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Biological Reporting Database, version 1.1 Instruction Manual


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U.S. DEPARTMENT OF THE INTERIOR
U.S.GEOLOGICAL SURVEY
WESTERN ECOLOGICAL RESEARCH CENTER

Biological Reporting Database, version 1.1 Instruction Manual

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INTRODUCTION

Anyone that has worked with threaten/endangered (T&E) species in the state of California knows of the numerous forms that must be completed and submitted to various Federal and State agencies under the stipulations of their T&E permits. Often the information requested by these management agencies is similar, but frequently follows different formats dictated by the agencies specific needs. The purpose of the Biological Reporting Database is to facilitate the reporting of this data in the formats required by the various management agencies.

The Biological Reporting Database (BRDB) was initially born out of a desire to simplify the process of reporting distribution and abundance data for the endangered southwestern willow flycatcher (*Empidonax traillii extimus*), for inclusion into the USGS California Willow Flycatcher Database. However, it's utility to facilitate the collection and reporting of data for numerous T&E species was quickly realized and its scope was expanded to captured data relevant to both plant and animal taxa.

The current version of the database (i.e. version 1.1) has been designed around the data contained within three forms: 1) the California Fish and Game - California Native Species Field Survey Form, 2) the Fish and Wildlife Service - 45-Day Report, and 3) the USGS - Willow Flycatcher Survey and Detection Form. Data relevant to the three forms is entered into the BRDB through a user-friendly interface and can then be subsequently printed and submitted to the appropriate management agency. Version 1.1 also contains the added capability to export individual survey, survey summary, species location, site, and contact data to Microsoft Excel.

Although version 1.1 of the BRDB is the second version of this software application, we realize that it is a work in progress and would greatly appreciate user comments and constructive criticisms (comments and criticisms can be emailed to Jay Rourke at jrourke@usgs.gov). Plans are currently being developed to migrate the system to a web based data entry format.

USING THE DATABASE

System Requirements

1) Microsoft Windows (98 or older)
2) Microsoft Access 2000 (or higher)

Getting the Application Setup on Your Computer

The first thing you will need to do prior to using the database is copy the Microsoft Access file "Biological Reporting Database v1.1" from the CD to your hard drive. Next, ***right*** click on the Biological Reporting Database v1.1 icon ⇨ select PROPERTIES from the drop down list ⇨ at the bottom of the "Biological Reporting Database v1.1 Properties" window ***uncheck*** the READ ONLY box if it is checked ⇨ click APPLY (bottom right corn) ⇨ click OK ⇨ and double-click the Biological Reporting Database v1.1 icon to start the application.

Note: Once the above procedure is performed the application can be subsequently started by double-clicking the Biological Reporting Database v1.1 icon.

Getting the Application to Display Properly

Depending on how the screen display properties are set on your computer, will determine how large the data entry screens appear on your computer monitor. The Biological Reporting Database has been configured to display optimally when the screen area is set to 1024x768 pixels. A setting of fewer than 1024x768 pixels will cause the data entry forms to extend beyond your screen's boundaries, making it more difficult to enter data and navigate through the program. If a computer monitor is set to display substantially more pixels, the data entry forms will appear small on a computer monitor.

If you are not happy with the way the forms are displayed, follow this procedure: on your desktop double-click the MY COMPUTER icon ⇨ within the My Computer window double-click the CONTROL PANEL folder ⇨ within the Control Panel Window double-click the DISPLAY icon (the Display Properties Dialog box should open) ⇨ click the SETTINGS TAB ⇨ in the lower right corner you should see the SCREEN AREA box ⇨ place the mouse pointer over the "lever" that is positioned between the words "Less" and "More" ⇨ depress the left mouse button while the cursor is over the lever and hold it ⇨ with the button still depressed slide the lever horizontally (by moving your mouse) to adjust the number of pixels that will display on your screen (as you slide the lever back and forth you should see the number of pixels change) ⇨ move the lever back and forth until the display below the lever reads "1024 by 768 pixels" ⇨ once this occurs release the left mouse button ⇨ click the APPLY button in the lower right corner ⇨ a dialog box will appear telling you that "Windows will now resize your desktop…", click OK ⇨ another dialog box will appear asking you if "…you want to keep this setting", click YES ⇨ to close the Display Properties window click OK ⇨ to close the Control Panel window click the "X" in its upper right corner. You have now successfully reset your screen display.

Important Notes when Working with the Database

1. If you are unclear about what should be entered into a field, click inside the data entry cell in question and check the status bar (lower left corner of the screen) for an expanded definition.
2. To advance to the next cell when entering data either depress the Tab key on your keyboard, or use the mouse to navigate through a form.
3. Data is saved immediately after the cursor is moved to another cell. It is not necessary to actively save your data. This means that when you close a form all of your data is saved.
4. If you mistype or type-over an entry by mistake, depressing the escape key [Esc] on your keyboard before leaving the cell will "undo" what you have typed.
5. Most screens contain navigation buttons that allow the user to "scroll" through records that have already been entered. Navigation buttons will have either the words Next and Previous printed on them or appear as arrows (Figure 1)

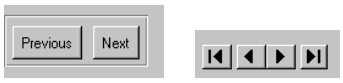

Figure 1. Examples of form navigation buttons

6. To edit data simply click within the field that you would like to edit and type in the new data. The one exception to this rule is when you are working in the Survey Data and Results Form. This form has been setup so that you must consciously click the EDIT DATA button before you are allowed to change any data that was previously entered. Note: that the changes that you make will be reflected on all subsequent reports that are printed.

DATABASE STRUCTURE

The Biological Reporting Database is comprised of seven main screens/forms:

1. Title/Main Screen (Figure 2)
2. Site Screen (Figure 3)
3. Species Screen (Figure 4)
4. Contact Screen (Figure 5)
5. Survey Data and Results Screen (Figure 6)
6. Printing Screen (Figure 10)
7. Exporting Screen (Figure 11)

Title/Main Screen

The Main screen opens when the program is started and provides links to the other database screens (Figure 2) contained within the Reporting Database. Buttons are provided under "Menu Options" to navigate to all other "secondary" screens. When you are finished entering, reviewing, printing, or exporting data in a secondary screen simply click the CLOSE button on the form to return to the Main screen. To exit the program, click the EXIT button.

Figure 2. Main/Title screen

Site Screen

The Site Screen is where site-specific information, such as the site name, the management authority, and general site location data are entered (Figure 3). Once a site is entered into the database, through the site screen, it becomes available for selection in the Survey Data and Results Screen (Figure 5) through drop-down lists to facilitate data entry. If you enter a site name into the Survey Data and Results Screen that is not contained within the database, you will be prompted to enter its site-specific data. Clicking on YES will cause the Site Screen to appear so its site-specific data can be entered. It is important to note that to maintain the data integrity of the BRDB you will not be allowed to continue entering survey data until the site-specific information has been entered. At a minimum you must enter a site's name into the site table/screen.

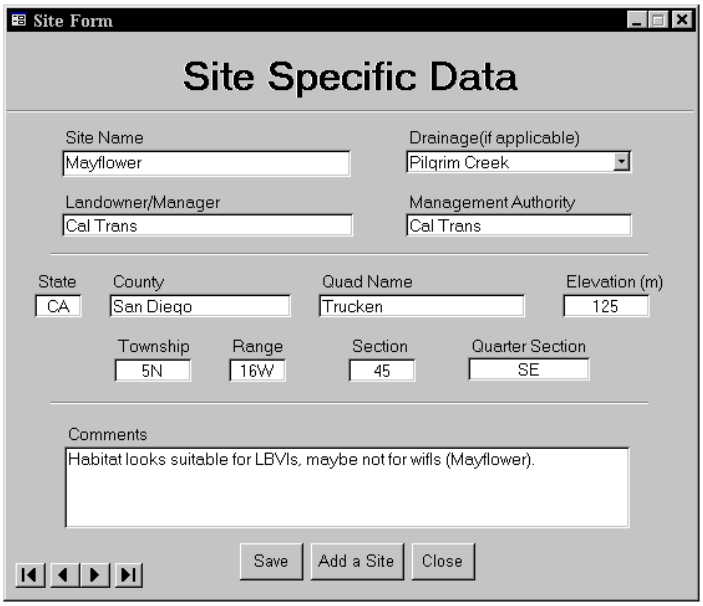

Figure 3. The Site screen

Species Screen

The Species Screen is where a new species is added to the database (Figure 4). The species screen contains only two fields - a species common and scientific name. As with the site name, once a species is entered into the database, using the species screen, it becomes available in the Survey Data and Results Screen as an item in a drop-down menu. If you enter a species into the Survey Data and Results Screen that is not in the drop-down menu you will be prompted to enter the species into the Species Table/Screen (and will not be allowed to continue until you do so). Note, misspelled species names are treated as "new" species. If you mistype a name and are prompted to enter it into the database, click NO and either select it from the drop-down menu (if it's already in the database) or retype its name correctly. For convenience the database comes with four bird species already entered into the database (i.e. the southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), yellow-billed cuckoo (*Coccyzus americanus*), and California gnatcatcher (*Polioptila californica*).

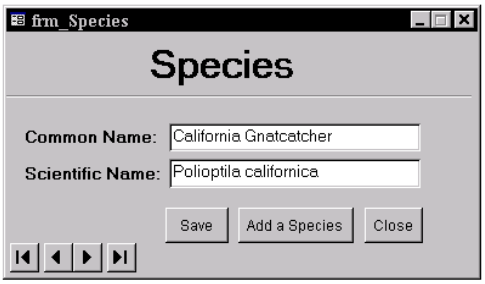

Figure 4. The Species screen

Contact Screen

The Contact Screen is where contact information of the person reporting the biological data or performing surveys is entered (Figure 5). Data captured in this screen includes: the person's full name, his/her address, phone number, email, and their Fish and Wildlife Service Threatened and Endangered permit number. As with the Site and Species screens data entered here becomes available in the Survey Data and Results Screen in the form of drop-down menus,

and due to data-integrity rules must be entered into the Contact Screen/Form before it can be accessed in other screens.

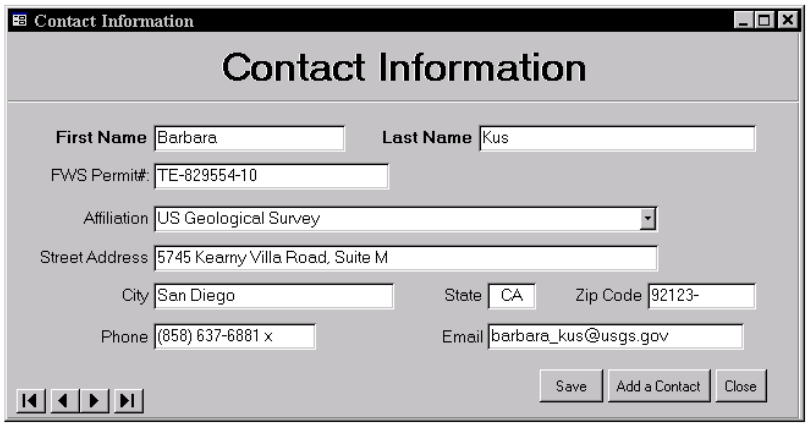

Figure 5. The Contact screen

Survey Data and Results Screens

The Survey Data and Results Screens are where data relating to individual surveys, habitat composition, animal and plant locations, and summary abundance numbers over a field season or for an entire year can be entered (Figures 6-9). Through these screens the majority of data are entered into the database. The Survey Data and Results form contains three main screens that are accessed using "Tabs" (i.e. Individual Surveys, Summary Data/Results, and Animal/Plant Coordinates), and four sub-screens contained within the Summary Data/Results Screen, also accessed using Tabs at the top of each sub-screen.

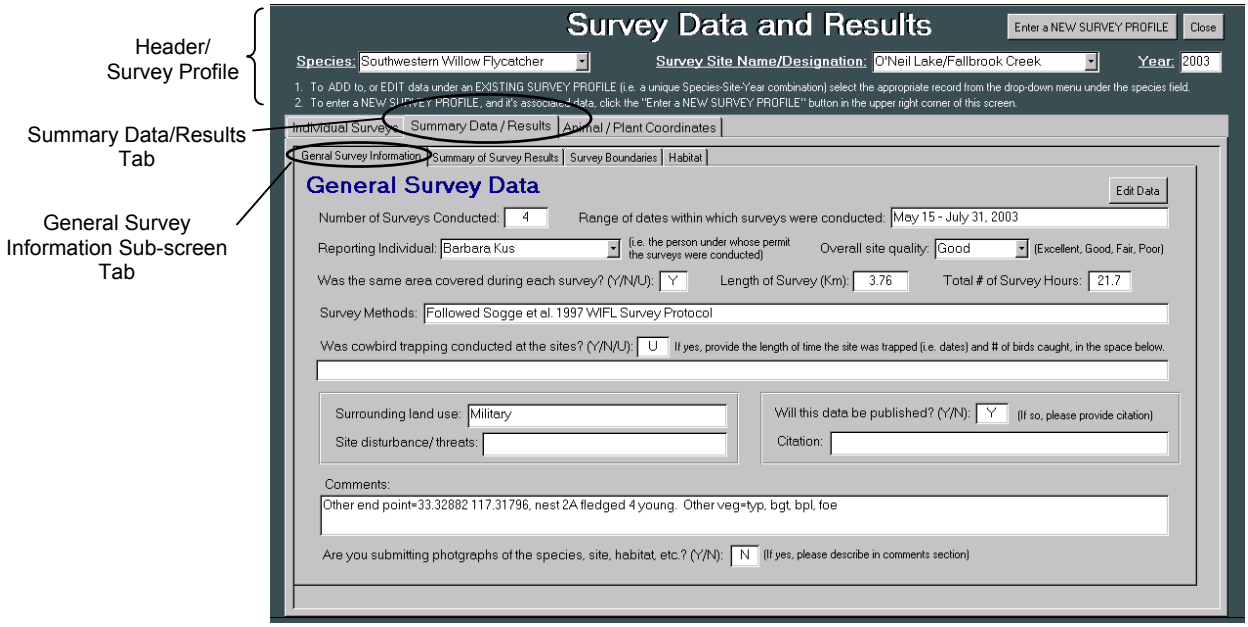

Figure 6. Survey Data and Results screen with the Screen Header and Tabs indicated

ENTERING SURVEY DATA

The top of the Survey Data and Results Screen is referred to as the Header and contains three fields that designate the plant or animal species with which work was performed, the site at which work was performed, and the year in which the work was carried out (Figure 6). The combination of these three fields is referred to as a Survey Profile. You must complete these fields before you will be allowed to entered data into the screens and sub-screens of the Survey Data and Results Form. This can be done by either clicking the ENTER A NEW SURVEY PROFILE button and creating a new Species-Site-Year profile or selecting an existing Survey Profile from the Species drop-down menu. If you select an existing profile you can either enter new data or edit existing data contained within that profile using the ADD DATA and EDIT DATA buttons, respectively.

As you navigate through the various forms contained within the Survey Data and Results Screen the Survey Profile will not change and continually indicates the species, site, and year for which you are entering data. Once you have completed entering data into the sub-screens, clicking the ENTER A NEW SURVEY PROFILE button will bring up a blank data entry form so you may continue with your data entry for another species, site, or year.

Understanding the Survey Profile

The Biological Reporting Database organizes the data entered into it under unique survey profiles (i.e. the combination of the species, site, and year fields found in the form header). Since each profile must remain unique for the database to function properly, it does not permit survey profiles to be duplicated. Therefore, if you enter a profile that is contained within the database you will be prompted that the profile already exists and instructed to select that profile from the species drop-down menu. After doing so you can either enter new data or edit existing data contained within that profile using the ADD DATA and EDIT DATA buttons, respectively. The Reporting Database is structured this way to ensure that all data relevant to a particular species, at a particular site, in a given year stays "together" and is easily extracted from the database.

The Individual Surveys Screen

When the ENTER SURVEY DATA button is pressed on the Main Menu, the Survey Data and Results screen opens displaying the Individual Surveys Tab (Figure 7). Under this tab data relating to the results for individual surveys can be entered. If you are unclear about what should be entered into a field, click inside the data entry cell in question and check the status bar (lower left corner of the screen) for an expanded definition. If the status bar is not visible click the RESTORE DOWN button in the upper right corner and/or move the Survey Data and Results window to uncover the status bar.

Common operations can be performed using the following instructions:

- *To enter additional surveys under an existing Survey Profile* – Select the Survey Profile from the drop-down menu under the species field in the Header of the form and click the ADD DATA button. A blank individual survey record will appear.

- *To view data that was entered previously* - use the navigation buttons in the lower right corner of the screen to locate the survey of interest.
- *To edit data that was entered previously* - click the EDIT DATA button.
- *To delete a survey* - first use the navigation buttons to locate the survey, then with the survey displayed on the screen, click the DELETE RECORD button. A warning will appear indicating that you are about to delete a record, click the YES button to confirm you want to delete the survey.

Once you have finished entering survey data, complete the rest of the form by navigating through the sub-screens using the tabs at the top of each form.

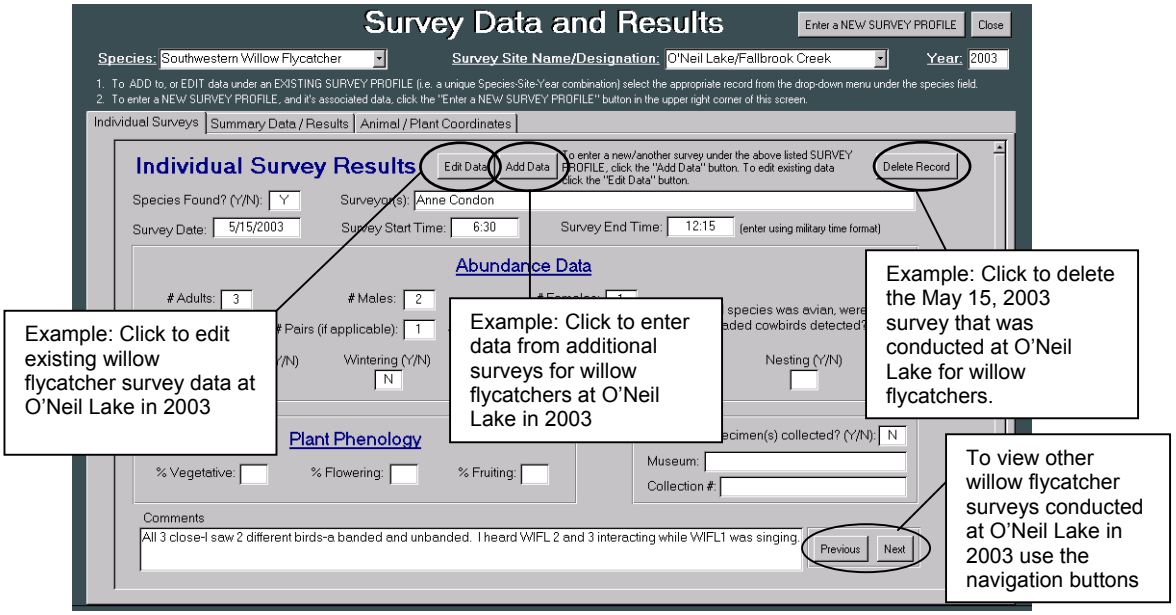

Figure 7. Individual Surveys screen with EDIT DATA, ADD DATA, DELETE, and navigation data buttons indicated.

The Summary Data/Results Screen and Sub-screens

The Summary Data/Results screen contains four sub-screens (i.e. General Survey Information, Summary of Survey Results, Survey Boundaries, and Habitat) in which to enter data under a Survey Profile (Figure 8a-d). This series of four screens is where summary data for a given period of time is entered (i.e. a breeding season, year, or survey interval), and can be accessed using the tabs at the top of the sub-screens. As you move through the screens notice that the Survey Profile in the Header does not change, indicating that you are entering data for the same species, site and year.

Summary of Survey Results Sub-screen

The Summary of Survey Results sub-screen is where overall abundance data for a field season, breeding season, or year are summarized and recorded (Figure 8a). Again, if you are

unclear about what should be entered into a field, click inside the data entry cell in question and check the status bar (lower left corner of the screen) for an expanded definition.

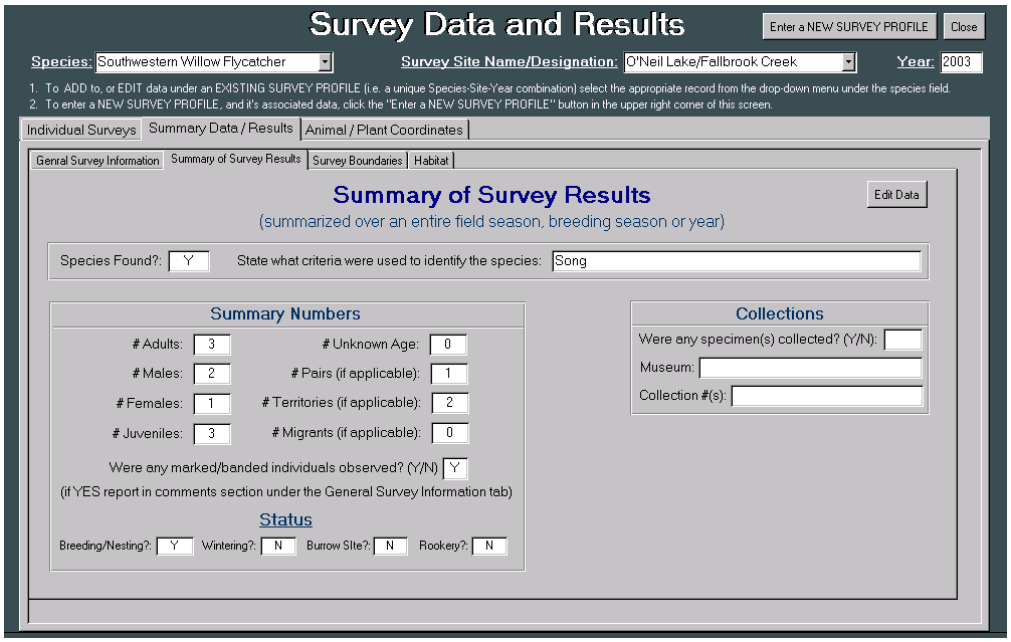

Figure 8a. The Summary Data/Results screen and Summary of Survey Results sub-screen.

Survey Boundaries Sub-screen

The Survey Boundaries sub-screen is where the boundaries of the survey are entered (Figure 8b). Currently, the database is configured to accept only two pairs of spatial coordinates. Therefore, we recommend that the locations be used to delineate the greatest extent of the survey area (in a riverine situation this could be the upstream and downstream boundaries), and that a topographic map outlining the entire survey area be submitted with all forms.

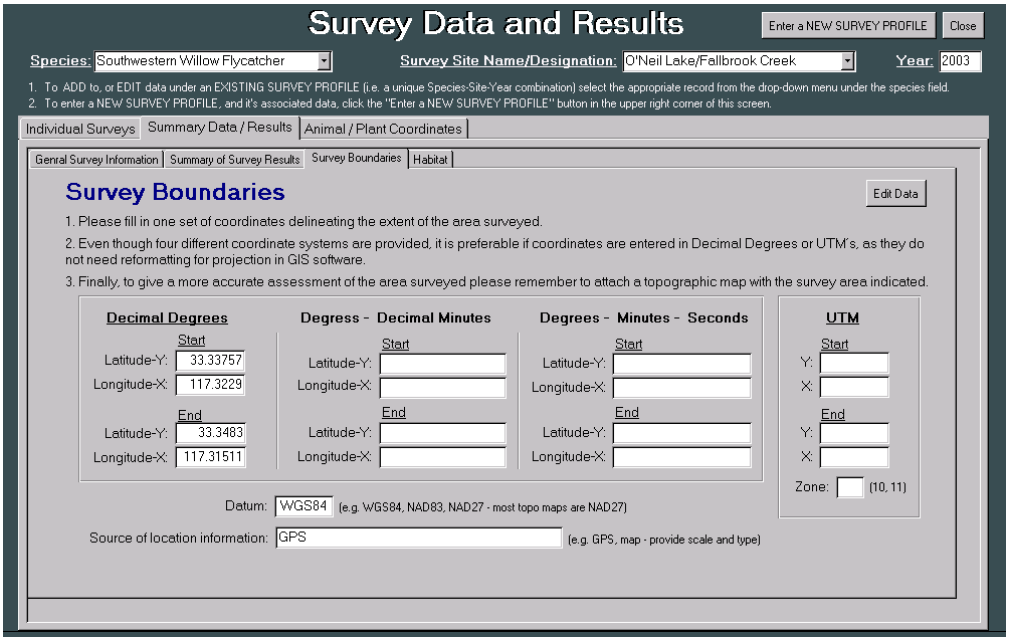

Figure 8b. The Summary Data/Results screen and Survey Boundaries sub-screen.

To facilitate data entry, fields for four different coordinate systems are provided (i.e. decimal degrees, degrees-decimal minutes, degrees-minutes-seconds, and Universal Transverse Mercator – UTM). Also, to ensure proper projection it is very important that you specify the datum/zone in which the coordinates were collected.

Habitat Sub-screen

Within the Habitat sub-screen are seven fields used to quantify the general habitat characteristics of the site (Figure 8c).

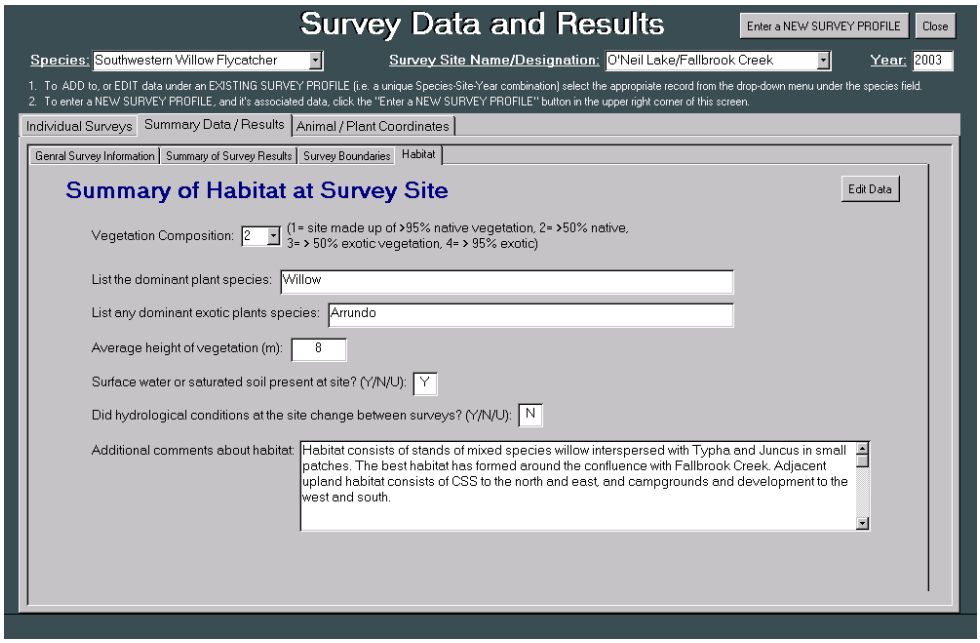

Figure 8c. The Summary Data/Results screen and Habitat sub-screen.

General Survey Information Sub-screen

The General Survey Information sub-screen is where the remaining data that is not captured within the other screens is entered (Figure 8d). Data such as the reporting person's name, the overall site quality, the surrounding land use and survey methods are entered into the database with this form.

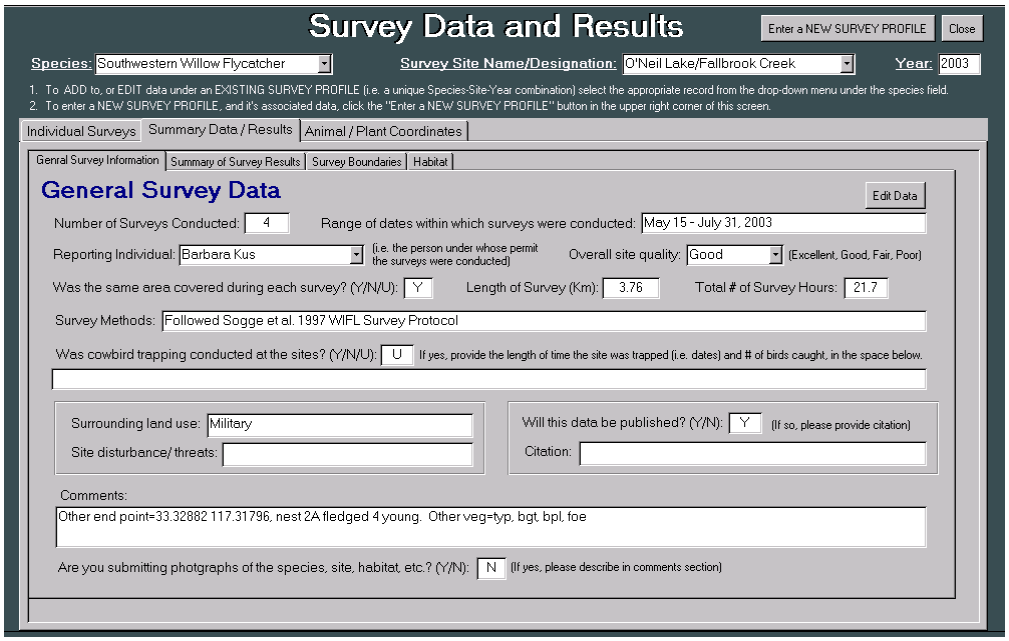

Figure 8d. The Summary Data/Results screen and General Survey Information sub-screen.

Individual Animal / Plant Coordinates Screen

The Individual Animal/Plant Coordinates screen is where spatial coordinates for individual plants and animals are entered (Figure 9). There is no limit to the number of coordinates (i.e. coordinates of individual plants or animals) that can be entered. To add

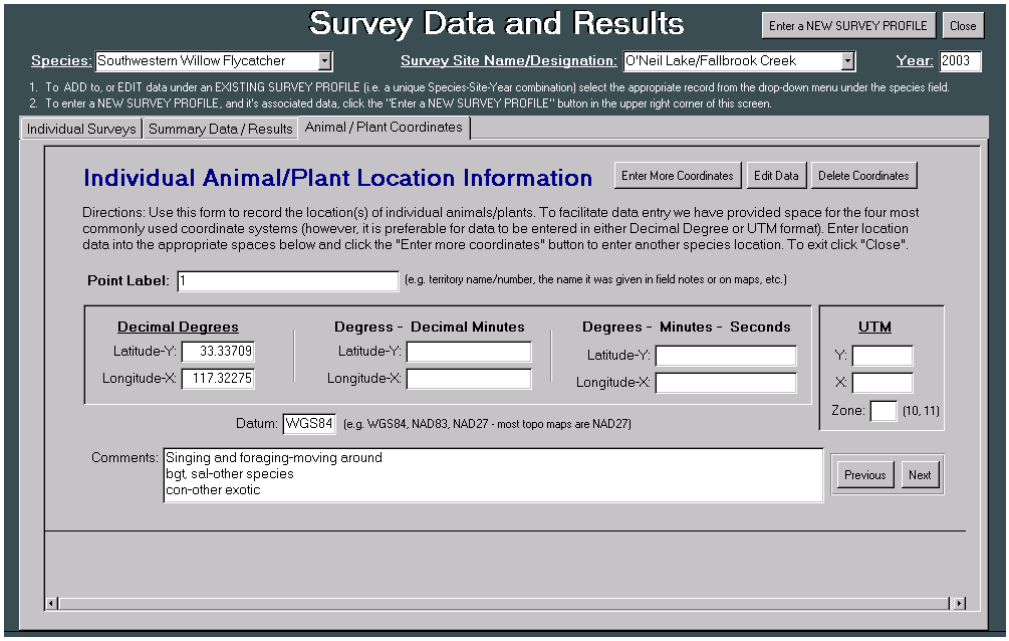

Figure 9. The Animal/Plant Coordinates screen.

additional coordinates simply click the ENTER MORE COORDINATES button on the right side of the screen. Note: it is important to provide a label or name to each set of coordinates entered. Also, like the Survey Boundaries sub-screen, four coordinate systems are provided to facilitate data entry.

GETTING THE DATA OUT OF THE DATABASE

Data that has been entered into the Biological Reporting Database can be extracted in the form of either hardcopy reports, softcopy reports (published to MS Word) or exported to a MS Excel spreadsheet.

Reports Available to Print

The Biological Reporting Database contains four reports that can be printed and submitted to management agencies to meet T&E permit obligations, and two auxiliary reports to keep track of data entered into the database, and print species locations. The reports contained within the database are:

1. Willow Flycatcher Survey and Detection Form – as stipulated by T&E permitting requirements, a copy of this form, for each site surveyed, must be sent to the US Geological Service, Biological Resources Division, 5745 Kearny Villa Road, Suite M, San Diego CA 92123, Attn. Barbara Kus and to the appropriate FWO office upon completion of surveys each year. Soft copies of the form can be emailed to Kerry Kenwood (kkenwood@usgs.gov).

2. Natural Diversity Database1 (NDDB1), California Native Species Field Survey Form – As stipulated under state permitting requirements, a copy of this form (or NDDB2) must be submitted to the California Department of Fish and Game (Natural Diversity Database, California Department of Fish and Game, 1807 13th Street, Suite 202, Sacramento, CA 95814) upon completion of work relating to state listed species. The NDDB1 report generates a single form for each survey conducted. Therefore, if three surveys are conducted at a site in a breeding season, NDDB1 will generate three reports.

3. Natural Diversity Database2 (NDDB2), California Native Species Field Survey Form – This report is identical to NDDB1, but prints out summary results over a period of time, specified by you during data entry, instead of the results from individual surveys.

4. USFWS 45-Day Report – As stated under federal recovery permit rules, "within 45 days following the completion of a survey, a report shall be submitted to the appropriate FWO office…". The 45-Day Report generated by the BRDB aims to meet the requirements stipulated by the US Fish and Wildlife Service. However, it is important that you review the data submission requirements of your permit to ensure that all necessary information is included.

5. List of Surveys Contained within the Database – The purpose of this report is to help you organize your data and determine what data has been entered into your copy of the database.

6. Species GPS Coordinates – This report contains the geographic coordinates and detection date of species that have been entered into the database. A report containing species coordinates should accompany all of the reports that are submitted to federal and state agencies.

7. Reporter and Surveyor Contact Information – This report contains the name, FWS permit number, and contact information for surveyors and individuals reporting data.

Printing and/or Publish Reports

1. Open the Printing Form (Figure 10) by clicking the PRINT REPORTS button on the main screen.

2. Under Printing Options, select which records you would like to print by setting the printing criteria. The Species, Site Name, and Year/Survey Date fields can be used in any combination to limit the data printed.

   For example, to limit the printing to all data relating to southwestern willow flycatcher, check the box to the left of the word Species, and then select "Southwestern Willow Flycatcher" from the drop-down menu to the right. To print all 2003 Southwestern Willow Flycatcher Data, you would select "Southwestern Willow Flycatcher" from the Species drop-down menu, and "2003" from the Year drop-down menu.

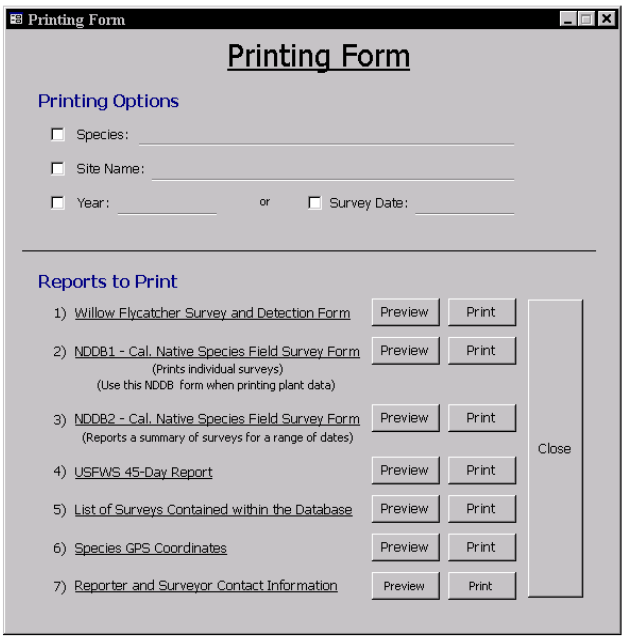

Figure 10. The Printing Form.

3. Next, under the Reports to Print section, click the PREVIEW button to the right of the report you want to print. The Printing Form should minimize and the Print Preview window should appear.

4. To scroll through the pages of the report use the navigation buttons in the lower left.

5. To print the report, click the Printer Icon on the Print Preview menu. The Printer Icon should be located in the upper left corner of your screen.

6. To save the report as a MS Word document, click the "Publish it with MS Word" button on the Print Preview menu bar. (You're looking for a blue "W". It should be to the right of the "Close" button. If you see a green "X", click on the small down arrow to the right of the "X". A drop-down menu should appear containing the "Publish it with MS Word" button). Once you've clicked the "Publish it with MS Word" button, Microsoft Word will open containing your report(s).

   Be sure to rename the Word file to something meaningful prior to "publishing" more data. Each MS Word file is published under the same name. Therefore, if you do not rename the file there is a possibility that you will overwrite previously published data the next time you publish data using the same report.

   After renaming the file return to MS Access.

7. Click the "Close" button on the Print Preview Menu to close the report and return to the Printing Form.

8. When you have finished printing, click the large "Close" button on the Printing Form to return to the Reporting Database's main screen.

Exporting Data to Microsoft Excel

The Exporting Data Form (Figure 11) allows you to export survey summary, individual survey, site, contact, and species location data to a Microsoft Excel file (provided Excel is installed on your computer). To export data follow the instructions listed below:

1. Press the "Preview" button to the right of the type of data you wish to export. A report will open displaying the data to be exported. Do not worry about the format of the data displayed in the report. When exported, data will be organized into rows and columns on a single spreadsheet.

2. On the Print Preview Menu, click the "Analyze it with MS Excel" button. (You're looking for a green "X". It should be to the right of the "Close" button. If you see a blue "W", click on the small down arrow to the right of the "W". A drop-down menu should appear containing the "Analyze it with MS Excel" button). Once you've clicked the "Analyze it with MS Excel" button, an MS Excel spreadsheet will open containing your data. When data is export, MS Access uses the field names contained within the structure of the database as column headings. These are often abbreviations, not always intuitive, so a list of field names and accompanying definitions are provided in Appendix A for each table.

3. Rename the Excel file to something meaningful prior to exporting more data. Each MS Access table is exported under the same name. Therefore, if you do not rename the Excel file there is a possibility that you will overwrite previously exported data the next time you export data from the same table.

4. After exporting, return to MS Access and click the "Close" button on the Print Preview Menu to close the report.

5. When you have finished exporting data click the large "Close" button on the Exporting Data Form to return to the Reporting Databases main screen.

Figure 11. The Exporting Form, used to export data to Microsoft Excel.

Limiting the Data that is Exported

Use the Species, Site Name, and Year fields listed under "Exporting Options" to limit the data exported. These fields can be used in any combination. (Note, the Species, Site Name, and Year fields work in conjunction with Survey Summary, Individual Survey, and Species Location data, and are not relevant when exporting Site or Contact information)

For example, to export all data relating to southwestern willow flycatcher, check the box to the left of the word Species, then select "Southwestern Willow Flycatcher" from the drop-down menu to the right, and follow steps 1-4 listed above.

To export all 2003 Southwestern Willow Flycatcher Data, you would select "Southwestern Willow Flycatcher" from the Species drop-down menu, "2003" from the Year drop-down menu, and then export the data following instructions 1-4, outlined above.

Appendix A. Field names and definitions for data exported to Microsoft Excel

CONTACT TABLE	
Field Name	**Field Definition**
C_LastName	Last name - surname of person reporting data
C_FirstName	First name - given name of person reporting data
FullName	Full name - the combination of a person's first and last names
C_ORGNZTN	Organization - the name of the organization that employs the person submitting survey data
C_ADDRES	Address - the street address where the person can be contacted
C_CITY	City
C_ST	State
C_ZIP	Zip code
C_PHONE	Telephone number
C_EMAIL	Email address
TEPermit	The USFWS threatened and endangered species permit number of the person reporting data

SITE TABLE	
Field Name	**Field Definition**
S_SITENM	Site Name – name given to the area surveyed
S_STATE	State
S_DRAIN	Drainage – river, stream, or creek a survey was conducted along (if applicable)
S_OWNERS	Management Authority (e.g. Department of Defense)
S_AGENCY	Landowner/Manager (e.g. US Marine Corps)
S_QDNM1	Name of the topographic quadrant in which the site is located
S_CNTY1	County in which the site is located
S_TWNSH1	Township in which the site is located
S_RANGE1	Range in which the site is located
S_SECT1	Section in which the site is located
S_SECT2	Quarter section the site was located within
S_ELEV	Elevation of site (in meters)
S_CMNTS	Comments

INDIVIDUAL SURVEY TABLE	
Field Name	**Field Definition**
CommonName	Common name of species
S_SITENM	Site Name – name given to the area surveyed
Date	Date a specific survey was conducted
R_YEAR	Year the survey was conducted
SurveyID	Survey ID # - Identification number generated by MS Access. Used to "link" individual surveys with data in the Survey Summary table.
Surveyor	Name of person conducting the survey
NOWIFL	Number of adults located. Since the reporting database was initially designed to manage willow flycatcher data NOWIFL originally stood for "number of adult willow flycatchers detected". "
NumberMales	Number of males located. (This field my not be applicable to all species)
NumberFemales	Number of females located. (This field my not be applicable to all species)
NumberJuvis	Number of juveniles/immature individuals located.
NOPAIR	Number of pairs located. (This field my not be applicable to all species)
NOTERR	Number of territories located. (This field my not be applicable to all species)
NSTSFD	Was breeding confirmed? (Originally, in the flycatcher database, NSTFD stood for was a nest found?)
BHCO	Were brown-headed cowbirds detected during the survey?
Comments	Comments
Collection	Were any species collected on this date?
CollectionNumb	If species were collected, what are their collection/catalogue numbers?
Museum	Museum where the collected specimens will be stored.
PhenoVeg	Plant phenology – percent vegetative (applicable to plant surveys)
PhenoFlower	Plant phenology – percent flowering (applicable to plant surveys)
PhenoFruit	Plant phenology – percent fruiting (applicable to plant surveys)
SpeciesFound	Was the focal species located? Yes/No
SpIdDeterm	What criteria were used to positively identify the species of interest?
Wintering	Wintering – NDDB
BurrowSite	Burrow site – NDDB
Rookery	Rookery – NDDB
Nesting	Nesting confirmed?
NumberUnk	Number of focal species found of unknown age
Other	Other – NDDB
StartSurvey	Time the survey was started (in military time format)
EndSurvey	Time the survey was ended (in military time format)

SURVEY SUMMARY TABLE

Field Name	Field Definition
CommonName	Common name of species
S_SITENM	Site Name – name given to the area surveyed
R_YEAR	Year the survey was conducted
S_CNTCT	Contact - Name of person reporting the data
SpeciesFound	Was the species of interest located on any survey? Yes/No
R_SRVLTH	Length of survey (in kilometers)
SameArea	Was the same area surveyed during each survey? Yes/No
SurveyMethod	Methods used when conducting survey(s). If tape vocalizations were used specify how often the vocalization was played
R_TOTHRS	Total number of hours spent surveying (added over all surveys conducted at the site, in one year or season, etc.)
R_NOWIFL	Number of "resident" adults located. Since the reporting database was initially designed to manage willow flycatcher data NOWIFL originally stood for "number of resident adult willow flycatchers detected". "Resident" implies that if you are dealing with a migratory species, this is the number of adults that breed in an area (i.e. excluding migrants and transient individuals). If the species is non-migratory this field can be read "Number of adults located".
NumberMales	Number of "resident" males located. For a definition of "resident" see the NOWIFL field. (This field my not be applicable to all species)
NumberFemales	Number of "resident" females located. For a definition of "resident" see the NOWIFL field. (This field my not be applicable to all species)
NumberJuvis	Number of juveniles/immature individuals located.
NumberUnk	Number of focal species found of unknown age
R_NOPAIR	Number of "resident" pairs located. For a definition of "resident" see the NOWIFL field. (This field my not be applicable to all species)
R_NOTERR	Number of "resident" territories located. For a definition of "resident" see the NOWIFL field. (This field my not be applicable to all species)
R_NSTSFD	Was breeding of the focal species confirmed at anytime during the year, season, etc.? (Originally, in the flycatcher database, NSTFD stood for was a nest found?)
NumberMigrants	Number of migrants detected during the entire survey period.
Collection	Were any species collected during any survey?
CollectionNumb	If species were collected, what are their collection/catalogue numbers?
Museum	Museum where the collected specimens will be stored.
R_BANDED	Were any banded, marked or tagged individuals observed?
R_VEGCHR	Habitat category – four categories estimating the percentage of native to exotic vegetation present at a site (1= site made up of >95% native vegetation, 2= 96-50% native, 3= 96-50% exotic vegetation, 4= > 95% exotic)
R_PRTREE	Dominant plants species contained within site
DomExotics	List the dominant exotic plant species found during survey(s).
R_CANHGT	The height of the vegetation at the site (Originally stood for canopy height)
R_WATER	Was there surface water or saturated soil present at site?
R_H20CHG	Did the hydrological conditions at the site change dramatically between surveys?
R_CMNTS	Comments
R_CBTRAP	Was cowbird trapping conducted at the site? (Y/N/U)
SiteQuality	Overall site quality: Excellent, Good, Fair, Poor
SurLandUse	Surrounding land use - specify the current use of the land surrounding the site.
DisturbThreats	Specify any visible signs of disturbance or possible threats to the site.

SURVEY SUMMARY TABLE (continued)

Field Name	Field Definition
SpIdDeterm	What criteria were used to positively identify the species of interest?
Photo	Are photos of the species, habitat, site, etc. attached? (Y/N). If so please elaborate in the comments section.
UTMStartY	Latitude (Y) of the STARTING point of the site, in UTMs
UTMStartX	Longitude (X) of the STARTING point of the site, in UTMs
UTMEndY	Latitude (Y) of the ENDING point of the site, in UTMs
UTMEndX	Longitude (X) of the ENDING point of the site, in UTMs
ZONE	Zone
U_DmsStrtY	Start Latitude (Y) - designating the start of a site/survey, provided in degrees, minutes, seconds.
U_DmsStrtX	Start Longitude (X) - designating the start of a site/survey, provided in degrees, minutes, seconds.
U_DmsStopY	End Latitude (Y) - designating the End of the survey/site, provided in degrees, minutes, seconds.
U_DmsStopX	End Longitude (X) - designating the End of the survey/site, provided in degrees, minutes, seconds.
U_DdStrtY	Start Latitude (Y) - designating the start of a site/survey, provided in decimal degrees.
U_DdStrtX	Start Longitude (X) - designating the start of a site/survey, provided in decimal degrees.
U_DdStopY	End Latitude (Y) - designating the End of the survey/site, provided in decimal degrees.
U_DdStopX	End Longitude (X) - designating the End of the survey/site, provided in decimal degrees.
U_DdmStrtY	Start Latitude (Y) designating the start of a site/survey, provided in degrees, decimal minutes.
U_DdmStrtX	Start Longitude (X) - designating the start of a site/survey, provided in degrees, decimal minutes.
U_DdmStopY	End Latitude (Y) - designating the End of the survey/site, provided in degrees, decimal minutes.
U_DdmStopX	End Longitude (X) - designating the End of the survey/site, provided in degrees, decimal minutes.
S_DATUM	Datum (e.g. WGS84, NAD83, NAD27) - if derived from a topo map it's most likely NAD27.
S_LOCMET	Source of coordinates (GPS, map and type)
DataPublished	Is this data going to be published in a report? Y/N
Citation	If the data will be published please provide the appropriate citation.
BHCOComments	Comments on BHCO trapping, including length of time area was trapped (start and stop dates), # of birds caught, etc.
DateRange	The range of dates that surveys were conducted (e.g. April 12 - August 25, 2003)
NumSurveys	Number of surveys conducted during the year, survey period, breeding season, etc. (i.e. within the DateRange specified above).
Wintering	NDDB - was the species wintering?
BurrowSite	NDDB - was a burrow site located?
Rookery	NDDB - were the animals observed in a rookery?
SurveyID	Survey ID # - Identification number generated by MS Access. Used to “link” individual surveys with data in the Survey Summary table.
HabComments	Qualitative description of habitat (as required in the USFWS 45-day report)

SPECIES COORDINATES TABLE	
Field Name	**Field Definition**
S_SITENM	Site Name – name given to the area in which the species was documented
CommonName	Common name of species
PointLabel	Point Label – name given to location where the species was found (e.g. WIFL1, KRat3)
DDate	Date – the date the species was documented
U_DdStrtY	Latitude (Y) of individual plant/animal location, provided in decimal degrees.
U_DdStrtX	Longitude (X) of individual plant/animal location, provided in decimal degrees.
U_DmsStrtY	Latitude (Y) of individual plant/animal location, provided in degrees, minutes, seconds.
U_DmsStrtX	Longitude (X) of individual plant/animal location, provided in degrees, minutes, seconds.
U_DdmStrtY	Latitude (Y) of individual plant/animal location, provided in degrees, decimal minutes.
U_DdmStrtX	Longitude (X) of individual plant/animal location, provided in degrees, decimal minutes.
UTM_Y	UTM-Y - designating an individual plant/animal location - in Universal Transverse Mercator
UTM_X	UTM-X - designating an individual plant/animal location - in Universal Transverse Mercator
S_DATUM	Datum (e.g. WGS84, NAD83, NAD27) - if derived from a topo map, its most likely NAD27.
ZONE	UTM Zone
Comments	Comments