

## PROJECT LEADER TIP #7 HOW TO ADD SAMPLE GEOMETRY

Before beginning, it is important to understand that sample site and sample locations are set-up hierarchically. For Pacific Flyway Shorebird Survey the hierarchy is as follows:

- 1. Project (i.e., San Diego Shorebird Survey [SDSS])
  - a. Study Area (i.e., North Bay)
    - i. Shorebird Area (i.e., 188; aka Sampling Location or Sampling Unit)

There are different ways of adding sampling unit geometry in CADC:

- 1. Using an embedded Google Earth application in the Edit feature
- 2. Uploading an ArcGiS shapefile or Google Earth kml file.

## TO USE THE EMBEDDED GOOGLE EARTH APPLICATION:

- 1. Log-in to CADC and choose the **Project Leaders** application
- 2. Under Sampling Units, select "Create and Manage"

Project Leader						
Home         Sampling Units         Field Observations         Load Observations in Bulk         Project Definition						
Foday is 9-Dec-2011						
What you can do in Project Leader?						
Sampling Units						
<ul> <li><u>Download</u> - Get Project and Sampling Unit reports, maps and data.</li> <li><u>Create and Manage</u> - Create and edit Sampling Units (geographic units for collecting field observations) including drawing geometry on a map or locating using GPS data.</li> </ul>						
Field Observations						
Download - Get Project observation data in different formats.     Review Point Counts - For reviewing Point Count observations for a Project and setting level of availability.     Review Area Searches / Area Surveys - For reviewing Area Search / Area Survey observations and setting level of availability.     Review Area Searches - For reviewing Rail Point Count observations and setting level of availability						
Project Definition						
<ul> <li>Researchers - For creating and updating Researchers.</li> <li>Researcher Access - For setting which Researchers have access to a Project, whether they are active or inactive, and whether they are a Project Leader or not.</li> <li>Protocols Used - For setting which Protocols can be used when adding new observation data to a Project.</li> </ul>						
Load Observations in Bulk						
You can upload specific format of Banding Data and Point Count Data. If you would like to find out more about our bulk data loading tools, please contact PRBO's Informatics division for more details.						
*What are Sampling Units? A Sampling Unit is a named locations where you make observations in the field, such as transects, area search plots, nets. Sampling Units can contain other, smaller Sampling Units, giving you a way of organizing your projects logically and spatially.						

- **3.** On the following screen, choose your project of interest and click enter.
- **4.** Locate the Study Area (Study Location) or Shorebird Area (Sampling Unit) where you want to add geometry from the expandable tree and click on it. It should highlight yellow.

**Note:** Consider project hierarchy to find the correct sampling location. Some projects have all of the Sampling Locations displayed in one list. Other projects have Sampling Locations grouped into Study Areas. This distinction is important in step 6.

5. Click the orange "edit" button under Manage the highlighted feature on the right.

Project Leader						
Home Sampling Units Field Observations Load Observations	in Bulk Project Definition					
Create and Manage Sampling Units						
Click on the Sampling Unit or Project you want to select (it will highlight yellow). Open any part of the tree to get to more detail. Hover on a tree node and the tooltip will tell you what type of feature it is.						
<ul> <li>☆ SDSS - San Diego Bay Shorebird Survey</li> <li>☆ Gentral (C)</li> <li>☆ Mission Bay (MB)</li> <li>♥ ∰ North (N)</li> <li>♥ ∰ Ocean (O)</li> <li>♥ ∰ Salt Pond (SD)</li> <li>♥ ∰ South (S)</li> <li>↓ Ţijuana River (TR)</li> </ul>	Add Sampling Units under the highlighted feature with:         online form       GPS-U file       Waypoint Plus file         KML file       SHP file         Update Sampling Unit geometry under the highlighted feature using:       GPS-U file       Waypoint Plus file         GPS-U file       Waypoint Plus file       KML file					
	Manage the highlighted feature: edit move in hierarchy delete					

**6.** For existing sampling units, the type of Sampling Unit should already be selected. Simply click <u>enter</u> to move to the next screen.

Project	Leader			
Home Sampling Units	Field Observations	Load Observations in Bulk	Project Definition	
Edit a Sampling U	nit			
	*Select your pr	roject SDSS - San Diego B	ay Shorebird Survey	
	As p	art of No other study area	1	
	Sampling Unit N	lame: N - North		
		Edit		
	*Type(s) of sampling u	Init I Blood Collection (P Egg collection (Po Net (Point or Area Other Banding Loc Other Bird Observi Other Nest (Point Predatory Fish Die Shorebird Area (Ar Shorebird Area (Ar Shorebird Stie (Am Shorebird Stubsite Specimen Collectio Study Aroa (Area) Target Species Sa Territory (Point or Trap (Point or Area Weather Station (	Point or Area) int or Area) ) ation (Point or Area) ation Point (Point) or Area) t Collection (Point) rea) (Area) on (Point or Area) mpling Area (Area) Area) a) Point)	enter cancel

7. On the next screen, click **Geometry.** This launches a Google Earth application that allows you to draw and save the geometry of the sampling are or unit.



- 8. Zoom or move map to your area of interest:
  - a. Type a location into the "Zoom to:" field at the top of the popup screen
  - b. Click the " $\underline{+}$ " or " $\underline{-}$ " buttons at the top left to zoom in or out
  - c. Click the "<u>zoom box</u>" button and then, using your mouse, **click and drag** to create a box around the area of interest you wish to zoom-in on.

Repeat this step as many times as necessary to zoom in to where you wish to draw geometry.



**9.** When you have located the area where you wish to draw geometry, you will outline the geometry of your area with a series of single mouse clicks. Your last mouse click is marked with

an X in a yellow box, and as you single-click your way around your area, a red-shaded shape will appear, as illustrated below:



10. If you make a mistake: the "<u>Undo</u>" button will remove one click point/vertex at a time; "<u>Start</u> <u>Over</u>" will erase the entire user-created polygon. Also, if you click "<u>Close</u>", the popup window will close but will NOT save your changes.



11. When you are satisfied with the digitized geometry, click "<u>Keep it</u>" – your changes will be automatically saved in CADC and the popup window will close. You should now see Lat/Long numbers printed next to Geometry & the "<u>Area</u>" button you clicked to begin editing Geometry. **12.** When finished, click "update"

## TO USE AN ARC GIS SHAPEFILE:

- **1.** Follow steps 1- through 4 above.
- 2. Click the orange "<u>SHP file</u>" button under <u>Update Sampling Unit Geometry...</u> on the right.

me Sampling Units Field Observations Load Observation Create and Manage Sampling Units	ns in Bulk   Project Definition
Create and Manage Sampling Units	
Create and Manage Sampling Units	
Create and Manage Sampling Units	
LBSS - Los Banos Wildlife Area Complex Shorebird Surve	2y open new project
Click on the Sampling Unit or Project you want to select (it will	highlight vellow). Onen any part of the tree to get to more detail. Hove
Click on the Sampling Unit of Project you want to select (it will	i highlight yellow). Open any part of the tree to get to more detail. Hove
tree node and the tooltip will tell you what type of feature it is	
	Add Sampling Units under the highlighted feature with:
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T Los Paper Wildlife Area 1 (LBW1)	online form GPS-U file Waypoint Plus f
Los Banos Wildlife Area 1 (LBW1)     Los Banos Wildlife Area 2 (LBW1)	online form GPS-U file Waypoint Plus f
Los Banos Wildlife Area 1 (LBW1)     Los Banos Wildlife Area 2 (LBW2)     Los Banos Wildlife Area 2 (LBW2)     Los Banos Wildlife Area 2 (LBW2)	online form         GPS-U file         Waypoint Plus f           KML file         SHP file
	online form GPS-U file Waypoint Plus f KML file SHP file
	online form GPS-U file Waypoint Plus f KML file SHP file Update Sampling Unit geometry under the highlighted featu
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Image: Los Banos Wildlife Area 1 (LBW1)           Image: Los Banos Wildlife Area 2 (LBW2)           Image: Los Banos Wildlife Area 3 (LBW2)	online form     GPS-U file     Waypoint Plus file       KML file     SHP file       Update Sampling Unit geometry under the highlighted featurising:     GPS-U file       GPS-U file     Waypoint Plus file       SHP file
Image: Los Banos Wildlife Area 1 (LEW1)           Image: Los Banos Wildlife Area 2 (LEW2)           Image: Los Banos Wildlife Area 3 (LEW2)	online form     GPS-U file     Waypoint Plus file       KML file     SHP file       Update Sampling Unit geometry under the highlighted featurising:     GPS-U file       GPS-U file     Waypoint Plus file       SHP file     SHP file
★ # Los Banos Wildlife Area 1 (LBW1)         ★ # Los Banos Wildlife Area 2 (LBW2)         ★ # Los Banos Wildlife Area 3 (LBW2)         ★ # Mod Slough Wildlife Area 3 (LBW3)         ★ # Mod Slough Wildlife Area 3 (LBW3)         ↓ # MSWA:12.2 (2.2)         ↓ # MSWA:15.2 (5.2)         ↓ # MSWA:15.1 (5.1)         ↓ # MSWA:15.2 (5.2)         ↓ # MSWA:15.2 (5.2)         ↓ # MSWA:15.1 (5.1)         ↓ # MSWA:15.2 (5.2)         ↓ # MSWA:15.1 (5.1)         ↓ # MSWA:15.1 (5.1)         ↓ # MSWA:15.2 (5.2)	online form     GPS-U file     Waypoint Plus file       KML file     SHP file       Update Sampling Unit geometry under the highlighted featurusing:     GPS-U file       GPS-U file     Waypoint Plus file       SHP file   Manage the highlighted feature:       edit     move in hierarchy

**3.** Navigate to your zipped file of the shapefile components

- prb	Project Leader							
Home	Sampling Units	Field Observations	Load Observations in Bulk	<b>Project Definition</b>				
Upd	Update Site Locations from SHP File							
All co your	All coordinates must be projected into World coordinates (Latitude/Longitude), WGS-84 datum. Use ArcMap or another product to project your SHP files before loading. "Select your project LBSS - Los Banos Wildlife Area Complex Shorebird Survey							
		A	As part of Mud Slough Wildl	ife Area(MSWA)				
	Enter ZIP file of SHP/SHX/DBF files Browse							
	next							
	cancel							

4. Choose the column using the header name that contains the survey area unit names. Usually CADC\_SN

prb	Project Leader						
Home	Sampling Units	Field Observations	Load Observations in Bulk	Project Definition			
Upd	Undate Site Locations from SHP File						
Selec	ct columns to be	used for identifying fea Arrea m FIEED P FIEED A B Hectares ID 1 Derimeter next cancel	atures in SHP file.				
				Hosted by PRBO Conservation Sc	ier		

5. Match the names in Column 1 (SHP entry) with Column 2 (Sampling Unit) pair-by-pair. After selecting one name from Column1 and one name from Column2 press the orange "select" button. This will move the pair to Column 4. Once all names from Column have been matched with Column 2, click the orange "process" button.

Project	t Leader			
Home Sampling Units	Field Observations	Load Observations in Bulk	Project Definition	
Update Site Loc Select a SHP entry and finished, click Process 1. Select a SHP entry 2.2 (2.2) [polyg 3.1 (3.1) [polyg 4.1 (4.1) [polyg 5.2 (6.2) [polyg 7 (7) [polygon] 9 (8) [polygon] 9 (2) (polygon]	ations with SH a Sampling Unit and to save everything to ry 2. Select 1 mswarz ms	P geometry click Select. Repeat for as m the database. a sampling linit to update 2. (2.2) [area] 2. (3.1) [area] 2. (3.2) [area] 3. [area] (3) [area] (3) [area]	any SHP file entries Click Select S>	as you want. Click Clear All to start over. Whe 4. Repeat. When finished, click Process to process list helow. process characteristic fields. select 3.2 (2.2) [polygon] to MSWA::2.2 (2.2) [area] select 3.1 (3.1) [polygon] to MSWA::3.1 (3.1) [area] select 3.2 (3.2) [polygon] to MSWA::3.2 (3.2) [area] select 4.1 (4.1) [polygon] to MSWA::4.1 (4.1) [area] select 5.1 (5.1) [polygon] to MSWA::5.1 (5.1) [area] select 7.7) [polygon] to MSWA::7 (7) [area] select 8 (8) [polygon] to MSWA::8 (8) [area] select 8 (9) [polygon] to MSWA::9 (9) [area]

6. You will be taken back to the screen in step 2.