

# Incorporating NCED data into Biotics

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## National Conservation Easement Database (NCED): Background information

### What is the NCED?

<http://www.conservationaleasement.us/>

<http://nced.conservatory.org/>

[http://nced.conservatory.org/pdf/NCED\\_Users\\_Guide\\_6\\_8\\_2011.pdf](http://nced.conservatory.org/pdf/NCED_Users_Guide_6_8_2011.pdf)

The National Conservation Easement Database (NCED) is the first national database of conservation easement information, compiling records from land trusts and public agencies throughout the United States. Voluntary and secure, the NCED respects landowner privacy and does not collect landowner names or sensitive information. This public-private partnership brings together national conservation groups, local and regional land trusts, and state and federal agencies around a common objective. The NCED provides a comprehensive picture of the estimated 40 million acres of privately-owned conservation easement lands, recognizing their contribution to America's natural heritage, a vibrant economy, and healthy communities.

### Purpose

In collaboration with land trusts and public agencies, create a single, up-to-date, sustainable nationwide system for managing and accessing data about conservation easements.

### Who?

The U.S. Endowment for Forestry and Communities, with generous support from the Gaylord and Dorothy Donnelly Foundation, is providing the funding for the project to five leading conservation organizations, including: Conservation Biology Institute, Defenders of Wildlife, Ducks Unlimited, NatureServe, and The Trust for Public Land. Three federal agencies - the U.S. Fish & Wildlife Service, U.S. Department of Agriculture's Natural Resources Conservation Service, and the U.S. Forest Service - are sponsors of the effort and are partnering with the Endowment in support of the national database. Other key sponsors include The Nature Conservancy and the Land Trust Alliance.

### Obtaining NCED data

The NCED Easement data is available for download as both shapefiles and as a geodatabase on the [NCED Data Download page](#), however for the purpose of this exercise, **download the data as a geodatabase**. You can download either the national dataset or the data for a particular region:

[http://nced.conservatory.org/easements/download\\_data](http://nced.conservatory.org/easements/download_data)

See [Appendix I](#) for the NCED Data Dictionary.

Extract the zipped geodatabase file to C:\TEMP.

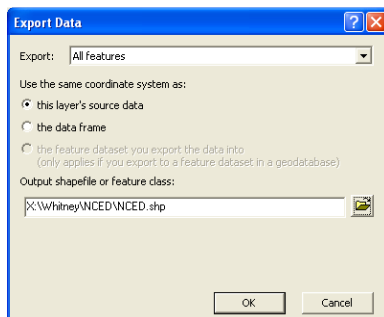
Download the necessary scripts, MS Access database, etc. from the [Biotics Trainings & Clinics](#) web page under the Materials section for the Support Clinic hosted on Aug 3, 2011. Alternatively, it can be downloaded from the [NatureServe transfer site](#).

## Export Data from Geodatabase

Both the spatial data and tabular data will be exported for separate import processes into Biotics. Because .dbf tables truncate data to 255 characters per field, we'll export the tabular data to a text file rather than use it from the shapefile's .dbf file.

### Export Spatial Data

1. In ArcMap, right select your NCED geodatabase within the table of contents (assuming it has been added to the view).
2. Right click on the geodatabase and choose **Data - Export Data**.
3. Navigate to where you would like to save the shapefile and name it appropriately (e.g. X:\Whitney\NCED\NCED.shp).

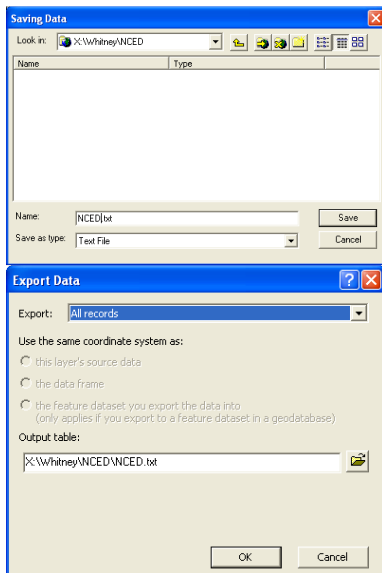


### Export Tabular Data

4. Right click on the geodatabase and choose **Open Attribute Table**.
5. Within the attribute table choose **Options** and **Export**

OBJECTID	Unique ID	Security	Sitename	Easement Holder
1	1	No - Not sensitive	SE Mass Ekoreserve	MA Department of Fish and Game
2	2	No - Not sensitive	Pitman Farm	MA Department of Agricultural Resources
3	3	No - Not sensitive	Haws Cr	Richmond Land Trust
4	4	No - Not sensitive		Berkshire Natural Resources Council, Inc.
5	5	No - Not sensitive	Kotsoi	Berkshire Natural Resources Council, Inc.
6	6	No - Not sensitive	Windy Ridge Farm	MA Department of Agricultural Resources
7	7	No - Not sensitive	Burnett Farm	MA Department of Agricultural Resources
8	8	No - Not sensitive	Tarnauskas	MA Department of Agricultural Resources
9	9	No - Not sensitive		Valley Land Fund
10	10	No - Not sensitive	High Ridge Farm Cr	The Trustees of Reservations
11	11	No - Not sensitive		City of Northampton Conservation Commis
12	12	No - Not sensitive	Shearer	MA Department of Agricultural Resources
13	13	No - Not sensitive	Devine Farms	MA Department of Agricultural Resources
14	14	No - Not sensitive	Kotsoi	MA Department of Agricultural Resources
15	15	No - Not sensitive	Connecticut River Greenway SP	MA DCR - Division of State Parks and Recre
16	16	No - Not sensitive	Meink	MA Department of Agricultural Resources
17	17	No - Not sensitive	Meink	MA Department of Agricultural Resources
18	18	No - Not sensitive	Ludlow Reservoir WCE	
19	19	No - Not sensitive	Fiske Pond Conservation Area	
20	20	No - Not sensitive	Magnolia Pipeline Cr	
21	21	No - Not sensitive	Murphy Farm	
22	22	No - Not sensitive	Drake CR	
23	23	No - Not sensitive	Royalston State Forest	
24	24	No - Not sensitive	Tully River Access	
25	25	No - Not sensitive	Robinson Farm	
26	26	No - Not sensitive	Birch Hill WMA	
27	27	No - Not sensitive		
28	28	No - Not sensitive	Kullira Farm	
29	29	No - Not sensitive	Hitchcock Mountain WCE	
30	30	No - Not sensitive	Adams Farm	
31	31	No - Not sensitive	Hubbardston WMA	
32	32	No - Not sensitive	Hubbardston WMA	
33	33	No - Not sensitive	Kallgren	
34	34	No - Not sensitive	Hubbard	
35	35	No - Not sensitive	Maynard Farm	
36	36	No - Not sensitive	Cascades East	
37	37	No - Not sensitive		
38	38	No - Not sensitive	Ball Property	
39	39	No - Not sensitive		
40	40	No - Not sensitive	Muller Cr	
41	41	No - Not sensitive	Hopping Brook	
42	42	No - Not sensitive	Chestnut Woods	
43	43	No - Not sensitive	Arrowhead CR	

- Navigate to where you would like to save the tabular data and name it appropriately (e.g. X:\Whitney\NCED\NCED.txt), making sure to select **Text File** from the "Save as type" dropdown list.



## Create NCED table in Biotics

The NCED data will be imported into some existing Managed Area fields but many additional fields were required to accommodate the data. Therefore the remaining data will be imported into an extensible table which will be created with the MA\_EXT\_NCED.sql script. The script will write a log file to the C:\temp directory so make sure one exists and you have write access to it!

- Log into SQLPlus as the biotics\_user.
- Run the MA\_EXT\_NCED.sql script.

```
C:\WINDOWS\system32\cmd.exe - sqlplus
Microsoft Windows XP [Version 5.1.2600]
Copyright 1985-2001 Microsoft Corp.
T:\>sqlplus
SQL*Plus: Release 10.2.0.2.0 - Production on Mon May 2 12:06:37 2011
Copyright (c) 1982, 2005, Oracle. All Rights Reserved.
Enter user-name: biotics_user/zooboteco
Connected to:
Oracle Database 10g Release 10.2.0.2.0 - Production
SQL> @X:\Whitney\NCED\MA_EXT_NCED.sql_
```

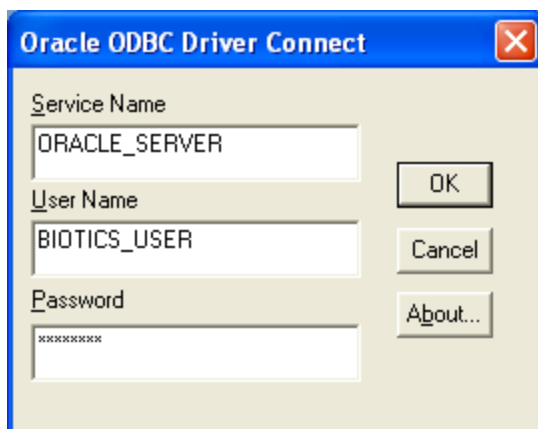
3. Review the log file (C:\temp\MA\_EXT\_NCED.log) for errors by searching for ORA-. Ignore any of the following error: “ERROR at line 1: ORA-00942: table or view does not exist”.
4. If you receive additional errors, submit an issue to the [Biotics Help Desk](#) with the subject line “NCED”. Attach the MA\_EXT\_NCED.log file to the issue.
5. Do not exit SQLPlus as we will be using it again later.

## Import Tabular Data into NCED Extensible table in Biotics

The following instructions assume that you want to import ALL of the data from NCED into Biotics, however, some of the data may already be represented in Biotics (perhaps indicated as such by a Managed Area code (i.e. M.USFLHP\*xxxx) within the Origuid field. Any such records which already exist in Biotics should be not be included in the data to be loaded in Biotics, to avoid duplications.

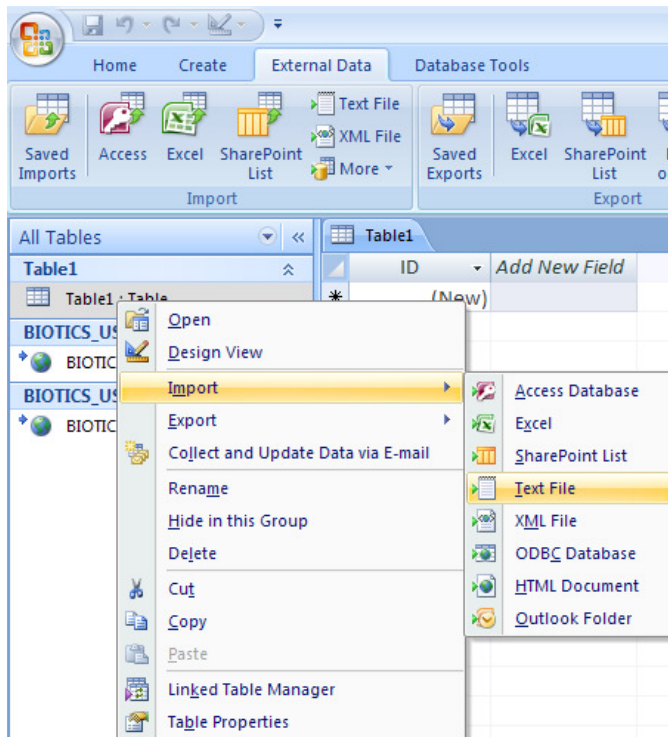
## Connect to your Biotics database

1. Double-click NCED.accdb found within C:\Temp\NCED to open the NCED Access database .
2. If within the Access database you receive a Security Warning stating that certain content has been disabled, click **Options** and choose to **Enable this Content**.
3. Under the BIOTICS\_USER\_MANAGED\_AREA\_OWNER section, double-click BIOTICS\_USER\_MANAGED\_AREA\_OWNER to connect to the data within your Biotics Oracle database.
4. Within the Oracle ODBC Driver window, enter the appropriate Service Name, User Name, and Password to connect to your Biotics database and click **OK**.

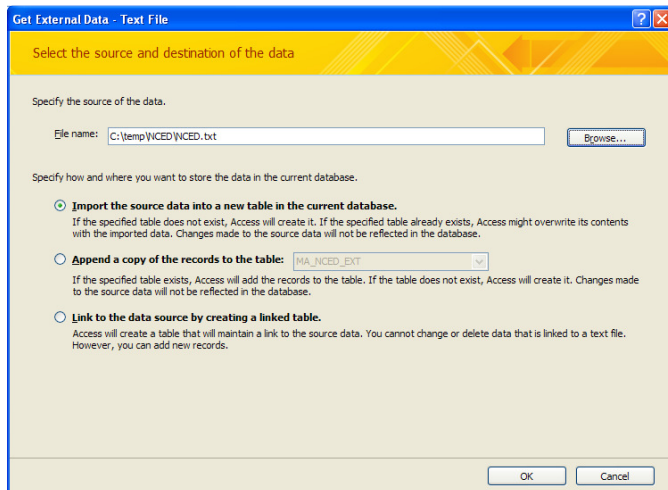


## Import NCED tabular data into Access

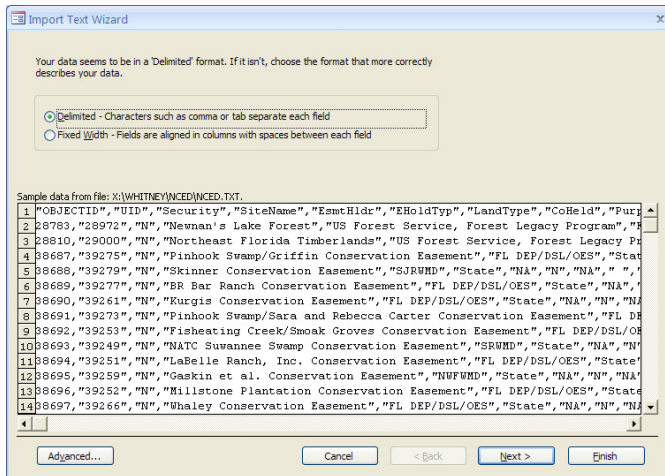
1. Right click on **NCED : Table** and choose **Import – Text File**.



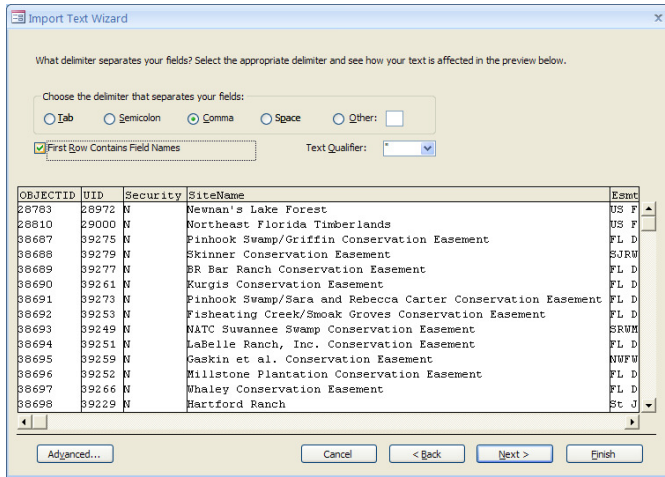
2. Within the *Get External Data – Text File* dialog, navigate to where you saved the tabular data you exported from the attribute table in ArcMap (e.g. C:\Temp\NCED\NCED.txt) and click **OK**. Because the data will be entered into multiple tables, we can't append it directly at this point.



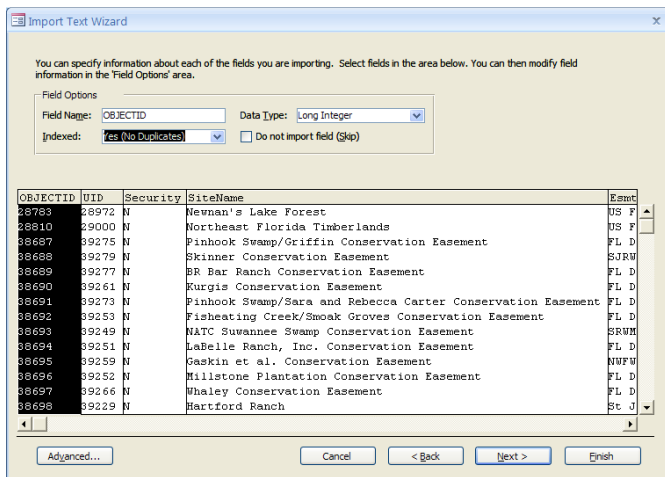
3. Within the *Import Text Wizard* accept the default of **Delimited** and click **Next**.



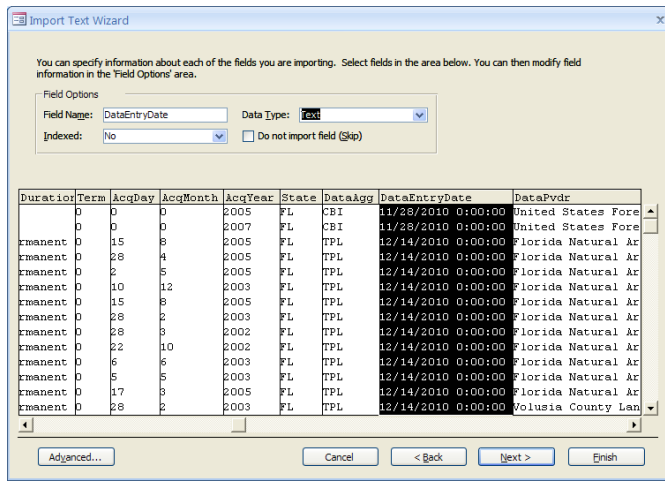
- Maintain **Comma** as the delimiter and make sure to indicate **First Row Contains Field Names** prior to clicking **Next**.



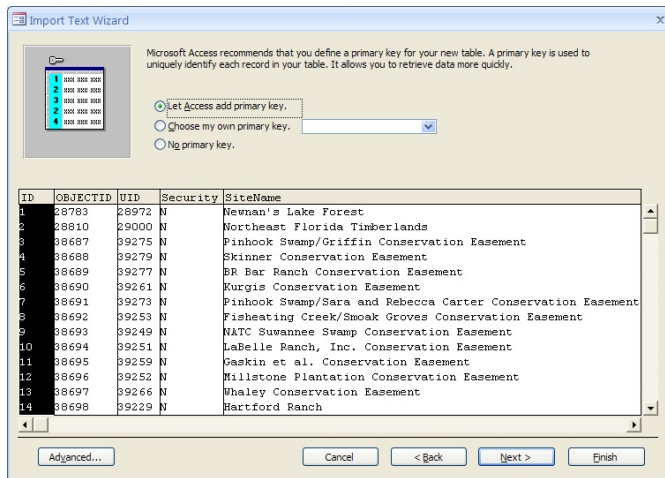
- From the dropdown list of the Indexed field for the **OBJECT\_ID** field name, select **Yes (No Duplicates)**.



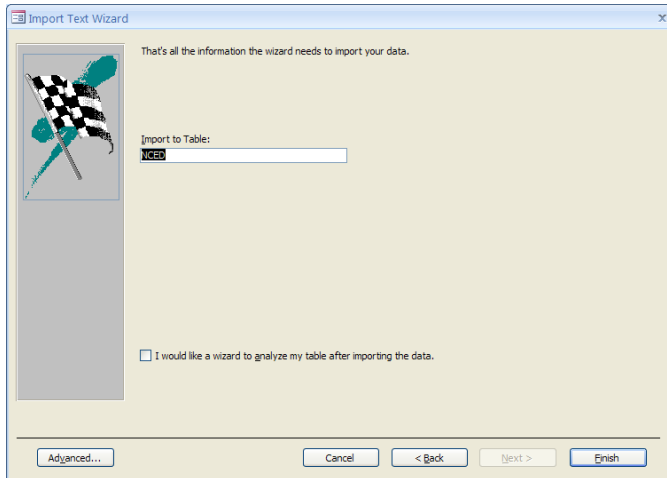
6. Scroll to the right until you find the **DataEntry** field. Select it and change the Data Type to **Text**. Failing to do so will result in import errors as Access doesn't recognize the date/time format in the data set. Click **Next**.



7. Accept the default of **Let Access add primary key** and click **Next**.



8. Name the table **NCED** and click **Finish**. Failing to name it exactly will result in the automated query failing.



## Transfer data from Access to Biotics

1. Under the “NCED” heading, double-click the **Populate CoHeld** query which will populate any null values in the CoHeld field to ‘N’. This is required for a boolean field.
2. Under the “Unrelated Objects” heading, double-click the **NCED to BIOTICS\_USER\_NCED Query** which will export the data from the NCED table in Access to the NCED table in Biotics (i.e. BIOTICS\_USER\_NCED).
3. Return to SQLPlus (should still be logged in as the biotics\_user) and run the incongruous\_data\_values.sql script found within C:\Temp\NCED.

```

C:\WINDOWS\system32\cmd.exe - sqlplus
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

T:\Whitney_Weber>sqlplus

SQL*Plus: Release 10.2.0.2.0 - Production on Wed May 25 15:33:37 2011
Copyright (c) 1982, 2005, Oracle. All Rights Reserved.

Enter user-name: biotics_user/zooboteco@oracle_server

Connected to:
Oracle Database 10g Release 10.2.0.2.0 - Production


SQL> @C:\TEMP\NCED\INCONGRUOUS_DATA_VALUES.SQL_

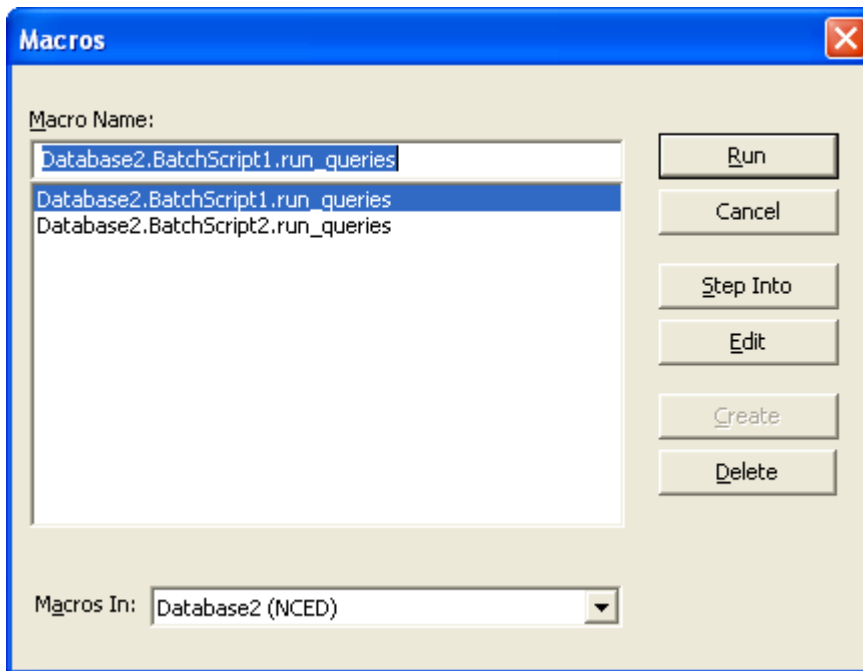
```

4. Open the resulting log file **INCONGRUOUS\_DATA\_VALUES.log** found in the C:\TEMP\NCED directory. The file reports any values within your NCED data which do not align with the values within the corresponding domain tables.
5. Edit the NCED.sql script in NotePad (or WordPad or...) and add to the UPDATE statements to accommodate for all of the incongruous data values, assigning the appropriate ID value. Failing to do so will result in the value not being imported.

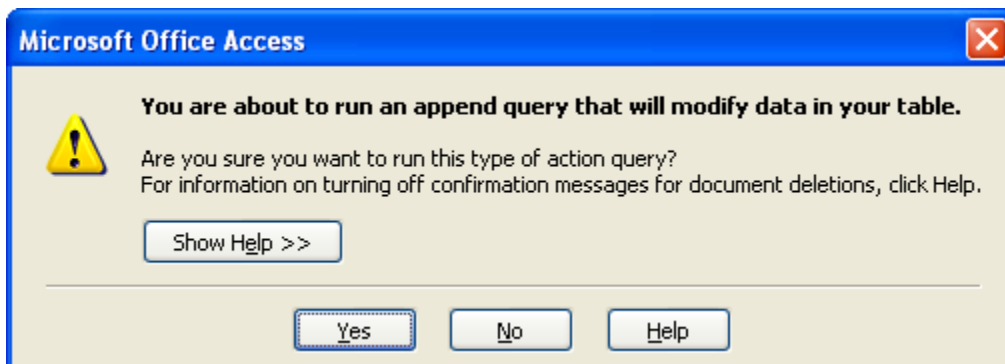


For example, if you have a value of LandType='NGO', select the D\_OWNER\_TYPE\_ID (33) which corresponds to 'Non-Governmental Organization'. You can find the appropriate ID value by looking at the D\_OWNER\_TYPE table via Tracker's Query Builder.

6. Once you have updated the **NCED.sql** script as necessary, run it in SQLPlus. This script will assign domain IDs for the corresponding tabular data.
7. In Microsoft Access, under the Unrelated Objects section, double-click the **BatchScript1** to open it.
8. Within Microsoft Visual Basic – NCED, click the  icon to run BatchScript1.
9. In the Macros window, click **Run** which will run a number of queries to populate the SHAPE and NCED tables.




10. Reply **Yes** when prompted six (?) times regarding appending data to your table. **NOTE:** This will take a while to run and may appear as though it's done but will then come up with another hourglass indicating that it's still working. It has finished once the BIOTICS\_USER\_NCED No Name Query table has opened.

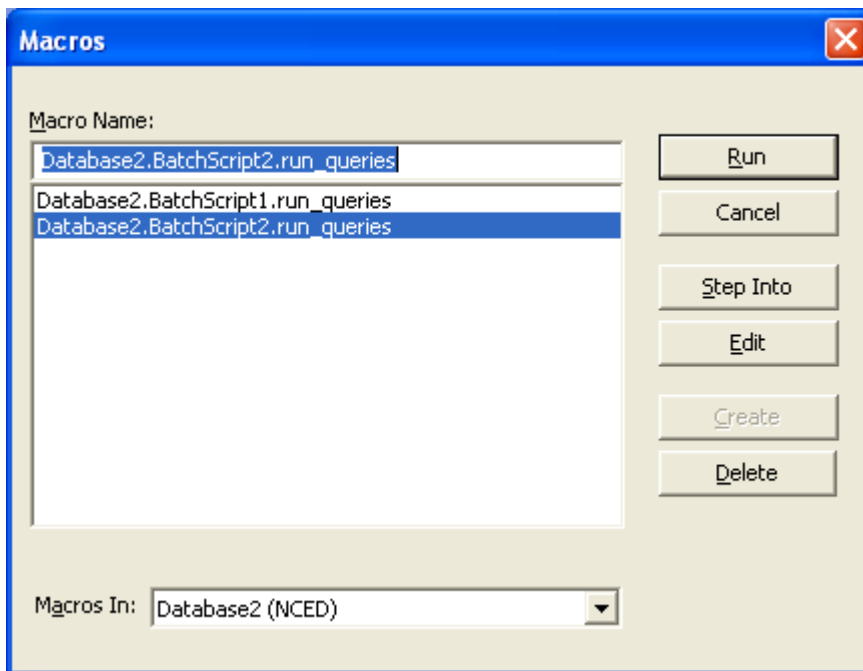


11. Once the BIOTICS\_USER\_NCED No Name Query table has opened , close the Microsoft Visual Basic – NCED window.
12. BatchScript1 runs a query (**BIOTICS\_USER\_NCED No Name Query**) to identify which records do not have an easement name. These records need to be given names in the **SiteName** field prior to continuing with step 8 or they will not be inserted into the MA table, as name is a required field.
13. Under the BIOTICS\_USER\_NCED section, double-click the **BIOTICS\_USER\_NCED to BIOTICS\_USER\_MA Query**. Respond **Yes** when prompted to append the data.
14. In SQLPlus while logged in as the biotics\_user, run the following statements:

**Update nced set managed\_area\_id = (select managed\_area\_id from ma where rec\_create\_user='NCED' and ma.shape\_id=nced.shape\_id);**

**Commit;**

15. In Microsoft Access, under the Unrelated Objects section, double-click the **BatchScript2** which will run queries to populate the MA\_EXT\_NCED and MANAGED\_AREA\_OWNER tables.
16. Within Microsoft Visual Basic – NCED, click the  icon to run BatchScript1.
17. In the Macros window select **Database2.BatchScript2.run\_queries** and click **Run**.



18. Reply **Yes** when prompted four (?) times regarding appending data to your table.

The tabular data has now been populated in Tracker. At this point we'll link the spatial data from NCED.shp to the tabular records.

## Extend Tracker to Accommodate NCED Data

### Create Extensible Tab in Tracker

Just as an FYI, Administrator aborted multiple times during the creation of these extensible tabs, which resulted in inefficiency to say the least. Whether this is due to the number of fields on the tabs or an issue with my computer, I don't know. Regardless, creating the extensible tabs in the following manner will enable you to avoid such pitfalls:

- Fill out the first (Object) section
  - Within the Table Column information, fill complete the configuration for the first 3 fields, then uncheck 'Visible' for the remaining fields. Failing to do so will require you to label them all prior to saving. Click OK to save the changes.
  - Edit the tab to continue, labeling and making visible all but the fields which utilize a ComboBox (domain attributes). Click OK to save changes.
  - Edit the tab and configure the remaining (domain) attributes which utilize a ComboBox and make them visible.
1. In the Biotics Administrator, create extensible tabs according to directions within section 8.4 (Configure Dynamic Tabs) of the [Biotics 4.0 Installation, Configuration, and Administration Guide](#).
    - a. Create extensible tab for MA\_EXT\_NCED as shown below:

**Dynamic Tab Manager - Edit**

**Dynamic Tab Manager**

Object

Name: MA\_EXT\_NCED

Description: MA\_EXT\_NCED

Table Name: MA\_EXT\_NCED

Window to extend: Managed Area

Tab Caption: Easement Data

Is Grid Layout?

Table Column Information

Seq Order	Column Name	Column Type	Size
1	MA_EXT_NCED_ID	NUMBER	27
2	NCED_ID	NUMBER	27
3	MANAGED_AREA_ID	NUMBER	27
4	SECURITY	CHAR	1
5	US_ID	NUMBER	27
6	D_CATEGORY_ID	NUMBER	27

Note: To rearrange rows, hold down the shift-key and drag row to new position or use the Arrow Buttons on the right hand side of the grid.

Extended attributes for MA\_EXT\_NCED\_ID

Control Type: TextBox

Label Text:

Primary Key  Foreign Key from Extensible Table  Visible

OK Cancel Help

Column Name	Control Type	Label Text	Primary Key	Foreign Key	Visible	Domain Table	Data Column	Display Column	Display Width
MA_EXT_NCED_ID			X						
NCED_ID	TextBox	NCED ID			x				
MANAGED_AREA_ID				X					
US_ID	TextBox	Unique ID (USGS)			x				
D_CATEGORY_ID	ComboBox	Category			x	D_CATEGORY	D_CATEGORY_ID	DISPLAY_VALUE	15
D_P_DES_TP_ID	ComboBox	Primary Designation Type			x	D_P_DES_TP	D_P_DES_TP_ID	DISPLAY_VALUE	100
P_LOC_DS	TextBox	Primary Local Designation Type			x				
D_SEC_DES_TP_ID	ComboBox	Secondary Designation Type			x	D_SEC_DES_TP	D_SEC_DES_TP_ID	DISPLAY_VALUE	100
S_LOC_DS	TextBox	Secondary Local Designation Type			x				
S_DES_NM	TextBox	Secondary Designation Name			x				
S_LOC_NM	TextBox	Secondary Local Name			x				
D_STATUS_ID	ComboBox	Status			x	D_STATUS	D_STATUS_ID	DISPLAY_VALUE	100
D_STATE_NM_ID	ComboBox	State Name			x	D_STATE_NM	D_STATE_NM_ID	DISPLAY_VALUE	15
WDPA_CD	TextBox	WDPA Site Code			x				
D_GAP_STS_ID	ComboBox	GAP Status Code			x	D_GAP_STS	D_GAP_STS_ID	DISPLAY_VALUE	100
D_IUCN_CAT_ID	ComboBox	IUCN Category			x	D_IUCN_CAT	D_IUCN_CAT_ID	DISPLAY_VALUE	100
GAPCDSRC	TextBox	GAP Status Code Source			x				
GAPCDDT	Date Control	GAP Status Code Date			x				
AGG_SRC	TextBox	Aggregator Source (Data Aggregator)			x				
GIS_SRC	TextBox	GIS Source (Data Source)			x				
GLOBALID	TextBox	Global ID (USGS)			x				
REC_CREATE_DATE	Date Control								

- b. Create extensible tab for MA\_EXT\_NCED\_CBI as shown below:

**Dynamic Tab Manager - Edit**

### Dynamic Tab Manager

Object

Name: MA\_EXT\_NCED\_CBI

Description: MA\_EXT\_NCED\_CBI

Table Name: MA\_EXT\_NCED\_CBI

Window to extend: Managed Area

Tab Caption: Easement Data, cont'd

Is Grid Layout?

Table Column Information

Seq Order	Column Name	Column Type	Size
1	MA_EXT_NCED_CBI_ID	NUMBER	27
2	NCED_ID	NUMBER	27
3	MANAGED_AREA_ID	NUMBER	27
4	SECURITY	CHAR	1
5	ORIGINAL_UID	VARCHAR2	50
6	ESMT_HLDR	VARCHAR2	100

Note: To rearrange rows, hold down the shift-key and drag row to new position or use the Arrow Buttons on the right hand side of the grid.

Extended attributes for MA\_EXT\_NCED\_CBI\_ID

Control Type: TextBox

Label Text:

Primary Key  Foreign Key from Extensible Table  Visible

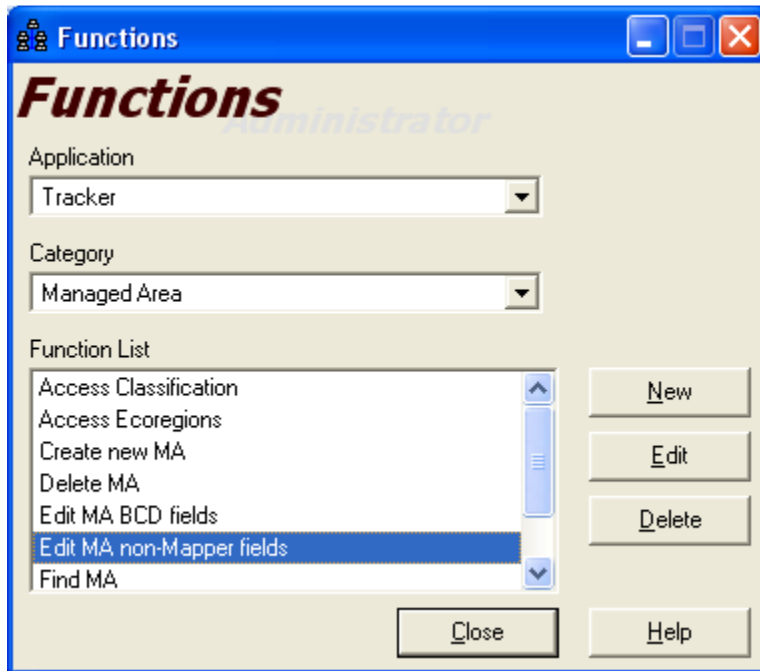
OK Cancel Help


Column Name	Control Type	Label Text	Primary Key	Foreign Key	Visible	Domain Table	Data Column	Display Column	Display Width
MA_EXT_NCED_ID			X						
NCED_ID	TextBox	NCED ID			x				
MANAGED_AREA_ID				X					
SECURITY	CheckBox	Security			x				
ORIGINAL_UID	TextBox	Unique ID (CBI)			x				
ESMT_HLDR	TextBox	Easement Holder			x				
D_ESMT_HLDR_TYPE_ID	ComboBox	Easement Holder Type			x	D_ESMT_HLDR_TYPE	D_ESMT_HLDR_TYPE_ID	DISPLAY_VALUE	100
COHELD	CheckBox	CoHeld			x				
D_DURATION_NCED_ID	ComboBox	Duration			x	D_DURATION_NCED	D_DURATION_NCED_ID	DISPLAY_VALUE	15
TERM	TextBox	Term			x				
ACQ_DAY	TextBox	Acquisition Day			x				
ACQ_MONTH	TextBox	Acquisition Month			x				
ACQ_YEAR	TextBox	Acquisition Year			x				
DATAPROVIDER	TextBox	Data Provider			x				
D_BOUND_CONF_ID	ComboBox	Boundary Confidence			x	D_BOUND_CONF	D_BOUND_CONF_ID	DISPLAY_VALUE	75
D_PURPOSE_ID	ComboBox	Purpose			x	D_PURPOSE	D_PURPOSE_ID	DISPLAY_VALUE	25
REPORTED_AREA	TextBox	Reported Area			x				
REC_CREATE_DATE	Date								

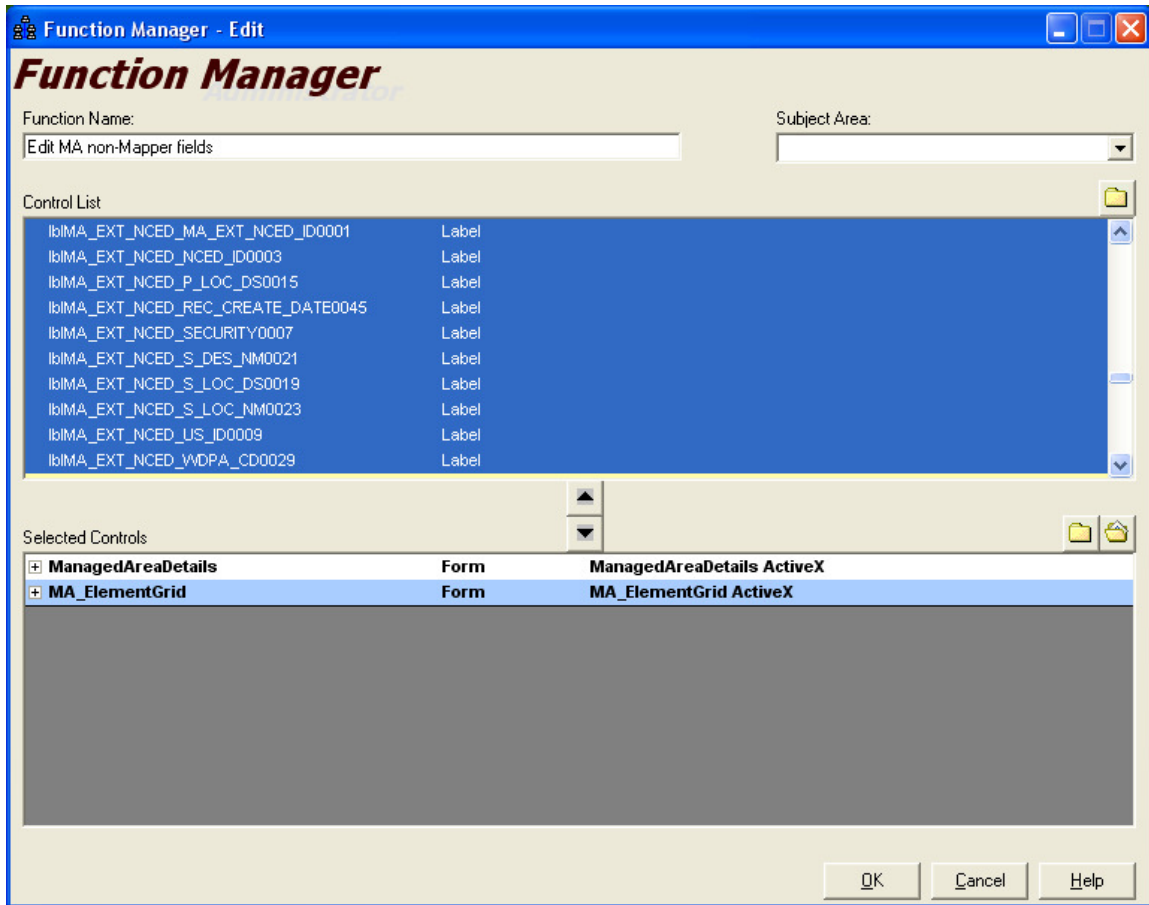
## Set Security for new Extensible Tabs

See Section 8.5 (Security for Dynamic Tabs) of the [Biotics 4.0 Installation, Configuration, and Administration Guide](#).

1. Within Biotics Administrator, double-click **Functions**.
2. Complete the Functions window as displayed below and click **Edit**



3. Within the Control List section of the Function Manager, expand **ManagedAreaDetails**.
4. Select all references to MA\_EXT\_NCED\_ and MA\_EXT\_NCED\_CBI and hit the  icon to add them to the Selected Controls. **NOTE:** These should be easy to find due to the all caps. Each tab has three sets of controls: Control Types, Lables, and Picture Box, so make sure to scroll all the way through ManagedAreaDetails and select them all.



5. Click **OK** and **Close** the Functions window.
6. **Exit** Biotics Administrator. The two tabs should now be editable in Tracker.

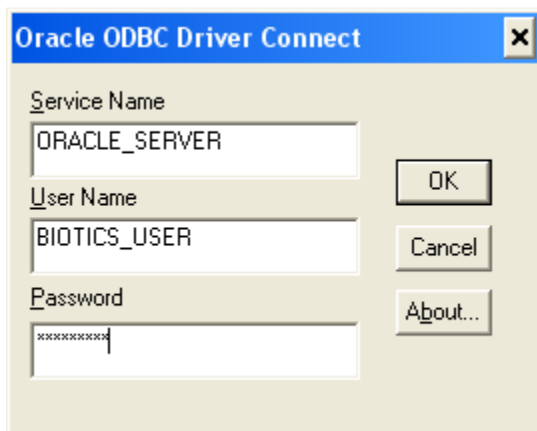
## Import Spatial Data in Mapper

1. In Mapper, close the View window by clicking on the x in the right hand corner (not the uppermost x, as this will close Mapper)
2. In the ArcView project window, from the 'Project' menu, choose 'SQL Connect'

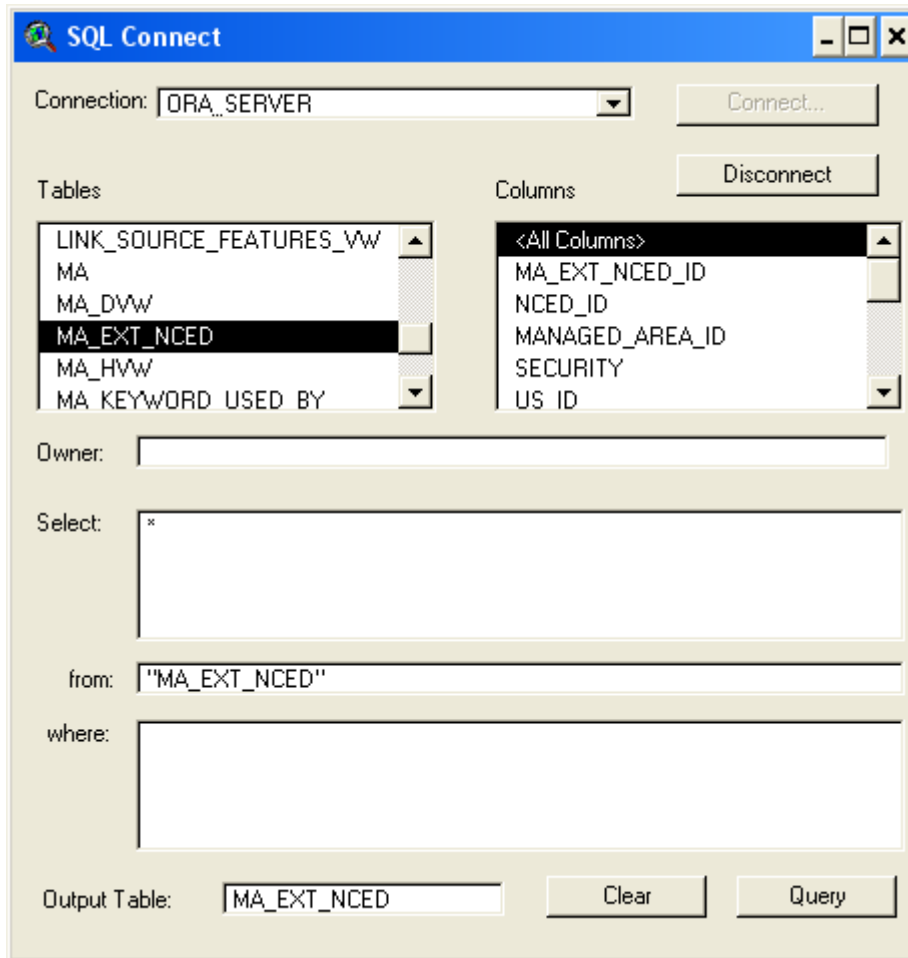




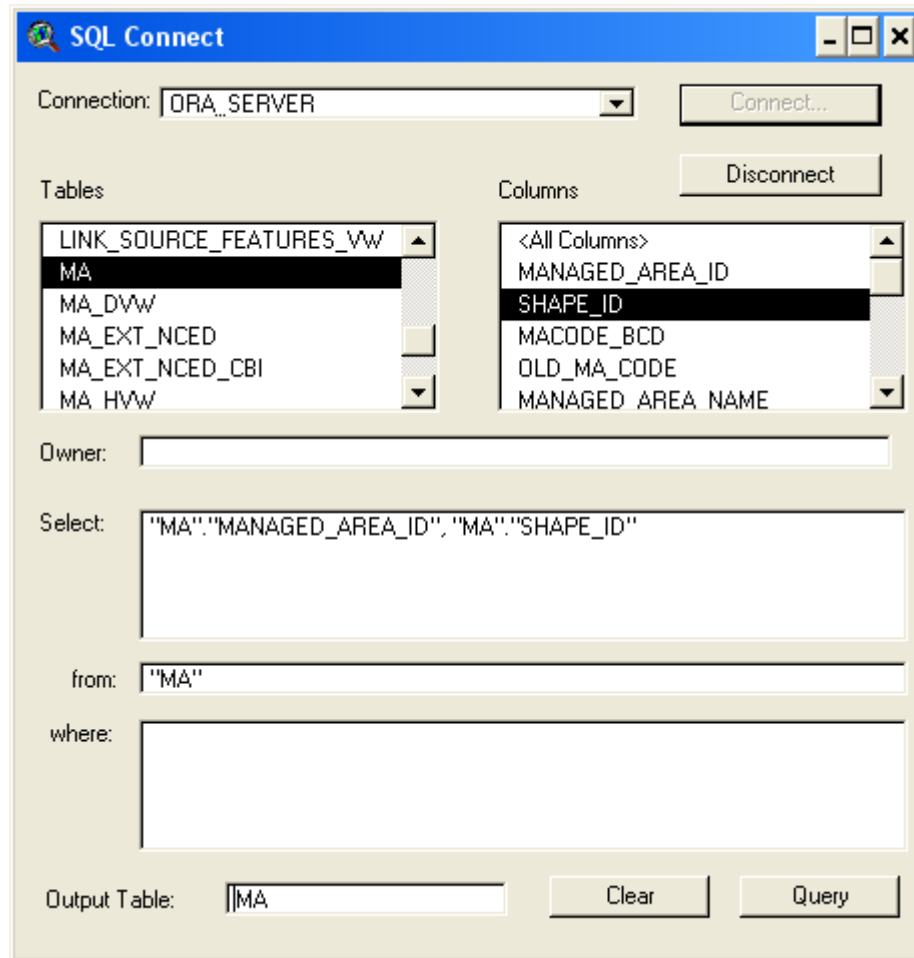
3. In the 'SQL Connect' window, choose the 'Connection' of **ORA\_SERVER**.
4. Click **Disconnect** then **Connect**.
5. In the Oracle ODBC Driver Connect prompt, enter the password for your biotics\_user and click **OK**.





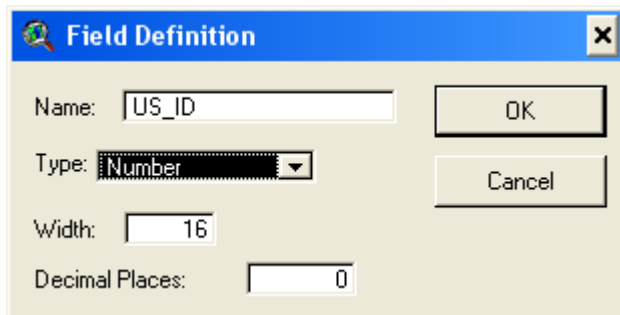
6. Complete the SQL Connect window as shown and described below:



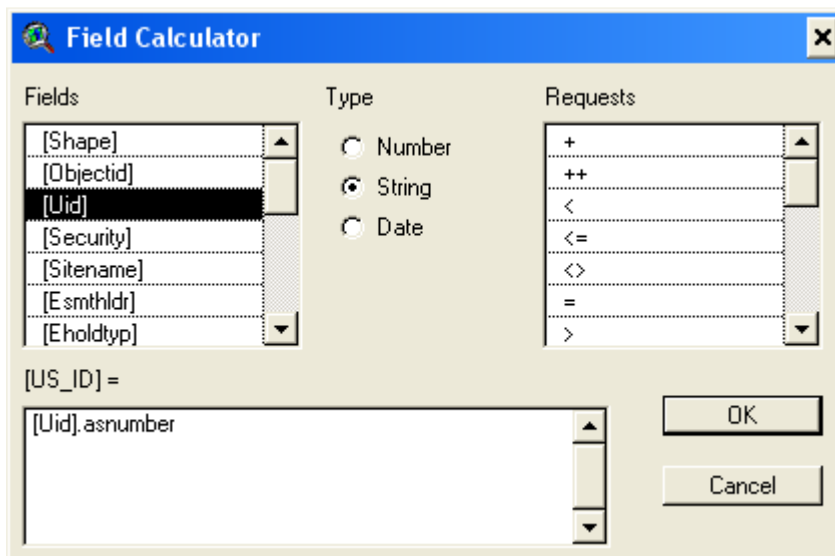
- i. In the 'Tables' dropdown list, choose the **MA\_EXT\_NCED** table – double click on it, so "MA\_EXT\_NCED" is populated in the 'from:' box.
- ii. In the 'Columns' dropdown list, choose the **<All Columns>** table – double click on it, so \* is populated in the 'Select:' box.
- iii. Rename the 'Output Table:' to **MA\_EXT\_NCED**
- iv. Hit the **Query** button then hit **Clear**.
- v. The MA\_EXT\_NCED table will open.
- vi. Repeat the steps above to add the **MA** table but rather than selecting <All Columns> under the Columns section, just select **MANAGED\_AREA\_ID** and **SHAPE\_ID**.
- vii. After completing the SQL Connect window as shown below, click **Query** and then close the window.



- viii. The MA table will open.
- b. From the Window menu, choose **View1** to switch to the View. If it's not available, within the Project window's Table of Contents, click **View**, select **View1** and click **Open**.
- c. Within the View, add the NCED.shp theme to the window (File menu, Long Menus, Add Theme icon )
- d. Select the theme in the Table of Contents to make it active and from the Theme menu, choose **Start Editing**.
- e. Open the attribute table:
  - i. From the 'Theme' menu, choose 'Table' or
  - ii. Click the 'Open Theme Table' icon 
- f. From the Edit menu, choose **Add Field**.
- g. Within the Field Definition, enter **US\_ID** as the Name and (maintaining the default choice of Type = Number, Width = 16, Decimal Places = 0) click **OK**.

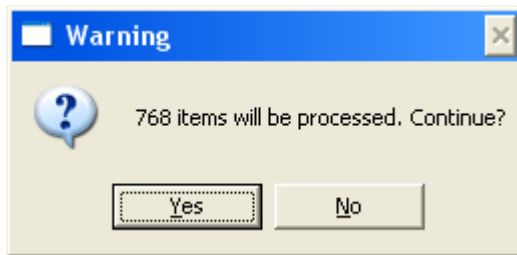


- h. From the Field menu choose **Calculate**.
- i. Within the Field Calculator, double-click the [**UId**] field and type .asnumber and click **OK**, as illustrated below.



- j. From the 'Window' menu, choose 'Tile' so that you can see both the theme's attribute table and the MA\_EXT\_NCED table. If the MA\_EXT\_NCED table is not displayed follow the instructions below:
  - i. In the Project window, select **Tables** from the Table of Contents.
  - ii. From the Project menu, select **Show All Tables**.
  - iii. Select the **MA\_EXT\_NCED** table and click **Open**.
  - iv. Within the MA\_EXT\_NCED table, again go to the Window menu and select **Tile** to see both the MA\_EXT\_NCED and Attributes of Nced.shp tables at the same time.
- k. In the MA\_EXT\_NCED table, highlight the **US\_ID** field.
- l. In the **Attributes of Nced.shp** table, highlight the corresponding **US\_ID** field.
- m. With the **Attributes of Nced.shp** table active, from the 'Table' menu, choose 'Join'. This will join the data from the MA\_EXT\_NCED table to the Attributes of Nced.shp file.
- n. In the MA table, highlight the **MANAGED\_AREA\_ID** field.
- o. In the **Attributes of Nced.shp** table, highlight the corresponding **MANAGED\_AREA\_ID** field.

- p. With the **Attributes of Nced.shp** table active, from the 'Table' menu, choose 'Join'. This will join the data from the MA table to the Attributes of Nced.shp file.
7. Click on View1 and from the Theme menu choose **Stop Editing**, responding **Yes** when prompted to save changes.
8. From the Biotics menu choose **Input/Edit**.
9. Within the BIOTICS – Input/Edit window, choose **Managed Areas** and click **OK**.
10. From the Admin menu choose **Batch Link Shapes to Data Records**.
11. Within the Choice window, select **Nced.shp** from the dropdown list as the theme containing the shapes to be match/linked to existing data and click **OK**.
12. Within the Choice window, select **SHAPE\_ID** from the dropdown list as the field from 'Nced.shp' to link to the FEATURE\_ID field in the editable theme and click **OK**.
13. In the Warning dialog, confirm the number of records to be processed. This number should correspond to the number of records you loaded into the tabular database. Click **Yes** to continue.



14. When the progress bar and all working dialogs have finished, be sure to query the new records in Mapper and Tracker to confirm that they were linked correctly.
15. Click the Close Input/Edit button to end the edit session and post the changes to the master database.

## Appendix I: NCED Data Dictionary

Below is an explanation of the attributes for the NCED database. For more specifics on the attribute fields and domains in the geodatabase, please see the following table.

**Security** – Whether or not the spatial or tabular data can be displayed or download by the general public.

Security Attribute	Display	Download	Display	Download
	Tabular Data	Tabular Data	Location	Location
Yes	Yes	Yes	No	No
No	Yes	Yes	Yes	Yes
No download	Yes	No	Yes	No

**Site Name** – Site name of easement.

**Easement Holder Name** – Name of the organization managing or holding the easement.

**Easement Holder Type** – Federal, Tribal, State, Regional agency, Local Government, Non-Governmental Organization (NGO), or Private

**Landowner Type** – Federal, Tribal, State, Regional agency, Local Government, Non-Governmental Organization (NGO), or Private

**Purpose** – This attribute describes the easement's intended conservation purpose. The list below shows the name of each domain value (from IRS code) followed by its definition (summarized from IRS code). The definitions are mutually exclusive, which will minimize questions. For Open Space, there are 4 sub-values, which the IRS mentions, including "other".

Domain Definitions:

- Recreation or Education (26 CFR 1.170A-14(d)(2)) - requires substantial and regular use by the general public, and does not fit any other definition.
- Environmental System (26 CFR 1.170A-14(d)(3)) - Protects significant, high quality examples of terrestrial or aquatic habitats or ecosystems where a fish, wildlife or plant community live. These include but are not limited to, habitats for rare, endangered, or threatened species, or lands contributing to the ecological viability of another conservation area.
- Open Space (26 CFR 1.170A-14(d)(4)) - provides scenic (i.e., visual) enjoyment for the general public, helps fulfill a public policy that provides open space by restricting development, or serves another significant public benefit such as preserving the uniqueness of the surrounding area or consistency with public policies promoting conservation. Sub-values: farm (if the land is to be planted with annual plants in part or in full any time during the term of the easement); ranch (if the land is to be hayed or grazed and not planted with an annual); forest (if the land is to be forested and not farmed or ranched); other (if nothing else applies, e.g., for a beach or marsh).

- Historic Preservation (26 CFR 1.170A-14(d)(5)) - protects historic values of an area or structure that either is officially designated as such or adjoins such an area or structure, or presents historic values consistent with such official designations.

**Public Access** – Open – Open to public access

Restricted – Public access is restricted

Seasonal – Public access is limited on a seasonal basis

Closed – No public access

**Duration** – Permanent or Temporary

**Term** – Term of easement (number of years; if the duration is “Permanent” then the value for the “term” is null.

**Acquisition Day** – Day easement began

**Acquisition Month** – Month easement began

**Acquisition Year** – Year easement began

**Boundary Confidence** – Accuracy of the geometry, where known.

**Reported Area** – Acres

**GIS Area** – Auto calculated by system, acres.

**Area Difference** – Calculated percent difference between the GIS Area and Reported Area.

**Comments** – If provided by source, provider or aggregator, include in NCED.

**Conflict** – Whether or not there is a conflict between an NCED polygon and either a different NCED polygon or PAD polygon. Where we are able to correct or adjust through knowledge of the data of from data provider input, data aggregators will use domain of Conflict – Adjusted. Where aggregators are unable to determine the appropriate adjustment, the Conflict – Not Adjusted domain will be used. This field could also be used to categorize gaps in data as well.

**Stacked** – Where polygons are appropriately stacked, that will be noted in this attribute.

**Geodatabase table of attributes, alias, description, domains, type and length:**

Field Name	Alias	Field Description	Domain	Field Type	Field Length
UID	Unique ID	Unique identifier		Text	15
Security	Security Code	Privacy requirements for the polygon	Yes No <b>NO NULL</b>	Text	5
SiteName	Site Name	The name of the site (E.g. Smith Preserve)		Text	100

Field Name	Alias	Field Description	Domain	Field Type	Field Length
EsmtHolder	Easement Holder	Name of the organization managing or holding the easement	No, but values should be ties to the Quickbase Inventory List and be in a standard format	Text	100
EsmtHolderType	Easement Holder Type	Whether the holder of the easement is a federal, state, local, tribal, or other legal classification	Federal Tribal State Regional Agency Local Government Non-Governmental Organization Private Data not available <b>NO NULL</b>	Text	50
LandownerType	Landowner Type	Whether the owner of the underlying land is a federal, state, local, tribal, or other legal classification	Federal Tribal State Regional Agency Local Government Non-Governmental Organization Private Data not available <b>NO NULL</b>	Text	50
CoHeld	Co-Held	Whether the easement is co-held by multiple entities	Yes No	Text	3
Purpose	Conservation Purpose	The easement's intended purpose, based on IRS Code	Recreation or Education Environmental System Historic Preservation Open Space – Farm Open Space – Ranch Open Space – Forest Open Space - Other Data not available	Text	50
ConsIntent	Conservation Intent	The conservation intent of the easement , based on GAP Code	0 - Temporarily Unassigned 1 - Permanent Protection -- ecological disturbance events allowed to proceed 2 - Permanent Protection -- ecological disturbance events suppressed 3 - Permanent Protection -- subject to extractive (e.g. mining or logging) or OHV use 4 - No known mandate for protection	Text	5



Field Name	Alias	Field Description	Domain	Field Type	Field Length
			4a - Long-term conservation easement (6-14 years) 4b - Short-term Conservation easement (5 years or less)		
PublicAccess	Public Access	Identifies whether the easement is open to public access or not	Open Restricted Seasonal Closed Data not available	Text	20
Duration	Duration	Identifies whether the easement is permanent or term	Permanent Temporary Data not available NO NULL	Text	20
Term	Term	Numeric field noting the term of the easement	# Years	Integer	
Acq_day	Acquisition day	Day easement began		Integer	
Acq_month	Acquisition month	Month easement began		Integer	
Acq_year	Acquisition year	Year easement began		Integer	
State	State	State in which the easement is located	Domain	Text	20
DataAgg	Data Aggregator	Which of the project partners aggregated the data or entity who formatted the data to the NCED schema	Conservation Biology Institute Ducks Unlimited Defenders of Wildlife NatureServe Trust for Public Land The Nature Conservancy Clemson Virginia Heritage Program <b>(NO NULL</b> - other values will be allowed, but notify CBI for their inclusion in the domain)	Text	50
DataEntry	Data Entry Date	Date when entered by NCED partner		Date	
DataProvider	Data Provider	Organization that provided the data	No, but values should be ties to the Quickbase Inventory List and be in a standard format	Text	100
DataSource	Data Source	Source of the data	No, but values should be ties to the Quickbase Inventory List and be in a standard format	Text	100

Field Name	Alias	Field Description	Domain	Field Type	Field Length
OriginalUID	Original UID	Original Unique Identifier from the data source, if any		Text	100
BoundConf	Boundary Confidence	Description of the method by which the digitizing occurred, if known	1:100,000 – National mapping standards 1:100,000 1:24,000 – National mapping standards 1:24,000 1:12,000 – National mapping standards 1:12,000 Cad2gis – CAD file converted to a shapefile, possibly georeferenced Cogo2gis – Coordinate geometry used to create scale boundary, manually placed Digbp – Digitized and georeferenced to best available control points Digquad – Digitized and georeferenced to features on the USGS quad Digspot – Digitized and georeferenced to SPOT imagery Digvbm – Boundary delineated using features on VBMP Parcelq – Boundary originated from jurisdictional parcel data Scrdig – Boundary heads-up digitized by referencing a map outside of GIS Survq – Georeferenced digital survey CAD file imported into GIS Unknown – Boundary accuracy unknown Digweb – Digitized within the conservation registry mapping interface	Text	15
ReportedArea	Reported Area	Area as reported by data steward, acres		Double	
GISArea	GIS Area	GIS calculated area, acres		Double	

Field Name	Alias	Field Description	Domain	Field Type	Field Length
AreaDiff	Area Difference	Calculated difference between the GIS area and reported area		Double	
Conflict	Conflict	Status of conflict between other geometries	No Known Conflict Conflict – Adjusted Conflict – No Adjustment	Text	50
Stacked	Stacked	Status of stacked polygons, whether stacking is accurate or not.	Yes No	Text	5
Comments	Comments	Any comments from either the source, provider or aggregator		Text	255