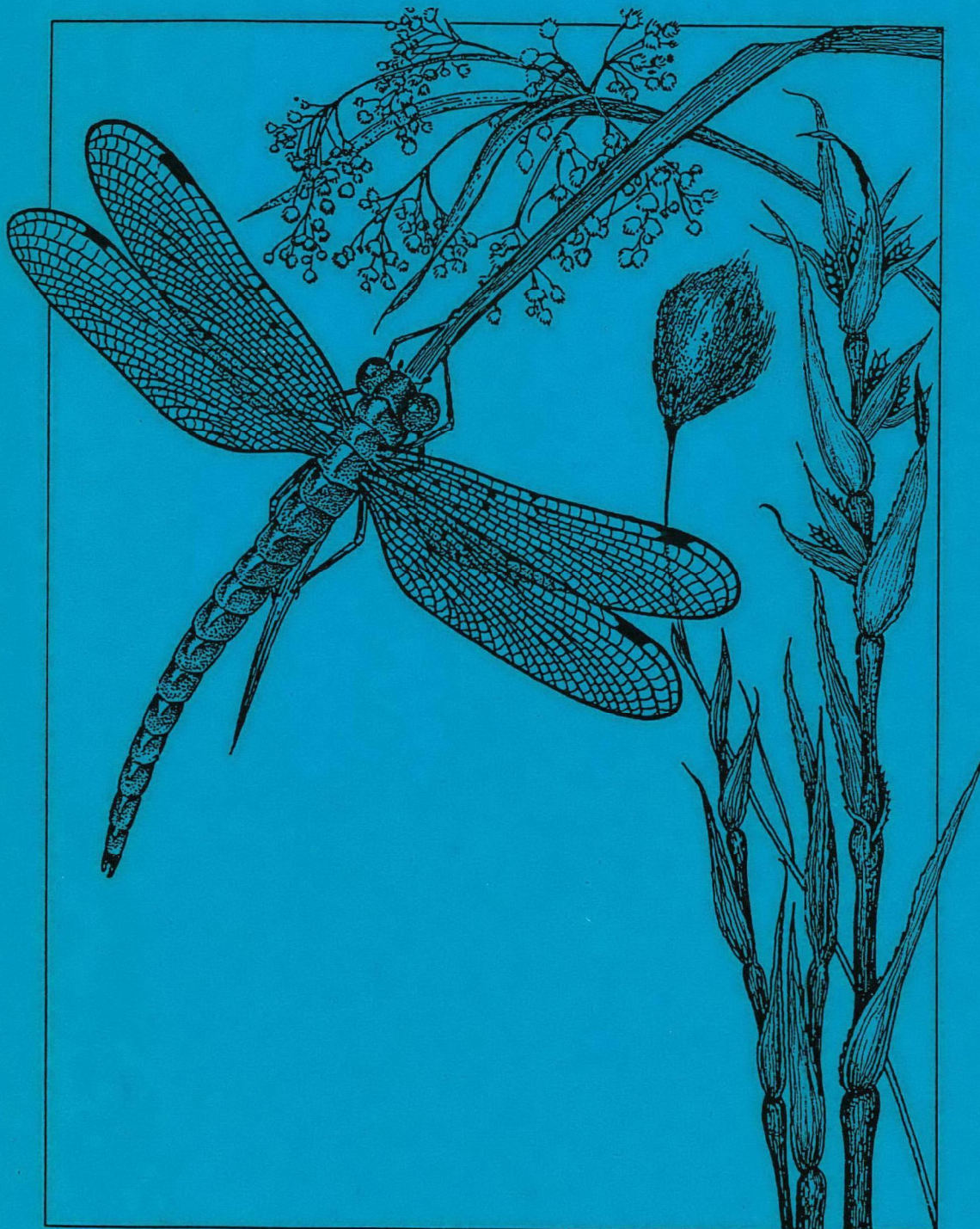




# The Permit Tracking System (PTS): A user's manual



# **THE PERMIT TRACKING SYSTEM (PTS): A USER'S MANUAL**

by

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## **NOTICE**

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**The Permit Tracking System (PTS) was developed to track information on the wetland resource affected by permitting, as opposed to information on permit status and activity (e.g., acceptance or renewal). We designed the PTS to complement existing systems that track permit activity to avoid duplicating the efforts of other agencies.**

## **DISCLAIMER**

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### **IMPORTANT:**

Several indices were used in the PTS programs. These indices can become damaged due to power outages, computer failures, etc. You can tell that an index is damaged if the PTS stops working, or you get an error message similar to the one depicted below.

Proc TABLE line 47, open error \PTS\RESULTS\RESULTS.NTX (0) Retry? (Y/N)

*If you suspect that an index has been damaged:*

☛ Type **INDEX** and press **[Enter]** from the directory containing the PTS (\PTS).

This process will restore any damaged indices in the PTS.



## ABOUT THE DOCUMENTATION

This manual will guide you through use of the Permit Tracking System (PTS), explain procedures, and provide examples of the procedures. A few preliminary notes are made here to direct you to important points in the manual:

- Many examples and illustrations are included in the documentation. If you are having trouble following the text, look in the figures. Procedures that may be difficult to understand in verbiage, may be easily comprehended with the use of a figure.
- A pointing finger (☞) indicates that directions on what to do at the computer will follow.
- Commands to type and keys to press will be in **bold**. For example:

☞ Type **cd\PTS** and press **[Enter]**

☞ Press **[F10]** to exit the PTS

### Terms used

Below is a list of terms and documentation conventions we use throughout this guide.

Code	the abbreviation for a value. For example, WILD is the code for Habitat for wildlife.
Field	each category of information. For example, permit number, state, and wetland functions are field names.
Record	all the information that has been entered for a wetland. For example, if one permit impacted two wetlands and created three wetlands, there would be a total of five records corresponding to that permit.
Screen	the block of information displayed on the computer monitor.
Value	the information entered into a field. For example, CA (for California) is a potential value in the state field.



## OVERVIEW



## **THE PERMIT TRACKING SYSTEM (PTS)**

A user-friendly data management system called the Permit Tracking System (PTS), was developed by the Environmental Protection Agency's (EPA) Wetlands Research Program to simplify the process of entering and analyzing information from permit records. The PTS is designed to track information from three types of permit systems, permits issued under Section 404 of the Clean Water Act, Section 401 of the Clean Water Act, and state authority. There is also an option to track data from other permit systems.

The PTS is divided into two main components: data entry and query. The PTS simplifies the process of data entry. In most cases, the user is merely required to check off items, as opposed to doing a lot of typing. Standardized categories, with definitions, are given for items, such as Cowardin wetland types (Cowardin et al. 1979), project types, and wetland functions. Selecting items and entering minimal verbiage eliminates most of the errors typically associated with data entry. The PTS also contains a program that sorts and prints all the items listed in each category, making it easy to recognize information that has been entered incorrectly. For example, if a list of counties contained both CENTER and CENTRE, it would be easy to recognize that there had been an error in data entry. After data have been entered, corrections, additions, and deletions can easily be incorporated into the PTS.

The menu-driven query component of the PTS allows the user to generate questions utilizing the contents of the database. The program identifies all possible combinations and compiles the answers, which can be viewed on the screen, copied to disk for conversion to tables and figures, or printed as hardcopy. The PTS not only eliminates the potential errors inherent to querying in other software packages, but also substantially reduces the time needed for analyses.

## **LIMITATIONS**

The PTS is not a statistical package. The query program generates frequency and area totals, but does not calculate any statistics, such as means or standard deviations. Since the PTS requires limited knowledge of the database structure, statistical capabilities were not included, so users could not misinterpret the output. If you want to perform statistical calculations on data, simply generate the frequencies and area totals using the PTS, and compute the statistics by hand or use a statistical software package.

## **GETTING STARTED**

### **Computer features needed to run the PTS**

The PTS can be run on any personal computer system that has the following attributes:

- an IBM PC, XT, or AT, or an IBM compatible computer
- PC-DOS or MS-DOS Version 2.0 or greater
- 512 kilobytes, or more, of available random access memory (RAM)
- 3 megabytes, or more, of available hard disk space
- 20 files and 20 buffers, or more, in CONFIG.SYS file.

Features that are helpful, but not essential, are:

- a color monitor
- a fast hard disk (less than 28 milliseconds average access time)
- a fast processor (for example, a 386).

### **Installing the PTS**

Follow the six steps listed on the following page to install the PTS on your computer.



- 1) Locate the three PTS diskettes found in the pocket at the back of this document.
- 2) Insert PTS diskette # 1 into the A: or B: drive of your computer.
- 3) Access the hard drive to contain the PTS (e.g., C: or D:).
- 4) Initiate the installation.

*If the PTS diskette is in the A: drive of your computer:*

☞ Type **A:INSTALLA PTS** and press **[Enter]**

*If the PTS diskette is in the B: drive of your computer:*

☞ Type **B:INSTALLB PTS** and press **[Enter]**

- 5) Continue with the installation process inserting diskettes # 2-3 when prompted by the directions on the computer monitor.
- 6) The PTS is now installed on your computer. Remove PTS diskette # 3 and return all the diskettes to the pocket.

**NOTE:** You may also want to make a back-up of the PTS diskettes to store at a second location.

## Accessing the PTS

☞ Type **PTS** and press **[Enter]** from the directory containing the PTS.

Do you want to use color? (Y)es/(N)o **Y**<sup>1</sup>

1. Only appears on screens with color monitors.

☞ Type **Y** and press **[Enter]** to use color, otherwise type **N** and press **[Enter]**.

The PTS main menu will appear. The various components (e.g., Data Entry, Query, and Table) of the PTS are discussed in the following sections of this documentation.

Data Entry	Summary Check	Field Contents	Query	Table	Print	Exit
Enter permit data						

The PTS main menu.



## THE PTS FORM



## OVERVIEW

The amount of data in permit records can range from files with detailed environmental impact reports and mitigation plans to those with only the U.S. Army Corps of Engineers' public notice, environmental assessment, and permit issuance letter, therefore it is essential that critical information be identified and organized before it is entered into the PTS. The EPA's Wetlands Research Program created a form to which key information can be transcribed for input into the data entry component of the PTS.

The form is divided into two double-sided pages--one for information on wetlands impacted by a project and a second for information on wetlands designated as mitigation for the impacted wetlands (referred to as *compensatory wetlands*). An optional third page is included so users can tailor the PTS to meet their individual needs. Appendix A contains the blank PTS forms that can be used to make copies. Copy the first two pages back to back on one sheet of paper and the second two pages back to back on a second sheet. Copy the last page on a third sheet, if needed.

A separate form should be used for each wetland involved in a permit and for each type of compensatory mitigation (i.e., wetland creation, enhancement, preservation, or restoration) (See Appendix B for definitions of compensatory mitigation types). For example, if a permit specifies that one wetland will be impacted by a project, and one wetland will be created and one will be restored as mitigation, three forms would be required--one impacted and two compensatory forms. Furthermore, if one permit impacted a palustrine forested wetland on one site and a palustrine emergent wetland on a different site, two impacted wetland forms should be used. Information on a wetland that is a complex of patches of two or more wetland types, however, should be recorded on only one form. Examples illustrating the number of PTS forms that should be used in various situations are depicted in the following table.

	SITUATION	# FORMS
Permit A	1 impacted wetland on site A 1 created wetland on site B 1 restored wetland on site C	1 impacted 2 compensatory
Permit B	1 impacted palustrine forested wetland on site A 1 impacted palustrine emergent wetland on site B	2 impacted
Permit C	1 impacted wetland on site A 1 created wetland composed of patches of palustrine forested and palustrine emergent wetland on site B	1 impacted 1 compensatory

After information is transcribed onto the PTS forms, it can be entered into the data entry component of the PTS. The data entry program follows the arrangement of the data on the forms.

## INFORMATION TO BE RECORDED ON THE PTS FORM

The form is divided into several boxes (10 boxes on the impacted form, and 14 boxes on the compensatory form) that contain similar types of information to be compiled from permit records. This section explains the specific information to be recorded in each box on the PTS forms. The boxes are described in order starting from the upper left corner and proceeding from left to right down the page. It might be helpful to have a form in front of you as you follow the directions listed below.

### Impacted wetland form:

Permit number <u>  1  </u>
Date permit issued <u>  2  </u> / <u>  </u> / <u>  </u>

Record the . . .

1. permit number
2. date the permit was issued - use the convention:



Month/Day/Year - the two-digit month and day and the last two digits of the year, for example, 12/23/87 (for December 23, 1987)  
(Use 00 for the year 2000)

State <u>1</u>	County <u>2</u>	Acres <u>3</u>
State <u>4</u>	County <u>4</u>	Acres <u>5</u>
		TOTAL <u>6</u>
Township & Range <u>7</u>		Section(s) <u>7</u>
Latitude/Longitude <u>8</u>		
USGS/NWI map name <u>9</u>		Scale 1: <u>9</u>
10 → <input type="button" value="Select [1]"/>	Water/river body name <u>10</u>	
<input type="radio"/> Water Body	Specific location <u>11</u>	
<input type="radio"/> River Body		

Record the . . .

1. two-letter abbreviation of the state in which the wetland is located
2. county in which the wetland is located
3. area (in acres) of the wetland in that state and county
4. state abbreviation and/or county name if the wetland lies in more than one state and/or county
5. area (in acres) of the wetland in the second state and/or county
6. total area (in acres) of the wetland impacted by the permit - this area should equal the area entered into 3 + the area entered into 5
7. township, range, and section of the location of the wetland - use the convention:  
Township and Range **2N4W**      Section(s) **4**
8. latitude and longitude of the location of the wetland - use the convention:  
Latitude **33°07'45"**      Longitude **117°13'30"**
9. U.S. Geological Survey topographic map name or the National Wetlands Inventory map name and scale if one was cited in the permit record
10. type of hydrologic connection (water body or river body) with which the wetland is associated, and list its name
11. specific location of the wetland - be as detailed as possible  
For example, **INTERSECTION OF ZION AVE AND SAN DIEGO RIVER**

<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;"> <b>Land use--Select [1]</b> </div> <div style="padding-left: 10px;"> <input type="radio"/> Agricultural  <input type="radio"/> Commercial  <input checked="" type="radio"/> <b>1</b> Industrial  <input type="radio"/> Natural  <input type="radio"/> Residential         </div>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;"> <b>Documents available--Select [0-4]</b> </div> <div style="padding-left: 10px;"> <input type="radio"/> Maps  <input checked="" type="radio"/> <b>2</b> Blueprints  <input type="radio"/> Ground photos  <input type="radio"/> Aerial photos         </div>
<p>Date construction began     <u>  3  </u> / <u>  </u> / <u>  </u></p> <p>Date construction completed <u>  4  </u> / <u>  </u> / <u>  </u></p>	

Record the . . .

1. primary land use in the vicinity of the wetland before the impact occurred:  
 Agricultural - land used for producing crops and/or livestock (farming)  
 Commercial - land occupied by businesses  
 Industrial - land occupied by manufacturing facilities  
 Natural - undeveloped land  
 Residential - land occupied by housing and/or housing units
2. documents available in the permit record
3. date the construction to the impacted wetland began - refer to comments on date entries at the top of page 13
4. date the construction to the impacted wetland was completed - refer to comments on date entries at the top of page 13

COWARDIN WETLAND TYPE--Select [1-5]					
1	ACRES		ACRES	ACRES	
<b>ESTUARINE</b>		<b>RIVERINE</b>		<b>RIVERINE (cont)</b>	
<input type="radio"/> subtidal aquatic bed	<b>2</b> _____	<input type="radio"/> tidal aquatic bed	_____	<input type="radio"/> unknown perennial aquatic bed	_____
<input type="radio"/> subtidal open water	_____	<input type="radio"/> tidal beach/bar	_____	<input type="radio"/> unknown perennial beach/bar	_____
<input type="radio"/> subtidal reef	_____	<input type="radio"/> tidal emergent	_____	<input type="radio"/> unknown perennial flat	_____
<input type="radio"/> subtidal rock bottom	_____	<input type="radio"/> tidal flat	_____	<input type="radio"/> unknown perennial open water	_____
<input type="radio"/> subtidal unconsolidated bottom	_____	<input type="radio"/> tidal open water	_____	<input type="radio"/> unknown perennial rock bottom	_____
<input type="radio"/> intertidal aquatic bed	_____	<input type="radio"/> tidal rock bottom	_____	<input type="radio"/> unknown perennial rocky shore	_____
<input type="radio"/> intertidal beach/bar	_____	<input type="radio"/> tidal rocky shore	_____	<input type="radio"/> unknown perennial streambed	_____
<input type="radio"/> intertidal emergent	_____	<input type="radio"/> tidal streambed	_____	<input type="radio"/> unknown perennial unconsolidated bottom	_____
<input type="radio"/> intertidal flat	_____	<input type="radio"/> tidal unconsolidated bottom	_____	<input type="radio"/> unknown perennial unconsolidated shore	_____
<input type="radio"/> intertidal forested	_____	<input type="radio"/> tidal unconsolidated shore	_____		
<input type="radio"/> intertidal reef	_____	<input type="radio"/> lower perennial aquatic bed	_____	<b>PALUSTRINE</b>	
<input type="radio"/> intertidal rocky shore	_____	<input type="radio"/> lower perennial beach/bar	_____	<input type="radio"/> aquatic bed	_____
<input type="radio"/> intertidal scrub/shrub	_____	<input type="radio"/> lower perennial emergent	_____	<input type="radio"/> emergent	_____
<input type="radio"/> intertidal streambed	_____	<input type="radio"/> lower perennial flat	_____	<input type="radio"/> flat	_____
<input type="radio"/> intertidal unconsolidated shore	_____	<input type="radio"/> lower perennial open water	_____	<input type="radio"/> forested	_____
		<input type="radio"/> lower perennial rock bottom	_____	<input type="radio"/> moss/lichen	_____
<b>LACUSTRINE</b>		<input type="radio"/> lower perennial rocky shore	_____	<input type="radio"/> open water	_____
<input type="radio"/> limnetic aquatic bed	_____	<input type="radio"/> lower perennial streambed	_____	<input type="radio"/> rock bottom	_____
<input type="radio"/> limnetic open water	_____	<input type="radio"/> lower perennial unconsolidated bottom	_____	<input type="radio"/> scrub/shrub	_____
<input type="radio"/> limnetic rock bottom	_____	<input type="radio"/> lower perennial unconsolidated shore	_____	<input type="radio"/> unconsolidated bottom	_____
<input type="radio"/> limnetic unconsolidated bottom	_____	<input type="radio"/> upper perennial aquatic bed	_____	<input type="radio"/> unconsolidated shore	_____
<input type="radio"/> littoral aquatic bed	_____	<input type="radio"/> upper perennial beach/bar	_____		
<input type="radio"/> littoral beach/bar	_____	<input type="radio"/> upper perennial flat	_____	<b>MARINE</b>	
<input type="radio"/> littoral emergent	_____	<input type="radio"/> upper perennial open water	_____	<input type="radio"/> subtidal aquatic bed	_____
<input type="radio"/> littoral flat	_____	<input type="radio"/> upper perennial rock bottom	_____	<input type="radio"/> subtidal open water	_____
<input type="radio"/> littoral open water	_____	<input type="radio"/> upper perennial rocky shore	_____	<input type="radio"/> subtidal reef	_____
<input type="radio"/> littoral rock bottom	_____	<input type="radio"/> upper perennial streambed	_____	<input type="radio"/> subtidal rock bottom	_____
<input type="radio"/> littoral rocky shore	_____	<input type="radio"/> upper perennial unconsolidated bottom	_____	<input type="radio"/> subtidal unconsolidated bottom	_____
<input type="radio"/> littoral unconsolidated bottom	_____	<input type="radio"/> upper perennial unconsolidated shore	_____	<input type="radio"/> intertidal aquatic bed	_____
<input type="radio"/> littoral unconsolidated shore	_____	<input type="radio"/> intermittent aquatic bed	_____	<input type="radio"/> intertidal beach/bar	_____
		<input type="radio"/> intermittent beach/bar	_____	<input type="radio"/> intertidal flat	_____
		<input type="radio"/> intermittent flat	_____	<input type="radio"/> intertidal reef	_____
		<input type="radio"/> intermittent open water	_____	<input type="radio"/> intertidal rocky shore	_____
		<input type="radio"/> intermittent rock bottom	_____	<input type="radio"/> intertidal unconsolidated shore	_____
		<input type="radio"/> intermittent rocky shore	_____		
		<input type="radio"/> intermittent streambed	_____		
		<input type="radio"/> intermittent unconsolidated bottom	_____		
				<b>TOTAL AREA</b>	<b>3</b> _____

1. Select up to five wetland types that may comprise the impacted wetland (see Cowardin et al. 1979 for definitions of the wetland types).
2. Specify the area (in acres) for each wetland type selected.
3. Record the total area (in acres) for all the wetland types - NOTE: this area should equal the area recorded in the box depicted on page 13, Number 6.

**Continuing on the back of the impacted wetland form:**

TYPE OF PROJECT--Select [1-3]		
<input type="radio"/> Airport	<input type="radio"/> Hydroelectric project	<input type="radio"/> Recreational area
<input type="radio"/> Aquaculture	<input type="radio"/> Industrial park	<input type="radio"/> Shipping wharf, dock, or pier
<input type="radio"/> Boat ramp	<input type="radio"/> Jetty or groin	<input type="radio"/> Shore stabilization
<input type="radio"/> Commercial project	<input type="radio"/> Marina	<input type="radio"/> Solid waste disposal
<input type="radio"/> Dam or reservoir	<input type="radio"/> Mining	<input type="radio"/> Stream modification
<input type="radio"/> Dike placement	<input type="radio"/> Mosquito abatement	<input type="radio"/> Tide gate
<input type="radio"/> Drainage ditch	<input type="radio"/> Navigation channel, canal, etc	<input type="radio"/> Utility
<input type="radio"/> Dredge disposal	<input type="radio"/> Oil & gas activities	<input type="radio"/> Well drilling pad
<input type="radio"/> Dredging	<input type="radio"/> Other	<input type="radio"/> Wildlife habitat
<input type="radio"/> Farming activity	<input type="radio"/> Pipeline	
<input type="radio"/> Highway, road, or bridge	<input type="radio"/> Private dock or moorage	
<input type="radio"/> Housing development	<input type="radio"/> Railroad	

Select up to three types of projects that impacted the wetland as a result of the permit.

FUNCTION--Select [1-5]
<input type="radio"/> Active recreation
<input type="radio"/> Consumptive recreation
<input type="radio"/> Flood storage
<input type="radio"/> Food chain support
<input type="radio"/> Ground water modification
<input type="radio"/> Habitat for endangered species
<input type="radio"/> Habitat for fisheries
<input type="radio"/> Habitat for wildlife
<input type="radio"/> Non-consumptive recreation
<input type="radio"/> Nutrient retention and removal
<input type="radio"/> Other
<input type="radio"/> Passive recreation
<input type="radio"/> Sediment trapping
<input type="radio"/> Shoreline stabilization
<input type="radio"/> Uniqueness or rareness

Select up to five functions the wetland performed before it was impacted.

ENDANGERED SPECIES	
1. Scientific name	_____
Common name	_____
2. Scientific name	_____
Common name	_____
3. Scientific name	_____
Common name	_____

If Habitat for endangered species was selected in the previous box, record the scientific and common names of up to three endangered species that were affected by the impact to the wetland.

REPORT INFORMATION	
Title	1 _____
Author's First Initial	2 _____
Middle Initial	2 _____
Last Name	2 _____
Year	3 _____
Source	4 _____
Content	5 _____

Record the . . .

1. title of the principal report listed in the permit record (e.g., mitigation report or Environmental Impact Statement)
2. first initial, middle initial, and last name of the first author
3. year the report was published
4. source where the report can be located
5. content of the report

CONTACT INFORMATION	
First Initial	1 _____
Middle Initial	1 _____
Last Name	1 _____
Organization	2 _____
Address	3 _____
City	3 _____
State	3 _____
Zip	3 _____
Phone ( )	3 _____

Record the . . .

1. first initial, middle initial, and last name of the principal contact for the project

2. organization with which the contact is affiliated
3. address and phone number of the contact's organization

COMMENTS

Record any additional comments pertinent to the permit.

**Compensatory wetland form:**

Permit number <u>    1    </u>
Date permit issued <u>  2  </u> / <u>  </u> / <u>  </u>

Record the . . .

1. permit number
2. date the permit was issued - use the convention:  
 Month/Day/Year - the two-digit month and day and the last two digits  
 of the year, for example, **12/23/87** (for December 23, 1987)  
 (Use 00 for the year 2000)

1 →	Mitigation Bank?	Yes → No →	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">           Name of bank <u>    2    </u>            Money or land? <u>    3    </u>  <b>STOP HERE</b> </div> <div style="width: 45%; text-align: right;"> <b>COMPLETE REST OF FORM</b> </div> </div>
-----	------------------	---------------	--

1. Specify if the compensatory wetland was a mitigation bank by circling Yes or No.
2. Record the name of the mitigation bank.
3. Specify if the mitigation bank was an in-lieu fee program (Money) or a large wetland area created or restored prior to development (Land) - circle the appropriate response.

Mitigation type-- <i>Select [1]</i>
<input type="radio"/> Created <input type="radio"/> Enhanced <input type="radio"/> Preserved <input type="radio"/> Restored

Select the type of compensatory mitigation specified in the permit.



State <u>1</u>	County <u>2</u>	Acres <u>3</u>
State <u>4</u>	County <u>4</u>	Acres <u>5</u>
		TOTAL <u>6</u>
Township & Range <u>7</u>		Section(s) <u>7</u>
Latitude/Longitude <u>8</u>		
USGS/NWI map name <u>9</u>		Scale 1: <u>9</u>
10 →	<div style="border: 1px solid black; padding: 2px;">         Select [1]  <input type="radio"/> Water Body  <input type="radio"/> River Body       </div>	Water/river body name <u>10</u> Specific location <u>11</u>

Record the . . .

1. two-letter abbreviation of the state in which the wetland is located
2. county in which the wetland is located
3. area (in acres) of the wetland in that state and county
4. state abbreviation and/or county name if the wetland lies in more than one state and/or county
5. area (in acres) of the wetland in the second state and/or county
6. total area (in acres) of the compensatory wetland - this area should equal the area entered into 3 + the area entered into 5.
7. township, range, and section of the location of the wetland - use the convention:  
Township and Range **2N4W**      Section(s) **4**
8. latitude and longitude of the location of the wetland - use the convention:  
Latitude **33°07'45"**      Longitude **117°13'30"**
9. U.S. Geological Survey topographic map name or the National Wetlands Inventory map name and scale if one was cited in the permit record
10. type of hydrologic connection (water body or river body) with which the wetland is associated, and list its name
11. specific location of the wetland - be as detailed as possible  
For example, **INTERSECTION OF ZION AVE AND SAN DIEGO RIVER**

<b>Was the mitigation project Off-site or On-site? 1</b>	
<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;"> <b>Land use--Select [1]</b> </div> <div style="padding-left: 20px;"> <input type="radio"/> Agricultural  <input type="radio"/> Commercial  <b>2</b> <input type="radio"/> Industrial  <input type="radio"/> Natural  <input type="radio"/> Residential         </div>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;"> <b>Documents available--Select [0-4]</b> </div> <div style="padding-left: 20px;"> <input type="radio"/> Maps  <b>3</b> <input type="radio"/> Blueprints  <input type="radio"/> Ground photos  <input type="radio"/> Aerial photos         </div>
Date construction began <u>4</u> / <u>  </u> / <u>  </u>	
Date construction completed <u>5</u> / <u>  </u> / <u>  </u>	
Were mid-course corrections made? Yes / No <b>6</b> (Make notes in comments section)	

Specify . . .

1. if the compensatory wetland occurred on the same site as the impacted wetland (On-site) or a different site from the impacted wetland (Off-site) by circling the appropriate response
2. the primary use of the land before the mitigation project was constructed:  
 Agricultural - land used for producing crops and/or livestock (farming)  
 Commercial - land occupied by businesses  
 Industrial - land occupied by manufacturing facilities  
 Natural - undeveloped land  
 Residential - land occupied by housing and/or housing units
3. the documents available in the permit record
4. the date the construction to the compensatory wetland began - refer to comments on date entries at the top of page 13
5. the date the construction to the compensatory wetland was completed - refer to comments on date entries at the top of page 13
6. if adjustments were made to the project once construction was underway

COWARDIN WETLAND TYPE--Select [1-5]				
1	ACRES		ACRES	ACRES
<b>ESTUARINE</b>		<b>RIVERINE</b>		
<input type="radio"/> subtidal aquatic bed	<u>2</u>	<input type="radio"/> tidal aquatic bed		<input type="radio"/> RIVERINE (cont)
<input type="radio"/> subtidal open water		<input type="radio"/> tidal beach/bar		<input type="radio"/> unknown perennial aquatic bed
<input type="radio"/> subtidal reef		<input type="radio"/> tidal emergent		<input type="radio"/> unknown perennial beach/bar
<input type="radio"/> subtidal rock bottom		<input type="radio"/> tidal flat		<input type="radio"/> unknown perennial flat
<input type="radio"/> subtidal unconsolidated bottom		<input type="radio"/> tidal open water		<input type="radio"/> unknown perennial open water
<input type="radio"/> intertidal aquatic bed		<input type="radio"/> tidal rock bottom		<input type="radio"/> unknown perennial rocky bottom
<input type="radio"/> intertidal beach/bar		<input type="radio"/> tidal rocky shore		<input type="radio"/> unknown perennial rocky shore
<input type="radio"/> intertidal emergent		<input type="radio"/> tidal streambed		<input type="radio"/> unknown perennial streambed
<input type="radio"/> intertidal flat		<input type="radio"/> tidal unconsolidated bottom		<input type="radio"/> unknown perennial unconsolidated bottom
<input type="radio"/> intertidal forested		<input type="radio"/> tidal unconsolidated shore		<input type="radio"/> unknown perennial unconsolidated shore
<input type="radio"/> intertidal reef		<input type="radio"/> lower perennial aquatic bed		
<input type="radio"/> intertidal rocky shore		<input type="radio"/> lower perennial beach/bar		<b>PALUSTRINE</b>
<input type="radio"/> intertidal scrub/shrub		<input type="radio"/> lower perennial emergent		<input type="radio"/> aquatic bed
<input type="radio"/> intertidal streambed		<input type="radio"/> lower perennial flat		<input type="radio"/> emergent
<input type="radio"/> intertidal unconsolidated shore		<input type="radio"/> lower perennial open water		<input type="radio"/> flat
		<input type="radio"/> lower perennial rock bottom		<input type="radio"/> forested
<b>LACUSTRINE</b>		<input type="radio"/> lower perennial rocky shore		<input type="radio"/> moss/lichen
<input type="radio"/> limnetic aquatic bed		<input type="radio"/> lower perennial streambed		<input type="radio"/> open water
<input type="radio"/> limnetic open water		<input type="radio"/> lower perennial unconsolidated bottom		<input type="radio"/> rock bottom
<input type="radio"/> limnetic rock bottom		<input type="radio"/> lower perennial unconsolidated shore		<input type="radio"/> scrub/shrub
<input type="radio"/> limnetic unconsolidated bottom		<input type="radio"/> upper perennial aquatic bed		<input type="radio"/> unconsolidated bottom
<input type="radio"/> littoral aquatic bed		<input type="radio"/> upper perennial beach/bar		<input type="radio"/> unconsolidated shore
<input type="radio"/> littoral beach/bar		<input type="radio"/> upper perennial flat		
<input type="radio"/> littoral emergent		<input type="radio"/> upper perennial open water		<b>MARINE</b>
<input type="radio"/> littoral flat		<input type="radio"/> upper perennial rock bottom		<input type="radio"/> subtidal aquatic bed
<input type="radio"/> littoral open water		<input type="radio"/> upper perennial rocky shore		<input type="radio"/> subtidal open water
<input type="radio"/> littoral rock bottom		<input type="radio"/> upper perennial streambed		<input type="radio"/> subtidal reef
<input type="radio"/> littoral rocky shore		<input type="radio"/> upper perennial unconsolidated bottom		<input type="radio"/> subtidal rock bottom
<input type="radio"/> littoral unconsolidated bottom		<input type="radio"/> upper perennial unconsolidated shore		<input type="radio"/> subtidal unconsolidated bottom
<input type="radio"/> littoral unconsolidated shore		<input type="radio"/> intermittent aquatic bed		<input type="radio"/> intertidal aquatic bed
		<input type="radio"/> intermittent beach/bar		<input type="radio"/> intertidal beach/bar
		<input type="radio"/> intermittent flat		<input type="radio"/> intertidal flat
		<input type="radio"/> intermittent open water		<input type="radio"/> intertidal reef
		<input type="radio"/> intermittent rock bottom		<input type="radio"/> intertidal rocky shore
		<input type="radio"/> intermittent rocky shore		<input type="radio"/> intertidal unconsolidated shore
		<input type="radio"/> intermittent streambed		
		<input type="radio"/> intermittent unconsolidated bottom		
				<b>TOTAL AREA</b>
				<u>3</u>

1. Select up to five wetland types that may comprise the compensatory wetland (see Cowardin et al. 1979 for definitions of wetland types).
2. Specify the area (in acres) for each wetland type selected.
3. Record the total area (in acres) for all the wetland types - NOTE: this area should equal the area recorded in the box depicted on page 13, Number 6.

**Continuing on the back of the compensatory wetland form:**

<b>OBJECTIVE--Select [1-3]</b>
<input type="radio"/> 1:1 Functional replacement
<input type="radio"/> Active recreation
<input type="radio"/> Consumptive recreation
<input type="radio"/> Flood storage
<input type="radio"/> Food chain support
<input type="radio"/> Ground water modification
<input type="radio"/> Habitat for endangered species
<input type="radio"/> Habitat for fisheries
<input type="radio"/> Habitat for wildlife
<input type="radio"/> Mosquito abatement
<input type="radio"/> Non-consumptive recreation
<input type="radio"/> Nursery for mitigation plants
<input type="radio"/> Nutrient retention and removal
<input type="radio"/> Other
<input type="radio"/> Passive recreation
<input type="radio"/> Research
<input type="radio"/> Sediment trapping
<input type="radio"/> Shoreline stabilization
<input type="radio"/> Unique systems replacement
<input type="radio"/> Uniqueness or rareness

Select up to three objectives of the compensatory wetland.

<b>ENDANGERED SPECIES</b>	
1	Scientific name _____  Common name _____
2.	Scientific name _____  Common name _____
3.	Scientific name _____  Common name _____

If Habitat for endangered species was selected in the previous box, record the scientific and common names of up to three endangered species for which the compensatory wetland was designed to create habitat.

METHOD--Select [1-3]	
<input type="radio"/> Abalone planting	<input type="radio"/> Other
<input type="radio"/> Channels cut	<input type="radio"/> Planting
<input type="radio"/> Dike breaching	<input type="radio"/> Preservations
<input type="radio"/> Establish proper hydrology	<input type="radio"/> Seeding
<input type="radio"/> Excavation	<input type="radio"/> Soil enhancement
<input type="radio"/> Fencing	<input type="radio"/> Upstream flows
<input type="radio"/> Fill	<input type="radio"/> Wave protection
<input type="radio"/> Grading	
<input type="radio"/> Natural regrowth	

Select up to three construction methods used for the compensatory wetland.

INFORMATION ON MONITORING	
1 Do construction plans exist? Yes / No	
2 Were checks made regularly? Yes / No	2 irregularly? Yes / No
3 Were data collected? Yes / No	

Specify whether or not . . .

1. construction plans, describing the wetland, **as built**, exist
2. post-construction assessments were made of the wetland on a regular or irregular basis
3. data were collected during post-construction visits

ITEMS MONITORED--Select [1-3]	
<input type="radio"/> Animal density	<input type="radio"/> Plant diversity
<input type="radio"/> Animal diversity	<input type="radio"/> Primary production
<input type="radio"/> Animal use	<input type="radio"/> Secondary production
<input type="radio"/> Endangered species	<input type="radio"/> Vegetative cover
<input type="radio"/> Other	<input type="radio"/> Water quality
<input type="radio"/> Physical viability	<input type="radio"/> Water table depth

Select up to three parameters monitored during post-construction visits to the compensatory wetland.

REPORT INFORMATION	
Title	1
Author's First Initial	2 Middle Initial 2 Last Name 2
Year	3 Source 4
Content	5

Record the . . .

1. title of the principal report listed in the permit record (e.g., mitigation report or Environmental Impact Statement)
2. first initial, middle initial, and last name of the first author
3. year the report was published
4. source where the report can be located
5. content of the report

CONTACT INFORMATION			
First Initial	1	Middle Initial	1
Last Name			
1			
Organization			
2			
Address			
3			
City	3	State	3
Zip	3	Phone (    )	3

Record the . . .

1. first initial, middle initial, and last name of the principal contact for the project
2. organization with which the contact is affiliated
3. address and phone number of the contact's organization

COMMENTS

Record any additional comments pertinent to the permit.

**User defined field (UDF) form (see pages 42-43 for information on UDFs):**

DATE FIELDS		
FIELD NAME	DESCRIPTION	DATE
UDF_DATE1	_____	_ / _ / _
UDF_DATE2	_____	_ / _ / _
UDF_DATE3	_____	_ / _ / _



Record up to three dates that you want to track. Remember to specify what each date represents under the DESCRIPTION column.

NUMERIC FIELDS		
FIELD NAME	DESCRIPTION	NUMBER
UDF_NUM1	_____	_____.__
UDF_NUM2	_____	_____.__
UDF_NUM3	_____	_____.__

Record up to three numbers that you want to track. Remember to specify what each number represents under the DESCRIPTION column.

YES OR NO FIELDS		
FIELD NAME	DESCRIPTION	YES OR NO
UDF_YN1	_____	Yes/No
UDF_YN2	_____	Yes/No
UDF_YN3	_____	Yes/No
UDF_YN4	_____	Yes/No

Record information for up to four "yes or no" questions. Remember to record each question under the DESCRIPTION column.

**CHARACTER FIELDS**

FIELD NAME	DESCRIPTION	CHARACTERS
UDF_CHAR1	_____	_____ (5 character maximum)
UDF_CHAR2	_____	_____
UDF_CHAR3	_____	_____ (10 maximum)
UDF_CHAR4	_____	_____
UDF_CHAR5	_____	_____ (30 maximum)
UDF_CHAR6	_____	_____

Record information (in letters or numbers) that you want to track in up to four of the blanks. Remember to specify what the data represents under the DESCRIPTION column.

## **DATA ENTRY**



## ACCESSING THE DATA ENTRY COMPONENT OF THE PTS

After the PTS has been installed on your computer (see page 6), you can access the data entry program two ways: by entering the PTS and accessing the data entry program through the PTS main menu, or by directly accessing the data entry program from the directory containing the PTS.

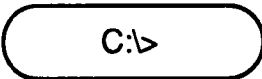

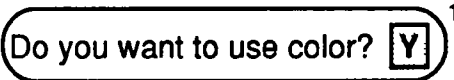
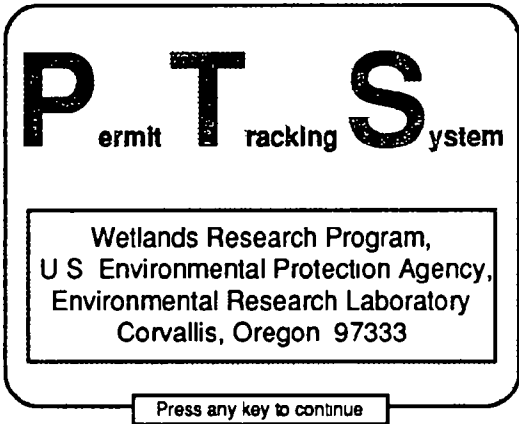
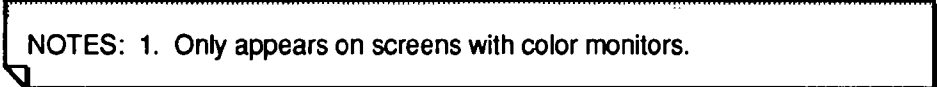
*To access the data entry program from the PTS main menu:*

- 1) Access the PTS
  - ☛ Type **PTS** and press **[Enter]** from the directory containing the PTS.
- 2) Access the data entry program

Data Entry	Summary Check	Field Contents	Query	Table	Print	Exit
Enter permit data						

- ☛ Position the highlighted box over **DATA ENTRY** and press **[Enter]**, OR press **D**.

*To access the data entry program from the directory containing the PTS, follow the directions outlined on the following page.*

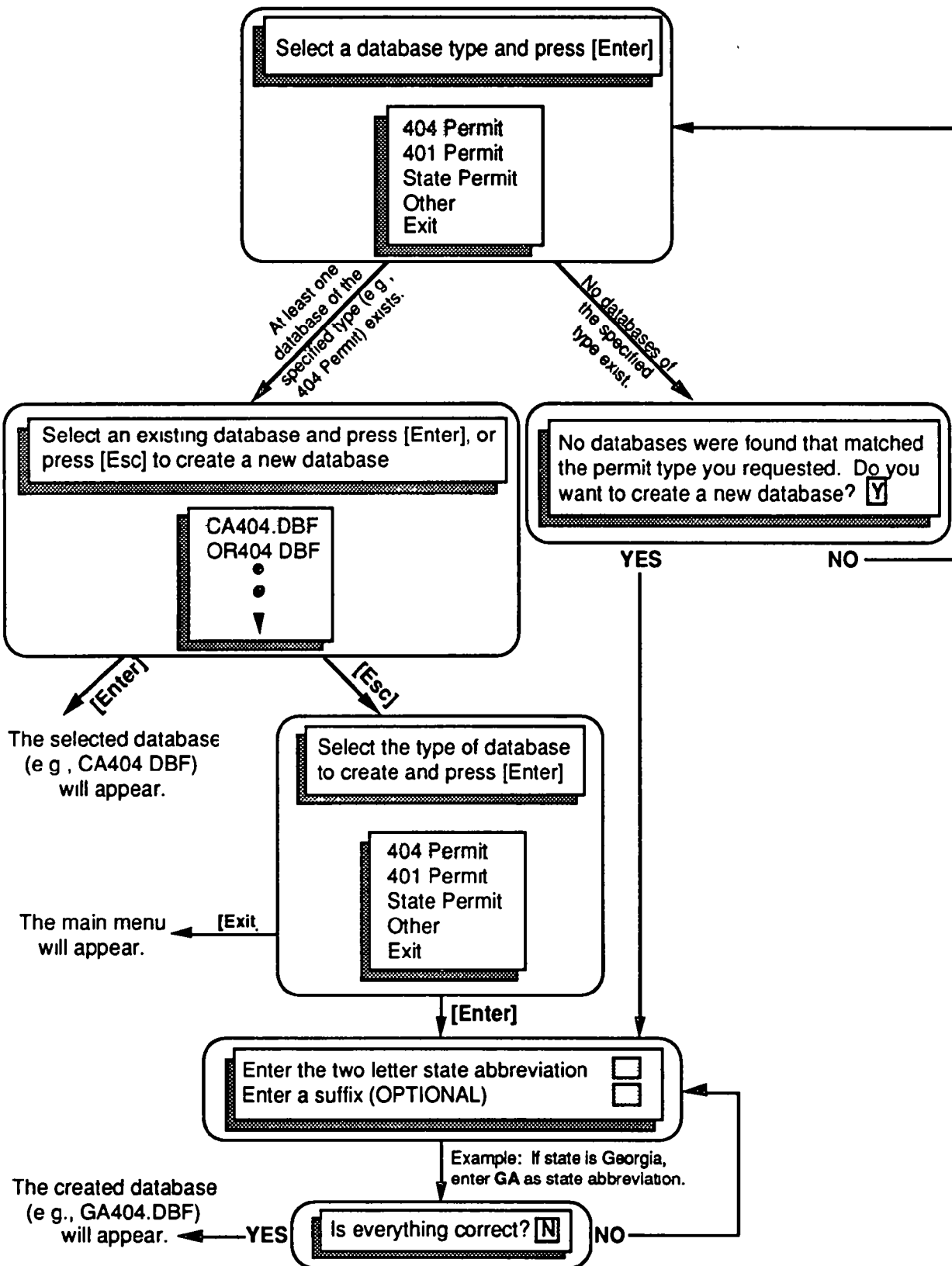
SCREEN	DIRECTION	EXAMPLE
	Access directory containing the PTS	+ Type <b>cd\PTS</b> and press <b>[Enter]</b>
	Access the data entry component of the PTS	+ Type <b>ENTER</b> and press <b>[Enter]</b>
	Answer question	+ Type <b>Y</b> and press <b>[Enter]</b> to use color, otherwise type <b>N</b> and press <b>[Enter]</b>
		+ Press <b>[Enter]</b>
		

Two options are available to you after you have entered the data entry program:

- create a new database and enter data into that database, or
- modify an existing database by adding data, making corrections, or deleting data.

The following flowchart illustrates the options available for creating or selecting a

database in the PTS. Each  represents a different data entry screen.



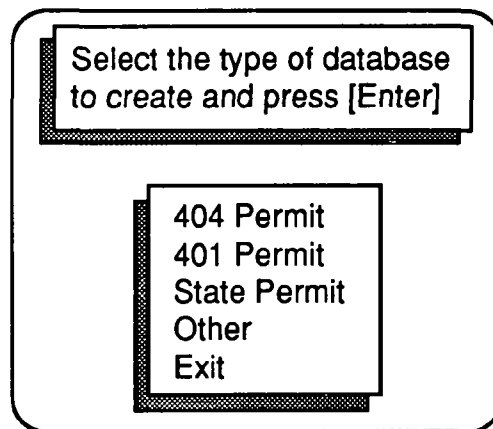
## CREATING NEW DATABASES

### How databases are named in the PTS

A new database should be created for each unit of data you wish to track (for example, the Section 404 permits issued in Oregon). All databases created in the PTS will have a .dbf extension. **DO NOT CHANGE THE .DBF EXTENSION.** It is necessary for both the data entry and the query programs to recognize databases used with the PTS. Furthermore, a suffix will be automatically assigned to each database depending upon which permit system was selected for that database. The four possible suffixes are:

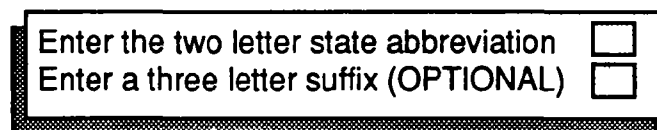
- \_\_\_\_404.dbf      corresponding to Section 404 permits
- \_\_\_\_401.dbf      corresponding to Section 401 permits
- \_\_\_\_ST.dbf      corresponding to state permits
- \_\_\_\_OTH.dbf      corresponding to any other permit systems

This suffix is automatically assigned to the database in response to your choice in the selection box illustrated below.



A screenshot of a software dialog box with a rounded rectangular border. Inside, at the top, is a rectangular instruction box with a drop shadow containing the text "Select the type of database to create and press [Enter]". Below this, centered, is a smaller rectangular box with a drop shadow containing a list of options: "404 Permit", "401 Permit", "State Permit", "Other", and "Exit".

You can further tailor the name for the database by using the options displayed in a box that appears during the start-up to the data entry program.



A screenshot of a software dialog box with a rectangular border. It contains two lines of text, each followed by a small square checkbox. The first line is "Enter the two letter state abbreviation" and the second line is "Enter a three letter suffix (OPTIONAL)".



Using the first option, the second unit in the name of a database created in the PTS becomes the two-letter state abbreviation. In addition, an optional, three-character maximum code can be assigned to the database name. Both of these forms of identification are assigned by you and are then combined with the initial database type (e.g., 404, 401, state, other) to comprise the database name. An example database name divided into its four components is:

OR401ONE.DBF  
└─┘└─┘└─┘└─┘  
1 2 3 4

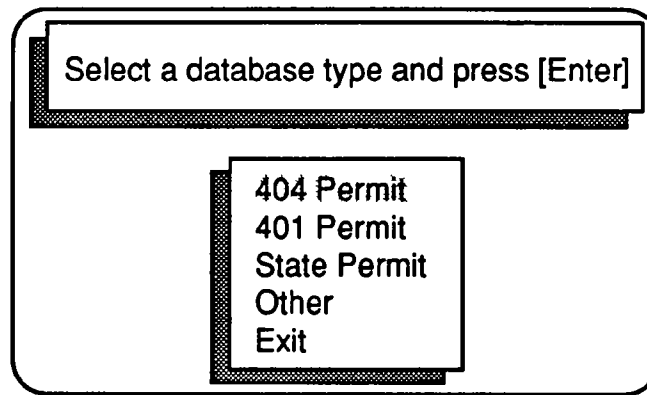
1. The two-letter abbreviation for Oregon
2. The permit type (Section 401 permits)
3. The optional suffix
4. The extension assigned by the PTS

Therefore, possible database names include:

CA404.DBF	for Section 404 permits issued in California
CA404ONE.DBF	for subset ONE of the Section 404 permits issued in California
CA401.DBF	for Section 401 permits issued in California
TXST.DBF	for state permits issued in Texas
TXST1.DBF	for subset 1 of the state permits issued in Texas

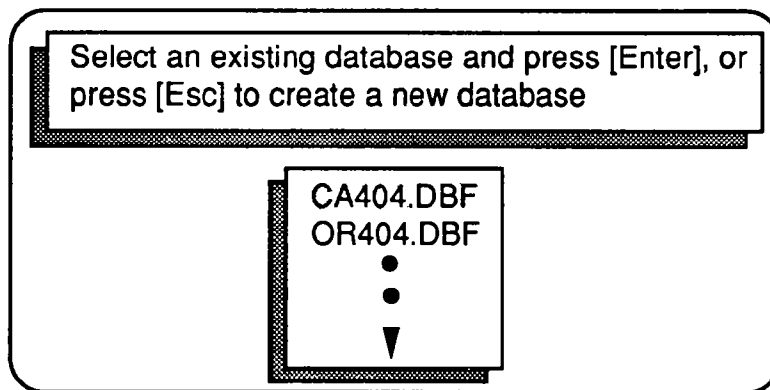
### **Steps to creating a database**

To create a database, follow the steps listed on the follow page in response to the screens illustrated.

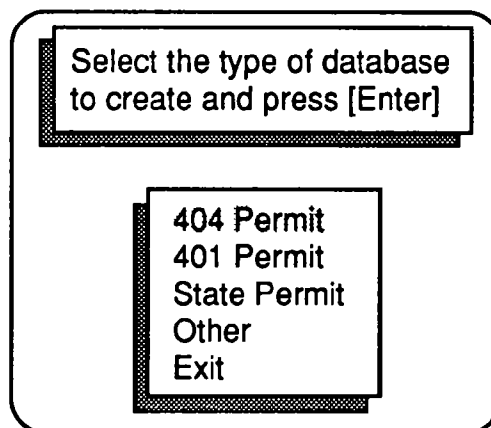


- ☞ Position the highlighted box over the type of permit you want to create the database to track and press **[Enter]**.

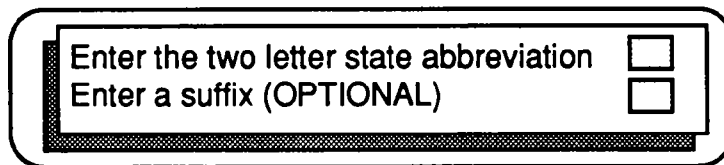
**If at least one database of the specified type exists the following screen will appear that lists the names of all the existing databases of the specified type.**



- ☞ Press **[Esc]**.



- ☞ Position the highlighted box over the permit type for the database you want to create and press **[Enter]**.



Enter the two letter state abbreviation ☐

Enter a suffix (OPTIONAL) ☐

- ☞ Enter the two-letter abbreviation for the state in which the permits were issued.
- ☞ OPTIONAL: Enter a suffix (3 character maximum) if you want to expand the name further for purposes of identification. This is another way to name the database you are creating.

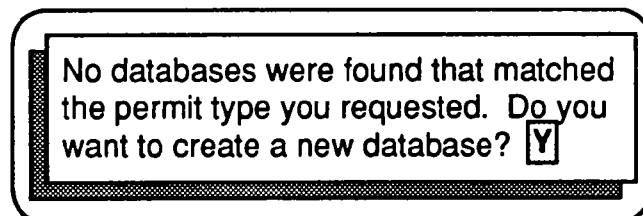


Is everything correct? **N**

- ☞ Enter **Y** and press **[Enter]** if all the information is correct.
- ☞ Enter **N** and press **[Enter]** if you need to correct the information entered above.

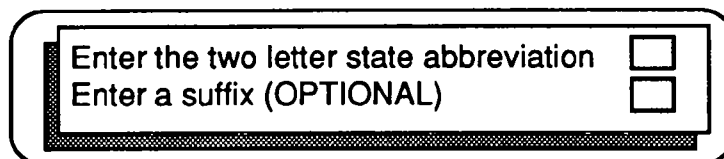
The program will now access the database you created.

**If no databases of the specified type exist the following screens will appear:**



No databases were found that matched the permit type you requested. Do you want to create a new database? **Y**


- ☞ Enter **Y** and press **[Enter]**.



Enter the two letter state abbreviation ☐

Enter a suffix (OPTIONAL) ☐

- ☞ Enter the two-letter abbreviation for the state in which the permits were issued.
- ☞ OPTIONAL: Enter a suffix (3 character maximum) if you want to expand the name further for purposes of identification. This is another way to name the database you are creating.



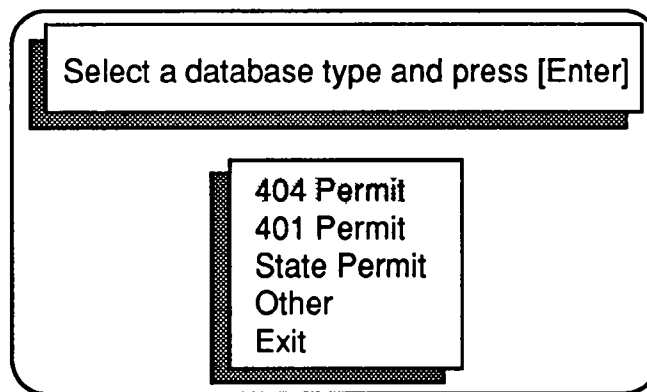
Is everything correct? **N**

- Enter **Y** and press **[Enter]** if all the information is correct.
- Enter **N** and press **[Enter]** if you need to correct the information entered above.

The program will now access the database you created.

## ACCESSING AN EXISTING DATABASE

To access an existing database, follow the steps listed below in response to the screens illustrated.

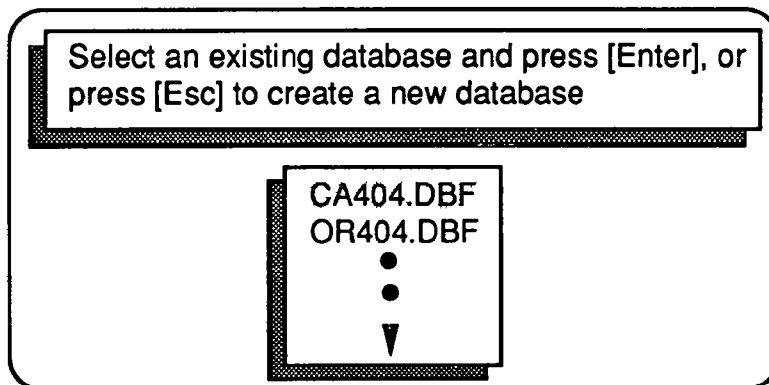


Select a database type and press **[Enter]**

- 404 Permit**
- 401 Permit
- State Permit
- Other
- Exit

- Position the highlighted box over the permit type for the database you want to access and press **[Enter]**.

A list of all the names of existing databases of the specified type will appear.



Select an existing database and press **[Enter]**, or press **[Esc]** to create a new database

- CA404.DBF**
- OR404.DBF
- ⋮
- ▼

- Position the highlighted box over the database to access and press **[Enter]**.

The program will now access the database you specified.

## THE HELP SCREEN

The help screen appears at the top of every screen in the data entry program. It lists the keys that perform certain functions within the data entry program.

[Record no. ==> 1      Status =      ]			
[F2]	=	Search for value	[Ctrl] + [Pg Up] = Previous record
[F3]	=	Find next value	[Ctrl] + [Pg Dn] = Next record
[F7]	=	Delete/restore record	[Ctrl] + [End] = Go to last record
[Pg Up]	=	Previous screen	[Ctrl] + [Home] = Go to first record
[Pg Dn]	=	Next screen	[F10] = Exit the program
[Filename: CA404.DBF]			

Explanations of the functions from the help screen menu of the data entry component of the Permit Tracking System are listed below.

PRESS	IN ORDER TO
[F2]	Search for a specified value in a field.
[F3]	Advance to the next record with the value specified by the F2 function.
[F7]	Delete the entire record from the database. Although the record will still appear on the screen, the record will be deleted when the program is exited. Press F7 again, before exiting the program, to restore the record
[Pg Up]	Shift to the previous screen.
[Pg Dn]	Advance to the next screen
[Ctrl] & [Pg Up] <sup>1</sup>	Shift to the first screen of the preceding record
[Ctrl] & [Pg Dn] <sup>1</sup>	Advance to the first screen of the next record.
[Ctrl] & [End] <sup>1</sup>	Advance to the last record in the database
[Ctrl] & [Home] <sup>1</sup>	Shift to the first record in the database.
[F10]	Exit the data entry program and return to the operating system.

<sup>1</sup>The two keys should be pressed simultaneously for the four functions listing the [Ctrl] key.

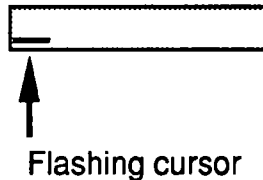
## ENTERING DATA

After you have created a database, you are ready to start entering data. There are two ways to enter information into the PTS--type data into highlighted boxes and select items in scroll boxes. The screens, as they appear in the data entry program, are illustrated in Appendix C.

### Highlighted boxes

Highlighted boxes are the spaces in which you enter information into the database. The table on the next page lists the maximum number of characters or numbers each of the 54 highlighted boxes in the data entry program can contain. Important points about the highlighted boxes are discussed below.

- A flashing cursor will appear at the beginning of the highlighted box to be used.



- All information entered into highlighted boxes is automatically converted to capital letters.
- Once you have entered the maximum number of characters for the highlighted box, the flashing cursor will move to the next box.
- Press **[Enter]** or the **down arrow** to move the cursor to the next box, if the maximum number of characters was not entered into the box.
- Press the **up arrow** to move the cursor to the previous box.
- For those questions that give you a choice of responses you must enter one of the choices in parentheses into the highlighted box. Examples include:

*Impacted wetland? (Y)es/(N)o*  
*Was the mitigation project (OFF)-site or (ON)-site?*  
*(C)reated/(E)nhanced/(P)reserved/(R)estored*

HIGHLIGHTED BOX	MAXIMUM # CHARACTERS
Permit number	15
Date permit issued	6
Impacted wetland?	1
Impacted	1
Created/enhanced/preserved/restored	1
Mitigation bank	1
Bank name	20
Money/land	1
State (2)	2
County (2)	15
Area (2)	6
Township/range	7
Sections	7
Latitude	7
Longitude	8
Map name	20
Map scale	5
Water body type	1
Water body name	20
Specific location	70
Off-site/on-site	3
Land use	1
Maps	1
Blueprints	1
Ground photos	1
Aerial photos	1
Date construction began	6
Date construction completed	6
Mid-course corrections	1
Endangered species-scientific(3)	40
Endangered species-common(3)	40
Report title	50
Author's initials	2
Author's last name	25
Year	4
Source	30
Content	50
Contact's initials	30
Contact's last name	50
Organization	30
Address	20
City	2
State	10
Phone number	13
As-built	1
Check-regular	1
Check-irregular	1
Data collected	1
User defined field-date	6
User defined field-numeric	5
User defined field-yes/no	1
User defined field-character	2@5, 2@10, 2@30

- You can leave most of the highlighted boxes blank, if you do not know the information. The exceptions to this are:

Permit number  
 Date permit issued  
 Impacted wetland? (Y)es/(N)o  
 Mitigation bank? (Y)es/(N)o  
 (I)mpacted (if you answered **Yes** to *Impacted wetland?* (Y)es/(N)o, then there will be an I in the (I)mpacted highlighted box)  
 (C)reated/(E)nhanced/(P)reserved/(R)estored

**You must answer the questions listed above for the program to proceed.**

- Do not enter commas into the area boxes.

WRONG: 1,345 acres  
 RIGHT: 1345 acres

- Do not enter symbols (°, ', ") into the Latitude and Longitude boxes.

WRONG: 117°20'45"  
 RIGHT: 1172045

- The state and/or county entered for the first record can be transferred to following records. A screen similar to the one illustrated below (with the state and county entered for the previous record) will appear after each record.

Press [Spacebar] to change values.  
 Press any other key to continue.

[Press [Enter] to continue.]  
 STATE: OR  
 COUNTY: BENTON

- To change the state and/or county defaults:
  - 1) Press the spacebar,
  - 2) Edit the data,
  - 3) Press [Enter].
  - 4) The next record will appear.
- To keep the state and/or county defaults:
  - 1) Press any key.
  - 2) The next record will appear.



**CAUTION:** If you change your response to *Impacted wetland? (Y)es/(N)o* or *Mitigation bank? (Y)es/(N)o*, all the information previously entered for that record will be deleted.

## Scroll boxes

A scroll box contains a list of items that can be selected for a given category. Six scroll boxes are found in the data entry program. A limited number of items can be selected in each scroll box.

SCROLL BOX	# ITEMS
Cowardin wetland types	5
Project types	3
Functions	5
Objectives	3
Methods	3
Items monitored	3

### *Selecting items in scroll boxes*

- ☛ To select an item in a scroll box, press **[Enter]** over the CODE or the FULLNAME of the item. A check will appear in the SELECTED column if an item has been selected. Use the up and down arrows to position the cursor over the desired CODE or FULLNAME.
- ☛ To deselect an item, press **[Enter]** again over the CODE or the FULLNAME. The check will disappear to signify the item has been deselected.

CODE	FULLNAME	SELECTED
FUNC	1:1 FUNCTIONAL REPLACEMENT	
ACTV	ACTIVE RECREATION	
CONS	CONSUMPTIVE RECREATION	
FLOD	FLOOD STORAGE	
FOOD	FOOD CHAIN SUPPORT	
GRWT	GROUND WATER MODIFICATION	4
ENDS	HABITAT FOR ENDANGERED SPECIES	
FISH	HABITAT FOR FISHERIES	4
WILD	HABITAT FOR WILDLIFE	
NONC	NON-CONSUMPTIVE RECREATION	
NURS	NURSERY FOR MITIGATION PLANTS	

[↓]

An example of the OBJECTIVE scroll box from the data entry program. Ground water modification and Habitat for fisheries are selected in this example.

- After you have selected the desired items in a scroll box, press **[Pg Dn]** (page down) to move to the next screen.

## USER DEFINED FIELDS (UDFs)

The last screen in the data entry program for both impacted and compensatory wetlands contains user defined fields (UDFs). These fields were included so users can tailor the PTS to meet their individual needs. If information you wish to track is not included in the PTS, simply assign the information to one of the appropriate UDFs. For example, if you wanted to track the dates permits expired, you would set UDF\_DATE1 = Date permit expires. Transcribe data for the dates permits expire onto the UDF form (see Appendix A) then enter the data into the data entry component of the PTS. The following table contains information on user defined fields.

# OF FIELDS	TYPE	FIELD NAME	FIELD LENGTH
3	Date	UDF_DATE	6
3	Numeric	UDF_NUM	5
4	Yes or no	UDF_YN	1
2	Character	UDF_CHAR	5
2	Character	UDF_CHAR	10
2	Character	UDF_CHAR	30

## EDITING DATA

### Changing data

To change information previously entered into a database:

- 1) access the appropriate database
- 2) move to the screen with the information to change
- 3) position the cursor in the highlighted box and correct the data, **OR**
- 3) move the cursor to the appropriate scroll box, and select or deselect the item to be corrected
- 4) When you exit the program, the corrections to the database will be saved.

**REMINDER:** If you change your response to *Impacted wetland?* (Y)es/(N)o or *Mitigation bank?* (Y)es/(N)o, all the information previously entered for that record will be deleted.

### Adding data

To add additional permits to an existing database:

- 1) access the appropriate database
- 2) press **[Ctrl]** and **[End]** simultaneously to advance to the last record in the database
- 3) press **[Ctrl]** and **[Pg Dn]** simultaneously to bring up the first data entry screen for the new permit

- 4) enter the information for the new permits

To add information to records in an existing database:

- 1) access the appropriate database
- 2) move to the appropriate record
- 3) move to the screen with the information to add
- 4) add the desired information

## **Deleting data**

To delete an entire record from a database:


- 1) access the appropriate database
- 2) move to the record to delete
- 3) press **[F7]** to delete the record
- 4) the word "DELETED" will appear after Status in the upper right corner of the help screen

[ Record no. ==> 1                      Status = DELETED ]

To delete information from a database:

- 1) access the appropriate database
- 2) move to the screen with the information to delete
- 3) delete the desired information

## **EXITING THE DATA ENTRY PROGRAM**

 Press **F10** then **Y** to exit the data entry program and return to the PTS main menu.

**QUERY**



## ACCESSING THE QUERY COMPONENT OF THE PTS

You can access the query program two ways: enter the PTS and access the query program through the PTS main menu, or directly access the query program from the directory containing the PTS.

*To access the query program from the PTS main menu:*

☞ Type **PTS** and press **[Enter]** from the directory containing the PTS.

Data Entry	Summary Check	Field Contents	Query	Table	Print	Exit
Analyze a database						

☞ Position the highlighted box over **QUERY** and press **[Enter]**, OR press **Q**.

**P**ermit **T**racking **S**ystem

Wetlands Research Program,  
U S Environmental Protection Agency,  
Environmental Research Laboratory  
Corvallis, Oregon 97333

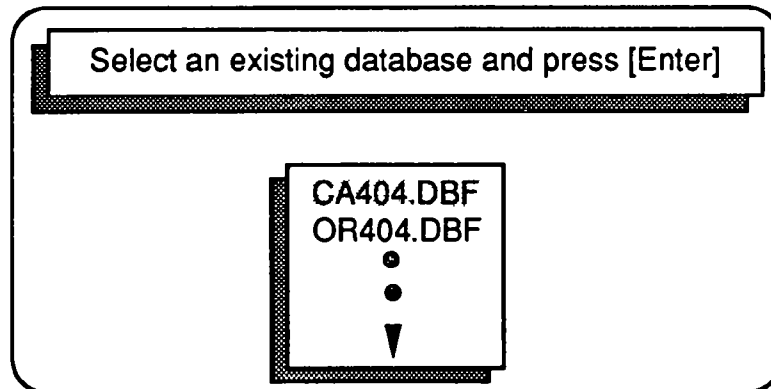
Press any key to continue

☞ Press any key.

Select a database type and press [Enter]

404 Permit  
401 Permit  
State Permit  
Other  
Exit

- ☞ Position the highlighted box over the permit type of the database to query and press **[Enter]**.

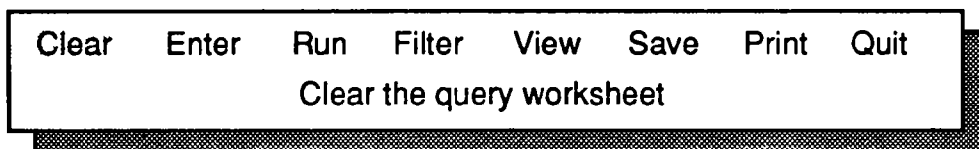


- ☞ Position the highlighted box over the database to query and press **[Enter]**.

The *Creating Look-up Tables* box will appear if look-up tables need to be updated. The section immediately following discusses look-up tables.



The query menu will appear after the *Creating Look-up Tables* box.



*To access the query program from the directory containing the PTS:*

- ☞ Type **QUERY** and press **[Enter]** from the directory containing the PTS and follow the steps listed above.

The query program has eight features. Brief explanations of the features are listed in the following table. The features are also discussed in more detail in the following sections of this manual.



SELECT	IN ORDER TO
Clear	Clear the query worksheet
Enter	Select fields to be used in a query
Run	Process the query
Filter	Remove all totals with counts equal to zero
View	View the results of a query
Save	Save the results to a file
Print	Print the query results
Quit	Exit the query program

## LOOK-UP TABLES

Look-up tables are files used to store all the entries in a database. Every time you change a database in the data entry program, the look-up table will change. The query program automatically updates look-up tables the first time a database is used with the query program and after changes are made to a database. After you have specified the database to be used with the query program, the box shown below will appear if the look-up table needs to be updated. If the database was not altered and was the last database used with the query program, the box will not appear. The process of creating look-up tables takes from 30 seconds to several minutes depending on the size of the database and the speed of your computer.

Creating Look-up Tables

## THE MENU OPTIONS

Clear

Clear   Enter   Run   Filter   View   Save   Print   Quit  
Clear the query worksheet

☛ Position the highlighted box over **CLEAR** and press **[Enter]**, OR press **C**.

This option will clear the specifications for the query previously processed. Clear the query worksheet before you begin the query process or before you enter a series of similar queries.

## Enter

Clear	Enter	Run	Filter	View	Save	Print	Quit
Select fields to be used in a query							

☛ Position the highlighted box over **ENTER** and press **[Enter]**, OR press **E**.

A table containing all the field names followed by short descriptions will appear (see the following figure). Use this table to complete the first step in the query process--selecting the fields for a query (see Appendix E for descriptions of field names).

### Choosing fields to make up a query

SELECTED	QRY_FIELD
F	PERMIT : Permit number
F	DATE_ISS : Date permit was issued
F	I : Impacted wetland?
F	CASE : Type of compensatory mitigation
F	COMP_MIT : Permits requiring compensatory mitigation
F	MIT_BANK : Mitigation bank?
F	BANK_NAME : Name of mitigation bank
F	MONEY_LAND : Mitigation bank involved money or land?
F	STATE : State in which wetland is located
F	COUNTY : County in which wetland is located
F	AREA : Total area of the wetland
F	TOWN_RANG : Township and range
F	SECTIONS : Sections
F	LAT_LONG : Latitude and longitude
F	MAPNAME : USGS or NWI map name
F	SCALE : Scale of map

[↓] [⇒]

**Press [Enter] to select/deselect the fields to be used THEN  
Press [Esc] to continue.**

QRY\_FIELD stands for query field name.

- ☛ Use the up and down arrow keys to position the highlighted box over the field name (under the QRY\_FIELD column) or the corresponding F (under the SELECTED column) and press **[Enter]** to select a field to be used for a query. The F corresponding to that field will change to a T indicating the field has been selected.
- ☛ Press **[Enter]** again over the field name or the corresponding T to deselect a field. The T will change to a F indicating the field has been deselected.

For example, if you wanted to answer the question, "What project types were listed as impacting the most wetlands?", you would select the CASE and PROJECT fields for that query.

**NOTE:** We suggest that no more than five fields are used for each query, since it is difficult to make sense of the results from overly complex queries.

☛ After you have selected the fields to be used in a query, press **[Esc]** to continue.

The next table that appears allows you to refine the query specifications. This query worksheet displays the fields selected for the query.

CASE_TF	CASE	PROJECT_TF	PROJECT
F		F	
F	CREATED	F	AIRPORT
F	ENHANCED	F	AQUACULTURE
F	IMPACTED	F	BOAT RAMP
F	PRESERVED	F	COMMERCIAL PROJECT
F	RESTORED	F	DAM OR RESERVOIR
F		F	DIKE PLACEMENT
F		F	DRAINAGE DITCH
F		F	DREDGE DISPOSAL
F		F	DREDGING

[↓] [⇒]

Press [Enter] to select/deselect items. Press [Enter] over the empty box in the 1st row to select ALL the items in that column. Press [Esc] to continue.

The CASE and PROJECT fields are selected for the query illustrated in the query worksheet above.

### *Multiple queries*

The following sections on Multiple and Exact queries are probably the most confusing sections in this manual. However, It is **extremely** important that you understand these sections, so that you understand the results generated by the query.

Several fields have the word MULTIPLE following the field description (for example, the WET\_TYPE, PROJECT, and FUNCTION fields shown below).

SELECTED QRY_FIELD	
F	WET_TYPE : Wetland type (MULTIPLE)
F	WA : Area of each wetland type
F	PROJECT : Project types (MULTIPLE)
F	FUNCTION : Functions of the impacted wetland (MULTIPLE)

These are the fields that also appeared in the scroll boxes in the data entry program. Recall that you can select more than one item for the fields in the scroll boxes. For example, since you select PROJECTS in a scroll box in the data entry program, the PROJECT field name is followed by the word MULTIPLE in the query program. A list of the fields that are followed by the word MULTIPLE in the query program (or those that appeared in scroll boxes in the data entry program) and the number of items that can be selected in each field appears below.

SCROLL BOXES	# ITEMS
Cowardin wetland types	5
Project types	3
Functions	5
Objectives	3
Methods	3
Items monitored	3

If you select one of the fields listed above for use in a query the following box will appear.

MULTIPLE? N

This box is asking if you want to process a multiple query. Multiple queries generate and query for all the different **combinations** of entries in that field. For example, if three objectives, ENDS (Habitat for endangered species), FOOD (Food chain support), and WILD (Habitat for wildlife), were entered in the Objective field in a database, a multiple query would query for the seven possibilities listed in the first column of the table illustrated below and provide a tally for each.

A regular query (not multiple) queries for the occurrence of only **one** objective. Using the example listed above, a regular query would search for the occurrence of the three objectives listed in the second column of the table illustrated below and provide a tally of the number of times it was listed as an objective for a project, whether by itself or in combination with other objectives.

MULTIPLE QUERY	REGULAR QUERY
ENDS	ENDS
FOOD	FOOD
WILD	WILD
ENDS, FOOD	
ENDS, WILD	
FOOD, WILD	
ENDS, FOOD, WILD	

**NOTE:** The order in which the codes are listed does not matter (e.g., ENDS, FOOD is the same as FOOD, ENDS).

The search for ENDS in a multiple query will count all the records that have ENDS listed as an objective. The record does not have to contain ENDS only. For example, if Permit A had two objectives, ENDS and FOOD, the permit would be

counted for three different cases in the multiple query: 1) ENDS 2) FOOD 3) ENDS, FOOD.

The following figure illustrates how the three permits (with the objectives stated below) would be counted under the various cases of a multiple query and a regular query. YES indicates the permit would be counted for that query combination, and NO indicates the permit would not be counted for that combination of objectives.

**OBJECTIVES**

Permit 1            ENDS  
 Permit 2            ENDS, FOOD  
 Permit 3            WILD, ENDS, FOOD

MULTIPLE QUERY	Objectives listed in permit		
	Permit 1 ENDS	Permit 2 ENDS, FOOD	Permit 3 WILD, ENDS, FOOD
ENDS	YES	YES	YES
FOOD	NO	YES	YES
WILD	NO	NO	YES
ENDS, FOOD	NO	YES	YES
ENDS, WILD	NO	NO	YES
FOOD, WILD	NO	NO	YES
ENDS, FOOD, WILD	NO	NO	YES

REGULAR QUERY	Objectives listed in permit		
	Permit 1 ENDS	Permit 2 ENDS, FOOD	Permit 3 WILD, ENDS, FOOD
ENDS	YES	YES	YES
FOOD	NO	YES	YES
WILD	NO	NO	YES

Note that for both multiple and regular queries, the record (permit or wetland) has to contain the combination of codes requested in the search, but can contain additional

codes. For example, Permit 2 (with ENDS, FOOD as objectives) was counted for the search for ENDS for both multiple and regular queries, even though FOOD was also listed as an objective for the permit. Recall that the order in which the codes occur does not matter (e.g., Permit 3 listed WILD, ENDS, FOOD as objectives but was counted for the search for ENDS, FOOD, WILD for the multiple query).

Use a multiple query to calculate the number of times various **combinations** of objectives, functions, wetland types, etc. are listed in the database. For example, a multiple query would be used if you wanted to determine how many palustrine emergent-palustrine open water wetland complexes were impacted as a result of permitting. Use a regular query to calculate the number of times **one** specific objective, function, wetland type, etc. is listed in the database. For example, a regular query would be used if you wanted to determine how many times palustrine emergent marshes were impacted.

For both multiple and regular queries, the total for the query can be greater than the number of records (permits or wetlands). In the example above, Permit 3 would be counted seven times for the multiple query and three times for the regular query.

After you have selected a field that is followed by the word MULTIPLE, the following box will appear.

MULTIPLE? N
-------------

- ☞ Press **Y** and **[Enter]** to perform a multiple query.
- ☞ Press **N** and **[Enter]** to perform a regular query.

**NOTE:** Only one field can be designated as MULTIPLE for each query.



If you answer **Yes** in the **MULTIPLE** query box, you will have the additional option to perform an exact query.

**NOTE:** Both multiple and exact queries require additional processing time. It can take up to several hours to generate totals for a multiple or an exact query.

### *Exact queries*

Exact queries only count records that **exactly** match the combination requested for that query. You will probably want to perform exact queries in most cases. Exact queries produce totals that equal the number of records in a database, since each permit or wetland will be counted only one time. Using the example above (see page 55), each of the three permits would be counted only one time in an exact query as illustrated below.

EXACT QUERY	Objectives listed in permit		
	Permit 1 ENDS	Permit 2 ENDS, FOOD	Permit 3 WILD, ENDS, FOOD
ENDS	YES	NO	NO
ENDS, FOOD	NO	YES	NO
ENDS, FOOD, WILD	NO	NO	YES

**NOTE:** Again, the order in which the codes are listed does not matter (i.e., Permit 3 with WILD, ENDS, FOOD as objectives was counted for the exact query for ENDS, FOOD, WILD).

After you have answered the question in the **MULTIPLE** box, the following box will appear.

EXACT? N

- Press **Y** and **[Enter]** to perform an exact query.
- Press **N** and **[Enter]** to perform a multiple query.

**REMEMBER:** Although the preceding sections are rather complicated, it is very important that you understand the difference between regular, multiple, and exact queries.

The following examples are presented to help clarify the differences between the three types of queries.

**EXAMPLE 1:** *Two permits are in a database, each permit lists the following Project types:*

	<u>PROJECT TYPES</u>
Permit 1	DOCK, RAMP, ROAD
Permit 2	RECR, SMOD, STAB

DOCK = Private dock or moorage

RAMP = Boat ramp

ROAD = Highway, road, or bridge

RECR = Recreational area

SMOD = Stream modification

STAB = Shore stabilization

**If a regular query was performed, the permits would be counted one time for each of the following cases.**

**REGULAR QUERY**

PROJECT TYPES	FREQUENCY
DOCK	1
RAMP	1
RECR	1
ROAD	1
SMOD	1
STAB	1

Since DOCK was listed one time in Permit 1, the permit was counted one time for the case when Project type = DOCK. Remember that regular queries count the number of times **one** entry (e.g., DOCK) is listed in a database.

**If a multiple query was performed, the permits would be counted one time for each of the following cases.**

**MULTIPLE QUERY**

PROJECT TYPES	FREQUENCY
DOCK	1
RAMP	1
RECR	1
ROAD	1
SMOD	1
STAB	1
DOCK, RAMP	1
DOCK, ROAD	1
RAMP, ROAD	1
RECR, SMOD	1
RECR, STAB	1
SMOD, STAB	1
DOCK, RAMP, ROAD	1
RECR, SMOD, STAB	1

Each of the combinations listed above occurs in the database containing Permit 1 and Permit 2. For example, the combination DOCK, ROAD can be found in Permit 1. Notice, however, that the combination DOCK, RECR is not listed above, since that

combination of project types does not occur in either Permit 1 or Permit 2. Remember that multiple queries count the number of times specific **combinations** of entries (e.g., SMOD, STAB) occur in a database.

**If an exact query was performed, the permits would be counted one time for each of the following cases.**

<b>EXACT QUERY</b>	
<b>PROJECT TYPES</b>	<b>FREQUENCY</b>
DOCK, RAMP, ROAD	1
RECR, SMOD, STAB	1

Exact queries only count records that **exactly** match the combination of entries for the exact query.

**EXAMPLE 2:**     *Four permits are in a database, each permit lists the following Objectives:*

	<u><b>OBJECTIVES</b></u>
Permit 1	ENDS
Permit 2	WILD
Permit 3	ENDS, FOOD
Permit 4	ENDS, FOOD, WILD

The number of times the permits would be counted for the possible cases for each of the three types of queries is listed on the next page.

REGULAR		MULTIPLE		EXACT	
ENDS	3	ENDS	3	ENDS	1
FOOD	2	FOOD	2	WILD	1
WILD	2	WILD	2	ENDS, FOOD	1
		ENDS, FOOD	2	ENDS, FOOD, WILD	1
		ENDS, WILD	1		
		FOOD, WILD	1		
		ENDS, FOOD, WILD	1		

The Multiple query for ENDS is the same as the Regular query for ENDS, but is **not** the same as the Exact query for ENDS.

#### *Moving around the query worksheet*

The following table contains a list of keys used for moving around the query worksheet.

PRESS	IN ORDER TO
[↑]	Move the highlighted box up one row.
[↓]	Move the highlighted box down one row.
[⇒]	Move the highlighted box to the right one column.
[⇐]	Move the highlighted box to the left one column.
[PgUp]	Move the highlighted box up 14 lines.
[PgDn]	Move the highlighted box down 14 lines.
[Home]	Move the highlighted box to the first field on the screen.
[End]	Move the highlighted box to the last field on the screen.
[Ctrl] & [PgUp] <sup>1</sup>	Move the highlighted box to the top of the query worksheet.
[Ctrl] & [PgDn] <sup>1</sup>	Move the highlighted box to the bottom of the query worksheet.
[Ctrl] & [Home] <sup>1</sup>	Move the highlighted box to the first field of the query worksheet.
[Ctrl] & [End] <sup>1</sup>	Move the highlighted box to the last field of the query worksheet.

---

<sup>1</sup>The two keys should be pressed simultaneously for the four functions listing the [Ctrl] key.

### *Yes/No and range fields*

There are two ways to enter specifications for queries in the query worksheet: select items in True/False (T/F) fields and enter upper and lower limits in Range fields. There are 46 T/F fields and 7 Range fields in the PTS. T/F fields are used for selecting individual items or all the items in a field to the right of the T/F column. Range fields are used to specify the lower and upper limits for fields. The range encompasses all values greater than the lower limit and less than or equal to the upper limit. Both lower and upper limits must be specified for all range fields. Tables listing the range and T/F fields used in the PTS are illustrated on the next page.

**Range fields:**

FIELD NAME	RANGE FIELDS	
	LOW	HIGH
DATE_ISS (date permit issued)	DATE_ISS_L	DATE_ISS_H
AREA (total project area)	AREA_L	AREA_H
SCALE (scale of NWI/USGS map)	SCALE_L	SCALE_H
DATE_BEGAN (date construction began)	DATE_BEG_L	DATE_BEG_H
DATE_COMP (date construction completed)	DATE_COM_L	DATE_COM_H
WA (area of a specific wetland type)	WA_L	WA_H
YEAR (year permit was issued)	YEAR_L	YEAR_H
UDF_DATE (user defined field-date)	UDF_DAT_L	UDF_DAT_H
UDF_NUM (user defined field-numenc)	UDF_NUM_L	UDF_NUM_H

DATE\_ISS\_L stands for the low limit of the range for the DATE\_ISS field.

DATE\_ISS\_H stands for the high limit of the range for the DATE\_ISS field.

**T/F fields:**

FIELD NAME	CORRESPONDING T/F FIELD
PERMIT	PERMIT_TF
I	I_TF
CASE	CASE_TF
COMP_MIT	COMPMIT_TF
MIT_BANK	MI_BANK_TF
BANK_NAME	BANKNAM_TF
MONEY_LAND	ML_TF
STATE	STATE_TF
COUNTY	COUNTY_TF
TOWN_RANG	TOWN_TF
SECTIONS	SECTION_TF
LAT_LONG	LATLONG_TF
MAPNAME	MAPNAME_TF
BODYTYPE	BODTYPE_TF
BODYNAME	BODNAME_TF
LOCATION	LOCAT_TF
OFF_ON	OFF_ON_TF
LAND_USE	LANDUSE_TF
MAPS	MAPS_TF
BLUEPRINTS	BLUE_TF
GRND_PHOTO	GRND_TF
AIR_PHOTO	AIR_TF
CORRECTION	CORRECT_TF
WET_TYPE	WET_TYPE_TF
PROJECT	PROJECT_TF
FUNCTION	FUNC_TF
OBJECTIVE	OBJECT_TF
METHOD	METHOD_TF
ENDSP_SCI	END_SCI_TF
ENDSP_COM	END_COM_TF
TITLE	TITLE_TF
AUTHOR	AUTHOR_TF
SOURCE	SOURCE_TF
CONTENT	CONTENT_TF
CONTACT	CONTACT_TF
ORGANIZA	ORGANIZ_TF
ADDRESS	ADDRESS_TF
CITY	CITY_TF
ST	ST_TF
ZIP	ZIP_TF
PHONE	PHONE_TF
AS_BUILT	AS_BLT_TF
CHECK_REG	CHK_REG_TF
CHECK_IREG	CHK_IRG_TF
DATA_COLL	DAT_COL_TF
MONITOR	MONITOR_TF
UDF_YN	UDF_YN_TF
UDF_CHAR	UDF_CHAR_TF

See Appendix E for descriptions of field names.



An example of a T/F field using the PROJECT field is illustrated below.

PROJECT_TF	PROJECT
F	
F	AIRPORT
T	AQUACULTURE
F	BOAT RAMP
F	COMMERCIAL PROJECT
F	DAM OR RESERVOIR
F	DIKE PLACEMENT
T	DRAINAGE DITCH
F	DREDGE DISPOSAL

AQUACULTURE and DRAINAGE DITCH are selected in this example.

- ☛ To select an item for a query, position the highlighted box over the item or the corresponding F to the left of the item and press **[Enter]**. The F will change to T to indicate the item has been selected.

PROJECT_TF	PROJECT
T	
F	AIRPORT
F	AQUACULTURE
F	BOAT RAMP
F	COMMERCIAL PROJECT
F	DAM OR RESERVOIR
F	DIKE PLACEMENT
F	DRAINAGE DITCH
F	DREDGE DISPOSAL

The entire Project field is selected in this example.

- ☛ To select all the items in a field, position the highlighted box over the empty space in the first row or the corresponding F and press **[Enter]**. The F will change to T to indicate the entire field has been selected.

- ☛ To deselect an item or an entire field, position the highlighted box over the T or the item and press **[Enter]**. The corresponding T will change to F to indicate the item or field has been deselected.

An example of a Range field using the AREA field is illustrated below.

If you selected the AREA field from the list of field names, the following query worksheet will appear.

AREA_L	AREA_H
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0
0.0	0.0

Note that the AREA range fields contain all 0.0's. You must enter the ranges for the query you want to perform.

For example, if you wanted to determine wetland size in five acre increments, you would enter the following area values in the query worksheet.

AREA_L	AREA_H
0.0	5.0
5.0	10.0
10.0	15.0
15.0	20.0
20.0	25.0

- ☛ To enter data into range fields, position the highlighted box over the appropriate 0.0's and enter the value for the upper and lower limits and press **[Enter]**.

Wetlands that are the following areas would be counted in the ranges listed above.

---

AREA_L	AREA_H	ACCEPTABLE WETLAND AREA
0.0	5.0	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, . . . 5.0
5.0	10.0	5.1, 5.2, 5.3, 5.4, 5.5, 5.6, . . . 10.0
10.0	15.0	10.1, 10.2, 10.3, 10.4, 10.5, 10.6, . . . 15.0
15.0	20.0	15.1, 15.2, 15.3, 15.4, 15.5, 15.6, . . . 20.0
20.0	25.0	20.1, 20.2, 20.3, 20.4, 20.5, 20.6, . . . 25.0

---

Therefore, if  $AREA\_L < X \leq AREA\_H$ , X will be counted in that range.

To include areas equal to 0.0, enter -1.0 as the lower limit of the range.

Another example of a Range field using the DATE\_ISS field (the date the permit was issued) is illustrated below.

DATE_ISS_L	DATE_ISS_H
12/31/80	12/31/81
12/31/81	12/31/82
12/31/82	12/31/83
12/31/83	12/31/84
12/31/84	12/31/85

The permits issued on the following dates would be counted in the ranges listed above.

DATEISS_L	DATEISS_H	ACCEPTABLE DATES
12/31/80	12/31/81	1/1/81 through 12/31/81
12/31/81	12/31/82	1/1/82 through 12/31/82
12/31/82	12/31/83	1/1/83 through 12/31/83
12/31/83	12/31/84	1/1/84 through 12/31/84
12/31/84	12/31/85	1/1/85 through 12/31/85

- ☛ After you have entered the specifications for the query, press **[Esc]** to return to the PTS main menu.

## Run

The next step in the query program is to process the query. The query will generate the frequency and area (in acres and hectares) totals for each question entered into the PTS.

Clear	Enter	Run	Filter	View	Save	Print	Quit
Process the query							

- ☛ Position the highlighted box over **RUN** and press **[Enter]**, OR press **R**.

You will then be asked to answer three questions about the query.

Query the database by permit? (Y)es/(N)o	N
Generate a detail file? (Y)es/(N)o	N
Process the query? (Y)es/(N)o	N

### *Querying by permit versus querying by wetland*

There are two ways by which a query can be processed: by permit and by wetland. A query processed by permit counts all the permits that meet the query specifications. For example, you should query by permit to determine the number of permits that were issued in 1987. A query processed by wetland counts all the wetlands that meet the query specifications. For example, you should query the database by wetland to determine the number of palustrine forested wetlands that were impacted by permitting. Since more than one wetland can be affected by a single permit, a query processed by wetland may have totals that exceed the number of permits in a database.

Query the database by permit? (Y)es/(N)o    N

- ☞ Enter **Y** and press **[Enter]** to process the database by permit.
- ☞ Enter **N** and press **[Enter]** to process the database by wetland.

### *Generating a detail file*

The detail file contains all the information in the database for the records that meet the query specifications. For example, if the query was to calculate the number of permits issued in each county, you will only see information pertaining to the query (i.e., county, frequency, and area) when you view the results without having produced a detail file. If a detail file was generated, all the information for each record that met the query specifications would appear when you view the results. Most of the time you will **not** want to generate detail files, as this greatly increases the amount of information to view. Generating detail files also increases the time required to

process the query. However, if information, other than the results of the query, is desired, you should generate a detail file.

Generate a detail file? (Y)es/(N)o **N**

- ☛ Enter **Y** and press **[Enter]** to generate a detail file.
- ☛ Enter **N** and press **[Enter]** to not generate a detail file.

### *Processing the query*

Process the query? (Y)es/(N)o **N**

- ☛ Enter **Y** and press **[Enter]** to process the query as entered previously.
- ☛ Enter **N** and press **[Enter]** to change the query specifications.

### **Filter**

After the query has been processed, the results can be *filtered* to remove all the totals that equal zero. For example, the results of a query generated to calculate the number and type of permits issued in each county might be similar to the one depicted below.

CASE	COUNTY	COUNT	ACRES	HECTARES
C	HUMBOLDT	0	0.0	0.0
C	MONTEREY	0	0.0	0.0
C	ORANGE	1	1.0	0.4
C	SAN DIEGO	2	5.7	2.3
C	SAN FRANCISCO	0	0.0	0.0
E	HUMBOLDT	0	0.0	0.0
E	MONTEREY	0	0.0	0.0
E	ORANGE	2	7.0	2.8
E	SAN DIEGO	4	34.9	14.1
E	SAN FRANCISCO	0	0.0	0.0
I	HUMBOLDT	0	0.0	0.0
I	MONTEREY	1	1.0	0.4
I	ORANGE	0	0.0	0.0
I	SAN DIEGO	0	0.0	0.0
I	SAN FRANCISCO	0	0.0	0.0
P	HUMBOLDT	0	0.0	0.0
P	MONTEREY	0	0.0	0.0
P	ORANGE	2	10.0	4.0
P	SAN DIEGO	1	2.4	1.0
P	SAN FRANCISCO	1	1.0	0.4
R	HUMBOLDT	1	1.0	0.4
R	MONTEREY	0	0.0	0.0
R	ORANGE	0	0.0	0.0
R	SAN DIEGO	0	0.0	0.0
R	SAN FRANCISCO	2	14.5	5.9

If the results were filtered, they would be shortened to the version illustrated on the next page.

CASE	COUNTY	COUNT	ACRES	HECTARES
C	ORANGE	1	1.0	0.4
C	SAN DIEGO	2	5.7	2.3
E	ORANGE	2	7.0	2.8
E	SAN DIEGO	4	34.9	14.1
I	MONTEREY	1	1.0	0.4
P	ORANGE	2	10.0	4.0
P	SAN DIEGO	1	2.4	1.0
P	SAN FRANCISCO	1	1.0	0.4
R	HUMBOLDT	1	1.0	0.4
R	SAN FRANCISCO	2	14.5	5.9

The primary advantage to filtering the results is that it simplifies the amount of information you have to view.

Clear	Enter	Run	Filter	View	Save	Print	Quit
Remove all totals with counts equal to zero							

 Position the highlighted box over **FILTER** and press **[Enter]**, OR press **F** to filter the results.

## View

The results of the query will be displayed in a results worksheet. An example of a results worksheet is illustrated on the next page.



CASE	COUNTY	COUNT	ACRES	HECTARES
C	ORANGE	1	1.0	0.4
C	SAN DIEGO	2	5.7	2.3
E	ORANGE	2	7.0	2.8
E	SAN DIEGO	4	34.9	14.1
I	MONTEREY	1	1.0	0.4
P	ORANGE	2	10.0	4.0
P	SAN DIEGO	1	2.4	1.0
P	SAN FRANCISCO	1	1.0	0.4
R	HUMBOLDT	1	1.0	0.4
R	SAN FRANCISCO	2	14.5	5.9

[↓] [⇒]

Press [Esc] to return to the main menu.

Clear	Enter	Run	Filter	View	Save	Print	Quit			
View the results of a query										
<table border="1"> <tr> <td>Totals</td> </tr> <tr> <td>Details</td> </tr> <tr> <td>Exit</td> </tr> </table>								Totals	Details	Exit
Totals										
Details										
Exit										

☛ Position the highlighted box over **VIEW** and press [Enter], OR press **V**.

THEN...

☛ Position the highlighted box over **TOTALS** and press [Enter], OR press **T** and press [Enter] to view the results worksheet for the query.

OR...

☛ Position the highlighted box over **DETAILS** and press [Enter], OR press **D** and press [Enter] to view the detail file (a detail file must have been requested prior to processing the query).

OR...

- ☛ Position the highlighted box over **EXIT** and press **[Enter]**, OR press **E** and press **[Enter]** to return to the query main menu.

### *Moving around the results worksheet*

It is unlikely that all of the query results will be displayed on the computer monitor at one time. To view the entire results worksheet, use the keys listed in the following table to move around.

PRESS	IN ORDER TO
[↑]	Move the highlighted box up one row.
[↓]	Move the highlighted box down one row.
[⇒]	Move the highlighted box to the right one column.
[⇐]	Move the highlighted box to the left one column.
[PgUp]	Move the highlighted box up 14 lines.
[PgDn]	Move the highlighted box down 14 lines.
[Home]	Move the highlighted box to the first field on the screen.
[End]	Move the highlighted box to the last field on the screen.
[Ctrl] & [PgUp] <sup>1</sup>	Move the highlighted box to the top of the results worksheet.
[Ctrl] & [PgDn] <sup>1</sup>	Move the highlighted box to the bottom of the results worksheet.
[Ctrl] & [Home] <sup>1</sup>	Move the highlighted box to the first field of the results worksheet.
[Ctrl] & [End] <sup>1</sup>	Move the highlighted box to the last field of the results worksheet.

<sup>1</sup>The two keys should be pressed simultaneously for the four functions listing the [Ctrl] key.

**NOTE:** If you query the database by permit, a field named LASTPERMIT will appear when you view the results. The "last permit" is simply the permit number of the last permit in the database that was counted for the query.

- ☛ After you have viewed the query results, press **[Esc]** to return to the query main menu.

## Save

You must save the query results if you want to generate tables (by using the TABLE option from the PTS main menu).

Clear	Enter	Run	Filter	View	Save	Print	Quit
Save the results to a file							
						Totals Exit	

- ☛ Position the highlighted box over **SAVE** and press **[Enter]**, OR press **S**.

THEN...

- ☛ Position the highlighted box over **TOTALS** and press **[Enter]**, OR press **T** and press **[Enter]** to save the results worksheet.

OR...

- ☛ Position the highlighted box over **EXIT** and press **[Enter]**, OR press **E** and press **[Enter]** to return to the query main menu.

If you are saving query totals, the following box will appear.

Enter a description for this file: _____
--

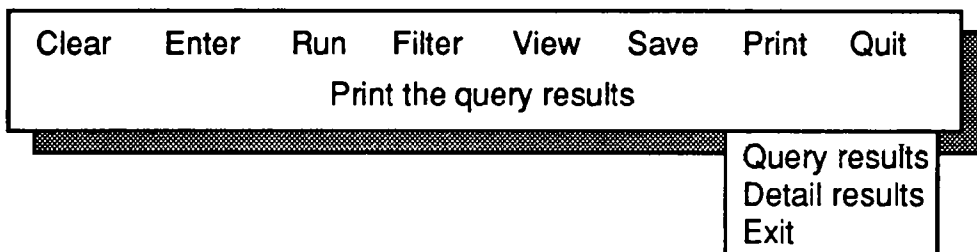
- ☛ Enter a description (thirty character maximum) for the file to contain the results, then press **[Enter]** to return to the query main menu.

**NOTE:** The file will be assigned a unique filename based on the date the query was saved. For example, the first query saved on 6/11/91 would be assigned the filename

061191AA; the second query saved on 6/11/91 would be assigned the filename 061191AB. The file will be saved to a subdirectory of the directory containing the PTS (i.e., \PTS\RESULTS). The saved file can be printed using the PRINT option from the query program, and/or it can be used to generate a table at a later time using the TABLE option from the PTS main menu.

## Print

The results of a query can either be output to a printer or written to a floppy disk or a hard drive. If you write the file to either a floppy or a hard drive, it will be saved in ASCII format with a .prn extension. The .prn file can later be incorporated into a word processing program.



☞ Position the highlighted box over **PRINT** and press **[Enter]**, OR press **P**.

THEN...

☞ Position the highlighted box over **QUERY RESULTS** and press **[Enter]**, OR press **Q** and press **[Enter]** to print the query results.

OR...

☞ Position the highlighted box over **DETAIL RESULTS** and press **[Enter]**, OR press **D** and press **[Enter]** to print a detail file (a detail file must have been requested prior to processing the query).

OR...

☞ Position the highlighted box over **EXIT** and press **[Enter]**, OR press **E** and press **[Enter]** to return to the query main menu.

If you are printing either totals or details, the following box will appear.

TITLE:

NAME:

WRITE TO DISK ? N

☞ Enter the title for the file to be printed and press **[Enter]**.

☞ Enter the file name to be printed and press **[Enter]**.

*If you are printing the file:*

☞ Enter **N** and press **[Enter]** to send the file to a printer.

Are you using a wide-carriage printer? (Y)es/(N)o N

☞ Type **Y** and press **[Enter]** if you are printing to a wide-carriage printer (e.g., at least 132 characters in width).

☞ Type **N** and press **[Enter]** if you are not printing to a wide-carriage printer.

The file will be printed.

*If you are writing the file to a floppy or a hard drive:*

☞ Enter **Y** and press **[Enter]** to write the file to a floppy or a hard drive. The following box will appear.

FILENAME: \_

- ☛ Enter a name (eight character maximum) for the file to contain the results, then press **[Enter]** to save the file to the default subdirectory.
- ☛ Enter a drive, and/or a directory, and a name (eight character maximum) for the file to contain the results, then press **[Enter]** to save the file to a drive and/or directory other than the defaults.

Do you want this file formatted for a wide-carriage printer? (Y)es/(N)o **N**

- ☛ Type **Y** and press **[Enter]** if you want the file formatted for a wide-carriage printer (132 characters in width).
- ☛ Type **N** and press **[Enter]** if you do not want the file formatted for a wide-carriage printer.

**NOTE:** DO NOT ENTER AN EXTENSION--the file will be assigned a .prn extension. For example, if you enter the name QUERY4, the file will be saved as QUERY4.prn. The difference between a .prn file generated in this manner and a .dbf file generated under **SAVE** from the query menu is the format. A .dbf is in dBase format and will be recognized under the **TABLE** command from the PTS main menu. A .prn file is in ASCII format and can be incorporated into other software programs as an ASCII file.

## Quit

Clear   Enter   Run   Filter   View   Save   Print   Quit  
Exit the query program

- ☛ Position the highlighted box over **QUIT** and press **[Enter]**, OR press **Q** to exit the query program.

## **SUPPLEMENTAL PROGRAMS**





## CHECKING FOR ERRORS

The Summary Check option searches for certain errors in a database. For example, if endangered species was listed as a function of the impacted wetland, but no endangered species names were listed, a warning would be issued. Summary Check also calculates the percent of each field in a database that contains data. This is especially useful for data quality assurance, in that you will be aware of how complete the data is in each field. You can then either go back and concentrate on obtaining better information for the incomplete fields or recognize the data quality problems when drawing conclusions from the data. To perform a summary check on your data, follow the steps listed below.

Data Entry	Summary Check	Field Contents	Query	Table	Print	Exit
Report errors and data quality						

- ☛ From the PTS main menu, position the highlighted box over **SUMMARY CHECK** and press **[Enter]**, OR press **S**.

Select a database type and press [Enter]
--

404 Permit
401 Permit
State Permit
Other
Exit

- ☛ Position the highlighted box over the permit type of the database to check and press **[Enter]**.

Select an existing database and press [Enter].

CA404.DBF  
OR404.DBF  
•  
•  
▼

☛ Position the highlighted box over the database to check and press [Enter].

A report of any errors detected in the database and a listing of the percent of each field that contains data will be generated and printed.

## LISTING CONTENTS OF FIELDS

The Field Contents option generates and prints a sorted list of all the entries in each field in a database. This option is also useful for quality assurance purposes, as it is easy to recognize information that has been entered incorrectly. For example, if a list of counties contained both CENTER and CENTRE, it would be easy to recognize that there had been an error in data entry. To produce a field contents list, follow the steps listed below.

Data Entry	Summary Check	Field Contents	Query	Table	Print	Exit
------------	---------------	----------------	-------	-------	-------	------

Produce a listing of the contents of each field

☛ From the PTS main menu, position the highlighted box over **FIELD CONTENTS** and press [Enter], OR press F.

Select a database type and press [Enter]

404 Permit  
401 Permit  
State Permit  
Other  
Exit

- ☞ Position the highlighted box over the permit type of the database from which to produce a field contents list and press [Enter].

Select an existing database and press [Enter].

CA404.DBF  
OR404.DBF  
•  
•  
▼

- ☞ Position the highlighted box over the database from which to produce a field contents list and press [Enter].

A box will appear as all the fields are processed.

Processing field 11 of 80

A file named CONTENTS.DBF, containing a sorted list of the contents of each field in the database, will be created. To obtain a print-out of the file, use the PRINT option from the PTS main menu (see directions on page 88 on printing files).

The results are in the file CONTENTS.DBF.  
Use the PRINT option to print the results.

Press [Enter] to continue.

Press [Enter] to return to the main menu.

## GENERATING TABLES

To produce tables from query results saved in the query program, follow the steps listed below. An ASCII file of the tables will be generated whether or not you print the tables. This file will have the same filename as the file saved in the query program, except with a .WID extension instead of a .DBF extension. The file saved by the table program will be saved to the \PTS\TABLES subdirectory and can be imported into other software packages as an ASCII file.

Data Entry	Summary Check	Field Contents	Query	Table	Print	Exit
Generate a table						

From the PTS main menu, position the highlighted box over **TABLE** and press [Enter], OR press T.

A list of all the files saved in the query program will be displayed.

FILE_DESC	DATABASE	DATE	TIME	FILENAME
Wetland types & functions	CA404.DBF	6/10/91	10:25:42	061091AA
Case and area totals	MD401.DBF	6/11/91	09:41:37	061191AA
Objectives and methods	ORST1.DBF	7/21/91	02:13:01	072191AA
Land use totals	MD401.DBF	7/21/91	04:11:43	072191AB
[⇒] Press [Enter] to select a file / Press [Esc] to exit.				

FILE\_DESC is the file description (the description of the file saved in the query program).

DATABASE is the database used for the query.

DATE is the date the query was processed.

TIME is the time the query was processed.

FILENAME is the name assigned to the file saved in the query program. The date and time the query was **saved** are used in assigning this filename.

- ☞ Use the up and down arrows to position the highlighted box over the description of the file from which you want to generate a table and press **[Enter]**.

OR...

- ☞ Press **[Esc]** to return to the main menu if you do not want to generate a table.

Remove extraneous answers?    N
---------------------------------

Removing extraneous answers is similar to filtering the query results. It removes all the results that equal zero.

- ☞ Type **N** and press **[Enter]** to remove extraneous answers.
- ☞ Type **Y** and press **[Enter]** to not remove extraneous answers.

An example of the table worksheet is illustrated on the next page. Only the field names used in the file from which you are making a table will be displayed.

AXIS	FIELD NAME
	CASE
	STATE
	COUNTY
	AREA

Y AXES: ↓ ↓ ↓ ↓	X AXIS: →	Press [Enter] to select the axis. Press [Esc] to generate table.
--------------------	--------------	---

A table is comprised of one X axis and one or more Y axis. The X axis runs across the paper; the Y axes run down the paper. The TABLE option will calculate the total for each row and each column displayed in the table. In the table illustrated on page 88, COUNTY and CASE are the Y axes and OBJECTIVE is the X axis.

The next box that appears allows you to enter information about the table. The information you enter will be printed at the top of the table.

TITLE:	
NAME:	

- ☞ Specify the title for the table.
- ☞ Specify the name of the file from which the table was generated, OR enter your name.
- ☞ Press [Enter].

The table will be generated.

Processing

After the table has been generated, you will be asked if you want to print the table.

Do you want to print the table? (Y)es/(N)o    Y

- ☞ Type **Y** and press **[Enter]** to print the table.
- ☞ Type **N** and press **[Enter]** to not print the table.

If you answered **Yes** to the previous question, the following box will appear.

Are you using a wide-carriage printer? (Y)es/(N)o    N

- ☞ Type **Y** and press **[Enter]** if you are printing to a wide-carriage printer (e.g., at least 132 characters in width).
- ☞ Type **N** and press **[Enter]** if you are not printing to a wide-carriage printer.

A table, similar to the one illustrated on the next page, will be printed. Tables calculating the total area in acres and hectares will also be printed.

[COUNT]

County	Case	Objective			TOTAL
		FISH	FOOD	WILD	
Alameda	Created	2	2	1	5
Alameda	Restored	3	2	0	5
Marin	Created	1	1	4	6
Marin	Restored	1	1	2	4
San Francisco	Created	1	1	2	4
San Francisco	Restored	3	1	1	5
Solano	Created	2	1	0	3
Solano	Restored	2	0	1	3
Sonoma	Created	1	1	2	4
Sonoma	Restored	1	2	2	5
TOTAL		17	12	15	44

## PRINTING FILES

Another program included with the PTS prints databases and the Field Contents list. Database print-outs are useful for quality assurance purposes. For example, you can scan an entire database searching for outliers and incomplete information, as opposed to inspecting the database record-by record within the PTS. Furthermore, we recommend you save hard-copies of all databases as archives. To obtain a hard-copy of a database or the Field Contents list, follow the procedures outlined below.

Data Entry	Summary Check	Field Contents	Query	Table	Print	Exit
Send a file to the printer						

- ☛ From the PTS main menu, position the highlighted box over **PRINT** and press [Enter], OR press P.

A list of all the databases created in the PTS will be displayed.



CA404.DBF  
OR404.DBF  
GA401.DBF  
TXSTONE.DBF  
TXOTH2.DBF

Press [Enter] to select a  
file. Press [Esc] to exit.

- ☞ Use the up and down arrows to position the highlighted box over the database to be printed and press **[Enter]**.
- ☞ Press **[Esc]** to return to the main menu.

A box that contains space for you to identify the database being printed will appear. The information you enter will be displayed at the top of the print-out.

Subject:

Name:

- ☞ Specify the subject of the file you are printing, for example, Section 404 permits issued in Texas, Field Contents list.
- ☞ Specify the name of the file you are printing, OR enter your name.
- ☞ Press **[Enter]**.

A box asking if you have a wide-carriage printer will appear.

Are you using a wide-carriage printer? (Y)es/(N)o    **N**

- ☞ Type **Y** and press **[Enter]** if you are printing to a wide-carriage printer (e.g., at least 132 characters in width)
- ☞ Type **N** and press **[Enter]** if you are not printing to a wide-carriage printer.

A *Printing* box will appear while the file is being printed.

Printing

The PTS main menu will appear after the file has been printed.

Data Entry	Summary Check	Field Contents	Query	Table	Print	Exit
Enter permit data						

## LITERATURE CITED

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Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, Washington, DC. FWS/OBS/-79/31. 103 pp.



**APPENDIX A**  
**THE PERMIT TRACKING SYSTEM FORM**



Permit number \_\_\_\_\_

Date permit issued \_\_\_\_/\_\_\_\_/\_\_\_\_

## Permit Tracking System

### IMPACTED WETLAND DATA FORM

Form designed by C.C. Holland and R.G. Gibson  
ManTech Environmental Technology, Inc.  
U.S. Environmental Protection Agency,  
Environmental Research Laboratory  
200 SW 35th Street  
Corvallis, OR 97333

State \_\_\_\_\_ County \_\_\_\_\_ Acres \_\_\_\_\_  
State \_\_\_\_\_ County \_\_\_\_\_ Acres \_\_\_\_\_

TOTAL \_\_\_\_\_

Township & Range \_\_\_\_\_ Section(s) \_\_\_\_\_

Latitude/Longitude \_\_\_\_\_

USGS/NWI map name \_\_\_\_\_ Scale 1: \_\_\_\_\_

Select [1]

Water/river body name \_\_\_\_\_

☐ Water Body

Specific location \_\_\_\_\_

☐ River Body

Land use--Select [1]

- ☐ Agricultural
- ☐ Commercial
- ☐ Industrial
- ☐ Natural
- ☐ Residential

Documents available--  
Select [0-4]

- ☐ Maps
- ☐ Blueprints
- ☐ Ground photos
- ☐ Aerial photos

Date construction began \_\_\_\_/\_\_\_\_/\_\_\_\_

Date construction completed \_\_\_\_/\_\_\_\_/\_\_\_\_

### COWARDIN WETLAND TYPE--Select [1-5]

ACRES

ACRES

ACRES

#### ESTUARINE

- ☐ subtidal aquatic bed \_\_\_\_\_
- ☐ subtidal open water \_\_\_\_\_
- ☐ subtidal reef \_\_\_\_\_
- ☐ subtidal rock bottom \_\_\_\_\_
- ☐ subtidal unconsolidated bottom \_\_\_\_\_
- ☐ intertidal aquatic bed \_\_\_\_\_
- ☐ intertidal beach/bar \_\_\_\_\_
- ☐ intertidal emergent \_\_\_\_\_
- ☐ intertidal flat \_\_\_\_\_
- ☐ intertidal forested \_\_\_\_\_
- ☐ intertidal reef \_\_\_\_\_
- ☐ intertidal rocky shore \_\_\_\_\_
- ☐ intertidal scrub/shrub \_\_\_\_\_
- ☐ intertidal streambed \_\_\_\_\_
- ☐ intertidal unconsolidated shore \_\_\_\_\_

#### RIVERINE

- ☐ tidal aquatic bed \_\_\_\_\_
- ☐ tidal beach/bar \_\_\_\_\_
- ☐ tidal emergent \_\_\_\_\_
- ☐ tidal flat \_\_\_\_\_
- ☐ tidal open water \_\_\_\_\_
- ☐ tidal rock bottom \_\_\_\_\_
- ☐ tidal rocky shore \_\_\_\_\_
- ☐ tidal streambed \_\_\_\_\_
- ☐ tidal unconsolidated bottom \_\_\_\_\_
- ☐ tidal unconsolidated shore \_\_\_\_\_
- ☐ lower perennial aquatic bed \_\_\_\_\_
- ☐ lower perennial beach/bar \_\_\_\_\_
- ☐ lower perennial emergent \_\_\_\_\_
- ☐ lower perennial flat \_\_\_\_\_
- ☐ lower perennial open water \_\_\_\_\_
- ☐ lower perennial rock bottom \_\_\_\_\_
- ☐ lower perennial rocky shore \_\_\_\_\_
- ☐ lower perennial streambed \_\_\_\_\_
- ☐ lower perennial unconsolidated bottom \_\_\_\_\_
- ☐ lower perennial unconsolidated shore \_\_\_\_\_
- ☐ upper perennial aquatic bed \_\_\_\_\_
- ☐ upper perennial beach/bar \_\_\_\_\_
- ☐ upper perennial flat \_\_\_\_\_
- ☐ upper perennial open water \_\_\_\_\_
- ☐ upper perennial rock bottom \_\_\_\_\_
- ☐ upper perennial rocky shore \_\_\_\_\_
- ☐ upper perennial streambed \_\_\_\_\_
- ☐ upper perennial unconsolidated bottom \_\_\_\_\_
- ☐ upper perennial unconsolidated shore \_\_\_\_\_
- ☐ intermittent aquatic bed \_\_\_\_\_
- ☐ intermittent beach/bar \_\_\_\_\_
- ☐ intermittent flat \_\_\_\_\_
- ☐ intermittent open water \_\_\_\_\_
- ☐ intermittent rock bottom \_\_\_\_\_
- ☐ intermittent rocky shore \_\_\_\_\_
- ☐ intermittent streambed \_\_\_\_\_
- ☐ intermittent unconsolidated bottom \_\_\_\_\_

#### RIVERINE (cont)

- ☐ unknown perennial aquatic bed \_\_\_\_\_
- ☐ unknown perennial beach/bar \_\_\_\_\_
- ☐ unknown perennial flat \_\_\_\_\_
- ☐ unknown perennial open water \_\_\_\_\_
- ☐ unknown perennial rock bottom \_\_\_\_\_
- ☐ unknown perennial rocky shore \_\_\_\_\_
- ☐ unknown perennial streambed \_\_\_\_\_
- ☐ unknown perennial unconsolidated bottom \_\_\_\_\_
- ☐ unknown perennial unconsolidated shore \_\_\_\_\_

#### PALUSTRINE

- ☐ aquatic bed \_\_\_\_\_
- ☐ emergent \_\_\_\_\_
- ☐ flat \_\_\_\_\_
- ☐ forested \_\_\_\_\_
- ☐ moss/lichen \_\_\_\_\_
- ☐ open water \_\_\_\_\_
- ☐ rock bottom \_\_\_\_\_
- ☐ scrub/shrub \_\_\_\_\_
- ☐ unconsolidated bottom \_\_\_\_\_
- ☐ unconsolidated shore \_\_\_\_\_

#### MARINE

- ☐ subtidal aquatic bed \_\_\_\_\_
- ☐ subtidal open water \_\_\_\_\_
- ☐ subtidal reef \_\_\_\_\_
- ☐ subtidal rock bottom \_\_\_\_\_
- ☐ subtidal unconsolidated bottom \_\_\_\_\_
- ☐ intertidal aquatic bed \_\_\_\_\_
- ☐ intertidal beach/bar \_\_\_\_\_
- ☐ intertidal flat \_\_\_\_\_
- ☐ intertidal reef \_\_\_\_\_
- ☐ intertidal rocky shore \_\_\_\_\_
- ☐ intertidal unconsolidated shore \_\_\_\_\_

#### LACUSTRINE

- ☐ limnetic aquatic bed \_\_\_\_\_
- ☐ limnetic open water \_\_\_\_\_
- ☐ limnetic rock bottom \_\_\_\_\_
- ☐ limnetic unconsolidated bottom \_\_\_\_\_
- ☐ littoral aquatic bed \_\_\_\_\_
- ☐ littoral beach/bar \_\_\_\_\_
- ☐ littoral emergent \_\_\_\_\_
- ☐ littoral flat \_\_\_\_\_
- ☐ littoral open water \_\_\_\_\_
- ☐ littoral rock bottom \_\_\_\_\_
- ☐ littoral rocky shore \_\_\_\_\_
- ☐ littoral unconsolidated bottom \_\_\_\_\_
- ☐ littoral unconsolidated shore \_\_\_\_\_

TOTAL AREA \_\_\_\_\_

**TYPE OF PROJECT--Select [1-3]**

- |  |  |   |
|--|--|---|
| <input type="radio"/> Airport                  | <input type="radio"/> Hydroelectric project          | <input type="radio"/> Recreational area             |
| <input type="radio"/> Aquaculture              | <input type="radio"/> Industrial park                | <input type="radio"/> Shipping wharf, dock, or pier |
| <input type="radio"/> Boat ramp                | <input type="radio"/> Jetty or groin                 | <input type="radio"/> Shore stabilization           |
| <input type="radio"/> Commercial project       | <input type="radio"/> Manna                          | <input type="radio"/> Solid waste disposal          |
| <input type="radio"/> Dam or reservoir         | <input type="radio"/> Mining                         | <input type="radio"/> Stream modification           |
| <input type="radio"/> Dike placement           | <input type="radio"/> Mosquito abatement             | <input type="radio"/> Tide gate                     |
| <input type="radio"/> Drainage ditch           | <input type="radio"/> Navigation channel, canal, etc | <input type="radio"/> Utility                       |
| <input type="radio"/> Dredge disposal          | <input type="radio"/> Oil & gas activities           | <input type="radio"/> Well drilling pad             |
| <input type="radio"/> Dredging                 | <input type="radio"/> Other                          | <input type="radio"/> Wildlife habitat              |
| <input type="radio"/> Farming activity         | <input type="radio"/> Pipeline                       |   |
| <input type="radio"/> Highway, road, or bridge | <input type="radio"/> Private dock or moorage        |   |
| <input type="radio"/> Housing development      | <input type="radio"/> Railroad                       |   |

**FUNCTION--Select [1-5]**

- ☐ Active recreation
- ☐ Consumptive recreation
- ☐ Flood storage
- ☐ Food chain support
- ☐ Ground water modification
- ☐ Habitat for endangered species
- ☐ Habitat for fisheries
- ☐ Habitat for wildlife
- ☐ Non-consumptive recreation
- ☐ Nutrient retention and removal
- ☐ Other
- ☐ Passive recreation
- ☐ Sediment trapping
- ☐ Shoreline stabilization
- ☐ Uniqueness or rareness

**ENDANGERED SPECIES**

- |    |                       |
|----|-----------------------|
| 1  | Scientific name _____ |
|    | Common name _____     |
| 2  | Scientific name _____ |
|    | Common name _____     |
| 3. | Scientific name _____ |
|    | Common name _____     |

**REPORT INFORMATION**

Title \_\_\_\_\_

Author's First Initial \_\_\_\_\_ Middle Initial \_\_\_\_\_ Last Name \_\_\_\_\_

Year \_\_\_\_\_ Source \_\_\_\_\_

Content \_\_\_\_\_

**CONTACT INFORMATION**

First Initial \_\_\_\_\_ Middle Initial \_\_\_\_\_ Last Name \_\_\_\_\_

Organization \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Phone (    ) \_\_\_\_\_

**COMMENTS**




Permit number \_\_\_\_\_

Date permit issued \_\_\_\_/\_\_\_\_/\_\_\_\_

Mitigation Bank?   
 Yes → Name of bank \_\_\_\_\_   
 Money or land? \_\_\_\_\_   
 STOP HERE   
 No → COMPLETE REST OF FORM

Mitigation type--Select [1]

☐ Created ☐ Enhanced ☐ Preserved ☐ Restored

State \_\_\_\_\_ County \_\_\_\_\_ Acres \_\_\_\_\_   
 State \_\_\_\_\_ County \_\_\_\_\_ Acres \_\_\_\_\_

TOTAL \_\_\_\_\_

Township & Range \_\_\_\_\_ Section(s) \_\_\_\_\_

Latitude/Longitude \_\_\_\_\_

USGS/NWI map name \_\_\_\_\_ Scale 1: \_\_\_\_\_

Select [1]

Water/river body name \_\_\_\_\_

☐ Water Body   
 ☐ River Body

Specific location \_\_\_\_\_

## Permit Tracking System

### COMPENSATORY WETLAND DATA FORM

Form designed by C.C. Holland and R.G. Gibson   
 ManTech Environmental Technology, Inc   
 U.S. Environmental Protection Agency,   
 Environmental Research Laboratory   
 200 SW 35th Street   
 Corvallis, OR 97333

Was the mitigation project Off-site or On-site?

Land use--Select [1]

- ☐ Agricultural   
 ☐ Commercial   
 ☐ Industrial   
 ☐ Natural   
 ☐ Residential

Documents available--   
 Select [0-4]

- ☐ Maps   
 ☐ Blueprints   
 ☐ Ground photos   
 ☐ Aerial photos

Date construction began \_\_\_\_/\_\_\_\_/\_\_\_\_

Date construction completed \_\_\_\_/\_\_\_\_/\_\_\_\_

Were mid-course corrections made? Yes / No   
 (Make notes in comments section)

### COWARDIN WETLAND TYPE--Select [1-5]

ACRES

ACRES

ACRES

#### ESTUARINE

- ☐ subtidal aquatic bed \_\_\_\_\_   
 ☐ subtidal open water \_\_\_\_\_   
 ☐ subtidal reef \_\_\_\_\_   
 ☐ subtidal rock bottom \_\_\_\_\_   
 ☐ subtidal unconsolidated bottom \_\_\_\_\_   
 ☐ intertidal aquatic bed \_\_\_\_\_   
 ☐ intertidal beach/bar \_\_\_\_\_   
 ☐ intertidal emergent \_\_\_\_\_   
 ☐ intertidal flat \_\_\_\_\_   
 ☐ intertidal forested \_\_\_\_\_   
 ☐ intertidal reef \_\_\_\_\_   
 ☐ intertidal rocky shore \_\_\_\_\_   
 ☐ intertidal scrub/shrub \_\_\_\_\_   
 ☐ intertidal streambed \_\_\_\_\_   
 ☐ intertidal unconsolidated shore \_\_\_\_\_

#### RIVERINE

- ☐ tidal aquatic bed \_\_\_\_\_   
 ☐ tidal beach/bar \_\_\_\_\_   
 ☐ tidal emergent \_\_\_\_\_   
 ☐ tidal flat \_\_\_\_\_   
 ☐ tidal open water \_\_\_\_\_   
 ☐ tidal rock bottom \_\_\_\_\_   
 ☐ tidal rocky shore \_\_\_\_\_   
 ☐ tidal streambed \_\_\_\_\_   
 ☐ tidal unconsolidated bottom \_\_\_\_\_   
 ☐ tidal unconsolidated shore \_\_\_\_\_   
 ☐ lower perennial aquatic bed \_\_\_\_\_   
 ☐ lower perennial beach/bar \_\_\_\_\_   
 ☐ lower perennial emergent \_\_\_\_\_   
 ☐ lower perennial flat \_\_\_\_\_   
 ☐ lower perennial open water \_\_\_\_\_   
 ☐ lower perennial rock bottom \_\_\_\_\_   
 ☐ lower perennial rocky shore \_\_\_\_\_   
 ☐ lower perennial streambed \_\_\_\_\_   
 ☐ lower perennial unconsolidated bottom \_\_\_\_\_   
 ☐ lower perennial unconsolidated shore \_\_\_\_\_   
 ☐ upper perennial aquatic bed \_\_\_\_\_   
 ☐ upper perennial beach/bar \_\_\_\_\_   
 ☐ upper perennial flat \_\_\_\_\_   
 ☐ upper perennial open water \_\_\_\_\_   
 ☐ upper perennial rock bottom \_\_\_\_\_   
 ☐ upper perennial rocky shore \_\_\_\_\_   
 ☐ upper perennial streambed \_\_\_\_\_   
 ☐ upper perennial unconsolidated bottom \_\_\_\_\_   
 ☐ upper perennial unconsolidated shore \_\_\_\_\_   
 ☐ intermittent aquatic bed \_\_\_\_\_   
 ☐ intermittent beach/bar \_\_\_\_\_   
 ☐ intermittent flat \_\_\_\_\_   
 ☐ intermittent open water \_\_\_\_\_   
 ☐ intermittent rock bottom \_\_\_\_\_   
 ☐ intermittent rocky shore \_\_\_\_\_   
 ☐ intermittent streambed \_\_\_\_\_   
 ☐ intermittent unconsolidated bottom \_\_\_\_\_

#### RIVERINE (cont)

- ☐ unknown perennial aquatic bed \_\_\_\_\_   
 ☐ unknown perennial beach/bar \_\_\_\_\_   
 ☐ unknown perennial flat \_\_\_\_\_   
 ☐ unknown perennial open water \_\_\_\_\_   
 ☐ unknown perennial rock bottom \_\_\_\_\_   
 ☐ unknown perennial rocky shore \_\_\_\_\_   
 ☐ unknown perennial streambed \_\_\_\_\_   
 ☐ unknown perennial unconsolidated bottom \_\_\_\_\_   
 ☐ unknown perennial unconsolidated shore \_\_\_\_\_

#### PALUSTRINE

- ☐ aquatic bed \_\_\_\_\_   
 ☐ emergent \_\_\_\_\_   
 ☐ flat \_\_\_\_\_   
 ☐ forested \_\_\_\_\_   
 ☐ moss/lichen \_\_\_\_\_   
 ☐ open water \_\_\_\_\_   
 ☐ rock bottom \_\_\_\_\_   
 ☐ scrub/shrub \_\_\_\_\_   
 ☐ unconsolidated bottom \_\_\_\_\_   
 ☐ unconsolidated shore \_\_\_\_\_

#### MARINE

- ☐ subtidal aquatic bed \_\_\_\_\_   
 ☐ subtidal open water \_\_\_\_\_   
 ☐ subtidal reef \_\_\_\_\_   
 ☐ subtidal rock bottom \_\_\_\_\_   
 ☐ subtidal unconsolidated bottom \_\_\_\_\_   
 ☐ intertidal aquatic bed \_\_\_\_\_   
 ☐ intertidal beach/bar \_\_\_\_\_   
 ☐ intertidal flat \_\_\_\_\_   
 ☐ intertidal reef \_\_\_\_\_   
 ☐ intertidal rocky shore \_\_\_\_\_   
 ☐ intertidal unconsolidated shore \_\_\_\_\_

TOTAL AREA \_\_\_\_\_

OBJECTIVE--Select [1-3]
<input type="radio"/> 1:1 Functional replacement
<input type="radio"/> Active recreation
<input type="radio"/> Consumptive recreation
<input type="radio"/> Flood storage
<input type="radio"/> Food chain support
<input type="radio"/> Ground water modification
<input type="radio"/> Habitat for endangered species
<input type="radio"/> Habitat for fisheries
<input type="radio"/> Habitat for wildlife
<input type="radio"/> Mosquito abatement
<input type="radio"/> Non-consumptive recreation
<input type="radio"/> Nursery for mitigation plants
<input type="radio"/> Nutrient retention and removal
<input type="radio"/> Other
<input type="radio"/> Passive recreation
<input type="radio"/> Research
<input type="radio"/> Sediment trapping
<input type="radio"/> Shoreline stabilization
<input type="radio"/> Unique systems replacement
<input type="radio"/> Uniqueness or rareness

ENDANGERED SPECIES
1. Scientific name _____ Common name _____
2. Scientific name _____ Common name _____
3. Scientific name _____ Common name _____

INFORMATION ON MONITORING
Do construction plans exist? Yes / No
Were checks made regularly? Yes / No      irregularly? Yes / No
Were data collected? Yes / No

METHOD--Select [1-3]
<input type="radio"/> Abalone planting <input type="radio"/> Other <input type="radio"/> Channels cut <input type="radio"/> Planting <input type="radio"/> Dike breaching <input type="radio"/> Preservations <input type="radio"/> Establish proper hydrology <input type="radio"/> Seeding <input type="radio"/> Excavation <input type="radio"/> Soil enhancement <input type="radio"/> Fencing <input type="radio"/> Upstream flows <input type="radio"/> Fill <input type="radio"/> Wave protection <input type="radio"/> Grading <input type="radio"/> Natural regrowth

ITEMS MONITORED--Select [1-3]
<input type="radio"/> Animal density <input type="radio"/> Plant diversity <input type="radio"/> Animal diversity <input type="radio"/> Primary production <input type="radio"/> Animal use <input type="radio"/> Secondary production <input type="radio"/> Endangered species <input type="radio"/> Vegetative cover <input type="radio"/> Other <input type="radio"/> Water quality <input type="radio"/> Physical viability <input type="radio"/> Water table depth

REPORT INFORMATION
Title _____
Author's First Initial _____ Middle Initial _____ Last Name _____
Year _____ Source _____
Content _____

CONTACT INFORMATION
First Initial _____ Middle Initial _____ Last Name _____
Organization _____
Address _____
City _____ State _____ Zip _____ Phone (    ) _____

COMMENTS

# Permit Tracking System

## USER DEFINED FIELD (UDF) FORM

### DATE FIELDS

FIELD NAME	DESCRIPTION	DATE
UDF_DATE1	_____	____/____/____
UDF_DATE2	_____	____/____/____
UDF_DATE3	_____	____/____/____

### NUMERIC FIELDS

FIELD NAME	DESCRIPTION	NUMBER
UDF_NUM1	_____	_____.____
UDF_NUM2	_____	_____.____
UDF_NUM3	_____	_____.____

### YES OR NO FIELDS

FIELD NAME	DESCRIPTION	YES OR NO
UDF_YN1	_____	Yes/No
UDF_YN2	_____	Yes/No
UDF_YN3	_____	Yes/No
UDF_YN4	_____	Yes/No

### CHARACTER FIELDS

FIELD NAME	DESCRIPTION	CHARACTERS
UDF_CHAR1	_____	_____ (5 character maximum)
UDF_CHAR2	_____	_____
UDF_CHAR3	_____	_____ (10 maximum)
UDF_CHAR4	_____	_____
UDF_CHAR5	_____	_____ (30 maximum)
UDF_CHAR6	_____	_____

## **APPENDIX B**

### **DEFINITIONS OF MITGATION TYPES**



Type of mitigation	Definition
Creation	the conversion of a persistent non-wetland area into a wetland through human activity. <sup>1</sup>
Enhancement	the increase in one or more values of all or a portion of an existing wetland by human activity, often with the accompanying decline in other wetland values. <sup>1</sup>
Preservation	the maintenance of an area in its natural and undeveloped condition to meet the specific objective of securing the perpetuation of the wetland site or complex for its inherent values. <sup>2</sup>
Restoration	the return from a disturbed or totally altered condition to a previously existing natural, or altered condition by human activity. <sup>1</sup>

1. Roy R. Lewis. 1990. Wetlands Restoration/Creation/Enhancement Terminology: Suggestions for Standardization, p.1-8. In J.A. Kusler and M.E. Kentula (Eds.), Wetland Creation and Restoration: The Status of the Science, Part 2: Perspectives. Island Press, Washington, DC.
2. J. Epperson, Missouri Department of Natural Resources.



**APPENDIX C**  
**SCREENS OF THE DATA ENTRY PROGRAM**





## SCREEN 1

Permit number	Date issued	/	/
Impacted wetland? (Y)es/(N)o			

If the answer to Impacted wetland? was YES, the following screens will appear.  
Go to page 110 for screens that will appear if the answer was NO.

## SCREEN 2

(I)mpacted				I
State	County	Area	0.0	
State	County	Area	0.0	
Township & Range		Section(s)		
Latitude		Longitude		
USGS/NWI map name		Scale 1:	0	
(W)ater body / (R)iver body		Water/riverbody name		
Specific location				

## SCREEN 3

Land use	
(A)gricultural / (C)ommercial / (I)ndustrial / (N)atural / (R)esidential	
Documents available	
(M)aps	(B)lue prints
(G)round photos	(A)erial photos
Date construction began	/ /
Date construction completed	/ /

SCREEN 4

CODE	COWARDIN WETLAND TYPE	SELECTED	AREA
E1AB	ESTUARINE SUBTIDAL AQUATIC BED		0.0
E1BB	ESTUARINE SUBTIDAL OPEN WATER		0.0
E1RF	ESTUARINE SUBTIDAL REEF		0.0
E1RB	ESTUARINE SUBTIDAL BED		0.0
E1UB	ESTUARINE SUBTIDAL UPRIVER		0.0
E2AB	ESTUARINE INTERTIDAL AQUATIC BED		0.0
E2BB	ESTUARINE INTERTIDAL BEACH/BAR		0.0
E2EM	ESTUARINE INTERTIDAL EMERGENT		0.0
E2FL	ESTUARINE INTERTIDAL FLAT		0.0
E2FO	ESTUARINE INTERTIDAL FORESTED		0.0

[↓]

SCREEN 5

CODE	PROJECT TYPE	SELECTED
AIRP	AIRPORT	
AQUA	AQUACULTURE	
RAMP	BOAT RAMP	
COMM	COMMERCIAL PROJECT	
DAMS	DAM OR RESERVOIR	
DIKE	DIKE PLACEMENT	
DRAI	DRAINAGE DITCH	
DDIS	DREDGE DISPOSAL	
DREG	DREDGING	
FARM	FARMING ACTIVITY	
ROAD	HIGHWAY, ROAD, OR BRIDGE	
HOUS	HOUSING DEVELOPMENT	

[↓]

## SCREEN 6

CODE	FUNCTION	SELECTED
ACTV	ACTIVE RECREATION	
CONS	CONSUMPTIVE RECREATION	
FLOD	FLOOD STORAGE	
FOOD	FOOD CHAIN SUPPORT	
GRWT	GROUND WATER MODIFICATION	
ENDS	HABITAT FOR ENDANGERED SPECIES	
FISH	HABITAT FOR FISHERIES	
WILD	HABITAT FOR WILDLIFE	
NONC	NON-CONSUMPTIVE RECREATION	
NUTR	NUTRIENT RETENTION AND REMOVAL	

[↓]

## SCREEN 7

ENDANGERED SPECIES  
 = = = = =

Scientific name  
 Common name

Scientific name  
 Common name

Scientific name  
 Common name

## SCREEN 8

REPORT INFORMATION  
 = = = = =

Title

Author's initials . . Author's last name

Year 0 Source

Content

## SCREEN 9

CONTACT INFORMATION				
===== :				
Contact's initials	.	.	Contact's last name	
Organization				
Address				
City	State	Zip	-	Phone ( ) -

## SCREEN 10

UDF_DATE1:	/	/	UDF_DATE2:	/	/	UDF_DATE3:	/	/
UDF_NUM1:	0.0	UDF_NUM2:	0.0	UDF_NUM3:	0.0			
UDF_YN1: (Y)es/(N)o			UDF_YN2: (Y)es/(N)o					
UDF_YN3: (Y)es/(N)o			UDF_YN4: (Y)es/(N)o					
UDF_CHAR1:			UDF_CHAR2:					
UDF_CHAR3:			UDF_CHAR4:					
UDF_CHAR5:								
UDF_CHAR6:								

If the answer to Impacted wetland? was NO, the following screens will appear.

## SCREEN 2

Permit number	Date issued	/	/
Impacted wetland? (Y)es/(N)o			
Mitigation bank? (Y)es/(N)o			

If the answer to Mitigation bank? was YES, the following screen will appear.  
See below for the screens that will appear if the answer was NO.

### SCREEN 3

Permit number	Date issued	/	/
Impacted wetland? (Y)es/(N)o			
Mitigation bank? (Y)es/(N)o			
Name of the bank			
(M)oney / (L)and			

If the answer to Mitigation bank? was NO, the following screens will appear.

### SCREEN 3

(C)reated/(E)nhanced/(P)reserved/(R)estored			
State	County	Area	0.0
State	County	Area	0.0
Township & Range		Section(s)	
Latitude		Longitude	
USGS/NWI map name		Scale 1:	0
(W)ater body / (R)iver body		Water/riverbody name	
Specific location			

#### SCREEN 4

Was the mitigation project (OFF)-site or (ON)-site?

Land use

(A)gricultural / (C)ommercial / (I)ndustrial / (N)atural / (R)esidential

Documents available

(M)aps

(B)lue prints

(G)round photos

(A)erial photos

Date construction began      /      /

Date construction completed      /      /

Were mid-course corrections made? (Y)es/(N)o

#### SCREEN 5

CODE	COWARDIN WETLAND TYPE	SELECTED	AREA
E1AB	ESTUARINE SUBTIDAL AQUATIC BED		0.0
E1BB	ESTUARINE SUBTIDAL OPEN WATER		0.0
E1RF	ESTUARINE SUBTIDAL FLAT		0.0
E1RB	ESTUARINE SUBTIDAL RED MUD FLAT		0.0
E1UB	ESTUARINE SUBTIDAL OPEN BOTTOM		0.0
E2AB	ESTUARINE INTERTIDAL AQUATIC BED		0.0
E2BB	ESTUARINE INTERTIDAL BEACH/BAR		0.0
E2EM	ESTUARINE INTERTIDAL EMERGENT		0.0
E2FL	ESTUARINE INTERTIDAL FLAT		0.0
E2FO	ESTUARINE INTERTIDAL FORESTED		0.0

[↓]

SCREEN 6

CODE	OBJECTIVE	SELECTED
FUNC	1:1 FUNCTIONAL REPLACEMENT	
ACTV	ACTIVE RECREATION	
CONS	CONSUMPTIVE RECREATION	
FLOD	FLOOD STORAGE	
FOOD	FOOD CHAIN SUPPORT	
GRWT	GROUND WATER MODIFICATION	
ENDS	HABITAT FOR ENDANGERED SPECIES	
FISH	HABITAT FOR FISHERIES	
WILD	HABITAT FOR WILDLIFE	
MOSQ	MOSQUITO ABATEMENT	
NONC	NON-CONSUMPTIVE RECREATION	
NURS	NURSERY FOR MITIGATION PLANTS	

[↓]

SCREEN 7

ENDANGERED SPECIES  
= = = = =

Scientific name  
Common name

Scientific name  
Common name

Scientific name  
Common name



## SCREEN 8

CODE	METHOD	SELECTED
ABAL	ABALONE PLANTING	
CHAN	CHANNELS CUT	
DIKE	DIKE BREACHING	
HYDR	ESTABLISH PROPER HYDROLOGY	
EXCA	EXCAVATION	
FENC	FENCING	
FILL	FILL	
GRAD	GRADING	
REGR	NATURAL REGROWTH	
OTHR	OTHER	

[↓]

## SCREEN 9

**INFORMATION ON MONITORING**  
 = = = = =

Do construction plans exist? (Y)es/(N)o

Were checks made regularly? (Y)es/(N)o

Were checks made irregularly? (Y)es/(N)o

Were data collected? (Y)es/(N)o

If the answer to Were data collected? was YES, the following screens will appear.  
Go to page 116 for the screens that will appear if the answer was NO.

#### SCREEN 10

CODE	ITEMS MONITORED	SELECTED
ANDE	ANIMAL DENSITY	
ANDI	ANIMAL DIVERSITY	
ANUS	ANIMAL USE	
ENSP	ENDANGERED SPECIES	
OTHR	OTHER	
PHVI	PHYSICAL VIABILITY	
PLDI	PLANT DIVERSITY	
PRPR	PRIMARY PRODUCTION	
SEPR	SECONDARY PRODUCTION	
VECO	VEGETATIVE COVER	
WAQU	WATER QUALITY	
WATA	WATER TABLE DEPTH	

[↓]

#### SCREEN 11

REPORT INFORMATION

Title

Author's initials . . . Author's last name

Year 0 Source

Content

#### SCREEN 12

CONTACT INFORMATION

Contact's initials . . . Contact's last name

Organization

Address

City State Zip - Phone ( ) -

### SCREEN 13

UDF_DATE1: / /	UDF_DATE2: / /	UDF_DATE3: / /
UDF_NUM1: 0.0	UDF_NUM2: 0.0	UDF_NUM3: 0.0
UDF_YN1: (Y)es/(N)o	UDF_YN2: (Y)es/(N)o	
UDF_YN3: (Y)es/(N)o	UDF_YN4: (Y)es/(N)o	
UDF_CHAR1:	UDF_CHAR2:	
UDF_CHAR3:	UDF_CHAR4:	
UDF_CHAR5:		
UDF_CHAR6:		

If the answer to Were data collected? was NO, the following screens will appear.

### SCREEN 10

#### REPORT INFORMATION

Title

Author's initials , , Author's last name

Year 0 Source

Content

## SCREEN 11

### CONTACT INFORMATION

= = = = = :

Contact's initials . . Contact's last name

Organization

Address

City State Zip - Phone ( ) -

## SCREEN 12

UDF\_DATE1: / / UDF\_DATE2: / / UDF\_DATE3: / /

UDF\_NUM1: 0.0 UDF\_NUM2: 0.0 UDF\_NUM3: 0.0

UDF\_YN1: (Y)es/(N)o UDF\_YN2: (Y)es/(N)o

UDF\_YN3: (Y)es/(N)o UDF\_YN4: (Y)es/(N)o

UDF\_CHAR1: UDF\_CHAR2:

UDF\_CHAR3: UDF\_CHAR4:

UDF\_CHAR5:

UDF\_CHAR6: .



**APPENDIX D**  
**LIST OF CODES**



# COWARDIN WETLAND TYPES . . .

<u>CODE</u>	<u>FULLNAME</u>	<u>CODE</u>	<u>FULLNAME</u>
E1AB	Estuarine subtidal aquatic bed	R1AB	Riverine tidal aquatic bed
E1OW	Estuarine subtidal open water	R1BB	Riverine tidal beach/bar
E1RF	Estuarine subtidal reef	R1EM	Riverine tidal emergent
E1RB	Estuarine subtidal rock bottom	R1FL	Riverine tidal flat
E1UB	Estuarine subtidal unconsolidated bottom	R1OW	Riverine tidal open water
E2AB	Estuarine intertidal aquatic bed	R1RB	Riverine tidal rock bottom
E2BB	Estuarine intertidal beach/bar	R1RS	Riverine tidal rocky shore
E2EM	Estuarine intertidal emergent	R1SB	Riverine tidal streambed
E2FL	Estuarine intertidal flat	R1UB	Riverine tidal unconsol. bottom
E2FO	Estuarine intertidal forested	R1US	Riverine tidal unconsol. shore
E2RF	Estuarine intertidal reef	R2AB	Riverine lower perennial aquatic bed
E2RS	Estuarine intertidal rocky shore	R2BB	Riverine lower perennial beach/bar
E2SS	Estuarine intertidal scrub/shrub	R2EM	Riverine lower perennial emergent
E2SB	Estuarine intertidal streambed	R2FL	Riverine lower perennial flat
E2UB	Estuarine intertidal unconsolidated shore	R2OW	Riverine lower perennial open water
L1AB	Lacustrine limnetic aquatic bed	R2RB	Riverine lower perennial rock bottom
L1OW	Lacustrine limnetic open water	R2RS	Riverine lower perennial rocky shore
L1RB	Lacustrine limnetic rock bottom	R2SB	Riverine lower perennial streambed
L1UB	Lacustrine limnetic unconsolidated bottom	R2UB	Riverine lower perennial unconsol. bottom
L2AB	Lacustrine littoral aquatic bed	R2US	Riverine lower perennial unconsol. shore
L2BB	Lacustrine littoral beach/bar	R3AB	Riverine upper perennial aquatic bed
L2EM	Lacustrine littoral emergent	R3BB	Riverine upper perennial beach/bar
L2FL	Lacustrine littoral flat	R3FL	Riverine upper perennial flat
L2OW	Lacustrine littoral open water	R3OW	Riverine upper perennial open water
L2RB	Lacustrine littoral rock bottom	R3RB	Riverine upper perennial rock bottom
L2RS	Lacustrine littoral rocky shore	R3RS	Riverine upper perennial rocky shore
L2UB	Lacustrine littoral unconsolidated bottom	R3SB	Riverine upper perennial streambed
L2US	Lacustrine littoral unconsolidated shore	R3UB	Riverine upper perennial unconsol. bottom
M1AB	Marine subtidal aquatic bed	R3US	Riverine upper perennial unconsol. shore
M1OW	Marine subtidal open water	R4AB	Riverine intermittent aquatic bed
M1RF	Marine subtidal reef	R4BB	Riverine intermittent beach/bar
M1RB	Marine subtidal rock bottom	R4FL	Riverine intermittent flat
M1UB	Marine subtidal unconsolidated bottom	R4OW	Riverine intermittent open water
M2AB	Marine intertidal aquatic bed	R4RB	Riverine intermittent rock bottom
M2BB	Marine intertidal beach/bar	R4RS	Riverine intermittent rocky shore
M2FL	Marine intertidal flat	R4SB	Riverine intermittent streambed
M2RF	Marine intertidal reef	R4UB	Riverine intermittent unconsol. bottom
M2RS	Marine intertidal rocky shore	R5AB	Riverine unknown perennial aquatic bed
M2US	Marine intertidal unconsolidated shore	R5BB	Riverine unknown perennial beach/bar
PAB	Palustrine aquatic bed	R5FL	Riverine unknown perennial flat
PEM	Palustrine emergent	R5OW	Riverine unknown perennial open water
PFL	Palustrine flat	R5RB	Riverine unknown perennial rock bottom
PFO	Palustrine forested	R5RS	Riverine unknown perennial rocky shore
PML	Palustrine moss/lichen	R5SB	Riverine unknown perennial streambed
POW	Palustrine open water	R5UB	Riverine unknown perennial unconsol. bottom
PRB	Palustrine rock bottom	R5US	Riverine unknown perennial unconsol. shore
PSS	Palustrine scrub/shrub		
PUB	Palustrine unconsolidated bottom		
PUS	Palustrine unconsolidated shore		



# **TYPES OF PROJECTS . . .**

<u>CODE</u>	<u>FULLNAME</u>
AIRP	Airport
AQUA	Aquaculture
RAMP	Boat ramp
COMM	Commercial project
DAMS	Dam or reservoir
DIKE	Dike placement
DRAI	Drainage ditch
DDIS	Dredge disposal
DREG	Dredging
FARM	Farming activity
ROAD	Highway, road, or bridge
HOUS	Housing development
HYDR	Hydroelectric project
INDS	Industrial park
JETT	Jetty or groin
MARN	Marina
MINE	Mining
MOSQ	Mosquito abatement
NAVI	Navigation channel, canal, or boat basin
OILG	Oil and gas activities
OTHR	Other
PIPL	Pipeline
DOCK	Private dock or moorage
RAIL	Railroad
RECR	Recreational area
SHIP	Shipping wharf, dock, or pier
STAB	Shore stabilization
WDIS	Solid waste disposal
SMOD	Stream modification
TIDE	Tide gate
UTIL	Utility
WELL	Well drilling pad
WILD	Wildlife habitat

**WETLAND FUNCTIONS . . .**

<u>CODE</u>	<u>FULLNAME</u>
ACTV	Active recreation
CONS	Consumptive recreation
FLOD	Flood storage
FOOD	Food chain support
ENDS	Habitat for endangered species
FISH	Habitat for fisheries
WILD	Habitat for wildlife
GRWT	Ground water modification
NONC	Non-consumptive recreation
NUTR	Nutrient retention and removal
OTHR	Other
PASS	Passive recreation
SEDI	Sediment trapping
SHOR	Shoreline stabilization
RARE	Uniqueness or rareness

**OBJECTIVES . . .**

<u>CODE</u>	<u>FULLNAME</u>
FUNC	1:1 functional replacement
ACTV	Active recreation
CONS	Consumptive recreation
FLOD	Flood storage
FOOD	Food chain support
GRWT	Ground water modification
ENDS	Habitat for endangered species
FISH	Habitat for fisheries
WILD	Habitat for wildlife
MOSQ	Mosquito abatement
NONC	Non-consumptive recreation
NURS	Nursery for mitigation plants
NUTR	Nutrient retention and removal
OTHR	Other
PASS	Passive recreation
RESR	Research
SEDI	Sediment trapping
SHOR	Shoreline stabilization
UNIQ	Unique or rare systems replacement
RARE	Uniqueness or rareness

**METHODS . . .**

<u>CODE</u>	<u>FULLNAME</u>
ABAL	Abalone planting
CHAN	Channels cut
DIKE	Dike breaching
HYDR	Establish proper hydrology
EXCA	Excavation
FENC	Fencing
FILL	Fill
GRAD	Grading
REGR	Natural regrowth
OTHR	Other
PLAN	Planting
PRES	Preservations
SEED	Seeding
SOIL	Soil enhancement
FLOW	Upstream flows
WAVE	Wave protection

**ITEMS MONITORED . . .**

<u>CODE</u>	<u>FULLNAME</u>
ANDE	Animal density
ANDI	Animal diversity
ANUS	Animal use
ENSP	Endangered species
OTHR	Other
PHVI	Physical viability
PLDI	Plant diversity
PRPR	Primary production
SEPR	Secondary production
VECO	Vegetative cover
WAQU	Water quality
WATA	Water table depth

## **APPENDIX E**

### **FIELD DESCRIPTIONS**



FIELD	FIELD DESCRIPTION
PERMIT	Permit number
DATE_ISS	Date the permit was issued
I	Impacted wetland?
CASE	Type of compensatory mitigation
COMP_MIT	Permits requiring compensatory mitigation
MIT_BANK	Mitigation bank?
BANK_NAME	Name of the mitigation bank
MONEY_LAND	Mitigation bank involved money or land?
STATE	State in which the wetland is located
COUNTY	County in which the wetland is located
AREA	Total area of the wetland
TOWN_RANG	Township and range
SECTIONS	Section(s)
LAT_LONG	Latitude and longitude
MAPNAME	USGS or NWI map name
SCALE	Scale of the map
BODYTYPE	Water body or river body?
BODYNAME	Name of the water body or river body
LOCATION	Specific location of the wetland
OFF_ON	Off-site or on-site?
LAND_USE	Primary land use
MAPS	Maps available
BLUEPRINTS	Blueprints available
GRND PHOTO	Ground photos available
AIR PHOTO	Aerial photos available
DATE_BEGAN	Date construction began
DATE_COMP	Date construction completed
CORRECTION	Were mid-course corrections made?
WET_TYPE	Wetland type
WA	Area of each wetland type
PROJECT	Project types
FUNCTION	Functions of the impacted wetland
OBJECTIVE	Objectives of the compensatory wetland
METHOD	Construction methods
ENDSP_SCI	Scientific name of endangered species
ENDSP_COM	Common name of endangered species
TITLE	Report title
AUTHOR	Author of report
YEAR	Year report was published
SOURCE	Source from which report may be obtained
CONTENT	Content of the report
CONTACT	Primary contact
ORGANIZA	Contact's organization
ADDRESS	Contact's address
CITY	City in which contact is located
ST	State in which contact is located
ZIP	Contact's zip code
PHONE	Contact's phone number
AS_BUILT	Do as-built construction plans exist?
CHECK_REG	Were checks made regularly?
CHECK_IREG	Were checks made irregularly?
DATA_COLL	Were data collected?
MONITOR	Items monitored
UDF_DATE	User defined field-date
UDF_NUM	User defined field-numeric
UDF_YN	User defined field-yes or no
UDF_CHAR	User defined field-character





## **APPENDIX F**

### **EXAMPLES OF SELECTED QUERIES**



## EXAMPLES OF SELECTED QUERIES

A sample database (CA404.dbf) containing information from 20 permits is included with the PTS and is loaded onto your computer when the PTS is installed. Use this database to perform the following queries to make sure you understand the query process. Refer to *Accessing the Query Component of the PTS* (Page 47), if you have forgotten how to access the query program and select a database to be queried.

1. What is the frequency of occurrence of impacted and compensatory (created, enhanced, preserved, or restored) wetlands in each county?

**CLEAR**

Clear	Enter	Run	Filter	View	Save	Print	Quit
Clear the query worksheet							

☛ Position the highlighted box over **CLEAR** and press **[Enter]**, OR press **C**.

**ENTER**

Clear	Enter	Run	Filter	View	Save	Print	Quit
Select fields to be used in a query							

☛ Position the highlighted box over **ENTER** and press **[Enter]**, OR press **E**.

SELECTED QRY_FIELD	
F	PERMIT : Permit number
F	DATE_ISS : Date permit was issued
F	I : Impacted wetland?
F	CASE : Type of compensatory mitigation
F	COMP_MIT : Permits requiring compensatory mitigation
F	MIT_BANK : Mitigation bank?
F	BANK_NAME : Name of mitigation bank
F	MONEY_LAND : Mitigation bank involved money or land?
F	STATE : State in which wetland is located
F	COUNTY : County in which wetland is located
F	AREA : Total area of the wetland
F	TOWN_RANG : Township and range
F	SECTIONS : Sections
F	LAT_LONG : Latitude and longitude
F	MAPNAME : USGS or NWI map name
F	SCALE : Scale of map

[↓] [⇒]

**Press [Enter] to select/deselect the fields to be used THEN  
Press [Esc] to continue.**

- ☛ Position the highlighted box over **CASE** and press **[Enter]** to select all the cases (i.e., Impacted, Created, Enhanced, Preserved, and Restored).
- ☛ Position the highlighted box over **COUNTY** and press **[Enter]** to select all the counties listed in the database.

SELECTED QRY_FIELD	
F	PERMIT : Permit number
F	DATE_ISS : Date permit was issued
F	I : Impacted wetland?
T	CASE : Type of compensatory mitigation
F	COMP_MIT : Permits requiring compensatory mitigation
F	MIT_BANK : Mitigation bank?
F	BANK_NAME : Name of mitigation bank
F	MONEY_LAND : Mitigation bank involved money or land?
F	STATE : State in which wetland is located
T	COUNTY : County in which wetland is located
F	AREA : Total area of the wetland
F	TOWN_RANG : Township and range
F	SECTIONS : Sections
F	LAT_LONG : Latitude and longitude
F	MAPNAME : USGS or NWI map name
F	SCALE : Scale of map

[↓] [⇒]

**Press [Enter] to select/deselect the fields to be used THEN  
Press [Esc] to continue.**

☞ Press [Esc].

CASE_TF	CASE	COUNTY_TF	COUNTY
F		F	
F	CREATED	F	ALAMEDA
F	ENHANCED	F	CONTRA COSTA
F	IMPACTED	F	MARIN
F	PRESERVED	F	MONTEREY
F	RESTORED	F	NAPA
F		F	SAN MATEO
F		F	SANTA CLARA
F		F	SANTA CRUZ
F		F	SOLANO
F		F	SONOMA

[↓] [⇒]

Press [Enter] to select/deselect items. Press [Enter] over the empty box in the 1st row to select ALL the items in that column. Press [Esc] to continue.

- ☞ Position the highlighted box over the empty space in the first row under the CASE field and press **[Enter]** to select all the cases. The first F under the CASE\_TF field will change to a T to indicate all cases have been selected.
- ☞ Position the highlighted box over the empty space in the first row under the COUNTY field and press **[Enter]** to select all the counties. The first F under the COUNTY\_TF field will change to a T to indicate all counties have been selected.

CASE_TF	CASE	COUNTY_TF	COUNTY
T		T	
F	CREATED	F	ALAMEDA
F	ENHANCED	F	CONTRA COSTA
F	IMPACTED	F	MARIN
F	PRESERVED	F	MONTEREY
F	RESTORED	F	NAPA
F		F	SAN MATEO
F		F	SANTA CLARA
F		F	SANTA CRUZ
F		F	SOLANO
		F	SONOMA

[↓] [⇒]

Press [Enter] to select/deselect items. Press [Enter] over the empty box in the 1st row to select ALL the items in that column. Press [Esc] to continue.

☞ Press [Esc].

RUN

Clear	Enter	Run	Filter	View	Save	Print	Quit
Process the query							

☞ Position the highlighted box over **RUN** and press [Enter], OR press R.

Query the database by permit? (Y)es/(N)o	N
--	---

Since we want to know how many **wetlands** are located in each county, we would query the database by wetland.

☞ Press N and press [Enter].

Generate a detail file? (Y)es/(N)o	N
------------------------------------	---



Since we are only interested in the results of the query, and not the supporting information, we do not want to generate a detail file.

☞ Press **N** and press **[Enter]**.

Process the query? (Y)es/(N)o    **N**

☞ Press **Y** to process the query.

Process the query? (Y)es/(N)o    **Y**

☞ Press **[Enter]**.

**FILTER**

Clear   Enter   Run   Filter   View   Save   Print   Quit  
Remove all totals with counts equal to zero

Since we only want to view the results that met the query specifications, we would filter the results.

☞ Position the highlighted box over **FILTER** and press **[Enter]**, OR press **F**.

**VIEW**

Clear   Enter   Run   Filter   View   Save   Print   Quit  
View the results of a query

Totals  
Details  
Exit

☞ Position the highlighted box over **VIEW** and press **[Enter]**, OR press **V** to view the results worksheet.

- ☛ Position the highlighted box over **TOTALS** and press [Enter], OR press T and press [Enter] to view the results worksheet.

The results worksheet will appear as illustrated below.

CASE	COUNTY	COUNT	ACRES	HECTARES
C	MARIN	2	53.4	21.6
C	SAN MATEO	1	1.5	0.6
C	SOLANO	1	0.2	0.1
E	SAN MATEO	1	5.2	2.1
E	SANTA CRUZ	1	7.5	3.0
E	SONOMA	1	1.0	0.4
I	ALAMEDA	2	75.5	30.6
I	CONTRA COSTA	1	1.0	0.4
I	MARIN	8	303.9	123.0
I	MONTEREY	1	114.0	46.1
I	NAPA	1	300.0	121.4
I	SAN MATEO	3	57.0	23.1
I	SANTA CLARA	1	8.0	3.2
I	SOLANO	2	5.2	2.1
I	SONOMA	2	5.5	2.2
P	MARIN	2	13.3	5.4

[↓] [⇒]

Press [Esc] to return to the main menu.

**2. What is the frequency of occurrence of project types listed as impacting wetlands?**

**CLEAR**

Clear	Enter	Run	Filter	View	Save	Print	Quit
Clear the query worksheet							

☞ Position the highlighted box over **CLEAR** and press **[Enter]**, OR press **C**.

**ENTER**

Clear	Enter	Run	Filter	View	Save	Print	Quit
Select fields to be used in a query							

☞ Position the highlighted box over **ENTER** and press **[Enter]**, OR press **E**.

SELECTED QRY_FIELD		
F	PERMIT	: Permit number
F	DATE_ISS	: Date permit was issued
F	I	: Impacted wetland?
F	CASE	: Type of compensatory mitigation
F	COMP_MIT	: Permits requiring compensatory mitigation
F	MIT_BANK	: Mitigation bank?
F	BANK_NAME	: Name of mitigation bank
F	MONEY_LAND	: Mitigation bank involved money or land?
F	STATE	: State in which wetland is located
F	COUNTY	: County in which wetland is located
F	AREA	: Total area of the wetland
F	TOWN_RANG	: Township and range
F	SECTIONS	: Sections
F	LAT_LONG	: Latitude and longitude
F	MAPNAME	: USGS or NWI map name
F	SCALE	: Scale of map
↓	↓	↓
F	PROJECT	: Project types (MULTIPLE)

[↓] [⇒]

Press [Enter] to select/deselect the fields to be used THEN  
Press [Esc] to continue.

- ☞ Position the highlighted box over **I** (Impacted wetland?) and press [Enter] to select all the impacted wetlands.
- ☞ Position the highlighted box over **PROJECT** and press [Enter] to select all the project types.

MULTIPLE? N

Since we want to know the exact combination of projects listed in the permits, we would perform a multiple query.

- ☞ Press **Y** to perform a multiple query.

MULTIPLE? Y

Press [Enter].

EXACT? N

Since we want to know the exact combination of projects listed in the permits, we would perform an exact query.

Press Y to perform an exact query.

EXACT? Y

Press [Enter].

SELECTED QRY_FIELD		
F	PERMIT	: Permit number
F	DATE_ISS	: Date permit was issued
T	I	: Impacted wetland?
F	CASE	: Type of compensatory mitigation
F	COMP_MIT	: Permits requiring compensatory mitigation
F	MIT_BANK	: Mitigation bank?
F	BANK_NAME	: Name of mitigation bank
F	MONEY_LAND	: Mitigation bank involved money or land?
F	STATE	: State in which wetland is located
F	COUNTY	: County in which wetland is located
F	AREA	: Total area of the wetland
F	TOWN_RANG	: Township and range
F	SECTIONS	: Sections
F	LAT_LONG	: Latitude and longitude
F	MAPNAME	: USGS or NWI map name
F	SCALE	: Scale of map
↓	↓	↓
T	PROJECT	: Project types (MULTIPLE)

[↓] [⇒]

**Press [Enter] to select/deselect the fields to be used THEN**  
**Press [Esc] to continue.**

Press [Esc].

I_TF	I	PROJECT_TF	PROJECT
F		F	
F	N	F	AQUACULTURE
F	Y	F	COMMERCIAL PROJECT
F		F	DREDGE DISPOSAL
F		F	PRIVATE DOCK OR MOORAGE
F		F	DRAINAGE DITCH
F		F	DREDGING
F		F	HOUSING DEVELOPMENT
F		F	INDUSTRIAL PARK
F		F	MARINA
F		F	PIPELINE
F		F	RAILROAD
F		F	RECREATIONAL AREA
F		F	HIGHWAY, ROAD, OR BRIDGE
F		F	STREAM MODIFICATION
F		F	TIDE GATE

[↓] [⇒]

Press [Enter] to select/deselect items. Press [Enter] over the empty box in the 1st row to select ALL the items in that column. Press [Esc] to continue.

You must scroll over to the right to see the last column.

- ☛ Position the highlighted box over the Y in the I (Impacted) field and press **[Enter]** to select all the impacted wetlands. The corresponding F under the I\_TF field will change to a T to indicate only impacted wetlands have been selected.
- ☛ Position the highlighted box over the empty space in the first row of the PROJECT field and press **[Enter]** to select all the project types. The first F under the PROJECT\_TF field will change to a T to indicate all project types have been selected.

I_TF	I	PROJECT_TF	PROJECT
F		T	
F	N	F	AQUACULTURE
T	Y	F	COMMERCIAL PROJECT
F		F	DREDGE DISPOSAL
F		F	PRIVATE DOCK OR MOORAGE
F		F	DRAINAGE DITCH
F		F	DREDGING
F		F	HOUSING DEVELOPMENT
F		F	INDUSTRIAL PARK
F		F	MARINA
F		F	PIPELINE
F		F	RAILROAD
F		F	RECREATIONAL AREA
F		F	HIGHWAY, ROAD, OR BRIDGE
F		F	STREAM MODIFICATION
F		F	TIDE GATE

[↓] [⇒]

Press [Enter] to select/deselect items. Press [Enter] over the empty box in the 1st row to select ALL the items in that column. Press [Esc] to continue.

+ Press [Esc].

RUN

Clear	Enter	Run	Filter	View	Save	Print	Quit
Process the query							

☞ Position the highlighted box over **RUN** and press [Enter], OR press R.

Query the database by permit? (Y)es/(N)o	N
--	---

Since we want to know the project types that impacted **wetlands**, we would query the database by wetland.



☞ Press **N** and press **[Enter]**.

Generate a detail file? (Y)es/(N)o    **N**

Since we are only interested in the results of the query, and not the supporting information, we do not want to generate a detail file.

☞ Press **N** and press **[Enter]**.

Process the query? (Y)es/(N)o    **N**

☞ Press **Y** to process the query.

Process the query? (Y)es/(N)o    **Y**

☞ Press **[Enter]**.

Since this is a multiple, exact query, allow up to 45 minutes for processing.

**FILTER**

Clear   Enter   Run   Filter   View   Save   Print   Quit  
Remove all totals with counts equal to zero

Since we only want to view the results that met the query specifications, we would filter the results.

☞ Position the highlighted box over **FILTER** and press **[Enter]**, OR press **F**.

**VIEW**

Clear	Enter	Run	Filter	View	Save	Print	Quit			
View the results of a query										
<table border="1"> <tr> <td>Totals</td> </tr> <tr> <td>Details</td> </tr> <tr> <td>Exit</td> </tr> </table>								Totals	Details	Exit
Totals										
Details										
Exit										

- Position the highlighted box over **VIEW** and press **[Enter]**, OR press **V** to view the query results.
- Position the highlighted box over **TOTALS** and press **[Enter]**, OR press **T** and press **[Enter]** to view the results worksheet.

The results worksheet will appear as illustrated below.

I	PROJECT1	PROJECT2	PROJECT3	COUNT	ACRES	HECTARES
Y	COMM			4	60.7	24.6
Y	DDIS			1	0.0	0.0
Y	HOUS			1	150.0	60.7
Y	INDS			2	14.0	5.7
Y	MARN			1	5.0	2.0
Y	RECR			1	1.0	0.4
Y	ROAD			3	76.2	30.8
Y	UTIL			1	0.2	0.1
Y	AQUA	PIPL		1	114.0	46.1
Y	DOCK	HOUS		1	99.0	40.1
Y	DREG	WDIS		1	300.0	121.4
Y	DRAI	PIPL	SMOD	1	8.0	3.2
Y	INDS	RAIL	TIDE	1	12.0	4.9
Y	MARN	RECR	WILD	1	30.0	12.1

[↓] [⇒]

Press [Esc] to return to the main menu.

**3. What were the sizes of the wetlands affected by permitting (in ten acre increments)?**

**CLEAR**

Clear	Enter	Run	Filter	View	Save	Print	Quit
Clear the query worksheet							

☞ Position the highlighted box over **CLEAR** and press **[Enter]**, OR press **C**.

**ENTER**

Clear	Enter	Run	Filter	View	Save	Print	Quit
Select fields to be used in a query							

☞ Position the highlighted box over **ENTER** and press **[Enter]**, OR press **E**.

SELECTED QRY_FIELD	
F	PERMIT : Permit number
F	DATE_ISS : Date permit was issued
F	I : Impacted wetland?
F	CASE : Type of compensatory mitigation
F	COMP_MIT : Permits requiring compensatory mitigation
F	MIT_BANK : Mitigation bank?
F	BANK_NAME : Name of mitigation bank
F	MONEY_LAND : Mitigation bank involved money or land?
F	STATE : State in which wetland is located
F	COUNTY : County in which wetland is located
F	AREA : Total area of the wetland
F	TOWN_RANG : Township and range
F	SECTIONS : Sections
F	LAT_LONG : Latitude and longitude
F	MAPNAME : USGS or NWI map name
F	SCALE : Scale of map

[↓] [⇒]

**Press [Enter] to select/deselect the fields to be used THEN  
Press [Esc] to continue.**

- ☛ Position the highlighted box over **CASE** and press [Enter] to select all the cases (i.e., Impacted, Created, Enhanced, Preserved, and Restored).
- ☛ Position the highlighted box over **AREA** and press [Enter] to select all the areas.

SELECTED QRY_FIELD	
F	PERMIT : Permit number
F	DATE_ISS : Date permit was issued
F	I : Impacted wetland?
T	CASE : Type of compensatory mitigation
F	COMP_MIT : Permits requiring compensatory mitigation
F	MIT_BANK : Mitigation bank?
F	BANK_NAME : Name of mitigation bank
F	MONEY_LAND : Mitigation bank involved money or land?
F	STATE : State in which wetland is located
F	COUNTY : County in which wetland is located
T	AREA : Total area of the wetland
F	TOWN_RANG : Township and range
F	SECTIONS : Sections
F	LAT_LONG : Latitude and longitude
F	MAPNAME : USGS or NWI map name
F	SCALE : Scale of map

[↓] [⇒]

**Press [Enter] to select/deselect the fields to be used THEN  
Press [Esc] to continue.**

Press [Esc].

CASE_TF	CASE	AREA_L	AREA_H
F		0.0	0.0
F	CREATED	0.0	0.0
F	ENHANCED	0.0	0.0
F	IMPACTED	0.0	0.0
F	PRESERVED	0.0	0.0
F	RESTORED	0.0	0.0
F		0.0	0.0
F		0.0	0.0
F		0.0	0.0
F		0.0	0.0
F		0.0	0.0
F		0.0	0.0
F		0.0	0.0
F		0.0	0.0
F		0.0	0.0

[↓] [⇒]

Press [Enter] to select/deselect items. Press [Enter] over the empty box in the 1st row to select ALL the items in that column. Press [Esc] to continue.

- ☞ Position the highlighted box over the empty space in the first row under the CASE field and press **[Enter]** to select all the cases. The first F under the CASE\_TF field will change to a T to indicate all cases have been selected.
- ☞ Enter the areas listed on the next page in the area range fields to obtain results in ten acre increments. You could also enter other area increments depending upon how you wanted to see the data arranged.

CASE_TF	CASE	AREA_L	AREA_H
T		-1.0	10.0
F	CREATED	10.0	20.0
F	ENHANCED	20.0	30.0
F	IMPACTED	30.0	40.0
F	PRESERVED	40.0	50.0
F	RESTORED	50.0	60.0
F		60.0	70.0
F		70.0	80.0
F		80.0	90.0
F		90.0	100.0
F		100.0	9999.0
F			
F			
F			

[↓] [⇒]

Press [Enter] to select/deselect items. Press [Enter] over the empty box in the 1st row to select ALL the items in that column. Press [Esc] to continue.

Press [Esc].

RUN

Clear	Enter	Run	Filter	View	Save	Print	Quit
Process the query							

Position the highlighted box over **RUN** and press [Enter], OR press **R**.

Query the database by permit? (Y)es/(N)o	N
--	---

Since we want to know the impacted and compensatory (created, enhanced, preserved, or restored) **wetland** area, we would query the database by wetland.

☞ Press **N** and press **[Enter]**.

Generate a detail file? (Y)es/(N)o    **N**

Since we are only interested in the results of the query, and not the supporting information, we do not want to generate a detail file.

☞ Press **N** and press **[Enter]**.

Process the query? (Y)es/(N)o    **N**

☞ Press **Y** to process the query.

Process the query? (Y)es/(N)o    **Y**

☞ Press **[Enter]**.

## **FILTER**

Clear   Enter   Run   Filter   View   Save   Print   Quit  
Remove all totals with counts equal to zero

Since we only want to view the results that met the query specifications, we would filter the results.

☞ Position the highlighted box over **FILTER** and press **[Enter]**, OR press **F**.

## **VIEW**

Clear   Enter   Run   Filter   View   Save   Print   Quit  
View the results of a query

Totals  
Details  
Exit



- ☛ Position the highlighted box over **VIEW** and press [Enter], OR press **V** to view the results worksheet.
- ☛ Position the highlighted box over **TOTALS** and press [Enter], OR press **T** and press [Enter] to view the results worksheet.

The results worksheet will appear as illustrated below.

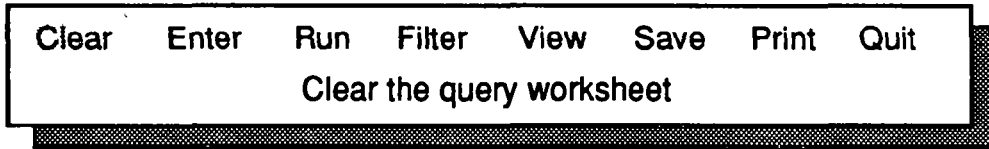
CASE	AREA_L	AREA_H	COUNT	ACRES	HECTARES
C	-1.0	10.0	5	12.3	5.0
C	40.0	50.0	1	43.8	17.7
E	-1.0	10.0	1	1.0	0.4
E	10.0	20.0	1	12.7	5.1
I	-1.0	10.0	11	35.6	14.4
I	10.0	20.0	2	27.0	10.9
I	20.0	30.0	1	30.0	12.1
I	30.0	40.0	1	39.0	15.8
I	70.0	80.0	1	75.5	30.6
I	90.0	100.0	1	99.0	40.1
I	100.0	9999.0	3	564.0	228.3
P	-1.0	10.0	3	8.8	3.6
P	10.0	20.0	1	13.0	5.3
R	40.0	50.0	1	50.0	20.2
R	90.0	100.0	1	100.0	40.5
R	100.0	9999.0	3	388.0	157.0

[↓] [⇒]

Press [Esc] to return to the main menu.

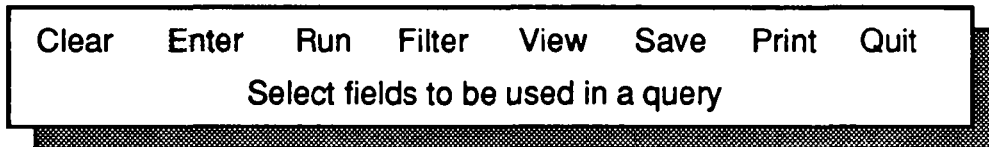
4. In what years were the permits requiring compensatory mitigation issued?

CLEAR



☞ Position the highlighted box over **CLEAR** and press [Enter], OR press **C**.

ENTER



☞ Position the highlighted box over **ENTER** and press [Enter], OR press **E**.

SELECTED QRY_FIELD	
F	PERMIT : Permit number
F	DATE_ISS : Date permit was issued
F	I : Impacted wetland?
F	CASE : Type of compensatory mitigation
F	COMP_MIT : Permits requiring compensatory mitigation
F	MIT_BANK : Mitigation bank?
F	BANK_NAME : Name of mitigation bank
F	MONEY_LAND : Mitigation bank involved money or land?
F	STATE : State in which wetland is located
F	COUNTY : County in which wetland is located
F	AREA : Total area of the wetland
F	TOWN_RANG : Township and range
F	SECTIONS : Sections
F	LAT_LONG : Latitude and longitude
F	MAPNAME : USGS or NWI map name
F	SCALE : Scale of map

[↓] [⇒]

**Press [Enter] to select/deselect the fields to be used THEN  
Press [Esc] to continue.**

- ☛ Position the highlighted box over **DATE\_ISS** and press **[Enter]** to select the dates the permits were issued.
- ☛ Position the highlighted box over **COMP\_MIT** and press **[Enter]** to select the permits requiring compensatory mitigation.

SELECTED		QRY_FIELD
F	PERMIT	: Permit number
T	DATE_ISS	: Date permit was issued
F	I	: Impacted wetland?
F	CASE	: Type of compensatory mitigation
T	COMP_MIT	: Permits requiring compensatory mitigation
F	MIT_BANK	: Mitigation bank?
F	BANK_NAME	: Name of mitigation bank
F	MONEY_LAND	: Mitigation bank involved money or land?
F	STATE	: State in which wetland is located
F	COUNTY	: County in which wetland is located
F	AREA	: Total area of the wetland
F	TOWN_RANG	: Township and range
F	SECTIONS	: Sections
F	LAT_LONG	: Latitude and longitude
F	MAPNAME	: USGS or NWI map name
F	SCALE	: Scale of map

[↓] [⇒]

**Press [Enter] to select/deselect the fields to be used THEN  
Press [Esc] to continue.**

 Press [Esc].

DATE_ISS_L	DATE_ISS_H	COMPMIT_TF	COMP_MIT
/ /	/ /	F	
/ /	/ /	F	N
/ /	/ /	F	Y
/ /	/ /	F	
/ /	/ /	F	
/ /	/ /	F	
/ /	/ /	F	
/ /	/ /	F	
/ /	/ /	F	
/ /	/ /	F	
/ /	/ /	F	
/ /	/ /	F	
/ /	/ /	F	
/ /	/ /	F	

[↓] [⇒]

Press [Enter] to select/deselect items. Press [Enter] over the empty box in the 1st row to select ALL the items in that column. Press [Esc] to continue.

- ☞ Enter the dates listed on the next page in the date range fields to obtain results in one year increments. You could also enter other date increments depending upon how you wanted to see the data arranged.
- ☞ Position the highlighted box over the Y in the COMP\_MIT field and press **[Enter]**. The corresponding F will change to a T to indicate that only the permits requiring compensatory mitigation have been selected.

DATE_ISS_L	DATE_ISS_H	COMPMIT_TF	COMP_MIT
12/31/75	12/31/76	F	
12/31/76	12/31/77	F	N
12/31/77	12/31/78	T	Y
12/31/78	12/31/79	F	
12/31/79	12/31/80	F	
12/31/80	12/31/81	F	
12/31/81	12/31/82	F	
12/31/82	12/31/83	F	
12/31/83	12/31/84	F	
12/31/84	12/31/85	F	
12/31/85	12/31/86	F	
12/31/86	12/31/87	F	
12/31/87	12/31/88	F	
12/31/88	12/31/89	F	

[↓] [⇒]

Press [Enter] to select/deselect items. Press [Enter] over the empty box in the 1st row to select ALL the items in that column. Press [Esc] to continue.

☞ Press [Esc].

RUN

Clear	Enter	Run	Filter	View	Save	Print	Quit
Process the query							

☞ Position the highlighted box over **RUN** and press [Enter], OR press **R**.

Query the database by permit? (Y)es/(N)o	N
--	---

Since we want to know how many **permits** requiring compensatory mitigation were issued each year, we would query the database by permit.

☞ Press **Y** to query the database by permit.

Query the database by permit? (Y)es/(N)o Y

☞ Press [Enter].

Generate a detail file? (Y)es/(N)o N

Since we are only interested in the results of the query, and not the supporting information, we do not want to generate a detail file.

☞ Press N and press [Enter].

Process the query? (Y)es/(N)o N

☞ Press Y to process the query.

Process the query? (Y)es/(N)o Y

☞ Press [Enter].

**FILTER**

Clear Enter Run Filter View Save Print Quit  
Remove all totals with counts equal to zero

Since we only want to view the results that met the query specifications, we would filter the results.

☞ Position the highlighted box over **FILTER** and press [Enter], OR press F.

**VIEW**

Clear
Enter
Run
Filter
View
Save
Print
Quit

View the results of a query

Totals  
Details  
Exit

- ☛ Position the highlighted box over **VIEW** and press [Enter], OR press **V** to view the results worksheet.
- ☛ Position the highlighted box over **TOTALS** and press [Enter], OR press **T** and press [Enter] to view the results worksheet.

The results worksheet will appear as illustrated below.

DATE_ISS_L	DATE_ISS_H	COMP_MIT	COUNT	ACRES	HECTARES
12/31/75	12/31/76	Y	1	0.4	0.2
12/31/76	12/31/77	Y	2	16.4	6.6
12/31/78	12/31/79	Y	1	123.0	49.8
12/31/79	12/31/80	Y	2	454.0	183.7
12/31/80	12/31/81	Y	1	82.8	33.5
12/31/81	12/31/82	Y	3	490.2	198.4
12/31/85	12/31/86	Y	1	12.7	5.1
12/31/86	12/31/87	Y	3	142.5	57.7
12/31/87	12/31/88	Y	1	13.5	5.5

[↓] [⇒]

Press [Esc] to return to the main menu.



# Permit Tracking System



Version 1.0

Robert G. Gibson, Programmer

Mantech Env. Tech., Inc.

CORVALLIS ENVIRONMENTAL RESEARCH LABORATORY

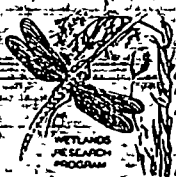
U.S. ENVIRONMENTAL PROTECTION AGENCY

200 S.W. 35TH STREET, CORVALLIS, OR 97333



DISK #1

# Permit Tracking System



Version 1.0

Robert G. Gibson, Programmer

ManTech Env Tech, Inc.

CORVALLIS ENVIRONMENTAL RESEARCH LABORATORY

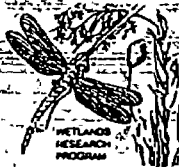
U.S. ENVIRONMENTAL PROTECTION AGENCY

200 S W 35TH STREET CORVALLIS, OR 97333



DISK #2

# Permit Tracking System



Version 1.0

Robert G. Gibson, Programmer

ManTech Env. Tech., Inc.

CORVALLIS ENVIRONMENTAL RESEARCH LABORATORY

U.S. ENVIRONMENTAL PROTECTION AGENCY

200 S.W. 35TH STREET, CORVALLIS, OR 97333



DISK #3