



U.S. Fish & Wildlife Service

Wetlands MGD Check-out Instructions

In Cooperation with the U.S. Geological Survey

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Copying Data

All the necessary files needed to complete a wetlands update project are included on the CD(s) or DVD(s) you received. A project may be divided into multiple “work areas”, as determined by the NWI Regional Coordinator and Wetlands Database Administer, for reasons of project management and/or file size limitations. Each “work area” has its own folder, and each folder has a complete set of information and forms for that given area.

The following steps must be completed before the data can be edited.

1. Copy the files to Computer(s) being used for editing wetlands.
 - a. Copy the specific “work area” directory from the CD that will be worked on. Each “work area” will be named with project title and a work area identifier (i.e. Anchorage_bowl_wa1, Anchorage_bowl_wa2, etc.).
 - b. Paste this folder to any drive that you have read and write access to (typically a data drive of D:\ or E:\).
2. Remove the ‘Read-only’ status from the folder and all it contents.
 - a. Open Windows Explorer.
 - b. Navigate to the “project” folder you copied to your machine.
 - c. Right click the folder.
 - d. Scroll to ‘Properties’ and click.
 - e. Uncheck the box next to ‘Read-only’
 - f. When prompted choose all files, subfolders and subfiles
 - g. Click OK
3. Repeat this process for each work area received.

Updating Wetlands Data

The wetlands data you received can be edited with any of the standard ArcMap editing tools. To ensure data consistency, project tracking, and acceptance of the data a few critical steps must be adhered to. The following sections outline these critical steps to assist you in correct data manipulation to ensure your edits are done properly and are accepted back into the Wetlands MGD.

Data Storage Parameters

The data you received is a “checked-out” geodatabase from the Wetlands MGD. This geodatabase, or a copy thereof, must be the one that gets edited and the one that gets sent back. Any other geodatabases or forms of data will not be accepted and cannot be checked back into the Wetlands MGD. Some manipulation of the data may occur for local project management (i.e. Copy the geodatabase, Add fields, Add feature classes, Add topology, etc.), although these

additions will be dropped/deleted when the data is checked in. A few things that CANNOT be done to the data are the following:

1. Do Not Change the Projection
2. Do Not Delete Original Fields
3. Do Not Rename Original Fields
4. Do Not Delete Original Feature Classes
5. Do Not Rename Geodatabase
6. Do Not Rename Original Feature Classes

Projection Issues

The data you receive is in Albers NAD83 projection and cannot be re-projected. If the data is re-projected it cannot be checked back in to the Wetlands MGD. If reference data (i.e. DRG's, DOQQ's, etc.) are in different projections, they can be added to the ArcMap session after the wetlands data. ArcMap will re-project on-the-fly in the ArcMap session and the different data layers will register to one another. **NOTE:** There are problems with the NAD27 to NAD83 datum transformation in ArcMap. Be sure to check that your reference data is in the NAD83 datum. If the data is in some other datum be sure to reproject it using the correct transformation (e.g. NAD27 to NAD83 use US-NADCON). If the project your working on is at the extremes of the Albers projection it may be 'tilted' in your ArcMap session. This can be remedied by rotating your data frame using the 'Rotate Data Frame' on the Data Frame Tools toolbar. This can be opened by selecting View > Toolbars> Data Frame Tools in your ArcMap window.

Topology

Topology has been incorporated into the checked-out geodatabase you received. The topological rule used was 'no overlapping polygons' within the WetPolys feature class. Use of the topology layer is not necessary, but can be utilized by those familiar with ESRI topology rules and tools.

Updating Linears

Linear delineations of wetlands are discouraged. If possible linears should be delineated as polygons in the WetPolys feature class and the corresponding linear feature deleted from the WetLinears feature class. However, if linears are delineated they should be created and edited in the WetLinears feature class provided in the 'checked-out' personal geodatabase. Linear features will be maintained as a separate feature class in the Wetlands MGD.

Updating Points

The Wetlands MGD will no longer support wetland point features. All wetland point data (f-file) has been buffered to 1/10 of an acre and included in the WetPolys feature class. No wetland point data is to be submitted, and wetland data in this format will not be included in the Wetlands MGD.

Project Area Border

Wetland delineations should occur only up to the project area border. Any wetlands delineated outside of the project area border will be clipped back to the border during the check-in process. All external ties will be the responsibility of the Wetlands Geodatabase Manager. Be sure that the project area fits properly immediately upon receipt of the data.

Work Area Edge Conflicts

Within a given project wetland delineations should also be stopped at the “work area” borders. If a wetland is delineated across the border of a “work area” the Photo Interpreter (PI) must coordinate with the PI from the adjacent “work area” to ensure that there are no overlapping polygons. PI’s may delineate across a work area as long as the same wetland polygon in the adjacent work area is deleted. This coordination will be necessary as the presence of overlapping polygons will result in the data failing final verification and being returned to the Project Coordinator for correction. All remaining internal seams and tie issues at the “work area” boundaries will be dealt with by the Wetlands Geodatabase Manager. Any overlaps in question will be sent back to the region for clarification.

Quad Boundaries

Each check-out will include a geodatabase of the USGS 1:24,000 quadrangle boundaries for use as a reference layer. This geodatabase can be copied to each PI’s computer for use as a reference layer and does not need to be returned nor will it be checked back in to the Wetlands MGD.

Data Forms and Documentation

Supplemental Map Information (Mandatory Submission)

The metadata requirement for Wetlands MGD data is the completed Supplemental Map Information Form for the project area. The 'project area' is determined by the Region and the bounds set at the Wetlands MGD data request stage of the project..

Since metadata are no longer necessarily tracked by quadrangle, the project area boundary and the project level Supplemental Map Information Form suffice for metadata.

If quad specific metadata files (created in ArcCatalog) are completed and submitted, the information will be retained and linked to the Supplemental Map Information feature class.

The Form is stored as a text file, which can be edited and linked to the spatial wetlands data via a 'Hyperlink'. There is also a printable version of the Word file that can be completed, converted to digital form, and linked to the data

The following steps cover both editing and linking the Supplemental Map Information Form. Linking this document to the spatial data is done using a 'hyperlink' in ArcMap. This process may be done by the user or by the Wetlands Database Administrator upon receipt of the data.

Editing the Supplemental Map Information Form.

1. Only one Supplemental Map Information form should be filled out per project and this should be done by the NWI Regional Coordinator or the NWI Project Manager. There will be a special folder named with the project name and SuppMapInfo (e.g. Anchorage_Bowl_SuppMapInfo). This folder will contain a geodatabase created just for the Project area and the Supplemental Map Information Form.
NOTE: Although not recommended, there may be some situations where a Project Area is split into one or more Projects (e.g. Drastic differences in delineation procedures, techniques, etc.) If this is conducted, fill out a Supplemental Map Information Form for each Project Area Polygon.
2. Open the Supplemental Map Information form found in "project name"_SuppMapInfo\Project_Metadata\Templates folder.
 - a. The Form should be named with the Project_ID.
 - i. The Project_ID convention is a concatenated code that identifies the Region, Fiscal Year and the Project Number. For example the Project_ID R03Y04P01 stands for Region 3 (R03), Year 2004 (Y04), and the first project in that region during that year (P01).
 - b. **NOTE:** Double clicking the file in Windows Explorer should open it with the default software.
 - i. Microsoft Word for the .doc file
 - ii. Notepad for the .txt file
3. Save the document using the 'Save As' function and save it to the "project name"_SuppMapInfo\Project_Metadata\SuppMapInfo' folder.
4. Edit the Supplemental Map Information form with proper software.
5. Save after final edits are complete.

Field Form (Optional Submission)

The field form was modified from an existing format to incorporate information and structure needed for the Wetlands MGD data model. The form is a record of on-the-ground information gathered during the wetlands mapping process.

The Field Form is stored as both a text file and a Word file, which can be edited and linked to the spatial wetlands data via a 'Hyperlink'. There is also a printable version of the Word file. The information on hard copy forms can be transcribed to the digital form and linked to the data.

NOTE: Information in the Field Data Form will be stored in the Service's Wetlands MGD but will not be available to the public

Editing the Field Form.

1. Open the Field form found in 'Project_Metadata\Templates' folder.
 - a. The Form should be named with the Project_ID followed by 'Fxxx' (e.g. R03Y04P01Fxxx.txt)
 - b. **NOTE:** Double clicking the file in Windows Explorer should open it with the default software.
 - i. Microsoft Word for the .doc file
 - ii. Notepad for the .txt file
2. Save the document using the 'Save As' function and save it to the 'Project_Metadata\Field_Forms' folder.
 - a. Be sure to change the 'xxx' in the name to the number of FieldForm being filled out (e.g. R03Y04P01F001.txt).
3. Edit the Field Form with proper software.
4. Save after final edits are complete.

Associating Field Form to a Geographic Location

Each Field Form should have an associated point in the database that identifies where the Field Form was filled out or the location that it is describing. Correct attribution of these points is necessary as it allows relationships to be created with this feature and other features (i.e. Project, Pictures, Field Forms).

1. Start Editing the Field_Forms feature class in ArcMap.
2. With the Editing tools place a point feature at the Field Form location.

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- a. **NOTE:** It may useful to have a DRG, DOQQ or other layer in your ArcMap session to use as geographic reference to ensure proper placement of the point feature.
3. Open the attribute table for Field Forms.
4. Enter the Project ID code in the 'Project_ID' field.
 - a. For the Project ID information see 'Editing the Supplemental Map Information #2'
5. Enter the Field Form ID code in the 'Form_ID' field.
 - a. For the Field Form ID information see 'Editing the Field Form #1a and 2a'
6. Save Edits
7. Stop Editing

Picture (Optional Submission)

Photographs will be linked internally to the Field Data Form and should clearly show the wetland, other habitat or object discussed or noted in the Field Form. Poor quality photos that are out-of-focus, blurred or that otherwise do not clearly depict useful information about a site will not be accepted into the database. Photographs that contain private property information such as street addresses, telephone numbers, advertisements, vehicle license plates or recognizable profiles of individuals will not be accepted.. Photograph submissions to the database will credit the appropriate source. **NOTE:** Pictures will be stored in the Service's Wetlands MGD but will not be available to the public

Saving Pictures

1. All pictures (.jpg, .bmp, .tiff, etc.) should be saved to the 'Project_Metadata\Pictures' folder.
2. Name the picture with it's appropriate Picture ID.
 - a. Due to the current system and the complex relationships between Project, Field Form and Picture the Picture ID is a long concatenated code that starts with the Project ID, then the Field Form ID, and finally the Picture ID.
(e.g. R03Y04P01F001P001.jpg) This ensures a unique ID for each picture in the entire Wetlands MGD.

Associating Picture to a Geographic Location

Each Picture should have an associated point in the database that identifies where the Picture was taken. Correct attribution of these points is necessary as it allows relationships to be created with this feature and other features (i.e. Project, Pictures, Field Forms).

1. Start Editing the Pictures feature class in ArcMap.
2. With the Editing tools place a point feature at the Picture location.
 - a. **NOTE:** It may be useful to have a DRG, DOQQ or other layer in your ArcMap session to use as geographic reference to ensure proper placement of the point feature.
3. Open the attribute table for Pictures.
4. Enter the Project ID code in the 'Project_ID' field.
 - a. For the Project ID information see 'Editing the Supplemental Map Information #2'
5. Enter the Field Form ID code in the 'Form_ID' field.
 - a. For the Field Form ID information see 'Editing the Field Form #1a and 2a'
6. Enter the Picture ID code in the 'Picture_ID' field.
 - a. For the Picture ID information see 'Saving Pictures #2a'
7. Save Edits
8. Stop Editing

Picture Form (Optional Submission)

Each picture is required to have an associated Picture Form. The Picture Form was developed to describe the location, aspect and other important information about the picture.

NOTE: Picture Forms will be stored in the Service's Wetlands MGD but will not be available to the public

Editing the Picture Form.

1. Open the Picture Form found in 'Project_Metadata\Templates' folder.
 - a. The Form should be named with the Project_ID followed by 'FxxxPxxx'. (e.g. R03Y04P01FxxxPxxx.txt)

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- b. **NOTE:** Double clicking the file in Windows Explorer should open it with the default software.
 - i. Microsoft Word for the .doc file
 - ii. Notepad for the .txt file
2. Save the document using the 'Save As' function and save it to the 'Project_Metadata\Pictures' folder.
 - a. Be sure to change the 'Fxxx' in the name to the number of Field Form in which the photo was taken (e.g. R03Y04P01F001Pxxx.txt). If the picture was not taken in association with a Field Form code the Field Form portion with all zeros (e.g. F000).
 - b. Be sure to change the 'Pxxx' in the name to the number of Picture that was taken (e.g. R03Y04P01F001P001.txt).
3. Edit the Field Form with proper software.
4. Save after final edits are complete.

Associating Picture Form to a Geographic Location

Each Picture Form will be associated with the same point feature as it's corresponding Picture. There is no need to create another point feature for the Picture Form.

Creating Hyperlinks in ArcMap

Remember this step is not necessary for the data to be accepted back into the master Wetlands MGD. This step can be done by the Wetlands Database Administrator.

1. Make sure the Form you are hyperlinking has been completed and saved in the correct location. (i.e. Supplemental Map Information Form, Field Form, Picture Form, Picture)
2. Make sure that the spatial features have been created and edited to link the documents and pictures to. (i.e. Project polygon for the Supplemental Map Information Form, Field Form point for the Field Form, and a Picture point for the Picture and Picture Form. See 'Associating Field Form/Picture/PictureForm to a Geographic Location').
3. Start editing the layer you want to build the hyperlink to in ArcMap (i.e. Projects, Field_Forms, Pictures).
4. Select the feature of interest (i.e. project polygon, picture point, field form point).
5. Open the attribute table of the desired feature class and edit the field that will contain the hyperlink.

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- a. For **Projects** edit the 'SuppMapInfo' field and enter the path name to the Supplemental Map Information document (e.g.
D:\Anchorage_Bowl_SuppMapInfo\Project_Metadata\SuppMapInfo\R03Y04P01.txt)
 - b. For **Field Forms** edit the 'Form' field and enter the path name to the Field Form document (e.g.
D:\Anchorage_Bowl_wal\Project_Metadata\FieldForms\R03Y04P01F001.txt)
 - c. For **Pictures** edit the 'Picture' field and enter the path name to the Picture (e.g.
D:\Anchorage_Bowl_wal\Project_Metadata\Pictures\R03Y04P01F001P001.jpg)
 - d. For **Pictures** also edit the 'Picture_Form' field and enter the path name to the Picture Form document (e.g.
D:\Anchorage_Bowl_wal\Project_Metadata\Pictures\R03Y04P01F001P001.txt)
6. Save Edits
7. Stop Editing
8. Right click the feature class of interest in the Table of Contents on the right side of your ArcMap session. (i.e. Projects, Field Forms, or Pictures).
9. Click Properties
10. Click the Display tab
11. Check the box that reads "Support Hyperlinks using field:"
12. Select proper field for the feature class or hyperlink of interest from the drop down list.
 - a. Select "SuppMapInfo" for the **Projects** hyperlink.
 - b. Select "Field_Form" for the **Field Forms** hyperlink.
 - c. Select "Picture" for the **Picture** hyperlink.
 - d. Or for **Picture** select "Picture_Form" to hyperlink the Picture Form instead of the Picture.
 - i. **NOTE:** Only one hyperlink per feature class is currently supported in ArcMap. That is if the picture points currently have a hyperlink to the picture, they can not have a hyperlink to the picture form at the same time.
13. Check to see that the "Document" radio button is selected.
14. Click OK
15. To utilize the hyperlink activate the 'Hyperlink' button, which is the lightning bolt on the bottom of the Tools toolbar.
16. Everything in that ArcMap session that has a hyperlink should be outlined in blue.

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17. Dragging the 'hyperlink' cursor over a blue outlined feature will cause the 'hyperlink' path to appear in a pop-up text message.
18. If the blue outlined feature is clicked with the 'hyperlink' tool the hyperlink is launched using the default program associated with that type of file (e.g. MicrosoftWord opens .doc files).
19. **NOTE:** The only way to utilize the hyperlink function is in ArcMap and the only way to save that function is in an ArcMap document (.mxd).

Final Verification Procedures

Upon completion of the wetland delineation process the Wetlands Verification Tool must be run on the data. The verification tests can be run singly or together as long as the data passes the QAQC Pass/Fail function. If the data Fails, corrections must be made before shipment. If verification Fails upon submission, the data will be returned for corrections.

The Wetlands Verification tool, Installation Instructions and User Information can be obtained at: http://capp.water.usgs.gov/FWS_web/index.htm.

The PI's or the Project Manager must ensure that all Pictures, Picture Forms, and Field Forms are filled out completed and properly named. The Pictures and Field Forms must also have an associated point in the database that is properly named that will tie the point to the corresponding Picture or Field Form.

The Project Manager or Regional Coordinator must check to see that the Supplemental Map Information Form is completed correctly, as this is the final 'metadata' associated with the project's data.

Data Submission Procedure

When the data is updated and the final verification checks have been completed it is ready for submission back into the Wetlands MGD. The steps for final submission of the wetlands data are as follows:

1. Burn the entire contents of each “work area” folder to a new CD.
 - a. Keep a backup copy of the data in the event the data is lost or damaged during shipping.
2. A completed Regional Transmittal Form must be submitted before all data is submitted. This is available at http://capp.water.usgs.gov/FWS_web/Forms/transmittal.htm.
3. Ship CD to:

U.S. Geological Survey
 505 Science Dr.
 Madison WI 53711-1061
 Attn: Bill Buckingham

Response to Data Submission

When the Wetlands Geodatabase Manager receives the data quality assurance and data verification checks will be conducted. Based on the results of these checks one of the following will occur:

- If the data is accepted you will receive an email informing you that the data has been accepted and has been checked into the Wetlands MGD.
- If the data is not accepted you will receive an email notifying you as to why the data failed and the data will be returned to you for correction.