

Wetland Determinations

Historically, NRCS field staff recorded wetland determinations on the Farm Service Agency (FSA) master photos within each field office. Since FSA has transitioned to the Common Land Unit (CLU) database, the master photos are no longer the official record, leaving NRCS-MI with no centralized location for spatially recording wetland determinations.

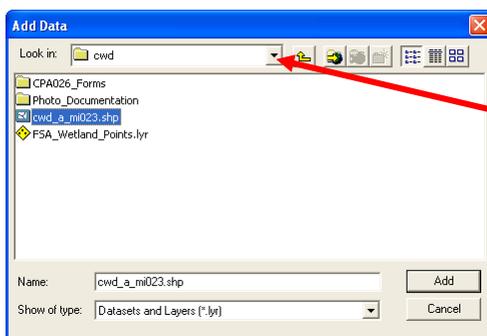
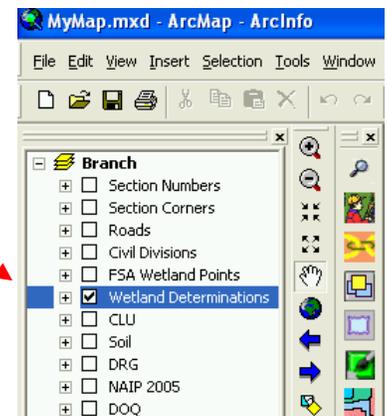
In addition, the NRCS-CPA-026E form created for each wetland determination has usually been stored in the case file of the client who owned the land at the time of the determination. This can create difficulties in tracking wetland determinations as property ownership changes.

NRCS-MI has developed a set of tools and procedures to assist field staff with the capture, storage, and documentation of certified wetland determination (CWD) data as a county-oriented geospatial database from which data can be easily retrieved without having to follow a “paper trail” through multiple client files.

The Wetland Determination Layer

NRCS-MI ArcMap templates have been revised to include a Wetland Determination layer.

If you are using an older ArcMap document, you may add a wetland determination layer with the  **Add Data** tool.



Available wetland determination layers reside in the “f:\geodata\project_data\nrcs\cwd” folder.

The shapefile naming convention is **cwd_a_mi[FIPS].shp** where [FIPS] is the county FIPS code.

Creating Wetland Determination Features

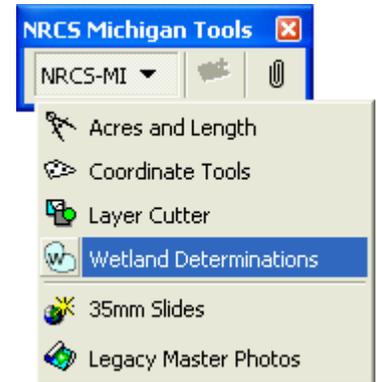
Please refer to the NRCS-MI GIS Skill Builder “**Digitizing Wetland Determinations**” for instructions on creating geospatial wetland determination features.

Entering Feature Attributes

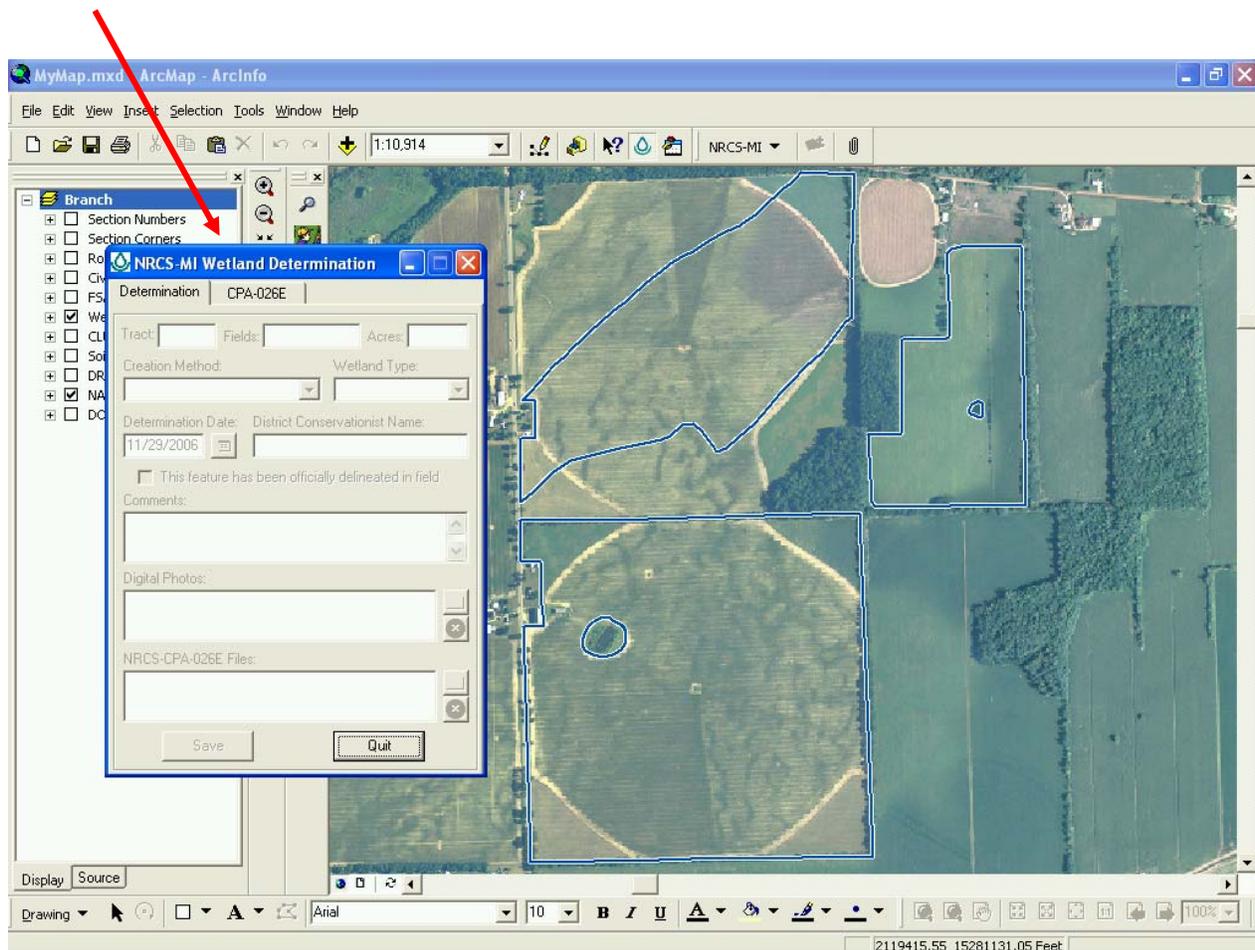
After digitizing the geospatial shapes which define the boundaries of wetland determinations, attributes must be applied to describe what the shapes actually represent.

1. On the NRCS Michigan toolbar, choose **Wetland Determinations**.

(For information on activating the NRCS-Michigan Toolbar, please refer to the GIS Skill Builder “The NRCS-MI Toolbar”.)



2. Position the NRCS-MI Wetland Determination form so that the features of interest are visible in the display view.



3. The  **Select Feature** tool is activated automatically when the tool starts. Click on a feature to select it.

Entering Feature Attributes

(continued)

4. Enter the required information for the selected feature...

Tract:

Tract: Tract number in which the feature is located. Numeric values only.

Fields:

Fields: Field number(s) in which the feature is located. Accepts alpha-numeric values. If entering multiple field numbers, separate with a comma, i.e. (1,1a,2,10)

Acres:

Acres: Size of feature. Automatically calculated if not previously set. Numeric values only. Clear entry and click a different box to recalculate.

Creation Method:

Creation Method: Choose from list. This is the method by which the feature was created, i.e. digitized freehand, copied from existing features (CLU, Soils, etc.), or imported from GPS.

Wetland Type:

Wetland Type: Choose from list. The most common types are repeated at the top of the list. Choosing type “CW+[YEAR]” prompts for year.

Determination Date:

Determination Date: Preliminary determination date. Automatically set to today if not previously set. Accepts any date-like entry, or click button and choose date from calendar.

Determination Performed By:

Determination Performed By: Name of person making the determination. Automatically set to current log in name if not already populated. Text only
 (Revised 2/22/08 - Previously labeled “District Conservationist Name:”)

This feature has been officially delineated in field

Check this box if feature has been officially delineated in the field.

Comments:

Comments: Miscellaneous comments about this feature.
 (Not to be confused with the “Remarks” section of the CPA-026 which contains comments about the entire determination)

Digital Photos:

NRCS-CPA-026E Files:

Optionally, you may attach up to five optional digital photos and/or CPA-026E forms to each feature.

See the “Attaching Files” sections for complete details.

Entering Feature Attributes

(continued)

The screenshot shows the 'NRCS-MI Wetland Determination' dialog box. The 'Determination' field is set to 'CPA-026E'. The 'Tract' is '999999', 'Fields' is '4', and 'Acres' is '40.59'. The 'Creation Method' is 'Manual Digitizing' and 'Wetland Type' is 'Nw'. The 'Determination Date' is '11/29/2006' and the 'District Conservationist Name' is 'YOUR NAME'. There is a checkbox for 'This feature has been officially delineated in field' which is unchecked. The 'Comments' field contains 'This is a comment. And so is this.'. The 'Digital Photos' and 'NRCS-CPA-026E Files' fields are empty. The 'Save' button is circled in red.

5. Click the **Save** button to save the attributes for this feature.

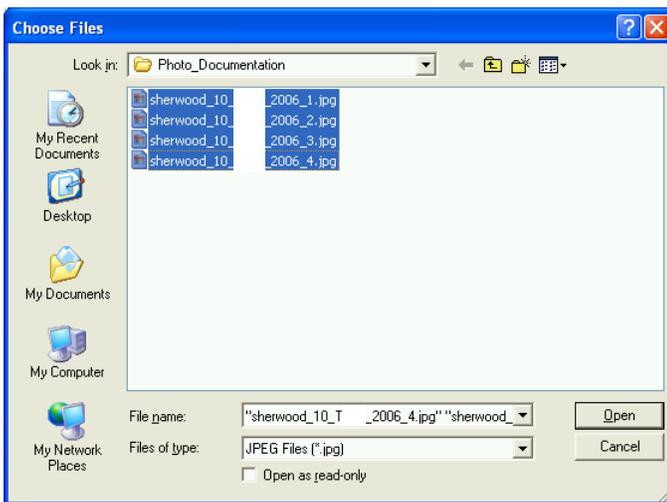
The **Save** button will become “grayed-out” and the current feature will become unselected when the save is complete.

6. Click on the next feature and repeat procedure for all features in the tract.

Attaching Files – Digital Photos

OPTIONAL

You may optionally associate up to five digital photos with each feature.



1. Click the  **Browse** button under Digital Photos.

2. The digital photos must be stored as JPG files in



3. Select up to five images and click **Open**.

The full system path for each image (not the image itself) is saved as an attribute of the selected feature.

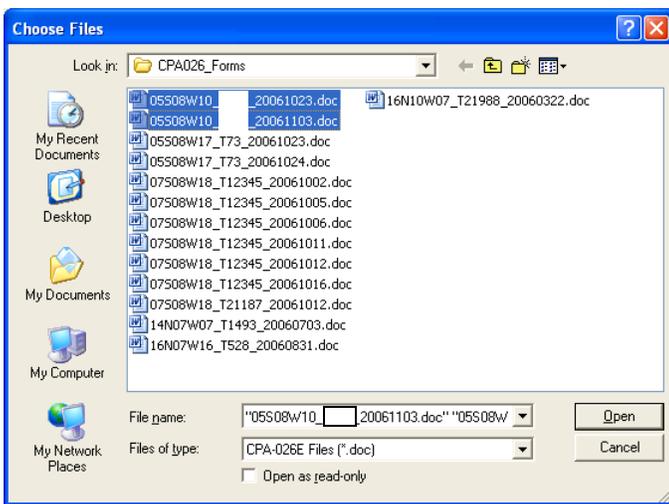
Attaching Files – CPA-026E Documents

OPTIONAL

As with digital photos, up to five CPA-026E forms may be associated with each feature. Unlike photos, however, it is required that each feature have at least one associated CPA-026E file.

Since that one, mandatory CPA-026E is associated automatically when created by the “Generate 026” utility, (as explained later in this skill builder), users may find that they never have to manually associate a CPA-026E file with a feature.

However, users wishing to associate additional CPA-026E files for historical purposes may do so by following these procedures...



1. Click the  **Browse** button under NRCS-CPA-026E Files.

2. CPA-026E documents must be stored as MS-Word files in



3. Select up to four additional CPA-026E documents and click **Open**.

Removing Attached File Associations

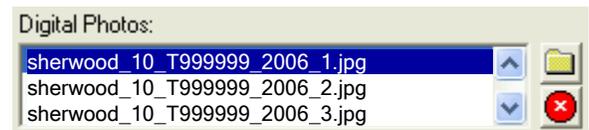
OPTIONAL

Associated digital photos and CPA-026E files may be “detached” from a feature.

1. Select the digital photo or CPA-026E file you wish to detach from the selected feature

2. Click the  **Detach** button.

3. Click **Save** to save changes.



NOTE: Detaching a file from a feature removes the reference to that file within the feature’s attributes. The actual file is not removed from the system, since other features may contain references to that same file.

Creating a CPA-026E File

After every wetland determination feature within the tract has been successfully attributed, a CPA-026E file can be created automatically.

1. Click the **CPA-206E** tab to begin.

FIELD	LABEL	ACRES	DATE
1	NW	157.35	11/30/2006
1	W	1.81	11/30/2006
2,3	PC	73.94	11/30/2006
4	NW	40.59	11/30/2006
4	W	0.24	11/30/2006

2. If necessary, enter the desired tract number and click **Search**.

The wetland determination features corresponding to the tract number are displayed in the preview pane.

This preview pane gives you a chance to review the information before creating a CPA-026E form.

Helpful Hint: Selecting an item in the list will highlight the corresponding feature in the ArcMap display frame. Conversely, selecting a feature in ArcMap will highlight the corresponding list entry.

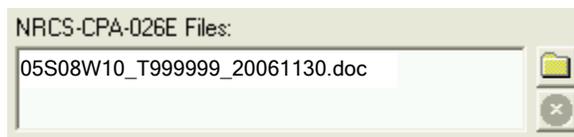
3. If changes are necessary, return to the **Determination** tab, select the required feature, and make corrections.

4. Click **Generate 026**.

A new CPA-026E for the tract is opened in Microsoft Word. You'll notice that some of the entries are already filled in, based on information you entered and information retrieved automatically (address, farm number, etc).

The CPA-026E document file is automatically saved in "F:\geodata\project_data\nrcs\cwd\CPA026_Forms" with a file name comprised of predominant PLSS Township, Tract Number, and Date (year/month/day).

The new 026 document is automatically attached to each wetland determination feature in the tract.



5. In MS Word, fill in the remaining entries and click **Save**.

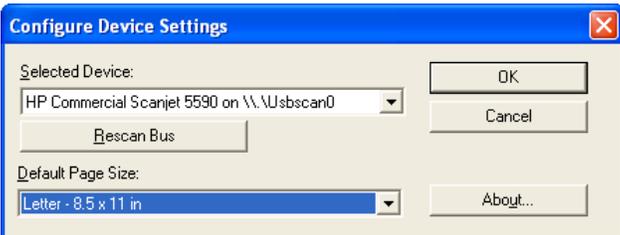
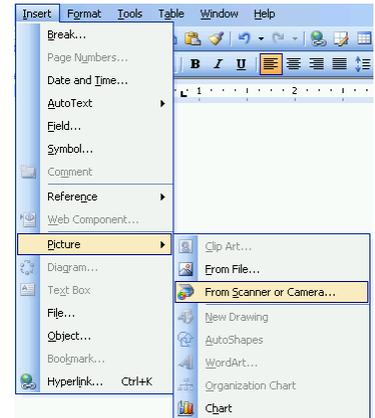
NOTE: Do not change the file name or location in which the CPA-026E file is saved.

6. If scanning field notes, continue to next page. If not, close the CPA-026E document.

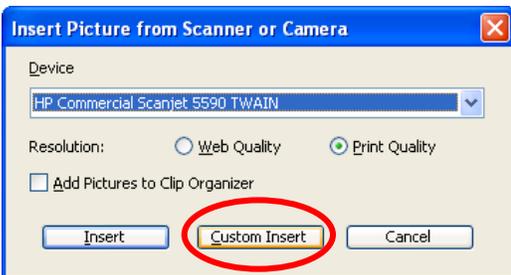
Scanning a Worksheet

If the NRCS District Conservationists has completed a wetland determination worksheet containing vegetation, hydrology, and soils information, this worksheet must be scanned and added to the CPA-026E file in order to preserve a more comprehensive set of historical documentation.

1. Place the worksheet face-up in the document feeder of the HP 5590 scanner.
2. In MS Word, go to **Scanned Field Notes** on the final page of the CPA-026E form.
3. Click **Insert, Picture, From Scanner or Camera...** →

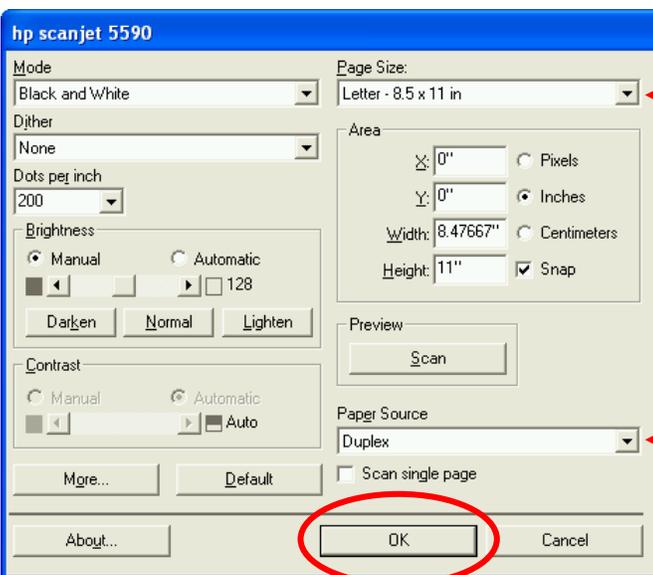


4. If the “Configure Device Settings” window appears, choose the **HP Commercial Scanjet 5590** scanner and click **OK**.



5. Set “Device:” to **HP Commercial Scanjet 5590 TWAIN** and “Resolution:” to **Print Quality**

Click **Custom Insert**



6. Set the following scanner settings...

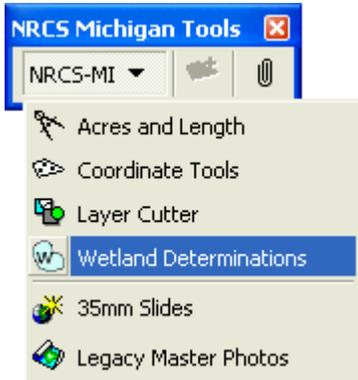
Mode: **Black and White**
 Dots per inch: **200**
 Page Size: **Letter – 8.5 x 11 in**
 Paper Source: **Duplex**

Click **OK**

Wait while both sides of the worksheet are scanned.

Retrieving Information

As well as being a data collection and storage system, the NRCS-MI Wetland Determinations tool can be used to retrieve determination data, photos, and documents at a later date.



1. Start the **Wetland Determinations** tool.
2. Select a wetland determination feature with  **Select Feature**.

All of the previously saved information for the selected feature is displayed in the corresponding form fields.

3. Information can be changed and resaved as required.

Remember, some changes may require the creation of a new CPA-026E form.

4. You may view an attached digital photo by double-clicking on a file name in the Digital Photos list.

Digital photos automatically display in **Windows Picture and Fax Viewer** unless a different image viewer has been associated with the JPG file format.

5. Double-click a file name in the NRCS-CPA-026E Files list to display an associated 026 form.

CPA-026E forms automatically display in **MS Word**.

Notes on Structure and Storage

- Data Storage Locations
 - Spatial Data (shapefiles) - “F:\geodata\project_data\nrcs\cwd”
 - Default location – requires no user interaction
 - CPA-026E Forms (MS Word docs) - “F:\geodata\project_data\nrcs\cwd\CPA026_Forms”
 - Default location – requires no user interaction for automatically generated 026 forms.
 - Digital Photos (JPG Files) - “F:\geodata\project_data\nrcs\cwd\Photo_Documentation”
 - Users must manually save digital wetland determination photos into this location from their digital camera. A suggested file naming standard is:
[TOWNSHIP]_[SECTION]_[TRACT]_[YEAR]_[PHOTO NUMBER].JPG

Example: “sherwood_10_T999999_2006_1.jpg”
 “sherwood_10_T999999_2006_2.jpg”
 “sherwood_10_T999999_2006_3.jpg”
 etc.
- Wetland determination features are created and stored within county-based shapefiles.
- The wetland determination shapefile for a county is maintained within the NRCS field office which administers that county. Editing is allowed only from within the administering office.
- Copies of wetland determination shapefiles are automatically transmitted to adjacent field offices for reference purposes only. Digital photos and CPA-026E form documents reside only in the originating office.
- Shapefile Attribute Fields
 - LABELCODE: Wetland label codes, i.e. W, NW, PC, etc.
 - CERTSTAFF: Name of staff member who made the determination
 - CERTACRES: Certified acreage of determination
 - CALCACRES: Acreage as calculated by GIS based on digitized feature
 - CERTMETHOD: Method of feature creation, i.e. Manual digitizing, CLU Feature, GPS
 - CPA26_1-5: Complete file paths for up to five CPA-026E files
 - PIC_1-5: Complete file paths for up to five digital photos
 - COMMENTS_1-5: Comment up to 1270 characters (split every 254 characters for storage)
 - DELINEATED: Boolean value – Feature delineated in field
 - TRACTNBR: Tract in which the feature is located
 - LUNBR: Land unit in which the feature is located
 - DETERMDATE: Date of initial determination
 - CERTDATE: Date of certification unless appealed (30 days after DETERMDATE)

Tool Requirements

The procedures documented in this skill builder assume the following:

1. Customer Service Toolkit and the NRCS-MI ArcMap tools have been loaded.
2. An editable wetland determination layer (as defined by NRCS-MI) must be present.
3. A PLSS sections layer (as defined by NRCS-MI) must be present.
4. The user must have write access to the “f:\geodata\project_data\nrcs\cwd” folder.

CPA-026E Information

Some of the data fields on the 026 will be populated automatically, depending on the availability of the information:

Name/Address: Populated automatically if a Toolkit client is checked out who has a plan which contains land units attributed with the selected tract number.

County: Based on current Wetland Determination layer

Person Requesting Determination: Client name from Name/Address block (if populated)

Tract Number: Currently identified tract

FSA Farm Number: Farm number corresponding to current tract according to the county CLU data

Additional Tools

While the Wetland Determination skill builders focus on the digitizing and documentation of certified wetland determination geospatial features, users may find the following NRCS-MI ArcMap tools helpful as part of the wetland determination process.

35mm Slide Tool: Displays the scanned 35mm FSA compliance slide imagery and allows the user to view land cover changes over multiple years.

Legacy Master Photos: Displays FSA master photo imagery. These images include historic wetland determination outlines and labels.

* For more details, please refer to the individual GIS Skill Builders for each of these tools.