the data in 2.10 was significant, the data in 2.30 must be edited manually to return the data to its original state. See Appendix C for more information on 5.1 Detailed Description in NBII MetaMaker 2.30.

PickList Values

Import the supplemented PickList values from the database created as described above under "Prepare for Keyword PickList Upgrading" using the Main Menu Import/Export Menu, Import Keywords from MetaMaker into NBII MetaMaker button as described below in this document.

Terminology and General Information

Data-set Names

Information in a MetaMaker database is referenced by a data-set name. A data-set name can be 80 characters in length, must be unique, and should describe the data being documented.

Example: BosqueNWR_Contours is a valid data-set name.

Note: Blank spaces may be used in a data-set name; e.g., Bosque NWR Contours.

Field Numbers and Names

Information about the data set is entered according to the draft NBII Content Standard, using a modified field numbering or naming scheme. There are differences between the field numbers and names used in the FGDC and the NBII Content Standards. These differences will be resolved as a profile to a revised FGDC Content Standard (in progress) when the final NBII Content Standard is released. Field numbers or names used in NBII MetaMaker 2.30 data entry forms, output options, and help routines were assigned using the following scheme, which matches the profile being developed:

1. If the field exists in the FGDC's June 8, 1994, *Content Standards for Digital Geospatial Metadata*, the FGDC field number and name are used.
2. If the field exists only in the December 1995 *Draft Content Standard for National Biological Information Infrastructure Metadata*, "99." is added to the beginning of the field number.

Appendix A documents the numbering and naming scheme in detail for those sections with differences between the two Content Standards.

The field numbers or names used in the Keyword PickList Menu have not been modified to use this numbering scheme, but are a mixture of FGDC and NBII field numbers and names.

To assist you in determining mandatoryor optional fields, MetaMaker uses the same colors as the graphical representation of the December 1995 *Draft Content Standard for National Biological Information Infrastructure Metadata* prepared by Susan Stitt, Center for Biological Informatics, U.S. Geological Survey (formerly Technology Transfer Center, National Biological Service).

Record and Template Names for Sections 8–10

Sections 1–7 have one data entry form each. Sections 8–10 are different from Sections 1–7 and are sometimes referred to as Template Records. The information in Sections 8–10 may be the same for multiple data sets or fields. The data are stored only once and are referenced by a record or template name. Record names can be 80 characters in length and must be unique. Because these records are referenced from multiple data sets or fields, the record name should be descriptive of the record's contents rather than the data set or field from which they are referenced.

When a Section 8, 9, or 10 record or template name is required, the data entry form will have a white box in which a record name can be entered and a gray button to open the Template Record. If an existing record is applicable, select it from the PickList. (PickList is defined under "General Navigation Tips Within the Data Entry Forms, Entering Data, Select from a PickList".) If an existing record is not applicable, open the appropriate section and create a Template Record. Before entering any data, enter a record name and select the Save Template button. Once the record has been saved, fill in all information, select the Save Template button again, then the Go Back to Menu button. MetaMaker does not update the Template Record name when it returns to the previous form. Select the correct record name from the PickList or key it in.

Example 1: One Section 8 Template Record used in three data sets: There are multiple data sets for Bosque NWR: BosqueNWR_Contours, BosqueNWR_Roads, and BosqueNWR_Veg. The Record Name for Field 1.9, Point of Contact Information in the BosqueNWR_Contours data set, is GIS/RS_Leader because the GIS and Remote Sensing Project Leader is the primary contact for all geospatial data sets at the Center. The record or template name entered in Field 1.9 for the BosqueNWR_Roads and BosqueNWR_Veg data sets is also GIS/RS_Leader because the same information also applies to these two data sets.

Example 2: One Section 8 Template Record used in two fields within one data set: Suppose the Section 8 Name for Field 1.9, Point of Contact Information in the BosqueNWR_Contours data set, is GIS/RS_Leader because the GIS and Remote Sensing Project Leader is the primary contact for all geospatial data sets at the Center. If the same person is the Metadata Contact, the value entered in Field 7.4 would also be GIS/RS_Leader because the same Template Record also applies here.

DMS to DD Conversion Calculator

The draft NBII Content Standard states, "Values for latitude and longitude shall be expressed as decimal fractions of degrees". To assist in converting Degree, Minutes, and Seconds (DMS) values to Decimal Degrees (DD), MetaMaker contains DMS —>DD Conversion Calculator buttons in appropriate locations. Clicking the button opens a new window containing the calculator. Enter a DMS value in the Input box, select the Convert button, and the DD output will appear. The output may be transferred to the MetaMaker form two ways:

1. Key the output value into the appropriate field.

2. Highlight the output value and copy it (select Edit and Copy in the Calculator or press Ctrl + C). Click in the appropriate field and paste (select Edit and Paste in the MetaMaker form or press Ctrl + V).

Click the Done button on the calculator to close it.

Removing Invalid Data and the Delete Warning

To remove information, click on the field containing the invalid information and replace the invalid data with blank spaces or a null.

When deleting data, a warning similar to the following may appear: "You have just deleted x record(s). Choose OK to save your changes or Cancel to undo your changes." Unless you used a Delete button on the screen display (not the delete key on the keyboard), select "Cancel". Otherwise, MetaMaker may be referencing more data than is visible on the screen, and you delete more data than intended.

Upper or Lower Case

MetaMaker is not case sensitive; values can be entered in upper, lower, or mixed cases.

Example: birds = BIRDS = Birds

Backups

All data entered are stored in the \metanbii\metanbii.mdb file. To make a backup, simply make a copy of that file. To resurrect a backup, delete the \metanbii\metanbii.mdb file and copy or move the backup .mdb (to be named \metanbii\metanbii.mdb).

At MESC, the \metanbii\metanbii.mdb is backed up on archive tape weekly. In addition, it is useful to maintain three rotating backups, a process described below. If a problem occurs, the latest backup can be resurrected without loading files from archive tape. Devise a backup strategy that works for your office. The following steps are used to create the rotating backups:

1. Create a directory and name it \metanbii\copies.
2. Before entering MetaMaker for that day's work, copy the \metanbii\copies directory and rename it to include the present day. The first copy of the day includes the letter "a" as shown (The first backup of \metanbii\metanbii.mdb on December 15, 1998 would be \metanbii\copies\m981215a.mdb).
3. Make another backup if a significant amount of data is being entered or modified during a single day and include the next sequential letter (b, c, d). (The second backup made on December 15, 1998 would be \metanbii\copies\m981215b.mdb.)
4. After making the backup copy, check the \metanbii\copies directory, and if four m_____.mdb files exist, delete the oldest one.

General Navigation Tips Within the Data Entry Forms

Moving Around in MetaMaker

- Underlined letters or numbers on menu buttons can be used as hot keys to access submenus or forms.
- The TAB key or ENTER key will generally move the cursor to the next gray PickList box.
- Use the mouse to move to a desired field by clicking in the associated white box.
- When clicking in a white or gray data entry box, the Arrow keys are in editing mode. In editing mode, Arrow keys move the cursor left or right, one character at a time, within the present field. Ctrl + Arrow key moves the cursor one word at a time, still within the same field. Pressing Function Key 2 (F2) switches to navigation mode and the Arrow keys move the cursor from field to field. Function Key 2 can be used to toggle between the two modes. The Home and End keys also work differently depending on whether one is in editing or navigation mode.
- When the data entry forms are longer than the computer screen, use the vertical scroll bars on the right edge of the screen or the Page Up and Page Down buttons to move the screen up or down.

Suggestion: Generally, the validity of the data entered is checked when the cursor moves out of a field (using TAB, ENTER, or the mouse). Always move out of the last field in which data was entered before scrolling the screen.

The Status Bar and the Navigation Buttons

Note the two functions in the lower left corner of the screen:

Status Bar

The Status bar contains a brief description of the present field. If the cursor is not in a field, the Status bar may indicate what the cursor is "pointing to".

Navigation Buttons

A set of Navigation buttons are positioned above the Status bar. The numbers in the Navigation buttons are read as Record No "x" out of a total number of "y" records. "X" indicates the record to which the cursor is presently pointing, whereas "Y" indicates the number of records in the present set of records. The definition for "the present set of records" varies depending upon where you are in the program. Generally, from the present location within the program, you can examine and modify any of the records within the present set. The following examples may clarify how Navigation buttons are used.

Example 1: In the Section 8 form, when entered using the Edit or New Template Menu, the Navigation buttons will indicate "Record 3 of 9". In this instance, the set of records being viewed includes all nine Section 8 records stored in the database and the record showing on the screen is record 3. The Navigation buttons can be used to move to any of the nine Section 8 records, therefore, any of the Section 8 records can be modified.

Example 2: If selecting a data-set name in the Edit Metadata Data Set form, move to Section 1 and open the Section 8 form by clicking the button in Field 1.1 Citation. The Section 8 Navigation buttons now indicate "Record 1 of 1." Only one Section 8 record can be associated with Field 1.1 Citation, therefore only one record is in the present set. However, the Select Citation to Edit PickList can be used to select a different Section 8 record and thus change the present set to a different, single Section 8 record.

Example 3: In a Section 2 form, the Navigation buttons always indicate "Record 1 of 1." In opening Section 2, you identify the data set to be selected by specifying its data-set name. Data-set names are unique, therefore, only one data set meets the search criteria and there is only one record in the present set.

Example 4: Some fields are repeating fields. When entering repeating fields, an additional form (a subform) appears over the top of the regular section form. A subform can exist within another subform. A subform often has its own set of Navigation buttons. For example, Field 99.1.16.2.1, Tool Network Resource Name, is a repeatable field. When entering more than one value, the record count in the subform increases one for each value entered (i.e., in this subform, the Navigation buttons represent the number of keywords entered for that particular field). Field 99.1.16.2.1 is an example of a subform within a subform within a form, as shown by the three sets of Navigation buttons visible.

The Navigation buttons can be used to move from one record to the next. Click on the left arrow to move to the previous record or click on the left arrow with a vertical bar to move to the first record. Click on the right arrow to move to the next record, or click on the right arrow with a vertical bar to move to the last record. Another method of switching to a different record is to click inside the Record Number box, key in the desired record number, and press the ENTER key.

Sometimes, records can be added to the database by using the Navigation buttons to move past the last record number indicated. However, this method is not recommended in MetaMaker.

Entering Data

There are three ways to enter data:

- Select from a PickList
- Key in Values
- Cut, Copy, Paste

Select from a PickList

Many fields have a predefined list of values called a PickList. To view the values for a particular PickList, click on the small gray underscored down arrow. If the PickList contains more values than can be displayed in the gray box that appears, use the vertical scroll bars to the right of the box to view the remaining values. PickList values are often in alphabetical or numerical order. To select a specific value, click on the value itself. If no PickList value is appropriate, key a value into the white box. The newly entered value will not be automatically added to the PickList; however, the Edit or New Template Menu allows you to supplement or modify PickLists.

Key in Values

Although, in most instances, a value can be keyed in either the grey or white box, it is recommended that the values be entered in the white boxes. When you click in the white box to enter data, the grey box usually disappears. To get the grey box back, click in another field. In a few instances, the grey boxes have been offset, and will not disappear entirely.

When typing or reviewing long text, it may be useful to use the Zoom box. Click in the white data entry box, and press SHIFT + Function Key 2. A Zoom box opens and more of the text can be seen than in the white data entry box.

Cut, Copy, Paste

Standard Windows Cut, Copy, and Paste commands can be used to modify or enter data.

Data Types

The draft NBII Content Standard allow five types of information: integers, real numbers, text, dates, and times. Appendix E contains the field names, types, and sizes for the NBII MetaMaker 2.30 database. MetaMaker includes format reminders in the field labels for fields that require dates and times. Although the Content Standard allows several variations of the date and time formats, the MetaMaker format reminders show YYYYMMDD for dates and HHMMSSSS for times.

If a real number is entered in an integer field, MetaMaker rounds the real value to the nearest integer and inserts the rounded value in the white data entry box without notifying you.

Drop Down Menus

This document primarily describes the functionality of MetaMaker using the buttons on the menus or forms. Another way to access many of these functions is by using the menu bar at the top of the screen and its drop down choices.

The About MM drop down menu and some of the choices in the Help drop down menu are only available through the menu bar. About MM credits people involved in the creation of MetaMaker and its documentation. The Help choices are all described in the Help section of this document.

Cancel

To cancel changes to a field entry, press the ESC key once before moving out of the field. To cancel changes to a record that has not been stored, press the ESC key a second time. Ctrl + Z and Alt + Backspace can also be used to undo typing within the present field.

Add and Done Buttons and Repeating Fields or Groups of Fields

A form may contain an Add button. Selecting an Add button opens a subform over the top of the existing form. A subform contains additional fields and is used in two main situations:

1. Portions of the Content Standard require you to enter data in one of several categories. For example, ou enter Point and Vector Object Information (Field 3.3 and all its subfields) or Raster Object Information (Field 3.4 and all its subfields), but not in both types of Object Information. Selecting the Add button in 3.3 opens a subform that displays the fields appropriate to 3.3.

2. Certain fields or groups of fields in the Content Standard groups of fields can be repeated numerous times. For example, Available Time Period, Field 6.7, can be repeated and contain multiple Section 9 Record Names. Clicking on the 6.7 Add button opens a subform that allows you to enter multiple record names.

Be aware of two things when dealing with Add buttons and repeating fields:

1. Repeating fields can be nested, one within another. For example, the Entity and Attribute Detail Citation, Field 5.2.2, is repeatable all by itself, but is also repeatable in combination with Entity and Attribute Overview, Field 2.5.1. Each section form, has its own set of Navigation buttons. If additional sets of Navigation buttons appear when a subform appears, repeating fields are indicated.

2. After an Add button is clicked, its associated Done button will appear. More Add and Done buttons may be nested within the subform displayed. After completing all appropriate fields, be sure to select the Done buttons to close the subforms in the reverse order from how they were opened. The Done buttons themselves do not disappear as each subform is closed.

Because of its complexity, Section 4 contains a significant number of subforms that open one on top of another. After selecting an Add button, scroll down the screen, entering fields or selecting additional Add buttons as appropriate. Move all the way to the bottom of the scroll bar to ensure all appropriate fields have been entered. Gaps between groups of fields in the subform generally indicate that another selection is required, one that will open another subform to fill in the gaps with the appropriate data entry fields.

Help

User help options:

The Status bar in the lower left corner of the screen contains a brief description of the present field, or what the cursor is "pointing to".

In the Add New Metadata Data Set form, the Tip for Adding a New Metadata Data Set button describes the steps needed to add a new data set and switch to edit mode to enter data.

In the Report Menu, Metadata Data Set Output Menu, the Report Tips button reiterates the reporting options shown on the Metadata Data Set Output Menu form.

Help selected from the Menu Bar, includes the following:

1. MM User's Manual – as of April 1999, this option displays the MetaMaker User's Manual as a Microsoft Write file. The document can be searched or printed as needed. To return to MetaMaker from the Microsoft Write (WordPad) window, select File and Exit.
2. Data Element Definition- displays information about each field (element), including field numbers, names, definitions, types, and domains. The field numbering and naming scheme described matches the numbering and naming scheme used in the data entry forms and output options based on a combination of the June 8, 1994, *Content Standards for Digital Geospatial Metadata* and the December 1995 *Draft Content Standard for National Biological Information Infrastructure Metadata.* This combination is described fully in Appendix A.
3. Projection Parameters - displays the same information found in Section 4, 4.1.2 Planar, 4.1.2.1 Map Projection by clicking the Help Projection Parameters button described below.
4. DMS Conversion - invokes the DMS —>DD Conversion Calculator as described under "Terminology and General Information, DMS to DD Conversion Calculator."
5. Edit Hot Keys - lists a number of hot keys that may be useful for editing.
6. User ID, MasterKey, Export, Import - contains information on Import, Export, MasterKeys, the MetaNBII.ini file, Station ID's, and importing Keywords from one version of MetaMaker into another. As of December 18, 1998, the information contained herein was taken from the MetaMaker 2.10 User's Manual. The first part of this information is also available in the System Menu, MetaMaker System Information, Help.
7. Graphical Representation NBII - displays a graphical representation of the December 1995 *Draft Content Standard for National Biological Information Infrastructure Metadata.*
8. NBII Content Standard - displays the December 1995 *Draft Content Standard for National Biological Information Infrastructure Metadata* as a Microsoft Write (WordPad) file. The document can be searched or printed as needed. To return to MetaMaker from the Microsoft Write window, select File and Exit.
9. FGDC Content Standard - displays the FGDC's June 8, 1994, *Content Standards for Digital Geospatial Metadata* as a Microsoft Write (WordPad) file. The document can be searched or printed as needed. To return to MetaMaker from the Microsoft Write window, select File and Exit.

Section 4, Spatial Reference Information, includes the following forms of help:

1. 4.1.1 Geographic: The Geographic Help button displays the formula used to convert data from Degrees, Minutes, and Seconds to Decimal Degrees. To close the Geographic Coordinate Entry window, select File and Exit.

2. 4.1.2 Planar/4.1.2.1 Map Projection: This portion of Section 4 contains 17 projection parameters fields. Specify a Map Projection Name in Field 4.1.2.1.1 and then enter only the projection parameters fields appropriate for that projection. The Help Projection Parameters button is available to assist you in identifying the appropriate projection parameters. Select the parameter and a list of projections will be displayed. In the Projection Help window, select Options, Keep Help on Top, Top. Click on a projection name in the Help window to identify the parameters required for the selected projection. To close the Projection Help window, select File and Exit.

   If the Map Projection Name specified is "other projection," you must determine the appropriate projection parameters to enter.

   4.1.2 Planar/4.1.2.2 Grid Coordinate System and 4.1.2 Planar/4.1.2.3 Local Planar do not contain Help buttons that list the required parameters because the subforms used for data entry display only the required parameters.

3. 4.1.2 Planar/4.1.2.1 Map Projection and 4.1.2.2 Grid Coordinate System: The Data Entry Tip button is also available in this portion of MetaMaker. After viewing the information it provides, click in the gray tip box to make it disappear.

Main Menu Buttons

Add New Metadata Data Set

From the Main Menu, select the Add New Metadata Data Set button.

Data-set names must be unique. The Metadata Data-set Names in Use List can be used to review the names of existing data sets. Click inside the white Enter New Metadata Data-set Name box and enter a new, unique name for the data set to be documented. Click the gray Save Metadata Data Set button. If the data-set name entered was unique, the Data Set Saved message box will be displayed. Click OK. If the data-set name entered has already been used, an error message will appear "Duplicate value in index, primary key, or relationship. Changes were unsuccessful." Click OK. More than one message box may appear. In a few instances, the Saving Data Set message will appear immediately after the "Duplicate value..." message, even though the data set has not been saved. When back at the Add New Metadata Data Set Form, enter a new, unique data-set name. To add another data set, click the Add Another Metadata Data Set button, click in the white Enter New Metadata Data-set Name box, and enter another data-set name.
Note: changing the data-set name and reselecting the Save Metadata Data Set button, without clicking the Add Another Metadata Data Set button, does not save a new data-set record. It simply renames the data set, as can be observed by the changes in the Metadata Data-set Names in Use List.

After a new data set has been saved by clicking the Save Metadata Data Set button, if the Add Another Metadata Data Set button has not been clicked, the data set can be deleted by selecting the Delete New Metadata Data Set button. Previously created data sets, or ones created before selecting Add Another Metadata Data Set cannot be deleted in this form. Such data sets must be deleted with the Edit Metadata Data Set, Delete Metadata Data Set button.

After creating the desired data sets, select the Go Back To Main Menu button, or Go Back to Edit Menu button as appropriate.

Edit Metadata Data Set

Edit Metadata Data Set

From the Main Menu, click the Edit Metadata Data Set button. The Edit Metadata Data-set Form will appear. Use the PickList to select the desired data set. Verify that the correct data set has been selected by examining the Selected Metadata Data Set and Abstract boxes. Next, select the section to be edited.

Once a section form has been opened and data edited, select the Save Data Set button before moving to another section or returning to the Edit Menu.

Delete Data Set

The Delete Metadata Data Set button is available only on the Edit Metadata Data Set form. Load the data set to be deleted using the Select Metadata Data Set to View or Edit PickList. After verifying the correct data set has been loaded, click the Delete Metadata Data Set button near the top of the form.

Duplicate Data Set

Duplicating a data set may reduce data entry time when one has similar data sets. Click the Duplicate Metadata Data Set button. In the Duplicate Data Set form, use the PickList to select the name of the existing data set to be duplicated. Enter a name for the data set to be created, and click OK.

Query Menu

The Query Menu includes six queries: Metadata Data-set Name, Theme, Place, Stratum, Temporal, and Taxonomic. Under the button used to run each query is a list of words by which to search or query the database. For the data-set list, the entries shown are the names of data sets existing in the database. For the other five queries, the entries shown are not based on data stored in data sets; rather, they are based upon the values included in the PickList Keywords table, for the appropriate field. Thus, if one searches for one of the items listed in the data-set list, one will always find a match. However, if one searches for an entry in any of the other queries, MetaMaker may indicate no data was found.

To run a query, click the appropriate button, and key in the requested value. Only the first few letters of the requested value need be entered. After entering a value, click OK. The resultant screen shows the data sets that contain the specified value. The number of records listed in the Navigation buttons do not necessarily indicate the number of data sets meeting the specified criteria. The same data set may be counted multiple times. This relates to the basic table structure of the database and how the data-set names in one table are linked to the keywords stored in another table. Use the Previous and Next buttons or the Navigation buttons to view the selected records. A screen containing titles, but no data, indicates no match was found.

Import/Export Menu

This menu is used to move data between MetaMaker databases, including moving data from one version of MetaMaker to another, or consolidating metadata developed at individual sites, or on several microcomputers, into one centralized database.

MasterKeys, Station ID's, and Default Paths

MasterKeys, Stations ID's and Default Paths relate to exporting and importing data. Since it is recommended that Stations ID's and default paths be addressed when starting MetaMaker for the first time, these topics are discussed above under "Starting NBII MetaMaker 2.30".

Import Metadata

This menu option is used to read an ACCESS database containing data sets previously exported from a MetaMaker database.

In the Import/Export Menu form, select the Import Metadata button. In the Import Data Set message box, move to the directory that contains the export file previously created by a version of MetaMaker. Select the ".mdb" file.

MetaMaker will check the data-set names and MasterKey numbers. If importing will overwrite existing data, you will be prompted and will have the opportunity to:

1. Update the present data set from the imported data set
2. Keep the present data set
3. Create a new data set
4. Cancel

As well as checking if a data set will be overwritten by the import, Metamaker checks if each Section 8, Section 9, and Section 10 record would be overwritten. A similar prompt appears each time a Section 8, Section 9, or Section 10 record is encountered whose name matches the name of a record already stored in the database.

If you choose to create a data set, Section 8, 9, or 10 record, MetaMaker creates a new name for the record being imported by adding "_1" to the old name. A form appears that allows you to enter a better new name. If a record already exists with the new name entered, MetaMaker will append another "_1", until it determines the new name is unique.

Canceling at any time during an import, cancels the whole import.

When importing is completed, a report may appear titled "Import Transferred Report for Table Changes from Version 2.10 to 2.30". See "Migrating from Previous Versions of MetaMaker to NBII MetaMaker 2.30, Data Sets" for a description of this report.

The two files created by export, an ".mdb" and a ".ldb" file, can be deleted using standard DOS or Windows delete routines when the files are no longer needed.

Export Metadata

This menu option is used to create an ACCESS database containing data sets that can be imported into a MetaMaker database.

In the Import/Export Menu form, select the Export Metadata button. In the Export Data Set form, click the Select All button or select individual data sets by clicking in the Export column. A check mark indicates a data set has been selected for export. Click OK. A second message box also titled Export Data Set appears. Specify a disk drive, directory, and filename. Although the default filename "export.mdb" can be used, specifying a name related to which data sets are being exported is recommended. The filename must end with the extension ".mdb". Click OK. If the specified file

already exists, a third message box titled Export Data Set appears. Select Yes to overwrite the existing file. Selecting No returns to the message box where the disk drive, directory, and filename are specified, where another name could be entered, or the entire operation canceled.

When export is run, two files are created, an ".mdb" and a ".ldb" file. When the files are no longer needed, they should be deleted, using standard DOS or Windows delete routines.

Import Keywords From MetaMaker into NBII MetaMaker

This menu option was created for users who entered additional PickList values in another MetaMaker database and wish to move those additional values into the present MetaMaker database.

From the Import/Export Menu form, select the Import KeyWords From MetaMaker Into NBII MetaMaker button. In the Merge Keywords from MetaMaker box, specify the disk drive, directory, and filename of the MetaMaker database. It will end in a ".mdb" extension. Click OK.

The option for merging PickList values from another MetaMaker database can also be accessed from the Main Menu, Edit or New Template Menu, Edit, Add, or Import Keyword PickList Menu, Import Keywords, Merge From MetaMaker button.

Open Report for Field Values That Are Relocated During Import from MM 2.00 and 2.10

See "Migrating from Previous Versions of MetaMaker to MetaMaker 2.30, Data Sets" above for a description of the report associated with this button.

Report Menu

Preview, Printer, and File Conventions

Several options may be accessed under the Report Menu. The options are discussed in detail below, but items that apply in more than one option are mentioned here.

Preview: When a Preview option is selected, the output is displayed on the screen for review. The Navigation buttons in the lower left corner of the screen can be used to move between pages. Click in the center of the page for a full screen view; a second click zooms into a particular area or section of the page, dependent upon the cursor location. After reviewing the output, select File, Close to return to the previous menu or select File, Print to send the output to a printer. A Print message box appears to specify the printer to access (Setup... button) and the pages to print.

Printer: When the To Printer option is selected, the same output as is generated with the Preview option is sent directly to the printer. The default printer is used, and all pages are printed.

File: When a To File option is selected, the same data as is generated with the Preview option is sent to a file. In the Metadata Data-set Output Menu, the file created is an ASCII file. Formatting, boldness, etc. is lost in the transformation to ASCII. In the remaining Report submenus with To File buttons, several file formats are available: Microsoft Excel (*.xls), Rich Text Format (*.rtf), and MS-DOS Text (*.txt). The specifics on naming and overwriting such files are discussed below in the appropriate sections.

Metadata Data-set Output Menu

The output generated in the Metadata Data-set Output Menu includes the data entered that relates to the FGDC or NBII Content Standards; additional information associated with the data set entered using the Additional Information About Metadata Data-set Form is written using the Report Menu, Additional Information Menu.

Upon entry to this menu some buttons are disabled, as shown by their text being light gray. They become available for use and their text changes to blue at the appropriate stages of this process.

Specify the data set to be written by selecting from the PickList or typing in the name.

Two output formats are available. The NBII output format prints all data entered into NBII MetaMaker 2.30 Sections 1 through 7, with Section 8 through 10 inserted at the appropriate locations. The FGDC output format produces the same information except any fields that relate only to the draft NBII Content Standard (i.e., all fields whose fields numbers begin with "99.") are not written. Click the Build Report button appropriate for the format desired. Three options become available: To Preview, To Printer, and File Output Menu.

Click on To Preview to view the data on the screen or to send all or selected pages to the printer. See the "Preview" section above.

Click on To Print to send the data directly to the printer.

Click on the File Output Menu to open the File Output Menu form. Click the Delete File Output For (\metanbii *.txt, *.err, *.htm, *.sgm, *.dif) Rename or Saves As To Keep Files button to delete old output and working CNS/MP files. Click the Metadata Data Set to File button to send the output to a file. In the Print Data Set To File message box, specify a disk drive, directory, and filename to which the data should be written. The defaults that appear are based on the information supplied from the Main Menu, System Menu. If one plans to run the CNS/MP programs from within NBII MetaMaker 2.30, the filenames and directories described below under "Metadata Preparser (CNS) and Parser (MP)" MUST be used; else every button besides the Data Set to File button in this menu will not function properly.

If one is not running CNS/MP from within NBII MetaMaker 2.30, specifying a filename related to the data-set name may be preferable to naming the output file "datanbii.txt" or "datafgdc.txt". One may also find it preferable to utilize a different drive or directory name than the NBII MetaMaker 2.30 defaults.

After specifying the desired filename, drive, and directory, click OK. If a file already exists (i.e., the button to delete old output and CNS/MP working files was not used) an additional message appears. Select Yes to overwrite the existing file. Selecting No returns to the original Print Data Set To File message box where another name could be entered or the entire operation is canceled. Once the file is created, it can be read by software that reads ASCII files. This includes most, if not all, editing and word processing software. Appendix B contains an example of a data set written using this menu option.

Metadata Preparser (CNS) and Parser (MP). The Metadata Preparser CNS and Parser MP are two programs written by Peter Schweitzer, USGS, to convert ASCII text files containing metadata to a format suitable for serving over the Internet as part of the FGDC or NBII Clearinghouse. Although one can download CNS/MP from the Internet and run them separately from NBII MetaMaker 2.30, there are several files that need to be configured to work well with MetaMaker output. To simplify the process, NBII Metamaker 2.30 incorporates CNS/MP into its file output routines.

All files needed to run CNS/MP are provided during NBII MetaMaker 2.30 installation. However, if desired, the CNS/MP documentation or programs can be obtained from the following Internet locations as of December 18, 1998:

Preparser (CNS) documentation	http://geology.usgs.gov/tools/metadata/tools/doc/cns.html
Parser (MP) documentation	http://geology.usgs.gov/tools/metadata/tools/doc/mp.html
CNS/MP programs	http://geology.usgs.gov/tools/metadata

Also as of December 18, 1998, the Internet page "Processing MetaMaker Reports into HTML Web Pages and SGML Files for Data Exchange and Indexing" describes the files needed to use CNS/MP with MetaMaker output:

http://www.nbii.gov/tools/metamaker/nsditools.html

When running CNS/MP from within NBII MetaMaker 2.30, the following filenames and directory structures MUST be used or this portion of NBII MetaMaker 2.30 will not function properly:

On the \metanbii\print directory:

NBII option	FGDC option	contents:
datanbii.txt	datafgdc.txt	ASCII text file of data-set written from NBII MetaMaker 2.30: input for CNS

On the \metanbii directory:

NBII option	FGDC option	contents:
cns_over.err	cns_ovrf.err	CNS leftovers or errors output file
cns_inf.txtcns_inff.txt		CNS information output file
cns_out.txt	cns_outf.txt	CNS output file; input for MP
mp_txtnb.err	mp_txtfg.err	MP errors output file, when generating text output
mp_htmnb.err	mp_htmfg.err	*MP errors output file, when generating HTML output

mp_sgmnb.err	mp_sgmfg.err	*MP errors output file, when generating DGML output
mp_difnb.err	mp_diffg.err	*MP errors output file, when generating DIF output
mp_txt.txt	mp_txtf.txt	MP output file, text format
mp_htm.htm	mp_htmf.htm	MP output file, HGML format
mp_sgm.sgm	mp_sgmf.sgm	MP output file, SGML format
mp_dif.dif	mp_diff.dif	MP output file, DIF format

* MP errors output files contain the same information, no matter which output option was specified for the MP run, as long as the input file for each run is the same. As CNS/MP is incorporated into NBII MetaMaker 2.30, the input file when generating the MP text output is the CNS output; the input file when generating the other 3 output formats, is the output from the text MP run (see Figure 1).

After each CNS/MP run, rename files that should not be overwritten by subsequent CNS/MP runs, using standard Windows commands. The Delete File Output For (\metanbii *.txt, *.err, *.htm, *.sgm, *.dif) Rename or Saves As To Keep Files button can be used to delete the working files created during a CNS/MP run and the CNS input file, datanbii.txt or datafgdc.txt.

Data flows from NBII MetaMaker 2.30 through CNS/MP as shown in Figure 1. The Report Menu, Metadata Data-set Output Menu is used to create a text file in either FGDC or NBII format. That text file is run through CNS. If the CNS leftovers/errors file or CNS information file indicates errors, the you must determine what caused the errors. The data set is modified, rewritten, and rerun through CNS until no errors are indicated. Once the CNS run is acceptable, MP is run. If the MP errors file identifies problems, the data set is fixed, rewritten, and rerun through CNS, and rerun through MP, until the errors are removed. There are a few instances where NBII MetaMaker 2.30 output will not run through CNS/MP properly; in these instances the MetaMaker output file or CNS output file is modified rather than the data set itself. See "Trouble Shooting".

There are a couple of other items to be aware of. If the CNS leftovers/errors file is empty, it does not mean there are no errors; rather it means CNS did not run. See "Trouble Shooting, CNS" below on problems of these types. Besides checking the CNS leftovers/errors file, always check the CNS information file. It may indicate errors that are not listed in the leftovers/errors file. When CNS encountering unacceptable data, it writes the phrase "could not be placed" in the information file. The unacceptable data are either left out of the output file and written to the leftovers/errors file or appended into another field. The first 3–4 lines of the information file will always say "could not be placed" as explained in "Trouble Shooting, CNS, Problem: The CNS leftovers/errors file is empty". Any other "could not be placed" lines indicate problems that must be checked and possibly fixed. As of December 18, 1998, see also the Internet page "Processing MetaMaker Reports into HTML Web Pages and SGML Files for Data Exchange and Indexing" for information on CNS/MP errors at:

http://www.nbii.gov/tools/metamaker/nsditools.html

When CNS/MP are run, an MSDOS window opens, the execution lines print as they are executed, and you are instructed to close the MSDOS window before proceeding. The following identifies the messages that print as CNS/MP and are run successfully. Truncated lines begin with "...". Additional lines that print while running CNS/MP generally indicate errors that occurred and include information about the cause of the problem.

Messages from CNS run:

```
cns -v -c ...
DOS/4GW Protected Mode Run-time  Version 1.95
Copyright (c) Rational Systems, Inc. 1990–1993
********** Please Close Window Before Proceeding **********
```

Messages from MP run to generate a text output:

```
mp -c ...
DOS/4GW Protected Mode Run-time  Version 1.95
Copyright (c) Rational Systems, Inc. 1990-1993
Warning: requested sgml ... not created
Warning: requested html file ... not created
********** Please Close Window Before Proceeding **********
```

Messages from MP run to generate a html output:

```
mp -c ...
DOS/4GW Protected Mode Run-time  Version 1.95
Copyright (c) Rational Systems, Inc. 1990-1993
Warning: requested text file ... not created
Warning: requested sgml file ... not created
********** Please Close Window Before Proceeding **********
```

Messages from MP run to generate a sgml output:

```
mp -c ...
DOS/4GW Protected Mode Run-time  Version 1.95
Copyright (c) Rational Systems, Inc. 1990-1993
Warning: requested text file ... not created
Warning: requested html file ... not created
********** Please Close Window Before Proceeding **********
```

Messages from MP run to generate a dif output:

```
mp -c ...
DOS/4GW Protected Mode Run-time  Version 1.95
Copyright (c) Rational Systems, Inc. 1990-1993
Warning: requested text file ... not created
Warning: requested sgml file ... not created
Warning: requested html file ... not created
********** Please Close Window Before Proceeding **********
```

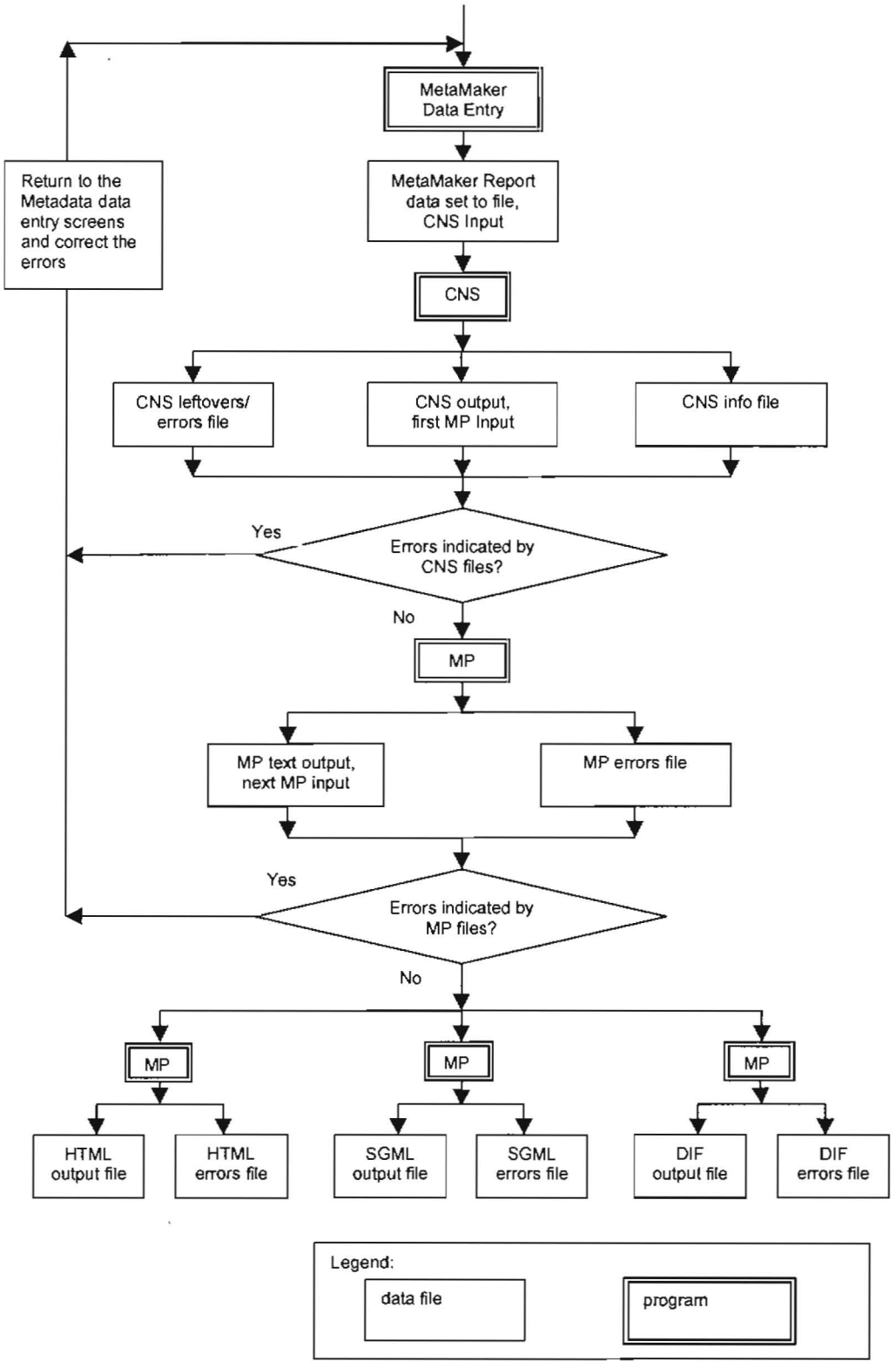

Figure 1. Flow of data from NBII MetaMaker 2.30 through CNS/MP.

Keyword PickList Menu

The Keywords PickList Menu writes or prints the data in the PickLists. This menu contains three buttons: To Preview, To Printer, and To File.

Click on To Preview to view the data on the screen or to send all or selected pages to the printer. See the "Preview" section above.

Click on To Printer to send the data directly to the printer.

Click on To File to send the information to a file. The Output To message box appears. Select the file format to be used and click OK. A second Output To message box appears containing the default filename "REPORT_K.<extension>", where the extension used depends on the format selected in the previous message box. Specify a disk drive, directory, and filename as desired. If the file already exists, an option is given to overwrite the existing file. If No is chosen, a new output filename may be specified. If no extension is included, NBII MetaMaker 2.30 adds an extension based on the format selected.

Template 8, 9, and 10 Menu

The Template 8, 9, and 10 Menu previews or prints all data stored in Citation (Section 8), Time Period (Section 9), and Contact (Section 10) records. This menu contains two buttons per section: To Preview and To Print.

Click on To Preview to view the data on the screen or to send all or selected pages to the printer. See the "Preview" section above.

Click on To Printer to send the data directly to the printer.

Distribution Disclaimer Menu

The Distribution Disclaimer Statements menu previews or prints the data for Field 6.3, Distribution Liability. This menu contains three buttons: To Preview, To Printer, and To File.

Click on To Preview to view the data on the screen or to send all or selected pages to the printer. See the "Preview" section above.

Click on To Printer to send the data directly to the printer.

Click on To File to send the information to a file. The Output To message box appears. Select the file format to be used and click OK. A second Output To message box appears containing the default filename "DISTRIBU.<extension>", where the extension used depends on the format selected in the previous message box. Specify a disk drive, directory, and filename as desired. If the file already exists, an option is given to overwrite the existing file. If No is chosen, a new output filename may be specified. If no extension is included, NBII MetaMaker 2.30 adds an extension based on the format selected.

Additional Information Menu

The Additional Information Menu writes or prints information related to the data set that was stored in the Additional Information About Data Set form. This menu contains three buttons: To Preview, To Printer, and To File.

Click on To Preview to view the data on the screen and to send all or selected pages to the printer. See "Preview" above.

Click on To Printer to send the data directly to the printer.

Click on To File to send the information to a file. The Output To message box appears. Select the file format to be used and click OK. A second Output To message box appears containing the default filename "USER_COM.<extension>", where the extension used depends on the format selected in the previous message box. Specify a disk drive, directory, and filename as desired. If the file exists, an option is given to overwrite the existing file. If No is chosen, a new output filename may be specified. If no extension is included, NBII MetaMaker 2.30 adds an extension based on the format selected.

Edit or New Template Menu

Several options may be accessed under this menu:

Edit or New Citation Section 8, Edit or New Time Period Section 9, and Edit or New Contact Section 10

It may be easier to create or edit a Section 8, 9, or 10 record directly rather than accessing it through one of the other sections. These submenus are provided for that purpose. Click the Edit or New ... button to open the desired section form. The Add New... button is used to create a new template. Replace the default name Name and Save Template with a name relative to the data to be entered. Examples: Section 8 - "Bosque del Apache NWR - Public Land Survey System - Citation", Section 9 - "Range 1981–1982, no time", Section 10 - "GIS and RS Project". To modify existing data, use the PickList in the header portion of the form, or the Navigation buttons in the bottom, left corner of the form to load the desired template record.

Caution:

1. If the record name is changed in this menu, any data sets that reference this record will NOT be automatically updated. These updates must be made manually to assure data sets do not reference template records that no longer exist.
2. When changing the field contents of a record in this menu, the changes affect all data sets associated with this record.

Edit, Add, or Import Keyword PickList Menu

The majority of PickLists used in Sections 1–10 can be modified in this menu. PickList values may be added, edited, or deleted using this menu. Input can come from an existing MetaMaker database, an ASCII text file, or the keyboard.

Import Keywords. The Import Keywords button is used to enter values from an existing MetaMaker database or an ASCII text file.

The Merge from MetaMaker option was created for users who entered additional PickList values in another MetaMaker database and wish to move those additional values into the present MetaMaker database. Select the Merge From MetaMaker button. In the Merge Keywords from MetaMaker box, specify the disk drive, directory, and filename of the MetaMaker database. It will end in a ".mdb" extension. Click OK.

The Import from Text File button is used when adding additional values to the PickLists from an ASCII text file. The format of the ASCII text file should be as follows:

Example 1:

Alabama
Alaska
Arizona
...
West Virginia
Wisconsin
Wyoming

Example 2:

Alabama, Alaska, Arizona, Arkansas, California
Colorado, Connecticut, Delaware, Florida, Georgia
...
Virginia, Washington, West Virginia, Wisconsin, Wyoming

Select the Import from Text File button. In the Import Keywords from Text File box, specify the disk drive, directory, and filename. Be sure the file specified is an ASCII text file in one of the formats listed above; NBII MetaMaker 2.30 will attempt to load any file specified, but the results may not be useful. Click OK.

The data loaded from the text file are the keywords or PickList values only. Assigning the values to a PickList or field, is a separate step that can be accomplished in two ways. The preferred method is to remain in the Keyword Import form. Click the All button to display all records stored in the Keywords table. PickList values or keywords that have been assigned to a PickList or field will have data in all 3 columns. These are called Assigned values. All values imported from a text file are initially Unassigned values. To convert a value from Unassigned to Assigned, select the appropriate field number in the NBII/FGDC Code column. The appropriate Word Theme or Field Name will automatically be inserted. Once a value has been Assigned, it will appear in the PickList for the Word Theme specified. If left Unassigned, the record remains in the Keywords table but will not appear in any PickList.

To delete a record while in the Keyword Import form, click in the gray area to the left of the NBII/FGDC Code column. The box containing a triangle will change to a darker shade of gray indicating the record has been selected. Press the delete key. A warning appears stating "You've just deleted 1 record(s). Choose OK to save your changes or Cancel to undo your changes." Click OK.

The second method of assigning values to a PickList or field is discussed under Edit and Add Keywords, Keyword PickList form.

Edit and Add Keywords. The Edit and Add Keywords button is used to add, edit, or delete PickList values. PickList values that were imported from an ASCII text file can be assigned to a PickList by editing the records in the Keyword PickList table.

Click the Edit and Add Keywords button to open the Keyword PickList form. Three columns of data are visible:

1. NBII/FGDC Code number
2. Keyword Theme
3. Keyword

The number in the NBII/FGDC Code number column sometimes references the December 1995 *Draft Content Standard for National Biological Information Infrastructure Metadata* and sometimes references the FGDC's June 8, 1994, *Content Standards for Digital Geospatial Metadata*. It does not use the combined numbering and naming scheme described in Appendix A that is used in the rest of the program. The Keyword column contains the values that actually appear in the PickLists. The Keyword Theme, or field name, always references the draft NBII Content Standard with the following exceptions:

FGDC Name in Keyword Theme	Name in draft NBII Content Standard
Currentness Reference	Time Period of Content Date Explanation
G-Ring Latitude	Latitude
G-Ring Longitude	Longitude
Geospatial Data Presentation Form	Data Presentation Form
Contact Electronic Mail Address	Internet Address

To add an item or value to a PickList:

Records in this form are in NBII/FGDC Code number/Keyword Theme/Keyword order. Look through the Keyword PickList form until you find the listing for the desired field. Keep in mind that the Keyword Theme (field name) for the five fields listed above will not match the field name as it appears on the data entry forms. When you find the desired Keyword Theme, write down the NBII/FGDC Code number and Keyword Theme. Even though these may not match the information that appears on the data entry forms, the listed information must be used to add a value to the PickList. Entering a new PickList item without using the information as shown in this table, will result in the addition not appearing in the appropriate PickList.

Select the Add New Keyword button. Click in the NBII/FGDC Code Number box and enter the code number. TAB into the Keyword Theme box and enter the appropriate text. TAB into the Keyword box and enter the desired new value. If additional entries are desired, TAB into the NBII/FGDC Code

Number box on the next line and enter the three fields as before. When all new entries are completed, select the Save Keyword button. The Saving Keyword Information message box appears. Click OK and select the Go Back To Menu button.

Do not add items to PickLists that will be used only a few times. It is better to use Windows Cut, Copy, and Paste commands to populate such fields.

To verify the additional entry or entries, reenter the Keyword PickList form; the new entries will now appears in sorted order. As stated above, entering a new PickList item without using the information as shown in this table, will result in the addition not appearing in the appropriate PickList. In addition, there are a few instances where the PickList is not created based on this table. In these instances you cannot modify the PickLists.

To delete an item or value from a PickList:

Scroll through the Keyword PickList form until the desired item is located. Click in the gray box to the far left of the screen (adjacent to the row to be deleted). The gray box will darken and a small arrow will appear. This indicates the row that will be deleted. Click the Delete Keyword button. A message box appears giving one the opportunity to OK or cancel the deletion of record(s). Click OK. Select the Go Back to ... buttons to return to the Main Menu.

Do not delete or modify keywords required by the FGDC or NBII Content Standards.

Edit or New Distribution Disclaimer Statements

This form is used to enter the data for Field 6.3, Distribution Liability, which is a statement of the liability assumed by the distributor. The Agency Names In Use list identifies the agencies that have a distribution record already stored in the database. The same list is available in the PickList, Select Disclaimer To Edit or View, to select an agency's statement for editing.

To enter an additional agency and its disclaimer, click the Add Disclaimer Statement button. A blank screen appears. Enter a new agency name and statement. Select the Save Disclaimer button. When the Save Disclaimer Statements message box appears, click OK. Select the Go Back To Menu button to return to the Edit or New Template Menu. If the Edit or New Distribution Disclaimer Statements button is clicked again, the new agency name will appear in the Agency Names in Use box and in the PickList.

When entering data in Field 6.3, select the appropriate Agency Name using the PickList and the corresponding liability statement will automatically be incorporated.

Edit or New Additional Information

Clicking the Edit or New Additional Information button opens the Additional Information About Metadata Data Set form. This form is used to store information related to a data set that is not required by the FGDC or draft NBII Content Standards. Information stored in this manner can be written using the Report Menu, Additional Information Menu.

The form can also be opened from three places:

1. Within section 1 by clicking the Additional Info About Data Set button,
2. by selecting the Menu Bar, Tools, Additional Info About Data Set, or
3. by selecting Edit or New Template Menu, Edit Additional Info About Database.

For entering information, option 1 is best as it associates the presently accessed data set to the Additional Information form. The other two options can be used, but one must be sure the correct data set is being referenced, as all data sets can be accessed using options 2 and 3.

When the form is opened from Section 1, it appears over the top of the Section 1 Form, at the top of the Section 1 form. If you are near the bottom of Section 1 when the Additional Info button is selected, it is not apparent that the Additional Information About Metadata Data Set form opened because it is off the top of the screen.

System Menu

Edit Station ID and Directories

Click the Edit Station ID and Directories button to open the MetaMaker System Information Form. This form allows you to change Station ID's and default paths.

MasterKeys, Stations ID's and Default Paths relate to exporting and importing data. Since it is recommended that Stations ID's and default paths be addressed when starting NBII MetaMaker 2.30 for the first time, these topics are discussed above under "Starting NBII MetaMaker 2.30".

Exit NBII MetaMaker

Select the Exit NBII MetaMaker button to close the program and return to Windows.

Trouble Shooting

CNS

Problem: Click on the button to run CNS and get the error message:
Error: could not open input file \metanbii\print\datanbii.txt
(if creating NBII output) or
Error: could not open input file \metanbii\print\datafgdc.txt
(if creating FGDC output)

Reason/Solution: The problem is the output file was not created on the "\metanbii\print" directory or the filename used was not datanbii.txt (NBII option) or datafgdc.txt (FGDC option). This directory name and these filenames are hard coded into NBII MetaMaker 2.30 and must be used for this portion of the program to work.

Problem: The CNS leftovers/errors file is empty.

Reason/Solution: The CNS leftovers/errors file is empty because CNS did not run. If CNS runs, the leftovers/errors file will ALWAYS contain 3–4 lines.

Line 1	Report Date: .....
Line 2	Metadata Data-set Name:
Lines 3/4	the name of the data set

Problem: The CNS information file contains the phrase "could not be placed".

Reason/Solution: When CNS encounters unacceptable data, it writes the phrase "could not be placed" in the information file. The unacceptable data are either left out of the output file and written to the leftovers/errors file or appended into another field. The first 3–4 lines of the information file will always say "could not be placed" as explained in Trouble Shooting "Problem: The CNS leftovers/errors file is empty". Any other "could not be placed" lines indicate problems that must be checked and possibly fixed.

Problem: A data value that is valid is being put into the CNS leftovers/errors file.

Reason/Solution: CNS has trouble interpreting how to process a data value that is the same as a field name or that begins with a phrase that is the same as a field name. There are two methods to fix the problem: a) modify the data value so it appears or starts on the same line as the field title or b) modify the data value itself if allowed by the Content Standard.

Example 1: Publication Date is a valid entry for Field 1.3.1 Currentness Reference, but Publication Date is also the name of Field 8.2.

If the CNS input file contains:
1.3.1 Currentness Reference:
Publication Date
"Publication Date" is moved to the CNS leftovers/errors file.

Solution a) Modify the CNS input file and change the above two lines to one line:
1.3.1 Currentness Reference: Publication Date

Solution b) Since the Content Standard indicates free text is allowed in Field 1.3.1, change the data value to
The publication date

Example 2: The CNS leftovers/errors file contains:
168: Description of the type of fence
and the CNS input file contains:
5.1.2.2 Attribute Definition:
Description of the type of fence
Note: Description is the name of Field 1.2.

Solution a) Modify the CNS input file by changing the above to one line:
5.1.2.2 Attribute Definition: Description of the type of fence

Solution b) Since the Content Standard indicates free text is allowed in Field 5.1.2.2, change the data value to
Is a description of the type of fence

Problem: You have reported a data set to a file and are attempting to run CNS. (In this instance, the NBII option is being used, but a similar message would appear for the FGDC option.) An error message appears that says:
Cannot find the file \metanbii\CNS_RUN.PIF
Ensure that the file exists on your system and that the path and filename are correct.

Reason and Solution: One instance in which this error message appears is when NBII MetaMaker 2.30 was installed to a location other than c:\metanbii, and the default location was not changed through System Menu. As stated in "Installation of NBII MetaMaker 2.30" and "Starting NBII MetaMaker 2.30" above, changing drives is allowable if the System Menu is updated. However, changing directories names causes all routines in the Preparser/Parser (CNS/MP) section of the program to fail.

If NBII MetaMaker 2.30 was installed to <some non-c drive>:\metanbii, and this error appears, use the System Menu to update the default drive, recreate the file using the new default name, <the non-c drive>:\metanbii\print\datanbii.txt (datafgdc.txt for the FGDC option), and the error should no longer appear.

Problem: The input MP file looks fine, but MP is identifying errors.

Reason and Solution: NBII MetaMaker 2.30 output does not include all compound field titles. This sometimes results in MP identifying errors, though the errors MP identifies as the problem have nothing to do with the real problem. When in doubt, check the Content Standard(s). If compound field titles are missing, edit them into the input file and see if it helps. At the present time, NBII MetaMaker 2.30 output has been modified to print all compound field titles that were creating trouble in previous versions of MetaMaker.

Problem: MP error file say something like:

Error (line ###): Source_Citation_Abbreviation is required in Source_Information

Reason and Solution: Source Citation Abbreviation is required in Lineage in the FGDC Content Standard, but optional in the NBII Content Standard. To conform to both standards, enter "None" in this field, rather than leaving it blank.

Problem: The MP error file includes a message similar to the following:

Error (line 64): Grid_Coordinate_System permits only one of Universal_Transverse_Mercator or Universal_Polar_Stereographic or State_Plane_Coordinate_System or ARC_Coordinate_System or Other_Grid_System's_Definition
Warning (line 65): Grid_Coordinate_System_Name does not have a value
Error (line 66): UTM_Zone_Number is required in Universal_Transverse_Mercator
Error (line 66): Transverse_Mercator is required in Universal_Transverse_Mercator

Reason and Solution: CNS/MP have trouble interpreting how to process a data value that is the same as a field name or that begin with a phrase that is the same as a field name.

In this instance, the NBII MetaMaker 2.30 output contained the lines

4.1.2.2 Grid Coordinate System
4.1.2.2.1 Grid Coordinate System Name:
Universal Transverse Mercator
4.1.2.2.2 Universal Transverse Mercator
4.1.2.2.2.1 UTM Zone Number:
12

CNS tried to interpret this, but incorrectly converted it to:

Grid_Coordinate_System:
Grid_Coordinate_System_Name:
Universal_Transverse_Mercator:
Universal_Transverse_Mercator:
UTM_Zone_Number: 12

which MP identifies as incorrect.

Solution a) Modify the NBII MetaMaker 2.30 output before running CNS, to put Universal Transverse Mercator (value) on the same line as 4.1.2.2.1 Grid Coordinate System Name: (field name), i.e., change it to:

```
4.1.2.2 Grid Coordinate System
 4.1.2.2.1 Grid Coordinate System Name: Universal Transverse Mercator
 4.1.2.2.2 Universal Transverse Mercator
  4.1.2.2.2.1 UTM Zone Number:
    12
```

Solution b) Modify the file output by CNS used as input to MP. Make three changes: a) put Grid_Coordinate_System_Name: Universal_Transverse_Mercator: on one line
b) in the combined line, take the ":" off of "Mercator"
c: in the combined line, change the "_" to " " in "Universal_Transverse_Mercator"
i.e., change it to:

```
Grid_Coordinate_System:
 Grid_Coordinate_System_Name: Universal Transverse Mercator
 Universal_Transverse_Mercator:
  UTM_Zone_Number: 12
```

Miscellaneous Problems

Problem: A Section 8, 9, or 10 name expected to appear in a PickList does not appear.

Reason and Solution: This may happen right after a new Section 8, 9, or 10 record is created, after entering the 8/9/10 from one of the other sections while in editing mode. Moving to a different Section and returning to the current Section will generally solve the problem.

Problem: Data that was previously entered no longer appear in the data entry form, but continues to appear in a printout, OR
The data appears to have a number of blank fields.

Reason and Solution: An example of this is when you enter five Place Keywords in Field 1.6.2.2. When looking at the Place Keyword field, it appears that all lines are blank or some of the data values have disappeared. In these instances, check those Navigation buttons associated with the present field that ordinarily are NOT the Navigation buttons at the bottom of the screen that always remain visible. The Navigation buttons associated with the field will generally say something like "Record 1 of 13". The five place keywords are still stored, but may be in records nine through 13. Use the field Navigation buttons to move though all records when looking for data that has disappeared.

Problem: You have reported a data set to a file and selected the button to View the file. (In this instance, the NBII option is being used, but a similar message would appear for the FGDC option.) The following error message appears:

C:\metanbii\print\Datanbii.txt
Cannot find this file.
Please verify that the correct path and filename are given.

Reason and Solution: One instance in which this error message appears is when NBII MetaMaker 2.30 was installed to a location other than c:\metanbii, and the default location was not changed through System Menu. As stated in "Installation of NBII MetaMaker 2.30" and "Starting NBII MetaMaker 2.30" above, changing drives is allowable if the System Menu is updated. However, changing directories names causes all routines in the Preparser/Parser (CNS/MP) section of the program to fail.

If NBII MetaMaker 2.30 was installed to <some non-c drive>:\metanbii, and this error appears, use the System Menu to update the default drive, recreate the file using the new default name, <the non-c drive>:\metanbii\print\datanbii.txt (datafgdc.txt for the FGDC option), and the error should no longer appear.

Problem: You are viewing or using the Section 1 editing form and select the button to open Section 2, and an error message appears saying something like:

Macro Name
2DataQualityInfo.HideAllOnOpen2
Condition True
Action Name
Set Value
Arguments
[Forms]![2
DATAQUALITYINFORMATION]![2DataQa_251Methodology_RPF].[Form]![2DataQa251MethKw].[Form].[Visible]
No
Object referred to in the expression no longer exists.

Reason and Solution: When this error occurs, one has no choice but to exit NBII MetaMaker 2.30 and reenter the program. Generally no data has been lost. Errors of this nature usually occurs only when moving directory from Section 1 to Section 2. To avoid this problem, instead of going directly from Section I to Section 2, go from Section 1 back to the Edit Menu, and then enter Section 2.

Problem: You are "stuck" in an error message and cannot proceed. This usually happens when one of the following error message appears.

Index or primary key can't contain a null value.
Can't add or change record. Referential integrity rules require a related record in table '1_2_3_4_5_6_7_section'.
Duplicate value in index, primary key, or relationship. Changes were unsuccessful.

Reason and Solution: Press the ESC key until the error message disappears. Some data may be lost in the data set being modified. If the error message continues to appear, exit NBII MetaMaker 2.30, and restart the program.

Problem: Data that has been entered does not appear in the output.

Reason and Solution: This generally is related to entering a Section 8, 9, or 10 record, or Field 6.3 Distribution Liability and occurs because the value entered in the field does not exactly match the name of the Section 8, 9, 10, or 6.3 record. Select the appropriate record using the PickList rather than typing in the name.

Problem: When somewhere in Section 1–7, data that has been entered in a Section 8, 9, 10, or Field 6.3 Distribution Liability does not appear when using the Open ... button.

Reason and Solution: The value entered in the field does not exactly match the name of the Section 8, 9, 10, or 6.3 record. Select the appropriate record using the PickList rather than typing in the name. A sure sign this is happening for Section 8, 9, or 10 is getting the Name and Save Template reminder after using the Open ... button.

Problem: You have used the Report Menu to print a data set to a file. You then click on the View data-set button, and get the error message:

c:\metanbii\print\datanbii.txt (if creating NBII output) OR
c:\metanbii\print\datafgdc.txt (if creating FGDC output)
Cannot find this file
Please verify that the correct path and filename are given.

Reason and Solution: Click OK and Close WordPad. The problem is that the output file was not created on the "c:\metanbii\print" directory or the filename used was not datanbii.txt/datafgdc.txt. This directory name and these filenames are hard coded into NBII MetaMaker 2.30 and must be used for this portion of the program to work

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Problem: We are trying to install MetaMaker 2.30 on a computer running Windows 95. Part way through the installation process, we get the following message. (Unable to start DDE communication with Program Manager Abort, Retry, Ignore)

Reason and Solution: The COMPOBJ.DLL on c:\windows\system must be updated. The COMPOBJ.DLL was copied from a computer previously installed with MetaMaker 2.30 to the computer having the problem. The installation process ran successfully.

The version that comes with MetaMaker 2.30 is: COMPOBJ DLL 109,056 12-23-98 10:45a

The version on the computer with the problem was: COMPOBJ DLL 30,976 07-11-95 9:50a

A newer version placed on the computer was: COMPOBJ DLL 31,120 08-24-96 11:11a

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Section 4 Data Entry Screens

Problem: You clicked in the white box for the 4.1.2.2.1 Grid Coordinate System Name field but the additional data entry form does not open.

Reason and Solution: Previous versions of MetaMaker allowed the user to enter "Universal Transverse Mercator(UTM)" or "Universal Polar Stereographic(UPS)" in Field 4.1.2.2.1 Grid Coordinate System Name. The Content Standards specify these values should be entered without the acronyms, namely as "Universal Transverse Mercator" or "Universal Polar Stereographic". The coding in NBII MetaMaker 2.30 has been altered to expect the correct values. To get the data entry form to appear, enter the correct value, without the acronym, and click in the white box. If the incorrect value was entered in a previous version of MetaMaker, the data are still present and will appear on output, but you cannot access the data to make changes or corrections until the acronym is removed from Field 4.1.2.2.1.

MetaMaker Support

The USGS NBII plans to continue supporting NBII MetaMaker with program upgrades and a help desk. If you are having operational or navigational problems:

1. Read the readme.txt file that is supplied with NBII MetaMaker 2.30.
2. Read the User's Manual.
3. If the above two items do not answer your questions, go to Frequently Asked Questions - NBII MetaMaker at:
   http://www.emtc.er.usgs.gov/http_data/emtc_spatial/applications/meta_faq.html
4. If none of the above have answered your questions, call or E-mail the NBII MetaMaker help desk:
   Help desk: David Hansen
   Phone: (608) 783-7550 ext. 704
   Fax: (608) 783-8058
   Hours: 8:00 A.M. to 3:00 p.m. cst
   E-mail: david_e_hansen@usgs.gov

To report a bug in NBII MetaMaker 2.30, contact David Hansen at the Help Desk.

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Appendix A. Field Numbering and Naming Scheme used in NBII MetaMaker 2.30

The field numbering and naming scheme utilized in NBII MetaMaker 2.30 data entry forms, output options, and help routines are a combination of the June 8, 1994, *Content Standards for Digital Geospatial Metadata* and the December 1995 *Draft Content Standard for National Biological Information Infrastructure Metadata.* The FGDC columns indicate the field numbers and names used in the FGDC Content Standard. The NBII columns indicate the field numbers and names used in the NBII Content Standard where they do not exactly match the FGDC Content Standard or are additions to the FGDC Content Standard. A "-" is used in the NBII columns as a placeholder when only one of the two columns differs from the FGDC Content Standard. The Profile columns indicate the modified numbering and naming scheme used in NBII MetaMaker 2.30 data entry forms, output options, and help that reconciles the two schemes, using the following rules.

1. If the field exists in the FGDC's June 8, 1994, *Content Standards for Digital Geospatial Metadata*, the FGDC field number and name are used.
2. If the field exists only in the December 1995 *Draft Content Standard for National Biological Information Infrastructure Metadata*, "99." is added to the beginning of the field number.

Sections 3-7 and 9 have no conflicts between the FGDC and NBII Content Standards, and are therefore not included in the table below.

The field numbers and names used in the Keyword PickList Menu have not been modified to use this numbering scheme, but are a mixture of FGDC and NBII field numbers and names.

FGDC Number	FGDC Title	NBII Number	NBII Title	Profile Number	Profile Title
1	Identification Information				
1.1	Citation				
1.2	Description				
1.2.1	Abstract				
1.2.2	Purpose				
1.2.3	Supplemental Information				
1.3	Time Period of Content				
1.3.1	Currentness Reference	-	Time Period of Content Date Explanation	1.3.1	Currentness Reference
1.4	Status				
1.4.1	Progress				
1.4.2	Maintenance and Update Frequency				

FGDC Number	FGDC Title	NBII Number	NBII Title	Profile Number	Profile Title
1.5	Spatial Domain	-	Geographic Extent	1.5	Spatial Domain
		1.5.1	Description of Geographic Extent	99.1.5.1	Description of Geographic Extent
1.5.1	Bounding Coordinates	1.5.2	Bounding Rectangle Coordinates	1.5.1	Bounding Coordinates
1.5.1.1	West Bounding Coordinate	1.5.2.1	-	1.5.1.1	West Bounding Coordinate
1.5.1.2	East Bounding Coordinate	1.5.2.2	-	1.5.1.2	East Bounding Coordinate
1.5.1.3	North Bounding Coordinate	1.5.2.3	-	1.5.1.3	North Bounding Coordinate
1.5.1.4	South Bounding Coordinate	1.5.2.4	-	1.5.1.4	South Bounding Coordinate
1.5.2	Data Set G-Polygon	1.5.3	Detailed Boundary	1.5.2	Data Set G-Polygon
1.5.2.1	Data Set G-Polygon Outer G-Ring	1.5.3.1	Outer Boundary	1.5.2.1	Data Set G-Polygon Outer G-Ring
1.5.2.1.1	G-Ring Latitude	1.5.3.1.1	Latitude	1.5.2.1.1	G-Ring Latitude
1.5.2.1.2	G-Ring Longitude	1.5.3.1.2	Longitude	1.5.2.1.2	G-Ring Longitude
					1.5.2.2 Data Set G-Polygon Exclusion
					G-Ring 1.5.3.2 Interior Exclusion
					Area Boundary 1.5.2.2Data Set
					G-Polygon Exclusion G-Ring
1.5.2.1.1	G-Ring Latitude	1.5.3.1.1	Latitude	1.5.2.1.1	G-Ring Latitude
1.5.2.1.2	G-Ring Longitude	1.5.3.1.2	Longitude	1.5.2.1.2	G-Ring Longitude
1.6	Keywords				
1.6.1	Theme				
1.6.1.1	Theme Keyword Thesaurus				
1.6.1.2	Theme Keyword				
1.6.2	Place				
1.6.2.1	Place Keyword Thesaurus				
1.6.2.2	Place Keyword				
1.6.3	Stratum				
1.6.3.1	Stratum Keyword Thesaurus				
1.6.3.2	Stratum Keyword				
1.6.4	Temporal				
1.6.4.1	Temporal Keyword Thesaurus				
1.6.4.2	Temporal Keyword				
		1.7	Taxonomy	99.1.7	Taxonomy
		1.7.1	Taxonomic Keywords	99.1.7.1	Taxonomic Keywords
		1.7.2	Taxonomic Coverage	99.1.7.2	Taxonomic Coverage
		1.7.2.1	Specific Taxonomic Information	99.1.7.2.1	Specific Taxonomic Information
		1.7.2.1.1	Kingdom	99.1.7.2.1.1	Kingdom
		1.7.2.1.2	Division-Phylum	99.1.7.2.1.2	Division-Phylum

FGDC Number	FGDC Title	NBII Number	NBII Title	Profile Number	Profile Title
		1.7.2.1.3	Class	99.1.7.2.1.3	Class
		1.7.2.1.4	Order	99.1.7.2.1.4	Order
		1.7.2.1.5	Family	99.1.7.2.1.5	Family
		1.7.2.1.6	Genus	99.1.7.2.1.6	Genus
		1.7.2.1.7	Species	99.1.7.2.1.7	Species
		1.7.2.1.8	Applicable Common Names	99.1.7.2.1.8	Applicable Common Names
		1.7.2.2	General Taxonomic Coverage	99.1.7.2.2	General Taxonomic Coverage
1.7	Access Constraints	1.8	-	1.7	Access Constraints
1.8	Use Constraints	1.9	-	1.8	Use Constraints
1.9	Point of Contact	1.10	-	1.9	Point of Contact
1.10	Browse Graphic	1.11	-	1.10	Browse Graphic
1.10.1	Browse Graphic Filename	1.11.1	-	1.10.1	Browse Graphic Filename
1.10.2	Browse Graphic File Description	1.11.2	-	1.10.2	Browse Graphic File Description
1.10.3	Browse Graphic File Type	1.11.3	-	1.10.3	Browse Graphic File Type
1.11	Data Set Credit	1.12	-	1.11	Data Set Credit
1.12	Security Information	1.13	-	1.12	Security Information
1.12.1	Security Classification System	1.13.1	-	1.12.1	Security Classification System
1.12.2	Security Classification	1.13.2	-	1.12.2	Security Classification
1.12.3	Security Handling Description	1.13.3	-	1.12.3	Security Handling Description
1.13	Native Data Set Environment	1.14	-	1.13	Native Data Set Environment
1.14	Cross Reference	1.15	-	1.14	Cross Reference
		1.16	Analytical Tool	99.1.16	Analytical Tool
		1.16.1	Analytical Tool Description	99.1.16.1	Analytical Tool Description
		1.16.2	Tool Access Information	99.1.16.2	Tool Access Information
		1.16.2.1	Tool Network Resource Name	99.1.16.2.1	Tool Network Resource Name
		1.16.2.2	Tool Access Instructions	99.1.16.2.2	Tool Aecess Instructions
		1.16.2.3	Tool Computer and Operating System	99.1.16.2.3	Tool Computer and Operating System
		1.16.3	Tool Contact	99.1.16.3	Tool Contact
		1.16.4	Tool Citation	99.1.16.4	Tool Citation
2	Data Quality Information				
2.1	Attribute Accuracy				
2.1.1	Attribute Accuracy Report				
2.1.2	Quantitative Attribute Accuracy Assessment				
2.1.2.1	Attribute Accuracy Value				
2.1.2.2	Attribute Accuracy Explanation				
2.2	Logical Consistency Report				

FGDC Number	FGDC Title	NBII Number	NBII Title	Profile Number	Profile Title
2.3	Completeness Report				
2.4	Positional Accuracy				
2.4.1	Horizontal Positional Accuracy				
2.4.1.1	Horizontal Positional Accuracy Report				
2.4.1.2	Quantitative Horizontal Positional Accuracy Assessment				
2.4.1.2.1	Horizontal Positional Accuracy Value				
2.4.1.2.2	Horizontal Positional Accuracy Explanation				
2.4.2	Vertical Positional Accuracy				
2.4.2.1	Vertical Positional Accuracy Report				
2.4.2.2	Quantitative Vertical Positional Accuracy Assessment				
2.4.2.2.1	Vertical Positional Accuracy Value				
2.4.2.2.2	Vertical Positional Accuracy Explanation				
2.5	Lineage				
		2.5.1	Methodology	99.2.5.1	Methodology
		2.5.1.1	Methodology Type	99.2.5.1.1	Methodology Type
		2.5.1.2	Methodology Identifier	99.2.5.1.2	Methodology Identifier
		2.5.1.2.1	Methodology Keyword Thesaurus	99.2.5.1.2.1	Methodology Keyword Thesaurus
		2.5.1.2.2	Methodology Keyword	99.2.5.1.2.2	Methodology Keyword
		2.5.1.3	Methodology Description	99.2.5.1.3	Methodology Description
		2.5.1.4	Methodology Citation	99.2.5.1.4	Methodology Citation
2.5.1	Source Information	2.5.2	-	2.5.1	Source Information
2.5.1.1	Source Citation	2.5.2.1	-	2.5.1.1	Source Citation
2.5.1.2	Source Scale Denominator	2.5.2.2	-	2.5.1.2	Source Scale Denominator
2.5.1.3	Type of Source Media	2.5.2.3	-	2.5.1.3	Type of Source Media
2.5.1.4	Source Time Period of Content	2.5.2.4	-	2.5.1.4	Source Time Period of Content
2.5.1.4.1	Source Currentness Reference	2.5.2.4.1	-	2.5.1.4.1	Source Currentness Referenee
2.5.1.5	Source Citation Abbreviation	2.5.2.5	-	2.5.1.5	Source Citation Abbreviation
2.5.1.6	Source Contribution	2.5.2.6	-	2.5.1.6	Source Contribution
2.5.2	Process Step	2.5.3	-	2.5.2	Process Step
2.5.2.1	Process Description	2.5.3.1	-	2.5.2.1	Process Description
2.5.2.2	Source Used Citation Abbreviation	2.5.3.2	-	2.5.2.2	Source Used Citation Abbreviation
2.5.2.3	Process Date	2.5.3.3	-	2.5.2.3	Process Date
2.5.2.4	Process Time	2.5.3.4	-	2.5.2.4	Process Time
2.5.2.5	Source Produced Citation Abbreviation	2.5.3.5	-	2.5.2.5	Source Produced Citation Abbreviation
2.5.2.6	Process Contact	2.5.3.6	-	2.5.2.6	Process Contact
2.6	Cloud Cover				

FGDC Number	FGDC Title	NBII Number	NBII Title	Profile Number	Profile Title
		2.7	Taxonomic System	99.2.7	Taxonomic System
		2.7.1	Classification System or Authority	99.2.7.1	Classification System or Authority
		2.7.1.1	Classification System Citation	99.2.7.1.1	Classification System Citation
		2.7.1.2	Classification System Modifications	99.2.7.1.2	Classification System Modifications
		2.7.2	Identification Reference	99.2.7.2	Identification Reference
		2.7.3	Identifier	99.2.7.3	Identifier
		2.7.4	Taxonomic Procedures	99.2.7.4	Taxonomic Procedures
		2.7.5	Taxonomic Completeness	99.2.7.5	Taxonomic Completeness
		2.7.6	Vouchers	99.2.7.6	Vouchers
		2.7.6.1	Specimen	99.2.7.6.1	Specimen
		2.7.6.2	Repository	99.2.7.6.2	Repository
8	Citation Information				
8.1	Originator				
8.2	Publication Date				
8.3	Publication Time				
8.4	Title				
8.5	Edition				
8.6	Geospatial Data Presentation Form	-	Data Presentation Form	8.6	Geospatial Data Presentation Form
8.7	Series Information				
8.7.1	Series Name				
8.7.2	Issue Identification				
8.8	Publication Information				
8.8.1	Publication Place				
8.8.2	Publisher				
8.9	Other Citation Details				
8.10	Online Linkage				
8.11	Larger Work Citation				
10	Contact Information				
10.1	Contact Person Primary				
10.1.1	Contact Person				
10.1.2	Contact Organization				
10.2	Contact Organization Primary				
10.1.2	Contact Organization				
10.1.1	Contact Person				
10.3	Contact Position				
10.4	Contact Address				

FGDC Number	FGDC Title	NBII Number	NBII Title	Profile Number	Profile Title
10.4.1	Address Type				
10.4.2	Address				
10.4.3	City				
10.4.4	State or Province				
10.4.5	Postal Code				
10.4.6	Country				
10.5	Contact Voice Telephone				
10.6	Contact TDD/TTY Telephone				
10.7	Contact Facsimile Telephone				
10.8	Contact Electronic Mail Address	-	Internet Address	10.8	Contact Electronic Mail Address
10.9	Hours of Service				
10.10	Contact Instructions				

Appendix B. Report Menu, Data-set Output Examples

Sample Report Output

The following sample NBII output was generated using the NBII MetaMaker 2.30 Report Menu, Metadata Data-set Output Menu, NBII File Output Menu. If the output had been produced using the FGDC File Output Menu, no fields whose field numbers begin with "99." would appear. This sample contains only one such field, Field 99.1.5.1 Description of Geographic Extent, and it has been highlighted.

Report Date: 04-Dec-1998
Metadata Data Set Name:
Kansas Conservation Reserve Program (CRP) - Tracts
1 Identification Information
1.1 Citation:
8 Citation Information:
8.1 Originator:
USGS Midcontinent Ecological Science Center (MESC)
8.2 Publication Date:
19970109
8.4 Title:
Kansas Conservation Reserve Program (CRP) - Tracts
8.6 Geospatial Data Presentation Form:
Map
1.2 Description
1.2.1 Abstract:
This data set consists of Conservation Reserve Program (CRP) land tracts or parcels in portions of Atchison, Brown, Jackson, and Nemaha counties that fall within the Delaware River Basin, Kansas. The CRP tracts were manually transferred from black-and-white (B&W) photocopies of aerial photographs and digitized from mylar overlays to USGS 1:24,000-scale topographic quadrangles. A lookup table (LUT) was created that contains numerous fields of information on each CRP tract, such as contract number, farm number, field number, county, tract number, issue dates, and crop history. [Polygonal Data]
1.2.2 Purpose:
To identify and map the CRP tracts that occur within the Delaware River Basin, KS. This data set is being used with soils data developed by the U.S. Department of Agriculture (USDA), a GRASS interface, and a sediment yield model to simulate reductions in sediment yields from lands converted from crops to CRP parcels on a river basin scale

over a 10-year period.
1.3 Time Period Of Content
9.3 Range of Dates/Times
9.3.1 Beginning Date:
1984
9.3.3 Ending Date:
1985
1.3.1 Currentness Reference:
Publication Date
1.4 Status
1.4.1 Progress:
Complete
1.4.2 Maintenance and Update Frequency:
None Planned
1.5 Spatial Domain
99.1.5.1 Description of Geographic Extent:
Portions of Atchison, Brown, Jackson and Nemaha Counties within the Delaware River Basin, Kansas
1.5.1 Bounding Coordinates
1.5.1.1 West Bounding Coordinate:
-95.98936249
1.5.1.2 East Bounding Coordinate:
-95.27145048
1.5.1.3 North Bounding Coordinate:
40.012278
1.5.1.4 South Bounding Coordinate:
39.32525909
1.6 Keywords
1.6.1 Theme
1.6.1.1 Theme Keyword Thesaurus:
None
1.6.1.2 Theme Keyword:
Conservation Reserve Program
1.6.1.2 Theme Keyword:
CRP
1.6.1.2 Theme Keyword:
CRP Parcels
1.6.1.2 Theme Keyword:
CRP Tracts
1.6.2 Place
1.6.2.1 Place Keyword Thesaurus:
None
1.6.2.2 Place Keyword:
Atchison County
1.6.2.2 Place Keyword:
Brown County
1.6.2.2 Place Keyword:
Jackson County
1.6.2.2 Place Keyword:

Nemaha County
1.6.2.2 Place Keyword:
Delaware River Basin
1.6.2.2 Place Keyword:
Kansas
1.6.2.2 Place Keyword:
KS
1.6.2.2 Place Keyword:
USA
1.6.4 Temporal
1.6.4.1 Temporal Keyword Thesaurus:
None
1.6.4.2 Temporal Keyword:
1984
1.6.4.2 Temporal Keyword:
1985
1.7 Access Constraints:
None
1.8 Use Constraints:
None
1.9 Point of Contact
10.1 Contact Person Primary
10.1.1 Contact Person:
Jim Terrell
10.1.2 Contact Organization:
USGS Midcontinent Ecological Science Center (MESC)
10.4 Contact Address
10.4.1 Address Type:
Mailing and Physical Address
10.4.2 Address:
U.S. Geological Survey
10.4.2 Address:
Biological Resources Division
10.4.2 Address:
Midcontinent Ecological Science Center
10.4.2 Address:
4512 McMurry Avenue
10.4.3 City:
Fort Collins
10.4.4 State or Province:
Colorado
10.4.5 Postal Code:
80525-3400
10.4.6 Country:
USA
10.5 Contact Voice Telephone:
(970) 226-9100
10.6 Contact TDD/TTY Telephone:
Unavailable

10.7 Contact Facsimile Telephone:
(970)226-9230
10.9 Hours of Service:
8:00 a.m. to 1:00 p.m., Monday through Friday
1.11 Data Set Credit:
USDA, Kansas Biological Survey, and Kansas Department of Wildlife and Parks
1.13 Native Data Set Environment:
ARC/INFO Version 7.1.1 double precision, UNIX Solaris operating system
2 Data Quality Information
2.1 Attribute Accuracy
2.1.1 Attribute Accuracy Report:
The attribute accuracy is tested by manually comparing hard copy plots of the digital data with the source materials. When attributes cannot be visually verified on plots they are interactively queried and verified on screen. In addition, the attributes are compared against a master set of valid attributes.
2.2 Logical Consistency Report:
ARC/INFO software is used to create and maintain topological relationships between features. There are no duplicate features, but coincident lines are maintained between data layers where appropriate. Polygonal features begin and end at the same point, contain no overshoots or undershoots, and contain a single label. Linear features are continuous where appropriate, i.e., dangling arcs are removed if they are not required.
2.3 Completeness Report:
The majority of CRP tracts in designated townships in Atchison, Brown, Jackson, and Nemaha counties within the Delaware River Basin, Kansas.
2.4 Positional Accuracy
2.4.1 Horizontal Positional Accuracy
2.4.1.1 Horizontal Positional Accuracy Report:
The horizontal positional accuracy is tested by visual comparison of hard copy check plots to the source materials and verifying the location of the data on-screen relative to other data layers in the same geographic area.
2.4.2.1 Vertical Positional Accuracy Report:
Not applicable
2.5.1 Source Information
2.5.1.1 Source Citation:
8.1 Originator:
USDA, Farm Services Agency (FSA): Atchison,

Brown, Jackson, and Nemaha Counties

8.2 Publication Date:
1984 - 1985

8.4 Title:
CRP Tract Maps and ASCS-578 Report of Acreage Forms

8.6 Geospatial Data Presentation Form:
Map

8.8.1 Publication Place:
Atchison, Brown, Jackson, and Nemaha Counties

8.8.2 Publisher:
FSA County Offices

8.9 Other Citation Details:
The USDA Agriculture Stabilization and Conservation Service (ASCS) was reorganized and renamed the USDA Farm Services Agency (FSA).

2.5.1.3 Type Of Source Media:
Paper

2.5.1.4 Source Time Period Of Content:

9.3 Range of Dates/Times

9.3.1 Beginning Date:
1984

9.3.3 Ending Date:
1985

2.5.1.4.1 Source Currentness Reference:
Publication Date

2.5.1.5 Source Citation Abbreviation:
None

2.5.1.6 Source Contribution:
Spatial and attribute information

2.5.2 Process Step

2.5.2.1 Process Description:
Data were manually transferred and drafted from B&W photocopies of aerial photographs to mylar overlays that were punch-registered to 7.5-minute USGS quadrangles. The mylar overlays were manually digitized on an Altek Datatab digitizer to capture the data at a resolution of at least 0.001 inches. Four control points corresponding to the four corners of the quadrangle were used for registration during data capture. Tracts that continued onto adjacent quadrangles were adjusted to intersect the boundary at a common, coincident node. Attributes were assigned after the digitizing was completed, and all map files were joined into a single map file. Neat lines were removed and attributes and arcs along map edges were verified. An ARC/INFO LUT was created that contains information on each CRP tract, such as

contract number, farm number, field number, practice number, county, tract number, issue dates, and crop history. This information was provided on Form ASCS-578 (10-02-86) for each CRP tract. When a crop history was not reported, not available, or unknown, a simulated crop history was entered based on the most common crop history for each county in the appropriate year.

2.5.2.3 Process Date:
19970109

3 Spatial Data Organization Information

3.1 Indirect Spatial Reference:
Not Applicable

3.2 Direct Spatial Reference Method:
Vector

4 Spatial Reference Information

4.1 Horizontal Coordinate System Definition

4.1.2 Planar

4.1.2.2 Grid Coordinate System

4.1.2.2.1 Grid Coordinate System Name:
Universal Transverse Mercator

4.1.2.2.2 Universal Transverse Mercator

4.1.2.2.2.1 UTM Zone Number:
15

4.1.2.1.2.2 Longitude Of Central Meridian:
-93

4.1.2.1.2.3 Latitude Of Projection Origin:
0

4.1.2.1.2.4 False Easting:
500000

4.1.2.1.2.5 False Northing:
0

4.1.2.1.2.17 Scale Factor at Central Meridian:
.9996

4.1.2.4 Planar Coordinate Information

4.1.2.4.1 Planar Coordinate Encoding Method:
Coordinate Pair

4.1.2.4.2 Coordinate Representation

4.1.2.4.2.1 Abscissa Resolution:
.61

4.1.2.4.2.2 Ordinate Resolution:
.61

4.1.2.4.4 Planar Distance Units:
Meters

4.1.4 Geodetic Model

4.1.4.1 Horizontal Datum Name:
North American Datum of 1927

4.1.4.2 Ellipsoid Name:
Clarke 1866

4.1.4.3 Semi-Major Axis:
6378206.4
4.1.4.4 Denominator of Flattening Ratio:
294.98
5 Entity and Attribute Information
5.1 Detailed Description
5.1.1 Entity Type
5.1.1.1 Entity Type Label:
CRP_Tracts
5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:
FSA County Office
5.1.2 Attribute
5.1.2.1 Attribute Label:
CODE
5.1.2.2 Attribute Definition:
Unique number for each polygon, used to relate the ARC/INFO LUT to the final map coverage.
5.1.2.3 Attribute Definition Source:
User defined
5.1.2.4 Attribute Domain Values
5.1.2.4.4 Unrepresentable Domain:
Unique polygon number.
5.1.1 Entity Type
5.1.1.1 Entity Type Label:
CRP_Tracts
5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:
FSA County Office
5.1.2 Attribute
5.1.2.1 Attribute Label:
CONTRACT
5.1.2.2 Attribute Definition:
Unique number assigned to the CRP contract and identified on the CRP-1 or ASCS-578 form.
5.1.2.3 Attribute Definition Source:
FSA County Office
5.1.2.4 Attribute Domain Values
5.1.2.4.3 Codeset Domain
5.1.2.4.3.1 Codeset Name:
Unique CRP Contract Number
5.1.2.4.3.2 Codeset Source:
FSA County Office
5.1.1 Entity Type
5.1.1.1 Entity Type Label:

CRP_Tracts

5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.

5.1.1.3 Entity Type Definition Source:
FSA County Office

5.1.2 Attribute

5.1.2.1 Attribute Label:
FARM

5.1.2.2 Attribute Definition:
Unique number assigned to the farm and identified on the CRP contract CRP-1 or ASCS-578 form.

5.1.2.3 Attribute Definition Source:
FSA County Office

5.1.2.4 Attribute Domain Values

5.1.2.4.3 Codeset Domain

5.1.2.4.3.1 Codeset Name:
Unique farm number

5.1.2.4.3.2 Codeset Source:
FSA County Office

5.1.1 Entity Type

5.1.1.1 Entity Type Label:
CRP_Tracts

5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.

5.1.1.3 Entity Type Definition Source:
FSA County Office

5.1.2 Attribute

5.1.2.1 Attribute Label:
FIELD

5.1.2.2 Attribute Definition:
Unique number assigned to each field identified on the CRP contract CRP-1 or ASCS-578 form.

5.1.2.3 Attribute Definition Source:
FSA County Office

5.1.2.4 Attribute Domain Values

5.1.2.4.3 Codeset Domain

5.1.2.4.3.1 Codeset Name:
Unique field numbers in the CRP tract

5.1.2.4.3.2 Codeset Source:
FSA County Office

5.1.1 Entity Type

5.1.1.1 Entity Type Label:
CRP_Tracts

5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.

5.1.1.3 Entity Type Definition Source:

FSA County Office

5.1.2 Attribute

5.1.2.1 Attribute Label:
COUNTY

5.1.2.2 Attribute Definition:
Name of the county in which the CRP tract is located.

5.1.2.3 Attribute Definition Source:
USGS 7.5-minute quadrangle

5.1.2.4 Attribute Domain Values

5.1.2.4.4 Unrepresentable Domain:
Name of USA County identified on USGS quadrangle

5.1.1 Entity Type

5.1.1.1 Entity Type Label:
CRP_Tracts

5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.

5.1.1.3 Entity Type Definition Source:
FSA County Office

5.1.2 Attribute

5.1.2.1 Attribute Label:
TRACT_NUM

5.1.2.2 Attribute Definition:
Unique number assigned to each CRP tract and identified on the CRP contract CP-1 or ASCS-578 form.

5.1.2.3 Attribute Definition Source:
FSA County Office

5.1.2.4 Attribute Domain Values

5.1.2.4.3 Codeset Domain

5.1.2.4.3.1 Codeset Name:
Unique CRP tract number

5.1.2.4.3.2 Codeset Source:
ASCS County Office

5.1.1 Entity Type

5.1.1.1 Entity Type Label:
CRP_Tracts

5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.

5.1.1.3 Entity Type Definition Source:
FSA County Office

5.1.2 Attribute

5.1.2.1 Attribute Label:
PRACTICE_NUM

5.1.2.2 Attribute Definition:
Alphanumeric code that identifies the type of grass grown on the CRP tract.

5.1.2.3 Attribute Definition Source:
FSA County Office
5.1.2.4 Attribute Domain Values
5.1.2.4.1 Enumerated Domain
5.1.2.4.1.1 Enumerated Domain Value:
CP1
5.1.2.4.1.2 Enumerated Domain Value Definition:
Introduced grass
5.1.2.4.1.3 Enumerated Domain Value Definition Source:
FSA County Office
5.1.1 Entity Type
5.1.1.1 Entity Type Label:
CRP_Tracts
5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:
FSA County Office
5.1.2 Attribute
5.1.2.1 Attribute Label:
PRACTICE_NUM
5.1.2.2 Attribute Definition:
Alphanumeric code that identifies the type of grass grown on the CRP tract.
5.1.2.3 Attribute Definition Source:
FSA County Office
5.1.2.4 Attribute Domain Values
5.1.2.4.1 Enumerated Domain
5.1.2.4.1.1 Enumerated Domain Value:
CP3
5.1.2.4.1.2 Enumerated Domain Value Definition:
Tree planting
5.1.2.4.1.3 Enumerated Domain Value Definition Source:
FSA County Office
5.1.1 Entity Type
5.1.1.1 Entity Type Label:
CRP_Tracts
5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:
FSA County Office
5.1.2 Attribute
5.1.2.1 Attribute Label:
PRACTICE_NUM
5.1.2.2 Attribute Definition:
Alphanumeric code that identifies the type of grass grown on the CRP tract.
5.1.2.3 Attribute Definition Source:

FSA County Office
5.1.2.4 Attribute Domain Values
5.1.2.4.1 Enumerated Domain
5.1.2.4.1.1 Enumerated Domain Value:
CP12
5.1.2.4.1.2 Enumerated Domain Value Definition:
Wildlife food plots
5.1.2.4.1.3 Enumerated Domain Value Definition Source:
FSA County Office
5.1.1 Entity Type
5.1.1.1 Entity Type Label:
CRP_Tracts
5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:
FSA County Office
5.1.2 Attribute
5.1.2.1 Attribute Label:
ISSUE_DATE_FROM
5.1.2.2 Attribute Definition:
Start date of the CRP contract period.
5.1.2.3 Attribute Definition Source:
ASCS County Office
5.1.2.4 Attribute Domain Values
5.1.2.4.2 Range Domain
5.1.2.4.2.1 Range Domain Minimum:
1986
5.1.2.4.2.2 Range Domain Maximum:
1993
5.1.1 Entity Type
5.1.1.1 Entity Type Label:
CRP_Tracts
5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:
FSA County Office
5.1.2 Attribute
5.1.2.1 Attribute Label:
lSSUE_DATE_TO
5.1.2.2 Attribute Definition:
End date of the CRP contract period.
5.1.2.3 Attribute Definition Source:
ASCS County Office
5.1.2.4 Attribute Domain Values
5.1.2.4.2 Range Domain
5.1.2.4.2.1 Range Domain Minimum:
1995

5.1.2.4.2.2 Range Domain Maximum:
2002
5.1.1 Entity Type
5.1.1.1 Entity Type Label:
CRP_Tracts
5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:
FSA County Office
5.1.2 Attribute
5.1.2.1 Attribute Label:
CROP_1985
5.1.2.2 Attribute Definition:
1985 crop history or land uses listed on the ASCS-578 form or Water Erosion Worksheet.
5.1.2.3 Attribute Definition Source:
ASCS County Office
5.1.2.4 Attribute Domain Values
5.1.2.4.4 Unrepresentable Domain:
Name and acreage of each crop grown in 1985
5.1.1 Entity Type
5.1.1.1 Entity Type Label:
CRP_Tracts
5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:
FSA County Office
5.1.2 Attribute
5.1.2.1 Attribute Label:
CROP_1984
5.1.2.2 Attribute Definition:
1984 crop history listed on the ASCS-578 form or Water Erosion Worksheet.
5.1.2.3 Attribute Definition Source:
ASCS County Office
5.1.2.4 Attribute Domain Values
5.1.2.4.4 Unrepresentable Domain:
Name and acreage of each crop grown in 1984
5.1.1 Entity Type
5.1.1.1 Entity Type Label:
CRP_Tracts
5.1.1.2 Entity Type Definition:
Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:
FSA County Office
5.1.2 Attribute

5.1.2.1 Attribute Label:
DIFFERENT_COUNTY
5.1.2.2 Attribute Definition:
Name of the county where the CRP information is filed if different from the county where the CRP tracts are physically located.
5.1.2.3 Attribute Definition Source:
ASCS County Office
5.1.2.4 Attribute Domain Values
5.1.2.4.4 Unrepresentable Domain:
Name of USA County
6 Distribution Information
6.1 Distributor
10.2 Contact Organization Primary
10.1.2 Contact Organization:
USGS Midcontinent Ecological Science Center (MESC)
10.3 Contact Position:
GIS and Remote Sensing Project Leader
10.4 Contact Address
10.4.1 Address Type:
Mailing and Physical Address
10.4.2 Address:
U.S. Geological Survey
10.4.2 Address:
Biological Resources Division
10.4.2 Address:
Midcontinent Ecological Science Center
10.4.2 Address:
4512 McMurry Avenue
10.4.3 City:
Fort Collins
10.4.4 State or Province:
Colorado
10.4.5 Postal Code:
80525-3400
10.4.6 Country:
USA
10.5 Contact Voice Telephone:
(970) 226-9100
10.6 Contact TDD/TTY Telephone:
Unavailable
10.7 Contact Facsimile Telephone:
(970) 226-9230
10.9 Hours of Service:
8:00 a.m. to 1:00 p.m., Monday through Friday
6.2 Resource Description:
Kansas Conservation Reserve Program (CRP) - Tracts
6.3 Distribution Liability:
Although these data have been processed

successfully on a computer system at the U.S. Geological Survey, no warranty expressed or implied is made regarding the accuracy or utility of the data on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data. It is strongly recommended that these data are directly acquired from a U.S. Geological Survey server, and not indirectly through other sources that may have changed the data in some way. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data. The U.S. Geological Survey shall not be held liable for improper or incorrect use of the data described or contained herein.

6.4 Standard Order Process

6.4.2 Digital Form

6.4.2.1.1 Format Name:

ARCE

6.4.2.1.2 Format Version Number:

7.1.1

6.4.2.1.6 File Decompression Technique:

Double precision ARC/INFO export file compressed with UNIX GZIP. Single precision ARC/INFO export file for a computer compressed with LHA into a self-extracting file.

6.4.2.2 Digital Transfer Option

6.4.2.2.1 Online Option

6.4.2.2.1.1 Computer Contact Information

6.4.2.2.1.1.1 Network Address

6.4.2.2.1.1.1.1 Network Resource Name:

http://www.mesc.usgs.gov/gisdata/ListOfAll.htm

6.4.2.2.1.1.1.1 Network Resource Name:

ftp.mesc.usgs.gov/gisdata

6.4.3 Fees:

None, if data are available online.

6.5 Custom Order Process:

None

7 Metadata Reference Information

7.1 Metadata Date:

19980304

7.4 Metadata Contact:

10.2 Contact Organization Primary

10.1.2 Contact Organization:

USGS Midcontinent Ecological Science Center (MESC)

10.3 Contact Position:

GIS and Remote Sensing Project Leader
10.4 Contact Address
10.4.1 Address Type:
Mailing and Physical Address
10.4.2 Address:
U.S. Geological Survey
10.4.2 Address:
Biological Resources Division
10.4.2 Address:
Midcontinent Ecological Science Center
10.4.2 Address:
4512 McMurry Avenue
10.4.3 City:
Fort Collins
10.4.4 State or Province:
Colorado
10.4.5 Postal Code:
80525-3400
10.4.6 Country:
USA
10.5 Contact Voice Telephone:
(970) 226-9100
10.6 Contact TDD/TTY Telephone:
Unavailable
10.7 Contact Facsimile Telephone:
(970) 226-9230
10.9 Hours of Service:
8:00 a.m. to 1:00 p.m., Monday through Friday
7.5 Metadata Standard Name:
Draft Content Standard for National Biological Information Infrastructure Metadata, National Biological Service
7.6 Metadata Standard Version:
December 1995
7.8 Metadata Access Constraints:
None
7.9 Metadata Use Constraints:
None

CNS/MP Text Option Output

The following shows the above sample NBII output after being run through CNS/MP. As stated above, if it was a sample FGDC output, no fields whose field numbers began with "99." would appear. This sample contains only one such field, Field 99.1.5.1 Description of Geographic Extent, and it has been highlighted.

Identification_Information:
 Citation:
  Citation_Information:
   Originator: USGS Midcontinent Ecological Science Center (MESC)
   Publication_Date: 19970109
   Title: Kansas Conservation Reserve Program (CRP) - Tracts
   Geospatial_Data_Presentation_Form: Map
 Description:
  Abstract:
   This data set consists of Conservation Reserve
   Program (CRP) land tracts or parcels in portions
   of Atchison, Brown, Jackson, and Nemaha counties
   that fall within the Delaware River Basin, Kansas.
   The CRP tracts were manually transferred from
   black-and-white (B&W) photocopies of aerial
   photographs and digitized from mylar overlays to
   USGS 1:24,000-scale topographic quadrangles. A
   lookup table (LUT) was created that contains
   numerous fields of information on each CRP tract,
   such as contract number, farm number, field
   number, county, tract number, issue dates, and
   crop history. [Polygonal Data]
  Purpose:
   To identify and map the CRP tracts that occur
   within the Delaware River Basin, KS. This data
   set is being used with soils data developed by the
   U.S. Department of Agriculture (USDA), a GRASS
   interface, and a sediment yield model to simulate
   reductions in sediment yields from lands converted
   from crops to CRP parcels on a river basin scale
   over a 10-year period.
 Time_Period_of_Content:
  Time_Period_Information:
   Range_of_Dates/Times:
    Beginning_Date: 1984
    Ending_Date: 1985
  Currentness_Reference: Publication Date
 Status:
  Progress: Complete
  Maintenance_and_Update_Frequency: None Planned
 Spatial_Domain:

Description_of_Geographic_Extent:
Portions of Atchison, Brown, Jackson and Nemaha
Counties within the Delaware River Basin, Kansas
Bounding_Coordinates:
West_Bounding_Coordinate: -95.98936249
East_Bounding_Coordinate: -95.27145048
North_Bounding_Coordinate: 40.012278
South_Bounding_Coordinate: 39.32525909
Keywords:
Theme:
Theme_Keyword_Thesaurus: None
Theme_Keyword: Conservation Reserve Program
Theme_Keyword: CRP
Theme_Keyword: CRP Parcels
Theme_Keyword: CRP Tracts
Place:
Place_Keyword_Thesaurus: None
Place_Keyword: Atchison County
Place_Keyword: Brown County
Place_Keyword: Jackson County
Place_Keyword: Nemaha County
Place_Keyword: Delaware River Basin
Place_Keyword: Kansas
Place_Keyword: KS
Place_Keyword: USA
Temporal:
Temporal_Keyword_Thesaurus: None
Temporal_Keyword: 1984
Temporal_Keyword: 1985
Access_Constraints: None
Use_Constraints: None
Point_of_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Jim Terrell
Contact_Organization: USGS Midcontinent Ecological Science Center (MESC)
Contact_Address:
Address_Type: Mailing and Physical Address
Address: U.S. Geological Survey
Address: Biological Resources Division
Address: Midcontinent Ecological Science Center
Address: 4512 McMurry Avenue
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525-3400
Country: USA
Contact_Voice_Telephone: (970) 226-9100

Contact_TDD/TTY_Telephone: Unavailable
Contact_Facsimile_Telephone: (970)226-9230
Hours_of_Service: 8:00 a.m. to 1:00 p.m., Monday through Friday
Data_Set_Credit:
USDA, Kansas Biological Survey, and Kansas Department of Wildlife and Parks
Native_Data_Set_Environment:
ARC/INFO Version 7.1.1 double precision, UNIX Solaris operating system
Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
The attribute accuracy is tested by manually comparing hard copy plots of the digital data with the source materials. When attributes cannot be visually verified on plots they are interactively queried and verified on screen. In addition, the attributes are compared against a master set of valid attributes.
Logical_Consistency_Report:
ARC/INFO software is used to create and maintain topological relationships between features. There are no duplicate features, but coincident lines are maintained between data layers where appropriate. Polygonal features begin and end at the same point, contain no overshoots or undershoots, and contain a single label. Linear features are continuous where appropriate, i.e., dangling arcs are removed if they are not required.
Completeness_Report:
The majority of CRP tracts in designated townships in Atchison, Brown, Jackson, and Nemaha counties within the Delaware River Basin, Kansas.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
The horizontal positional accuracy is tested by visual comparison of hard copy check plots to the source materials and verifying the location of the data on-screen relative to other data layers in the same geographic area.
Vertical_Positional_Accuracy:
Vertical_Positional_Accuracy_Report: Not applicable
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator:

USDA, Farm Services Agency (FSA): Atchison, Brown, Jackson, and Nemaha Counties
Publication_Date: 1984 - 1985
Title:
CRP Tract Maps and ASCS-578 Report of Acreage Forms
Geospatial_Data_Presentation_Form: Map
Publication_Information:
Publication_Place: Atchison, Brown, Jackson, and Nemaha Counties
Publisher: FSA County Offices
Other_Citation_Details:
The USDA Agriculture Stabilization and Conservation Service (ASCS) was reorganized and renamed the USDA Farm Services Agency (FSA).
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1984
Ending_Date: 1985
Source_Currentness_Reference: Publication Date
Source_Citation_Abbreviation: None
Source_Contribution: Spatial and attribute information
Process_Step:
Process_Description:
Data were manually transferred and drafted from B&W photocopies of aerial photographs to mylar overlays that were punch-registered to 7.5-minute USGS quadrangles. The mylar overlays were manually digitized on an Altek Datatab digitizer to capture the data at a resolution of at least 0.001 inches. Four control points corresponding to the four corners of the quadrangle were used for registration during data capture. Tracts that continued onto adjacent quadrangles were adjusted to intersect the boundary at a common, coincident node. Attributes were assigned after the digitizing was completed, and all map files were joined into a single map file. Neat lines were removed and attributes and arcs along map edges were verified. An ARC/INFO LUT was created that contains information on each CRP tract, such as contract number, farm number, field number, practice number, county, tract number, issue dates, and crop history. This information was provided on Form ASCS-578 (10-02-86) for each CRP tract. When a crop history was not reported, not available, or unknown, a simulated crop history was entered based on the most common crop history

for each county in the appropriate year.
Process_Date: 19970109
Spatial_Data_Organization_Information:
Indirect_Spatial_Reference: Not Applicable
Direct_Spatial_Reference_Method: Vector
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Grid_Coordinate_System:
Grid_Coordinate_System_Name: Universal Transverse Mercator
Universal_Transverse_Mercator:
UTM_Zone_Number: 15
Transverse_Mercator:
Longitude_of_Central_Meridian: -93
Latitude_of_Projection_Origin: 0
False_Easting: 500000
False_Northing: 0
Scale_Factor_at_Central_Meridian: .9996
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: Coordinate Pair
Coordinate_Representation:
Abscissa_Resolution: .61
Ordinate_Resolution: .61
Planar_Distance_Units: Meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.4
Denominator_of_Flattening_Ratio: 294.98
Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to
CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: CODE
Attribute_Definition:
Unique number for each polygon, used to relate the
ARC/INFO LUT to the final map coverage.
Attribute_Definition_Source: User defined
Attribute_Domain_Values:
Unrepresentable_Domain: Unique polygon number.
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to

CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: CONTRACT
Attribute_Definition:
Unique number assigned to the CRP contract and identified on the CRP-I or ASCS-578 form.
Attribute_Definition_Source: FSA County Office
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Unique CRP Contract Number
Codeset_Source: FSA County Office
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: FARM
Attribute_Definition:
Unique number assigned to the farm and identified on the CRP contract CRP-1 or ASCS-578 form.
Attribute_Definition_Source: FSA County Office
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Unique farm number
Codeset_Source: FSA County Office
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: FIELD
Attribute_Definition:
Unique number assigned to each field identified on the CRP contract CRP-1 or ASCS-578 form.
Attribute_Definition_Source: FSA County Office
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Unique field numbers in the CRP tract
Codeset_Source: FSA County Office
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to CRP tracts.

Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: COUNTY
Attribute_Definition:
Name of the county in which the CRP tract is
located.
Attribute_Definition_Source: USGS 7.5-minute quadrangle
Attribute_Domain_Values:
Unrepresentable_Domain: Name of USA County identified on USGS quadrangle
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to
CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: TRACT_NUM
Attribute_Definition:
Unique number assigned to each CRP tract and
identified on the CRP contract CP-1 or ASCS-578
form.
Attribute_Definition_Source: FSA County Office
Attribute_Domain_Values:
Codeset_Domain:
Codeset_Name: Unique CRP tract number
Codeset_Source: ASCS County Office
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to
CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: PRACTICE_NUM
Attribute_Definition:
Alphanumeric code that identifies the type of
grass grown on the CRP tract.
Attribute_Definition_Source: FSA County Office
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: CP1
Enumerated_Domain_Value_Definition: Introduced grass
Enumerated_Domain_Value_Definition_Source: FSA County Office
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to
CRP tracts.
Entity_Type_Definition_Source: FSA County Office

Attribute:
Attribute_Label: PRACTICE_NUM
Attribute_Definition:
Alphanumeric code that identifies the type of
grass grown on the CRP tract.
Attribute_Definition_Source: FSA County Office
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: CP3
Enumerated_Domain_Value_Definition: Tree planting
Enumerated_Domain_Value_Definition_Source: FSA County Office
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to
CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: PRACTICE_NUM
Attribute_Definition:
Alphanumeric code that identifies the type of
grass grown on the CRP tract.
Attribute_Definition_Source: FSA County Office
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: CP12
Enumerated_Domain_Value_Definition: Wildlife food plots
Enumerated_Domain_Value_Definition_Source: FSA County Office
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to
CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: ISSUE_DATE_FROM
Attribute_Definition: Start date of the CRP contract period.
Attribute_Definition_Source: ASCS County Office
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1986
Range_Domain_Maximum: 1993
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to
CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:

Attribute_Label: ISSUE_DATE_TO
Attribute_Definition: End date of the CRP contract period.
Attribute_Definition_Source: ASCS County Office
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1995
Range_Domain_Maximum: 2002
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to
CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: CROP_1985
Attribute_Definition:
1985 crop history or land uses listed on the
ASCS-578 form or Water Erosion Worksheet.
Attribute_Definition_Source: ASCS County Office
Attribute_Domain_Values:
Unrepresentable_Domain: Name and acreage of each crop grown in 1985
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to
CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: CROP_1984
Attribute_Definition:
1984 crop history listed on the ASCS-578 form or
Water Erosion Worksheet.
Attribute_Definition_Source: ASCS County Office
Attribute_Domain_Values:
Unrepresentable_Domain: Name and acreage of each crop grown in 1984
Entity_Type:
Entity_Type_Label: CRP_Tracts
Entity_Type_Definition:
Private land parcels converted from crop lands to
CRP tracts.
Entity_Type_Definition_Source: FSA County Office
Attribute:
Attribute_Label: DIFFERENT_COUNTY
Attribute_Definition:
Name of the county where the CRP information is
filed if different from the county where the CRP
tracts are physically located.
Attribute_Definition_Source: ASCS County Office
Attribute_Domain_Values:

Unrepresentable_Domain: Name of USA County
Distribution_Information:
Distributor:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USGS Midcontinent Ecological Science Center (MESC)
Contact_Position: GIS and Remote Sensing Project Leader
Contact_Address:
Address_Type: Mailing and Physical Address
Address: U.S. Geological Survey
Address: Biological Resources Division
Address: Midcontinent Ecological Science Center
Address: 4512 McMurry Avenue
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525-3400
Country: USA
Contact_Voice_Telephone: (970) 226-9100
Contact_TDD/TTY_Telephone: Unavailable
Contact_Facsimile_Telephone: (970) 226-9230
Hours_of_Service: 8:00 a.m. to 1:00 p.m., Monday through Friday
Resource_Description: Kansas Conservation Reserve Program (CRP) - Tracts
Distribution_Liability:
Although these data have been processed successfully on a computer system at the U.S. Geological Survey, no warranty expressed or implied is made regarding the accuracy or utility of the data on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This disclaimer applies both to individual use of the data and aggregate use with other data. It is strongly recommended that these data are directly acquired from a U.S. Geological Survey server, and not indirectly through other sources that may have changed the data in some way. It is also strongly recommended that careful attention be paid to the contents of the metadata file associated with these data. The U.S. Geological Survey shall not be held liable for improper or incorrect use of the data described or contained herein.
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: ARCE
Format_Version_Number: 7.1.1
File_Decompression_Technique:
Double precision ARC/INFO export file compressed

with UNIX GZIP. Single precision ARC/INFO export
file for a computer compressed with LHA into a
self-extracting file.
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: http://www.mesc.usgs.gov/gisdata/ListOfAll.htm
Network_Resource_Name: ftp.mesc.usgs.gov/gisdata
Fees: None, if data are available online.
Custom_Order_Process: None
Metadata_Reference_Information:
Metadata_Date: 19980304
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USGS Midcontinent Ecological Science Center (MESC)
Contact_Position: GIS and Remote Sensing Project Leader
Contact_Address:
Address_Type: Mailing and Physical Address
Address: U.S. Geological Survey
Address: Biological Resources Division
Address: Midcontinent Ecological Science Center
Address: 4512 McMurry Avenue
City: Fort Collins
State_or_Province: Colorado
Postal_Code: 80525-3400
Country: USA
Contact_Voice_Telephone: (970) 226-9100
Contact_TDD/TTY_Telephone: Unavailable
Contact_Facsimile_Telephone: (970) 226-9230
Hours_of_Service: 8:00 a.m. to 1:00 p.m., Monday through Friday
Metadata_Standard_Name:
Draft Content Standard for National Biological
Information Infrastructure Metadata, National
Biological Service
Metadata_Standard_Version: December 1995
Metadata_Access_Constraints: None
Metadata_Use_Constraints: None

Appendix C. Entering a Detailed Description in Section 5

Appendix C shows the specific steps to use to enter the Section 5 shown in Appendix B. Before choosing to enter a 5.1 Detailed Description, be aware of the Navigation buttons and how they work within this form, options for moving to the Next Record, and that the order in which the data are entered may not be the order in which it is maintained.

Navigation Buttons

After the 5.1 Detailed Description Add Button has been selected, scroll down to the bottom of the screen. Two sets of Navigation buttons will be visible. The Navigation buttons at the very bottom of the screen will say Record 1 of 1 throughout this whole process. As you scroll, these are the Navigation buttons that will continue to be visible. The second set of Navigation button, right under 5.1.2.10, are the ones that will be incremented as you move between records in the 5.1 Detailed Description. For simplicity in Appendix C, these Navigation buttons will be referred to as the 5.1.2.10 Navigation buttons.

Next Record

Within the Detailed Data Entry Steps there are three ways to "Move to the next record". Click any one of the following:

- the Next button right above the 5.1 Detailed Description label
- the next record (right facing triangle) in the 5.1.2.10 Navigation buttons
- the Next button right below Field 5.1.2.10

Moving to the next record generally requires scrolling up or down to get to the needed buttons.

Data Order

If data are entered into 5.1 Detailed Description, as described in Appendix C, that includes entering three entity values (5.1.1.1, 5.1.1.2, and 5.1.1.3) and three attribute values (5.1.2.1, 5.1.2.2, and 5.1.2.3) for each domain value entered, the order in which the data are entered will match the order in which it is stored, accessed, and reported within the present NBII MetaMaker 2.30 database. However, if the data set is exported and imported into another NBII MetaMaker 2.30 database, as when transferring a data set to another person or upgrading the MetaMaker version being used, the order of the data in 5.1 Detailed Description will probably not appear in the same order as originally entered. Example: When the data set used in Appendix B was created, the 5.1 Detailed Description appears in the data entry forms as listed in Appendix B. However, when the data set was forwarded to the MetaMaker programmer for inclusion in the final distribution copy of the database, it was exported and imported to make the transfer. In the final version of NBII MetaMaker 2.30, the order of the data in 5.1 Detailed Description does not match the order listed in Appendix B.

Detailed Data Entry Steps

- Enter Section 5
- Click on the 5.1 Detailed Description Add Button
  -The 5.1.2.10 Navigation buttons should say Record 1 of ##.
    - Enter

5.1.1.1 Entity Type Label:	CRP_Tracts
5.1.1.2 Entity Type Definition:	Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:	FSA County Office

    - Enter

5.1.2.1 Attribute Label:	CODE
5.1.2.2 Attribute Definition:	Unique number for each polygon, used to relate the ARC/INFO LUT to the final map coverage.
5.1.2.3 Attribute Definition Source:	User defined

    - Click the 5.1.2.4.4 Unrepresentable Domain Add Button
    - Enter

5.1.2.4.4 Unrepresentable Domain:	Unique polygon number.

    - Click the 5.1.2.4.4 Unrepresentable Domain Done Button
- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 2 of ##.
- Shortcut: Pressing Ctrl + " will insert the value from the same field in the previous record. This is particularly useful in a 5.1 Detailed Description for entering repeating entity values (5.1.1.1, 5.1.1.2, and 5.1.1.3) and repeating attribute values (5.1.2.1, 5.1.2.2, and 5.1.2.3). For Record 2, (Shortcut: just key CTRL + ") indicates where and how this can be used. The same applies to all following records.
    - Enter

5.1.1.1 Entity Type Label:	CRP_Tracts (Shortcut: just key CTRL + ")
5.1.1.2 Entity Type Definition:	Private land parcels converted from crop lands to CRP tracts. (Shortcut: just key CTRL + ")
5.1.1.3 Entity Type Definition Source:	FSA County Office (Shortcut: just key CTRL + ")

    - Enter

5.1.2.1 Attribute Label:	CONTRACT
5.1.2.2 Attribute Definition:	Unique number assigned to the CRP contract and identified on the CRP-1 or ASCS-578 form.
5.1.2.3 Attribute Definition Source:	FSA County Office (Shortcut: just key CTRL + ")

- Click the 5.1.2.4.3 Codeset Domain Add Button
- Enter
  - 5.1.2.4.3.1 Codeset Name:Unique — CRP Contract Number
  - 5.1.2.4.3.2 Codeset Source: — FSA County Office
- Click the 5.1.2.4.3 Codeset Domain Done Button

- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 3 of ##.
  - Enter
    - 5.1.1.1 Entity Type Label: — CRP_Tracts
    - 5.1.1.2 Entity Type Definition: — Private land parcels converted from crop lands to CRP tracts.
    - 5.1.1.3 Entity Type Definition Source: — FSA County Office
  - Enter
    - 5.1.2.1 Attribute Label: — FARM
    - 5.1.2.2 Attribute Definition: — Unique number assigned to the farm and identified on the CRP contract CRP-1 or ASCS-578 form.
    - 5.1.2.3 Attribute Definition Source: — FSA County Office
  - Click the 5.1.2.4.3 Codeset Domain Add Button
  - Enter
    - 5.1.2.4.3.1 Codeset Name: — Unique farm number
    - 5.1.2.4.3.2 Codeset Source: — FSA County Office
  - Click the 5.1.2.4.3 Codeset Domain Done Button
- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 4 of ##.
  - Enter
    - 5.1.1.1 Entity Type Label: — CRP_Tracts
    - 5.1.1.2 Entity Type Definition: — Private land parcels converted from crop lands to CRP tracts.
    - 5.1.1.3 Entity Type Definition Source: — FSA County Office
  - Enter
    - 5.1.2.1 Attribute Label: — FIELD
    - 5.1.2.2 Attribute Definition: — Unique number assigned to each field identified on the CRP contract CRP-1 or ASCS-578 form.
    - 5.1.2.3 Attribute Definition Source: — FSA County Office
  - Click the 5.1.2.4.3 Codeset Domain Add Button
  - Enter
    - 5.1.2.4.3.1 Codeset Name: — Unique field numbers in the CRP tract
    - 5.1.2.4.3.2 Codeset Source: — FSA County Office
  - Click the 5.1.2.4.3 Codeset Domain Done Button
- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 5 of ##.
  - Enter
    - 5.1.1.1 Entity Type Label: — CRP_Tracts
    - 5.1.1.2 Entity Type Definition: — Private land parcels converted from crop lands to CRP tracts.
    - 5.1.1.3 Entity Type Definition Source: — FSA County Office
  - Enter
    - 5.1.2.1 Attribute Label: — COUNTY

5.1.2.2 Attribute Definition: Name of the county in which the CRP tract is located.

5.1.2.3 Attribute Definition Source: USGS 7.5-minute quadrangle

- Click the 5.1.2.4.4 Unrepresentable Domain Add Button
- Enter

5.1.2.4.4 Unrepresentable Domain: Name of USA County identified on USGS quadrangle

- Click the 5.1.2.4.4 Unrepresentable Domain Done Button

- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 6 of ##.
  - Enter

5.1.1.1 Entity Type Label: CRP_Tracts

5.1.1.2 Entity Type Definition: Private land parcels converted from crop lands to CRP tracts.

5.1.1.3 Entity Type Definition Source: FSA County Office

  - Enter

5.1.2.1 Attribute Label: TRACT_NUM

5.1.2.2 Attribute Definition: Unique number assigned to each CRP tract and identified on the CRP contract CP-1 or ASCS-578 form.

5.1.2.3 Attribute Definition Source: FSA County Office

  - Click the 5.1.2.4.3 Codeset Domain Add Button
  - Enter

5.1.2.4.3.1 Codeset Name: Unique CRP tract number

5.1.2.4.3.2 Codeset Source: ASCS County Office

  - Click the 5.1.2.4.3 Codeset Domain Done Button
- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 7 of ##.
  - Enter

5.1.1.1 Entity Type Label: CRP_Tracts

5.1.1.2 Entity Type Definition: Private land parcels converted from crop lands to CRP tracts.

5.1.1.3 Entity Type Definition Source: FSA County Office

  - Enter

5.1.2.1 Attribute Label: PRACTICE_NUM

5.1.2.2 Attribute Definition: Alphanumeric code that identifies the type of grass grown on the CRP tract.

5.1.2.3 Attribute Definition Source: FSA County Office

  - Click the 5.1.2.4.1 Enumerated Domain Add Button
  - Enter

5.1.2.4.1.1 Enumerated Domain Value: CP1

5.1.2.4.1.2 Enumerated Domain Value Description: Introduced grass

5.1.2.4.1.3 Enumerated Domain Value Definition Source: FSA County Office

  - Click the 5.1.2.4.1 Enumerated Domain Done Button

- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 8 of ##.
  - Enter
    - 5.1.1.1 Entity Type Label: CRP_Tracts
    - 5.1.1.2 Entity Type Definition: Private land parcels converted from crop lands to CRP tracts.
    - 5.1.1.3 Entity Type Definition Source: FSA County Office
  - Enter
    - 5.1.2.1 Attribute Label: PRACTICE_NUM
    - 5.1.2.2 Attribute Definition: Alphanumeric code that identifies the type of grass grown on the CRP tract.
    - 5.1.2.3 Attribute Definition Source: FSA County Office
  - Click the 5.1.2.4.1 Enumerated Domain Add Button
  - Enter
    - 5.1.2.4.1.1 Enumerated Domain Value: CP3
    - 5.1.2.4.1.2 Enumerated Domain Value Description: Tree planting
    - 5.1.2.4.1.3 Enumerated Domain Value Definition Source: FSA County Office
  - Click the 5.1.2.4.1 Enumerated Domain Done Button
- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 9 of ##.
  - Enter
    - 5.1.1.1 Entity Type Label: CRP_Tracts
    - 5.1.1.2 Entity Type Definition: Private land parcels converted from crop lands to CRP tracts.
    - 5.1.1.3 Entity Type Definition Source: FSA County Office
  - Enter
    - 5.1.2.1 Attribute Label: PRACTICE_NUM
    - 5.1.2.2 Attribute Definition: Alphanumeric code that identifies the type of grass grown on the CRP tract.
    - 5.1.2.3 Attribute Definition Source: FSA County Office
  - Click the 5.1.2.4.1 Enumerated Domain Add Button
  - Enter
    - 5.1.2.4.1.1 Enumerated Domain Value: CP12
    - 5.1.2.4.1.2 Enumerated Domain Value Description: Wildlife food plots
    - 5.1.2.4.1.3 Enumerated Domain Value Definition Source: FSA County Office
  - Click the 5.1.2.4.1 Enumerated Domain Done Button
- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 10 of ##.
  - Enter
    - 5.1.1.1 Entity Type Label: CRP_Tracts

5.1.1.2 Entity Type Definition:	Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:	FSA County Office

- Enter

5.1.2.1 Attribute Label:	ISSUE_DATE_FROM
5.1.2.2 Attribute Definition:	Start date of the CRP contract period.
5.1.2.3 Attribute Definition Source:	ASCS County Office

- Click the 5.1.2.4.2 Range Domain Add Button
- Enter

5.1.2.4.2.1 Range Domain Minimum:	1986
5.1.2.4.2.2 Range Domain Maximum:	1993

- Click the 5.1.2.4.2 Range Domain Done Button

- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 11 of ##.
  - Enter

5.1.1.1 Entity Type Label:	CRP_Tracts
5.1.1.2 Entity Type Definition:	Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:	FSA County Office

  - Enter

5.1.2.1 Attribute Label:	ISSUE_DATE_TO
5.1.2.2 Attribute Definition:	End date of the CRP contract period.
5.1.2.3 Attribute Definition Source:	ASCS County Office

  - Click the 5.1.2.4.2 Range Domain Add Button
  - Enter

5.1.2.4.2.1 Range Domain Minimum:	1995
5.1.2.4.2.2 Range Domain Maximum:	2002

  - Click the 5.1.2.4.2 Range Domain Done Button
- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 12 of ##.
  - Enter

5.1.1.1 Entity Type Label:	CRP_Tracts
5.1.1.2 Entity Type Definition:	Private land parcels converted from crop lands to CRP tracts.
5.1.1.3 Entity Type Definition Source:	FSA County Office

  - Enter

5.1.2.1 Attribute Label:	CROP_1985
5.1.2.2 Attribute Definition:	1985 crop history or land uses listed on the ASCS-578 form or Water Erosion Worksheet.
5.1.2.3 Attribute Definition Source:	ASCS County Office

  - Click the 5.1.2.4.4 Unrepresentable Domain Add Button
  - Enter

5.1.2.4.4 Unrepresentable Domain:	Name and acreage of each crop grown in 1985

  - Click the 5.1.2.4.4 Unrepresentable Domain Done Button
- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 13 of ##.
  - Enter

5.1.1.1 Entity Type Label: CRP_Tracts

5.1.1.2 Entity Type Definition: Private land parcels converted from crop lands to CRP tracts.

5.1.1.3 Entity Type Definition Source: FSA County Office

- Enter

5.1.2.1 Attribute Label: CROP_1984

5.1.2.2 Attribute Definition: 1984 crop history listed on the ASCS-578 form or Water Erosion Worksheet.

5.1.2.3 Attribute Definition Source: ASCS County Office

- Click the 5.1.2.4.4 Unrepresentable Domain Add Button
- Enter

5.1.2.4.4 Unrepresentable Domain: Name and acreage of each crop grown in 1984

- Click the 5.1.2.4.4 Unrepresentable Domain Done Button

- Move to the next record. The 5.1.2.10 Navigation buttons should now say Record 14 of ##.
  - Enter

5.1.1.1 Entity Type Label: CRP_Tracts

5.1.1.2 Entity Type Definition: Private land parcels converted from crop lands to CRP tracts.

5.1.1.3 Entity Type Definition Source: FSA County Office

  - Enter

5.1.2.1 Attribute Label: DIFFERENT_COUNTY

5.1.2.2 Attribute Definition: Name of the county where the CRP information is filed if different from the county where the CRP tracts are physically located.

5.1.2.3 Attribute Definition Source: ASCS County Office

  - Click the 5.1.2.4.4 Unrepresentable Domain Add Button
  - Enter

5.1.2.4.4 Unrepresentable Domain: Name of USA County

  - Click the 5.1.2.4.4 Unrepresentable Domain Done Button

Appendix D. Section 4 - Entering Projections

To enter a specific projection in Section 4, you must access the appropriate subform. The following list identifies the projections that fall within specific subforms.

Field 4.1.1 Geographic
- Geographic

Field 4.1.2 Planar
- Field 4.1.2.1 Map Projection
  - Albers Conical Equal Area
  - Azimuthal Equidistant
  - Equidistant Conic
  - Equirectangular
  - General Vertical Near-sided Projection
  - Gnomonic
  - Lambert Azimuthal Equal Area
  - Lambert Conformal Conic
  - Mercator
  - Modified Stereographic for Alaska
  - Miller Cylindrical
  - Oblique Mercator
  - Orthographic
  - Polar Stereographic
  - Polyconic
  - Robinson
  - Sinusoidal
  - Space Oblique Mercator
  - Stereographic
  - Transverse Mercator
  - van der Grinten
  - other projection
- Field 4.1.2.2 Grid Coordinate System
  - ARC Coordinate System
  - State Plane Coordinate System 1927
  - State Plane Coordinate System 1983
  - Universal Polar Stereographic
  - Universal Transverse Mercator
  - other grid system
- Field 4.1.2.3 Local Planar
  - Local Planar

Field 4.1.3 Local

Local

Appendix E. Names, Types, and Sizes of Fields in the NBII MetaMaker 2.30 Database

NBII MetaMaker 2.30 field type definitions:

Text	- text, maximum length 255 characters Memo- text, maximum length 64,000 characters, are indicated below with "*"
Number (Integer)	- integer in the range -32,768 to 32,767
Number (Long)	- integer in the range -2,147,483,648 to 2,147,483,647
Number (Double)	- real with 10 digit precision

Field numbers and names listed in this table follow the numbering and naming scheme described in Appendix A that reconciles the differences between the June 8, 1994, *Content Standards for Digital Geospatial Metadata* and the December 1995 *Draft Content Standard for National Biological Information Infrastructure Metadata.*

Field Number	Field Name	Content Standard Type	NBII MetaMaker Type	NBII MetaMaker Size
-	Data-set Name	-	Text	80
1	Identification Information	Compound	-	-
1.1	Citation	Compound	Text	80
----	Citation Information as per Section 8	-	-	-
1.2	Description	Compound	-	-
1.2.1	Abstract	Text	Memo	*
1.2.2	Purpose	Text	Memo	*
1.2.3	Supplemental Information	Text	Memo	*
1.3	Time Period of Content	Compound	Text	80
-----	Time Period Information as per Section 9	-	-	-
1.3.1	Currentness Reference	Text	Text	250
1.4	Status	Compound	-	-
1.4.1	Progress	Text	Text	50
1.4.2	Maintenance and Update Frequency	Text	Text	50
1.5	Spatial Domain	Compound	-	-
99.1.5.1	Description of Geographic Extent	Text	Memo	*
1.5.1	Bounding Coordinates	Compound	-	-
1.5.1.1	West Bounding Coordinate	Real	Number (Double)	8
1.5.1.2	East Bounding Coordinate	Real	Number (Double)	8
1.5.1.3	North Bounding Coordinate	Real	Number (Double)	8
1.5.1.4	South Bounding Coordinate	Real	Number (Double)	8
1.5.2	Data Set G-Polygon	Compound	-	-
1.5.2.1	Data Set G-Polygon Outer G-Ring	Compound	-	-
1.5.2.1.1	G-Ring Latitude	Real	Number (Double)	8
1.5.2.1.2	G-Ring Longitude	Real	Number (Double)	8
1.5.2.2	Data Set G-Polygon Exclusion G-Ring	Compound	-	-

Field Number	Field Name	Content Standard Type	NBII MetaMaker Type	NBII MetaMaker Size
1.5.2.1.1	G-Ring Latitude	Real	Number (Double)	8
1.5.2.1.2	G-Ring Longitude	Real	Number (Double)	8
1.6	Keywords	Compound	-	-
1.6.1	Theme	Compound	-	-
1.6.1.1	Theme Keyword Thesaurus	Text	Text	255
1.6.1.2	Theme Keyword	Text	Text	255
1.6.2	Place	Compound	-	-
1.6.2.1	Place Keyword Thesaurus	Text	Text	255
1.6.2.2	Place Keyword	Text	Text	255
1.6.3	Stratum	Compound	-	-
1.6.3.1	Stratum Keyword Thesaurus	Text	Text	255
1.6.3.2	Stratum Keyword	Text	Text	255
1.6.4	Temporal	Compound	-	-
1.6.4.1	Temporal Keyword Thesaurus	Text	Text	255
1.6.4.2	Temporal Keyword	Text	Text	255
99.1.7	Taxonomy	Compound	-	-
99.1.7.1	Taxonomic Keywords	Text	Text	255
99.1.7.2	Taxonomic Coverage	Compound	-	-
99.1.7.2.1	Specific Taxonomic Information	Compound	-	-
99.1.7.2.1.1	Kingdom	Text	Text	255
99.1.7.2.1.2	Division-Phylum	Text	Text	255
99.1.7.2.1.3	Class	Text	Text	255
99.1.7.2.1.4	Order	Text	Text	255
99.1.7.2.1.5	Family	Text	Text	255
99.1.7.2.1.6	Genus	Text	Text	255
99.1.7.2.1.7	Speeies	Text	Text	255
99.1.7.2.1.8	Applicable Common Names	Text	Text	255
99.1.7.2.2	General Taxonomic Coverage	Text	Memo	*
1.7	Access Constraints	Text	Memo	*
1.8	Use Constraints	Text	Memo	*
1.9	Point of Contact	Compound	Text	80
----	Contact Information as per Section 10	-	-	-
1.10	Browse Graphic	Compound	-	-
1.10.1	Browse Graphic Filename	Text	Text	250
1.10.2	Browse Graphic Filc Description	Text	Memo	*
1.10.3	Browse Graphic File Type	Text	Text	255
1.11	Data Set Credit	Text	Text	255
1.12	Security Information	Compound	-	-
1.12.1	Security Classification System	Text	Text	255
1.12.2	Security Classification	Text	Text	50
1.12.3	Security Handling Description	Text	Text	255
1.13	Native Data Set Environment	Text	Text	255
1.14	Cross Reference	Compound	Text	80
----	Citation Information as per Section 8	-	-	-
99.1.16	Analytical Tool	Compound	-	-
99.1.16.1	Analytical Tool Description	Text	Memo	*
99.1.16.2	Tool Access Information	Compound	-	-
99.1.16.2.1	Tool Network Resource Name	Text	Memo	*
99.1.16.2.2	Tool Access Instructions	Text	Memo	*
99.1.16.2.3	Tool Computer and Operating System	Text	Memo	*
99.1.16.3	Tool Contact	Compound	Text	80
----	Contact Information as per Section 10	-	-	-
99.1.16.4	Tool Citation	Compound	Text	80
----	Citation Information as per Section 8	-	-	-

Field Number	Field Name	Content Standard Type	NBII MetaMaker Type	NBII MetaMaker Size
2	Data Quality Information	Compound	-	-
2.1	Attribute Accuracy	Compound	-	-
2.1.1	Attribute Accuracy Report	Text	Memo	*
2.1.2	Quantitative Attribute Accuracy Assessment	Compound	-	-
2.1.2.1	Attribute Accuracy Value	Text	Memo	*
2.1.2.2	Attribute Accuracy Explanation	Text	Memo	*
2.2	Logical Consistency Report	Text	Memo	*
2.3	Completeness Report	Text	Memo	*
2.4	Positional Accuracy	Compound	-	-
2.4.1	Horizontal Positional Accuracy	Compound	-	-
2.4.1.1	Horizontal Positional Accuracy Report	Text	Memo	*
2.4.1.2	Quantitative Horizontal Positional Accuracy Assessment	Compound	-	-
2.4.1.2.1	Horizontal Positional Accuracy Value	Real	Memo	*
2.4.1.2.2	Horizontal Positional Accuracy Explanation	Text	Memo	*
2.4.2	Vertical Positional Accuracy	Compound	-	-
2.4.2.1	Vertical Positional Accuracy Report	Text	Memo	*
2.4.2.2	Quantitative Vertical Positional Accuracy Assessment	Compound	-	-
2.4.2.2.1	Vertical Positional Accuracy Value	Real	Memo	*
2.4.2.2.2	Vertical Positional Accuracy Explanation	Text	Text	255
2.5	Lineage	Compound	-	-
99.2.5.1	Methodology	Compound	-	-
99.2.5.1.1	Methodology Type	Text	Text	255
99.2.5.1.2	Methodology Identifier	Compound	-	-
99.2.5.1.2.1	Methodology Keyword Thesaurus	Text	Text	150
99.2.5.1.2.2	Methodology Keyword	Text	Memo	*
99.2.5.1.3	Methodology Description	Text	Memo	*
99.2.5.1.4	Methodology Citation	Compound	Text	80
----	Citation Information as per Section 8	-	-	-
2.5.1	Source Information	Compound	-	-
2.5.1.1	Source Citation	Compound	Text	80
----	Citation Information as per Section 8	-	-	-
2.5.1.2	Source Scale Denominator	Integer	Number (Double)	8
2.5.1.3	Type of Source Media	Text	Text	50
2.5.1.4	Source Time Period of Content	Compound	Text	80
----	Time Period Information as per Section 9	-	-	-
2.5.1.4.1	Source Currentness Reference	Text	Text	50
2.5.1.5	Source Citation Abbreviation	Text	Memo	*
2.5.1.6	Source Contribution	Text	Memo	*
2.5.2	Process Step	Compound	-	-
2.5.2.1	Process Description	Text	Memo	*
2.5.2.2	Source Used Citation Abbreviation	Text	Memo	*
2.5.2.3	Process Date	Date	Text	50
2.5.2.4	Process Time	Time	Text	50
2.5.2.5	Source Produced Citation Abbreviation	Text	Memo	*
2.5.2.6	Process Contact	Compound	Text	80
-----	Contact Information as per Section 10	-	-	-
2.6	Cloud Cover	Integer	Number (Double)	8
99.2.7	Taxonomic System	Compound	-	-
99.2.7.1	Classification System or Authority	Compound	-	-
99.2.7.1.1	Classification System Citation	Compound	Text	80
----	Citation Information as per Section 8	-	-	-
99.2.7.1.2	Classification System Modifications	Text	Memo	*
99.2.7.2	Identification Reference	Compound	Text	80
-----	Citation Information as per Section 8	-	-	-
99.2.7.3	Identifier	Compound	Text	80

Field Number	Field Name	Content Standard Type	NBII MetaMaker Type	NBII MetaMaker Size
----	Contact Information as per Section 10	-	-	-
99.2.7.4	Taxonomic Procedures	Text	Memo	*
99.2.7.5	Taxonomic Completeness	Text	Memo	*
99.2.7.6	Vouchers	Compound	-	-
99.2.7.6.1	Specimen	Text	Text	255
99.2.7.6.2	Repository	Compound	Text	80
----	Contact Information as per Section 10	-	-	-
3	Spatial Data Organization Information	Compound	-	-
3.1	Indirect Spatial Reference	Text	Memo	*
3.2	Direct Spatial Reference Method	Text	Text	255
3.3	Point and Vector Object Information	Compound	-	-
3.3.1	SDTS Terms Description	Compound	-	-
3.3.1.1	SDTS Point and Vector Object Type	Text	Text	255
3.3.1.2	Point and Vector Object Count	Integer	Number (Integer)	2
3.3.2	VPF Terms Description	Compound	-	-
3.3.2.1	VPF Topology Level	Integer	Number (Integer)	2
3.3.2.2	VPF Point and Vector Object Type	Text	Text	55
3.3.1.2	Point and Vector Object Count	Integer	Number (Long)	4
3.4	Raster Object Information	Compound	-	-
3.4.1	Raster Object Type	Text	Text	50
3.4.2	Row Count	Integer	Number (Integer)	2
3.4.3	Column Count	Integer	Number (Integer)	2
3.4.4	Vertical Count	Integer	Number (Integer)	2
4	Spatial Reference Information	Compound	-	-
4.1	Horizontal Coordinate System Definition	Compound	-	-
4.1.1	Geographic	Compound	-	-
4.1.1.1	Latitude Resolution	Real	Number (Double)	8
4.1.1.2	Longitude Resolution	Real	Number (Double)	8
4.1.1.3	Geographic Coordinate Units	Text	Text	50
4.1.2	Planar	Compound	-	-
4.1.2.1	Map Projection	Compound	-	-
4.1.2.1.1	Map Projection Name	Text	Text	50
4.1.2.1.2	map projection parameters for: Albers Conical Equal Area, Azimuthal Equidistant, Equidistant Conic, Equirectangular, General Vertical Near-sided Perspective, Gnomonic, Lambert Azimuthal Equal Area, Lambert Conformal Conic, Mercator, Modified Stereographic for Alaska, Miller Cylindrical, Oblique Mercator, Orthographic, Polar Stereographic, Polyconic, Robinson, Sinusoidal, Space Oblique Mercator (Landsat), Stereographic, Transverse Mercator,	Compound	-	-

Field Number	Field Name	Content Standard Type	NBII MetaMaker Type	NBII MetaMaker Size
	van der Grinten			
4.1.2.1.2.1	Standard Parallel	Real	Number (Double)	8
4.1.2.1.2.2	Longitude of Central Meridian	Real	Number (Double)	8
4.1.2.1.2.3	Latitude of Projection Origin	Real	Number (Double)	8
4.1.2.1.2.4	False Easting	Real	Number (Double)	8
4.1.2.1.2.5	False Northing	Real	Number (Double)	8
4.1.2.1.2.6	Scale Factor at Equator	Real	Number (Double)	8
4.1.2.1.2.7	Height of Perspective Point Above Surface	Real	Number (Double)	8
4.1.2.1.2.8	Longitude of Projection Center	Real	Number (Double)	8
4.1.2.1.2.9	Latitude of Projection Center	Real	Number (Double)	8
4.1.2.1.2.10	Scale Factor at Center Line	Real	Number (Double)	8
4.1.2.1.2.11	Oblique Line Azimuth	Compound	-	-
4.1.2.1.2.11.1	Azimuthal Angle	Real	Number (Double)	8
4.1.2.1.2.11.2	Azimuth Measure Point Longitude	Real	Number (Double)	8
4.1.2.1.2.12	Oblique Line Point	Compound	-	-
4.1.2.1.2.12.1	Oblique Line Latitudes	Real	Number (Double)	8
4.1.2.1.2.12.2	Oblique Line Longitude	Real	Number (Double)	8
4.1.2.1.2.13	Straight Vertical Longitude from Pole	Real	Number (Double)	8
4.1.2.1.2.14	Scale Factor at Projection Origin	Real	Number (Double)	8
4.1.2.1.2.15	Landsat Number	Integer	Number (Integer)	2
4.1.2.1.2.16	Path Number	Integer	Number (Integer)	2
4.1.2.1.2.17	Scale Factor at Central Meridian	Real	Number (Double)	8
4.1.2.1.3	Other Projection's Definition	Text	Memo	*
4.1.2.2	Grid Coordinate System	Compound	-	-
4.1.2.2.1	Grid Coordinate System Name	Text	Text	50
4.1.2.2.2	Universal Transverse Mercator (UTM)	Compound	-	-
4.1.2.2.2.1	UTM Zone Number	Integer	Number (Long)	4
4.1.2.2.3	Universal Polar Stereographic (UPS)	Compound	-	-
4.1.2.2.3.1	UPS Zone Identifier	Text	Text	50
4.1.2.2.4	State Plane Coordinate System (SPCS)	Compound	-	-
4.1.2.2.4.1	SPCS Zone Identifier	Text	Text	255
4.1.2.2.5	ARC Coordinate System	Compound	-	-
4.1.2.2.5.1	ARC System Zone Identifier	Integer	Number (Integer)	2
4.1.2.2.6	Other Grid System's Definition	Text	Text	255
4.1.2.3	Local Planar	Compound	-	-
4.1.2.3.1	Local Planar Description	Text	Text	255
4.1.2.3.2	Local Planar Georeference Information	Text	Text	255
4.1.2.4	Planar Coordinate Information	Compound	-	-
4.1.2.4.1	Planar Coordinate Encoding Method	Text	Text	50
4.1.2.4.2	Coordinate Representation	Compound	-	-
4.1.2.4.2.1	Abscissa Resolution	Real	Number (Double)	8
4.1.2.4.2.2	Ordinate Resolution	Real	Number (Double)	8
4.1.2.4.3	Distance and Bearing Representation	Compound	-	-
4.1.2.4.3.1	Distance Resolution	Real	Number (Double)	8
4.1.2.4.3.2	Bearing Resolution	Real	Number (Double)	8
4.1.2.4.3.3	Bearing Units	Text	Text	50
4.1.2.4.3.4	Bearing Reference Direction	Text	Text	50
4.1.2.4.3.5	Bearing Reference Meridian	Text	Text	50
4.1.2.4.4	Planar Distance Units	Text	Text	50
4.1.3	Local	Compound	-	-
4.1.3.1	Local Description	Text	Text	255
4.1.3.2	Local Georeference Information	Text	Text	255
4.1.4	Geodetic Model	Compound	-	-
4.1.4.1	Horizontal Datum Name	Text	Text	50
4.1.4.2	Ellipsoid Name	Text	Text	50

Field Number	Field Name	Content Standard Type	NBII MetaMaker Type	NBII MetaMaker Size
4.1.4.3	Semi-Major Axis	Real	Number (Double)	8
4.1.4.4	Denominator of Flattening Ratio	Real	Number (Double)	8
4.2	Vertical Coordinate System Definition	Compound	-	-
4.2.1	Altitude System Definition	Compound	-	-
4.2.1.1	Altitude Datum Name	Text	Text	50
4.2.1.2	Altitude Resolution	Real	Number (Double)	8
4.2.1.3	Altitude Distance Units	Text	Text	50
4.2.1.4	Altitude Encoding Method	Text	Text	100
4.2.2	Depth System Definition	Compound	-	-
4.2.2.1	Depth Datum Name	Text	Text	50
4.2.2.2	Depth Resolution	Real	Number (Double)	8
4.2.2.3	Depth Distance Units	Text	Text	50
4.2.2.4	Depth Encoding Method	Text	Text	75
5	Entity and Attribute Information	Compound	-	-
5.1	Detailed Description	Compound	-	-
5.1.1	Entity Type	Compound	-	-
5.1.1.1	Entity Type Label	Text	Text	250
5.1.1.2	Entity Type Definition	Text	Memo	*
5.1.1.3	Entity Type Definition Source	Text	Text	250
5.1.2	Attribute	Compound	-	-
5.1.2.1	Attribute Label	Text	Text	250
5.1.2.2	Attribute Definition	Text	Memo	*
5.1.2.3	Attribute Definition Source	Text	Memo	*
5.1.2.4	Attribute Domain Values	Compound	-	-
5.1.2.4.1	Enumerated Domain	Compound	-	-
5.1.2.4.1.1	Enumerated Domain Value	Text	Text	50
5.1.2.4.1.2	Enumerated Domain Value Definition	Text	Text	255
5.1.2.4.1.3	Enumerated Domain Value Definition Source	Text	Text	50
5.1.2.4.2	Range Domain	Compound	-	-
5.1.2.4.2.1	Range Domain Minimum	Text	Text	50
5.1.2.4.2.2	Range Domain Maximum	Text	Text	50
5.1.2.4.3	Codeset Domain	Compound	-	-
5.1.2.4.3.1	Codeset Name	Text	Text	50
5.1.2.4.3.2	Codeset Source	Text	Text	255
5.1.2.4.4	Unrepresentable Domain	Text	Text	250
5.1.2.5	Attribute Units of Measure	Text	Text	50
5.1.2.6	Attribute Measurement Resolution	Real	Number (Double)	8
5.1.2.7	Beginning Date of Attribute Values	Date	Text	50
5.1.2.8	Ending Date of Attribute Values	Date	Text	50
5.1.2.9	Attribute Value Accuracy Information	Compound	-	-
5.1.2.9.1	Attribute Value Accuracy	Real	Text	255
5.1.2.9.2	Attribute Value Accuracy Explanation	Text	Text	255
5.1.2.10	Attribute Measurement Frequency	Real	Text	50
5.2	Overview Description	Compound	-	-
5.2.1	Entity and Attribute Overview	Text	Memo	*
5.2.2	Entity and Attribute Detail Citation	Text	Memo	*
6	Distribution Information	Compound	-	-
6.1	Distributor	Compound	Text	80
-----	Contact Information as per Section 10	-	-	-
6.2	Resource Description	Text	Text	255
6.3	Distribution Liability	Text	Text	80/Memo
6.4	Standard Order Process	Compound	-	-
6.4.1	Non-digital Form	Text	Text	255

Field Number	Field Name	Content Standard Type	NBII MetaMaker Type	NBII MetaMaker Size
6.4.2	Digital Form	Compound	-	-
6.4.2.1	Digital Transfer Information	Compound	-	-
6.4.2.1.1	Format Name	Text	Text	255
6.4.2.1.2	Format Version Number	Text	Text	255
6.4.2.1.3	Format Version Date	Date	Text	255
6.4.2.1.4	Format Specification	Text	Text	255
6.4.2.1.5	Format Information Content	Text	Text	255
6.4.2.1.6	File Decompression Technique	Text	Text	255
6.4.2.1.7	Transfer Size	Real	Number (Double)	8
6.4.2.2	Digital Transfer Option	Compound	-	-
6.4.2.2.1	Online Option	Compound	-	-
6.4.2.2.1.1	Computer Contact Information	Compound	-	-
6.4.2.2.1.1.1	Network Address	Compound	-	-
6.4.2.2.1.1.1.1	Network Resource Name	Text	Text	255
6.4.2.2.1.1.2	Dialup Instructions	Compound	-	-
6.4.2.2.1.1.2.1	Lowest BPS	Integer	Number (Integer)	2
6.4.2.2.1.1.2.2	Highest BPS	Integer	Number (Integer)	2
6.4.2.2.1.1.2.3	Number DataBits	Integer	Number (Integer)	2
6.4.2.2.1.1.2.4	Number StopBits	Integer	Number (Integer)	2
6.4.2.2.1.1.2.5	Parity	Text	Text	10
6.4.2.2.1.1.2.6	Compression Support	Text	Text	255
6.4.2.2.1.1.2.7	Dialup Telephone	Text	Text	255
6.4.2.2.1.1.2.8	Dialup Filename	Text	Text	255
6.4.2.2.1.2	Access Instructions	Text	Text	255
6.4.2.2.1.3	Online Computer and Operating System	Text	Text	255
6.4.2.2.2	Offline Option	Compound	-	-
6.4.2.2.2.1	Offline Media	Text	Text	255
6.4.2.2.2.2	Recording Capacity	Compound	-	-
6.4.2.2.2.2.1	Recording Density	Real	Text	50
6.4.2.2.2.2.2	Recording Density Units	Text	Text	255
6.4.2.2.2.3	Recording Format	Text	Text	255
6.4.2.2.2.4	Compatibility Information	Text	Text	255
6.4.3	Fees	Text	Memo	*
6.4.4	Ordering Instructions	Text	Text	255
6.4.5	Turnaround	Text	Text	255
6.5	Custom Order Process	Text	Memo	*
6.6	Technical Prerequisites	Text	Text	255
6.7	Available Time Period	Compound	Text	80
-----	Time Period Information as per Section 9	-	-	-
7	Metadata Reference Information	Compound	-	-
7.1	Metadata Date	Date	Text	255
7.2	Metadata Review Date	Date	Text	255
7.3	Metadata Future Review Date	Date	Text	255
7.4	Metadata Contact	Compound	Text	80
-----	Contact Information as per Section 10	-	-	-
7.5	Metadata Standard Name	Text	Text	255
7.6	Metadata Standard Version	Text	Text	255
7.7	Metadata Time Convention	Text	Text	50
7.8	Metadata Access Constraints	Text	Memo	*
7.9	Metadata Use Constraints	Text	Memo	*
7.10	Metadata Security Information	Compound	-	-
7.10.1	Metadata Security Classification System	Text	Memo	*
7.10.2	Metadata Security Classification	Text	Memo	*
7.10.3	Metadata Security Handling Description	Text	Memo	*

Field Number	Field Name	Content Standard Type	NBII MetaMaker Type	NBII MetaMaker Size
-	Citation Information (Section 8) Record Name	-	Text	80
8	Citation Information	Compound	-	-
8.1	Originator	Text	Text	250
8.2	Publication Date	Date	Text	255
8.3	Publication Time	Time	Text	50
8.4	Title	text	Memo	*
8.5	Edition	Text	Text	50
8.6	Geospatial Data Presentation Form	Text	Text	255
8.7	Series Information	Compound	-	-
8.7.1	Series Name	Text	Text	255
8.7.2	Issue Identification	Text	Text	255
8.8	Publication Information	Compound	-	-
8.8.1	Publication Place	Text	Memo	*
8.8.2	Publisher	Text	Memo	*
8.9	Other Citation Details	Text	Memo	*
8.10	Online Linkage	Text	Text	255
8.11	Larger Work Citation	Compound	Text	80
-----	Citation Information as per Section 8 - cyclical	-	-	-
-	Time Period Information (Section 9) Record Name	-	Text	80
9	Time Period Information	Compound	-	-
9.1	Single Date and Time	Compound	-	-
9.1.1	Calendar Date	Date	Text	50
9.1.2	Time of Day	Time	Text	50
9.2	Multiple Dates/Times	Compound	-	-
9.1.1	Calendar Date	Date	Text	50
9.1.2	Time of Day	Time	Text	50
9.3	Range of Dates/Times	Compound	-	-
9.3.1	Beginning Date	Date	Text	50
9.3.2	Beginning Time	Time	Text	50
9.3.3	Ending Date	Date	Text	50
9.3.4	Ending Time	Time	Text	50
-	Contact Information (Section 10) Record Name	-	Text	80
10	Contact Information	Compound	-	-
10.1	Contact Person Primary	Compound	-	-
10.1.1	Contact Person	Text	Text	255
10.1.2	Contact Organization	Text	Text	255
10.2	Contact Organization Primary	Compound	-	-
10.1.2	Contact Organization	Text	Text	255
10.1.1	Contact Person	Text	Text	255
10.3	Contact Position	Text	Text	255
10.4	Contact Address	Compound	-	-
10.4.1	Address Type	Text	Text	255
10.4.2	Address	Text	Text	255
10.4.3	City	Text	Text	50
10.4.4	State or Province	Text	Text	50
10.4.5	Postal Code	Text	Text	50
10.4.6	Country	Text	Text	50
10.5	Contact Voice Telephone	Text	Text	50
10.6	Contact TDD/TTY Telephone	Text	Text	50
10.7	Contact Facsimile Telephone	Text	Text	20

Field Number	Field Name	Content Standard Type	NBII MetaMaker Type	NBII MetaMaker Size
10.8	Contact Electronic Mail Address	Text	Text	255
10.9	Hours of Service	Text	Text	255
10.10	Contact Instructions	Text	Text	255

Note: Underlined items:

The Content Standards do not follow "standard" outline formatting. Numbers that appear to be out of order or duplicated, but which follow the Standards, are underlined.

Shaded items:

Shaded areas indicate where an entire Section 8, 9, or 10 record should be inserted.

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