U.S. Fish and Wildlife Service

Avian Knowledge Network (AKN)
Help Documentation

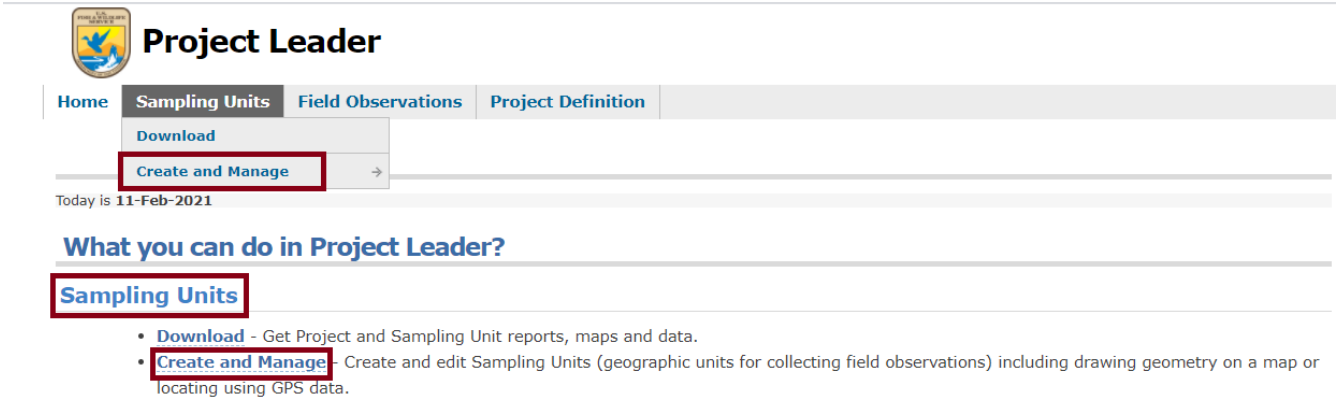
Help Guide 4
Project Leader: Adding Study Areas, Transects, and Management Units to a Project

Summary: This document describes how Project Leaders work with study areas and corresponding management units or transects within a project, create new study areas and units, and edit exiting units, areas, and transect points. It also describes how to add spatial data to a project.

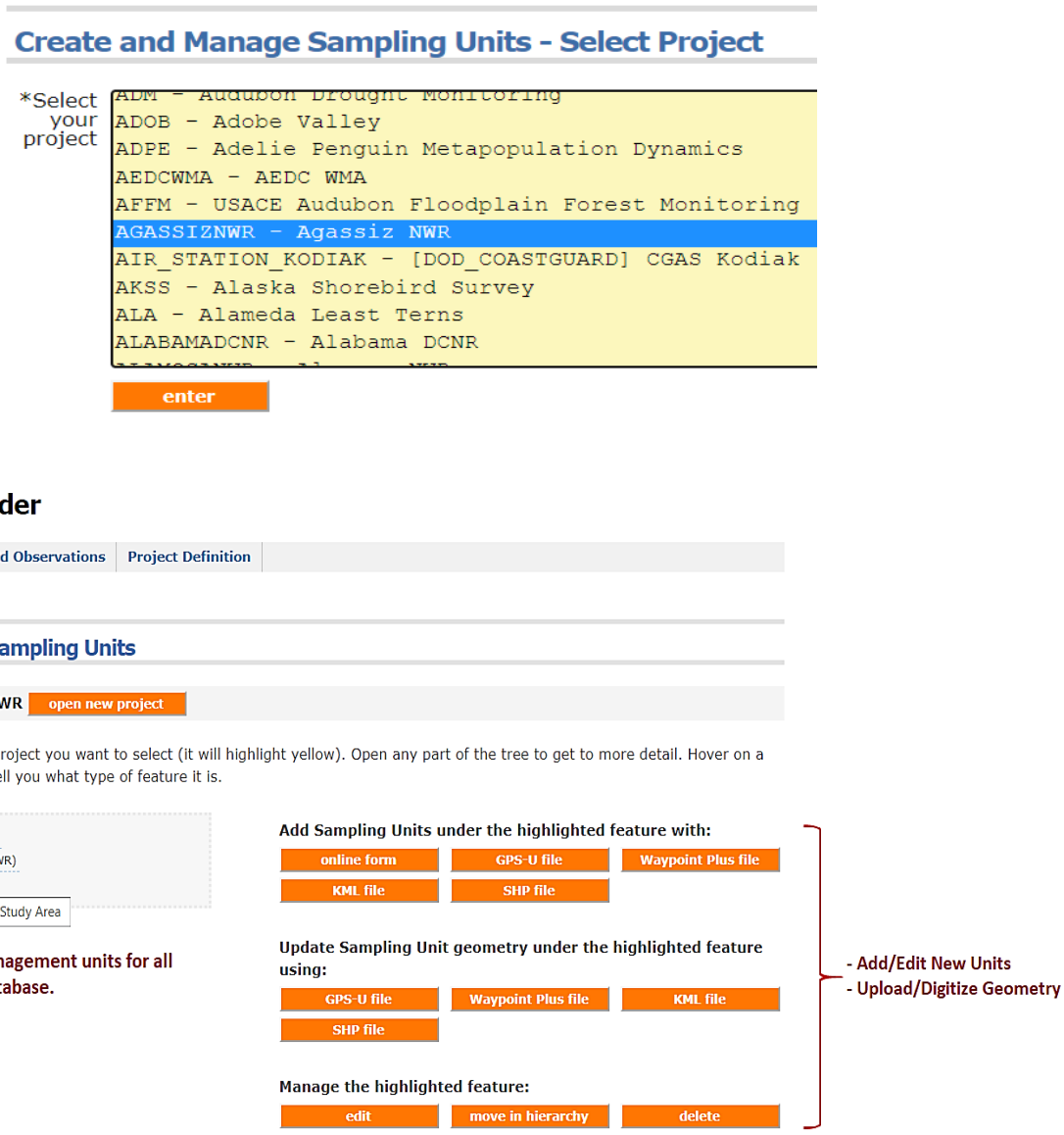
Contents

Accessing Study Areas and Sampling Units

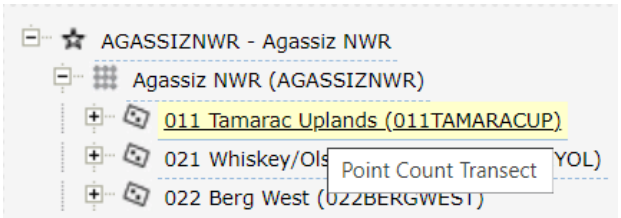
In the AKN, a study area provides a folder for independent studies or protocols that are being utilized by a *Project*. It can be used to group the various types of observations into a more accessible format within the database. To add or edit a study area, login to the Project Leader portal. This opens the *Project Leader* interface. To access the *Sampling Units* interface, select *Sampling Units* ➔ *Create and Manage*.

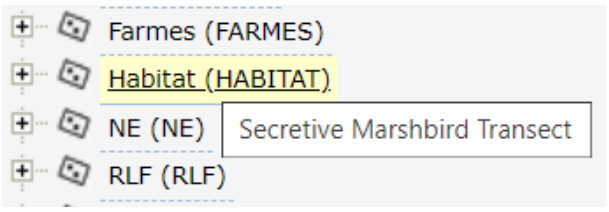


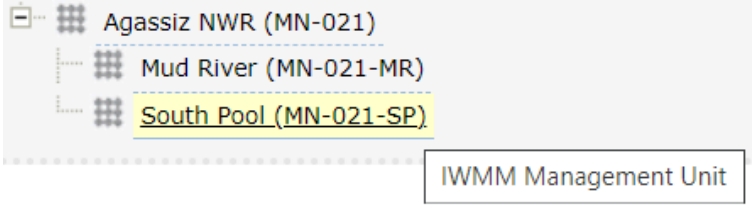
Select the project from the list of available projects. The *Create and Manage Sampling Units* page will appear for that project.



In the *Create and Manage Sampling Units* page, the project tree in the left panel contains a list of study areas. Expand the study areas by clicking on the expand button ⊞ to view the contents within the study area. Place the cursor over any management unit. A message box appears indicating the type of observations contained within the unit.

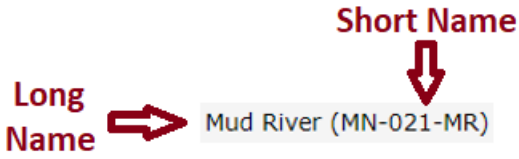




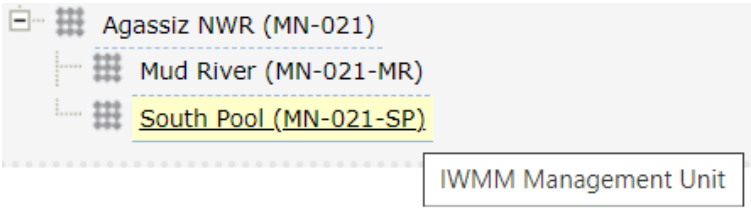


Long Name / Short Name

The identifiers in parentheses are termed the "short name". This is used as the unit or study area identifier in the database. The descriptive name outside of the parentheses is the "long name". The long and short names are assigned by the project leader when the unit or study area is created.

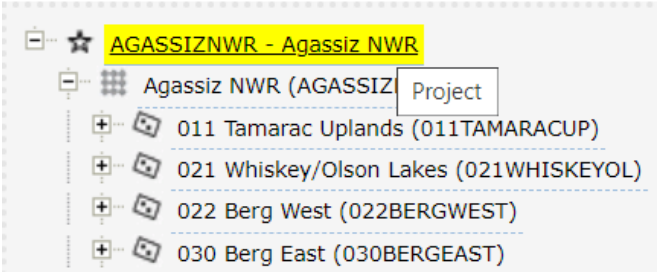


Since multiple protocols may be assigned to one project, IWMM study areas are given a short name code to better identify them as being specific to IWMM. The code includes the two-letter state identifier corresponding to the state where the project is located followed by a sequential number (e.g., MN-003). To obtain a short name code for your study area, contact the Inventory and Monitoring Data Manager, who is maintaining a list of numbers by state as new IWMM projects are added. If a project already contains an IWMM study area and units, then the short name has already been assigned. In this case, the I & M Data Manager does not need to be contacted. Simply add a new IWMM management unit to the study area. In the example below, the short name for an IWMM study area indicates that Agassiz NWR is located in Minnesota and is the 21st project within the state to conduct observations using the IWMM protocol(s). The suffix for management units are assigned by the Project Leader and can be numeric values or initials corresponding to the unit's long name.



Create a Study Area

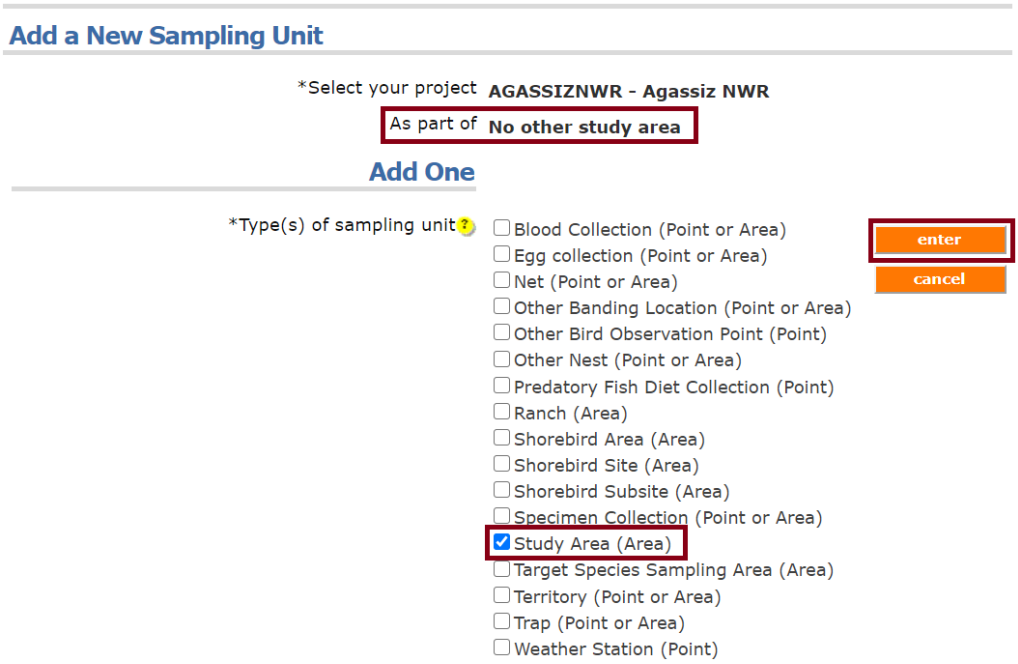
Before creating individual management units, the first step is to create a study area (folder). Within a study area there may be any number of management units with different observation protocols. Start by clicking on the project's name in the sampling unit tree (it will highlight yellow).



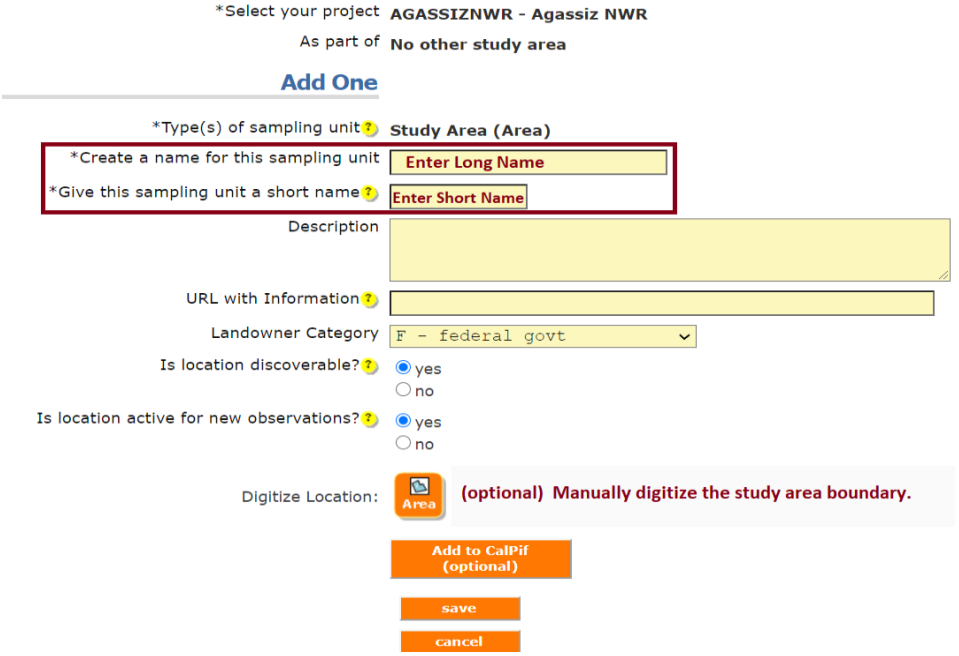
Online Form

To manually input a study area, select the **online form** button below the **Add Sampling Units under the highlighted feature with:** section.

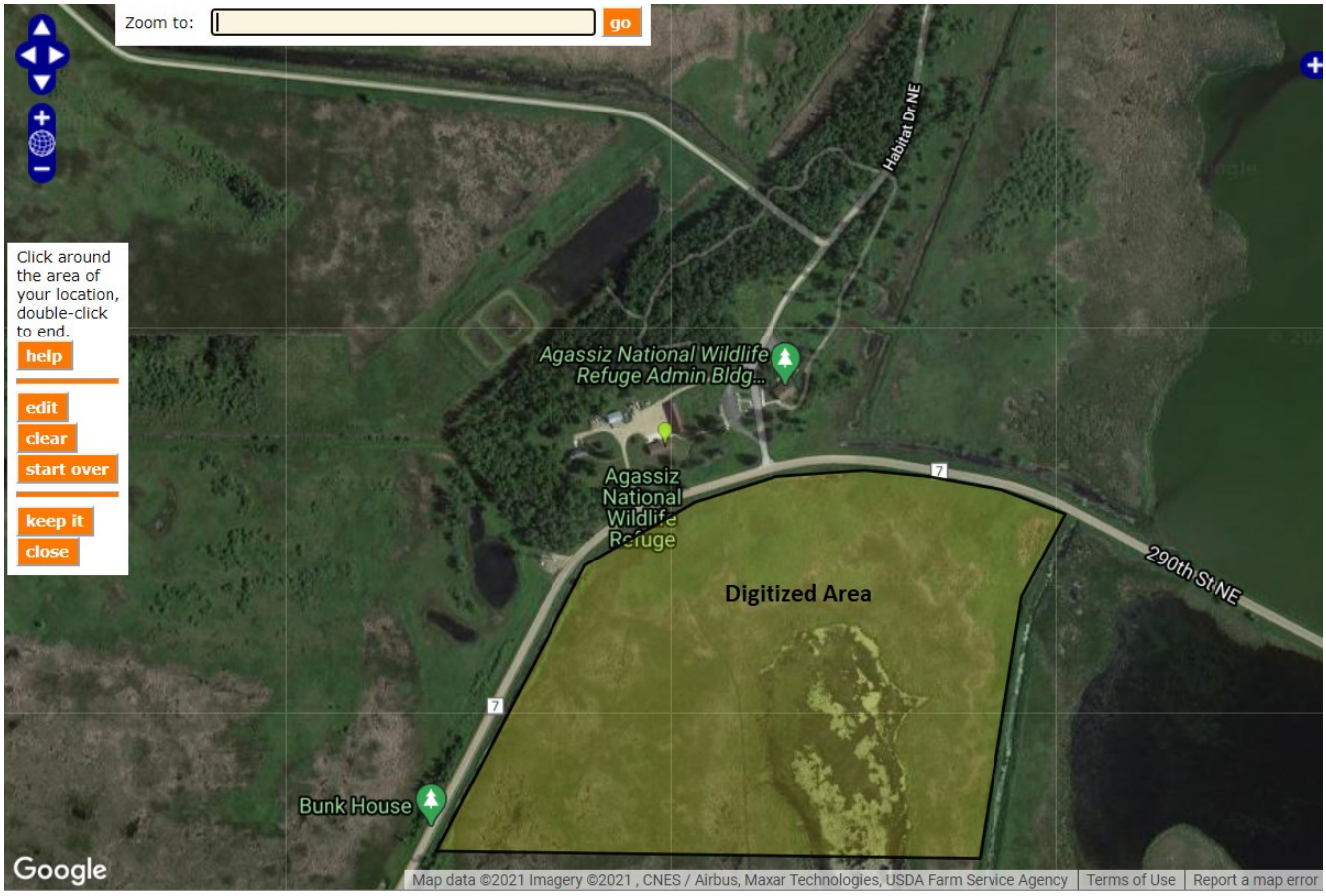
Select **Study Area (Area)** from the list provided. Check that you are creating a study area '**As part of' No other study area** and click **enter.**



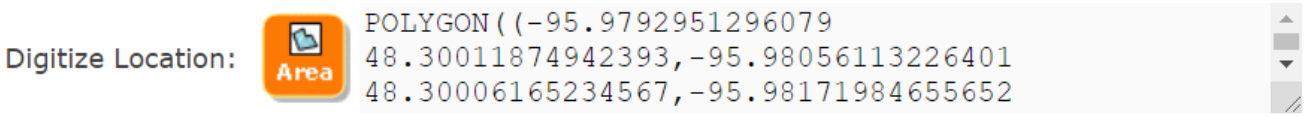
The next page contains textboxes for defining the study area. Enter the long and short names, a description of the area, a URL if available, select "F – federal govt" if the site is a refuge, and "yes" for the radio buttons.



If there are no geospatial data for the study area, the region can be digitized manually. Click the **Digitize Location** button Area. A map appears in a popup window. Click the vertices of the polygon defining the study area. Once the area is entered, click **keep it**. The digitized area is now included in the database. Click the **start over** button to re-enter the boundary or **edit** to modify the existing boundary.



The latitude and longitude coordinates of the vertices appear next to the digitize button:



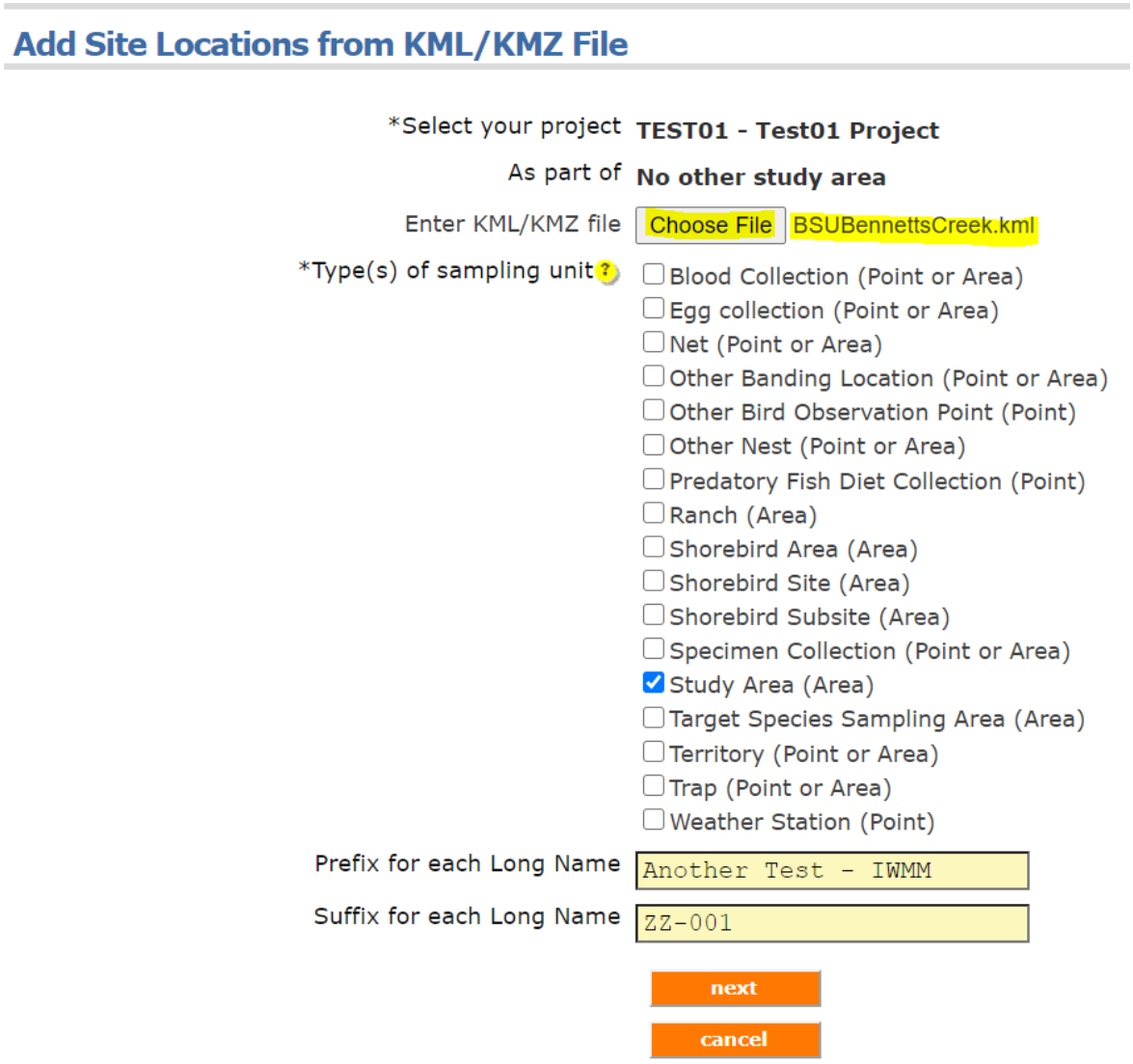
Click **save** to complete creating the study area.

ⓘ Adding geospatial data is optional. A study area or management unit can be created without digitizing the area. Spatial data can be included at any time. However, location information needs to be included so the data can be used in pre-defined visualization and download tools that utilize spatial queries. Researchers using the data will also need location information corresponding to the observations.

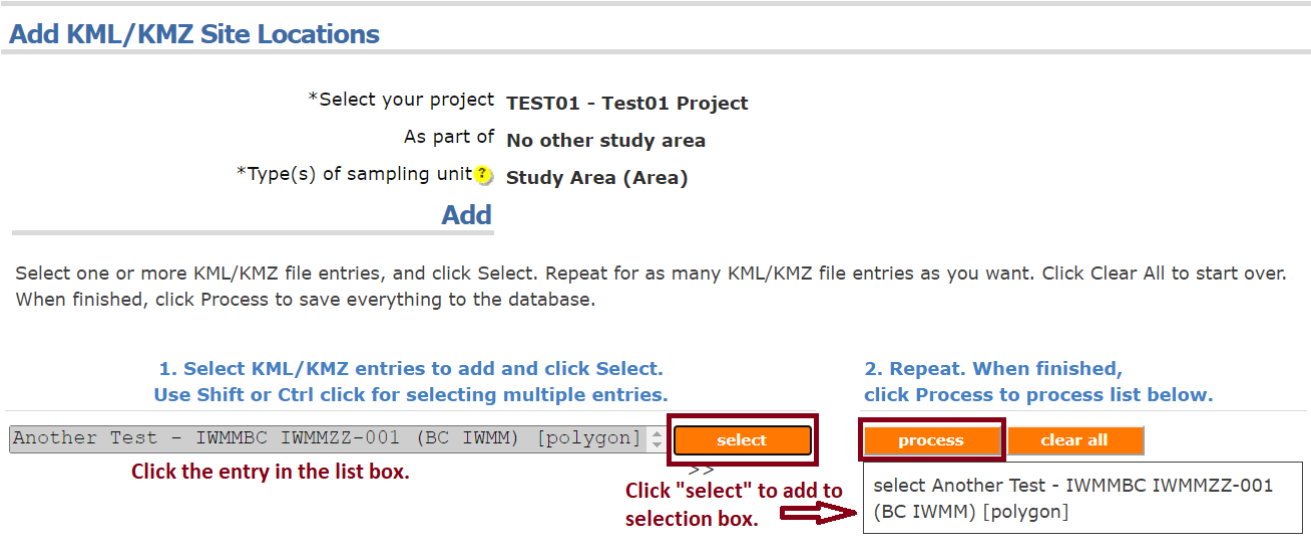
Upload Geospatial Data

If your study area has already been digitized and is in the form of an ESRI Shapefile, Google Earth KML file, or data from a GPS, use one of the other buttons to upload the file. Note, geospatial data must be in the WGS84 datum. Highlight the upper-level project in the project tree and click the button corresponding to the spatial data type to be uploaded.

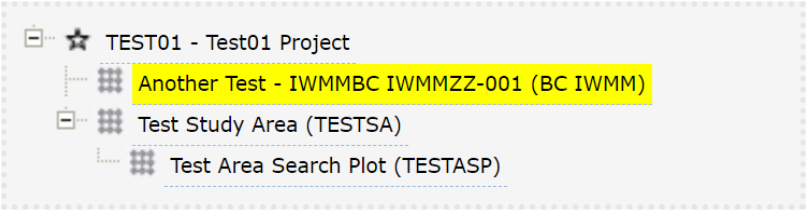
Clicking on any of these buttons will go to the same interfaces for defining the study area. However, there will be a prompt for uploading a file. For ESRI shapefiles, all individual components *(.shp*, *.shx*, *.dbf*, *.prj*, etc.) need to be in a single compressed file before uploading (**.zip*).



The next page provides a list of features within the file. Select the feature in the list and then click the **select** button. The selected data is displayed in the label box. Click the **process** button.

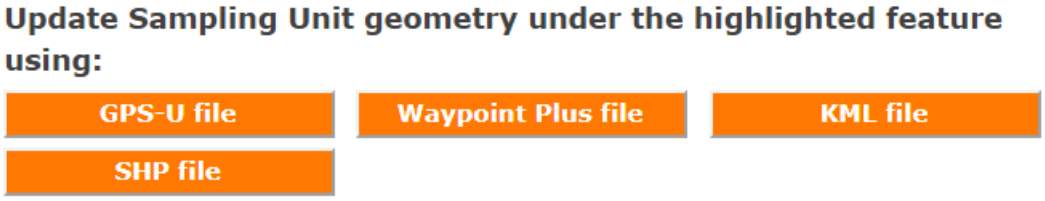


The new study area is added to the project tree. The name is modified to match the contents of the label box. To edit the properties of the study area, highlight the study area and click the **edit** button under the **Manage the highlighted feature:** section. See below for additional information about editing a study area.

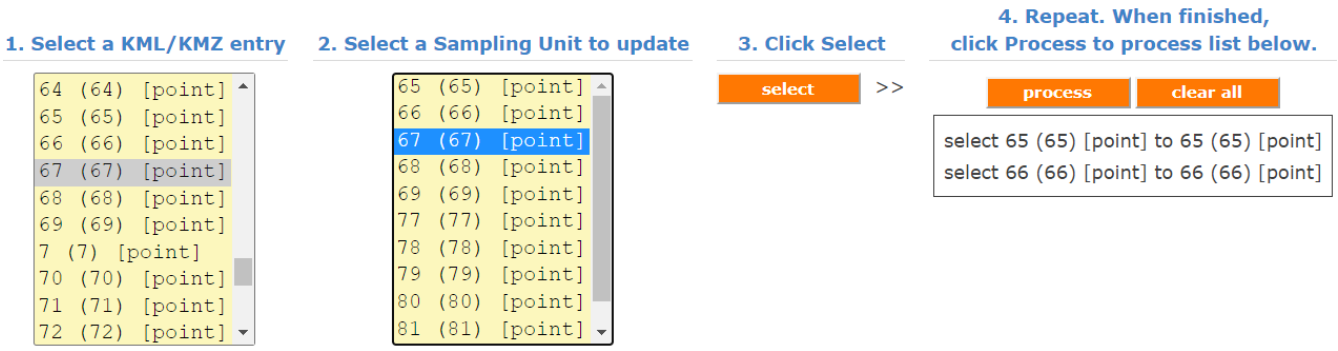


Editing Existing Study Areas, Sampling Units, and Transect Points

If geographic data was not included when the sampling unit or transect point was created, it can be uploaded under the **Update Sampling Unit geometry under the highlighted feature using:** section. Any spatial data must be in the WGS84 datum, and shapefile components must be compressed as a .zip file.



For IWMM polygons, click on the study area in the project tree. For point data, highlight the transect in the project tree. Click the button corresponding to the type of spatial data file to be uploaded. The next page requests the file to be uploaded. Once uploaded, match the feature from the uploaded file to the sampling unit or transect point by highlighting a single entry in each list (steps 1 and 2 in the figure below). Click the **select** button. This places the matched selection into the list box in step 4. Once all of the matches are made, click the **process** button. This will upload the geographic data to the matched transect points or sampling units. When uploading data, it is beneficial that the identifiers in the geographic data match the names of the points or polygons from the project tree.

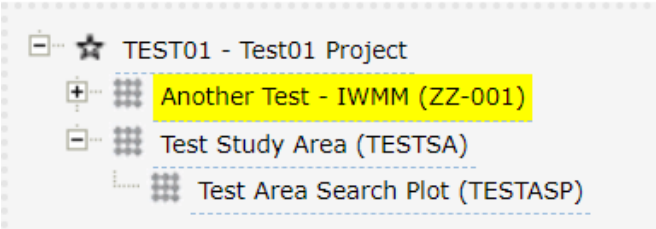


To perform further edits, click the **edit** button under the **Manage the highlighted feature:** section. This will return to the interfaces used by the **online form** button. The long and short names can be edited as well as any other property of the study area or sampling unit.

Study areas, management units, or transects and corresponding points can also be deleted in this section. Highlight the feature in the project tree and click the **delete** button.

Management Units

The process for adding and modifying sampling units and transects within a study area are similar to creating study areas. Begin by selecting the study area where the management units will be added. Choose the method of adding properties to the unit. The same type of information will need to be entered to define the unit. The headers of the web interfaces will state specifically the study area that the unit will be part of.



Add a New Sampling Unit

*Select your project **TEST01 - Test01 Project**

As part of **Another Test - IWMM(ZZ-001)**

Add One

*Type(s) of sampling unit

- [ ] Area Search Plot (Area)
- [ ] At-Sea Transect (Line or Area)
- [ ] Banding Net Collection (Area)
- [ ] Blood Collection (Point or Area)
- [ ] CTD Sample (Point)
- [ ] Depredation Plot (Point or Area)
- [ ] Diet Observations (Point or Area)
- [ ] Disturbance Plot (Point or Area)
- [ ] Egg collection (Point or Area)
- [ ] Fixed Radius Point Count Transect (None)
- [ ] Fixed Transect (Line)
- [ ] Forage Behavior Observation Point (Point or Area)
- [ ] Habitat Use Observation Point (Point or Area)
- [ ] Hydroacoustic Data Sample (Line)
- [ ] Index Plot (Point or Area)
- [x] IWMM Management Unit (Area)
- [ ] Migration Observation Point (Point or Area)
- [ ] Nest Plot (Point or Area)
- [ ] Net (Point or Area)
- [ ] Nightbird Route (None)
- [ ] Other Banding Location (Point or Area)
- [ ] Other Bird Observation Point (Point)
- [ ] Other Nest (Point or Area)
- [ ] Point Count Transect (None)
- [ ] Predatory Fish Diet Collection (Point)
- [ ] Sea Watch Observation Point (Point)

enter

cancel

Add a New Sampling Unit

*Select your project **TEST01 - Test01 Project**

As part of **Another Test - IWMM(ZZ-001)**

Add One

*Type(s) of sampling unit **IWMM Management Unit (Area)**

*Create a name for this sampling unit: IWMM Test Unit

*Give this sampling unit a short name: ZZ-001-01

IWMM Short Name - append suffix to study area short name

Description: IWMM Test Unit

URL with Information:

Landowner Category: F - federal govt

Is location discoverable? (yes / no)

Is location active for new observations? (yes / no)

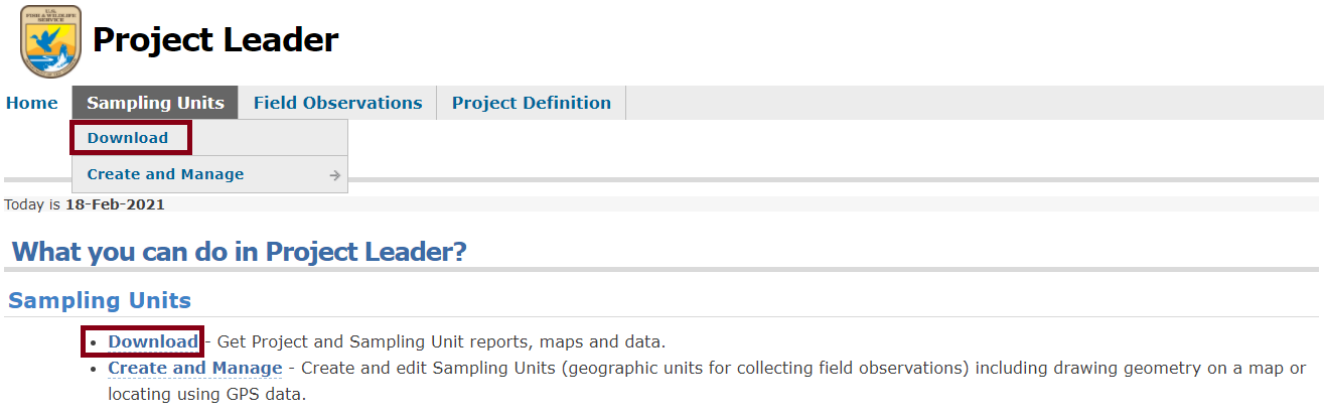
Digitize Location: Area

save

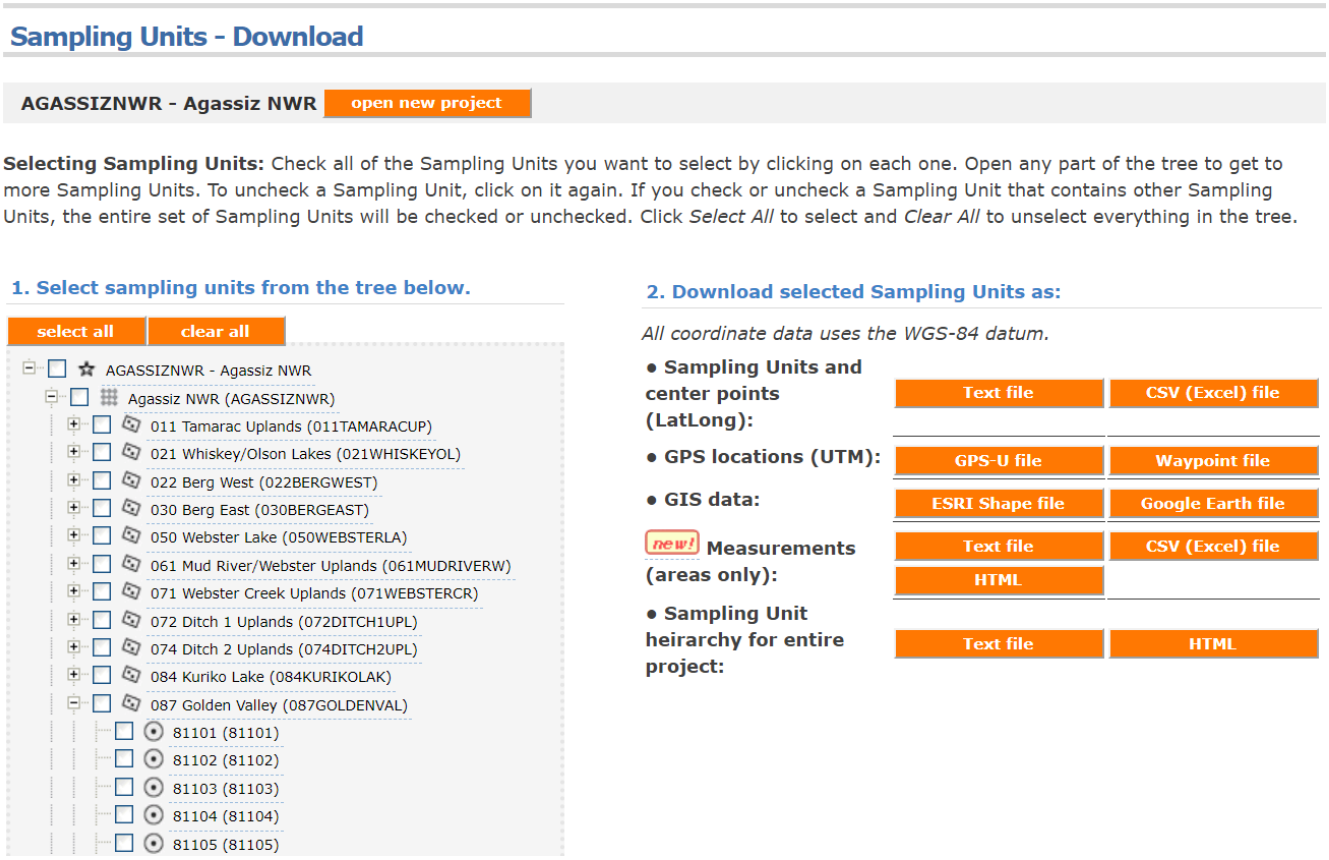
cancel

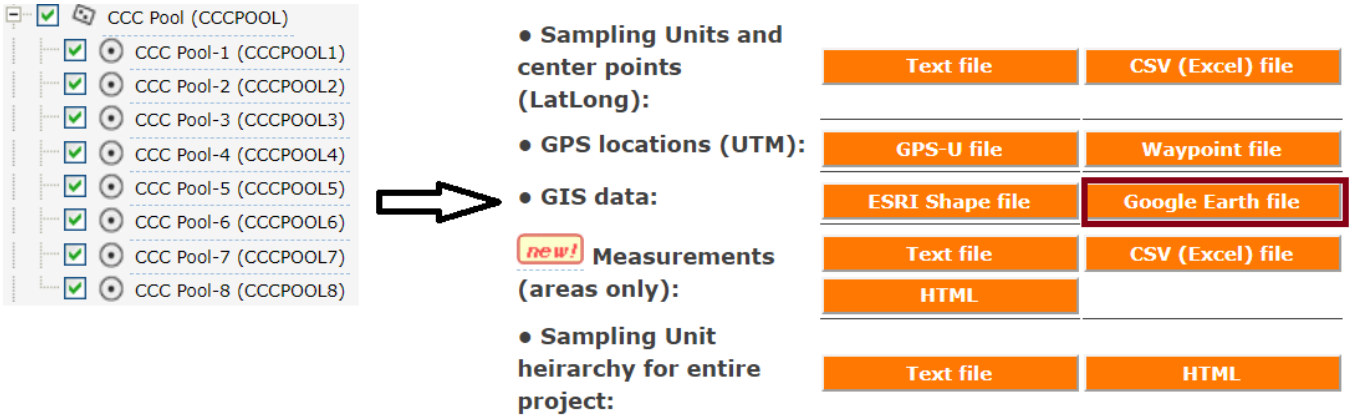
Download Sampling Units

To download area or point locations of study areas or sampling units, click on *Sampling Units* ➔ *Download* in the Project Leader interface.



After selecting the project, the *Sampling Units – Download* page appears. Click on the desired sampling unit(s) in the project tree. The panel on the right provides download options. Click on the button for the preferred geospatial data format to obtain the coordinates or polygon data for the selected sampling unit(s). You will be requested to select a location to save the file.





Google Earth KML File