



desert conservation
PROGRAM

MSHCP Implementation Database User Manual

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1.0 Introduction

1.1 Purpose

The Multiple Species Habitat Conservation Plan (MSHCP) Implementation Database is designed to track all implementation efforts that address the Clark County MSHCP (RECON 2000). These efforts include work conducted by County staff; other local, state and federal agencies; nonprofit organizations; and private businesses. MSHCP guidance documents include lists of species, threats, ecosystems and conservation actions that might be addressed throughout the term of the MSHCP's Incidental Take Permit. These MSHCP elements and other information such as cost, implementation metrics (such as acres protected, miles of fence installed, acres monitored), products (such as reports or data), and location of the action are tracked within this database.

1.2 Definitions

Many of these efforts have been accomplished through interlocal agreements with agencies or contracts with vendors and all will be referred to as "contracts" within this document, regardless of the title of the award document or purchase order. Projects completed in-house by County staff will also be referred to as "contracts" for consistency. The database, however, uses the terms "contract" and "project" interchangeably. A list of each field and the definition and sources of the data can be found below.

2.0 The Database

The MSHCP Implementation Database is a Microsoft Access © database in Access 2000 file format with an associated folder of images. Appendix A contains a figure depicting the tables and links among tables and a list of the data fields in each table.

The database currently resides on the D:\ partition of the harddrive of computer DPXG41T3J1. A network version of the database with a SQL backend and MS Access user interface is in development by the DCP's Programmer Analyst II, but is not live as of January 7, 2013. A shortcut to the current version of the database can be found in the

DCP shared network drive: P:\Program Elements\AMP\impl db\ . The database user must be logged into this computer (DPXG41T3J1) to access the database.

Because the database uses Microsoft Access and macro functions, you may see a Security Warning notifying you that the default security settings on your system have disabled certain content in the database. Click the <Options...> button and select the “Enable this content” option to allow use of the database.

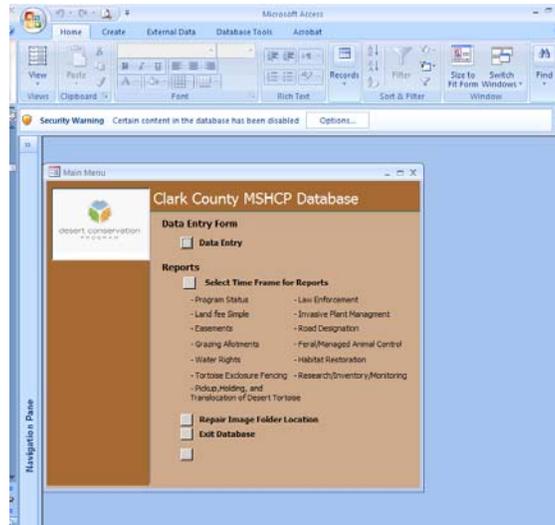


Figure 1. Security Warning Displayed Upon Opening Database

2.1 Main Menu

The main menu window (Figure 2) is displayed upon opening the database. This window can be closed without exiting the database. It can be reopened from the main database window where it is listed as “Switchboard” under the Forms list (Figure 3).

- Data Entry Form - Launches a data entry screen
- Reports - Launches a standard report selection screen
- Repair Image Folder Location - Launches a screen that allows repair of the link to the folder that contains contract map images
- Exit Database - Closes all database components and exits the database

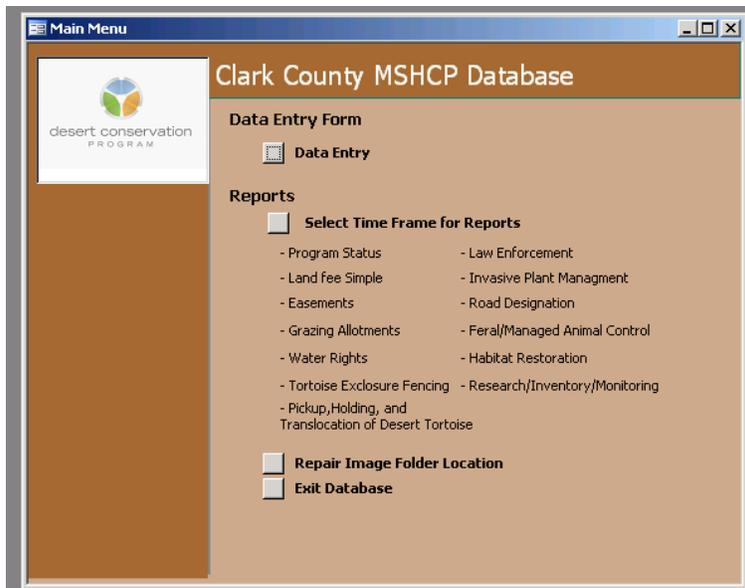


Figure 2. Main Menu

2.2 Main Database Window

The Main Database Window allows the user to navigate to all objects in the database. The Main Menu (Figure 3) is automatically launched when the database is opened and may be minimized during database use, but closing this window will exit the database.

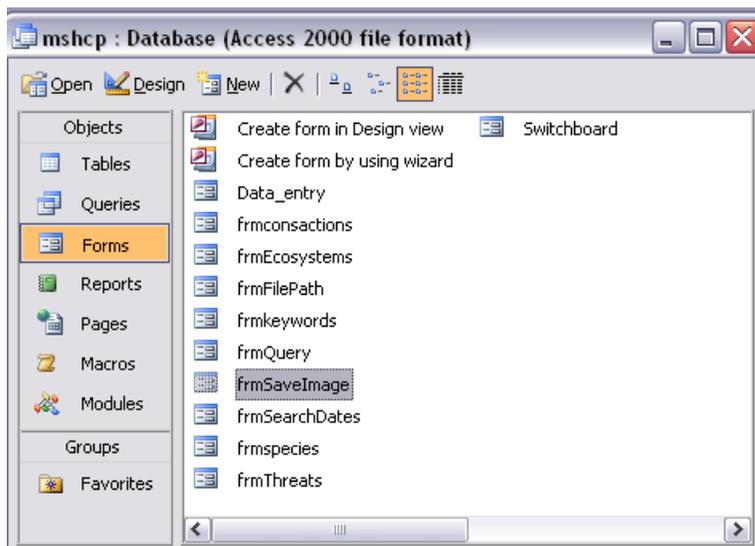


Figure 3. Main Database Window

3.0 Entering Data

3.1 Timing of Data Entry

Data entry may be triggered by four types of events.

- 1) Initiation of the contract.
- 2) Availability of a periodic status report (e.g. biennial progress report or annual project report) that provides information about conservation effort outcomes.
- 3) Amendment of a contract that alters the scope of work in such a way that impacts conservation effort or likely outcomes.
- 4) Closeout of the contract.

3.2 Data Entry Form

The Data Entry Form (Figure 4) is displayed after a user clicks on the Data Entry button on the Main Menu (Figure 3). On this form contract information can be viewed, entered, and modified. Any time a change is made the form auto-saves the changes. There is no warning for this and all staff using the database should take care not to accidentally overwrite information when using this form to view the data. As a safeguard a copy of the database could be used for viewing and the master copy saved in a secure location.

The Data Entry Form consists of one main Contract Information form with five sub forms: Conservation Action, Ecosystems Form, Keywords Form, Species Information Form, and Threats Form. The Conservation Action Form consists of several tabbed sub form sections; the Add Image button; and the Keywords, Products, and Contract Comments fields. The Conservation Action Form data should be entered after a periodic or closeout report indicates that the work is complete.

Enter these data after the outcomes are reported.

Figure 4. Data Entry Form

3.3 Contract Display Order

All Contracts are listed in alphabetical order by Project Number. Newly entered contracts will be sorted after the database is closed and reopened. To navigate through contracts click on the back or next arrow button located at the bottom left corner of the form.

3.4 Entering New Data

Enter data in the blank fields for the first entry. For additional entries (for instance, three species for one contract) click on the new button in the lower left corner of selected form or sub form. If you're entering the first record in the form or sub form and the new button is grayed out, enter the data in the blank fields. Entries are saved automatically.

General Data Entry:

Choose the appropriate form, sub form or tab and enter applicable data.

Length and Area Measurement Data Entry:

The length and area fields in the tabs have drop down lists to select English or Metric units. The drop down lists can be used to convert the unit back and forth once numeric

data has been entered. The options consist of Kilometer or Mile for distance fields and Hectares or Acres for area. Follow the instructions below when entering or updating data to avoid English / Metric unit conversion errors.

- If the field is empty (contains no value (not even a zero)) - enter the numerical value and hit <tab> on the keyboard to move to the units field and choose the correct units from the drop down list.
- If the field contains a value and needs to be updated (even if the value is zero (0)) - delete the current value in the field and then click within any other field on the form to deactivate the old value. Once another field is selected the value in the descriptor dropdown will be clear. Next, enter the data as if there was no value in the field.

3.5 Contract Information Form

Basic information about a contract should be entered in this section of the database (Figure 4) when the contract is initiated and updated as necessary throughout the term of the contract. Project numbers are established by the DCP staff. The section above the tabbed data section and the Keywords field should be completed first and updated as needed. The tabbed sections and the Products field should only be updated as reports and outcomes of the contract are delivered or produced. The Last Entry Date field is automatically populated by the database each time a field within the contract's record is updated.

Required Data

Project Number

3.6 Add Image

An image depicting a map of the locations of the contract's conservation efforts may be loaded and linked to each contract (Figure 5). An image is not required.

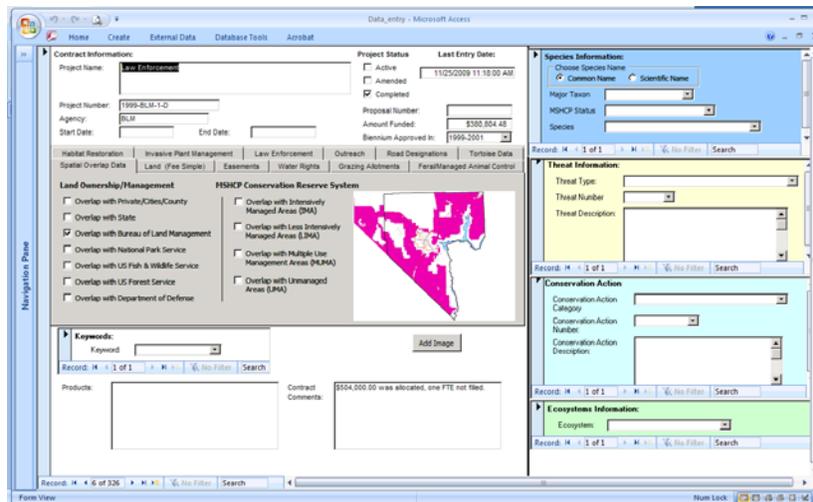


Figure 5. Sample Contract Entry With Image

Data Entry:

To add a new image to any contract entry, follow the instructions below.

- First add the image file to the “image” folder located in the MSHCP database folder. The file name should be the contract number.
- Once the image is added to the folder it can be linked to a contract in the database.
- Navigate to corresponding contract for the image within the database’s Data Entry form.
- From the contract’s data entry form, click the Add Image button.
- The Choose Image Form (Figure 6) should be displayed. If nothing is displayed see the troubleshooting section of this manual, section 5.1.

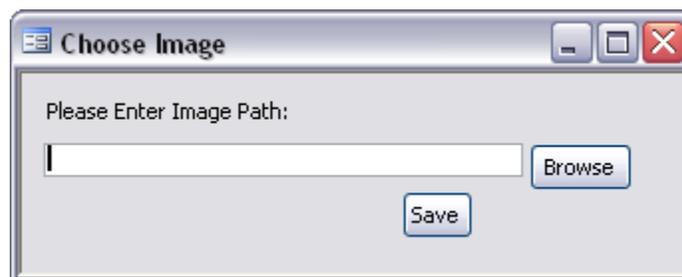


Figure 6. Choose Image Form

- Click <Browse> and the Locate Image Window displaying all the currently loaded database images (Figure 7) should open. If not, then the database is “looking” in the wrong location. If necessary, navigate to the correct folder location within the Locate Image Window to locate the desired image file.
- Click <Choose> button to select the correct image file for that contract. If nothing is displayed in the Locate Image Window, please see the troubleshooting of this manual, section 5.2.

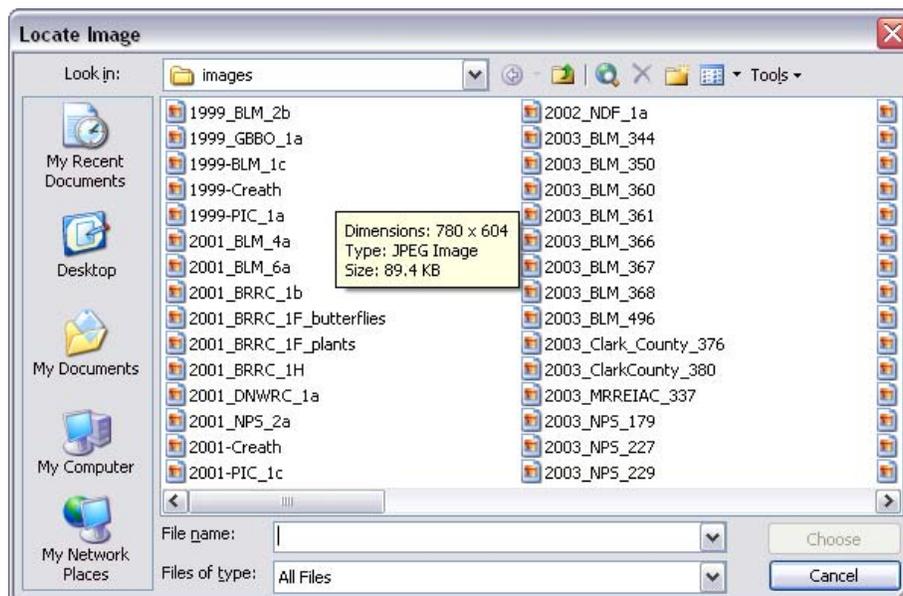


Figure 7. Locate Image Window

Now the image is linked to that contract’s data. To view the completed data entry form and verify the link is successful, navigate to another contract record and then back to the previous contract and the image should be displayed as in Figure 5.

To replace an image, simply overwrite the image file with the updated image file using the same file name. There is no need to re-link the file in the database if the same filename is used.

3.7 Species Information Form

Species scientific name, common names, and MSHCP Status are defined in Chapter 2 of the MSHCP (RECON 2000). Complete lists of species and other elements can be found on the P drive: P:\Administration\Forms-Formats\MSHCP Elements Forms\ . Species not listed in the current MSHCP could be added to the database. Changes in MSHCP covered species list would require updates to the master species table in the database and the Programmer Analyst II should be consulted to make any such changes. Taxonomic updates are also not reflected in this database – tracking actions that benefit the taxa as listed in the MSHCP is the primary concern.

Data Entry:

- First Select the Species Name Common or Scientific.
- Next select a species Major Taxon and the Species Status drop down field will be populated.
- Then select the MSHCP Status and the Species field will be populated with a drop down list.
- Finally, select the species (taxon) from the drop down list.

Required Fields:

Major Taxon

MSHCP Status

Species

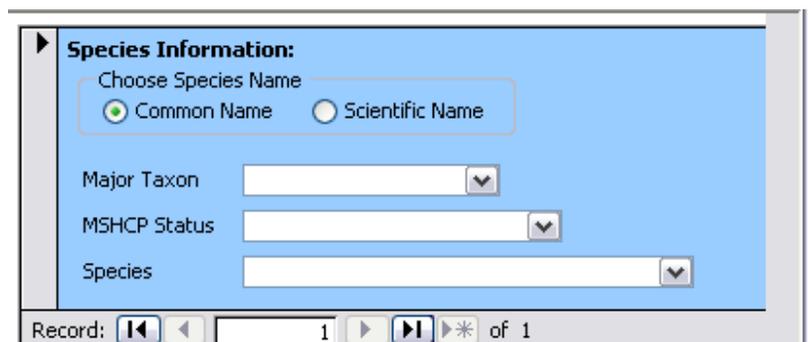


Figure 8. Species Information Form

3.8 Threat Information Form

Threat types, descriptions and numbers are defined in Chapter 2 of the MSHCP (RECON 2000). Complete lists of threats and other elements can be found on the P drive:

P:\Administration\Forms-Formats\MSHCP Elements Forms\

Data Entry:

There are two techniques for data entry. If the Threat Number is known, it can be selected from the dropdown list in the Threat Number field. Alternatively, the dropdown list can be truncated using the following steps.

- First select a Threat Type and the Threat Number dropdown field will be populated.
- After selecting a Threat Number from the dropdown list, the corresponding description will be displayed.

Required Entries:

Threat Number

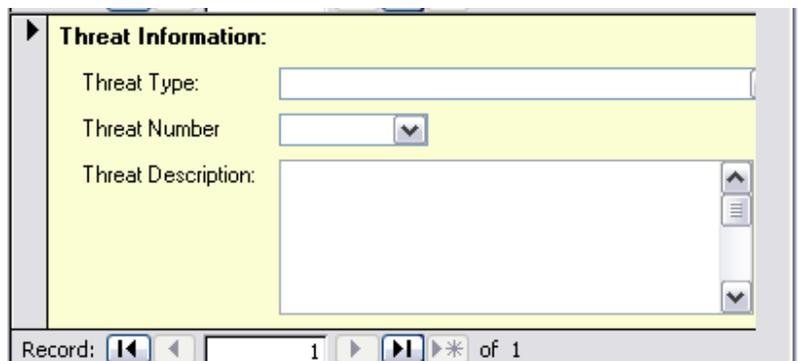
The image shows a screenshot of a software form titled "Threat Information". The form has a yellow background and is contained within a window. It features three main input fields: "Threat Type" (a text box), "Threat Number" (a dropdown menu), and "Threat Description" (a large text area with a vertical scrollbar on the right). Below the form, there is a record navigation bar with icons for first, previous, next, and last records, and the text "Record: 1 of 1".

Figure 9. Threat Information Form

3.9 Conservation Action Form

Conservation Action categories, names and numbers are defined in Chapter 2 of the MSHCP (RECON 2000). Additional Conservation Actions have been created to denote the permit conditions. Complete lists of conservation action and other elements can be found on the P drive: P:\Administration\Forms-Formats\MSHCP Elements Forms\

Data Entry:

There are two techniques for data entry. If the Conservation Action Number is known, it can be selected from the dropdown list in the Conservation Action Number field.

Alternatively, the dropdown list can be truncated using the following steps.

- First pick a Conservation Action Category in the drop down and the Conservation Action Number field will be populated with the action number that fits that category.
- Select the appropriate Conservation Action Number from the drop down list. The Conservation Action Description field will be filled in after the Conservation Action Number is selected.

Required Entries:

Conservation Action Number

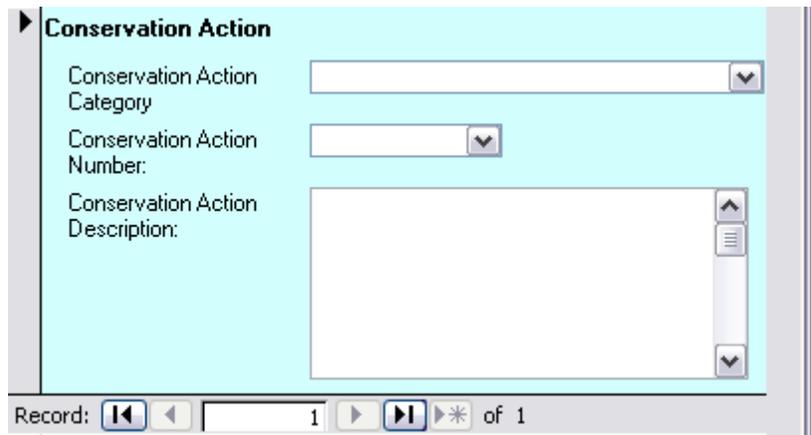


Figure 10. Conservation Action Form

3.10 Ecosystems Form

Ecosystems are defined in Chapter 2 of the MSHCP (RECON 2000). Complete lists of ecosystems and other elements can be found on the P drive: P:\Administration\Forms-Formats\MSHCP Elements Forms\

Data Entry:

- Select the proper ecosystem(s) for the contract

Required Field:

Ecosystem

Figure 11. Ecosystems Form

3.8 Keywords

A variety of keywords can be used to add useful information to the database. Before creating a new keyword, check this drop down list and all the other forms and subforms in the database to ensure that the keyword will not duplicate existing information.

Data Entry:

- Select the proper keyword(s) for the contract

Required Field:

Keyword

Figure 12. Keywords Form

4.0 Reports

The database has several standard reports available from the Reports section of the Main Menu. Customized reports can also be created using the Design window or the Reports Wizard. See the MS Access Help menus for assistance creating customized reports.

4.1 Standard report

- Program Status
- Land (Fee Simple)
- Easements
- Grazing Allotments
- Water Rights
- Tortoise Enclosure Fencing
- Pickup, Holding, and Translocation of Desert Tortoise
- Law Enforcement
- Invasive Plant Management
- Road Designation
- Feral/Managed Animal Control
- Habitat Restoration
- PIE Events
- Research/Inventory/Monitoring
 - Conservation Actions Summary
 - Ecosystems Summary
 - Species Summary
 - Threats Summary

4.2 Creating a Standard Report

From the Main Menu click the <Select Time Frame for Reports> button. This will load the Search Dates report window (Figure 13) with a list of reports and boxes to enter the timeframe of the reports.

Required Entry:

Check the Select All Dates checkbox.

Select one of the reports in the Choose Report section of the window.

An optional date range can be selected to limit the results by entering dates in MM/DD/YYYY format or by selecting dates in the calendar pick tool. Note that the four

summary reports listed under Research/Inventory/Monitoring will always return all dates, even if a start and end date are entered by the user. Also, at the present time, the report header will not correctly display the selected start and end dates in pdf or printed formats but will instead show ##### - ##### if the number of characters in the date field is too long. There is currently no fix for this issue.

Once the report is selected and the user has selected date information, click the Create Report button  and the report will be created. It can be saved as a pdf file, printed, or the data exported as an excel file.

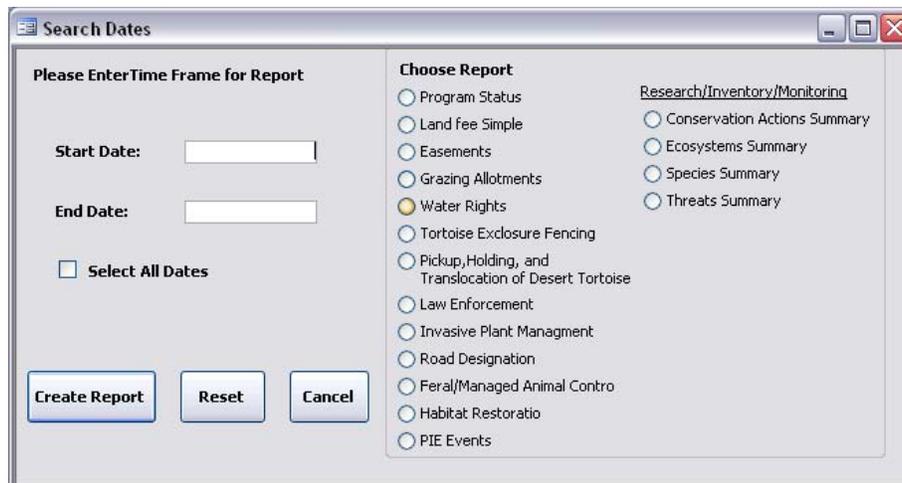


Figure 13 Search Dates Report Window

The <Reset> button will clear all selections. The <Cancel> button exits the window and returns the user to the Main Menu Form.

5.0 Troubleshooting

5.1 Repair Image Folder Location

When this database is moved from one location to another the file path of the thumbnail site map image folder needs to be changed to the new location.

- From the Main Menu click on Repair Image Folder Location. This will load a small form, Repair File Path (Figure 14). If the Repair File Path form fails to load, see section 5.2 of this manual.

- Click on the Browse button
- Navigate to the Image folder located in the same folder as the database
- Click on the image folder
- Click Open (Figure 15). The form will close and the location of the image folder will be displayed on the Repair Path form.
- Click the Save button and the images should now work on the Data Entry form.

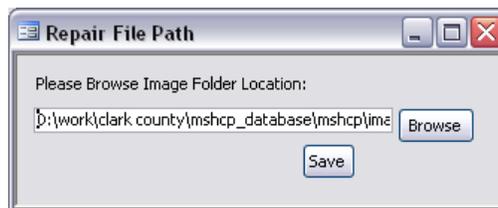


Figure 14. Repair File Path Form

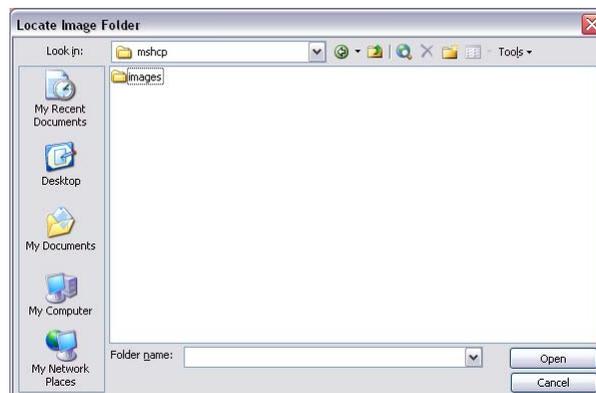


Figure 15. Locate Image Folder Form

5.2 Repair File Path Form will not load

If this form doesn't open by clicking on the button on the Main Menu, follow the below instructions.

- Click on the Main Database Window (Figure 3).
- In the object tabs on the left side of the window, select Forms
- Navigate to frmFilePath and highlight it by clicking once
- Click the design button  on the top left of the Main Database Window. This should display the form minimized like the example illustrated in Figure 16.

- Resize the form by clicking and dragging the lower right corner. The result should look like Figure 17.
- Click save. Now the Repair File Path form should load correctly.

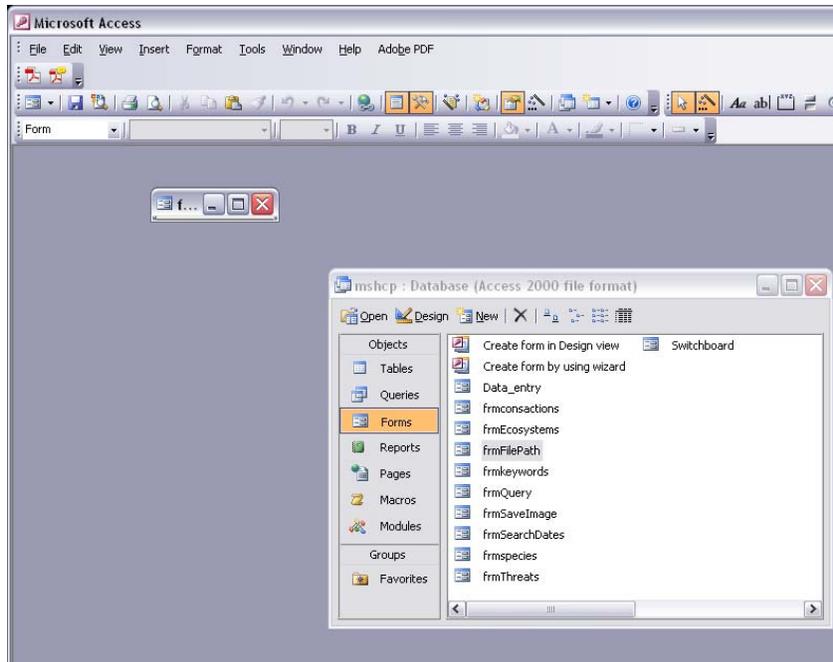


Figure 16. Design View of Repair File Path Form

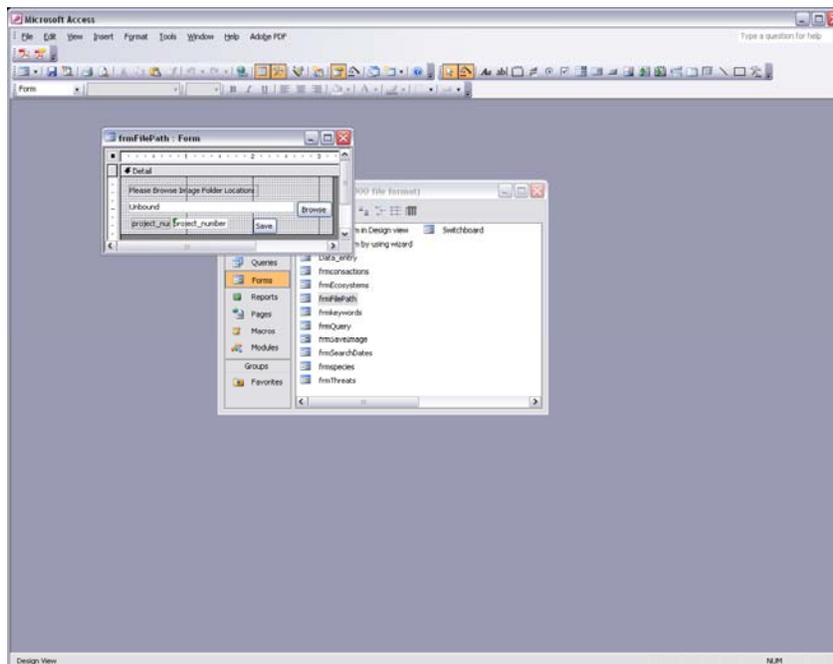


Figure 17. Corrected Size of Repair File Path Form

5.3 Image Form will not load

If the Choose Image form does not open by clicking on the <Add Image> button on the Main Menu, then follow the below directions.

- Click on the Main Database Window (Figure 18).
- In the object tabs select forms
- Navigate to frmSaveImage,
- Highlight that form by clicking once,
- Click the design button  on the top left of the Main Database Window - this should display the form minimized like the example illustrated in Figure 18.

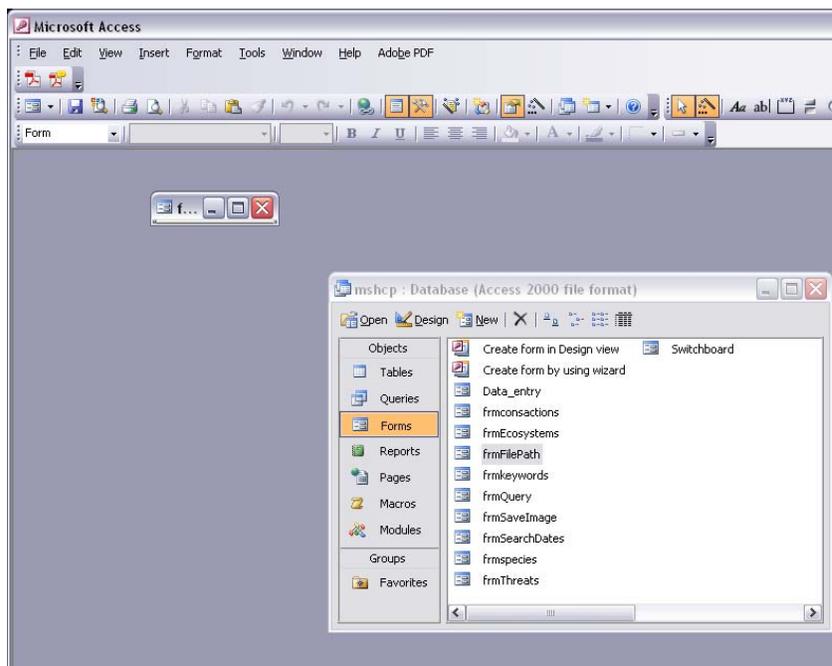


Figure 18. Design View of Choose Image Form

- Resize the form by clicking and dragging the lower right corner. The result should look like Figure 19.
- Click save. This form should now load properly.

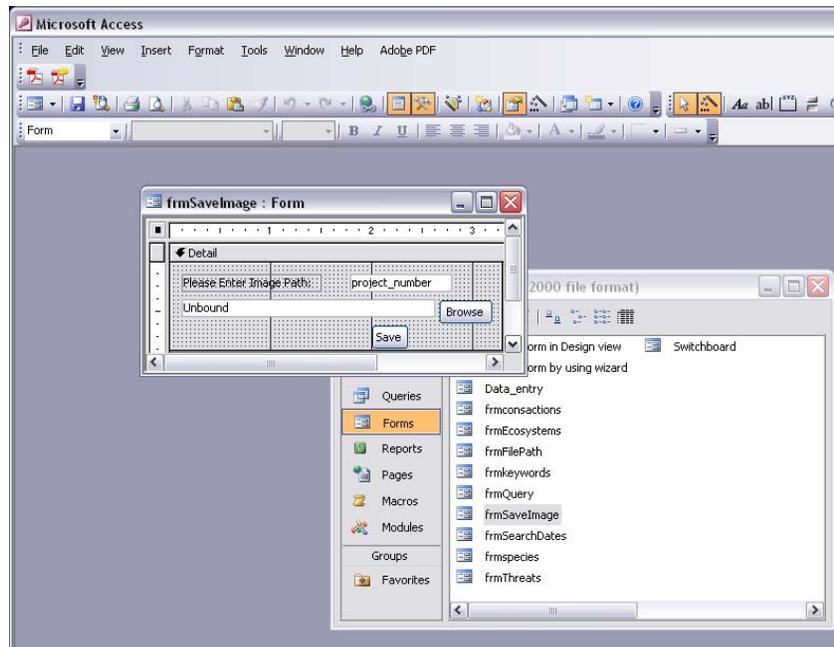


Figure 19. Corrected Size of Choose Image Form

5.4 Images Are Not Displaying in Main Data Entry Form Tabbed Section

Set the image folder location by clicking on the <Repair Image Folder Location> button on the Main Menu (Figure 2). Also see Repair Image Folder Location in section 5.1.

5.5 Measurement Unit Conversion Errors

See section 3.4 for the necessary sequence of data entry to avoid length and area English/Metric unit conversion errors.

5.6 Report Date Range Generating Errors

The standard reports in the database require that the Select All Dates option be checked for all reports. Failure to selection this option will result in an error message as shown in Figure 20. Reports other than those listed under Research/Inventory/Monitoring can then be truncated by selecting a more limited date range as described in section 4.2 of this manual.

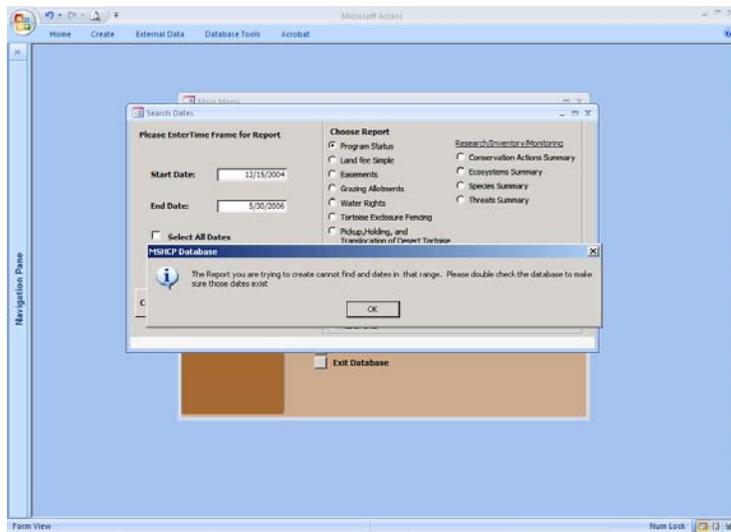


Figure 20. Error Message in Standard Reports Form

6.0 References

2000. RECON. Clark County Multiple Species Habitat Conservation Plan and Environmental Impact Statement.

Appendix A. Database Structure and Fields

Structure of the MSHCP Implementation Database

The database is composed of eleven linked tables. The tables and relationships (links) are depicted in Figure A1 below.

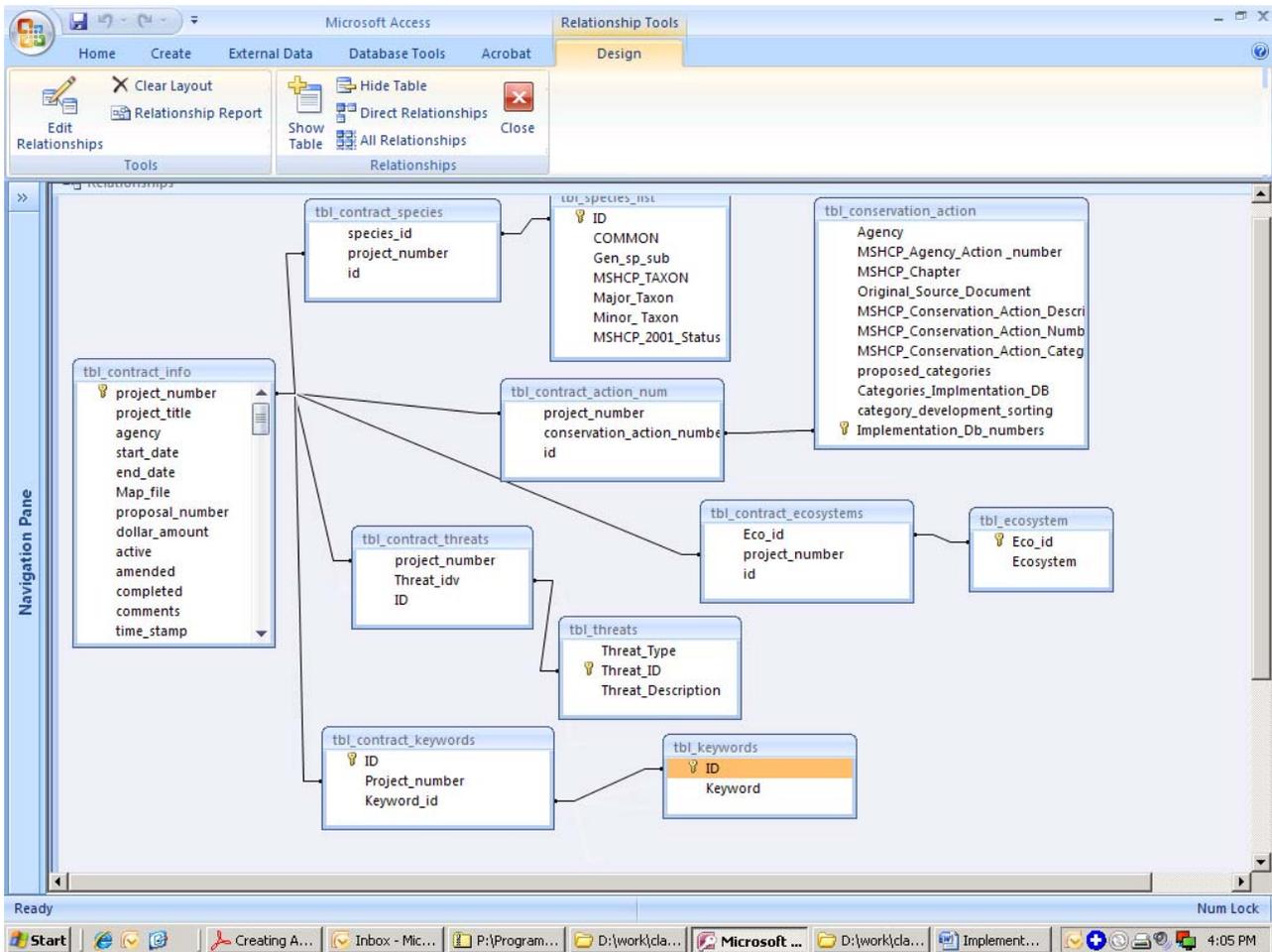


Figure A1. Structure of the MSHCP Implementation Database

Contract Information Section

The contract information section of each record is entered via several subforms and a tabbed section where a variety of conservation outcomes can be recorded. The underlying tables for this section are tbl_contract_info, tbl_keywords, and tbl_contract_keywords. Each of the subforms and tabbed data sections are addressed separately below.

Contract Information

Project Name: Enter the formal title of the contract assigned by the DCP.

Project Number: Enter the official project number assigned by the DCP. Staff efforts may include small purchase orders for goods and services to accomplish the overall objective(s) of the staff effort.

Agency: Enter the entity that performed the role of contract lead. These may be vendors, agencies or Clark County (DCP).

Start Date: Enter the first day of the contract term or staff effort start date.

End Date: Enter the last day of the contract term or staff effort.

Project Status: Check the appropriate boxes to describe the current status of the contract.

Proposal Number: Enter the Implementation Plan and Budget proposal/project concept number.

Amount Funded: Enter the contract not to exceed (as amended) amount or the total amount expended by the staff effort. This data should not be used for financial analyses but should match the financial databases for completed contracts/efforts.

Biennium Approved In: Select or enter the Implementation Plan and Budget period in which the funding was approved.

Last Entry Date: This field is populated automatically each time a change is made to the contract's record.

Keywords

Keyword_id: Select or enter the common names of any weed species addressed by the contract. Selections also exist to categorize the contract as one of the following contract types: implementation, operations, planning or information gathering. Multiple entries can be made by following the instructions in section 3.4.

Add Image button

See section 3.6 of this manual for more information. The image file may be created as a product of the contract or may be created by the DCP's GIS staff.

Products

Products: Enter a list of reports or other tangible products from the contract that are not captured by the tabbed sections described below.

Contract Comments

Contract Comments: Enter any additional notes or amendments to contract.

The screenshot displays a web-based data entry form titled "Data_entry : Form". The form is divided into several sections:

- Contract Information:** Includes fields for Project Name (filled with "Legal representation of special interest groups and rural communities"), Project Number (1999-BF-1-A), Agency (BUDD_FALEN), Start Date, and End Date.
- Project Status:** Features checkboxes for "Active" (checked), "Amended", and "Completed".
- Last Entry Date:** An empty text field.
- Proposal Number:** An empty text field.
- Amount Funded:** A text field containing "\$0.00".
- Biennium Approved In:** A dropdown menu.

Below these fields is a horizontal tabbed menu with the following tabs: "Habitat Restoration", "Invasive Plant Management", "Law Enforcement", "Outreach", "Road Designations", "Tortoise Data", "Spatial Overlap Data", "Land (Fee Simple)", "Easements", "Water Rights", "Grazing Allotments", and "Feral/Managed Animal Control".

The "Land Ownership/Management" section is currently active and contains a sub-section titled "MSHCP Conservation Reserve System". It lists various land ownership types with corresponding checkboxes:

- Overlap with Private/Cities/County
- Overlap with State
- Overlap with Bureau of Land Management
- Overlap with National Park Service
- Overlap with US Fish & Wildlife Service
- Overlap with US Forest Service
- Overlap with Department of Defense
- Overlap with Intensively Managed Areas (IMA)
- Overlap with Less Intensively Managed Areas (LIMA)
- Overlap with Multiple Use Management Areas (MUMA)
- Overlap with Unmanaged Areas (UMA)

At the bottom of the form, there is a "Keywords" section with a "Keyword_id" dropdown and an "Add Image" button. Below this is a record navigation bar showing "Record: 1 of 1". The "Products" and "Contract Comments" sections are represented by large empty text areas.

A red circle is drawn around the "Add Image" button, which is located to the right of the "Keyword_id" dropdown.

Figure A2. Contract Information Section

Spatial Overlap Data Tab:

Land Ownership/Management: Check the box(es) that describe the overlap of the contract area with the types of land ownership and management. More than one box can be checked.

MSHCP Conservation Reserve System: Check the box(es) that describe the overlap of the contract area with categories of MSHCP conservation reserve system areas. More than one box can be checked. Definitions of each category are found in chapter 2 of the MSHCP (RECON 2000) and the most recent categorization should be used. See the DCP Sr. GIS Analyst for the most current categorization of lands in the MSHCP Conservation Reserve System.

Thumbnail of Site Map: See section 3.6 for instructions to link a map image to a contract's record. The linked map image will appear here.

Figure A3. Spatial Overlap Tab

Land (Fee Simple) Tab:

Land, Easements, Grazing Allotments, Water Rights and Habitat Restoration are each tracked on separate tabs.

Parcels Acquired: Enter the number of discrete parcels (with unique Assessor's Parcel Numbers) acquired by the contract effort.

Acres Acquired: Enter the measurement of the area acquired. Data can be entered in Acres or Hectares, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Parcels Managed: Enter the number of discrete parcels managed by the contract effort. Management is an activity separate from Restoration. Restoration efforts are captured on a separate tab.

Acres Managed: Enter the measurement of the area managed. Data can be entered in Acres or Hectares, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Dollars Spent on Acquisitions: Enter the amount expended on land acquisition efforts.

Dollars Spent on Management: Enter the amount expended on land management efforts.

Habitat Restoration	Invasive Plant Management	Law Enforcement	Outreach	Road Designations	Tortoise Data
Spatial Overlap Data	Land (Fee Simple)	Easements	Water Rights	Grazing Allotments	Feral/Managed Animal Control
<p># Parcels Acquired: <input type="text"/></p> <p># Acres Acquired: <input type="text"/> <input type="text"/></p> <p># Parcels Managed: <input type="text"/></p> <p># Acres Managed: <input type="text"/> <input type="text"/></p> <p>Dollars Spent on Acquisitions: <input type="text"/></p> <p>Dollars Spent on Management: <input type="text"/></p>					

Figure A4. Land (Fee Simple) Tab

Easements Tab:

Easements, Land, Grazing Allotments, Water Rights and Habitat Restoration are each tracked on separate tabs.

Easements Acquired: Enter the number of discrete parcels (with unique Assessor’s Parcel Numbers) for which an easement was acquired by the contract effort.

Acres Easements Acquired: Enter the measurement of the easement area acquired. Data can be entered in Acres or Hectares, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Easements Managed/Enforced: Enter the number of discrete easement parcels managed or enforced by the contract effort. Management or enforcement of an easement is an activity separate from Restoration. Restoration efforts are captured on a separate tab.

Acres Easements Managed/Enforced: Enter the measurement of the easement area managed or enforced. Data can be entered in Acres or Hectares, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Dollars Spent on Easements Acquisition: Enter the amount expended on easement acquisition efforts.

Dollars Spent on Easements Management: Enter the amount expended on easement management efforts.

Figure A5. Easements Tab

Water Rights Tab:

Water Rights, Easements, Land, Grazing Allotments, and Habitat Restoration are each tracked on separate tabs.

Water Rights Acquired: Enter the number of discrete water right claims (with unique numbers assigned by the State Engineer) acquired by the contract effort.

Acre Feet of Water Rights Acquired: Enter the measurement of the acre feet acquired.

Water Rights Maintained/Administered: Enter the number of discrete water right claims maintained or administered by the contract effort. Maintenance and administration of water rights claims can involve filing of forms or documents and site visits to measure or maintain diversions or pumps. Maintenance and administration of a water right is an activity separate from Restoration. Restoration efforts are captured on a separate tab.

Acre Feet of Water Rights Maintained/Administered: Enter the measurement of the acre feet maintained or administered.

Dollars Spent on Water Rights Acquisition: Enter the amount expended on water rights acquisition efforts.

Dollars Spent on Water Rights Maintained/Administration: Enter the amount expended on water rights maintenance and administration efforts.

Habitat Restoration	Invasive Plant Management	Law Enforcement	Outreach	Road Designations	Tortoise Data
Spatial Overlap Data	Land (Fee Simple)	Easements	Water Rights	Grazing Allotments	Feral/Managed Animal Control
# Water Rights Acquired:	<input type="text"/>	Dollars Spent on Water Rights Acquisition:	<input type="text"/>		
# Acre Feet of Water Rights Acquired:	<input type="text"/>				
# Water Rights Maintained/Administered:	<input type="text"/>	Dollars Spent on Water Rights Maintained/Administration:	<input type="text"/>		
# Acre Feet of Water Rights Maintained/Administered:	<input type="text"/>				

Figure A6. Water Rights

Grazing Allotments Tab:

Grazing Allotments, Water Rights, Easements, Land, and Habitat Restoration are each tracked on separate tabs. Include base properties, easements, or water rights acquired with a grazing allotment claim in the appropriate tab. There is no tab for any mining claims associated with grazing allotments, but they should be mentioned in the Contract Comments field.

Allotments Acquired: Enter the number of discrete grazing allotment claims (with unique numbers assigned by the Bureau of Land Management) acquired by the contract effort.

Acres Allotments Acquired: Enter the measurement of the allotment area acquired. Data can be entered in Acres or Hectares, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Allotments Maintained/Administered: Enter the number of discrete grazing right claims maintained or administered by the contract effort. Maintenance and administration of

grazing rights claims can involve filing of forms or documents and site visits to inspect range improvements.

Acres Allotment Maintained/Administered: Enter the measurement of the grazing right claim area maintained or administered.

Dollars Spent on Allotment Acquisition: Enter the amount expended on grazing right claims acquisition efforts.

Dollas (sic) Spent on Allotment Maintained/Administration: Enter the amount expended on grazing right claims maintenance and administration efforts.

Habitat Restoration	Invasive Plant Management	Law Enforcement	Outreach	Road Designations	Tortoise Data
Spatial Overlap Data	Land (Fee Simple)	Easements	Water Rights	Grazing Allotments	Feral/Managed Animal Control

# Allotments Acquired:	<input type="text"/>	Dollars Spent on Allotment Acquisition:	<input type="text"/>
# Acres Allotments Acquired:	<input type="text"/>		<input type="text"/>
# Allotments Maintained/Administered:	<input type="text"/>	Dollas Spent on Allotment Maintained/Administration:	<input type="text"/>
# Acres Allotment Maintained/Administered:	<input type="text"/>		<input type="text"/>

Figure A7. Grazing Allotments Tab

Feral/Managed Animal Control Tab:

Burros Removed: Enter the number of individual burros removed.

Feral Animals Removed: Enter the number of individual feral animals removed.

Common Ravens Removed: Enter the number of individual ravens (eggs included) removed.

Dollars Spent on Burro Removal: Enter the amount expended on burro removal efforts.

Dollars Spent on Feral Animal Removal: Enter the amount expended on feral animal removal efforts.

Dollars Spent on Common Raven Removal: Enter the amount expended on raven removal efforts.

Habitat Restoration	Invasive Plant Management	Law Enforcement	Outreach	Road Designations	Tortoise Data
Spatial Overlap Data	Land (Fee Simple)	Easements	Water Rights	Grazing Allotments	Feral/Managed Animal Control
# Burros Removed:	<input type="text"/>	Dollars Spent on Burro Removal	<input type="text"/>		
# Feral Animals Removed:	<input type="text"/>	Dollars Spent on Feral Animal Removal	<input type="text"/>		
# Common Ravens Removed:	<input type="text"/>	Dollars Spent on Common Raven Removal	<input type="text"/>		

Figure A8. Feral / Managed Animal Control Tab

Habitat Restoration Tab:

Habitat restoration is tracked separately from the maintenance, management and administration of land, land use rights and resource rights.

Acres Habitat Restored: Enter the measurement of the area restored. Data can be entered in Acres or Hectares, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Springs with Protective Fencing Installed: Enter the number of discrete springs that were enclosed by protective fencing.

Length of Trails with Protective Fencing Installed: Enter the measurement of length of fencing installed. Data can be entered in Miles or Kilometers, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Length of Trails Closed: Enter the measurement of the length of closed trails. Data can be entered in Miles or Kilometers, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Dollars Spent on Habitat Restoration and Fencing: Enter the amount expended on the efforts recorded in this tab.

Spatial Overlap Data	Land (Fee Simple)	Easements	Water Rights	Grazing Allotments	Feral/Managed Animal Control
Habitat Restoration	Invasive Plant Management	Law Enforcement	Outreach	Road Designations	Tortoise Data

Acres Habitat Restored:

Springs with Protective Fencing Installed:

Length of Trails with Protective Fencing Installed:

Length of Trails Closed:

Dollars Spent on Habitat Restoration and Fencing:

Figure A9. Habitat Restoration Tab

Invasive Plant Management Tab:

Acres Weeds Managed: Enter the measurement of the area where weeds were managed. Data can be entered in Acres or Hectares, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Comments (Weed Species Listed in Keywords): Enter comments other than the types of weeds managed by the contract. Common names of weeds managed should be entered in the Keywords field of the Contract Information section described above.

Dollars Spent on Invasive Plant Management: Enter the amount expended on the efforts recorded in this tab.

Spatial Overlap Data	Land (Fee Simple)	Easements	Water Rights	Grazing Allotments	Feral/Managed Animal Control
Habitat Restoration	Invasive Plant Management	Law Enforcement	Outreach	Road Designations	Tortoise Data

Acres Weeds Managed:

Dollars Spent on Invasive Plant Management:

Comments (Weed Species listed in Keywords) :

Figure A10. Invasive Plant Management Tab

Law Enforcement Tab:

Law Enforcement Positions Funded: Enter the number of full time equivalents (40 hour work week) funded by the contract efforts.

Acres Patrolled by Law Enforcement: Enter the measurement of the area where law enforcement patrols took place. Data can be entered in Acres or Hectares, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Dollars Spent on Law Enforcement: Enter the amount expended on the efforts recorded in this tab.

Contacts by Law Enforcement: Enter the number of individuals who were contacted by law enforcement under this contract effort.

Citations by Law Enforcement: Enter the number of individuals who received citations from law enforcement under this contract effort.

Figure A11. Law Enforcement Tab

Outreach Tab:

Outreach includes efforts to plan, implement, and evaluate Public Information and Education (PIE).

PIE Events: Enter the number of outreach events participated in during the contract effort

People Reached by PIE Events: Enter the number of individuals contacted or reached by the PIE effort(s).

Dollars Spent on PIE: Enter the amount expended on the efforts recorded in this tab.

Users/Target: Enter the types of persons that were the focus of the PIE efforts in this contract.

Spatial Overlap Data	Land (Fee Simple)	Easements	Water Rights	Grazing Allotments	Feral/Managed Animal Control
Habitat Restoration	Invasive Plant Management	Law Enforcement	Outreach	Road Designations	Tortoise Data

Outreach or Public Information and Education (PIE)

PIE Events: Dollars Spent on PIE:

People Reached by PIE Events: Users/Target:

Figure A12. Outreach Tab

Road Designations Tab:

Length of Trails Surveyed: Enter the measurement of the length of roads (roads, motorized trails, tracks or incursions) that were surveyed, mapped or monitored in support of a roads designation effort. Data can be entered in Miles or Kilometers, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Length of Roads Designated: Enter the measurement of the length of roads that were designated as any type (open, administrative, private, closed, etc.) by the contract effort. Data can be entered in Miles or Kilometers, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Length of Roads Designated "Closed": Enter the measurement of the length of closed roads. Data can be entered in Miles or Kilometers, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Dollars Spent on Road Designations: Enter the amount expended on the efforts recorded in this tab.

Spatial Overlap Data	Land (Fee Simple)	Easements	Water Rights	Grazing Allotments	Feral/Managed Animal Control
Habitat Restoration	Invasive Plant Management	Law Enforcement	Outreach	Road Designations	Tortoise Data

Length of Roads Surveyed: Dollars Spent on Road Designation:

Length of Roads Designated:

Length of Roads Designated "Closed":

Figure A13. Road Designations Tab

Tortoise Data Tab:

Tortoises Picked Up: Enter the total number of tortoises (including eggs and any wild tortoises) received by a tortoise pickup service.

Wild Tortoises Picked Up: Enter the number of wild tortoises (including eggs) received by a tortoise pickup service.

Tortoises Translocated: Enter the number of individuals moved from a holding facility to a translocation site. This does not include individuals temporarily held onsite for a short period of time (less than a day) and moved some distance away from their original location.

Dollars Spent on Tortoise Exclosure Fencing Installed (retrofit): Enter the amount expended on retrofitting existing fencing to add tortoise exclosure fencing.

Dollars Spent on Tortoise Exclosure Fencing Installed (new): Enter the amount expended on installation of new tortoise exclosure fencing.

Dollars Spent on Tortoise Exclosure Fencing Monitored and Maintained (retrofit and new fence): Enter the amount expended on monitoring and maintenance of any type of tortoise exclosure fencing.

Length of Tortoise Exclosure Fencing Installed (retrofit): Enter the measurement of the length of existing fencing retrofitted to add tortoise exclosure fencing by the contract effort. Data can be entered in Miles or Kilometers, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Length of Tortoise Exclosure Fencing Installed (new): Enter the measurement of the length of new tortoise exclosure fencing installed by the contract effort. Data can be entered in Miles or Kilometers, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Length of Tortoise Exclosure Fencing Monitored and Maintained (retrofit and new fence): Enter the measurement of the length of any type of tortoise exclosure fencing that was monitored and maintained by the contract effort. Data can be entered in Miles or Kilometers, chosen by combo box to the right of the field. See section 3.4 for instructions on entering units of measurement correctly.

Spatial Overlap Data	Land (Fee Simple)	Easements	Water Rights	Grazing Allotments	Feral/Managed Animal Control
Habitat Restoration	Invasive Plant Management	Law Enforcement	Outreach	Road Designations	Tortoise Data
# Total Tortoises Picked Up:	<input type="text"/>	Length of Tortoise Exclosure Fencing Installed (retrofit):	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Wild Tortoises Picked Up:	<input type="text"/>	Length of Tortoise Exclosure Fencing Installed (new):	<input type="text"/>	<input type="text"/>	<input type="text"/>
# Tortoises Translocated:	<input type="text"/>	Length of Tortoise Exclosure Fencing Monitored and Maintained (retrofit and new fence):	<input type="text"/>	<input type="text"/>	<input type="text"/>
Dollars Spent on Tortoise Exclosure Fencing Installed (retrofit)	<input type="text"/>				
Dollars Spent on Tortoise Exclosure Fencing Installed (new)	<input type="text"/>				
Dollars Spent on Tortoise Exclosure Fencing Monitored and Maintained (retrofit and new fence)	<input type="text"/>				

Figure A14. Tortoise Data Tab.

Species Information

The underlying tables for this section are `tbl_contract_species` and `tbl_species_list`. See section 3.7 for instructions on how to select the species using the species name lists and other drop down menus. More than one species can be entered as described in section 3.4. Covered, Evaluation and Watch List species are available for selection. The contract and progress reports should be inspected for proposed and actual species addressed by the contract effort.

Threat Information

The underlying tables for this section are `tbl_contract_threats` and `tbl_threats`. See section 3.8 for instructions on how to select the threats using the drop down menus. More than

one threat can be entered as described in section 3.4. The contract and progress reports should be inspected for proposed and actual threat(s) addressed by the contract effort.

Conservation Action

The underlying tables for this section are tbl_contract_action_num and tbl_conservation_action. See section 3.9 for instructions on how to select conservation actions using the drop down menus. More than one conservation action can be entered as described in section 3.4. The contract and progress reports should be inspected for proposed and actual conservation action(s) implemented by the contract effort.

Ecosystem Information

The underlying tables for this section are tbl_contract_ecosystems and tbl_ecosystem. See section 3.10 for instructions on how to select the ecosystem using the drop down menus. More than one ecosystem can be entered as described in section 3.4. The contract and progress reports should be inspected for proposed and actual ecosystem(s) addressed by the contract effort.

The image shows a screenshot of a web application form with four distinct sections, each with a colored header and a record indicator below it. The sections are: 1. Species Information (blue header): Includes radio buttons for 'Common Name' (selected) and 'Scientific Name', and dropdown menus for 'Major Taxon', 'MSHCP Status', and 'Species'. 2. Threat Information (yellow header): Includes a dropdown for 'Threat Type', a dropdown for 'Threat Number' (set to 0), and a text area for 'Threat Description'. 3. Conservation Action (cyan header): Includes a dropdown for 'Conservation Action', a dropdown for 'Conservation Action Category', a dropdown for 'Conservation Action Number', and a text area for 'Conservation Action Description'. 4. Ecosystems Information (green header): Includes a dropdown for 'Ecosystem'. Each section has a 'Record: 1 of 1' indicator with navigation icons.

Figure A15. Species, Threat, Conservation Action and Ecosystem Information Sections.

Appendix B: Data Update Methods as of December 15, 2009

Clark County MSHCP Implementation Tracking System: Methods Used to Update Data for 2009

Sue Wainscott
Clark County
Desert Conservation Program

December 15, 2009

Introduction

The MSHCP Implementation Database was initially populated in February 2009 with exported data from a prior FileMaker MSHCP proposal database as a test of the database's structure and documentation. In 2009, the MSHCP Implementation Database (the database) was cleaned and populated with additional, validated contract outcome data from a variety of sources, and was used to deliver the best available implementation data to Science Advisor (Enduring Conservation Outcomes, LLC). Data sources used to populate and validate the data within the database as of December 15, 2009 are described below, as are the methods used to rectify apparent errors in the imported data.

Additional data sources that should be mined for contract outcomes and procedures to accomplish regular updates to the database are described. Finally, recommendations made for deletions of data fields that cannot be reliably populated from the available data.

Methods for 2009 data entry

The original proposal database used to populate the database in February 2009 had not been updated since 2005, and contained several proposals that were never initiated. Because the focus of the new database is on contract outcomes, it was necessary to remove the data for uninitiated proposals. Two tracking lists used by the Desert Conservation Program (DCP) to track MSHCP contract financial information, the Master Projects List and the Funding by Category List, were used as the more reliable sources of initiated contract financial and temporal data. The Master Projects List is used by DCP staff to track active and recently closed contract's financial and temporal data, and is updated daily. This list contains all recent (active in 2005 to present) conservation action implementing contracts, including those that were for smaller expenditures (less than \$25,000) as well as smaller expenditures of a more administrative basis. The Master Projects List also includes future contracts approved in MSHCP Implementing Plan and Budget cycles that have not yet been initiated. The Funding by Category List was initially populated from the Master Projects List, but also includes financial and temporal data on the earlier contracts, from the 1999 biennium to present that was derived from the program's Biennial Progress Reports for the 1999-2001, 2001-2003 and 2003-2005 biennia. This list is not updated on a daily basis.

Only completed or active contracts were entered into the database. Every entry in the database was checked against the lists, and each list was checked against the database to ensure that all conservation action implementing contracts and administrative contracts expending greater than \$25,000 were captured in the database. In those instances where the lists differed from the database, the database records were updated. In the few instances where the two lists appeared to contain conflicting data, the program's financial records were checked to determine which of the two was in error, and corrections were made to the lists and the database as needed.

Next, the paper contract files from 1999 to 2005 were examined to verify contract temporal and conservation outcome information. In particular, this was the best source of information to locate and verify each contract's species, ecosystems, threats and conservation actions for database entry. These files also contained lists of deliverables and in some instances, copies of products generated as outcomes of each contract.

However, it quickly became apparent that many of the products of the earlier contracts had been filed separately. Only those products that were accessible within the contract files were entered into the database.

Next, a 12/1/2009 list of the contents of the program's geographic information system (GIS) database was examined to locate additional, digital contract products. The DCP also maintains some digital contract documents on a section of the network drive (P:\...\Projects). The contents of this drive were reviewed for contract information and products. Finally, the current project and document management system for active contracts, CASE 360, was examined for more recent contract outcomes.

Sources for 2009 data

In summary, the data sources used and further described in the above methods section are:

- Initial entries in MSHCP Implementation Database, derived from prior proposal database
- Master Projects List (12/1/2009)
- Funding by Category List (12/1/2009)
- MSHCP GIS database list (12/1/2009)
- Paper contract files for 1999-2005 projects
- CASE 360 project and document management system for 2005-present projects
- DCP network drive (P:\) Projects folder contents

Additional data sources to review and enter

As the DCP continues a parallel effort to centralize and image all MSHCP records, certain paper and removable media files will be reviewed to determine if they are part of older contract record sets. The following sets of files should be scrutinized either prior to or after imaging to determine if they contain additional contract products:

- paper files for topics and the contents of an old reference materials library
- CD and DVD collection, including some older media such as floppy disks

Procedures for regular project updates

Upon initiation, each contract's basic information should be entered in the MSHCP Database, and the status set to Active. Annually, and upon closure, each contract's products should be entered in the database, the contracted status sent to Completed and all basic contract information checked to ensure the outcomes (as well as the impacted species, ecosystems, threats and conservation actions) of the contract were as originally contracted. A step to update the MSHCP Implementation Database is currently documented in the DCP's Contract Close-Out Process and Checklist, and is assigned to the DCP's Adaptive Management Coordinator role.

Recommendations

As the above described updates and data entry were made, several areas for improvement in the database, and its role within the DCP's administration of the MSHCP became apparent. Several recommendations follow.

Upon comparison to other DCP databases and tracking systems, it is apparent that the <Amount Funded> field in the summary of each project is duplicative, and prone to containing out of date data. As each contract has a unique "Project Number" that is used in all DCP databases and tracking systems, it would be possible to use this unique identifier to look up financial information in the Funding by Category List or Master Projects List as needed. Thus, the <Amount Funded> field is recommended for deletion from the MSHCP Implementation Database.

Outcome fields that track monetary values are:

<Dollars Spent on Acquisitions>

<Dollars Spent on Management>

<Dollars Spent on Easement Acquisition>

<Dollars Spent on Easement Management>

<Dollars Spent on Water Rights Acquisition>

<Dollars Spent on Water Rights Maintained/Administration>

<Dollars Spent on Allotment Acquisition>

<Dollars Spent on Allotment Maintained/Administration>
<Dollars Spent on Burro Removal>
<Dollars Spent on Feral Animal Removal>
<Dollars Spent on Common Raven Removal>
<Dollars Spent on Tortoise Exclosure Fencing Installed (retrofit)>
<Dollars Spent on Tortoise Exclosure Fencing Installed (new)>
<Dollars Spent on Tortoise Exclosure Fencing Monitored and Maintained (retrofit and new fence)>
<Dollars Spent on Road Designation>
<Dollars Spent on PIE>
<Dollars Spent on Law Enforcement>
<Dollars Spent on Invasive Plant Management>
<Dollars Spent on Habitat Restoration and Fencing>

The above fields each require data that is not found in most contract/project records. Many MSHCP contracts accomplish a combination of activities, and the financial data is not broken out by conservation action. Thus, any summary reports using these fields would not yield accurate information, and it is recommended that these fields be deleted from the MSHCP Implementation Database.

The <Conservation Action Category> field contains the categories that each conservation action statement was grouped under in the MSHCP document (RECON 2000). These groupings were created for convenience in the preparation of the MSHCP, and it is unclear what criteria were used to determine the category of any conservation action. Thus, the category of a given conservation action does not relay any reliably science-based information, and it is recommended that this field be deleted from the database.

A few contracts were implemented that were not part of an approved Implementation Plan and Budget, but were implemented with MSHCP funds with the approval of the US Fish and Wildlife Service and Board of County Commissioners. The inclusion of the entry "None" in the <Biennium Approved In> field would allow this information to be captured more accurately than the current practice of leaving the <Biennium Approved In> field blank.

The <Proposal Number> field was not consistently populated in this data entry effort, and as this information could be used to track contracts to their original Implementation Plan and Budget approved proposals, it should be consistently populated for all entries in the database, as applicable.

It is unclear what value would be derived from the check box for <Amended> in the Contract Information window, and it is recommended that this field be removed from the database.

All conservation outcome fields that contain a unit conversion feature need to be verified to ensure all programming errors in earlier versions of the database prototype were corrected.

The repair image technique described in this user manual is not satisfactory; as the database must be updated each time it is opened, or moved to a user's D drive in a series of subfolders that match the location in which the database was originally programmed. This programming needs to be improved, ideally so that the database can be stored and accessed on a networked drive where it will be backed up every 24 hours.

Finally, synchronization of terms to describe implementation outcomes is underway in the DCP, and it is recommended that fields and reports in the MSHCP Implementation Database be updated to use these standard terms once they are established. This will allow for more efficient cross referencing among MSHCP tracking lists, databases and systems.

Many of the above changes would require updates to the standard queries and reports that are currently programmed in the MSHCP Implementation Database. This manual and the images of the database screens within should also be reviewed and updated if necessary.

Appendix C: Initial (February 2009) Data Compilation Methods

Clark County MSHCP Implementation Tracking System: Methods Used to Compile Data

Shawn MacCabe¹

Mark Stone¹

and

Sue Wainscott²

¹Desert Research Institute

²Clark County
Desert Conservation Program

February 18 2009

Introduction

In its capacity as the Multiple Species Habitat Conservation Plan (MSHCP) Science Advisor, the Desert Research Institute (DRI) was asked to develop a functional prototype of a database template (herein after called the new database) where past and future monitoring data for MSHCP project implementation data can be compiled. The new database will include summary outcome information for all MSHCP-funded projects, a list of each project's outcomes, and low resolution maps depicting general locations for each project. Each project's outcome list will include project reports, models, and datasets (spatial and aspatial) generated by the project. This new database is to be used by researchers and managers to assess the outcomes of MSHCP implementation, which may provide information to assess the effectiveness of MSHCP implementation in meeting MSHCP goals and objectives.

Aspatial data were extracted from a prior FileMaker MSHCP proposal database (herein after called the old database) and applicable proposal data were selected, augmented and uploaded into the new database using the methods described in this document, and generally shown in Figure 1. The data in the old database were created by project proponents upon requesting MSHCP funding and reflect the planned activities of each project.

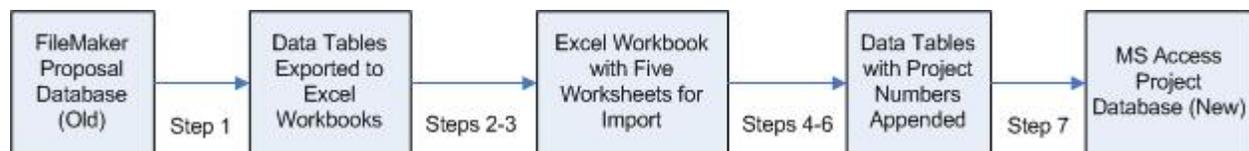


Figure 1. Data exportation and extraction steps.

Data Exporting and Extraction

Step 1. Extracting data tables from old database

DRI extracted all data tables from the old database dated December 2005 and exported them to Microsoft Excel © workbooks. These files were provided to the County for evaluation on February 21, 2008.

Step 2. Examination of extracted data tables from old database

The goal of the County evaluation was to identify common data fields between the old database and the MS Access project database (new database) created by DRI to hold project outcome information. If common data fields could be identified, these data would be used to populate the new database to test its structure and reporting capabilities.

No metadata or table structure descriptions of the old database were provided to County by the creator, the previous Science Advisor for the MSHCP. County staff examined the data tables and discovered several fields resembling new database fields. County staff were able to crosswalk these fields from the old to the new database fields. This comparison is shown in Table 1.

The comparison revealed that the old database data tables contained 26 fields that were similar to 15 new database fields. Further examination revealed that of those 15 fields in the new database, 6 were a derivative of other data fields, for instance, in the new database the Ecosystem field has a one-to-one relationship with values in the eco_ID field, thus only one needed to be imported to populate both fields in the new database. Also, the project funding field (Dollar_amount and ProjectDb::Project Funding in the old and new databases, respectively) was determined to be a field to be more accurately populated from other sources, such a copies of contracts, interlocal agreements, purchase orders, etc. After this examination, data were located to populate nine data fields in the new database: agency, biennium, eco_ID, MSHCP_conservation_action_number, project_number, project_title, proposal_number, tbl_species_list: ID, and threat_ID.

Table 1. Potentially suitable fields identified within data tables extracted from the old database.

Old database data table	Old database data table field name	New database field name
Master ecosystem threats upload.xls	Threats: action with letter	Threat_ID
	Threat descriptions: threat name	Threat_Description
Report species upload.xls	Latin Binomial	Gen_sp_sub
	Contract number	Proposal_number
	Project serial number	Proposal_number
	propnum	Proposal_number
Subcategory upload.xls	Project serial number	Proposal_number
	Citation field	MSHCP_Conservation_Action_Number
	Conservationtext	MSHCP_Conservation_Action_Description
Species threat upload.xls	Project serial number	Proposal_number
	Threat action	Threat_ID
	Threat text	Threat_Description
Project database upload.xls	Funding biennium	Biennium
	Currentrecid	Proposal_number
	Contractor	agency
	Project name	Project_title
	Contract number	Project_number
Species description upload.xls	Common	COMMON
	Gen sp sub	Gen_sp_sub
	Taxon	MSHCP_Taxon
Mshcp species description	Common	COMMON
	Gen sp sub	Gen_sp_sub

upload.xls	taxon	MSHCP_Taxon
	Recorded	Project_number
Mgmtactions upload.xls	Citation field	MSHCP_Conservation_Action_Number
	Text	MSHCP_Conservation_Action_Descripti on
Master ecosystem threats upload.xls	Threat	Threat_ID
	Threattext	Threat_Description
Land manager plus location upload.xls	Project number	Proposal_number
	Project serial number	Proposal_number
Habitat list upload.xls	Habitat	Ecosystem
	Projserialnum	Proposal_number
Ecosystem threats upload.xls	Threat action	Threat_ID
	Project serial number	Proposal_number
	Threattext	Threat_Description
Contract database upload.xls	Contract number	Project_number
	Contractor	agency
	ProjectDb::Project Name	Project_title
	ProjectDb::Project Funding	Dollar_amount

The set of thirteen data tables (shown in Table 1) were then compared to identify the smallest subset of data tables necessary to populate the above nine data fields. This resulted in a subset of five data tables; subcategory upload.xls, project database upload.xls, report species upload.xls, species threat upload.xls, and habitat list upload.xls.

The subset of five data tables were next examined to identify a unique identifying key field that would allow links across data tables by proposal. County staff found that no

single key field existed in these data tables. County staff also examined the other data tables from the old database, and again, no single key field was found.

County staff then examined the five tables using a single proposal (2003-PIC-256) to determine how that proposal’s data were identified in each of the five data tables. The fields in each data table that appear to identify this proposal are shown in Table 2 below. If a field did not appear in a data table, it is indicated in Table 2 with “NA” for not applicable. The data in the shaded cells show the identifying fields used in the following steps to identify each proposal’s records in the five data tables.

Table 2. Field names used to identify proposal identity for records in the five selected old database data tables.

	Old database field names				
Old database data tables	Project serial number	Projserialnum	Currentrecidproj	Currentrecid	Contract number
Subcategory upload.xls	256	NA	32965	NA	NA
Project database upload.xls	NA	NA	NA	32965	2003-PIC-256-P-2004-
Report species upload.xls	256	NA	32965	Many values for records with “project serial number” value of 256	NA
Species threat upload.xls	256	NA	NA	NA	NA
Habitat list	NA	256	32965	Many values	NA

upload.xls				for records with “project serial number” value of 256	
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Step 3. Generating new proposal spreadsheet data tables

New proposal spreadsheet data tables were generated from the above five old database data tables as five separate spreadsheets in a new Microsoft Excel workbook. The spreadsheet names corresponding to each data table are shown in Table 3 below.

Table 3. Proposal spreadsheet data tables generated from each of the five old database data tables.

Old database data table	Proposal spreadsheet data table
Project database upload.xls	Tbl_contract_info
Species threat upload.xls	Project x threat
Report species upload.xls	Project x species
Habitat list upload.xls	Project x ecosystem
Subcategory upload.xls	Project x action

Using the identifying fields, consistent proposal numbers were appended to each record of the data table spreadsheet. This proposal number field could now be used as a key field across all five data table spreadsheets to sort and compare records among spreadsheets. Records in each data table spreadsheet that lacked entries for the identifying fields were deleted.

Step 4. Removing uninitiated proposals

Using the Biennial Progress Reports (BPRs: Clark County 2007, 2005, 2003 and 2001) and the most current Master Project List (Clark County 2008), entries for proposals that had not been funded or initiated to date were removed.

Step 5. Adding project data to proposals

Again using the BPRs (Clark County 2007, 2005, 2003 and 2001) and the most current Master Project List (Clark County 2008), project numbers were appended to each proposal record. In those instances where the project numbers were different than the original proposal numbers, the BPRs and Master Project List were used to populate those entries.

Step 6. Generating data for proposals with multiple projects

Some proposals are implemented via more than one contract, interlocal, purchase order or other funding instrument. Using the BPRs (Clark County 2007, 2005, 2003 and 2001) and Master Project List (Clark County 2008), all records for such proposal were copied and used for each project initiated to implement that proposal. Project identification was added to each record set as appropriate.

Fields not used in importation into the new database were then deleted in each data table's spreadsheet. The proposal data table fields remaining were renamed to their corresponding field names in the new database. The resulting fields in each spreadsheet data table are shown in Tables 4-8 below.

Table 4. New database spreadsheet *tbl_contract_info* data table fields

Old database data table fields	Funding biennium	Contract number	Currentrecid	Project name	contractor
New database spreadsheet data table fields	biennium	project_number	proposal_number	project_title	agency

Table 5. New database spreadsheet *project x threat* data table fields

Old database data table fields	Project serial number	Threat action
New database spreadsheet data table fields	project_number	Threat_ID

Table 6. New database spreadsheet *project x action* data table fields

Old database data table fields	Project serial number	Citation field
New database spreadsheet data table fields	project_number	MSHCP_Conservation_Action_Number

Additional data field transformations were performed in the case of the species and ecosystems data tables, to reduce the impact of typographical errors in the old database. Key fields *species common name* and *ecosystem name* were used to insert the appropriate species ID number and ecosystem ID number fields for import to the new database, respectively.

Table 7. New database spreadsheet *project x species* data table fields

Old database data table fields	LatinBinomial		Contract number
New database spreadsheet data table fields	(Above was used to equate to values in Gen_sp_sub field and used to generate field at right.)	tbl_species_list: ID	project_number

Table 8. New database spreadsheet *project x ecosystem* data table fields

Old database data table fields	habitat		Projserialnum
New database spreadsheet data table fields	(Above was used to equate to values in ecosystem field and used to generate field at right.)	Eco_id	project_number

The above five new database spreadsheets contained 7,298 records with 15,409 values for 271 projects. They were provided to DRI on September 19th, 2008.

Step 7. Loading project data into new database

The New Database was populated using the data from the updated Excel spread sheets received from the Clark County. This data was imported one table at a time. Only a few errors arose during the import process such as duplicated project number and partial project numbers. These errors were quickly resolved by members of Clark County and DRI. The New populated database was provided to Clark Count on December 31, 2008.

Summary

This report, which accompanies the Users' Manual for the prototype Implementation Status Tracking database describes the methods used by Clark County to transfer data from an old database, and check the accuracy of that process. This was necessary because the software (FileMakerPro) which was used to create the old database proved to be unusable by the DCP, and the database was all-inclusive to such an extent that it was cumbersome and time consuming to access.

One of the difficulties of the old database is that it was based on planned activities and therefore may not reflect what actually happened on the ground during project

implementation. The County will at a later date update implementation database entries using records of project progress and completion where available. In addition, the County-maintained ArcGIS geodatabase of MSHCP data was used to generate low resolution maps for each project.

References

Clark County (2008). Master Project List. Unpublished Clark County working file tracking log of active projects accessed on September 12, 2008.

Clark County (2007). 2005-2007 Biennial Progress Report. Unpublished report from Clark County, Nevada to the US Fish and Wildlife Service.

Clark County (2005). 2003-2005 Biennial Progress Report. Unpublished report from Clark County, Nevada to the US Fish and Wildlife Service.

Clark County (2003). 2001-2003 Biennial Progress Report. Unpublished report from Clark County, Nevada to the US Fish and Wildlife Service.

Clark County (2001). 1999-2001 Biennial Progress Report. Unpublished report from Clark County, Nevada to the US Fish and Wildlife Service.

Glossary

Biennial Progress Report [BPR] – a required report on the planned and expended MSHCP implementation projects within a two-year MSHCP Biennial Period (July 1, year 0 – June 30, year 2)

Data table—Any table that contains data.

Field—a column of data values for multiple records in a data table.

Multiple Species Habitat Conservation Plan [MSHCP] – a mitigation plan (Habitat Conservation Plan) that is implemented to maintain compliance with a federal Endangered Species Act Section 10(a)(1)(B) Incidental Taker Permit.

New database—Microsoft Access © database of project outcome data created by Desert Research Institute

Old database—FileMaker © database of proposal information created and administered by University of Nevada Reno from X – Y.

Project – a funded and initiated contract, interlocal agreement, purchase order or other contractual instrument by which MSHCP implementation is accomplished.

Proposal – a proposed use of MSHCP funding for the purposes of potential MSHCP implementation.

Record—the set of field values in one row in a data table.

Value—Information in a field for one data record.