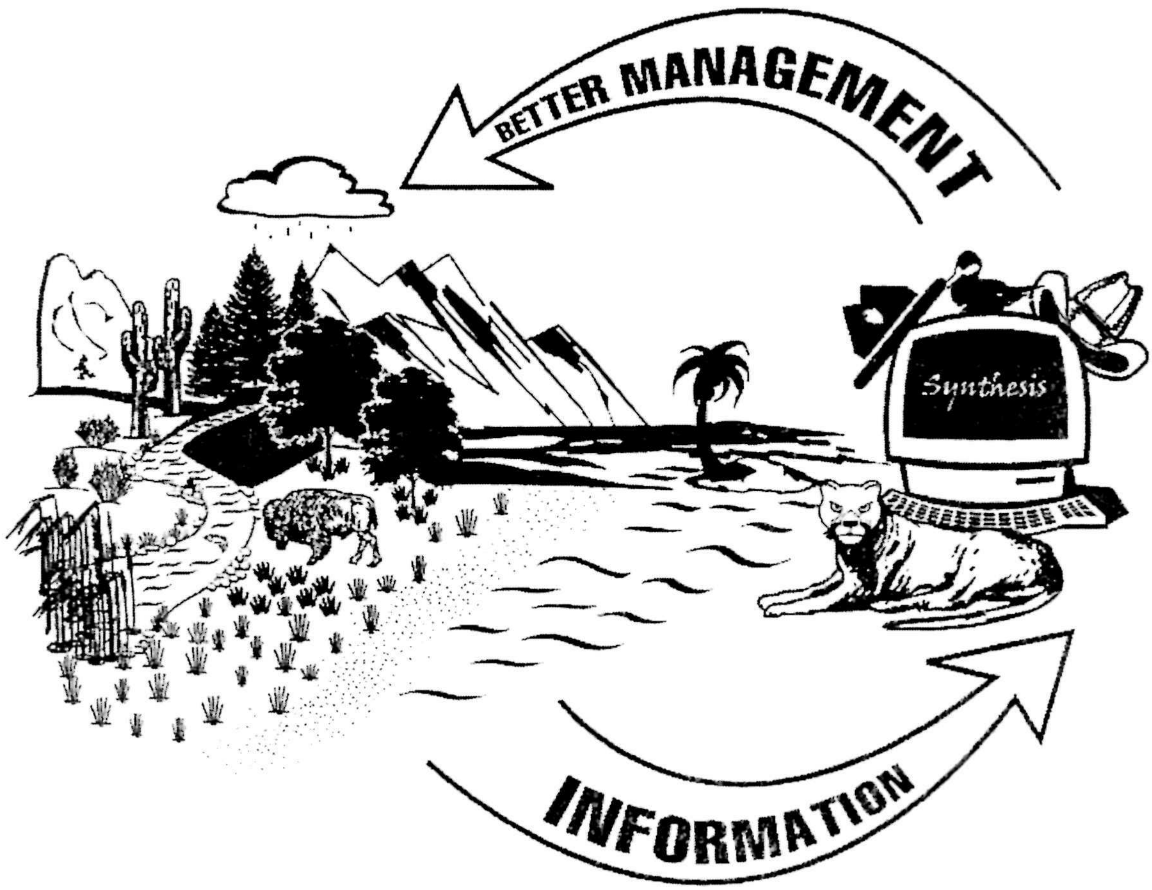
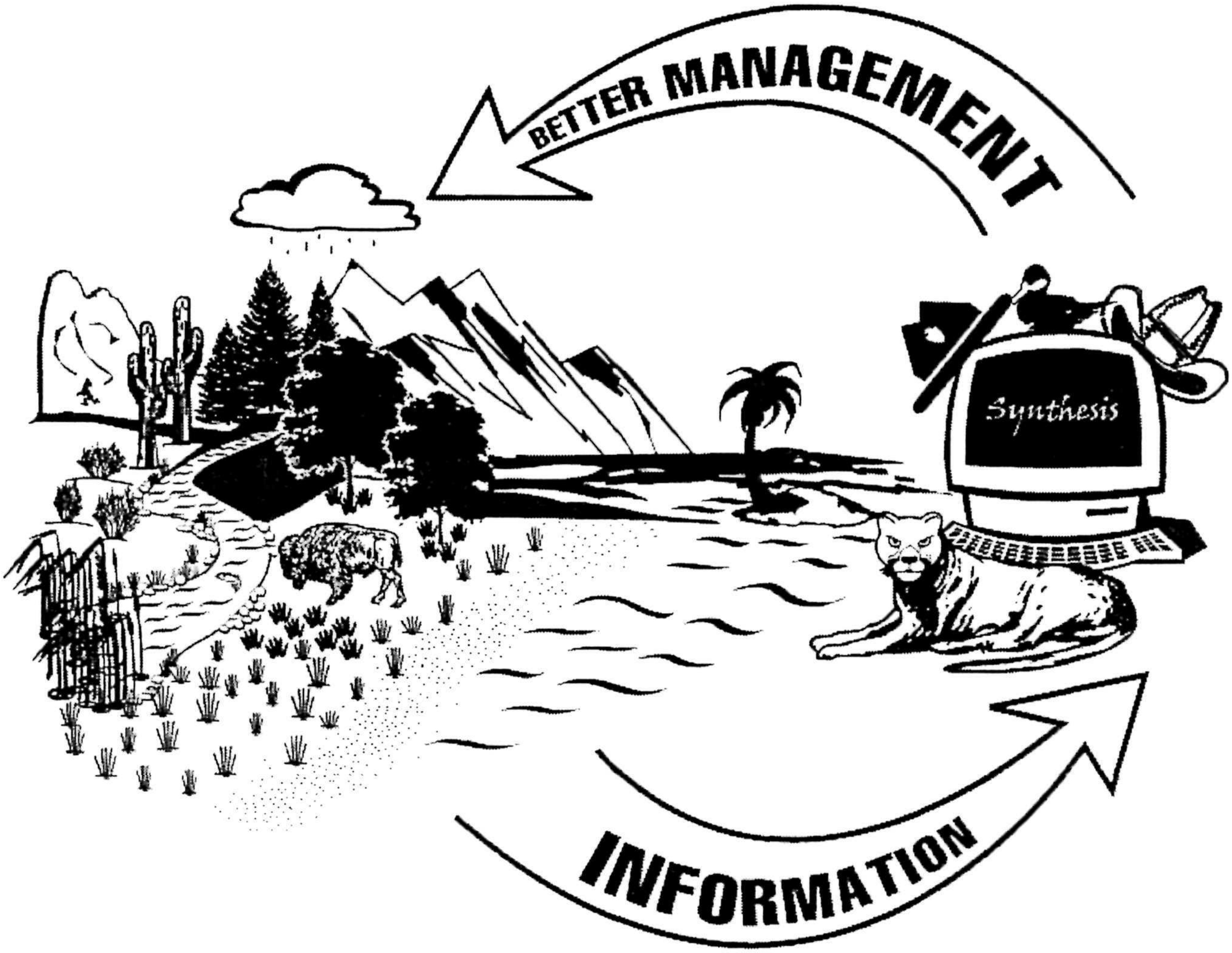



Information Management System

### X.1.7 Synthesis

Synthesis is an information management system for efficiently locating, organizing, integrating, and disseminating data and information. Synthesis presents the user with a simple, graphical user interface that functions as a gateway to information that may be stored on local computers, networks, intranets, or the Internet. From this single gateway, a user may view and integrate many types of information including text-based documents, photographic libraries, databases, spreadsheets, presentation graphics, geographic information system (GIS) data, bibliographies, Internet-based information, and decision support systems. All of the databases listed above, including the NPBib, NPSpecies, Dataset Catalog, GIS Theme Manager, and the NR Database Template, will operate as stand-alone applications or can be accessed through Synthesis.




**Information Management System**

# *Installing Synthesis and ArcExplorer™*

## Synthesis Reference Manual One

The *Synthesis* team appreciates your comments, especially if you find any instructions confusing or difficult to follow. For assistance, please contact:

Bruce Nash
National Park Service - NRID
12795 W. Alameda Parkway
Lakewood, CO 80228

Phone: (303) 987-6697
Fax: (303) 969-2822
cc:Mail or Internet
bruce_nash@nps.gov

Jessica Dempsey
National Park Service - NRID
12795 W. Alameda Parkway
Lakewood, CO 80228

Phone: 303-987-6942
Fax: 303-969-2822
cc:Mail or Internet
jessica_dempsey@nps.gov

# Table of Contents

## Section Five

### *Logging into Runtime and Locating the Species Database*



## Section Six

### *Installing ArcExplorer™*

# *Pre-Setup Checklist and Advisory:*

Before you proceed with the installation of *Synthesis*, you must read through the pre-installation checklist and advisory notice.

**Pre-Installation Checklist:**

1. You must have administrative privilege for the computer on which you are installing the *Synthesis* and ArcExplorer™ software.

2. Turn off any virus protection software that is running on your computer.

3. Uninstall any previous version of *Synthesis* or AQUIMS using the "Add/Remove Programs" function in the **"Control Panel"** under the **Start** menu.

4. If you encounter difficulty removing a previous version of *Synthesis* or AQUIMS software using "Add/Remove Programs":

   a. Delete the *Synthesis* program folder (located under C:\Program Files and containing synthesis.exe and synadmin.exe, and accompanying files).

   OR

   b. Delete Aq.exe and accompanying program files (located in the AQUIMS folder at root). Remaining embedded program files normally removed during the uninstall process will be overwritten and updated with the new installation.

5. If you have not created/added any data of your own, delete the *Synthesis* data folder located at root and containing subdirectories (db, docs, etc.) or the AQUIMS subdirectories (db, docs, etc.) located at root. If you **HAVE** added data of your own, **please contact the *Synthesis* development team before proceeding**. Contact information is listed on the first page of this manual.

**Pre-Installation Advisory Notice:**

1. Check available space on the drives where you will install the program files and data. Insufficient disk space will prevent completion of the software:

a. *Synthesis* program files require a minimum of 6 MB space.

b. *Synthesis* data subdirectories (db, docs, effimage, etc.) currently require a minimum of 200 MB, **PLUS** the MB required for each site folder you choose to load.

2. Install both *Synthesis Administration* and *Synthesis Runtime* for users who will be managing/administering your data.

3. Install **ONLY** *Synthesis Runtime* on the computers of those who will only be using the system.

4. **Use the "Typical" installation option for most users.**

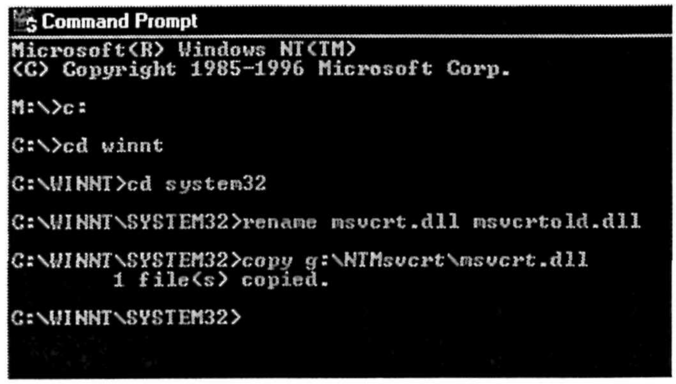
5. Use the **"Custom"** installation option **ONLY** for those users who have a valid MapObjects™ license (**See critical instructions on the next page**). The **"Custom"** option loads additional files for running MapObjects™-based applications, such as Air Resources' Aquatic Chemistry Decision Support System or the Petersburg Cultural Resource MapObjects™ application.

## Pre-Installation Advisory Notice:

NOTE: Before attempting a **"Custom"** installation, check the version number of the Windows™ system file: **Msvcrt.dll** which is located at C:\Winnt\system32 if you are running Windows NT or Windows 2000.

If you are running **Windows 95** or **98**, the **Msvcrt.dll** is located at C:\Windows\System.

Installing under the **"Custom"** option requires a **Version 6.0** of **Msvcrt.dll**. Copies of **Msvcrt.dll** for **Windows™ NT 4.0**, **Windows 2000**, **Windows™ 98, and Windows™ 95** are included on the *Synthesis* CD in their respective folders at root.



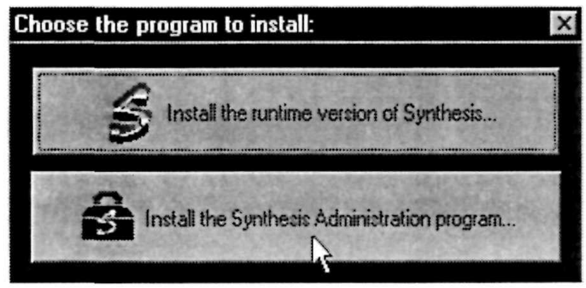

To replace an older version of this file, you must **close Windows Explorer™**. Open **Command Prompt** under the Windows™ **Start** menu. Use the commands shown in the graphic at right. If you are running Windows™ 95 or Windows™ 98, the path will be C:\Windows\

# Section One:

***Installing Synthesis Administration***

# ***Installing Synthesis Administration:***

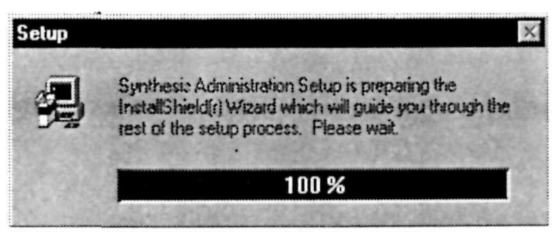
Install *Synthesis Administration* only on the computers of the staff who will be responsible for data entry and management. *Synthesis Administration* provides the tools and functions for data entry and management, and setting up user profiles.




When the *Synthesis* CD is inserted into the CD drive, the installation CD should autorun and the window to the right should automatically appear. Click on **Install the *Synthesis Administration* Program**.

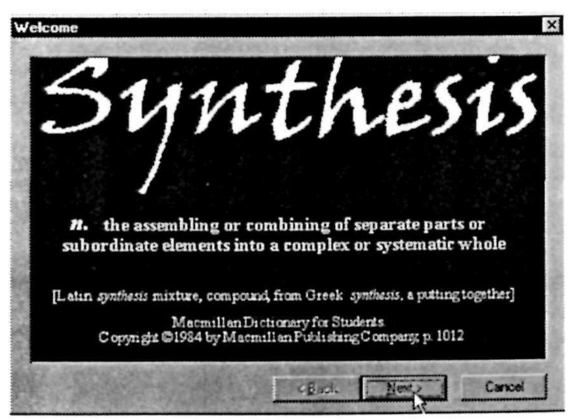
If this window does not automatically appear, click on the Windows™ **Start** button, **Run** and **Browse**. Navigate to the CDROM drive and click on **Setup.exe**. The window to the right should appear. Click on **Install the *Synthesis Administration* Program**.

## Install Shield(r) & Welcome Screen:



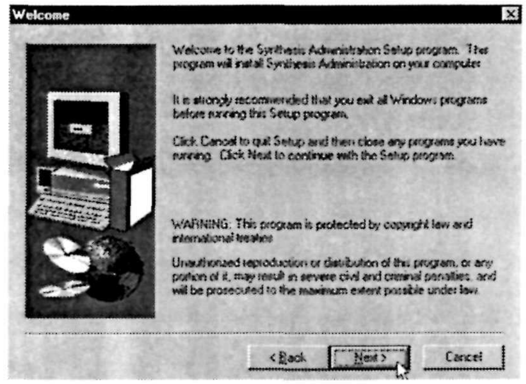

The setup program will now lead you through the installation.

When the **"Welcome"** screen appears, click on **Next** to continue the installation.



## Closing All Other Programs:

Make sure you have closed all Windows™ programs. If you need to close a Windows™ program at this point, click on **Cancel**, and **Exit Setup** in the subsequent window to close the program. Then, restart the installation. Otherwise, click on **Next**.

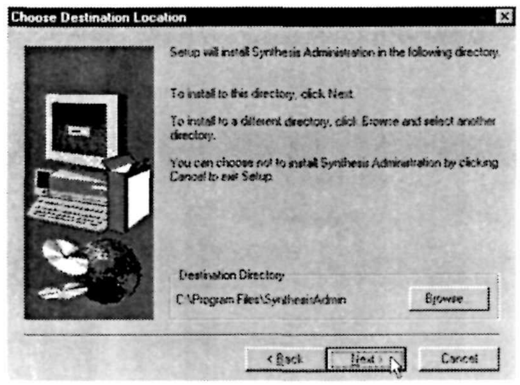



## Choosing the Destination Location:

The default installation path is **C:\Program Files\SynthesisAdmin**. That path will be appropriate for most users.

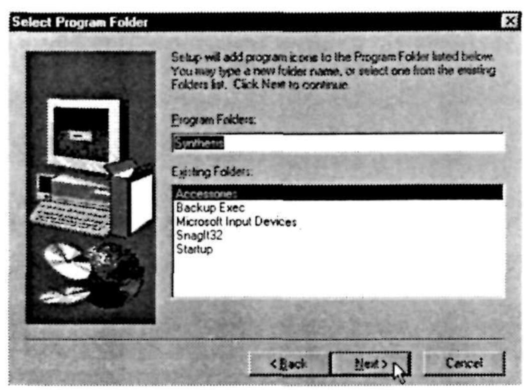
If you wish to install at a different location, click on **Browse** to select and set a different installation path and directory.

Otherwise, click on **Next**.




## Selecting the Program Folder:

A program folder called "*Synthesis*" will be added to the program folders on your computer. The *Synthesis* program shortcuts and icons (both *Administration* and *Runtime*) will be installed in this folder. Click on **Next**.

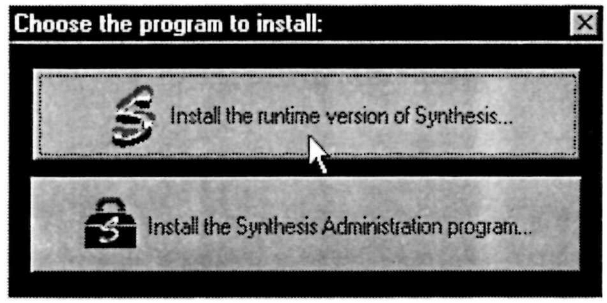


# Section Two:

*Installing Synthesis Runtime*

# *Installing Synthesis Runtime:*

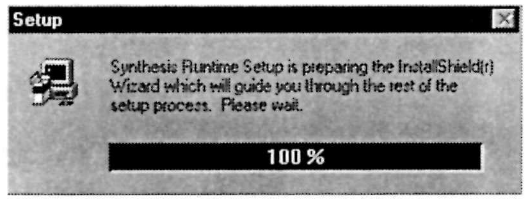
To install the *Synthesis Runtime* program (the user application), click on **Install the runtime version of *Synthesis***. The steps for installing the runtime version of *Synthesis* are the same as those for *Synthesis Administration*.

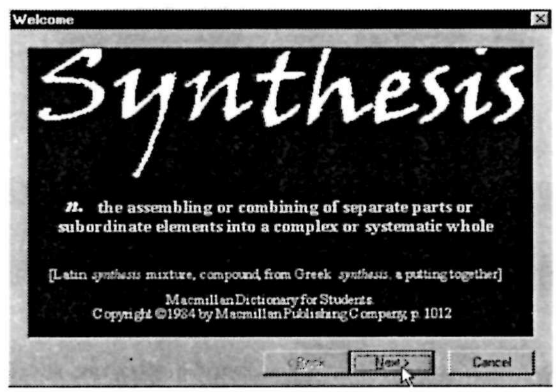



## Install Shield(r) & Welcome Screen:

The setup program will now lead you through the *Synthesis Runtime* installation program.

When the **"Welcome"** screen appears, click on **Next** to continue the installation.

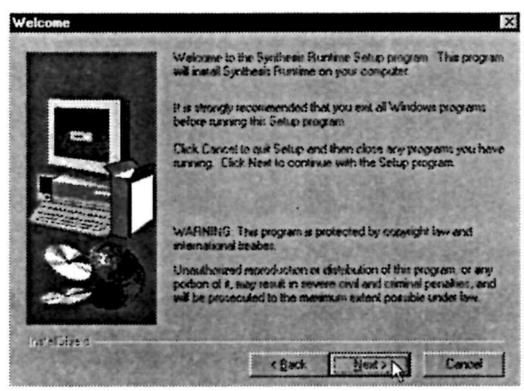


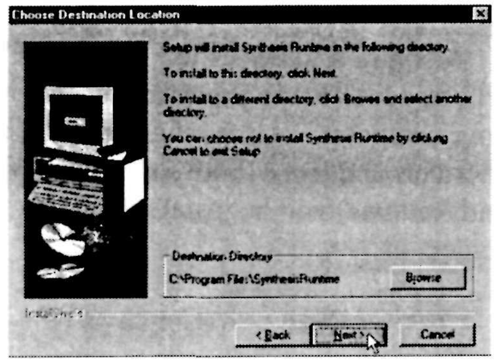

## Closing All Other Programs:

Make sure you close all Windows™ programs. If you need to close a Windows™ program, click on **Cancel**, and **Exit Setup** in the subsequent window to close the program. Then, restart the installation.

Otherwise, click on **Next**.



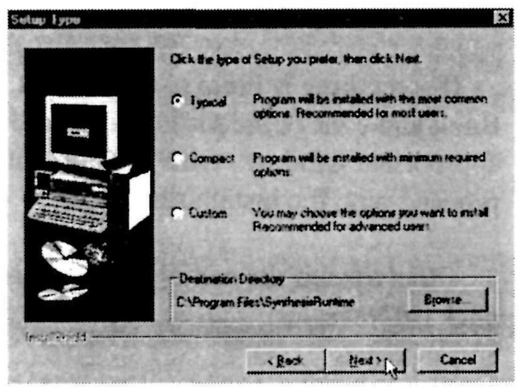
## Choosing the Destination Location:




The default installation path is **C:\Program Files\SynthesisRuntime**. That path will be appropriate for most users.

If you wish to install at a different location, click on **Browse** to select and set a different installation path and directory. Then, click on **Next**.

## Choosing the Setup Type:




Choose setup type: **"Typical"** and click on **Next**.

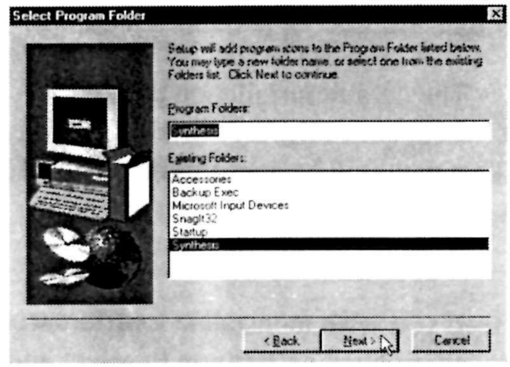
**NOTE**: Use the **"Custom"** installation option <u>**ONLY**</u> for those users who have a valid MapObjects™ license. If installing under the **"Custom"** option, refer to the critical instructions outlined on pages iv and v. These instructions explain the procedure for replacing the **Msvcrt.dll** file prior to installing under the **"Custom"** option.

The **"Custom"** option loads additional files for running MapObjects™-based applications, such as the Air Resources' Aquatic Chemistry Decision Support System or the Petersburg Cultural Resource MapObjects™ application.

## Selecting the Program Folder:

A program folder called "*Synthesis*" will be added to the program folders on your computer. The *Synthesis* program shortcuts and icons (both *Administration* and *Runtime*) will be installed in this folder.

Click on **Next**.

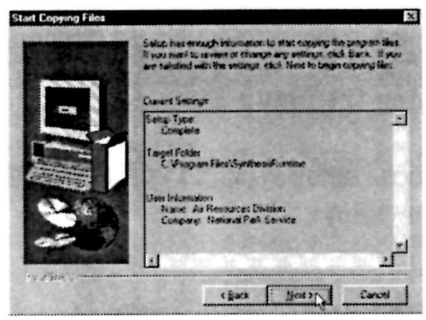



## Copying the Files:

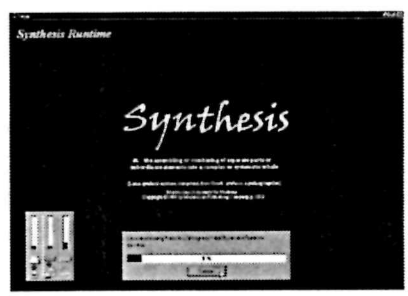
The program will now be installed. Check the information listed under **"Current Settings"** and ensure that the settings listed are correct.

If something is **incorrect**, click on **Back** and change the settings in the appropriate window. Click on **Next** and proceed with the installation.

Otherwise, if the settings are **correct**, click on **Next**.




When the files have been copied, the opening install dialog box will reappear. To close the window, click on the "X" in the upper right-hand corner of the dialog box.



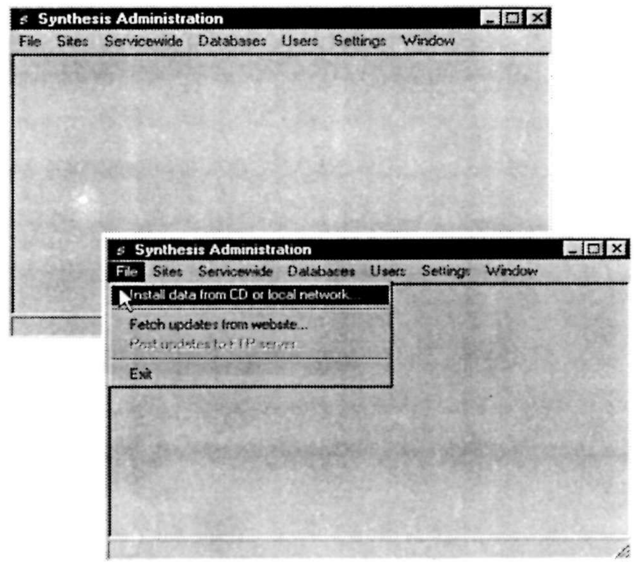

**NOTE**: If you are installing <u>only</u> program files (*Synthesis Administration* and/or *Synthesis Runtime*) and are <u>not</u> installing data, proceed to Section Four, page 14: Setting Up New Users and Logging into Synthesis Administration.

# Section Three:

*Installing the Synthesis Data*

# *Installing the Synthesis Data:*

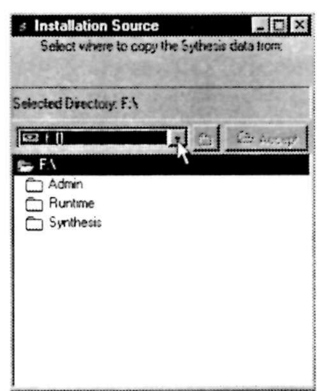
Once the application files are installed, the *Synthesis* data must be installed in a separate *Synthesis* (data) folder at root on the drive of your choice. The data are installed using *Synthesis Administration.*




Use either the desktop icon you have created, or navigate to the **Programs** menu under the **Start** button, to locate and open *Synthesis Administration.*

Click on **Install data from CD or local network** under the **File** menu in *Synthesis Administration.*

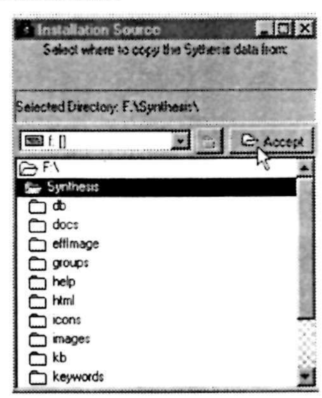
## Selecting Where to Copy Data From:




The program now asks you to locate the data source.

The data are located on your *Synthesis* installation CD. Select your CD drive from the drive-selection drop-down menu.

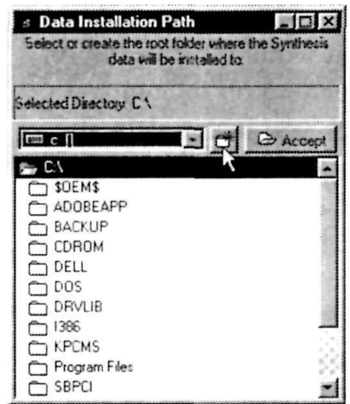
Locate and double-click on the *Synthesis* folder. You will see a list of subdirectories appear below the *Synthesis* directory.



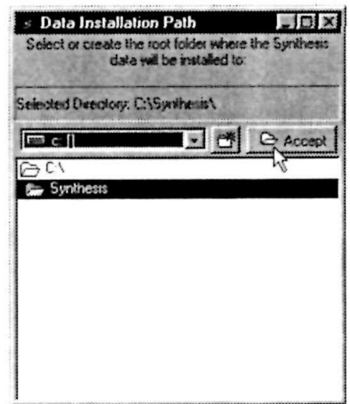

Click on **Accept**.

## Selecting Where to Install the Data:

The data are installed in a *Synthesis* (data) folder at root. You need to decide on which drive you want to install the data: hard drive or network server. **The default drive is C:\.**



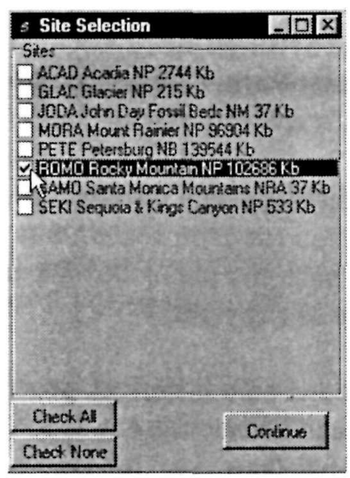

Click on the **drive** where the data will be installed. Then, click on the **"Create new directory"** icon to the left of the drive-selection drop-down menu. You will see a *Synthesis* folder created at root on that drive.




Click on **Accept**.

## Selecting Sites for Which Data Will Be Installed:

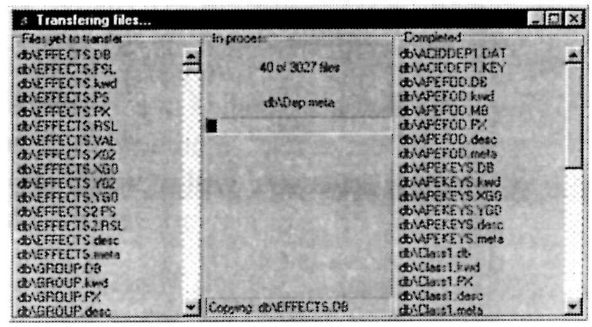
You may select any of the sites included on your CD by clicking in the box next to the site name.



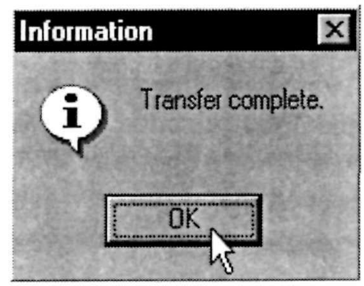

To install all sites, click on **Check All** in the bottom left-hand corner of the window.

Once you have finished choosing the sites for installation, click on **Continue**.

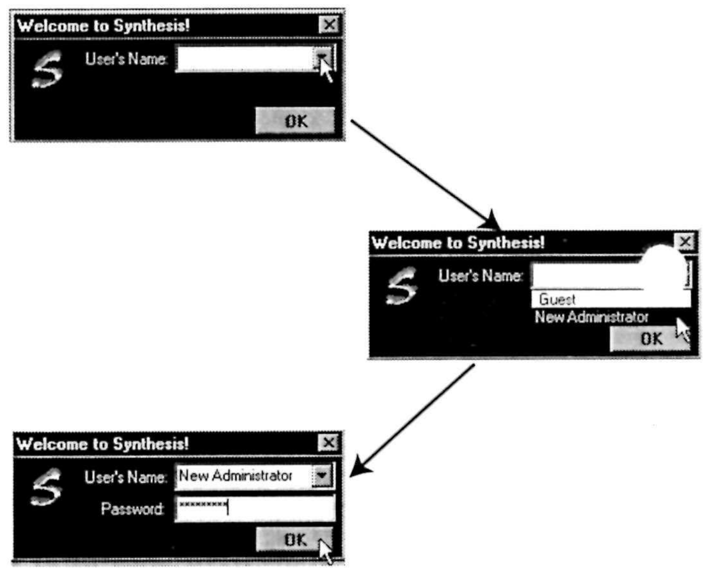
## Transferring Files:




Please wait while the data are installed. Depending on the number of sites for which you install data, the amount of data available for each site, and the speed of your computer, the process can take up to 30 minutes.




When the **"Information"** screen to the right appears, the data transfer is complete and the data have been installed. Click on **OK**.




The login screen will appear. Select the user name **New Administrator** from the drop-down menu. Or begin typing the user name **New Adminstrator** and it will appear in the user name slot.

Type the New Administrator password: <u>synthesis</u> Click on **OK**.

Synthesis Administration will open. Under the **Sites** menu, check to see that all of the sites you intended to install are installed and listed.

Under the **Settings** menu, click on **Active Dataset Path**. Check that the dataset path is correct; that is, the drive and folder (Synthesis) shown is the one you selected during data installation. For example, if you used the default data installation path, the dialog box should look like the one at right.

If the dataset path <u>is correct</u>, proceed to **page 14** and the section entitled: **Adding Self as New Administrator.**

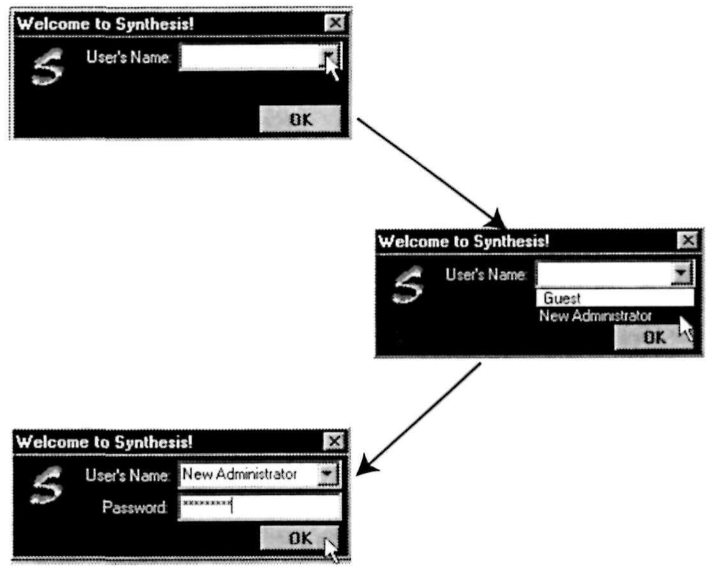
If the dataset path <u>is not correct</u>, proceed to **page 16**, set the dataset path correctly, then return to page 14 and the section entitled: **Adding Self as New Administrator.**

# Section Four:

## *Setting Up New Users and Logging into Synthesis Administration*

# Setting Up New Users and Logging into Synthesis Admin:

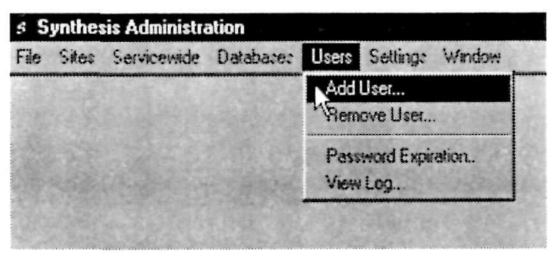
**NOTE**: You cannot run *Synthesis Administration* and *Synthesis Runtime* simultaneously.



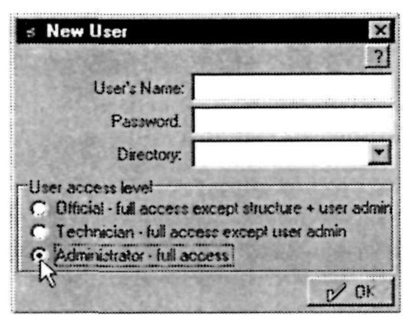

The login screen will appear whenever you run either the *Synthesis Runtime* or the *Synthesis Administration* program. Use either the desktop icon you have created, or navigate to the **Programs** menu under the **Start** button, to locate and open *Synthesis Administration*. Login to *Synthesis Administration* as **New Administrator**. Select this login name from the drop-down menu.

Type the **New Administrator** password: synthesis. Click on **OK**.

## Adding Self as New Administator:




In *Synthesis Administration*, select the **User** menu and click on **Add User**.



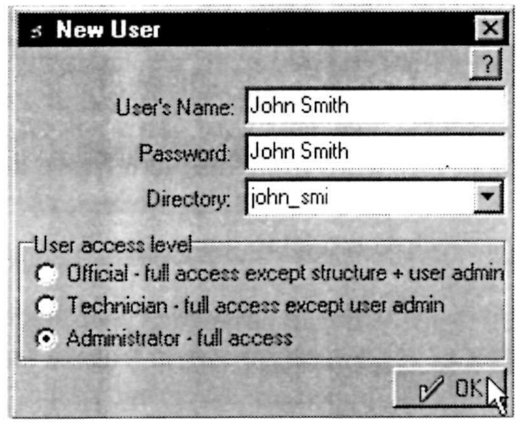

Select **Administrator** from the **User access level** options to give yourself access to all administrative duties, including user and data management.

Type in your new user name (at least six characters long). As you type, the program will fill in the remaining boxes with the appropriate information. Click on **OK**.

When you login for the first time under your new user name, your password will be your user name **EXACTLY** as it appears, including uppercase letters and spaces.

**NOTE**: We recommend that you add other users, especially those requiring *Synthesis Administration*, at this time.

## Adding Other New Users:




Select the **Add User** option from the **Users** menu in *Synthesis Administration*. Type the user's name into the **User's Name** box. As you type, the program will fill in the remaining boxes with the appropriate information.

Select the appropriate access level:
1. **"Administrator"** - users with user administration and data management duties.
2. **"Technician"** - users with data management duties
3. **"Official"** - general users having the *Runtime* version only.

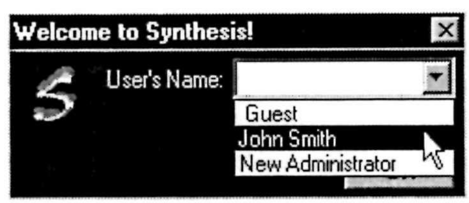
Once you assign the appropriate access level, click on **OK**.

REMIND NEW USERS: The first time they login under their new user name, their password will be their user name **EXACTLY** as it appears, including uppercase letters and spaces.

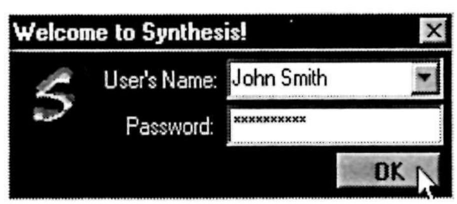
Close out of the program, and then launch ***Synthesis Administration*** again.

## Logging into *Synthesis Administration* under your user name:

NOTE: You cannot run *Synthesis Administration* and *Runtime* simultaneously.




Begin typing your name, or click on the down arrow to get to the drop-down list of users. **Select your user name**. You will be asked for your password.

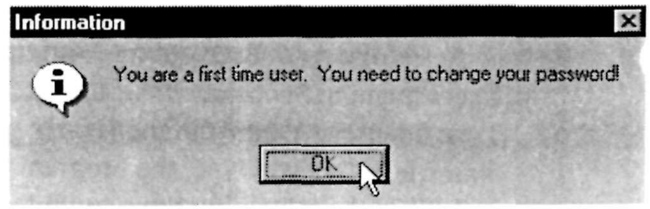



The first time you login to *Synthesis Administration* under your user name, your password is your name **EXACTLY** as it appears in front of you, including uppercase letters and spaces.

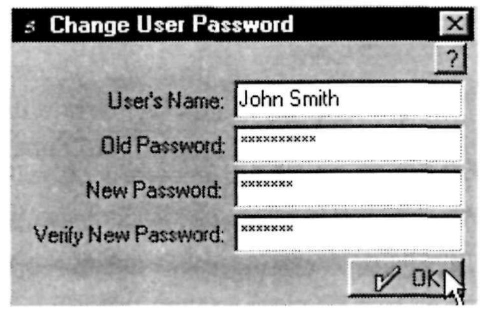
Click on **OK**.

## Changing Your Password:

Once you login to *Synthesis Administration*, the program will ask you to provide a new password. This will be your password from this point forward, or until you change it. By default, user passwords are set to never expire.

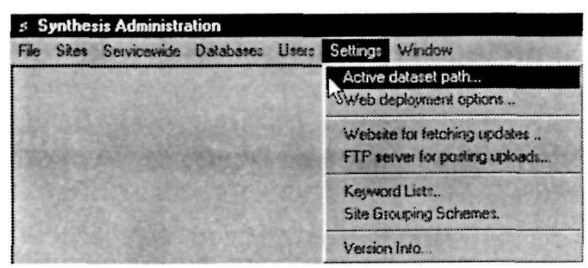



Type your old password (your name **EXACTLY** as it appears in front of you, including uppercase letters and spaces). Then, type a new password. It must be at least **six** characters and can contain both letters and numbers. Then, retype (verify) your new password and click on **OK**.

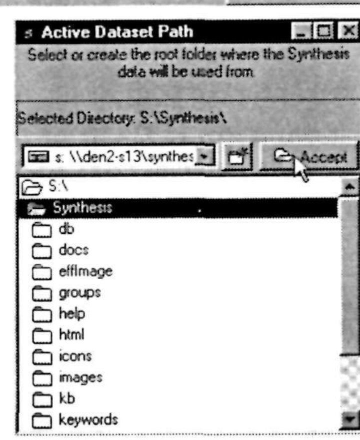



**NOTE**: For further instructions on using ***Synthesis Administration***, see **Manual Two**. For instructions on using the ***Synthesis Runtime*** program, see **Manual Three**.

## Setting the Active Dataset Path:




Also, instruct the data manager(s) on how to set the active dataset path whenever *Synthesis Administration* is installed or reinstalled. The active dataset path for *Synthesis Administration* is set using the **"Active dataset path"** option under the **Settings** menu in *Administration*. The dialog box looks the same as the "destination" dialog box in the data install process.




Select the **drive** on which you installed the data. Then double-click on the ***Synthesis*** data folder. You should see the list of subdirectories, such as db, docs, effimage, drop down. Click on **Accept**.

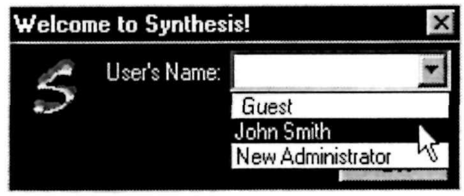
# Section Five:

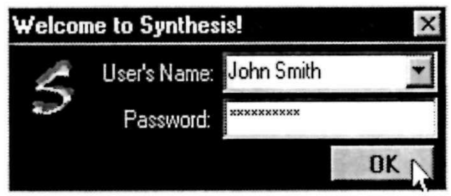
## *Logging into Synthesis Runtime and Locating the Species Database*

# Logging into Runtime and Locating the Species Database:

Once you have set the active dataset path and setup users, you as the administrator <u>must</u> login to *Synthesis Runtime* and locate the Species Database (**spp.db** file).

## Logging into *Synthesis Runtime*:



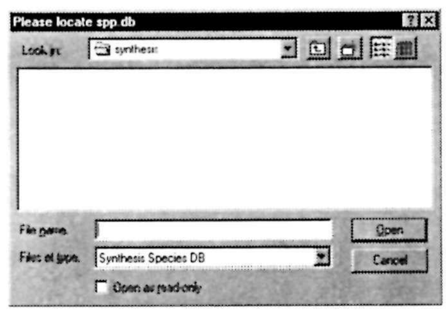



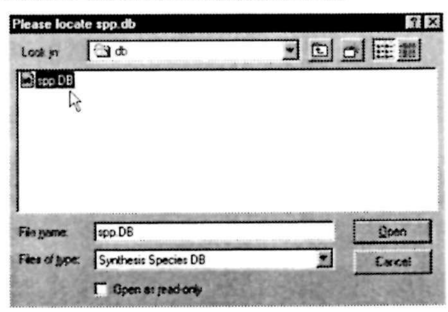

Use either the desktop icon you have created, or navigate to the **Programs** menu under the **Start** button, to locate and open *Synthesis Administration*. When you open *Synthesis Runtime*, you will be able to login as yourself.

**NOTE**: You cannot run *Synthesis Administration* and *Synthesis Runtime* simultaneously.

Begin typing your name, or click on the down arrow to get to the drop-down list of users. **Select your name**. You will be asked to type in your password. Click on **OK**. The **"Confidentiality Agreement"** window will appear. Click on **"I agree"** to continue with *Runtime*.

## Locating the Species Database:




To locate the **spp.db** file, navigate to the ***Synthesis* data directory**. Double-click on the "*Synthesis*" directory, and then double-click on the **db** folder. Click on the **spp.db** file, and click on **Open** (or just double-click on the **spp.db** file).

**NOTE**: As administrator, you <u>must</u> locate the **spp.db** file for each user as part of the installation process each time you install the runtime version on a user's computer. General users will not necessarily know the location of the Synthesis data folder.

# Section Six:

*Installing ArcExplorer™*

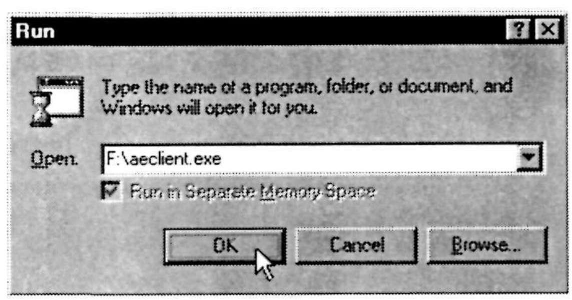
# *Installing ArcExplorer™:*

GIS data are displayed in *Synthesis* using ArcExplorer™ and ArcView™. ArcExplorer™ is a free application distributed by ESRI, and we have included it on the *Synthesis* installation CD along with the instruction manual in .pdf format (arcexplorer.pdf). Administrative privilege is required to install ArcExplorer™.

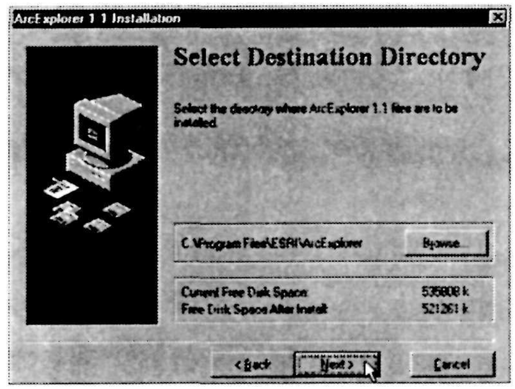



## Installing ArcExplorer™:

To install ArcExplorer™, click on the Windows™ **Start** button. Click on **Run** and then on **Browse** to locate the **aeclient.exe** file. Navigate to the CDROM drive, locate and double-click on the program file: **aeclient.exe**.

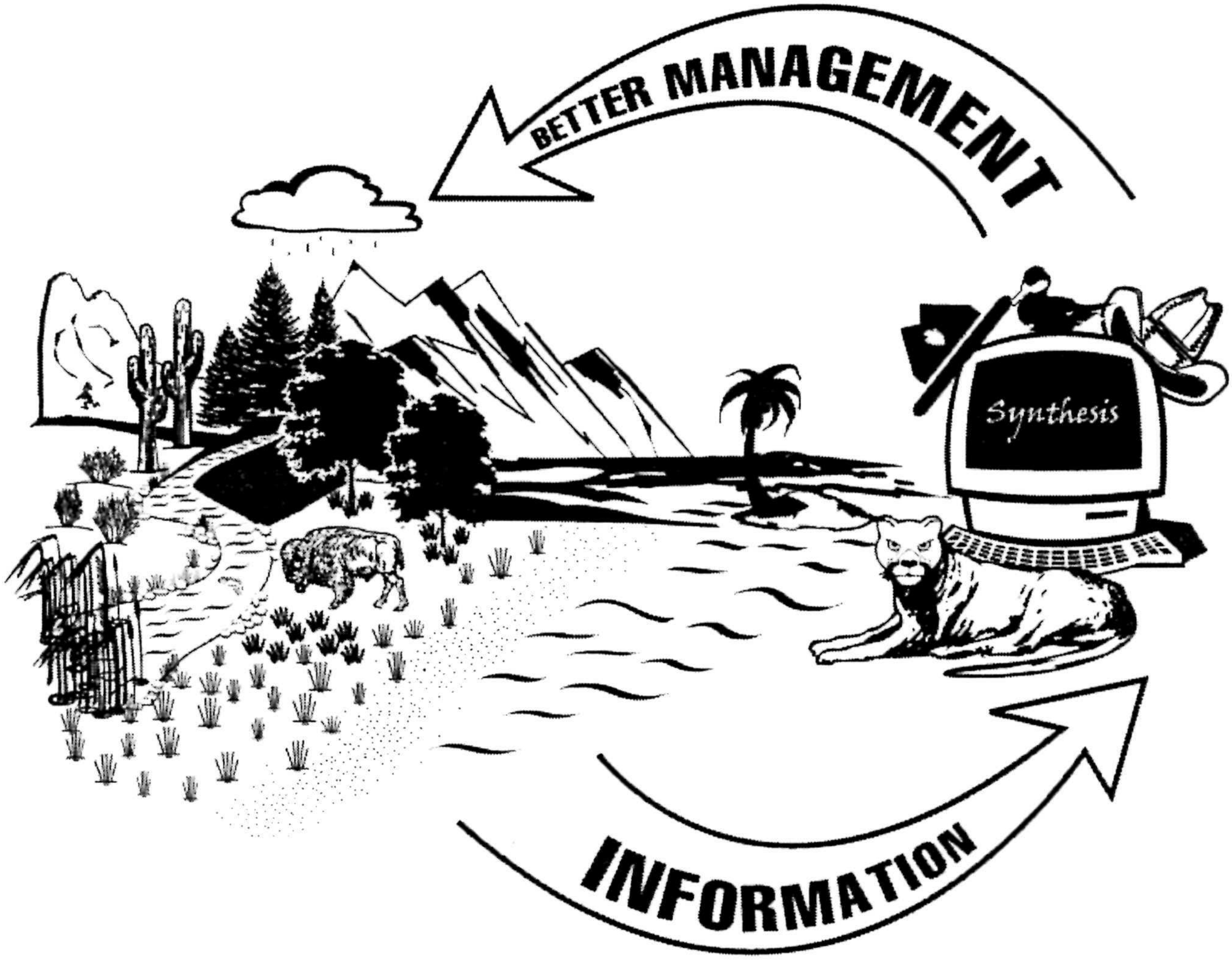


## Selecting the Destination Directory:




The default destination directory for the installation of ArcExplorer™ is **C:\Program Files\ESRI\Arcexplorer**. You may choose to install to a different drive, such as D:\. In that case, the path will be **D:\Program Files\ ESRI\ Arcexplorer**.

Follow the instructions on the screen as they lead you through the installation of ArcExplorer™.




**Information Management System**

# *Performing Data Entry and Maintenance Functions in Synthesis Administration*

## Synthesis Reference Manual Two

The *Synthesis* team appreciates your comments, especially if you find the instructions confusing or difficult to follow. For assistance, please contact:

Bruce Nash
National Park Service - NRID
12795 W. Alameda Parkway
Lakewood, CO 80228

Phone: (303) 987-6697
Fax: (303) 969-2822
cc:Mail or Internet
bruce_nash@nps.gov

Jessica Dempsey
National Park Service - NRID
12795 W. Alameda Parkway
Lakewood, CO 80228

Phone: 303-987-6942
Fax: 303-969-2822
cc:Mail or Internet
jessica_dempsey@nps.gov

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### *Working with Servicewide Data Items*

## Section Six

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## Section Six

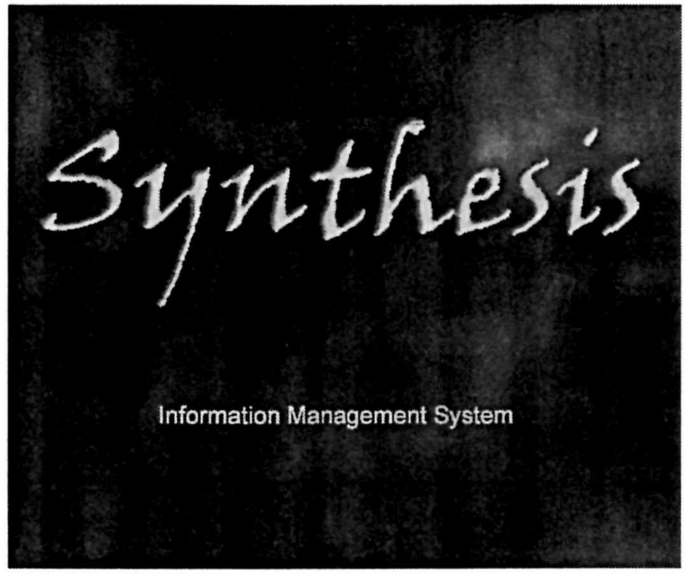
### *Working with Site Data Items*

# Section One:

*Explaining the Synthesis Administration Application*

# Explaining the Synthesis Administration Application:

*Synthesis Administration* is a software toolbox that allows data technicians and administrators to enter, manipulate, and organize data in *Synthesis*.



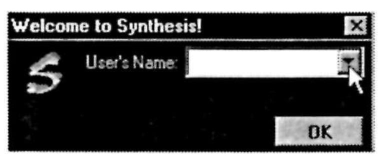

*Synthesis Administration* also provides the tools to create custom outlines for local and specific purposes, and then link information to the custom outline. No programming expertise is needed to use *Synthesis Administration*.

## Launching the Application:

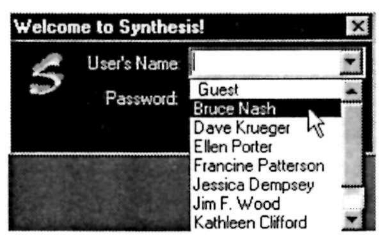
To launch the *Synthesis Administration* program, use either the desktop icon you have created, or navigate to the **Programs** menu under the **Start** button. Locate and open *Synthesis Administration.*

If you cannot locate the icon in the Start menu, the program file and icon can be found using the following path:

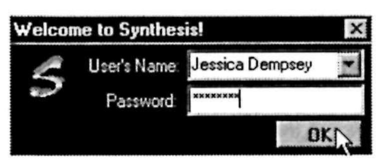

C:\Program Files\Synthesis Administration




The first screen to appear is the user login screen. **Select your name** from the list of users by either clicking on the drop-down arrow, or by typing in your name. **Type in your password**, and click on **OK** (or hit **Enter**).



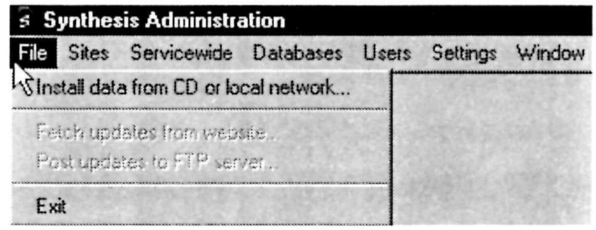

*Synthesis Administration* will now open, and you can begin using the program.



## Explanation of the Menus:

Following is a description of the menus, and options under each menu, in *Synthesis Administration.*

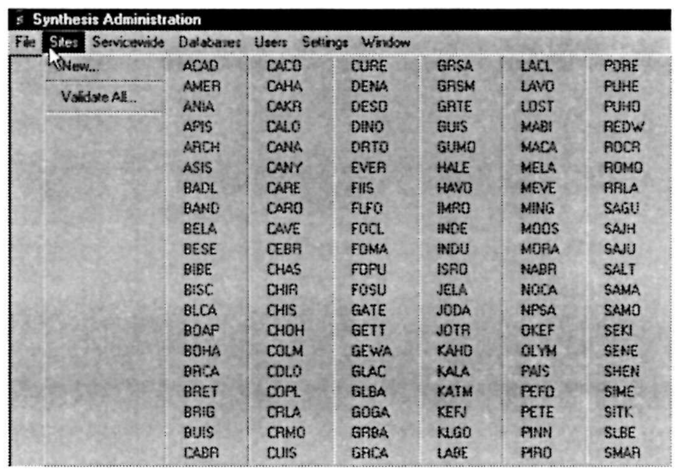
The **File** menu allows you to perform four functions:




1. Install data from a CD or a local network.
2. Fetch updates from the *Synthesis* web site.
3. Post updates to the *Synthesis* FTP site.
4. Exit *Synthesis Administration.*

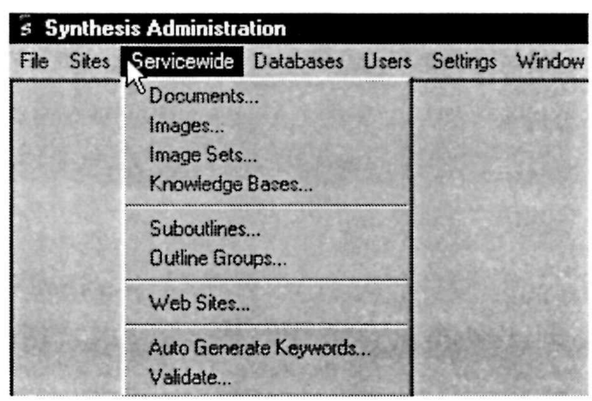
NOTE: Functions #3 and #4 are not yet implemented.

The **Sites** menu allows you to create a new site as well as open an existing site by selecting the site's four-letter abbreviation. You may also validate all of the existing sites.




Validation is an automated function during which Synthesis checks for the presence of required files. When **Validate All** is run, Synthesis checks that the required accompanying files are present for each data item in every installed site.

The **Servicewide** menu allows you to perform the following functions:

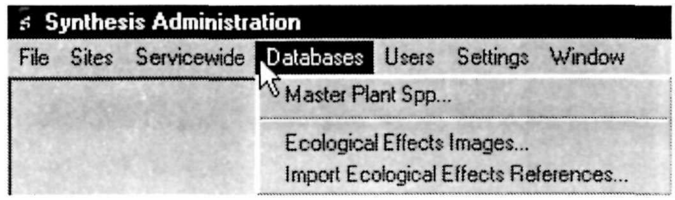



1. Open up servicewide documents, images, image sets, knowledge bases, suboutlines, outline groups, and web sites.
2. Auto generate keywords for all of the servicewide data items.
3. Validate all servicewide data items.

NOTE: The term "servicewide," as used in Synthesis, refers to any data item that might be applicable or of interest to all or more than one site.

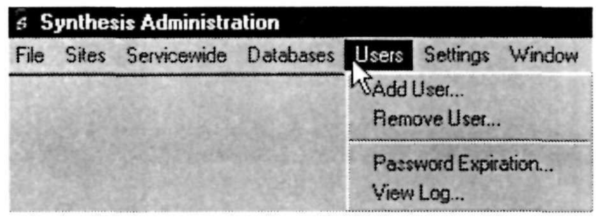
## Explanation of the Menus:

The **Databases** menu allows you to perform the following functions:



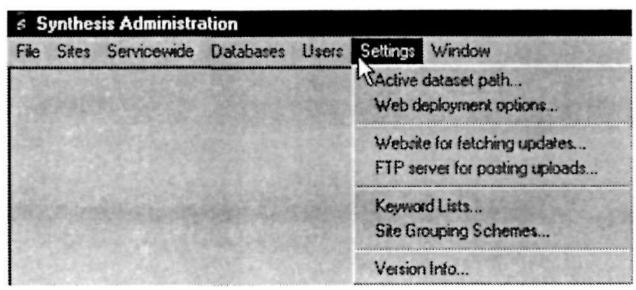

1. Open and modify the Master Plant List from the Natural Resource Conservation Service (NRCS) that is currently used in *Synthesis*. *Synthesis* will soon be using NPSpecies.
2. Add and modify servicewide ecologi cal effects images.
3. Import ecological effects references.

The **Users** menu allows you to perform the following functions:



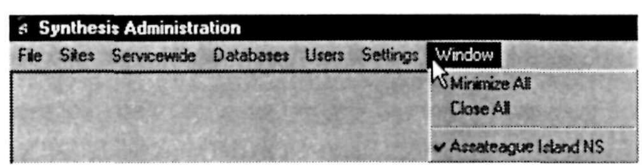

1. Add new users to *Synthesis*.
2. Remove old users from *Synthesis*.
3. Set a password expiration time.
4. View the user log.

The **Settings** menu allows you to perform the following functions:




1. Set the path to the drive and folder containing the *Synthesis* data you will be using.
2. Setup your web deployment options.
3. Set the web site for fetching updates.
4. Set the FTP server for posting up-loads.
5. Create and modify Synthesis keyword lists.
6. Create and edit site grouping schemes.
7. View the Synthesis software version information.

The **Window** menu allows you to minimize all of the open windows in the program as well as close all open site windows in *Synthesis Administration*. The **Window** menu also shows the name of the site you have opened.

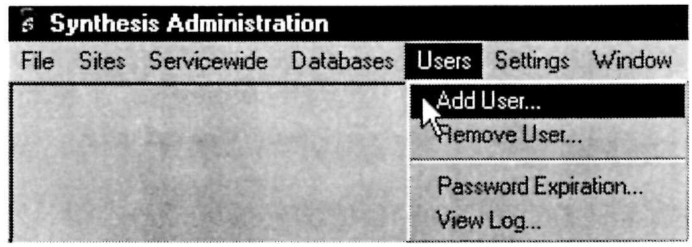


# Section Two:

*Managing User Accounts*

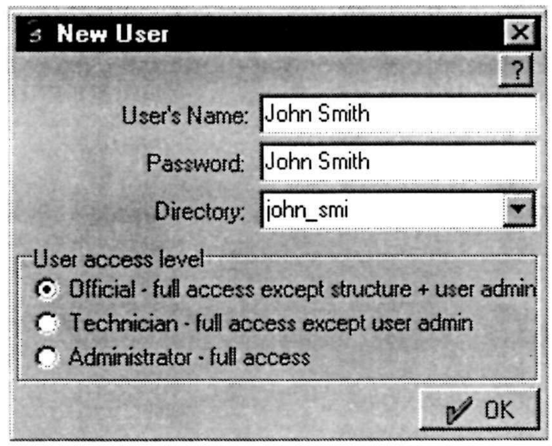
# *Managing User Accounts:*

In order to use either *Synthesis* applications, each person must have a user profile created. Each user of the *Synthesis* applications must also be assigned to a specific user level.




## Adding a New User:

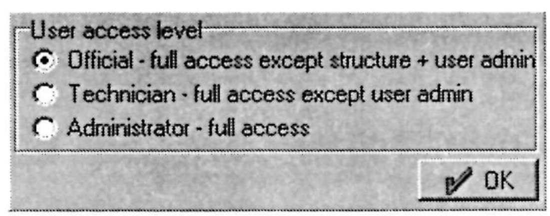
To add a new user to *Synthesis*, select the **User** menu, and then, choose the option **Add User**. The **"New User"** window will appear. **Type** in the name of the new user. As you type the name, the password and directory fields will automatically fill in. The user's password at first login (to either Synthesis application) will be the user's name EXACTLY as it appears, including spaces and uppercase letters. The directory holds all of the profile information.




## Explanation of the User Levels:

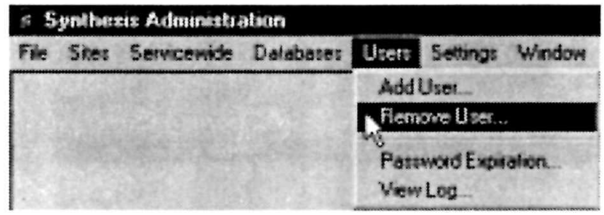
The three user levels are: **Official**, **Technician**, and **Administrator**. Assign an appropriate level to each user.

1. **Official level**: general users -- access to all of the functions of *Synthesis Runtime* only.
2. **Technician level**: users with data management responsibilities -- access to all functions in Synthesis Adminis tration and Synthesis Runtime, except the ability to add/change user profiles.
3. **Administrator:** users with user administration and data management duties -- access to all functions.

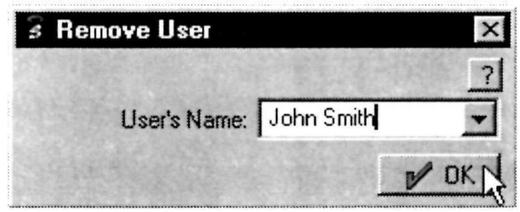



Click on the circle next to the **user access level** that you wish to assign. Then, click on **create the new user** and then on **OK**.

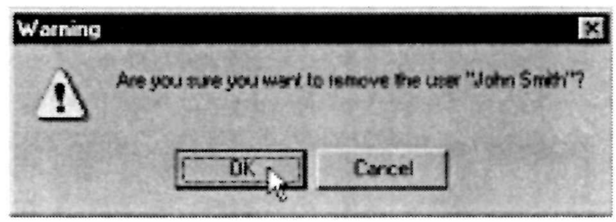
## Removing a User:




If a user no longer needs access to *Synthesis*, you can remove him or her from the user list.



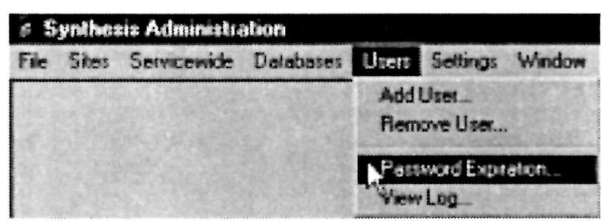

NOTE: **Forgotten passwords**: A user password is stored as a random series of numbers, so an Administrator cannot look up the user's password. The solution for a forgotten password is to remove that user and then add the user back as a new user. In such a case you will need to remind the user that having been added as a new user again, the user password at first login will be the user's name EXACTLY as it appears, including spaces and uppercase letters.



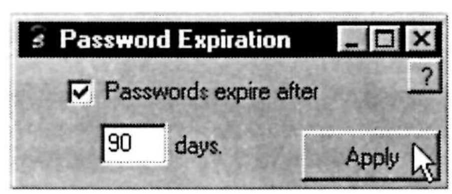

To remove a user from *Synthesis*, select the **User** menu, then choose the option **Remove User**. The **"Remove User"** window will appear. Click on the **drop-down arrow** on the right side of the **User's Name** field. A list of all the users will appear. Select the user you wish to remove, and click on **OK**.

When you click on OK, a **"Warning"** window will appear, asking if you really want to remove the user. Click either **OK** or **Cancel**.

Then, if needed (as in the case of forgotten passwords), use the **Add User** option described on the previous page to add the user back into *Synthesis*.



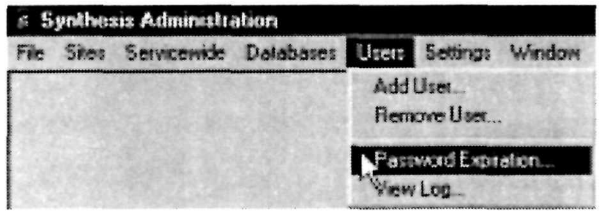

## Password Expiration:

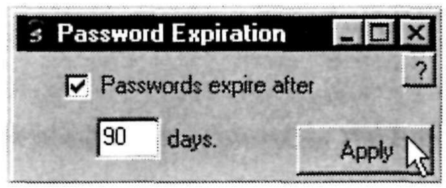



The default setting for the password expiration is "Passwords expire after 0 days." If you would like passwords to expire after a certain time period, you can set a time limit for user passwords.

## Password Expiration:

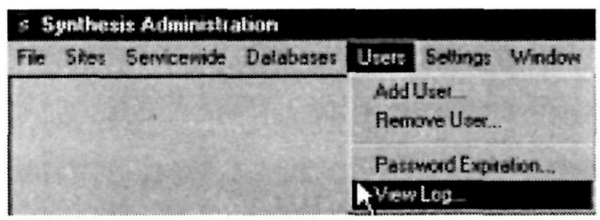
To set an expiration time, select the **User** menu and choose the option **Password Expiration**. The **"Password Expiration"** window will appear. Click in the **box** to select password expiration. Then , type in the **number of days** for which you wish to have the password valid. Click on **Apply**.



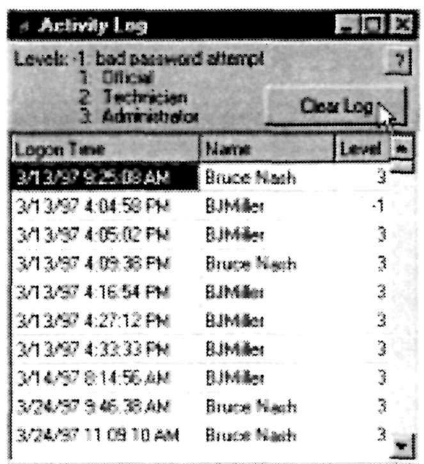




## Viewing the User Activity Log:

The **User Log** allows you to track the use of *Synthesis*. To view the log, select the **User** menu and choose the option **View Log**.




The **"Activity Log"** window will appear. When you are done examining the log, click on the **close window button**. To clear the **Activity Log**, just click on the **Clear Log** button.

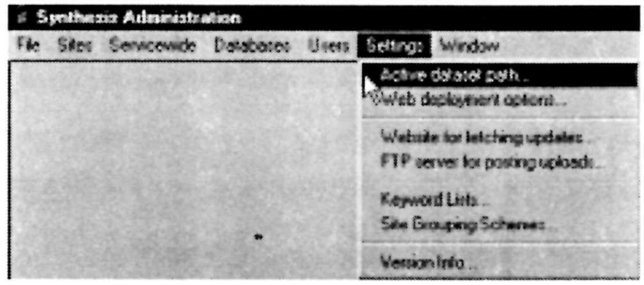


# Section Three:

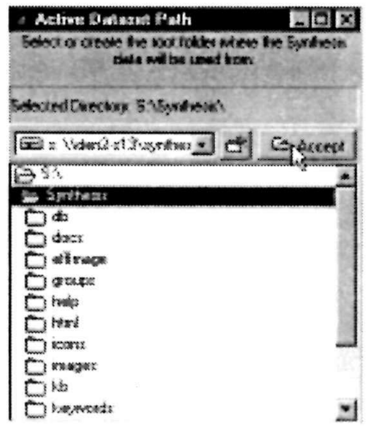
*Managing the Data Path*

# ***Managing the Data Path:***

You can change the path for the data folder that the *Synthesis Administration* program will manipulate. This function is particulary helpful in situations where you have multiple installations of Synthesis data: a working/admin copy which is regularly being updated, and a user copy of the data for general users who do not have data management responsibilities. Data managers may need to view the user copy to see how current files are in the user copy.

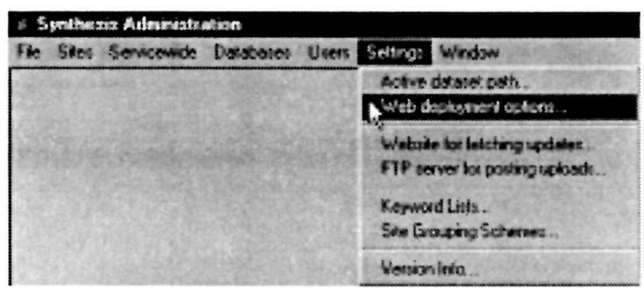


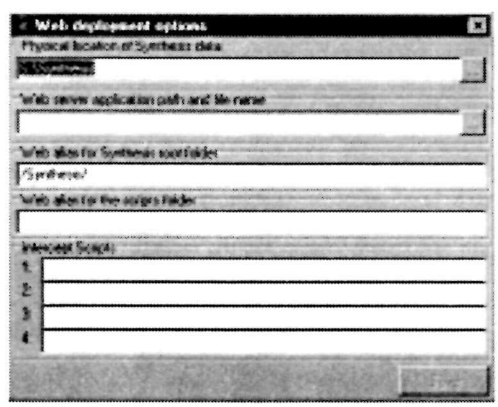

The user copy should be updated regularly to provide your users with the most robust version of your *Synthesis* data. The user copy is updated by copying and pasting the "working" data folders to the server and drive of the user copy. Copying will overwrite and update older version of the data.




## Setting the Active Dataset Path:

To set the active data path, select the **Settings** menu and choose the option **Active dataset path**. The **"Active Dataset Path"** window will appear. Using the drop-down menu, select the drive where the *Synthesis* data folder is located. Select the *Synthesis* folder and click on **Accept**.



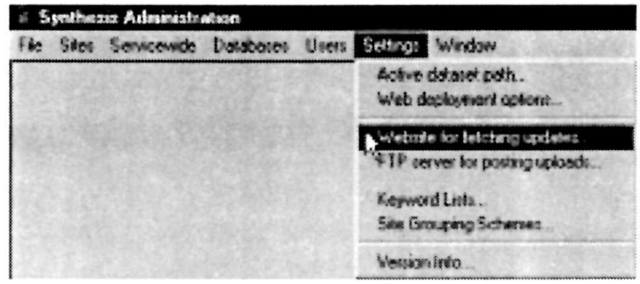




## Using the Web Deployment Options:

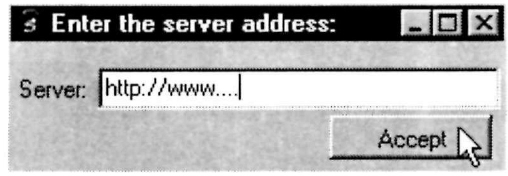
The **Web Deployment Options** can be found under the **Settings** menu. **Web Deployment Options** is used by an administrator to establish a web server installation of *Synthesis,* which allows users to access *Synthesis* using a web browser.

## Using Website for Fetching Updates:

The option **Website for Fetching Updates** is located under the **Settings** menu. This option will be used by the Synthesis team to set the path to the web site from which *Synthesis* updates will be downloaded.

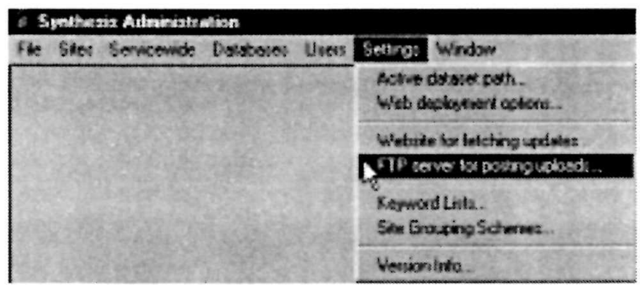



**Fetch Updates from Website** (available under the **File** menu) will be used by parks and central offices to download the current version of the *Synthesis* core data. The downloads will include new data as well as revised data. **Fetch Updates from Website** is not yet implemented.

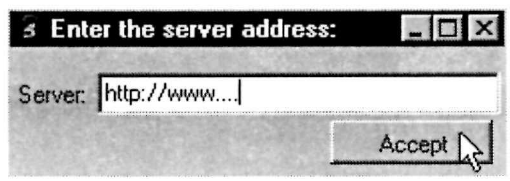



## Using the FTP Server for Posting:

The **FTP Server for Posting Uploads** option is located under the **Settings** menu. **FTP Server for Posting Uploads** will be used to set the path to the FTP site to which new data from users will be uploaded.




The **FTP Server for Posting Uploads** will act as a "holding area" for data designated for inclusion in *Synthesis*. Data uploaded to this FTP server will be examined and have to pass QC before being added to the *Synthesis* core data.



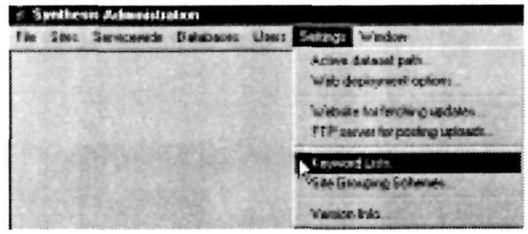

**Post Updates to the FTP Server** (available under the **File** menu) will be used by parks and central offices to send data that they would like to have included in the *Synthesis* core data. The FTP server will provide a "holding area" for the data until they are examined and pass QC. Then, the data will be added to the *Synthesis* core data. **Post Updates to the FTP Server** is not yet implemented.

# Section Four:

*Working with the Utilities in Synthesis Administration*

# Working with the Utilities in Synthesis Administration:

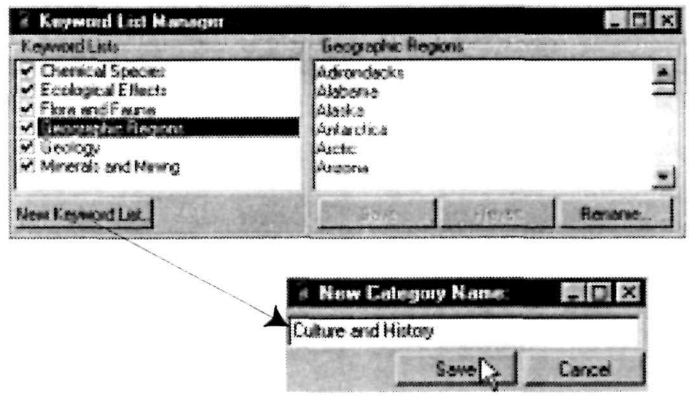
*Synthesis Administration* contains several basic utilities, which include managing keyword lists, auto generating keywords, grouping sites, managing Web URLs, editing the Master Plant List and Ecological Effects References.



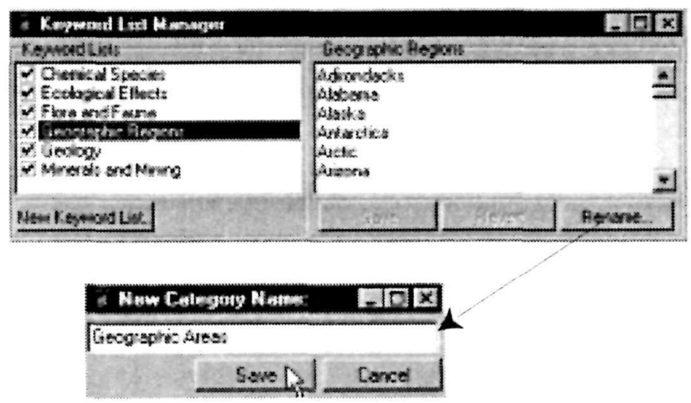
## Using Keyword List Manager:

The **Keyword Lists** option located under the **Settings** menu allows you to create, edit and rename keyword lists.

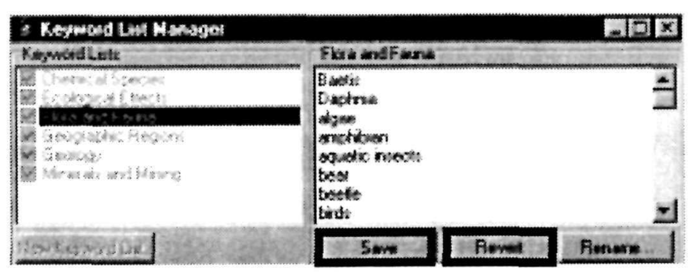
To open the utility, click on **Keyword Lists**. The **"Keyword List Manager"** window will appear. To create a new keyword list, click on the **New Keyword List** button. When the **"New Category Name"** window appears, type in the new keyword list name. Click on **Save** to keep the new list, or click on **Cancel** to type in another name.




To rename a keyword list, click on the **Rename** button. When the **"New Category Name"** window appears, type in the new keyword list name, and click on **Save**. Click on **Cancel** to type a different name. To delete a keyword list, click on the name of the keyword list. Then, click on the Delete located at the bottom of the window (but not shown in the graphic at right).



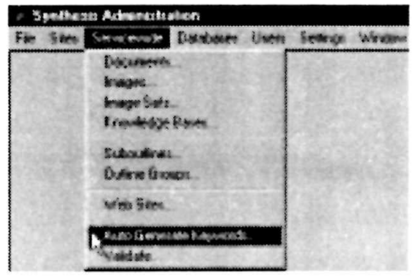

To modify a keyword, place the cursor next to the word in the right column that you want to edit. Make the change(s), then click on **Save** to save the changes. Or, click on **Revert** to undo the change(s).



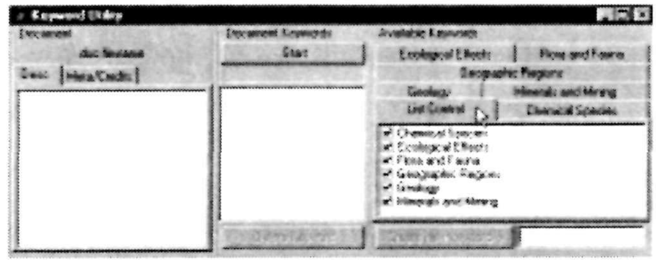

To delete a keyword, highlight it. Then press the delete button on your keyboard.

## Using Auto Generate Keywords:

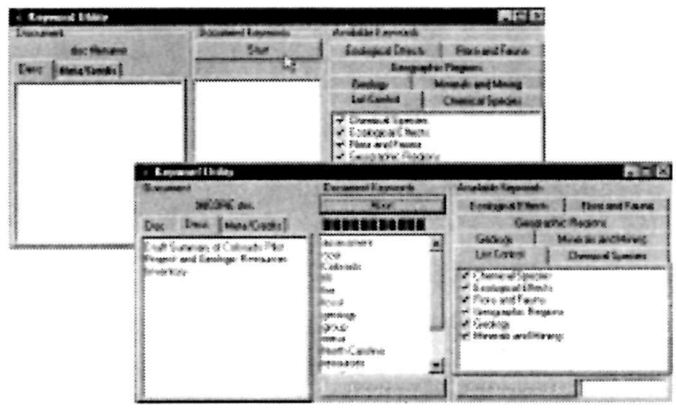
You can auto generate keywords for all servicewide data items.



To auto generate keywords for servicewide data items, go to the **Servicewide** menu. Scroll down and click on **Auto Generate Keywords**. The **"Keyword Utility"** window will appear.

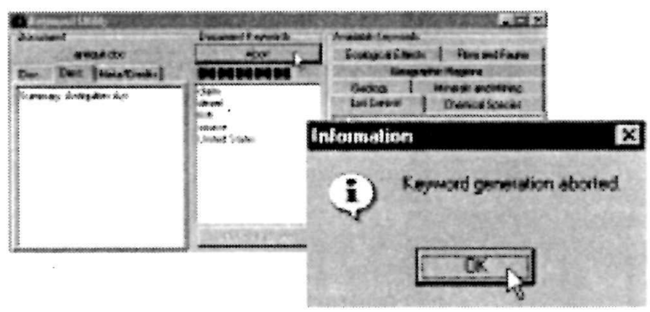


Under the **"List Control"** tab, check the lists that you want the software to use for the keyword generation.
By default, all lists are checked for use.

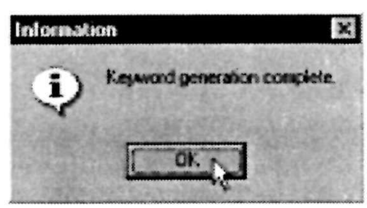


Click on **Start**. The software will open each servicewide data item and attach keywords to each data item based on file content, description and metadata, and the keyword lists you selected.

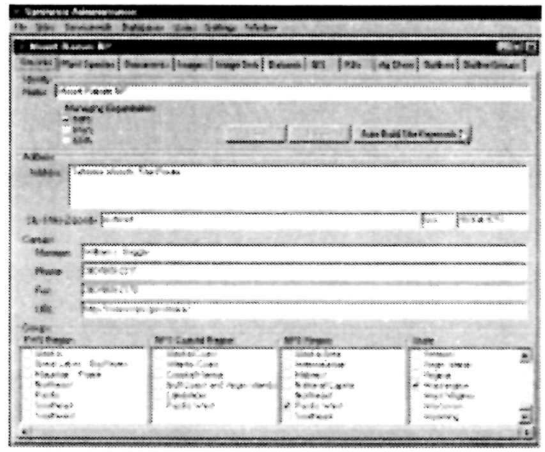
The **Auto Generate Keywords** process can take awhile to complete. If you decide not to run the utility after clicking on the Start button, you may click on the **Abort** button to cancel the autogenerate keyword process. If you abort the the process, the "Keyword generation aborted" message will appear.




If you allow the utility to complete its processing, an **"Information"** window will appear, announcing "Keyword generation complete."

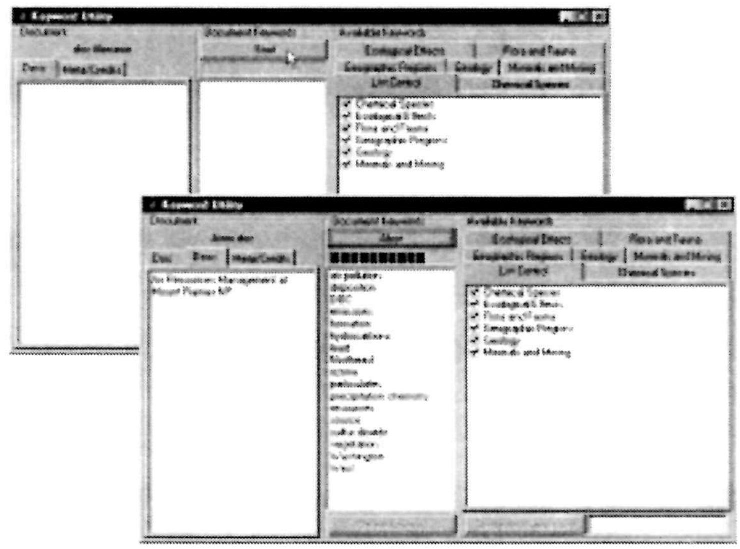


## Using Auto Build Site Keywords:



To auto-build keywords for site data items, such as document and images, select a site from the **Sites** menu.

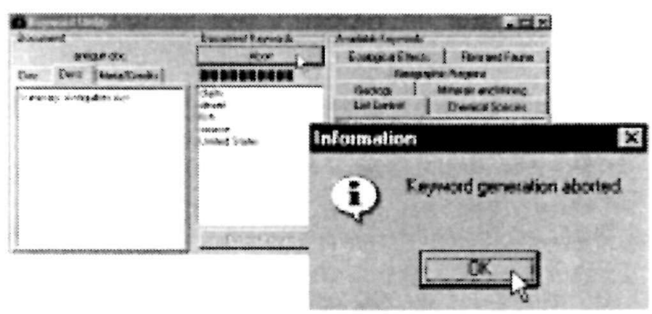
**Auto Build Site Keywords** provides a "check" and "fix" on any site data item for which keywords were not added during data entry. However, we recommend that you add/enter keywords for each data item as you enter it into the *Synthesis* program.



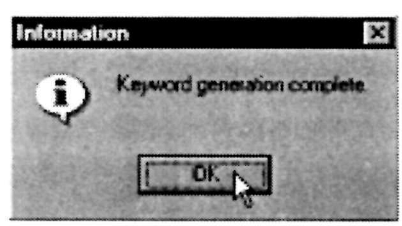
Once the site is open, click on the **Auto Build Site Keywords** button under the **"Site Info"** tab.

Under the **"List Control"** tab, check the lists that you want the software to use for the keyword generation.
By default, all lists are checked for use.

Click on **Start**. The software will automatically attach keywords to each data item in the site data item based on the contents of the file, description and metadata, and the keyword lists you selected.



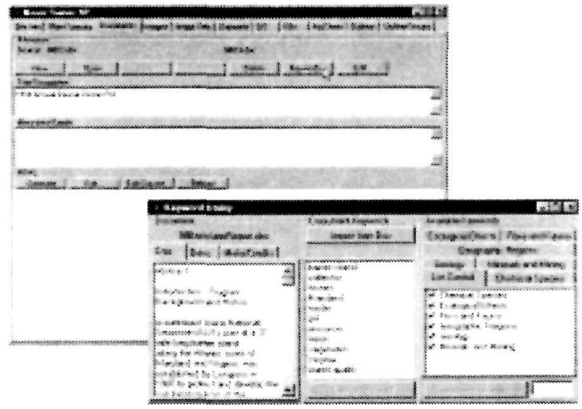

If you decide not to run the utility after clicking on the Start button, you may click on the **Abort** button to cancel the autogenerate keyword process. If you abort the the process, the "Keyword generation aborted" message will appear.



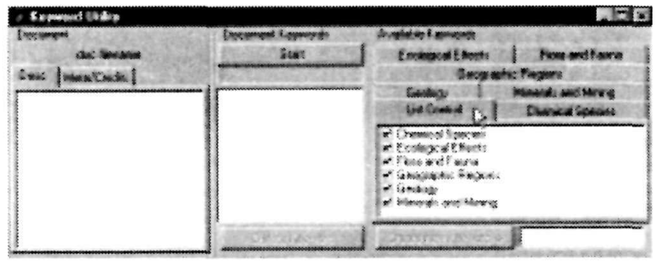

If you allow the utility to complete its processing, an **"Information"** window will appear, announcing "Keyword generation complete."

## Attaching Keywords to Individual Data Items:

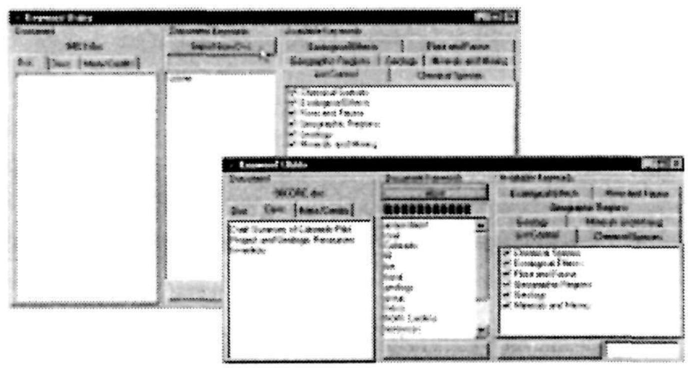
To add keywords to a new or existing site or servicewide data item, click on the tab that contains the data item. Select and open the data item. The **Keywords** button will become active. Click on the **Keywords** button. The **"Keyword Utility"** window will appear.



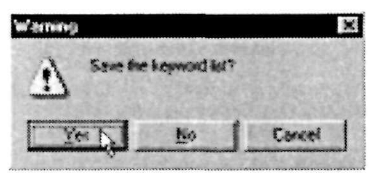
Under the **"List Control"** tab, check the lists that you want the software to use for the keyword generation. By default, all lists are checked for use.



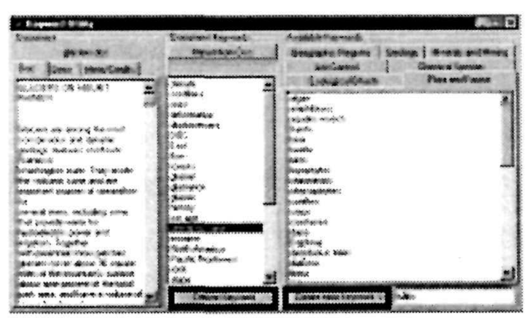
Then, select the **"Doc"** (document), **"Desc"** (description), or **"Meta/Credits"** tab as the file to search for keywords. Click on **Import from** to start the process. We recommend you run the Import from utility on each file type: **Doc**, **Desc**, **Meta/Credits**.



When the process is complete, the **blue process bar** under the **Import from** button will no longer be running. As you exit the **"Keyword Utility"** window, you will be asked if you want to <u>save</u> the keyword list. Click on **Yes**, **No**, or **Cancel**.



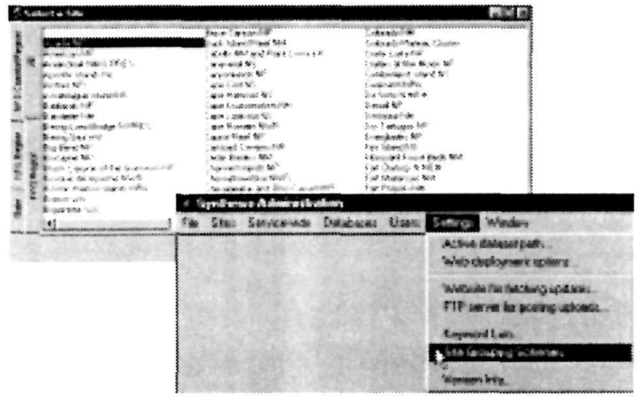

You may delete a keyword generated for the data item by highlighting it in the window under **Import from** and clicking on the **Delete** button.



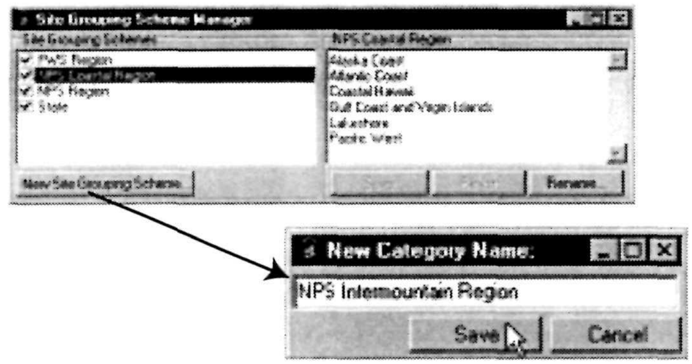
NOTE: Always use the Keyword List Manager utility (see page XX) to edit any Keyword List.

## Working with Site Grouping Scheme:

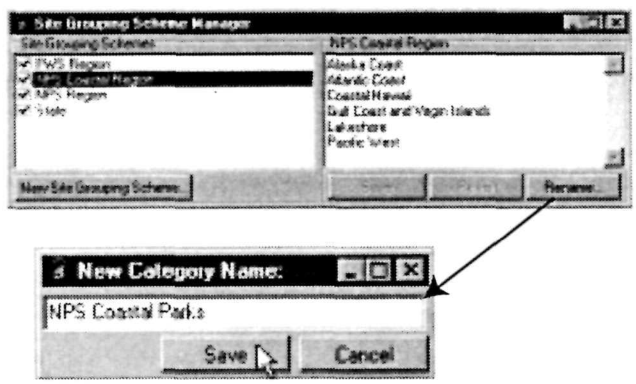
When you select a site in *Synthesis Runtime*, you will notice that the sites in *Synthesis* are grouped into several categories (e.g. **NPS Coastal Region** and **States**). The **Site Grouping Scheme** option under the **Settings** menu in *Synthesis Administration* allows you to modify these site groupings or to create a new site grouping scheme.



To modify or create a new site grouping scheme, go to the **Settings** menu. Scroll down and click on **Site Grouping Scheme**. The **"Site Grouping Scheme Manager"** window will appear. You may create a new site grouping scheme by clicking on the **New Site Grouping Scheme** button. Type the new name in the **"New Category Name"** window box.



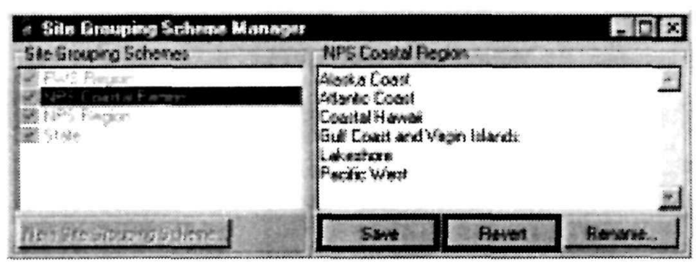

To rename an existing site grouping scheme. Select a grouping scheme and then click on the **Rename** button. When the **"New Category Name"** window appears, type the new name.



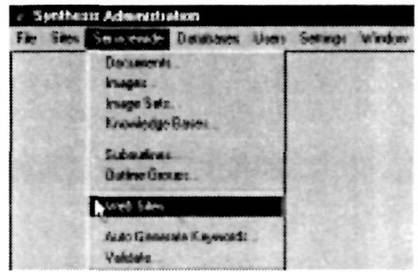

To delete a site grouping scheme by selecting the grouping and then clicking on the **Delete** button in the **"Site Grouping Scheme Manager"** window.

To edit the list located in the right column, place the cursor next to the word(s) you want to change. Make the change(s), and then click **Save** to save the change(s). Or, click on **Revert** to undo the previous change(s).

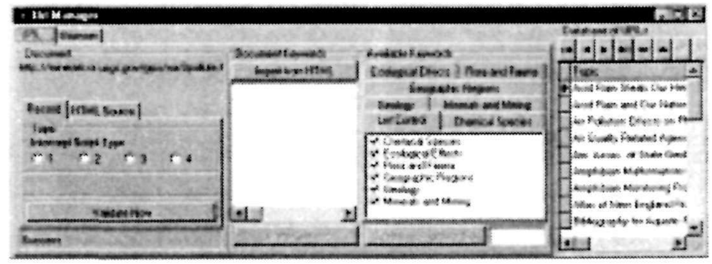
To delete an item located in the right column once it has been saved, highlight the item, then press the delete key on your keyboard.



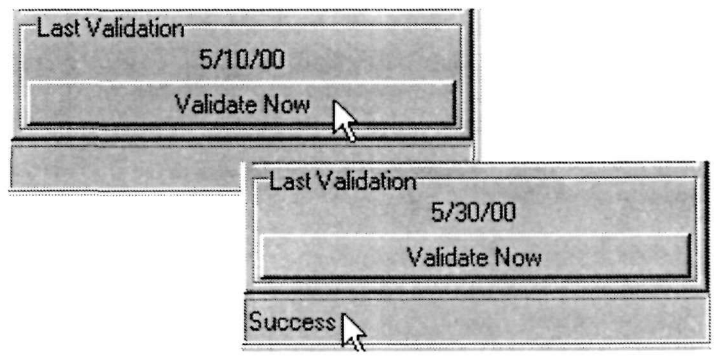
## Using URL Manager and Web Sites:



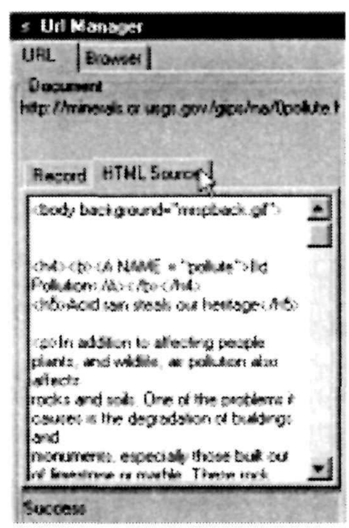
To add or delete web sites from *Synthesis*, go to the **Servicewide** menu. Scroll down and click on the option **Web Sites**. The **"Url Manager"** window, which will appear, consists of two main tabs - a **"URL"** tab and a **"Browser"** tab.

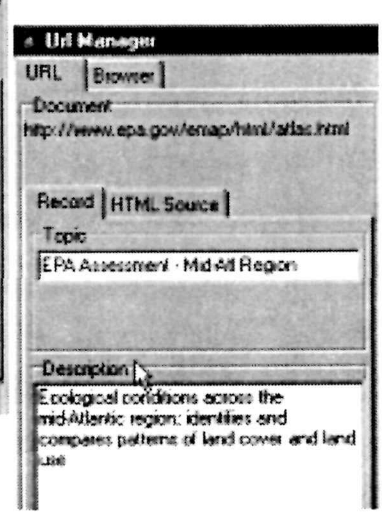


Under the **"URL"** tab, you can perform several functions. First, you can validate that an existing URL is operative as listed under the **Database of URLs** column. Click on the **topic to highlight it**, and then click on the **Validate Now** button, located in the lower left-hand corner of the window. The utility will check to see if the URL is still functional.




Once the validation process has finished, the system will alert you to the results of the validation. The word **Success** or **Failed** will appear in the lower left corner of the window.



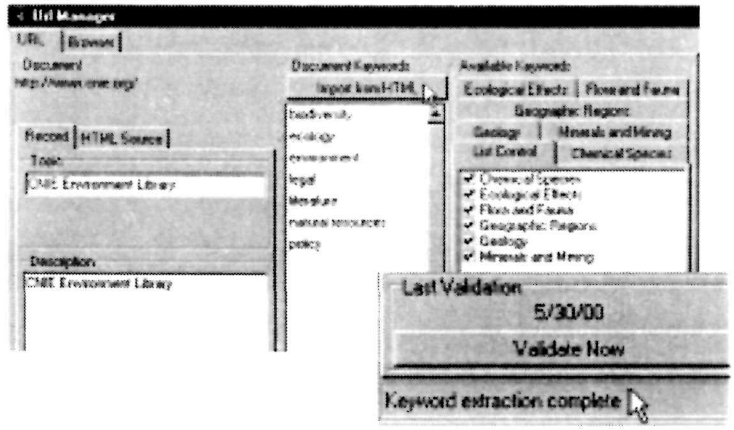

To review web site information and the source, click on the **"HTML Source"** tab after you validate the web site. Under the **"Record"** tab, you will see both the topic of the web site and a description if one has been provided.

## Using URL Manager and Web Sites:

A second function involves attaching **keywords** to the web site.

Under the **"List Control"** tab, check the lists that you want the software to use for the keyword generation.
By default, all lists are checked for use.

Then, click on **Import from HTML** to start the process. When the process is completed, the message, **Keyword extraction complete** will appear in the lower left-hand corner of the window.

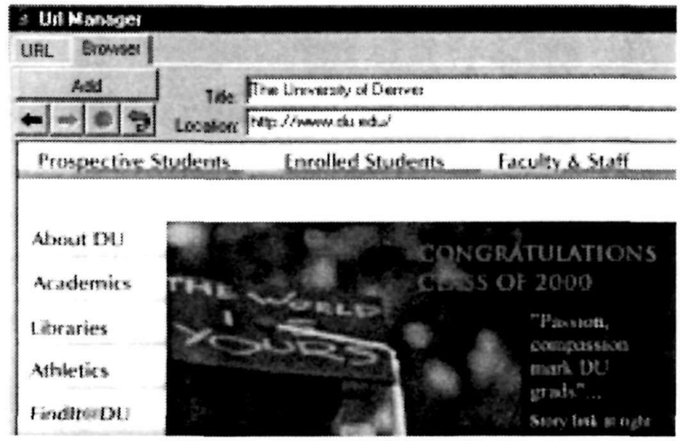



Under the **"Browser"** tab, you can view any of the validated (functional) web sites listed under the **Database of URLs** column. Click in the gray box to the left of the web site you would like to view. The web site will open and be displayed in the frame opposite the web site list. At this point, you will be browsing the web site as you normally would in the Web browser.

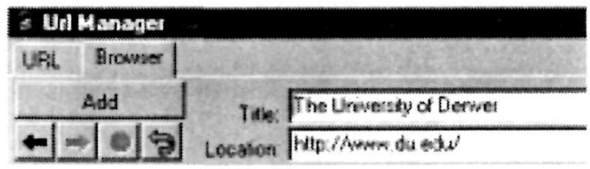
The **Back** arrow (←) in the top left-hand corner above the web site window allows you to go back to any sites you have previously viewed through this utility. The **Forward** arrow (→) allows you to advance forward through the web sites you have previously viewed through this utility.

## Using URL Manager and Web Sites:

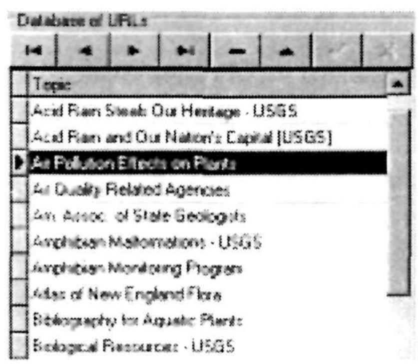
Another function you can perform under the **Browser** tab in the **Url Manager** involves adding a new web site to the **Database of URLs**. To add a new web site, type in the full address in the **"Location"** box and click on the **Green Search** arrow ( ). At this point, the software goes out to the web to search for and retrieve the web address you typed. You may stop the web search by clicking on the **Stop Sign** ( ).




Once the web site appears in the window, type in a preferred title. Then, click on the **Add** button, which is located in the top left-hand corner, to add the web site to the **Database of URLs**. The web site will automatically be placed into the database list in alphabetical order.



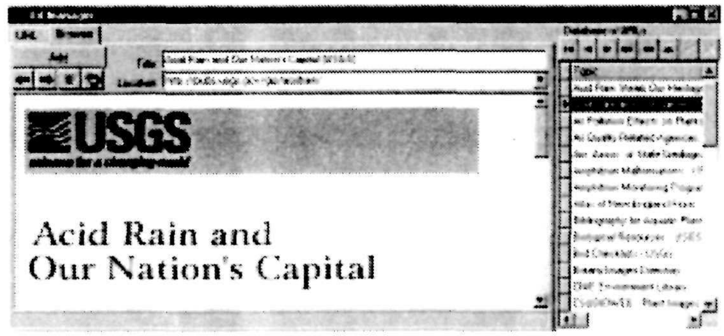

Once the web site is placed into the database list, you may change the title (or topic name). To edit the title or topic name, highlight the web site by clicking in the gray box to the left of the name and then clicking on the ( ) button. Then, click inside the title box and make any changes.

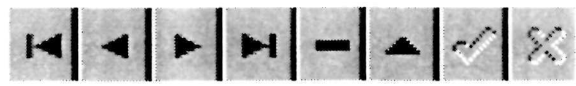



When the changes are made, click on the Post Edit ( ) button in the toolbar across the top of the Database of URLs window. The web site will be alphabetical ordered within the list. To undo any changes, click on the ( ).

**Using URL Manager and Web Sites:**

To delete a web site, highlight its topic title by clicking in the gray box to the left of the name. Then, click on the ( - ) button. A **"Confirm"** window will appear and will ask if you want to delete the record. Click **OK** or **Cancel**.



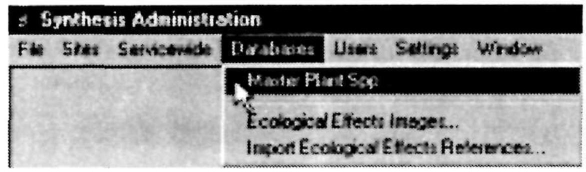



The ( ) button allows you to jump from anywhere in the topic list to the beginning of the list. The ( ) button allows you to jump to the last web site in the list. The ( ) button allows you to scroll backwards in the list one web site at a time. You can use the ( ) to scroll forward one web site at a time.

You can also move through the list by clicking in the gray box to the left of the topic title. You may move the scroll bar up and down, or you can click on the up and down arrows of the scroll bar to move throughout the list.

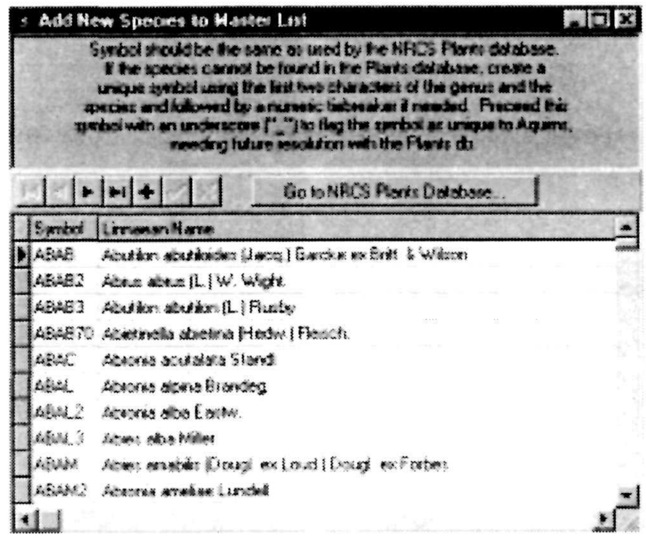
NOTE: We recommend that you use the tool buttons described above as the means for moving throughout the list.

## Editing the Master Plant List:




The master list of plant species (**Master Plant Spp**) is currently based on the Natural Resource Conservation Service (NRCS) PLANTS database. The list is accessed under the **Databases** menu.

Before editing or adding species to the master list, visit the **NRCS Plants Database** on the Web. Click on **Go to NRCS Plants Database**.



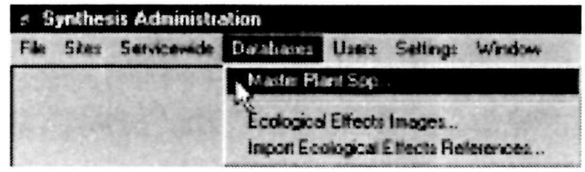

If you need to add a species for your site that is not included in the master list, but has been verified as a valid species name, you can add it to the master list using the following procedure.

Select the **Databases** menu and choose the option **Master Plant Spp**. The **Add New Species to Master List** window will appear. Click on the **Insert** ( + ) button. A blank record will appear in the last row of the database.

Using the NRCS naming convention, create a unique code using the **first two characters of the genus** and the **first two letters of the species** followed by a number or fifth letter as a **tiebreaker if needed**. (The fifth letter would be the first letter of a variety or subspecies for that species.) **Preceed the code you create with an underscore ( _ ) to flag the plant code as an addition to the NRCS-based master list**. An example would be: _TRMAE *Triglochin maritima* var. *elata.*

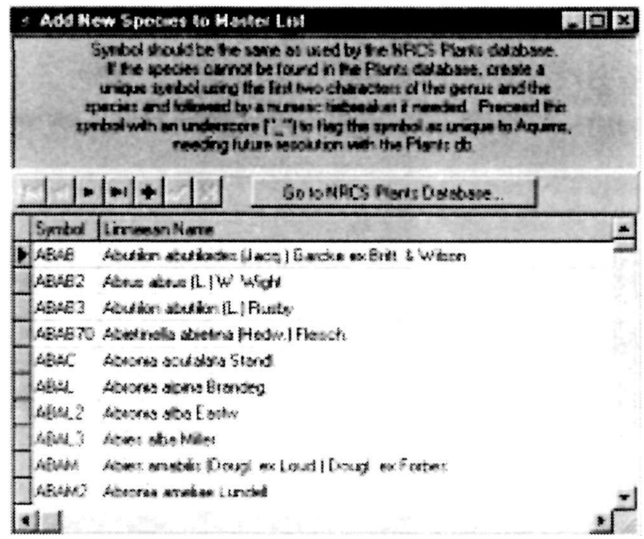
The presence of an underscore alerts users that the species and plant code have not yet been included in the official NRCS PLANTS database.

## Editing the Master Plant List:

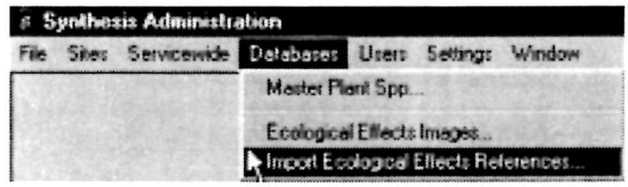



To **modify the text**, click in the gray box to the left of the species symbol. Then, click in the text field. Type in the changes, and click on the **Post** ( ✓ ) button to save the changes to the *Master List*. Click on the **Cancel** ( ✕ ) button to cancel the edit.

You may also use the tools to navigate throughout the *Master List*. To navigate to the beginning, click on ( ⏮ ). To skip to the end of the *Master List*, click on ( ⏭ ). To move forward from one species record to another, click on ( ◄ ). To view the previous record, click on ( ► ).



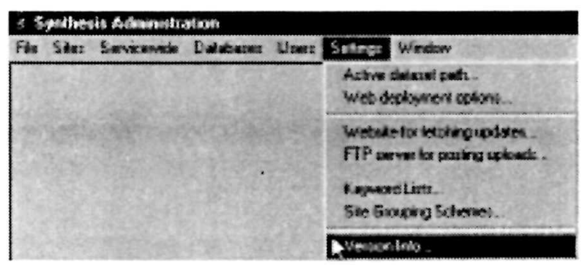
**<u>Importing Ecological Effects References:</u>**

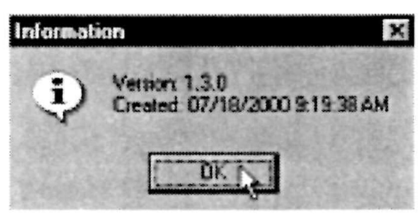



The Ecological Effects utility allows you to import ecological effects references created in ProCite, so that they may be viewed in *Synthesis* without running the ProCite software.

NOTE: This utility is still under construction.

**Viewing <u>*Synthesis*</u> <u>Version Information:</u>**




To view which version of *Synthesis* you are working with, go to the **Settings** menu and choose the option **Version Info**. The **"Information"** window will appear with the version number and the date it was created.

# Section Five:

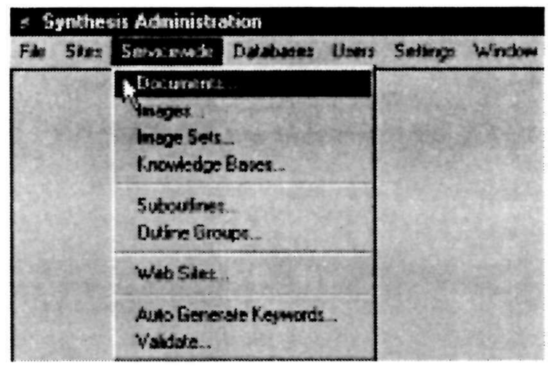
***Working with Servicewide Data Items***

# Working with Servicewide Data Items:

Servicewide data items, including documents, can be linked to any of the sites in *Synthesis*. Servicewide data items are generally applicable at the regional or federal level.

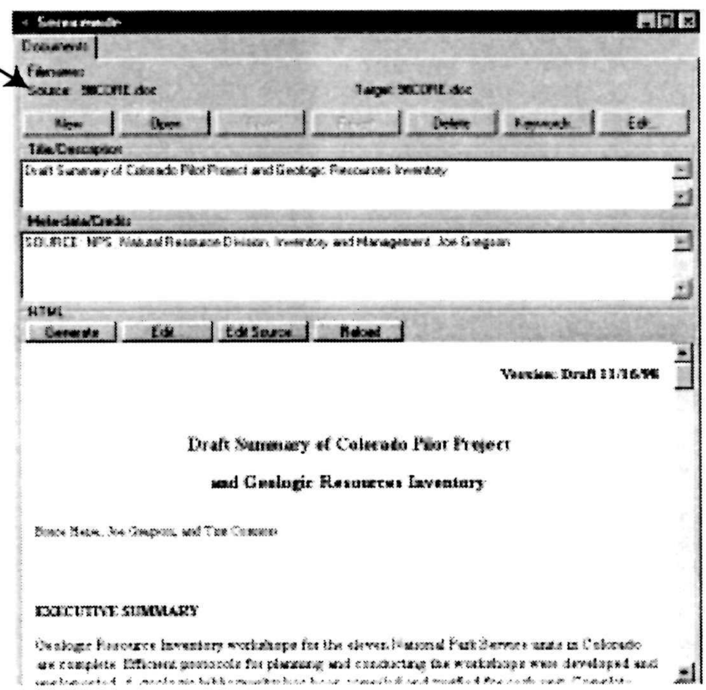
### Servicewide Documents

To add, modify, or remove a servicewide document, select the **Servicewide** menu and then select the option **Documents**. The Servicewide **"Documents"** window will appear.

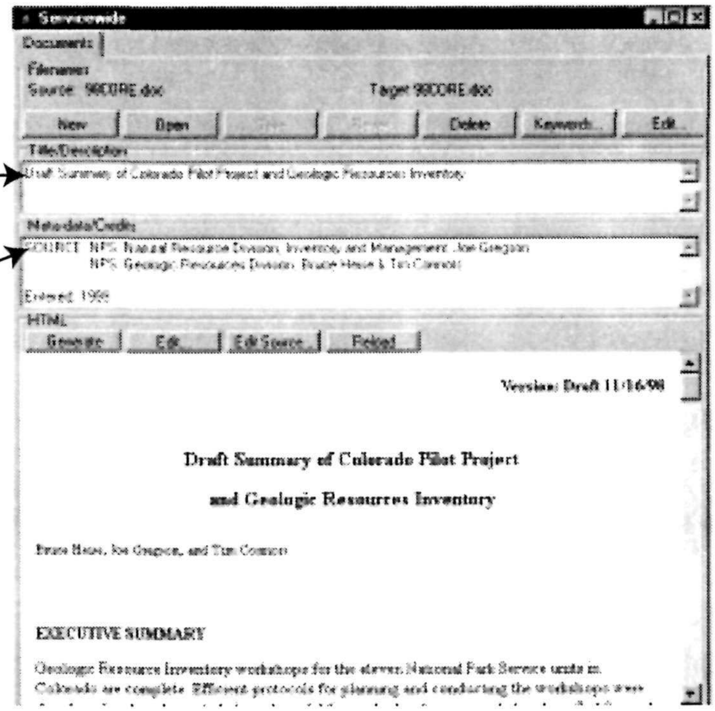



**<u>Documents Window Components</u>:**

- **<u>Source:</u>** displays the file name of the open file
- **<u>New Button:</u>** adds a new document to the Servicewide documents list
- **<u>Open Button:</u>** opens the document and loads information about the document
- **<u>Save Button:</u>** saves changes to the Title, Metadata, or HTML fields
- **<u>Revert Button:</u>** reverts back to the previously saved changes
- **<u>Delete Button:</u>** deletes the file from the Servicewide document list
- **<u>Keywords:</u>** opens the **"Keyword Utility"** window; see Section Four for information about this utility

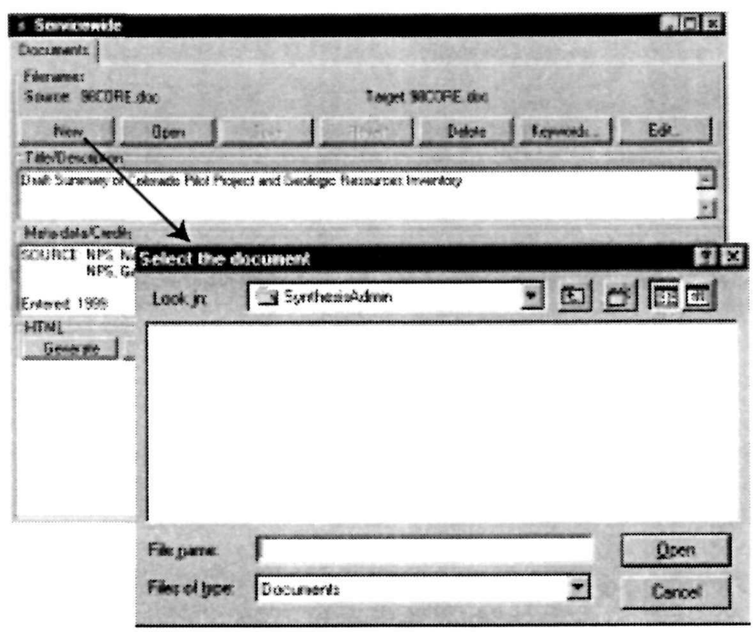


**Servicewide Documents**



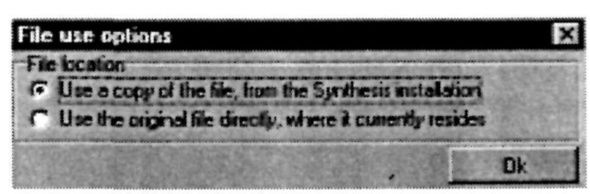

## Documents Window Components:

- **Edit:** opens the file in its original application for editing
- **Title/Description:** provides for entry of the document title/ description. This is the title that will show in the *Synthesis* outline.
- **Metadata/Credits:** provides for entry of the document metadata and credits informaiton
- **HTML - Generate:** generates the HTML version of the document, using the version of Microsoft Word™ that you have installed on your computer.
- **HTML - Edit:** allows you to edit the page in a web browser
- **HTML - Edit Source:** allows yo to edit the file source code
- **HTML - Reload:** reloads the document in the HTML window.




## Adding a New Servicewide Document:

To add a new servicewide document, click on **New**. The **"Select the document"** window will appear. Navigate to the location of the file, and click on the appropriate document's name.

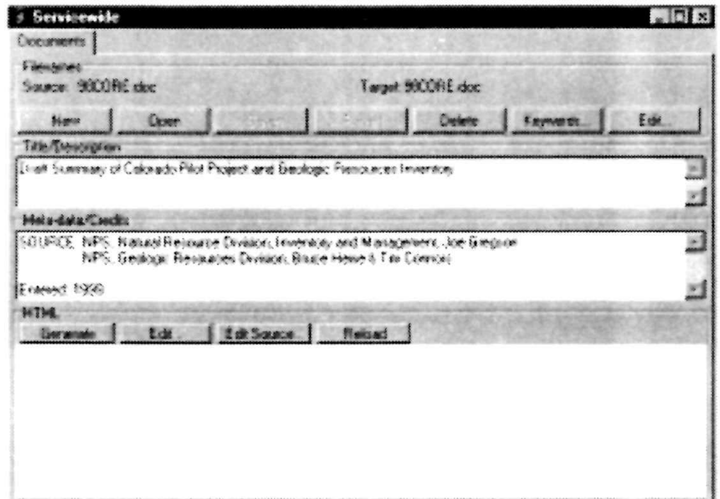



Click on **Open**. *Synthesis Administration* will ask if you would like to use a copy of the file or the original file, in a remote location.

## Servicewide Documents

### Adding a New Servicewide Document:

Check the option you prefer in the **"File use options"** window, and then click on **OK**. Type in a title that describes the content of the document and add metadata.



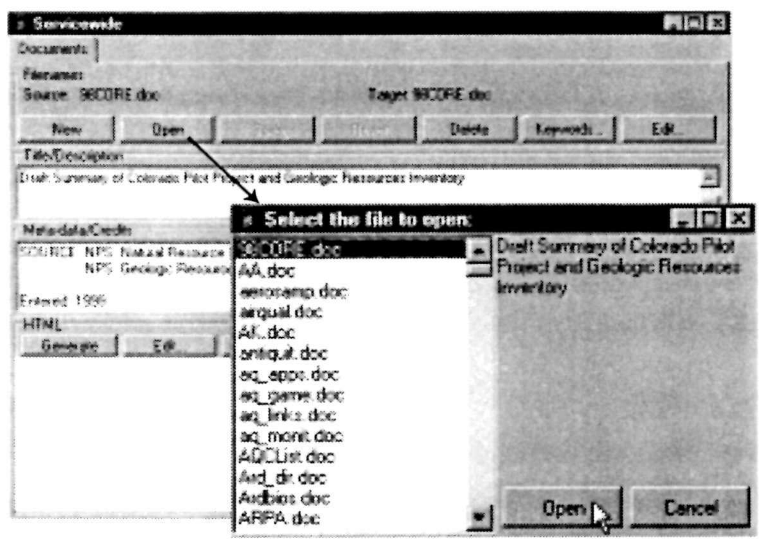

To add a title or description, click in the white portion of the text field. Type in the title, and click on **Save**.

To add the metadata and credits information, click in the white portion of that text field. Type in the metadata and credits information, and then click on **Save**.

Add keywords to a document as you enter it into *Synthesis*. Click on **Keywords** and follow the instructions outlined in **Section Four** under the heading **"Attaching Keywords to Individual Data Items."**

### Opening a Servicewide Document:

Opening a servicewide document allows you to edit the Title and Metadata information, delete the document, add keywords, generate and modify the HTML version, and open the actual document for editing in its original application.

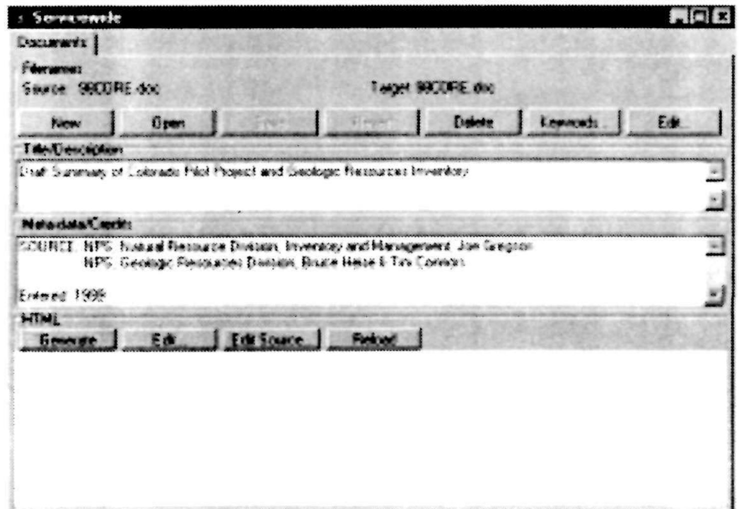



To open a document, click on **Open**. The **"Select the file to open"** window will appear. Scroll through the list until the appropriate file is located. Click on the **file name**. The title description for the document will appear in the right half of the window. Click on **Open**, and the document information will appear in the **"Documents"** window.

**Servicewide Documents**

## Modifying the Title/Metadata:

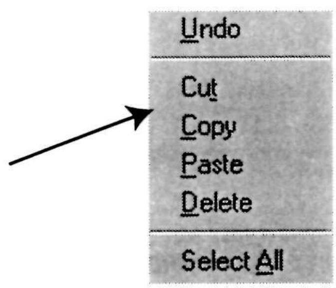
Once a document opens, the document information is displayed in the **"Documents"** window, allowing you to modify the information.



To modify either the **Title/Description** or **Metadata/Credits** field, **click in the white portion of the text box**.

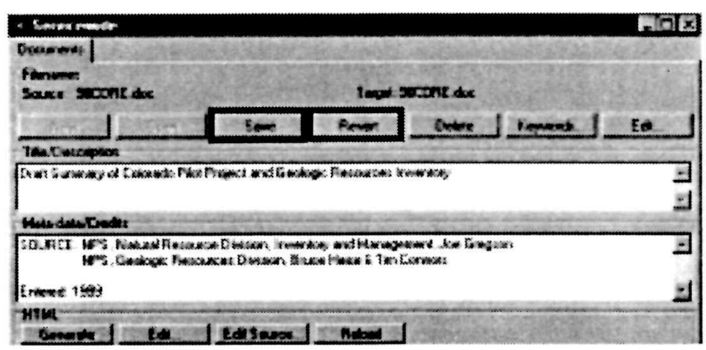
A text editing cursor will appear, and text can then be entered or edited.

Click and drag to highlight text. Right-click in field to open the pop-up editing menu that allows you to undo the last command as well as cut, copy, paste, delete, and select all of the text.

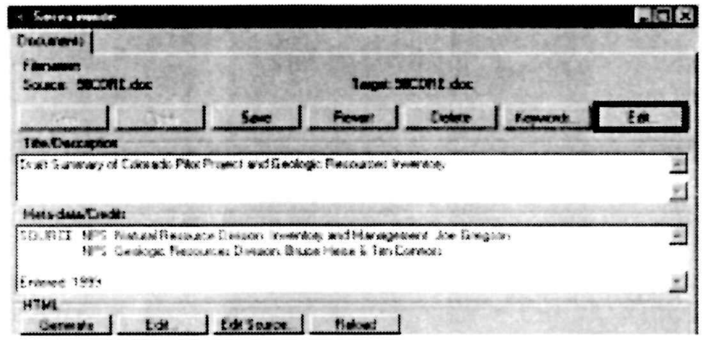



Once changes have been made to the text fields, click on the **Save** button to save the changes.

If you <u>don't</u> want to save the changes, click on **Revert**.



**Servicewide Documents**

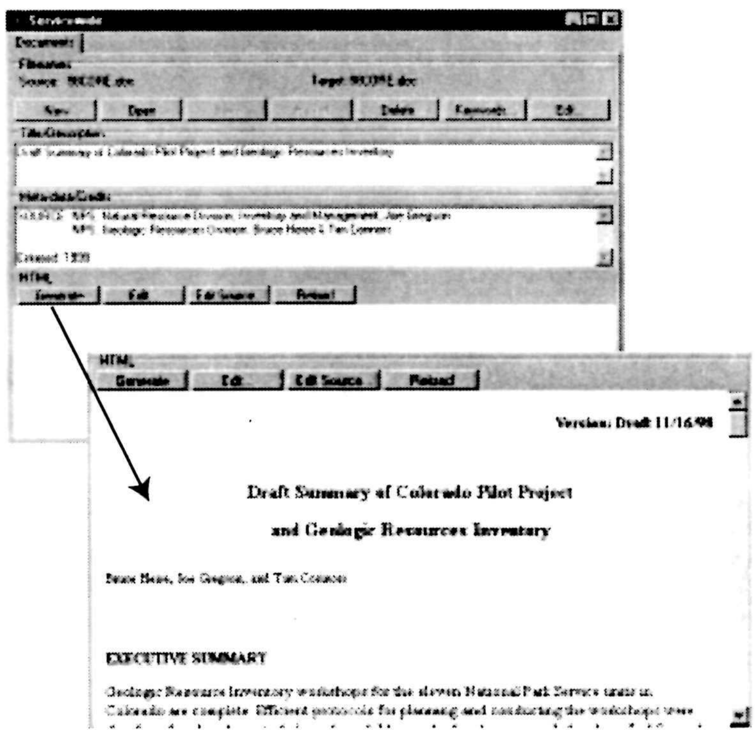



## Editing a Servicewide Document:

To open a servicewide document in its original application for editing, click on **Edit**.

**WARNING**: When you open the document, you will edit the original version. Thus, any changes that are saved will be permanent.

## Generating the HTML Document:

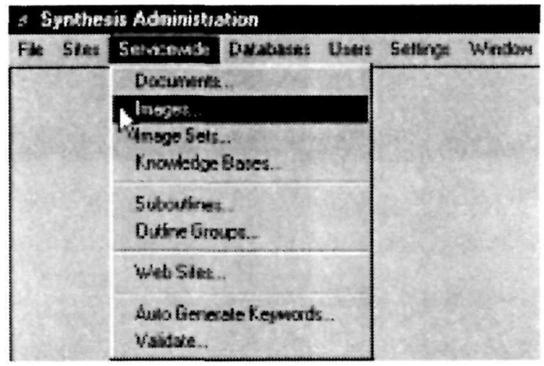



All of the documents entered into *Synthesis* can be converted and saved as **HTML** documents, using the version of Microsoft Word™ installed on your computer. To aid in the conversion process, *Synthesis Administration* has three commands available under the **"Documents"** window.

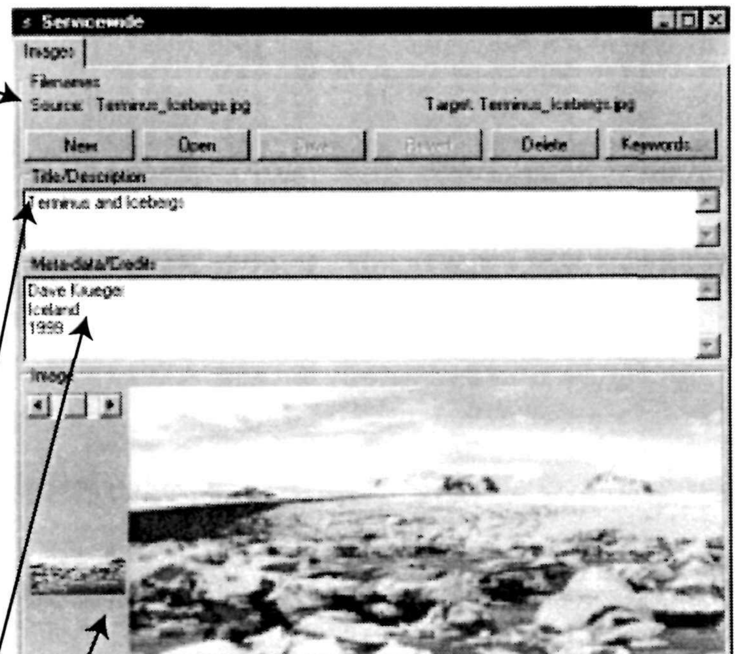
To generate the HTML version, click on **Generate**. After a few moments, depending on the size of the document, the HTML version of the document will appear in the bottom field of the **"Documents"** window.

## Servicewide Images

Servicewide images can be linked to any of the sites in *Synthesis,* and they are generally applicable at a regional and federal level. To add, modify, or remove a servicewide image, select the **Servicewide** menu and select **Images**. The Servicewide **"Images"** window will appear.



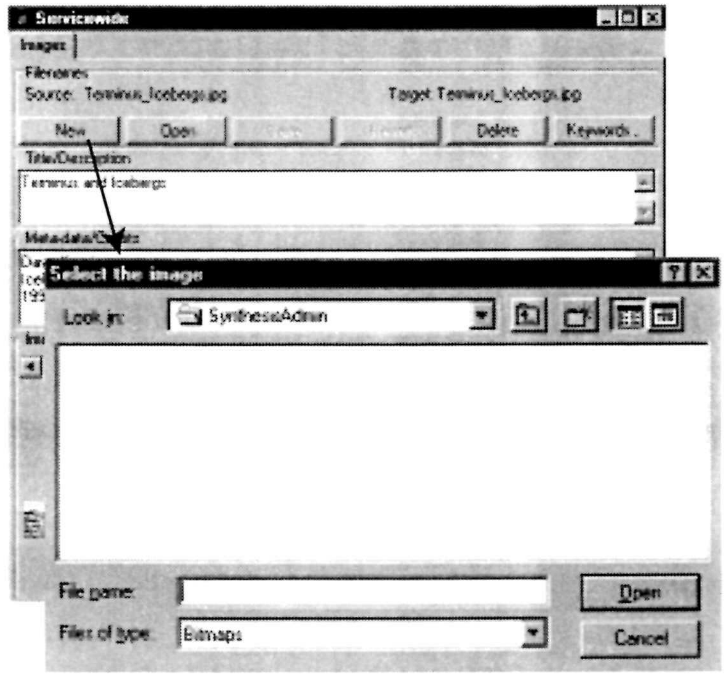

### Image Window Components:




- **Source:** displays the file name of the image being viewed
- **New Button:** adds a new image to the Servicewide images list
- **Open Button:** opens the servicewide image and loads information about the image
- **Save Button:** saves changes to the Title or Metadata fields
- **Revert Button:** reverts back to the previously saved changes
- **Delete Button:** deletes the image from the Servicewide images list
- **Keywords:** opens the **"Keyword Utility"** window; see Section Four for information about this utility
- **Title/Description:** provides for entry of the image title and description
- **Metadata/Credits:** provides for entry of image metadata and credits
- **Image:** shows the thumbnail, image quality, and the actual image.

## Servicewide Images

### Adding a New Servicewide Image:



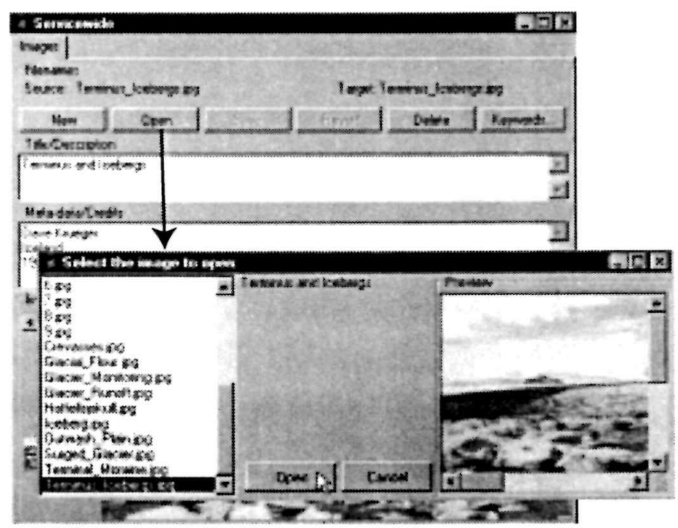

To add a new servicewide image, click on **New**. The **"Select the image"** window will appear. Navigate to the location of the image, and click on the image name. Click on **Open**. *Synthesis Administration* will copy the image into the Servicewide **"Images"** folder and create the accompanying files.

Note: Unlike other servicewide data types, *Synthesis* does not allow you to use an image file from a remote location. The system makes a copy of the image file and copies it into the servicewide images folder within the Synthesis file structure.

Type in a title and the metadata and credits information. To add a title or the metadata, click in the white portion of the text field. Type in the information, and then click on **Save**.

Add keywords to an image as you enter it into *Synthesis*. Click on **Key-words** and then follow the instructions outlined in **Section Four** under the heading, **Attaching Keywords to Individual Data Items**.

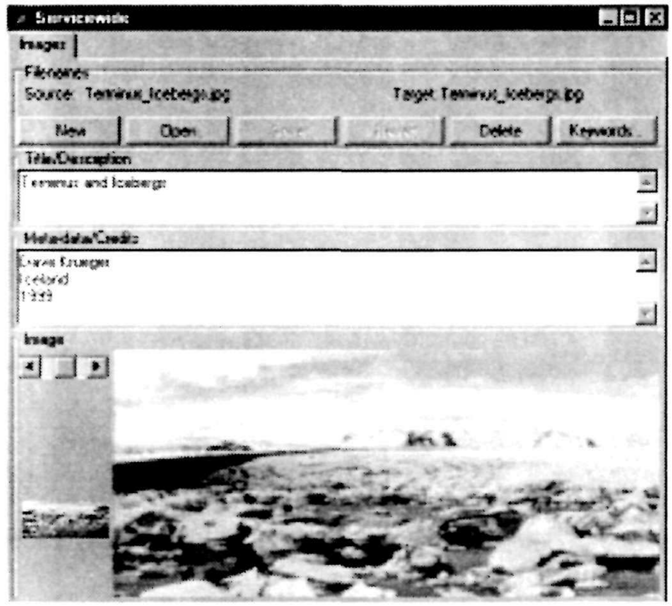
### Opening a Servicewide Image:



Opening an existing servicewide image allows you to edit the Title and Metadata information, delete the image, and add keywords.

To open an existing image, click on **Open**. The **"Select the image to open"** window will appear. Scroll through the list until the appropriate file is located.

## Servicewide Images

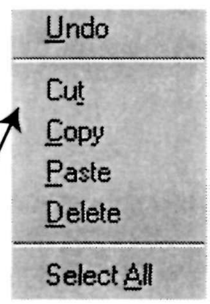



### Opening a Servicewide Image:

Click on the **file name**, and the title description for the image along with a preview of the image will appear in the right half of the window. Click on **Open**, so the image information will appear in the **"Images"** window.

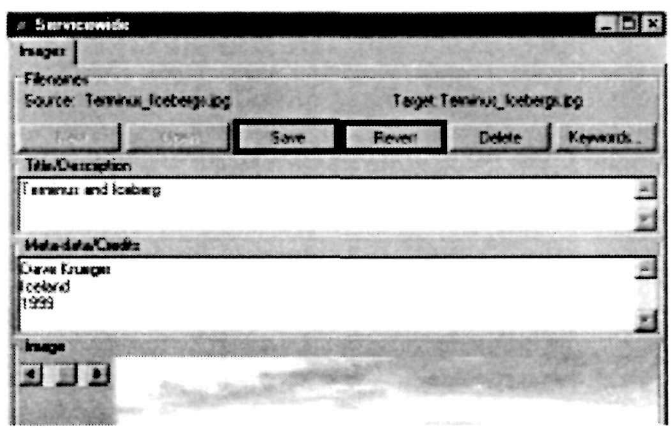
### Modifying the Title/Metadata:

Once an image opens, the image information is displayed in the **"Images"** window, allowing you to modify the information.




To modify either the **Title/Description** or the **Metadata/Credits field, click in the white portion of the text field**.

A text editing cursor will appear, and text can then be entered or edited. Click and drag to highlight text. Right-click in field to open the pop-up editing menu that allows you to undo the last command as well as to cut, copy, paste, delete, and select all of the text.

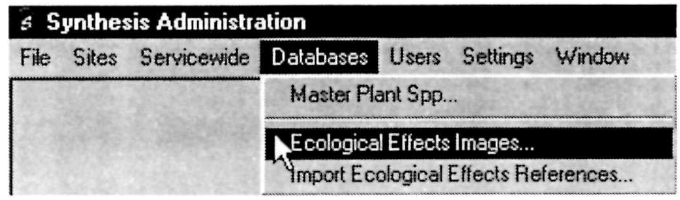



Once changes to the text fields are made, click on **Save** to save the changes.

If you don't want to save any of the changes, click on **Revert**.

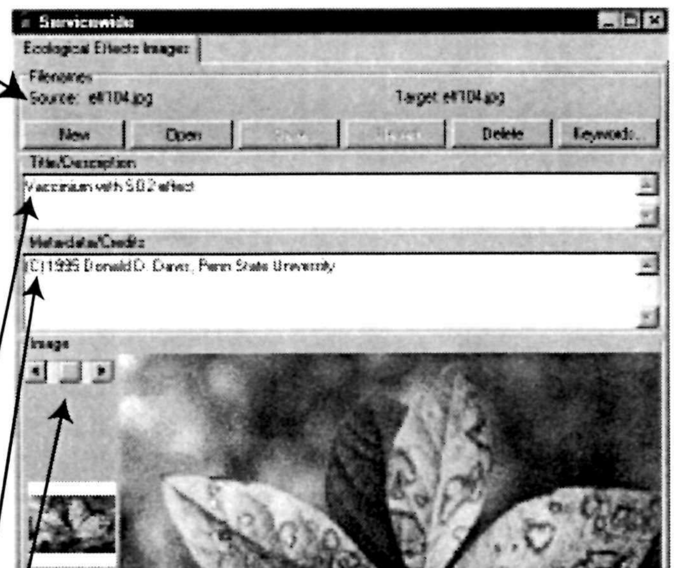
## Servicewide Ecological Effects Images

**Ecological Effects Images** is a library of images illustrating pollution effects on various plants. To view, add, modify, or remove an image from this library, go to the **Databases** menu and choose the option **Ecological Effects Images**. The **"Ecological Effects Images"** window will appear.



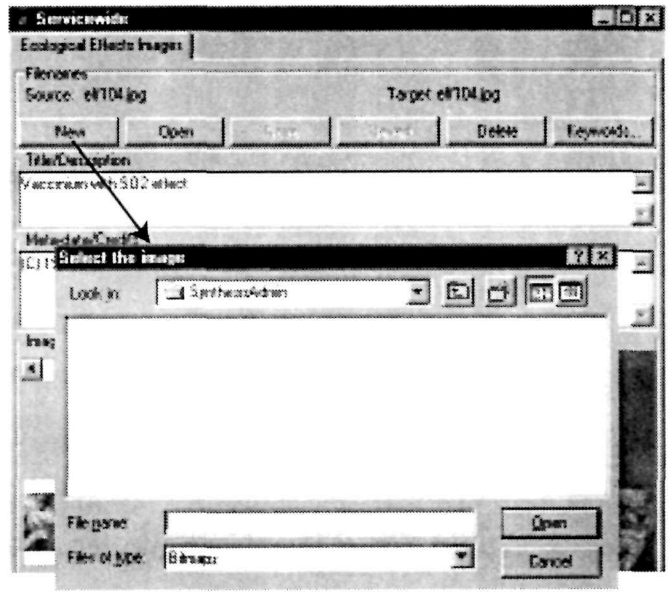

__Ecological Effects Images Window Components:__

- __**Source:**__ displays the file name of the image being viewed
- __**New Button:**__ adds a new image to the Ecological Effects Images library
- __**Open Button:**__ opens an ecological effects image and loads information about the image
- __**Save Button:**__ saves changes to the Title or Metadata fields
- __**Revert Button:**__ reverts to previ ously saved changes
- __**Delete Button:**__ deletes an image from the Ecological Effects Images library
- __**Keywords:**__ opens **Keywords** utility window; see Section Four for information about this utility
- __**Title/Description:**__ provides for entry of the image title and description
- __**Metadata/Credits:**__ provides for entry of image metadata and credits




- __**Image:**__ shows the thumbnail, image quality, and the actual image.

**Servicewide Ecological Effects Images**



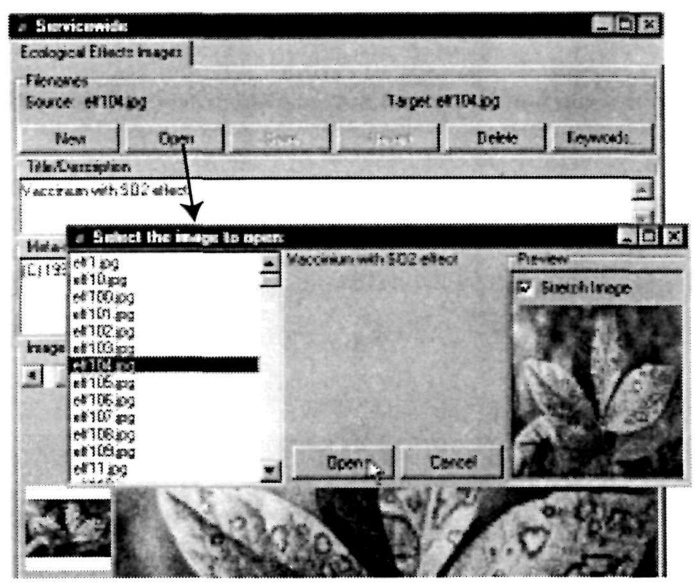
**<u>Adding Ecological Effects Images:</u>**

To add a new ecological effects image, click on **New**. The **"Select the image"** window will appear. Navigate to the location of the image, and click on the appropriate image name. Click on **Open**. *Synthesis Administration* will ask if you want to rename the ecological effects image. Renaming is optional.

Type in a title and the metadata and credits information. To add a title or the metadata, click in the white portion of the text field. Type in the information, and then click on **Save**.

Add keywords to an ecological effects image as you enter it into *Synthesis*. Click on **Keywords** and then follow the instructions outlined in **Section Four** under the heading, **Attaching Keywords to Individual Data Items**.

**<u>Opening Ecological Effects Images:</u>**



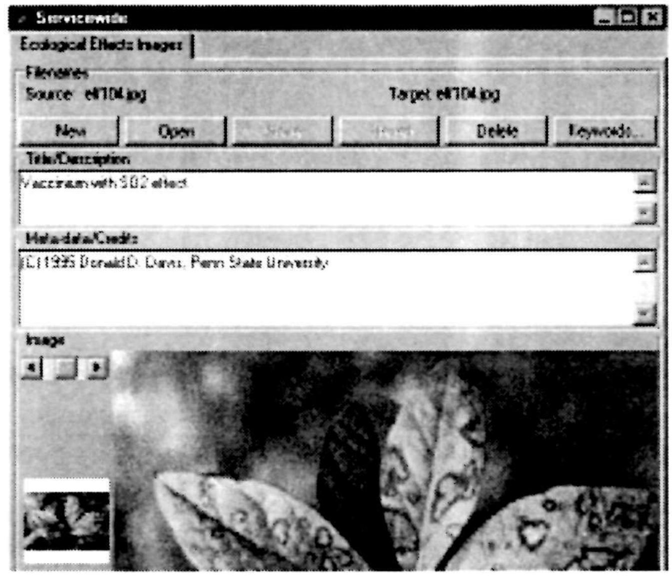
Opening an ecological effects image allows you to edit the Title and Metadata information, delete the image, and add keywords.

To open an existing image, click on **Open**. The **"Select the image to open"** window will appear. Scroll through the list until the appropriate file is located.

Click on the **file name**. The title/ description for the image will appear in the right frame of the window, along with a preview of the image.

Click on **Open**. The image information will appear in the Servicewide **"Ecological Effects Images"** window.

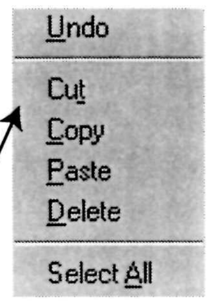
## Servicewide Ecological Effects Images



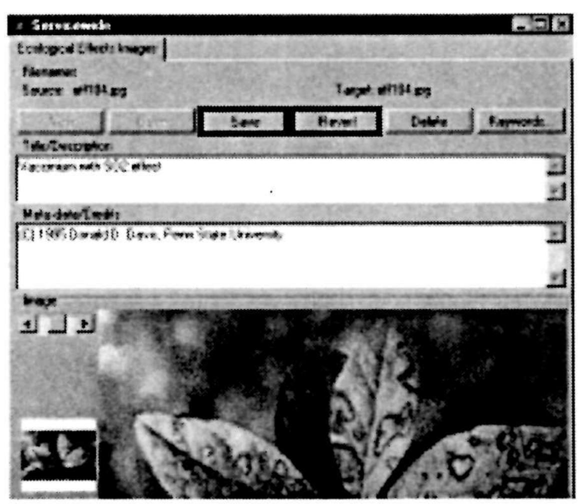
### Modifying the Title/Metadata:

Once an ecological effects image opens, the image information is displayed in the **"Ecological Effects Images"** window, allowing you to modify the information.

To modify either the **Title/Description** or the **Metadata/Credits field, click in the white portion of the text box**.




A text editing cursor will appear, and text can then be entered or edited. Click and drag to highlight text. Right-click in field to open the pop-up editing menu that allows you to undo the last command as well as to cut, copy, paste, delete, and select all of the text.

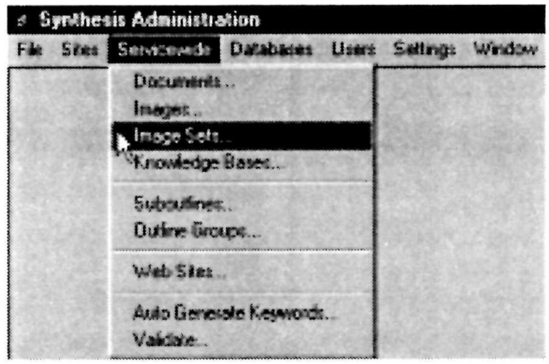


Once changes to the text fields are made, click on **Save** to save the changes.

If you <u>don't</u> want to save any of the changes, click on **Revert**.

## Servicewide Image Sets

Servicewide image sets can also be linked to any of the sites in *Synthesis*. Servicewide image sets are applicable at a regional or federal level.




To add, modify, or remove a servicewide image set, select the **Servicewide** menu and then choose **Image Sets**. The Servicewide **"Image Sets"** window will appear.

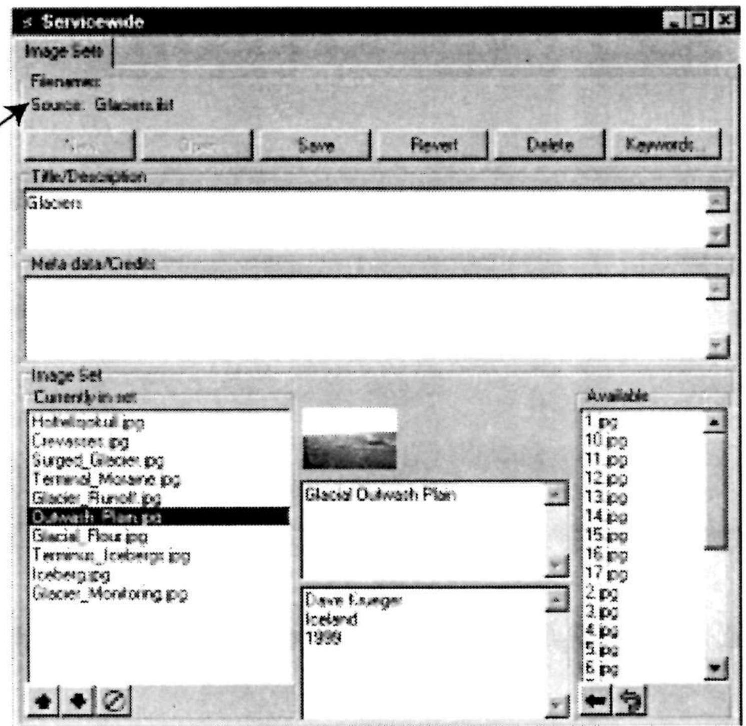


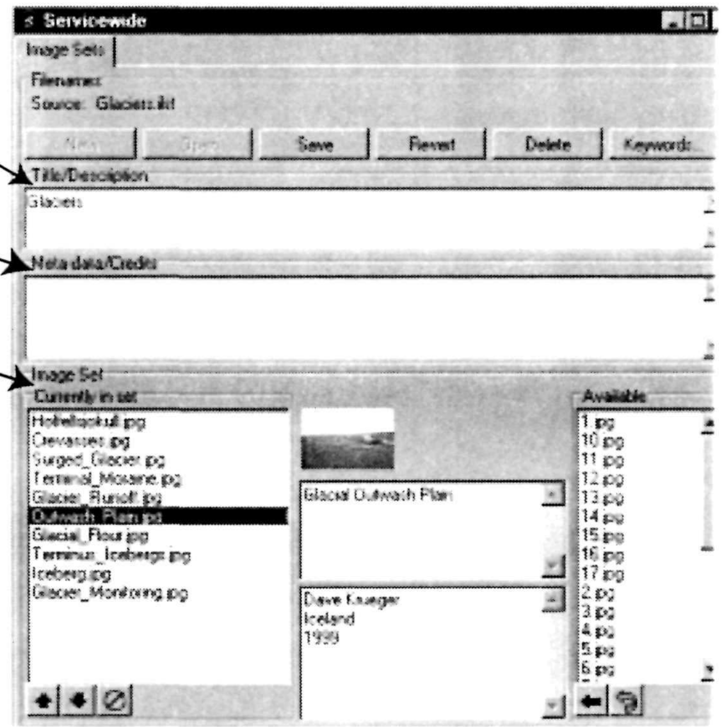

__Image Set Window Components:__

- __Source:__ displays the file name of the image set being viewed
- __New Button:__ creates a new image set in the Servicewide image sets list
- __Open Button:__ opens a servicewide image set and loads information about the image set
- __Save Button:__ saves any changes to the Title and Metadata fields as well as the image set list
- __Revert Button:__ reverts back to the previously saved changes
- __Delete Button:__ deletes the image from the image set
- __Keywords:__ opens the **"Keyword Utility"** window; see Section Four for information about this utility

## Servicewide Image Sets

**Image Set Window Components:**

- **Title/Description:** provides for entry of the title and description of the image set
- **Metadata/Credits:** provides for entry of metadata and credits for the image set
- **Image Set:** shows the images currently in the set, a thumbnail and title/metadata information regarding the selected image, and a list of servicewide images available to be added to the image set.

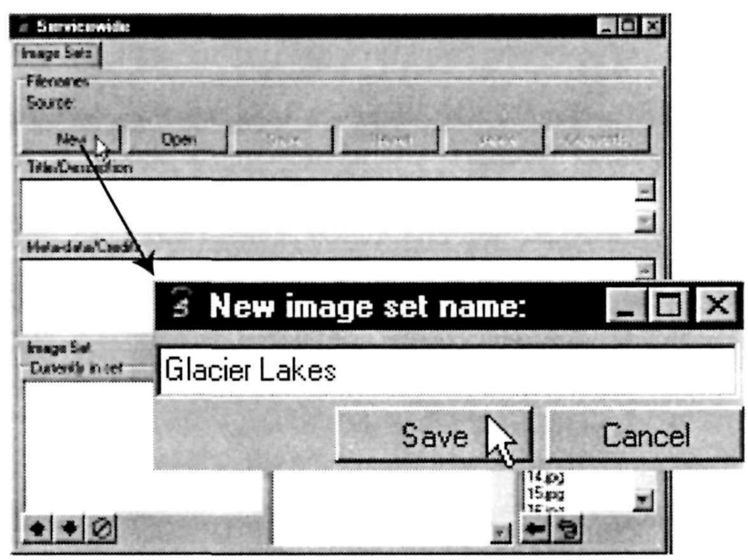



**Adding a New Servicewide Image Set:**

To add a new servicewide image set, click on **New**. The **"New image set name"** window will appear.

Type in the name of the new image set. Click on **Save**, and *Synthesis* will create a new image set file.

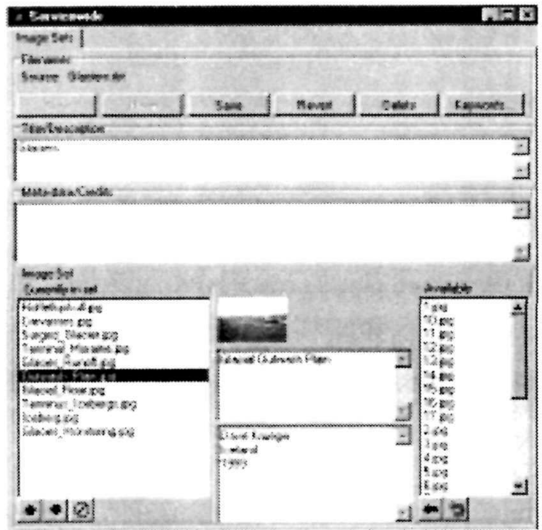
Type in a title and the metadata information. **To add a title or description, click in the white portion of the text field**. Type in the title, and click on **Save**.



## Servicewide Image Sets

### Adding a New Servicewide Image Set:

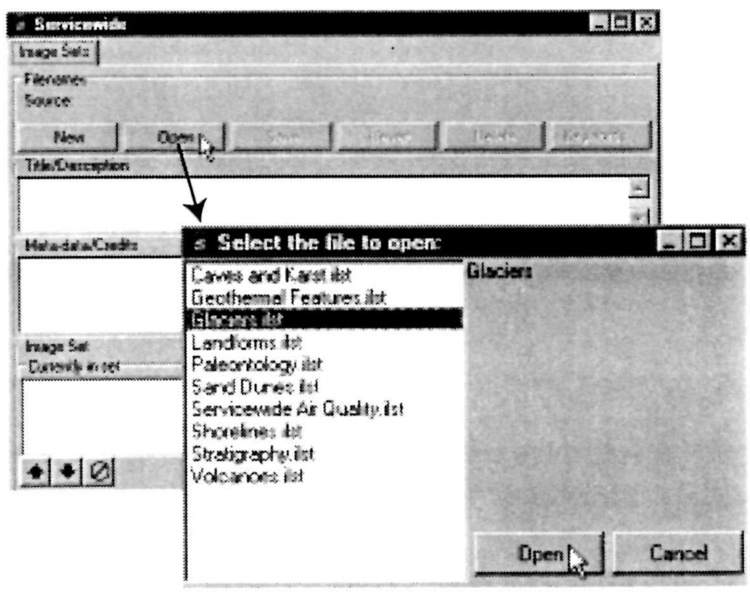
**To add the metadata information, click in the white portion of that text field**. Type in the metadata and credits information. Then, click on **Save**.



Add keywords to an image set as you enter it into *Synthesis*. Click on **Key-words** and then follow the instructions outlined in **Section Four** under the heading, **Attaching Keywords to Individual Data Items**.

### Opening a Servicewide Image Set:

Opening an existing servicewide image set allows you to edit the Title and Metadata information, delete the image set, add keywords, and modify the list of images in the set.




To open a servicewide image set, click on **Open**. The **"Select the file to open"** window will appear. Scroll through the list until the appro-priate file is located.

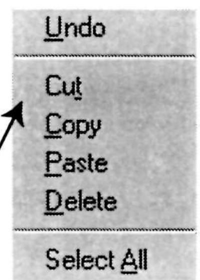
Click on the **file name**, so that the title description for the image set will appear in the right half of the window. Click on **Open**, and the image set information will appear in the **"Image Sets"** window.

**Servicewide Image Sets**

**Modifying the Title/Metadata:**

Once an image set opens, the image set information is displayed in the **"Image Sets"** window, allowing you to modify the information.

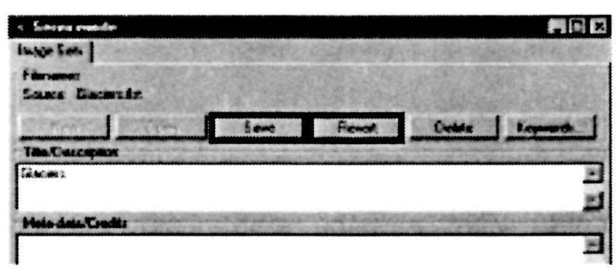
To modify either the **Title/Description** or the **Metadata/Credits** field, **click in the white portion of the text box**.



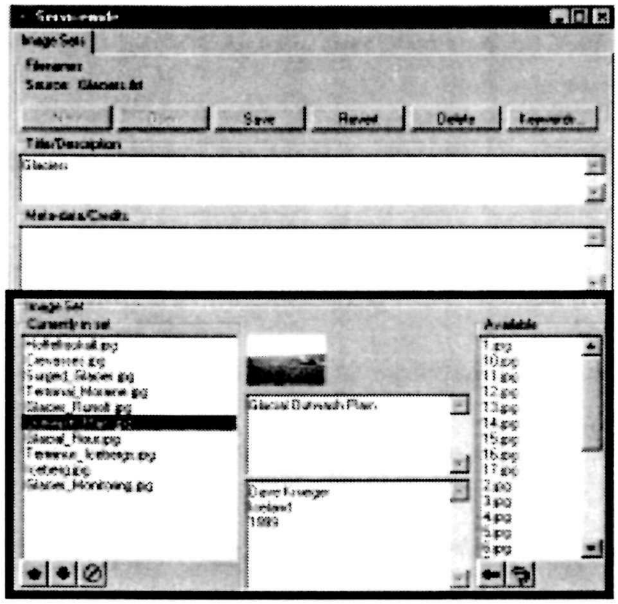

A text editing cursor will appear. Text can then be entered or edited. Click and drag to highlight text. Right-click in field to open the pop-up editing menu that allows you to undo the last command as well as to cut, copy, paste, delete, and select all of the text.

Once changes to the text fields are made, click on **Save** to save the changes.

If you don't want to save any of the changes, click on **Revert**.



## Servicewide Image Sets



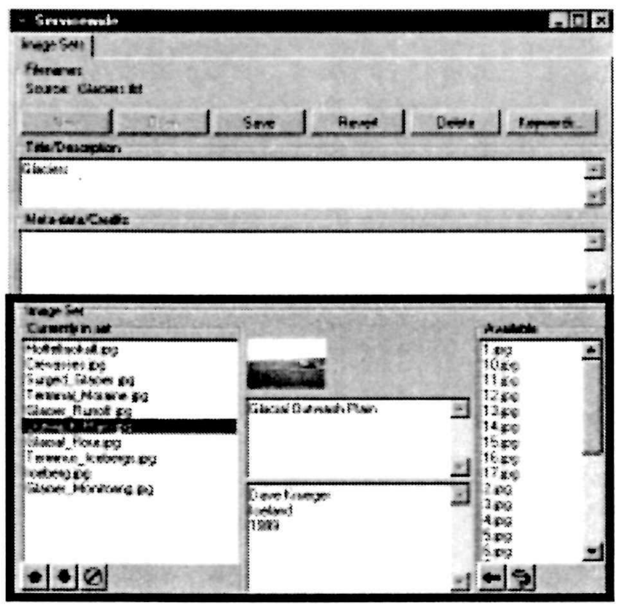
### Modifying an Image Set:

Images can be added to or removed from an image set.

To add an image to the image set, click on the **Refresh** ( ) button to bring up a list of servicewide images currently available. Select the name of the image you want to add. A thumbnail of the image and its information will be displayed in the middle section of the **"Image Set"** window.

Click on the **Add** ( ) button to add the image to the set, or double-click on the image name to add it to the set.

To remove an image from the image set, select the image name under the **"Currently in set"** field. A thumbnail and the image information are displayed in the middle section of the **"Image Set"** window.



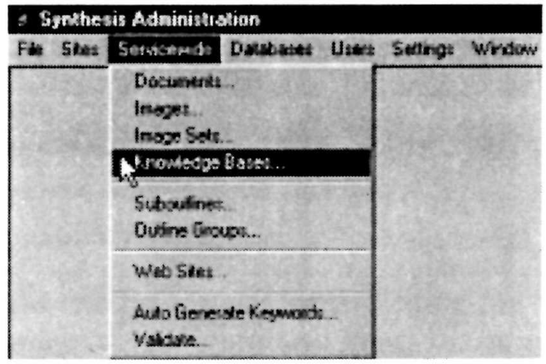
Click on the **Remove** ( ) button to remove an image from the set.

To modify the order of the images in the set, select the image you wish to move. The thumbnail and the image information will appear in the middle section of the **"Image Set"** window.

Click on the **Promote** ( ) button to move the image up in the list, or click on the **Demote** ( ) button to move the image down in the list.

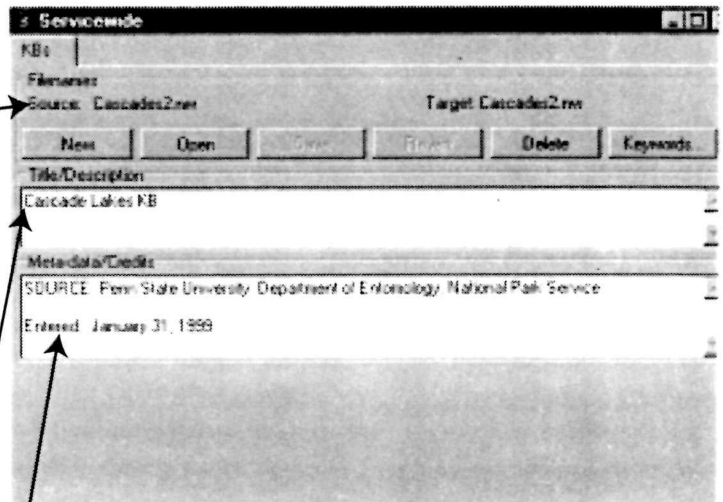
**Servicewide Knowledge Bases**

Knowledge bases (KBs) can be linked to sites in *Synthesis*. The knowledge bases for lake aquatic chemistry currently in Synthesis were developed by experts nationwide based on sets of regional rules. The knowledge bases are applicable to a given geographic region.



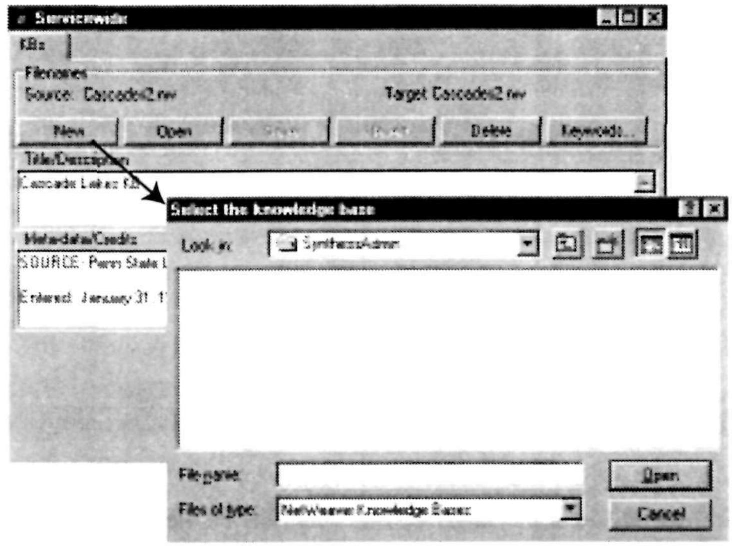

To add, modify, or remove a servicewide knowledge base, select the **Servicewide** menu. Then choose the option **Knowledge Bases**.

<u>**KB Window Components:**</u>



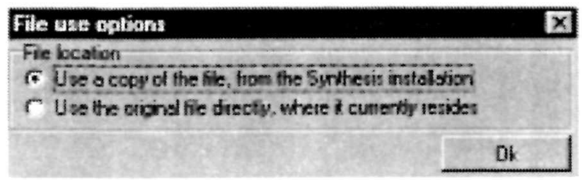

- <u>**Source:**</u> displays the file name of the open knowledge base
- <u>**New Button:**</u> allows a new knowledge base to be added to *Synthesis*
- <u>**Open Button:**</u> opens the knowledge base and loads information about the knowledge base
- <u>**Save Button:**</u> saves changes to the Title or Metadata fields
- <u>**Revert Button:**</u> reverts back to the previously saved changes
- <u>**Delete Button:**</u> deletes the knowledge base
- <u>**Keywords:**</u> opens the **"Keyword Utility"** window; see Section Four for information about this utility
- <u>**Title/Description:**</u> provides for entry of the knowledge base title and description
- <u>**Metadata/Credits:**</u> provides for entry of the knowledge base metadata and credits information.

## Servicewide Knowledge Bases




### Adding a New Knowledge Base:

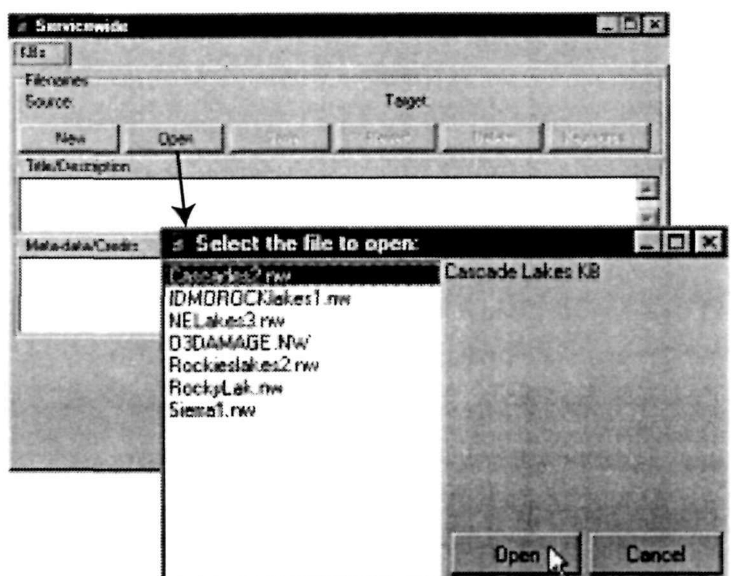
To add a new servicewide knowledge base, click on **New**. The **"Select the Knowledge Base"** window will appear. Navigate to the location of the knowledge base, and click on the name so that it appears in the **File name box**. Click on **Open**. *Synthesis Administration* will ask if you would like to use a copy of the file or the original file in a remote location. Check which option you prefer in the **"File use options"** window, and click on **OK**.




Type in a title and the metadata information. To add a title or the metadata, click in the white portion of the text field. Type in the information, and click on **Save**.

Add keywords to a knowledge base as you enter it into *Synthesis*. Click on **Keywords** and then follow the instructions outlined in **Section Four** under the heading, **"Attaching Keywords to Individual Data Items."**

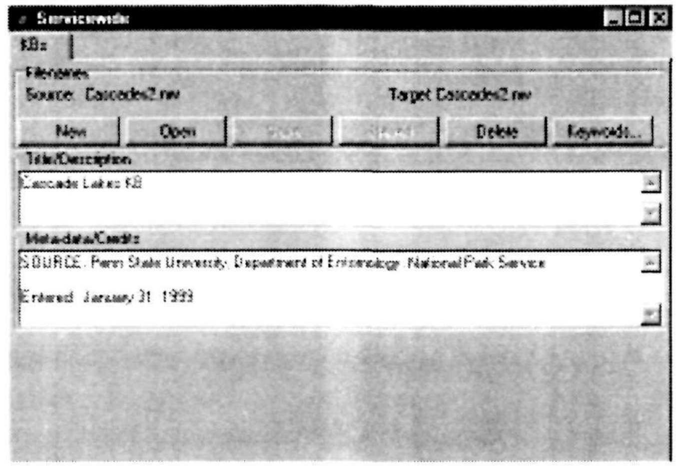
### Opening a Knowledge Base:




Opening an existing servicewide knowledge base allows you to edit the Title and Metadata information, delete the knowledge base, and add keywords.

To open a knowledge base, click on **Open**. The **"Select the file to open"** window will appear. Scroll through the list and locate the appropriate file. Click on the **file name**. The title description for the knowledge base will appear in the right half of the window. Click on **Open**. The knowledge base information will appear in the **"KBs"** window.

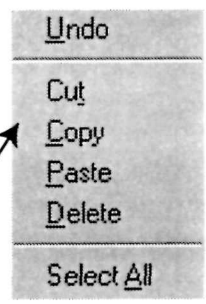
**Servicewide Knowledge Bases**




## <u>Modifying the Title/Metadata:</u>

Once a knowledge base opens, the knowledge base information is displayed in the Servicewide **"KBs"** window, allowing you to modify the information.

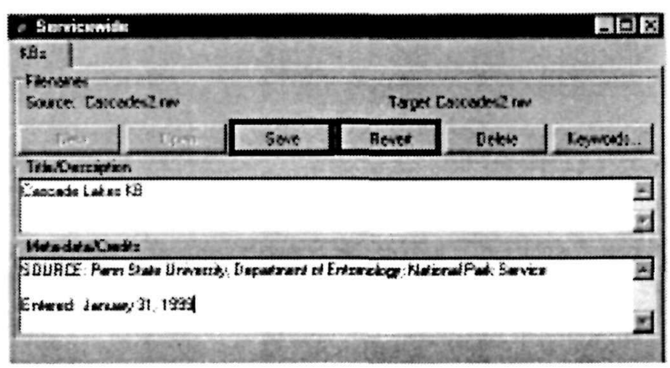
To modify either the **Title/Description** or the **Metadata/Credits** field, **click in the white portion of the text box**.



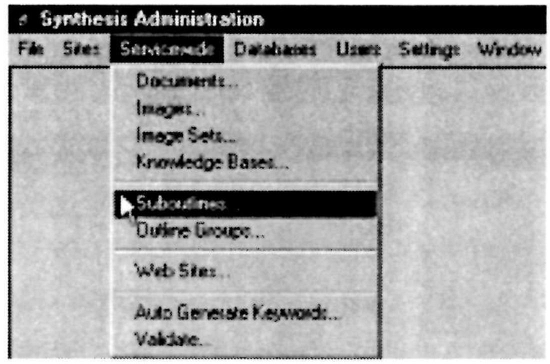

A text editing cursor will appear, and text can then be entered or edited. Click and drag to highlight text. Right-click in field to open the pop-up editing menu that allows you to undo the last command as well as to cut, copy, paste, delete, and select all of the text.

Once changes to the text fields are made, click on **Save** to save the changes.

If you <u>don't</u> want to save any of the changes, click on **Revert**.



## Servicewide Suboutlines

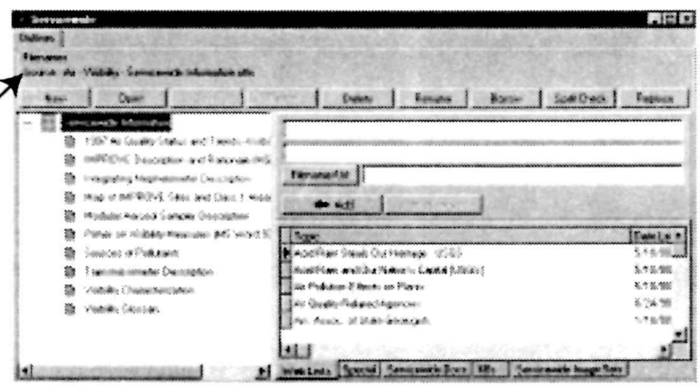



Servicewide suboutlines allow sets of documents, images, or other data types to be grouped and entered into a site outline as a single item.

For example, servicewide documents related to visibility may be grouped into a suboutline named: Air - Visibility - Servicewide Information.

When you modify a suboutline, every site containing a link to that outline will also be updated.

To add, modify, or remove an outline, select the **Servicewide** menu and then choose the option **Suboutlines**. The Servicewide **"Outlines"** window will appear.

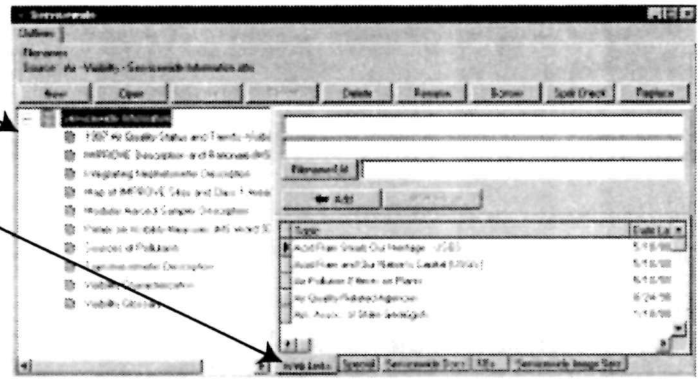


**Suboutline Window Components:**

- **Source:** displays the file name of the outline being viewed
- **New Button:** creates a new outline
- **Open Button:** opens a suboutline and loads information about the outline
- **Save Button:** saves changes to the outline
- **Revert Button:** reverts back to the previously saved changes
- **Delete Button:** deletes the outline
- **Rename:** allows you to rename the outline without navigating to it through Windows Explorer™
- **Borrow:** imports a template outline

## Servicewide Suboutlines

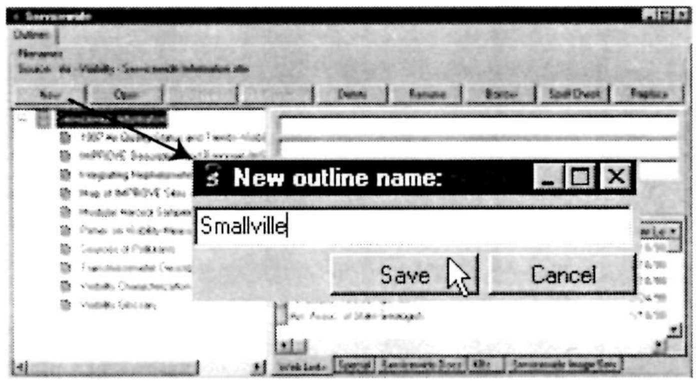
### Suboutline Window Components:



- **Outline Area:** shows the current items in the outline

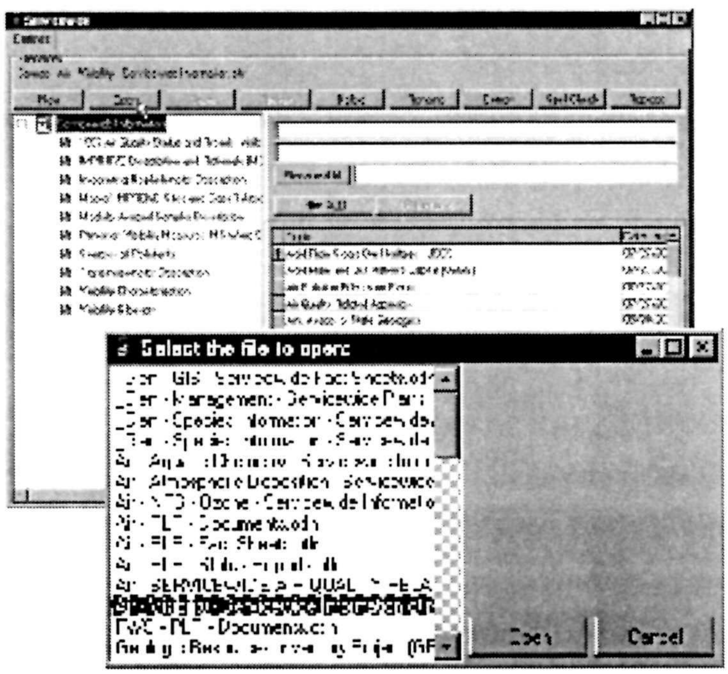
- **Data Items Area:** shows the differ ent types of servicewide data that linked under a suboutline. You can toggle through the available data using the tabs, add or remove data links in the suboutline.

### Adding a Servicewide Suboutline:




To add a new servicewide suboutline into *Synthesis*, click on the **New** button. The **"New outline name"** window will appear. Type in the name of the new outline. Click on **Save**, and *Synthesis Administration* will create a new outline file.

### Opening a Servicewide Suboutline:



Opening a servicewide suboutline allows you to edit the layout of the outline, rename the outline, or borrow a new scheme from a template outline.

To open a suboutline, click on **Open**. The **"Select the file to open"** window will appear. Scroll through the list and locate the suboutline.

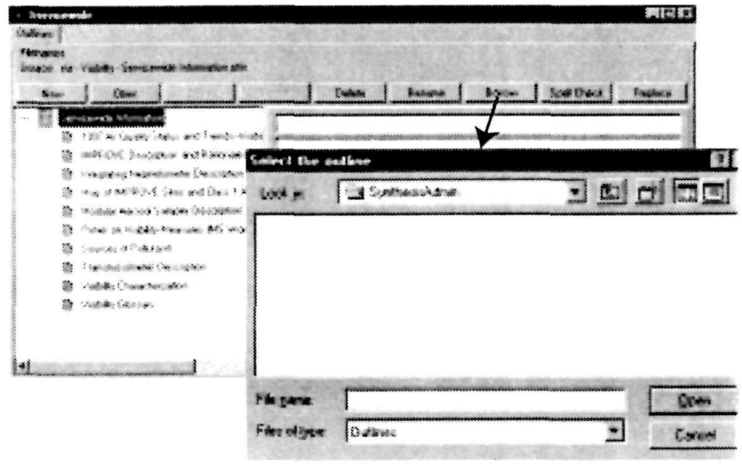
Click on the **file name**. Click on **Open**, and the outline will appear in the Servicewide **"Outlines"** window. The list of data items attached to that suboutline will appear.

## Servicewide Suboutlines

### Using a Suboutline Template:

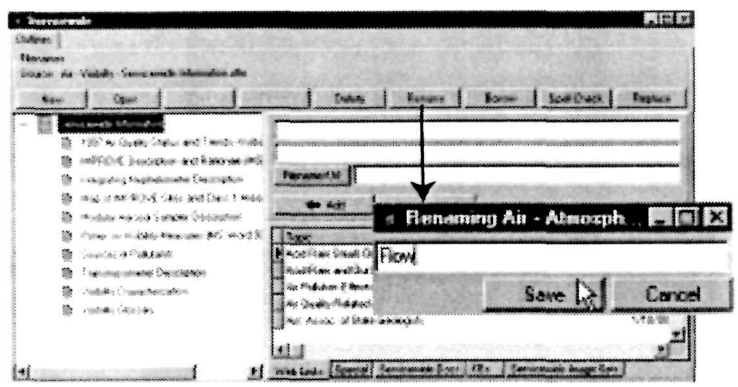
To borrow information from another servicewide outline or outline template, click on the **Borrow** button.

The **"Open"** window will appear. Navigate to the correct outline file. Click on the **file**, and then click on **Open**. The information for this outline will be placed in the **"Outline Area"** of the **"Outlines"** window.

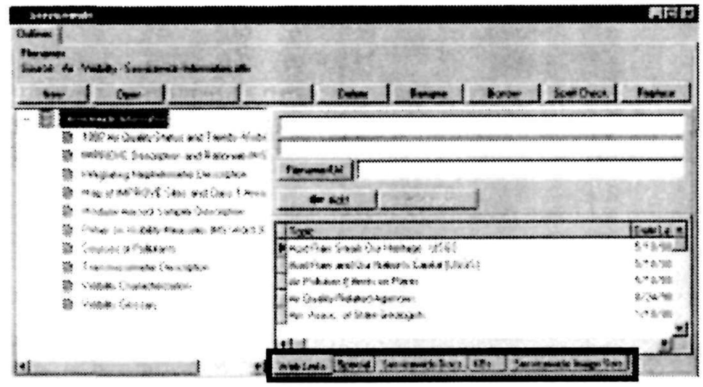



### Renaming a Servicewide Suboutline:

To rename an open suboutline, click on **Rename.** The **"Renaming File Name"** window will appear. Type in the new file name of the outline, and then click on **Save**.



## Servicewide Suboutlines



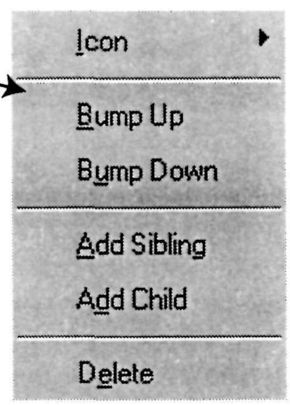
### <u>Modifying a Servicewide Suboutline:</u>

Once you open an outline, the outline information is displayed in the **"Outline Area"** of the window, allowing you to modify the information.

To **add data** to the suboutline, click in the **"Data Items Area"** and on the tab for the data type you want to add. Scroll through the list, and **click on the file** you want to add. Information about the file will appear in the fields in the upper-right part of the window.

**Click on the title** of the outline in the **"Outline Area"** of the window if it is not already highlighted. Then click on **Add**. The file will be added at the end of the list.

To **modify the position of the data** in the outline, **click on the item** that you want to move. **Right-click** so that the **Edit** menu for outlines will appear. Choose **Bump Up** to move the item up in the list, or click on **Bump Down** to move the item down in the list.




To **remove data** from the outline, **click on the item** you want to remove. The file name and information about the file will appear in the fields in the upper-right part of the window. The Remove button will become active. Click on **Remove**.

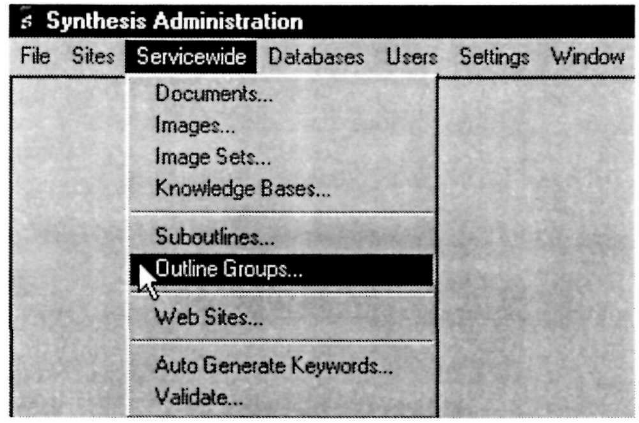
Once changes to the outline have been made, click on **Save** to save the changes.

If you <u>don't</u> want to save any of the changes, click on **Revert**.

**Servicewide Outline Groups**

Servicewide outline groups provide the ability to group site outlines of a servicewide nature.

NOTE: This feature is still under construction.

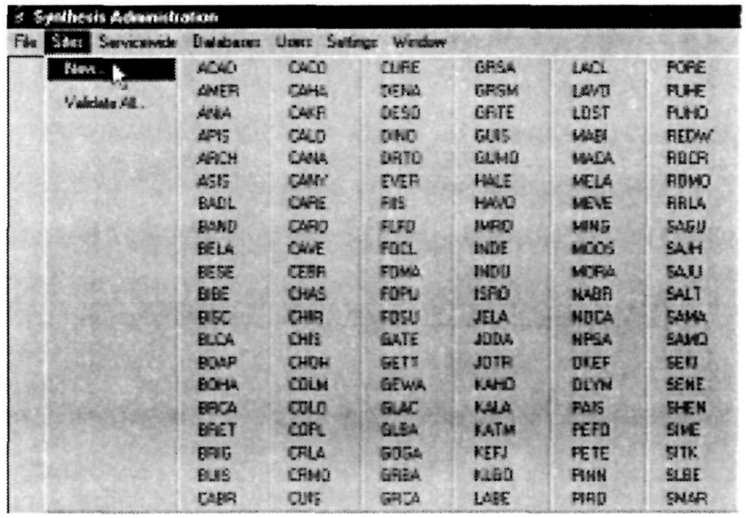


# Section Six:

***Working with Site Data Items***

# *Working with Site Data Items:*

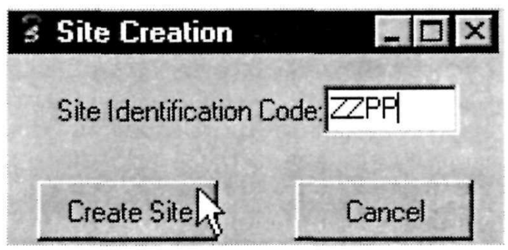
*Synthesis* organizes data by sites. A site could be a park, monument, regional office, or federal office. Each site is identified by a four-letter code in addition to its name. *Synthesis* contains a site folder for every site in it. The site folder holds all of the data and outlines that are specific to that site.



**Site Information**

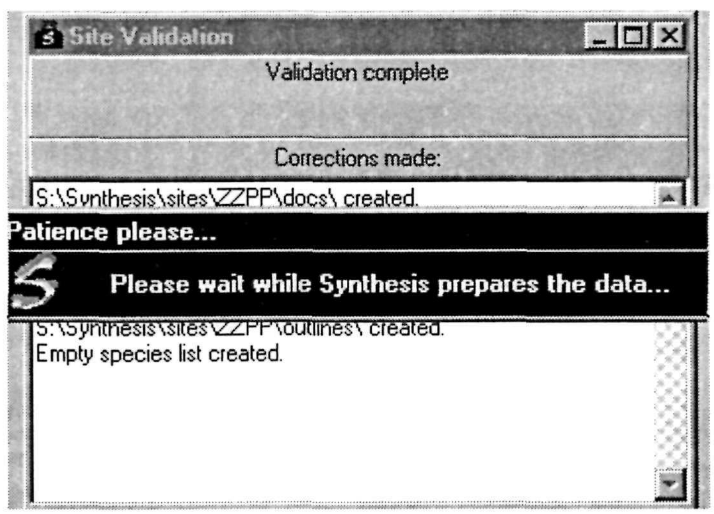
**Creating a New Site:**

To create a new site in *Synthesis*, select the **Sites** menu, and then choose the option **New**.




The **"Site Creation"** window will appear. Type in a **unique four-letter code** that will distinguish this site from the other sites already in *Synthesis*. (NPS sites use the Servce's standard four-letter code for that unit.)

Click on **Create Site**.

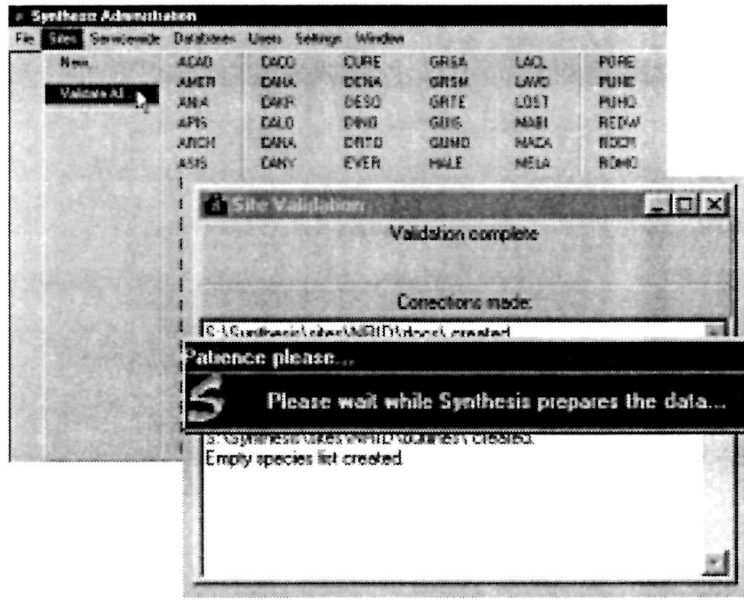



The software will run a validation check on the site. This initial validation will create all of the necessary folders and data files required for a site.

When the validation is complete, a site window will open. For detailed instructions on how to enter and organize data for the site, continue reading this entire section.

## Site Information

### Validating All Sites in *Synthesis*:

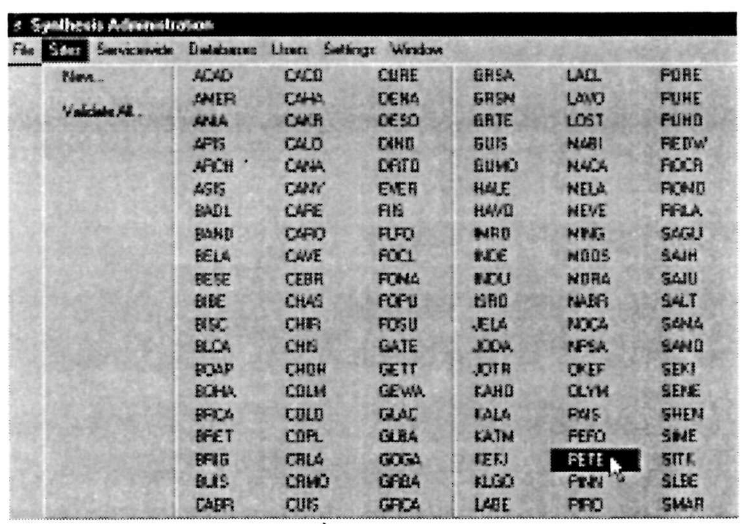



*Synthesis Administration* can run a validation check on all of the data in all of the sites in *Synthesis*. The validation check will create any .desc, .meta, and .html files that are missing.

To **validate all sites**, select the **Sites** menu. Then, choose the option **Validate All**.

The validation check will automatically begin. Wait for a few moments until the text in the top gray box says **"Validation complete."** Below this text, a list of corrections, if any, will be displayed.

### Selecting a Site in *Synthesis Administration*:



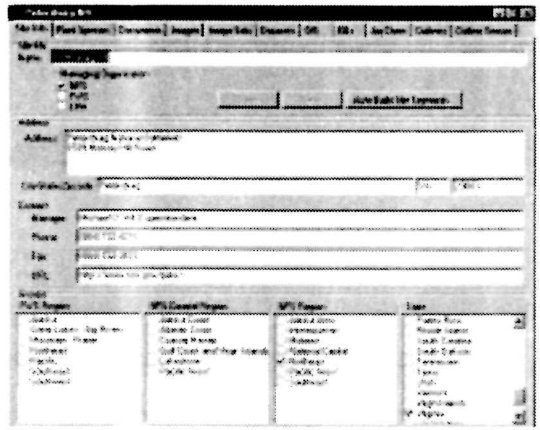

To open a site, select the **Sites** menu. Then, **choose the site** from the list in the right-half of the menu listing. In the example at right, we have selected PETE, or Petersburg National Battlefield.

Each time a site is opened, a validation check is run on it.

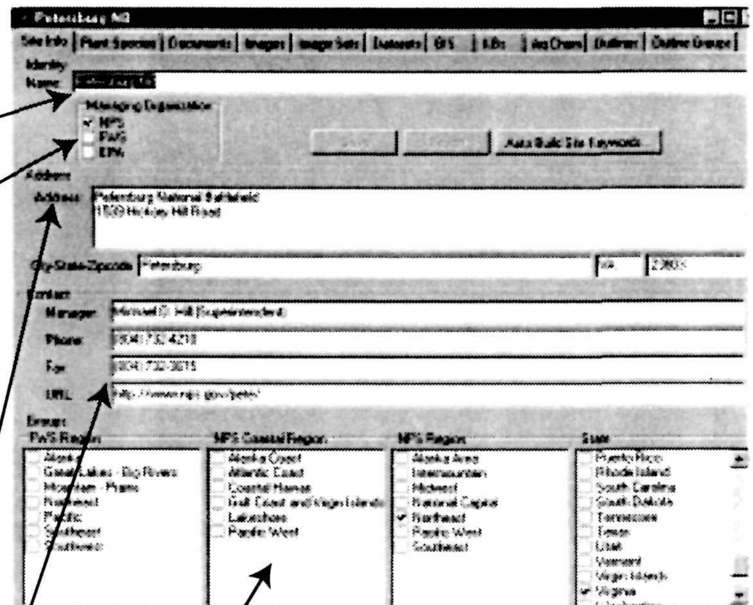
### Site Information

The **“Site Info”** tab organizes the identification, contact, and group information for a site. The Site Info tab appears by default when you open a site.

Use the Site Info Tab to add or modify the identification, contact, or group information.



**Site Info Tab Components:**

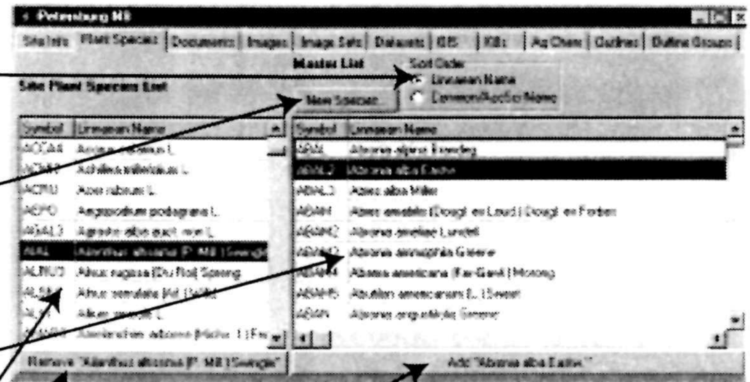



- **Name:** displays the name of the site
- **Managing Organization:** shows which organization manages the unit
- **Save Button:** saves changes to the fields under the **“Site Info”** tab
- **Revert Button:** reverts all of the fields back to the previously saved version
- **Auto Build Keywords:** opens the **“Keyword Utility”** and automatically attaches keywords for all files in the site folder; see **Section Four** for more information
- **Address Fields:** hold the address, city, state, and zip code of the site
- **Contact Fields:** hold the name of the manager, unit phone, fax numbers, and unit URL address
- **Groups:** check boxes that allow you to group sites by geographic location, managing organization, and regions within an agency or any other user-specified group

## Site Plant Species

The **"Plant Species"** tab in the **"Site"** window contains the plant list for that site.

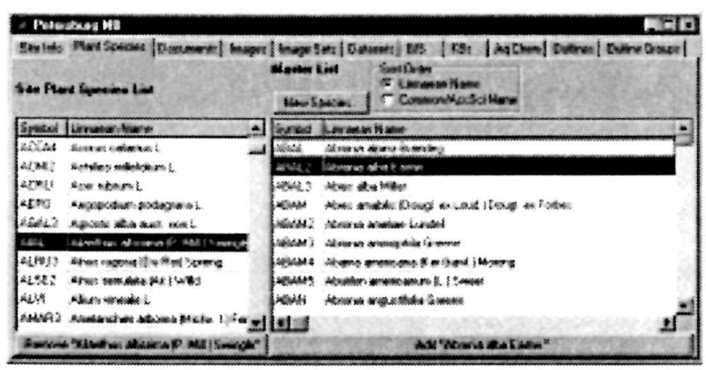
### Plant Species Tab Components:



- **Sort Order:** sorts the *Master List* by Linnaean name or Common name
- **New Species:** allows a new plant species to be added to the *Master List*
- **Master List:** shows all of the plant species in the *Master Plant List* based on the NRCS plant list
- **Site List:** shows the symbol and Linnaean name of the plant species currently in the site list
- **Add:** adds the highlighted plant species to the site list
- **Remove:** removes the highlighted plant species from the site list.

### Modifying a Site's Plant Species List:

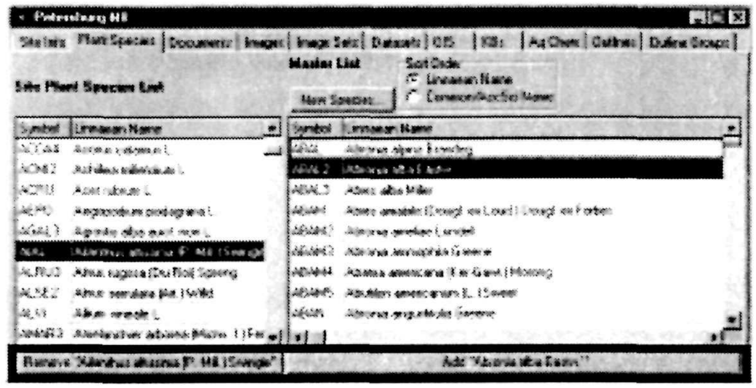
Plant species can be added or removed from a site plant list. To modify the site plant list, click on the **"Plant Species"** tab in the **"Site"** window.



## Site Plant Species

### Modifying a Site's Plant Species List:

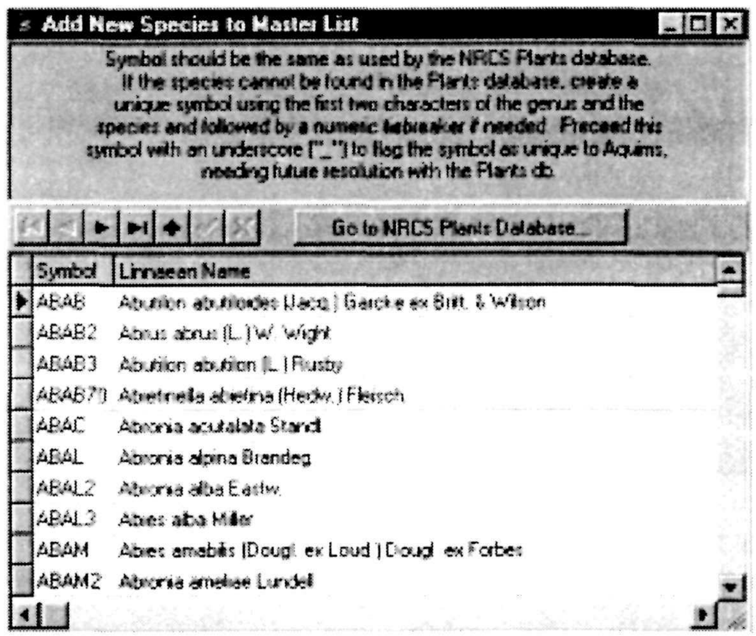
To **add a new species to the site plant species list**, scroll through the *Master List* to locate the species. (The *Master List* is alphabetized by the symbol). Once you locate the species, **click on that species name**. The **Add** button becomes active. Click on **Add**.



To **remove a species from the Site Plant Species List**, scroll through the *Site List* until you locate the species. Once you locate it, **click on the species**. The **Remove** button becomes active. Click on **Remove.**

### Adding a New Species to *Master List*:

There may be occasions when you need to **Add New Species to Master Lis**. See Section Four, **Editing the Master Plant Spp** for instructions.

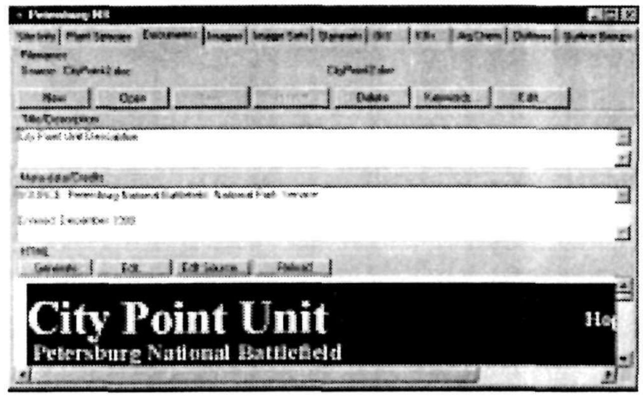



Use the following commands to navigate through the list.

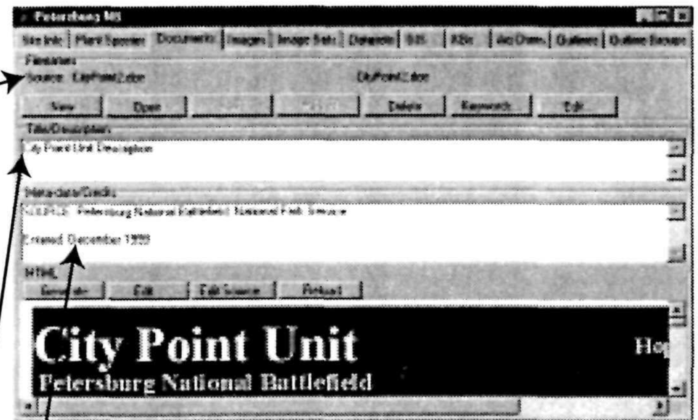
- Navigate to the beginning ( |◀ ), end ( ▶| ), previous record ( ◀ ), and next record ( ▶ )

Click on **Go to NRCS Plants Database** to open an internet browser and access the web-based NRCS Plants database.

**Site Documents**



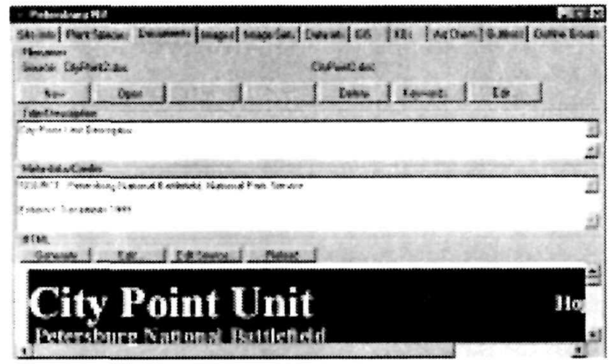

Site documents are typically site-specific documents that pertain to a certain issue or resource. Document types include Microsoft Word,™ PowerPoint,™ Excel files, Adobe Acrobat,™ movie files, Rich Text format and simple text files. To add, modify, or remove a site document, click on the **Documents** tab.




**Site Documents Tab Components:**

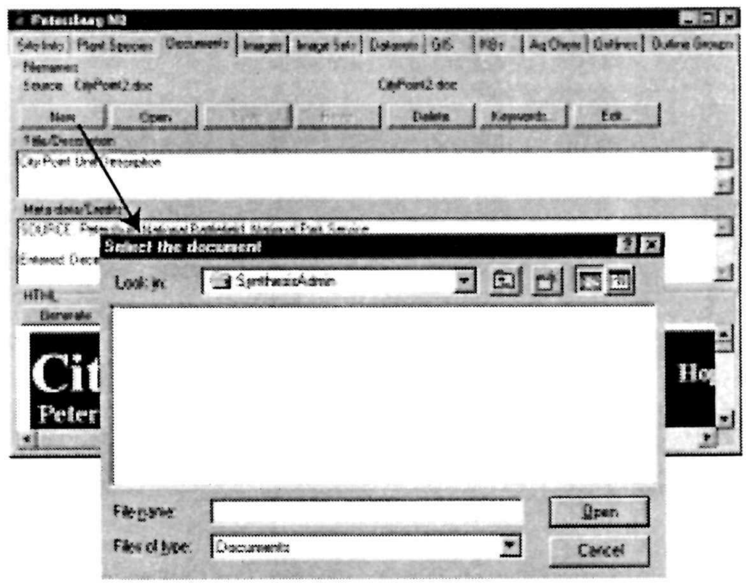
- **Source:** displays the file name
- **New:** adds a new document to the site documents list
- **Open:** opens a document and loads information about the document
- **Save:** saves changes to the HTML, Title, or Metadata fields
- **Revert:** reverts back to the previously saved changes
- **Delete:** deletes the file from the site documents list
- **Keywords:** opens the **"Keyword Utility"** window; see Section Four for information about this utility
- **Edit:** opens the file in its native application for editing
- **Title/Description:** provides for entry of document title/description
- **Metadata/Credits:** provides for entry of document metadata and credits

## Site Documents



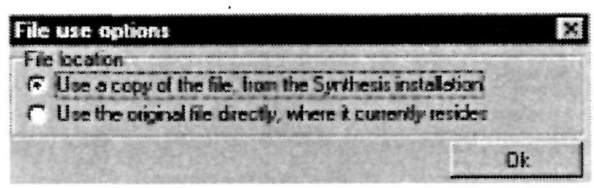

### Site Documents Tab Components:

- **HTML Generate:** generates the HTML for the document
- **HTML - Edit:** allows you to edit the page in a web browser
- **HTML - Edit Source:** allows you to edit the file source code
- **HTML - Reload:** reloads the document in the HTML window.




### Adding a New Site Document:

To add a new site document, click on **New**. The **"Select the document"** window will appear. **Choose the appropriate file type, or select All Document file types.** Navigate to the file of interest, and click on the filename, so that its name appears in the **File name box**.

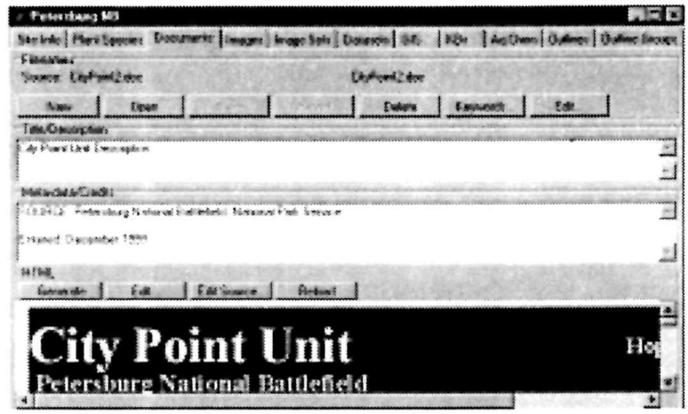



Click on **Open**. *Synthesis Administration* will ask if you would like to use a copy of the file or the original file in a remote location. Check the option you prefer in the **"File use options"** window, and then click on **OK**.

Type in a title and the metadata and credits information.

To add a title or description, click in the white portion of the text field. Type in the title, and click on **Save**.

**Site Documents**



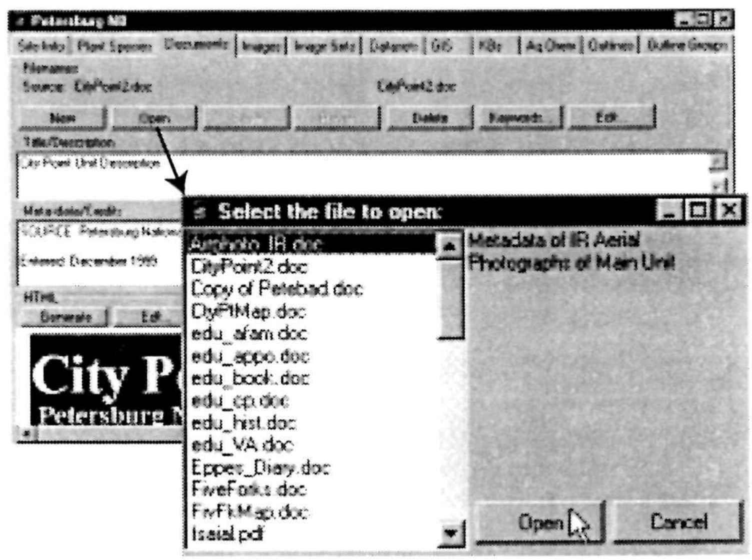

## Adding a New Site Document:

To add the metadata information, click in the white portion of the text field. Type in the metadata and credits information. Then, click on **Save**.

Add keywords to a document as you enter it into *Synthesis*. Click on **Keywords** and then follow the instructions outlined in **Section Four** under the heading **Attaching Keywords to Individual Data Items**.

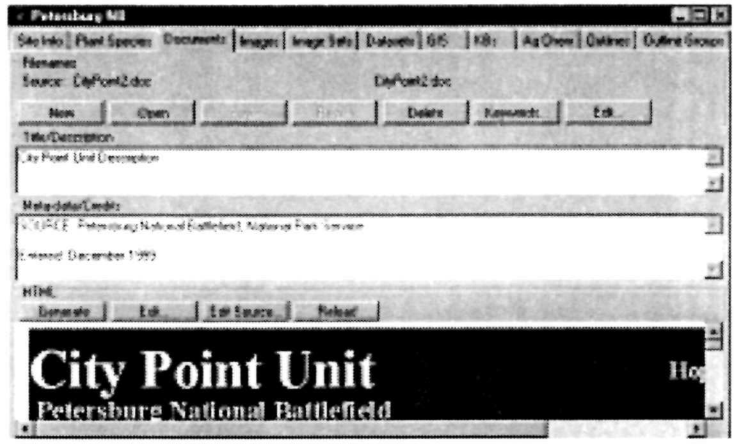
## Opening a Site Document:

Opening an existing document allows you to edit the Title and Metadata information, delete the document, add keywords, generate and modify the HTML document, and open the actual document for editing in Microsoft Word™.




To open an existing document, click on **Open**. The **"Select the file to open"** window will appear. Scroll down through the list and locate the apprpriate file. Click on the **file name**, and click on **Open**. The document information will appear in the **"Documents"** window.

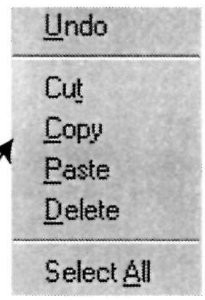
## Site Documents




**<u>Modifying the Title/Metadata:</u>**

Once a document opens, the document information is displayed in the **"Site"** window, allowing you to modify the information.

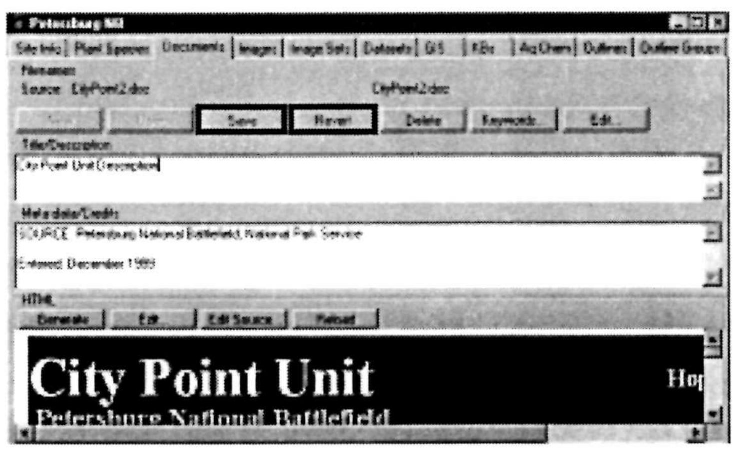
To modify either the **Title/Description** or the **Metadata/Credits** field, **click in the white portion of the text box**.



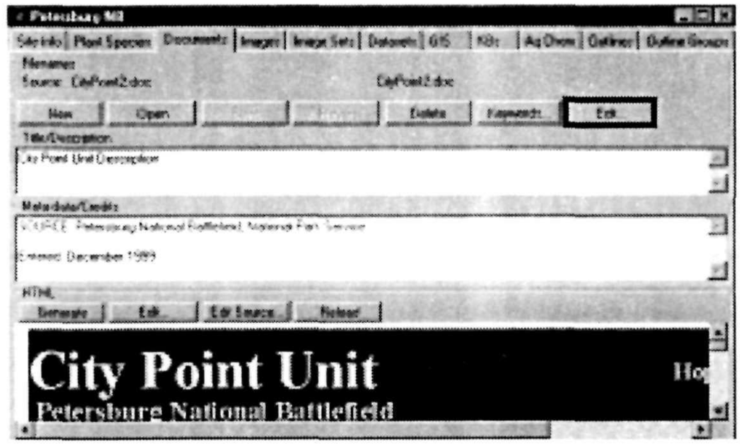

A text editing cursor will appear, and text can be entered or edited. Click and drag to highlight text. Right-click in field to open the pop-up editing menu that allows you to undo the last command as well as to cut, copy, paste, delete, and select all text.

Once changes have been made to the text fields, click on the **Save** button to save the changes.

If you <u>don't</u> want to save any of the changes, click on the **Revert** button.



## Site Documents



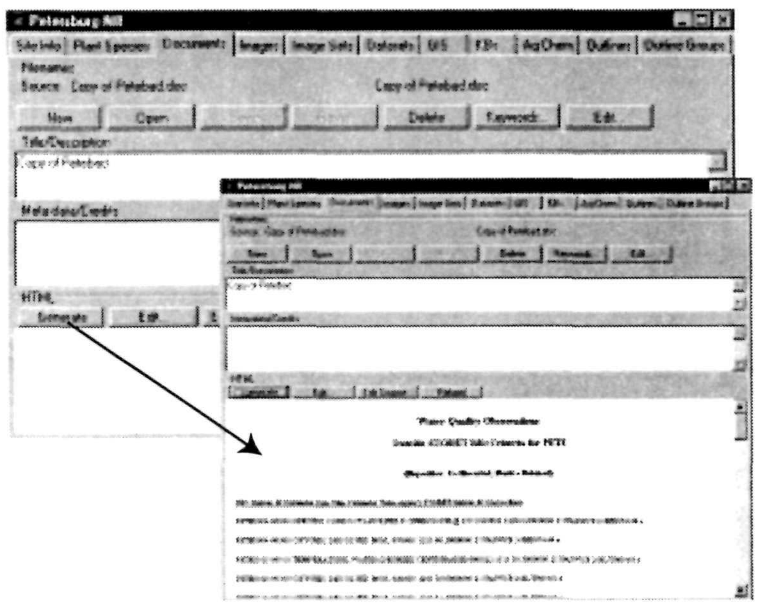

### Editing a Site Document:

To open a site document in its original application for editing, click on **Edit**.

WARNING: When you open the document, you will edit the original version. Thus, any changes that are saved will be permanent.

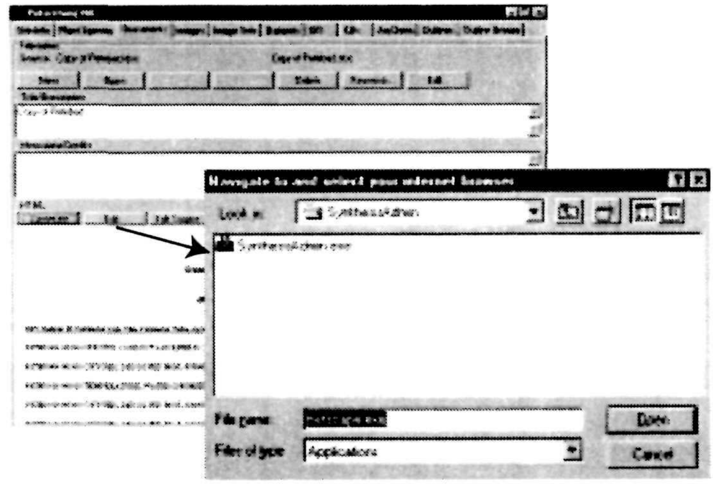
### Generating the HTML Document:

All of the documents entered into *Synthesis* can be converted and saved as HTML documents, using the version of Microsoft Word that is installed on your computer. To aid in the conversion process, *Synthesis Administration* has three commands available under the **"Documents"** tab.



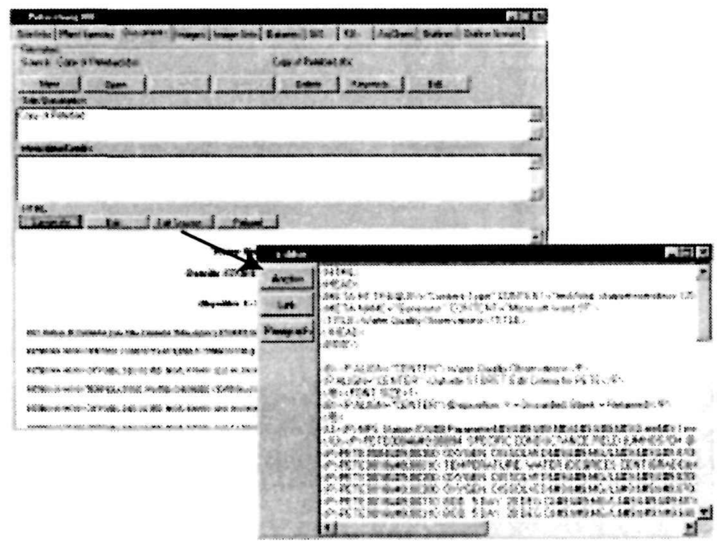
To generate the HTML version, click on **Generate**. After a few moments, depending on the size of the document, the HTML version of the document will appear in the bottom field of the **"Documents"** tab window.

**Site Documents**



**<u>Editing the HTML Document:</u>**

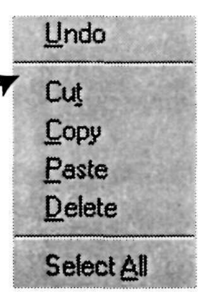
To edit the HTML document using an outside Web-authoring program, click on the **Edit** button located in the HTML part of the window. The **"Navigate to and select your internet browser"** window will appear. Navigate to the correct application, click on the **name of the application**, and click on **Open**.



**<u>Editing the HTML Source Code:</u>**

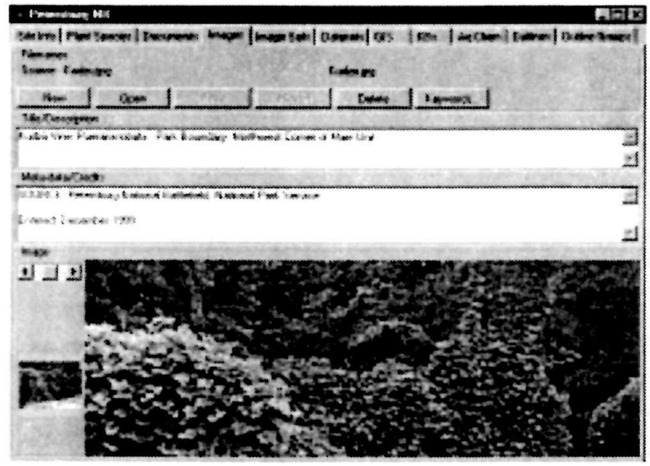
To edit the HTML source code, click on **Edit Source**. The **"Editor"** window will appear, and the HTML source code will be displayed. Changes can be made to the code by editing the code located in the right side of the window.

To begin editing, click anywhere in the right-hand field. Click and Drag: to highlight text. Right-click in field: opens the pop-up editing menu that allows you to undo the last command as well as to cut, copy, paste, delete, and select all text.




The three buttons on the left side of the **"Editor"** window insert preset code for anchors, links, and paragraphs.

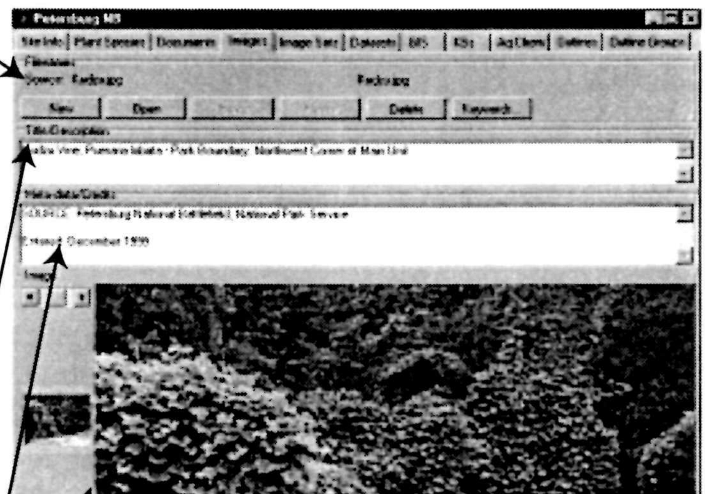
## Site Images



Images are digital versions of slides, pictures, and maps that provide a visual representation of the site and its resources.

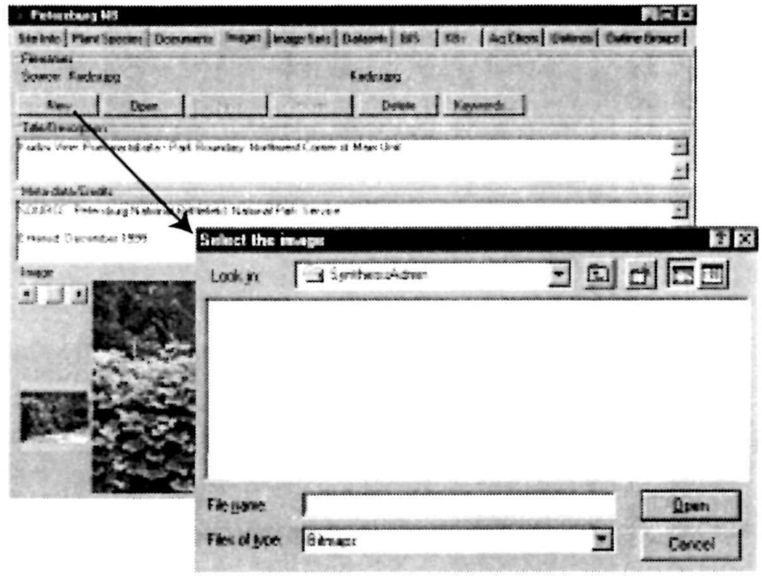
To add, modify, or remove a site image, select the **"Images"** tab in the **"Site"** window.

### Site Images Tab Components:



- **Source:** displays the file name of the image being viewed
- **New:** adds a new image to the site images list
- **Open:** opens the image and loads information about the image
- **Save:** saves changes to the Title or Metadata fields
- **Revert:** reverts back to the previously saved changes
- **Delete:** deletes the image from the site images list
- **Keywords:** opens the **"Keyword Utility"** window; see Section Four for information on this utility
- **Title/Description:** provides entry of the image title/description
- **Metadata/Credits:** provides entry of the image metadata/credits
- **Image:** shows the thumbnail of the image, the image quality, and the actual image.

## Site Images




*Synthesis* does not allow you to an image file at a remote location.

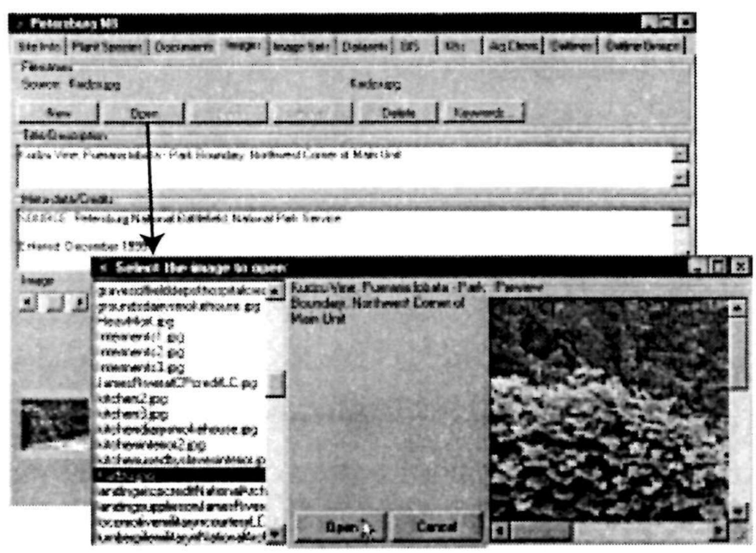
**Adding a New Site Image:**

To add a new site image, click on **New**. The **"Select the image"** window will appear. Navigate to the location of the image and click on the appropriate image so that its name appears in the **File name box**. Click on **Open**. *Synthesis Administration* will copy the image into the **"Site"** folder and create the accompanying files.

Type in a title and the metadata information. **To add a title or the metadata, click in the white portion of the text box.** Type in the information, and then click on **Save**.

Add keywords to an image as you enter it into Synthesis. Click on Keywords and then follow the instructions outline in Section Four under the heading, **Attaching Keywords to Individual Data Items**.

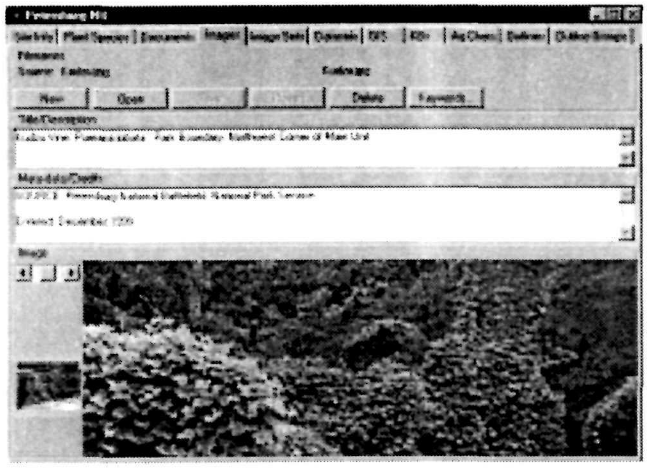
**Opening a Site Image:**



Opening an existing image allows you to edit the Title and Metadata information, delete the image, and add keywords. To open an existing image, click on **Open**. The **"Select the image to open"** window will appear. Scroll through the list until the appropriate file is located.

Click in the **file name**. The title description for the image and a preview of the image will appear in the right half of the window. Click on **Open**. The image information will appear in the **"Images"** window.

## Site Images

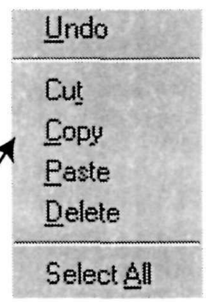


### Modifying the Title/Metadata:

Once an image opens, the image information is displayed in the **"Site"** window under the **"Images"** tab, allowing you to modify the information.

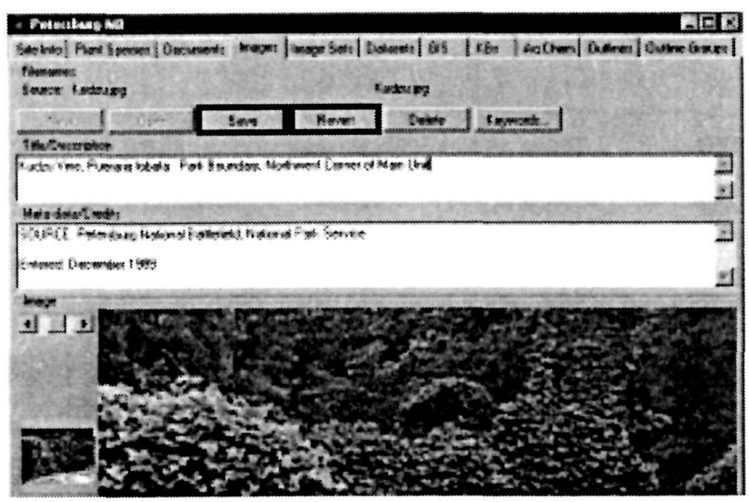
To modify either the **Title/Description** or the **Metadata/Credits** field, **click in the white portion of the text box**.

A text editing cursor will appear, and the text can be entered or edited. Click and drag to highlight text. Right-click in field to open the pop-up editing menu that allows you to undo the last command as well as to cut, copy, paste, delete, and select all text.



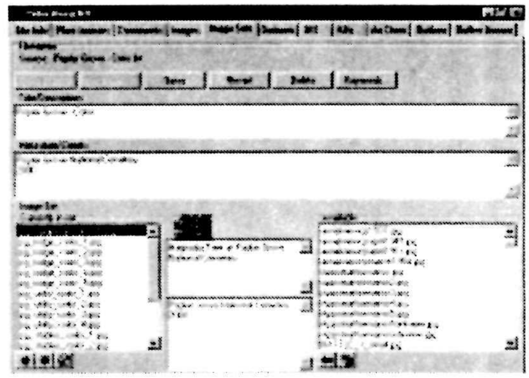

Once any changes have been made to the text fields, click on **Save** to save the changes.

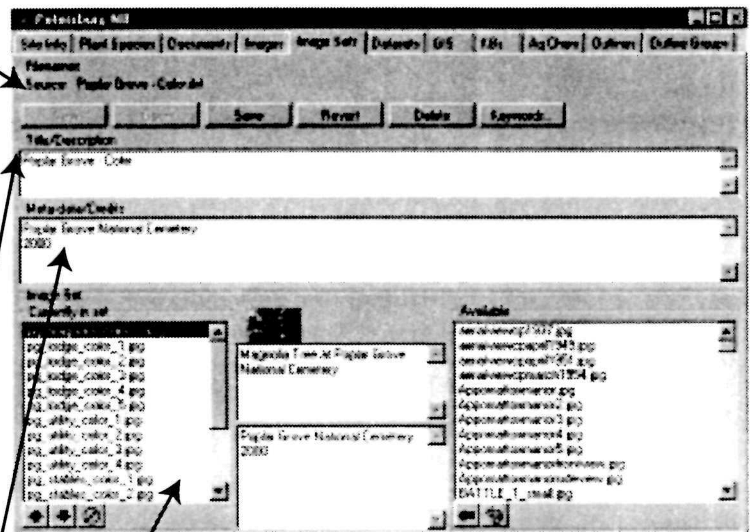
If you <u>don't</u> want to save any of the changes to the text field, click on the **Revert** button.



## Site Image Sets

An image set organizes images into groups with similar themes. To add, modify, or remove a site image set, select the **"Image Sets"** tab in the **"Site"** window.

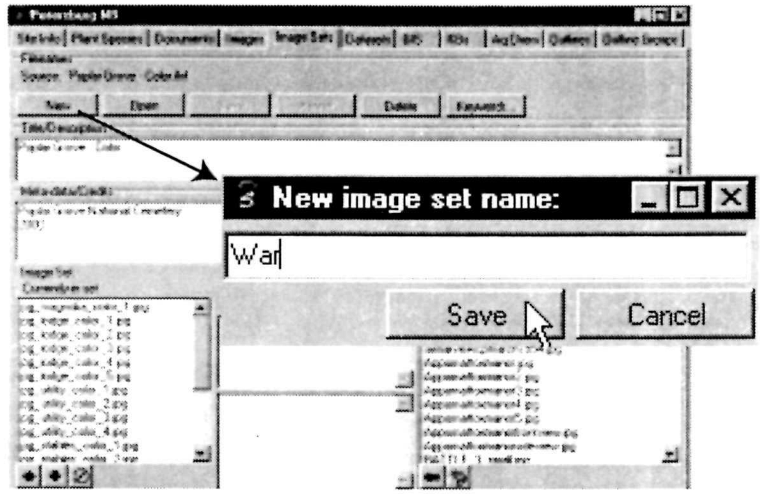





### Site Image Sets Tab Components:

- **Source:** displays the file name of the image set being viewed
- **New:** creates a new site images list
- **Open:** opens the image set and loads information about the image set
- **Save:** saves changes to the Title field, Metadata field, or image set list
- **Revert:** reverts back to the previously saved changes
- **Delete:** deletes the image set
- **Keywords:** opens the **"Keyword Utility"** window; see Section Four for information about this utility
- **Title/Description:** provides for entry of the image set title/ description
- **Metadata/Credits:** provides for entry of the image set metadata/ credits
- **Image Set:** shows the images currently in the list, a thumbnail of the image when selected, title and metadata for the selected image, and a list of available site images

## Site Image Sets




### Adding a New Site Image Set:

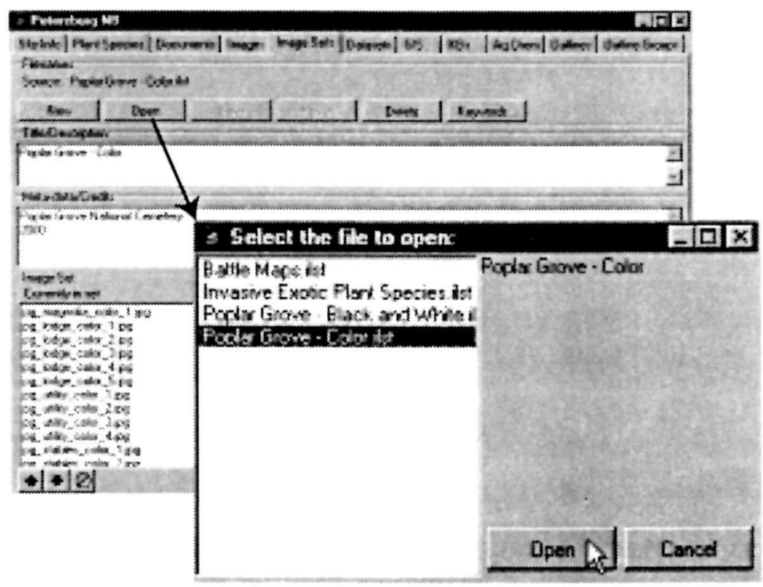
To create a new site image set, click on **New**. The **"New image set name"** window will appear. Type in the name of the new image set. Click on **Save**.

Type in a title and the metadata information. **To add a title or the meta- data, click in the white portion of the text field.** Type in the information, and then click on **Save**.

Add keywords to an image set as you enter it into Synthesis. Click on Key- words and then follow the instructions outlined in Section Four under the heading, **Attaching Keywords to Individual Data Items**.

### Opening a Site Image Set:

Opening an existing image set allows you to edit the Title and Metadata information, delete the image set, add keywords, and modify the list of images in the set.

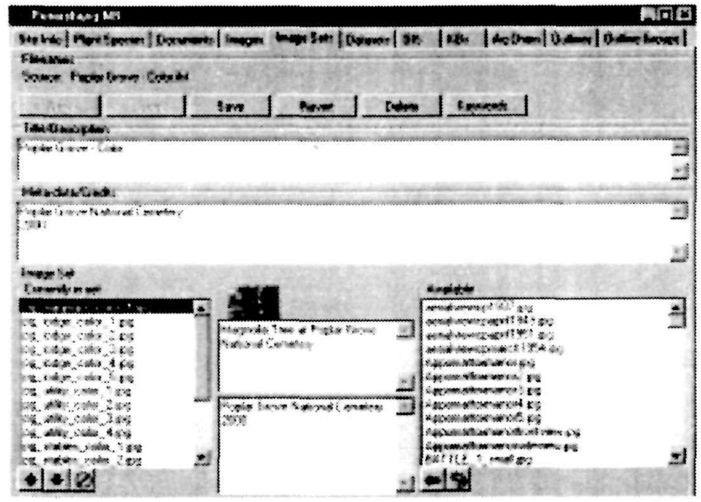



To open an existing image set, click on **Open**. The **"Select the file to open"** window will appear. Scroll through the list and locate the image set.

Click on the **image set name.** The title/description for the image set will appear in the right half of the window. Click on **Open**, and you will see the image set information appear in the **"Image Sets"** window.

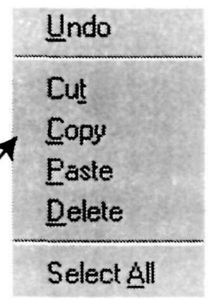
## Site Image Sets

### Modifying the Title/Metadata:

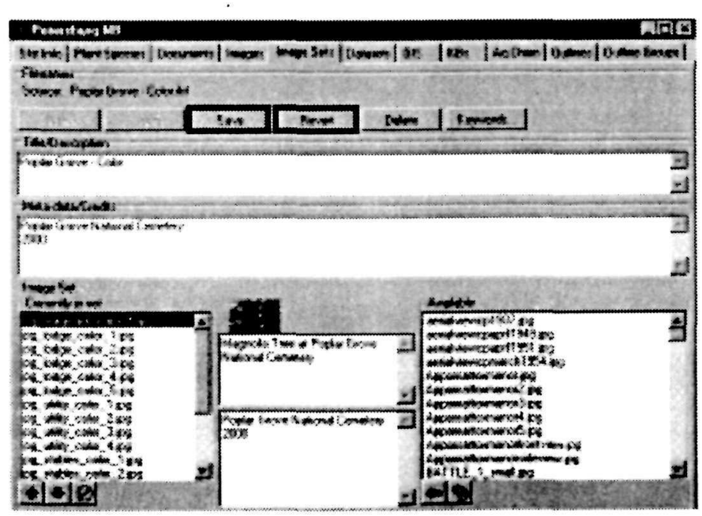


Once an image set opens, the image set information is displayed in the **"Image Sets"** window, allowing you to modify the information.

To modify either the **Title/Description** or the **Metadata/Credits** field, **click in the white portion of the text box**.



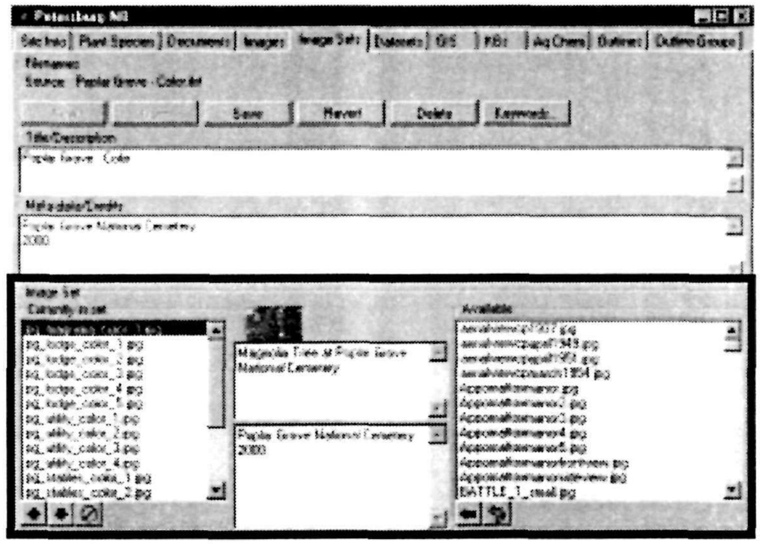

A text editing cursor will appear, and text can be entered or edited. Click and drag to highlight text. Right-click in field to open the pop-up editing menu that allows you to undo the last command as well as to cut, copy, paste, delete, and select all text.



Once changes to the text have been made, click on **Save** to save the changes.

If you <u>don't</u> want to save any of the changes to the text field, click on the **Revert** button.

## Site Image Sets



**<u>Modifying a Site Image Set:</u>**

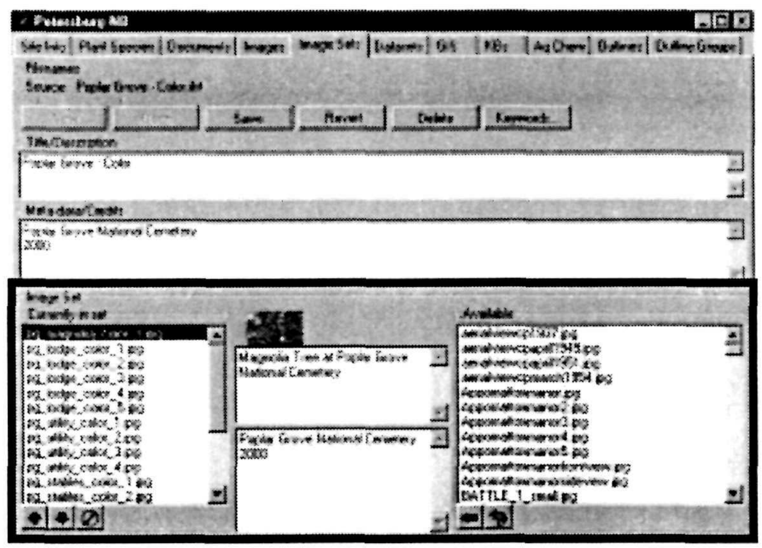
Each image set can have individual images added to or removed from the image set.

To **add an image** to the image set, click on the **Refresh** ( ) button to bring up a list of images currently available. **Select the name of the image** you want to add. A thumbnail of the image and its information are displayed in the middle section of the **"Image Set"** field.

Click on the **Add** ( ) button to add the image to the list.

To **remove an image** from the image set, **select the image name** under the **"Currently in set"** field. A thumbnail and the image information will appear in the middle section of the **"Image Set"** field.

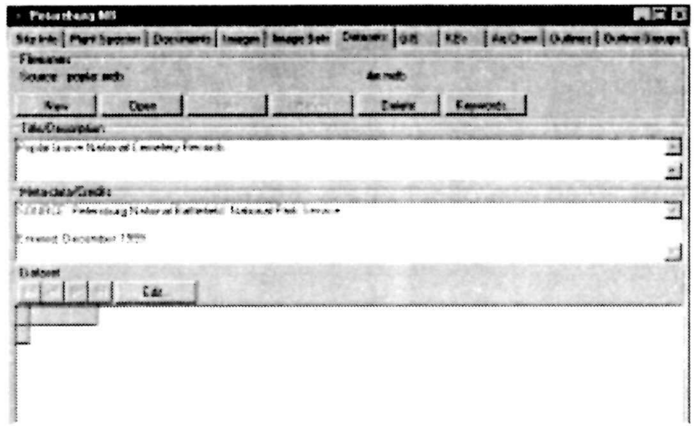
Click on the **Remove** ( ) button to remove an image from the set.



To **modify the order of the images** in the set, **select the image** you wish to move. The thumbnail and the image information will appear in the middle section of the **"Image Set"** field.

Click on the **Promote** ( ) button to move the image up in the list, or click on the **Demote** ( ) button to move the image down in the list.

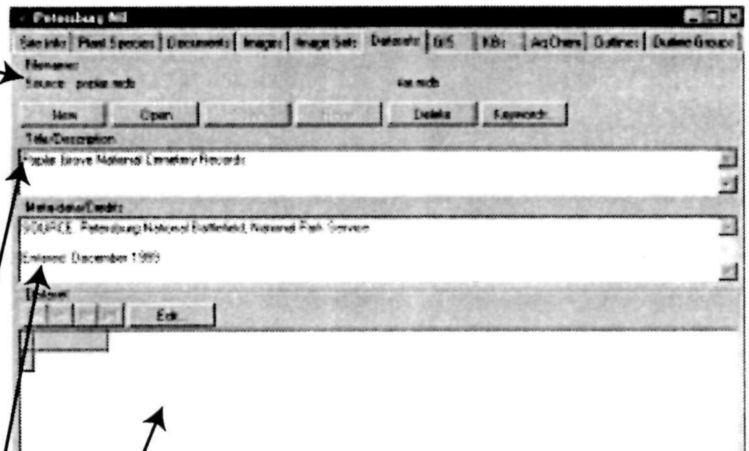
## Site Datasets



Site datasets include Access™, dBASE™, Paradox™ databases, and tab-delimited and comma-separated tables.

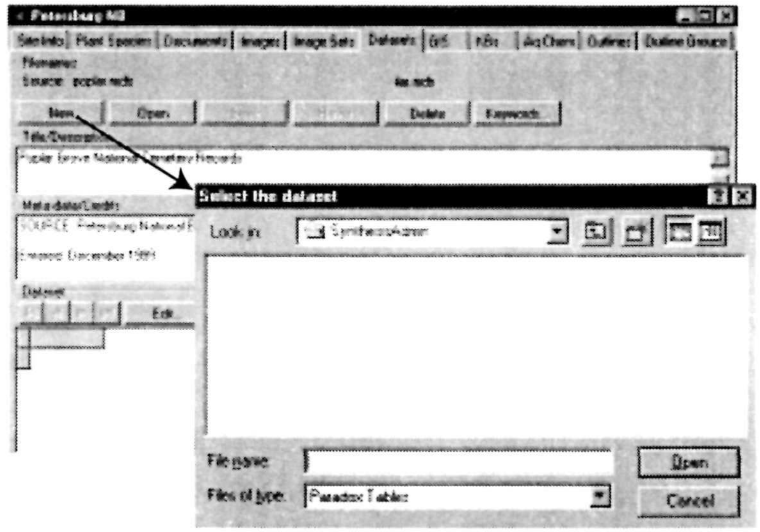
To add, modify, or remove a dataset, select the **"Datasets"** tab in the **"Site"** window.

## Site Datasets Tab Components:



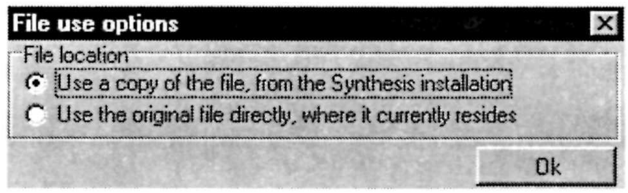
- **Source:** displays the file name of the dataset being examined
- **New:** allows a new dataset to be added to *Synthesis*
- **Open:** opens the dataset and loads information about the dataset
- **Save:** saves changes to the Title or Metadata fields
- **Revert:** reverts back to the previously saved changes
- **Delete:** deletes the dataset.
- **Keywords:** opens the **"Keyword Utility"** window; see Section Four for information about this utility
- **Title/Description:** provides for entry of the dataset title/description
- **Metadata/Credits:** provides for entry of the dataset metadata/ credits for the dataset
- **Dataset Field:** shows the data in the data files and allows the data to be edited.

**Site Datasets**




## <u>Adding a New Dataset:</u>

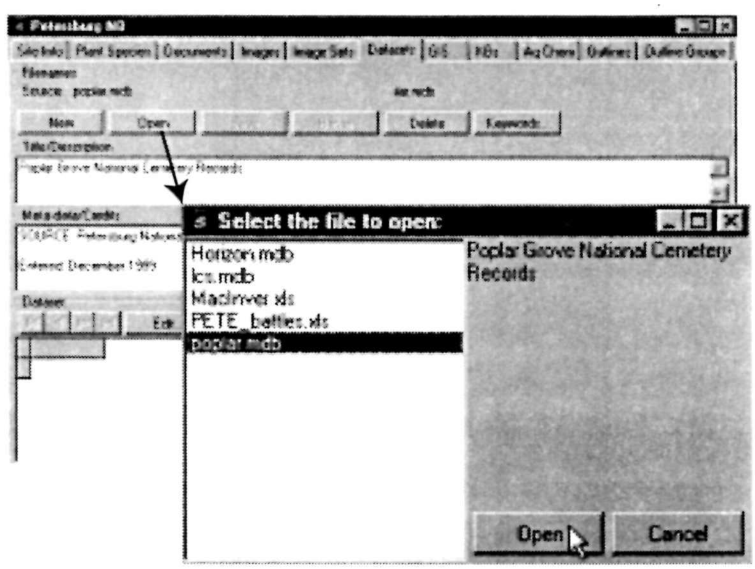
To add a new dataset to the site, click on the **New** button. The **"Select the dataset"** window will appear. Navigate to the location of the dataset, and click on the name so that it appears in the **File name box**. Click on **Open**. *Synthesis Administration* will ask if you would like to use a copy of the file or the original file in a remote location. Check which option you would prefer, and then click on **OK**.




When you add a new site dataset, type in a title and the metadata information. **To add a title or the metadata, click in the white portion of the text field.** Type in the information, and then click on **Save**.

Add keywords to a dataset as you entered it into *Synthesis*. Click on **Keywords** and then follow the instructions outlined in **Section Four** under the heading, **Attaching Keywords to Individual Data Items.**

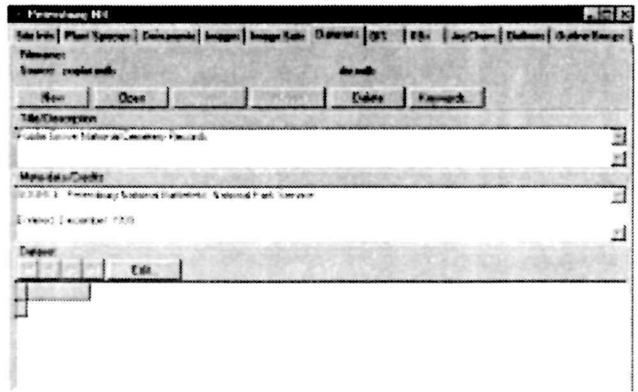
## <u>Opening a Site Dataset:</u>




Opening an existing dataset allows you to edit the Title or Metadata information, delete a dataset, add keywords and edit the data in the dataset. To open an existing dataset, click on **Open**. The **"Select the file to open"** window will appear. Scroll through the list until the appropriate file is located.

Click on the **file name**. The title description for the dataset will appear in the right half of the window. Click on **Open**. The dataset information will appear in the **"Datasets"** window.

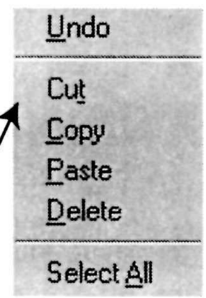
## Site Datasets



**Modifying the Title/Metadata:**

Once a dataset opens, the dataset information is displayed in the **"Site"** window, allowing you to modify the information.

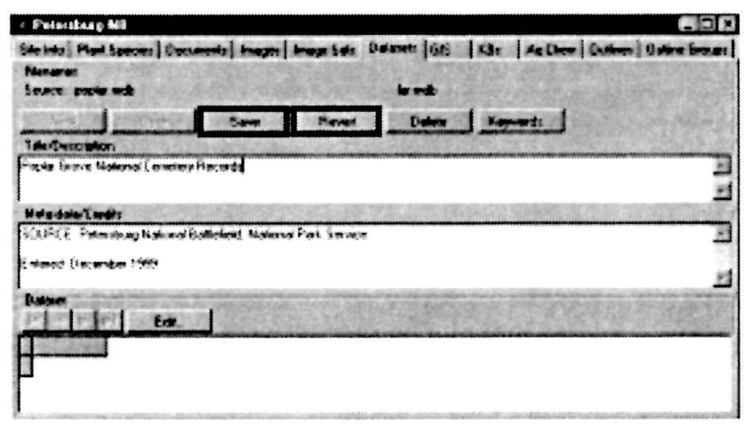
To modify either the **Title/Description** or the **Metadata/Credits** field, **click in the white portion of the text box**.



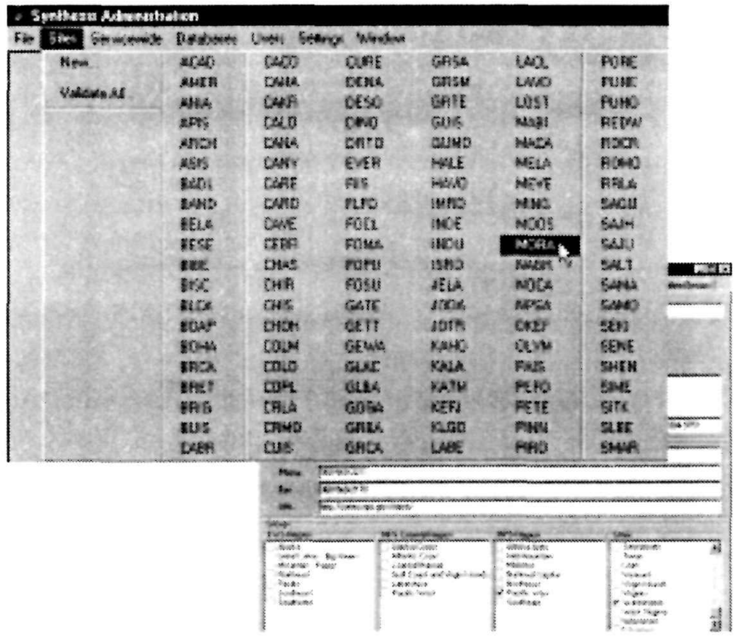

A text editing cursor will appear, and text can then be entered or edited. Click and drag to highlight text. Right-click in field to open the pop-up editing menu that allows you to undo the last command as well as to cut, copy, paste, delete, and select all text.

Once any changes have been made to the text, click on **Save** to save the changes.

If you don't want to save any of the changes, click on **Revert**.

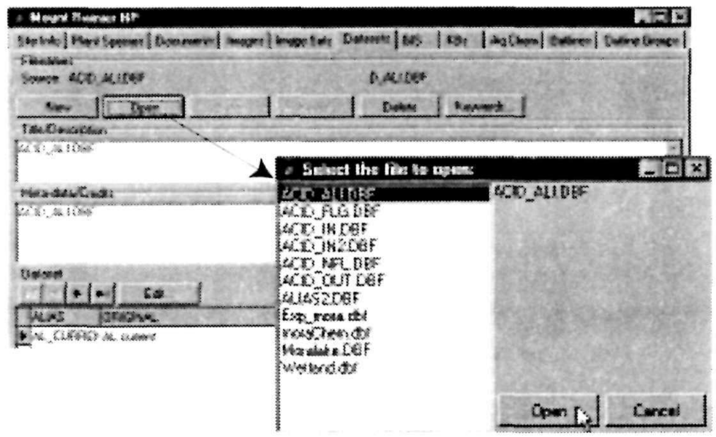


## Site Datasets



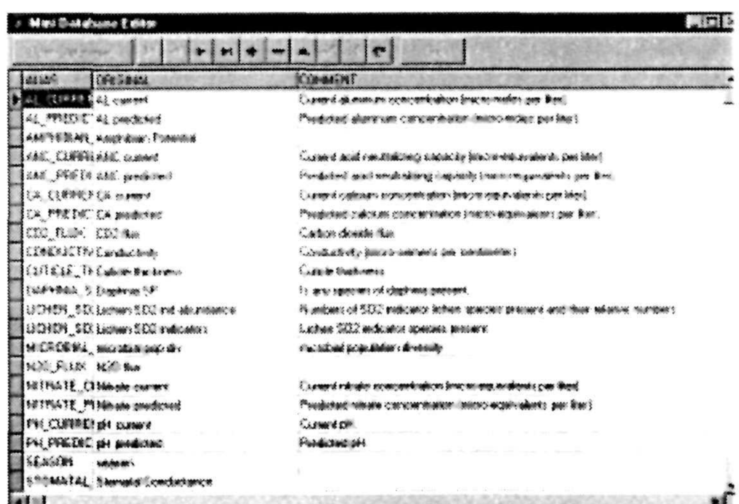
### <u>Editing a Dataset:</u>

To edit a dataset, go to the **Site** menu and open an existing site (e.g. MORA). The **"Site"** window will appear.



Click on the **"Datasets"** tab. Then, click on **Open** and select a dataset to open. Once the dataset opens, click on the **Edit** button.

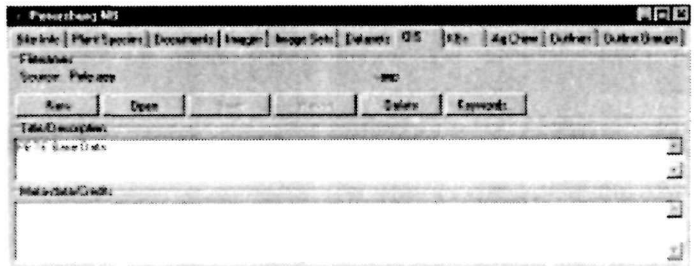
The **"Mini Database Editor"** window will appear so that you can make the necessary changes to the data. The **"Mini Database Editor"** window will <u>**ONLY**</u> appear if the dataset is a dBASE (.dbf) or Paradox (.db) file. Otherwise, the dataset will open in its native program (e.g. Access), so that you can view and edit the database.



You can navigate through the database using the button in the tool bar at the top of the Mini Database Editor. Use the ( ) button to move to the first record and ( ) to move to the last record in the database. The ( ) button allows you to move to the previous record and the ( ) allows you to move to the next record.

To edit the dataset, click on the **Refresh** ( ) button, and then click on the **Edit** ( ) button. Click on the **Cancel** ( ) button to discard changes before saving the changes. Use the **Post Edit** ( ) button to save the changes.

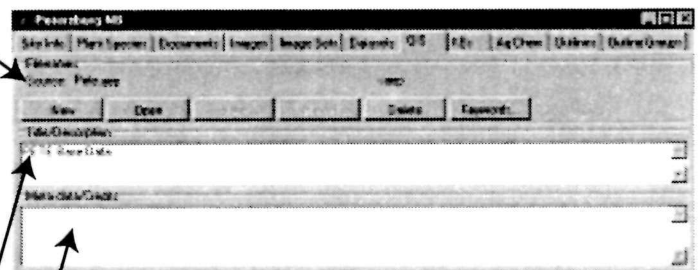
## GIS Data



Site GIS files include ArcExplorer™ and ArcView™ projects as well as shapefiles associated with the projects and GPS data files.

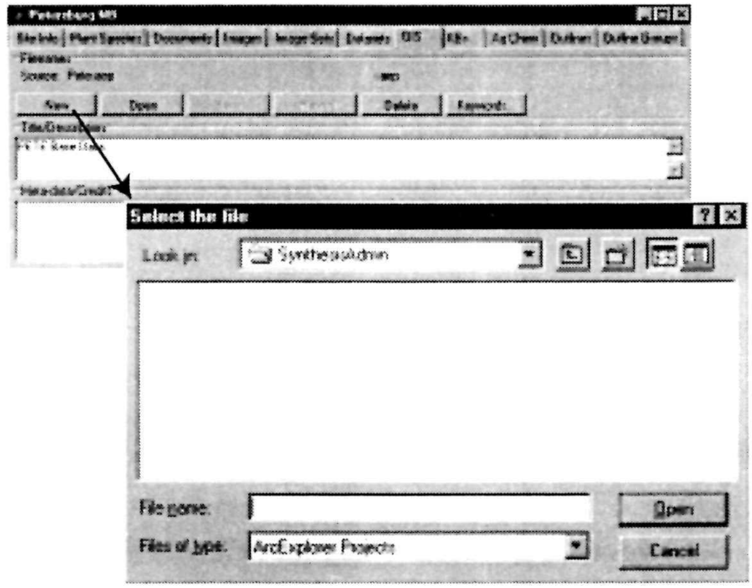
To add, modify, or remove a GIS file, select the **"GIS"** tab in the **"Site"** window.

### Site GIS Tab Components:



- **Source:** displays the file name of the GIS file being viewed
- **New:** allows a new GIS file to be added to *Synthesis*
- **Open:** opens the GIS file and loads information about the GIS file
- **Save:** saves any changes to the Title or Metadata fields
- **Revert:** reverts back to the previously saved changes
- **Delete:** deletes the GIS file
- **Keywords:** opens the **"Keyword Utility"** window; see Section Four for information on this utility
- **Title/Description:** provides for the entry of the GIS file title/description
- **Metadata/Credits:** provides for the entry of the GIS file metadata/credits

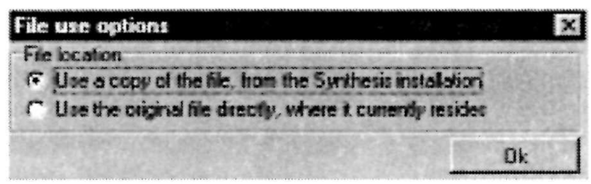
## GIS Data




### Adding a New GIS File:

To add a new GIS file to the site, click on **New**. The **"Select the file"** window will appear. Select the appropriate **File Type** or select **All**. Navigate to the GIS file, and click on the name so that it appears in the **File name box**.

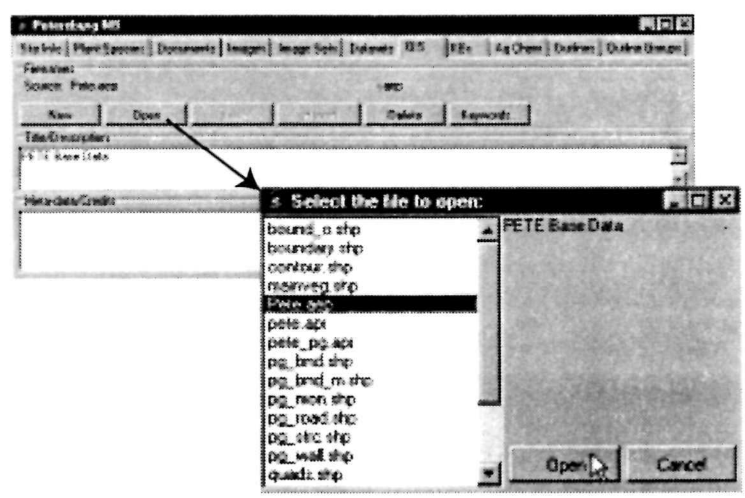
Click on **Open**. *Synthesis Administration* will ask you if you would like to use a copy of the file or the original file, in a remote location. Check which option you would prefer in the **"File use options"** window, and click on **OK**.




Type in a title and the metadata information. **To add a title or the metadata, click in the white portion of the text field.** Type in the information, and click on **Save**.

Add keywords to a GIS file as you enter it into *Synthesis*. Click on **Keywords** and then follow the instructions outlined in **Section Four** under the heading, **Attaching Keywords to Individual Data Items**.

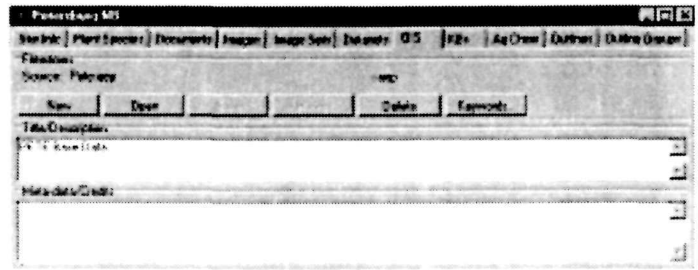
### Opening a GIS File:




Opening an existing GIS file allows you to edit the Title and Metadata information, delete a GIS file, and add keywords. To open an existing GIS file, click on **Open**. The **"Select the file to open"** window will appear. Scroll through the list until the appropriate file is located.

Click on the **file name**. The title description for the GIS file will appear in the right half of the window. Click on **Open**. The GIS file information will appear in the **"GIS"** window.

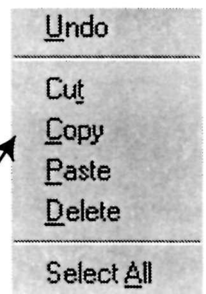
## GIS Data



**<u>Modifying the Title/Metadata:</u>**

Once a GIS file opens, the GIS file information is displayed in the **"GIS"** window, allowing you to moddify the nformation.

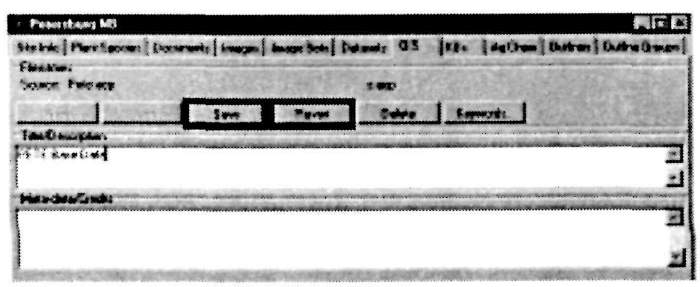
To modify either the **Title/Description** or the **Metadata/Credits** field, **click in the white portion of the text box**.



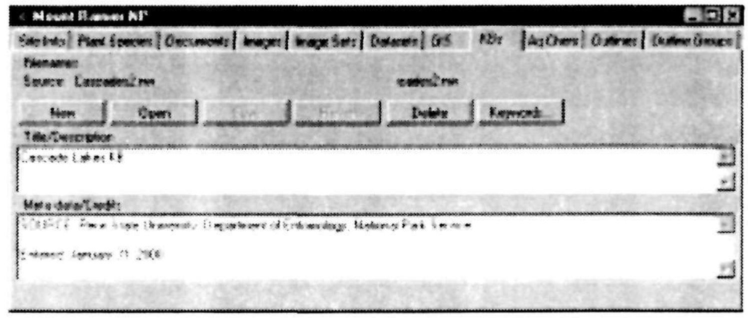

A text editing cursor will appear, and text can then be entered or edited. Click and drag to highlight text. Right-click in field to open the pop-up editing menu that allows you to undo the last command as well as to cut, copy, paste, delete, and select all text.

Once any changes have been made to the text, click on **Save** to save the changes.

If you <u>don't</u> want to save any of the changes, click on **Revert**.



## Site Knowledge Bases

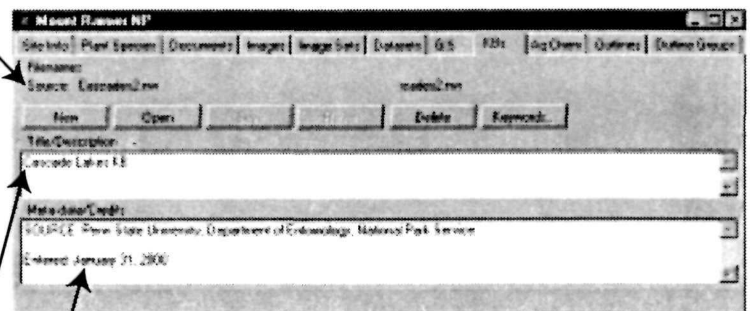


Knowledge bases (KBs) are key components of the decision support systems (DSSs) found in *Synthesis*. KBs currently available in Synthesis are based on the Netweaver software.

The KB linked to a site is dependent on the geographic region in which the site is located. For example, the NE Lakes KB has been linked to Acadia NP site as a "site KB."

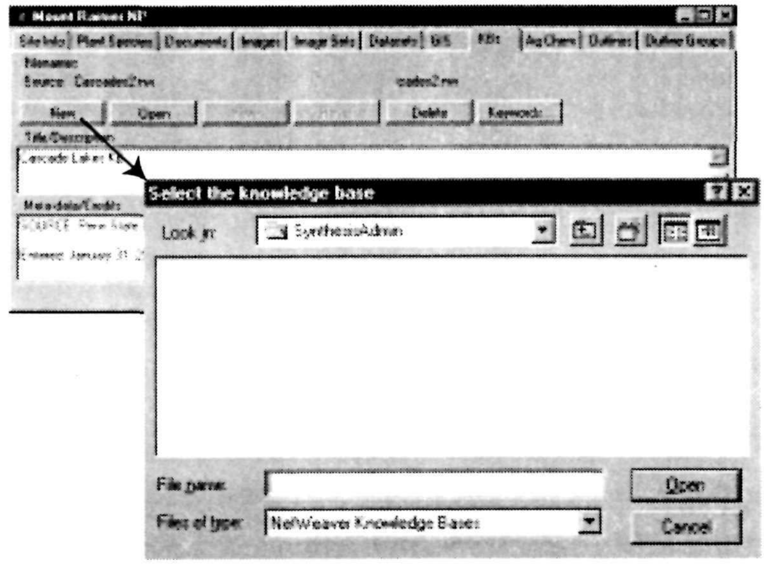
To add, modify, or remove a KB, select the **"KBs"** tab in the **"Site"** window.

### Site KBs Tab Components:



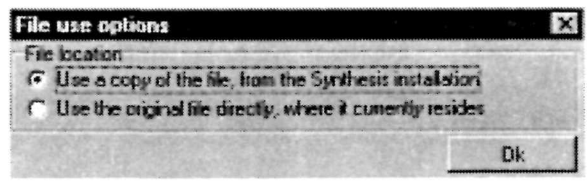
- **Source:** displays the file name of the KB being viewed
- **New:** allows a new KB to be added to *Synthesis*
- **Open:** open the KB and loads information about the KB
- **Save:** saves changes to the Title or Metadata fields
- **Revert:** reverts back to the previously saved changes
- **Delete:** deletes the KB
- **Keywords:** opens the **"Keyword Utility"** window; see Section Four for information about this utility
- **Title/Description:** provides for entry of the KB title/description
- **Metadata/Credits:** provides for entry of the KB metadata/credits

## Site Knowledge Bases




### Adding a New Knowledge Base:

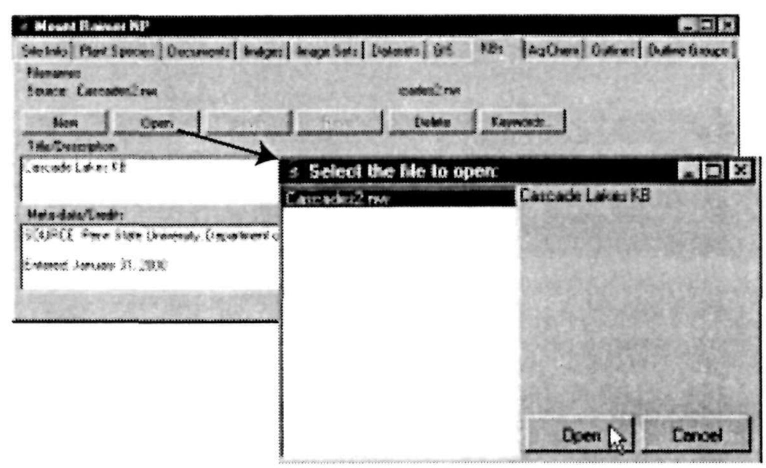
To add a new knowledge base to the site, click on **New**. The **"Open"** window will appear. Navigate to the location of the knowledge base, and click on the name so that it appears in the **File name box**. Click on **Open.** *Synthesis Administation* will ask you if you would like to use a copy of the file or the original file from its remote location. Check which option you would prefer in the **"File use options"** window, and then click on **OK**.




Type in a title and the metadata information. **To add a title or the metadata, click in the white portion of the text field**. Type in the information, and click on **Save**.

Add keywords to a knowledge base as you enter it into *Synthesis*. Click on **Keywords** and then follow the instructions outlined in **Section Four** under the heading, Attaching **Keywords to Individual Data Items**.

### Opening a Knowledge Base:



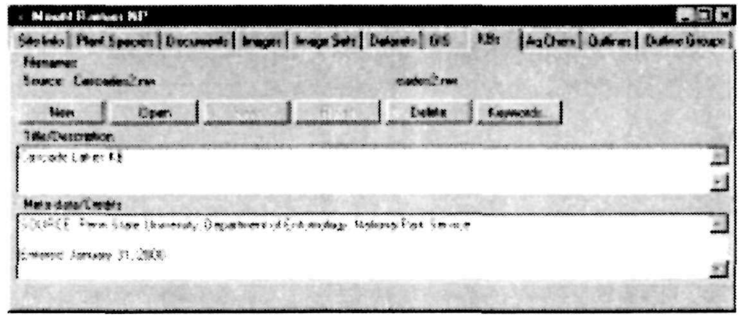

Opening an existing knowledge base allows you to edit the Title and Metadata information, delete a knowledge base, or add keywords. To open an existing knowledge base, click on **Open**. The **"Select the file to open"** window will appear. Scroll through the list until the appropriate file is located.

Click on the **file name**. The title description for the knowledge base will appear in the right half of the window. Click on **Open**. The knowledge base information will appear in the **"KBs"** window.

**Site Knowledge Bases**

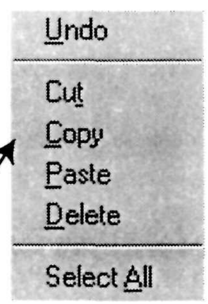
## Modifying the Title/Metadata:

Once a knowledge base opens, the knowledge base information is displayed in the **"KBs"** window, allowing to modify the information.



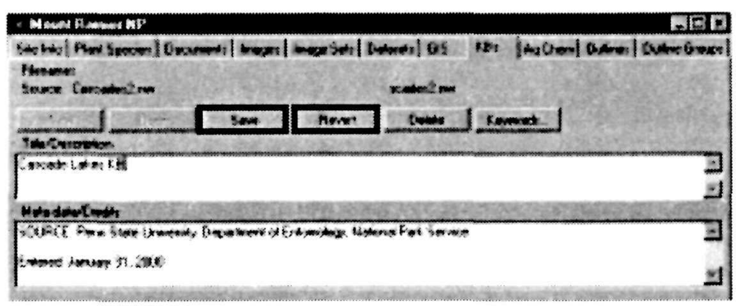
To modify either the **Title/Description** or the **Metadata/Credits** field, **click in the white portion of the text box**.

A text editing cursor will appear, and text can then be entered or edited. Click and drag to highlight text. Right-click in field: opens the pop-up editing menu that allows you to undo the last command as well as to cut, copy, paste, delete, and select all text.

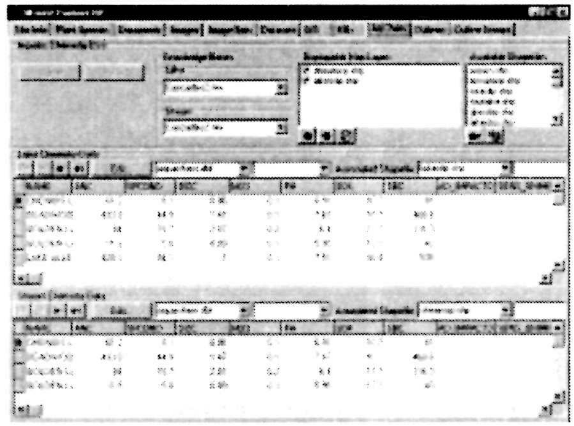



Once any changes have been to the text, click on **Save** to save the changes.

If you <u>don't</u> want to save any of the changes, click on **Revert**.



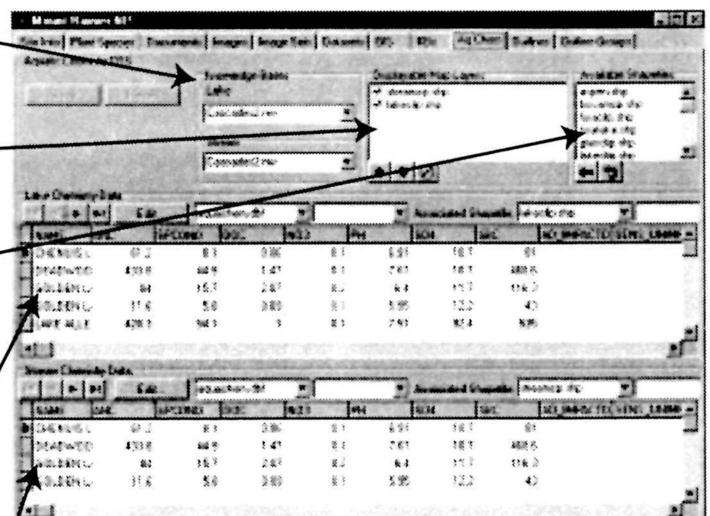
## Site Aquatic Chemistry Decision Support System



The Aquatic Chemistry Decision Support System (DSS) assists resource managers who must characterize the chemical status of surface waters. The system requires certain data inputs, and was developed by experts nationwide.

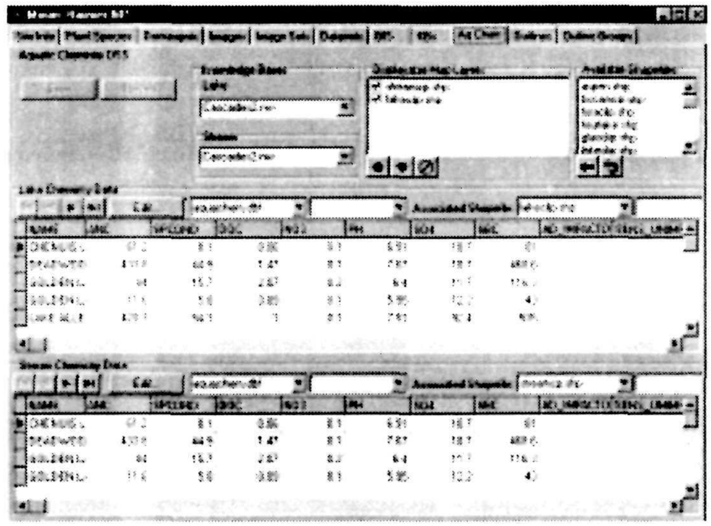
**NOTE**: To set up the AQ Chem DSS, you must have an aquatic chemistry dataset saved as aquachem.dbf, and GIS lake and stream data. For more information about this DSS, contact the *Synthesis* development team. Contact information is provided on the first page of this manual.

## Site Aquatic Chemistry Tab Components:



- **Knowledge Bases (KB):** displays available KBs and allows user to select KBs to use in the DSS
- **Displayable Map Layers:** identifies map layers and allows user to select the order in which they will be displayed in the DSS
- **Available Shapefiles Area:** displays available shapefiles and allows user to select the shapefiles that will be used in the DSS
- **Save:** saves changes to the DSS setup
- **Revert:** reverts to the previously saved changes
- **Lake and Stream Chemistry Data:** displays available databases and allows user to select the aquatic chemistry database to run in the DSS. Also displays the parameters and data values for each lake/stream in the database(s)

## Site Aquatic Chemistry Decision Support System

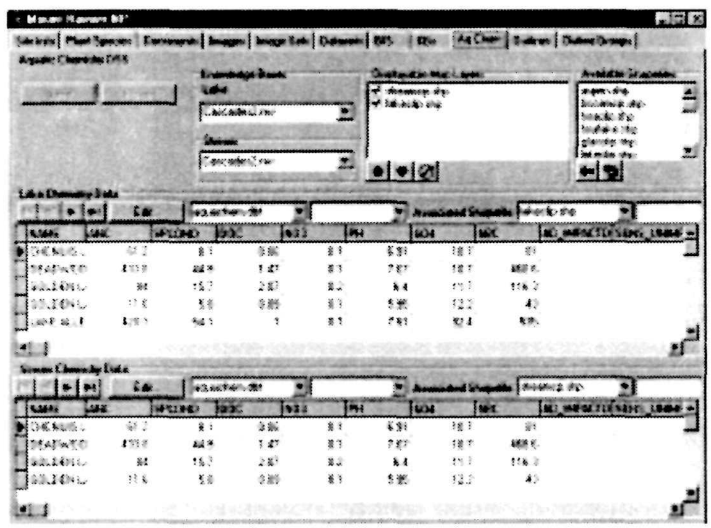


### Setting Parameters for the Aquatic Chemistry DSS:

You must have already entered the knowledge base(s) and GIS shapefile(s) into *Synthesis* before attempting to set the parameters for the DSS. To begin setup, click on the **"Aq Chem"** tab in the **"Site"** window.

Select the lake and/or stream knowledge base(s) to run by clicking on the drop-down arrow in the **"Knowledge Bases Area."** Then, from **Available Shapefiles,** select the GIS shapefiles that will be displayed.

To **add a shapefile** to the map layers list, click on the **Refresh** ( ) button to bring up a current list of available shapefiles. **Select the name** of the shapefile you want to add, and click on the **Add** ( ) button to add it the list under the **"Displayable Map Layers Area."**

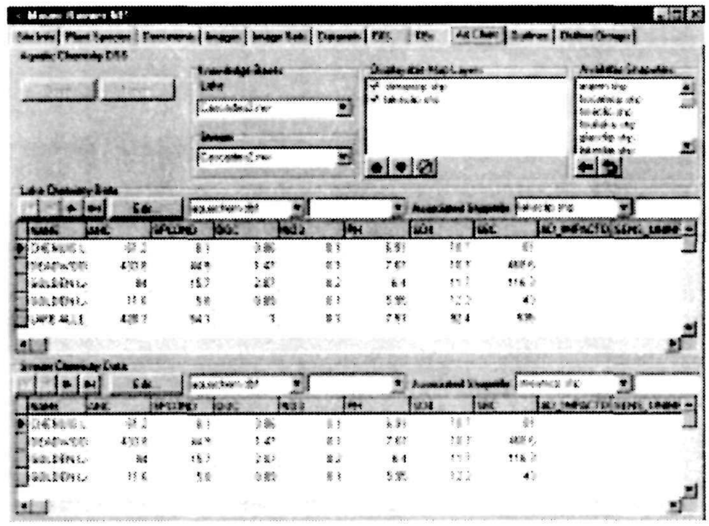


To **remove a shapefile** from the map layers list, select the shapefile name under the **"Displayable Map Layers Area,"** and click on the **Remove** ( ) button.

To **modify the order of the shapefiles** in the map layers list, select the shape- file you wish to move. Click on the **Promote** ( ) button to move the shapefile up in the list, or click on the **Demote** ( ) button to move the shapefile down in the list.

**Site Aquatic Chemistry Decision Support System**

<u>**Setting Parameters for the Aquatic Chemistry DSS:**</u>



In the **Lake Chemistry Data section**, select **aquachem.dbf** and **a GIS lakes shapefile**. Also, **select the field in both aquachem.dbf and the GIS lake shapefile,** on which aquachem.dbf and the GIS lake shapefile will be joined. The "join item" (field) is generally "**NAME.**"

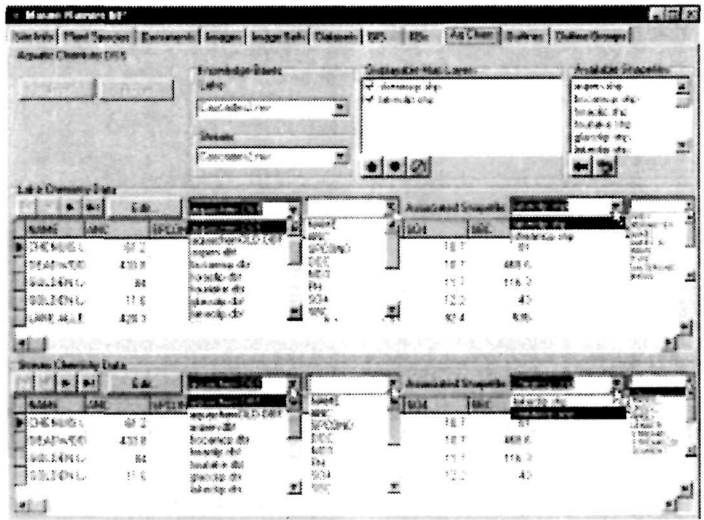
In the **Stream Chemistry Data section**, select **aquachem.dbf** and a **GIS stream shapefile**. Also, **select the field in both aquachem.dbf and the GIS stream shapefile**, on which aquachem.dbf and the GIS stream shapefile will be joined. The "join item" (field) for both databases is generally "**NAME.**"

When all parameters are set, click on **Save** and exit *Synthesis Administration.*. You can now run the Aquatic Chemistry DSS in *Synthesis Runtime*.

## Site Aquatic Chemistry Decision Support System

### <u>Creating an Aquatic Chemistry Database:</u>

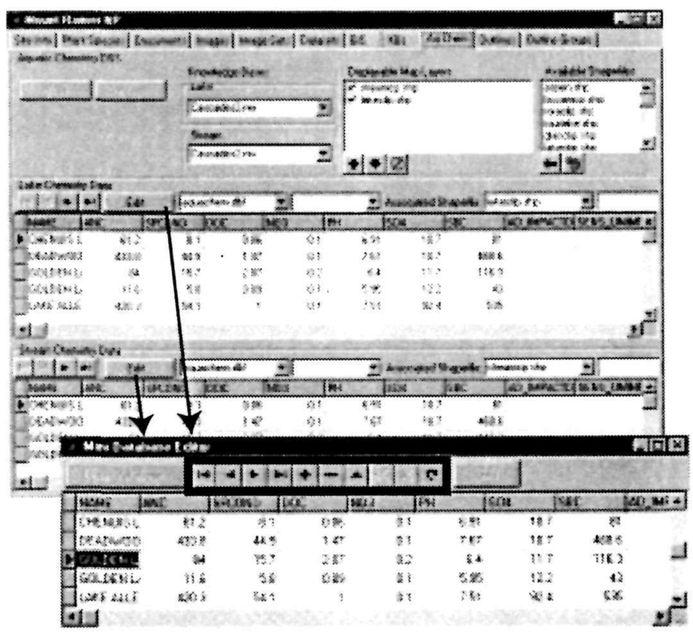
You may create a new aquatic chemistry database within the AQ Chem window.



NOTE: the Aquatic Chemistry DSS currently requires that the aquatic chemistry database is named aquachem.dbf. If an aquachem.dbf already exists, temporarily rename it to aquachem_old.dbf.

To **create a new database** for either lake or stream chemistry data, click on the drop-down arrow in the **"Lake dataset filename"** box or in the **"Stream dataset filename"** box. Then, select **New**. The **"Name for new Aquatic ..."** window will appear. Type in **aquachem.dbf** and click on **Save**.

To begin popluating the new database, click on the **Edit** button. The **"Mini Database Editor"** window will appear. Click on the **Edit** ( ▲ ) button, A blank record will appear, allowing you to begin entering data.

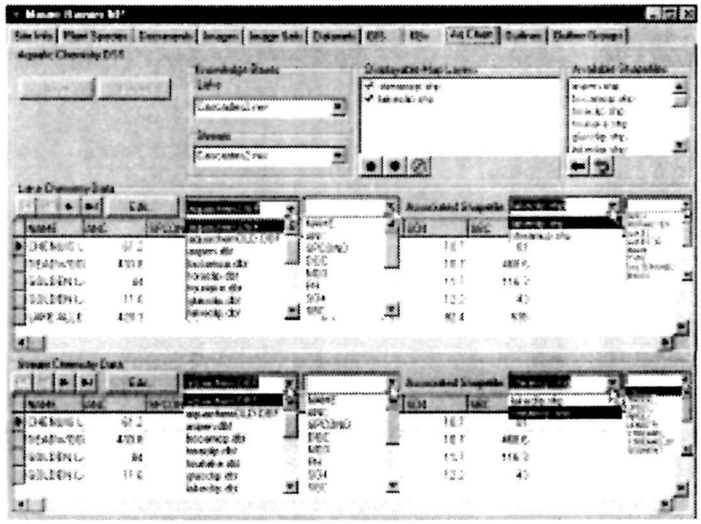


Add data values for each of the first eight parameters: NAME (of lake or stream), NOC, SPCOND, DOC, NO3, PH, SO4, and SBC. To **add a new record**, click on the **Insert** ( + ) button to insert a row. Add data values for each of the first eight parameters: NAME (of lake or stream), NOC, SPCOND, DOC, NO3, PH, SO4, SBC.

When the data are entered, click on **Post Edit** ( ✓ ) button. To delete a record, click on the **Delete** ( − ) button. A **"Confirm"** window will appear asking if you want to delete the record. Click on **OK** or **Cancel**.

## Site Aquatic Chemistry Decision Support System

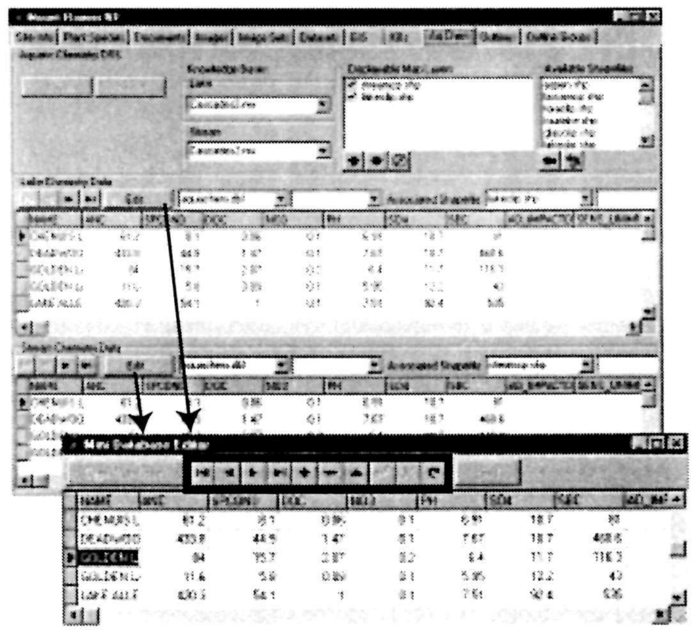
### Editing an Existing Aquatic Chemistry Database:



To **edit an existing database**, click on **Edit** in either the **"Lake Chemistry Data Area"** or **"Stream Chem-istry Data"** field. The **"Mini Database Editor"** window will appear, allowing you to begin editing.

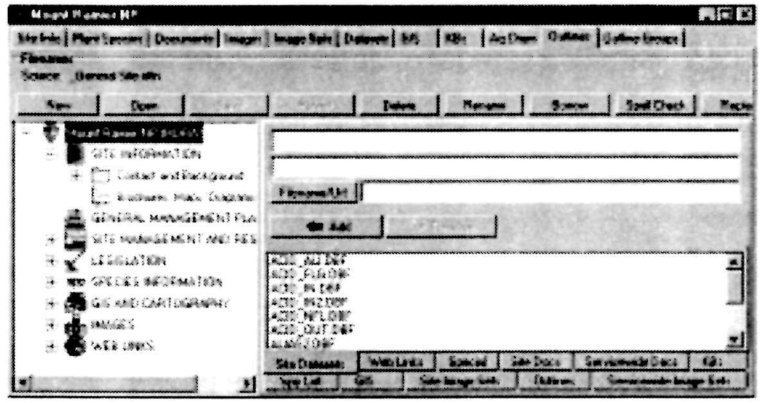
Use the following button in the tool bar at the top of the window tona gate throught he database. Click on ( ) to mov o the first record in the database or ( ) to move to the st record in thedatabase. Click ( ) to move to the next record or ( ) to move to the previous record.

To edit e dataset, click on the **Refresh** ( ) button, and then click on the **Edit** ( ) button. After you ake changes, click on the **Post Edit** ( ) button to ve the changes. Click on the **Cancel** ( ) button to cancel any changes that you have made.



## Site Outlines

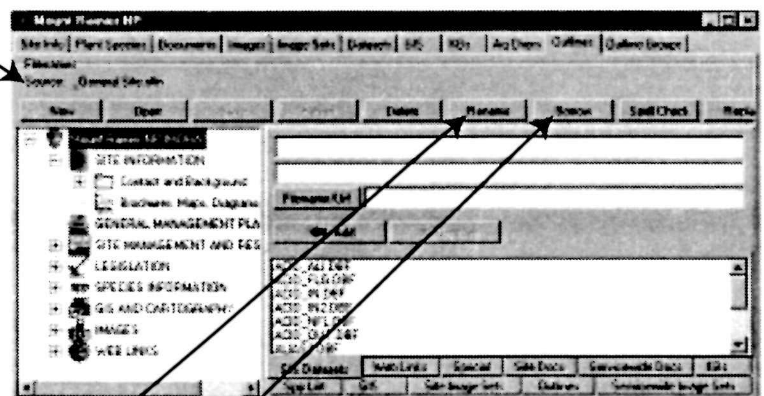
Site outlines are the primary interface between the user and the data. Site outlines organize the data under specific categories.



To add, modify, or remove a site outline, select the **"Outlines"** tab in the **"Site"** window.

NOTE: We recommend that you leave the WASO outlines (General Site, Air Resources, Geologic Resources, Cultural Resources) in the order and format as they are supplied. Doing so will facilitate the "Fetch and Post" update function for obtaining Synthesis updates when it is implemented.

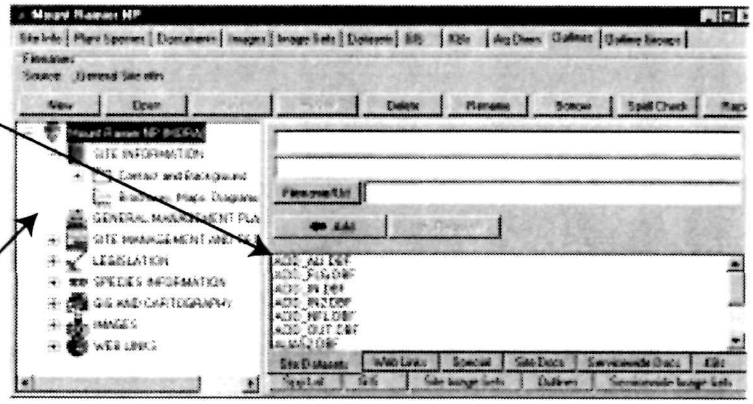
## <u>Site Outlines Tab Components:</u>



- **<u>Source:</u>** displays the file name of the outline being viewed
- **<u>New:</u>** creates a new site outline
- **<u>Open:</u>** opens a list of available outlines for that site
- **<u>Save:</u>** saves changes to the outline
- **<u>Revert:</u>** reverts back to the previously saved changes
- **<u>Delete:</u>** deletes the outline
- **<u>Rename:</u>** allows you to rename the outline without navigating to it in Windows Explorer™
- **<u>Borrow:</u>** imports a template outline

## Site Outlines

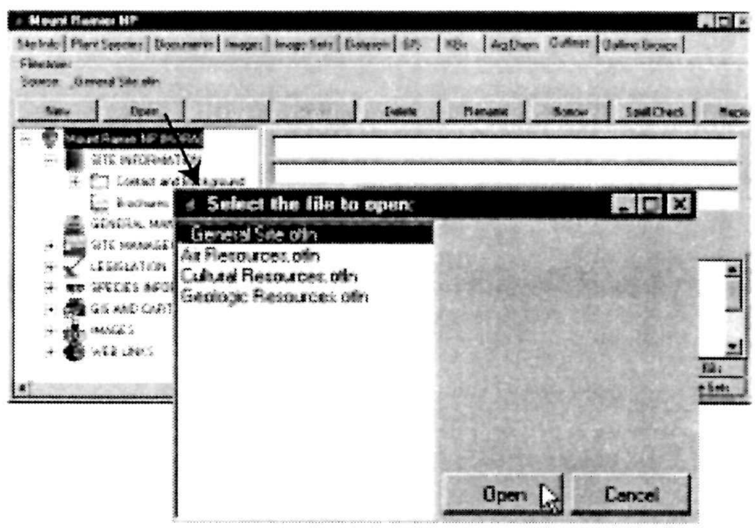
**<u>Site Outlines Tab Components:</u>**



- **<u>Available Data Area:</u>** shows the different types of available data that can be added to a site outline. Each tab at the bottom of the window reveals the files available for that data type.

- **<u>Site Outline:</u>** displays the current data items linked in the opened outline.

**<u>Opening a Site Outline:</u>**




Opening an existing site outline allows you to edit the layout of the outline, rename the outline, or borrow a new scheme from a template outline.

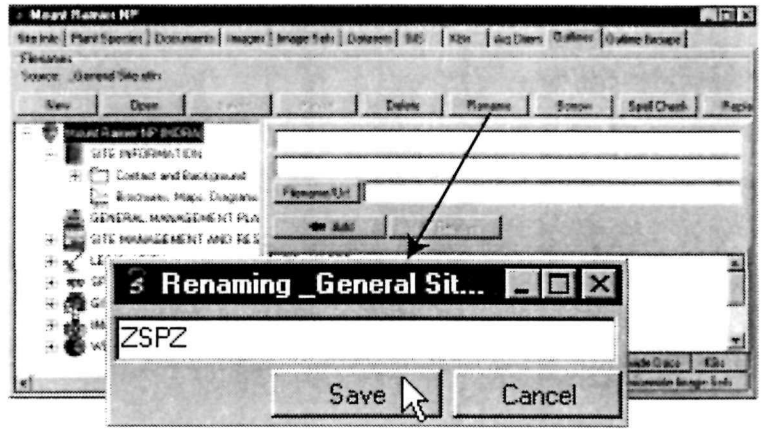
To open an existing outline, click on **Open**. The **"Select the file to open"** window will appear. Scroll through the list until the appropriate file is located.

Click on the **outline name**, and then click on **Open**. The outline will appear in the **"Outline Area"** window.

## Site Outlines

### Renaming a Site Outline:

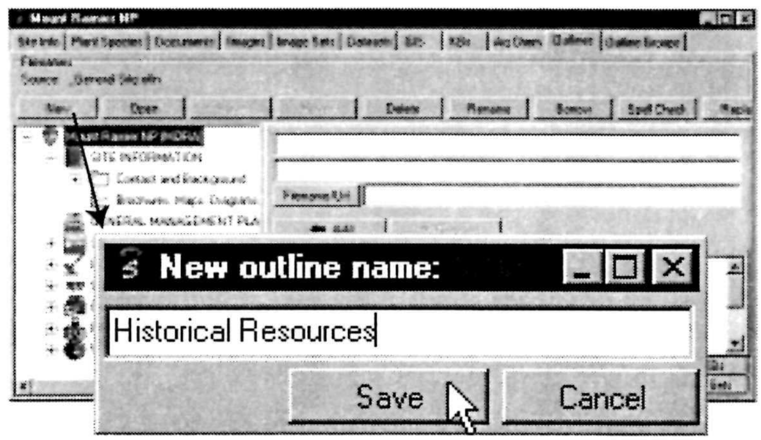
Renaming the currently opened site outline allows you to edit the name of the outline without having to navigate to the outline file in Windows Explorer™.




To rename the opened outline, click on **Rename**. The **"Renaming"** window will appear. Type in the **new file name** for the outline, and click on **Save**.

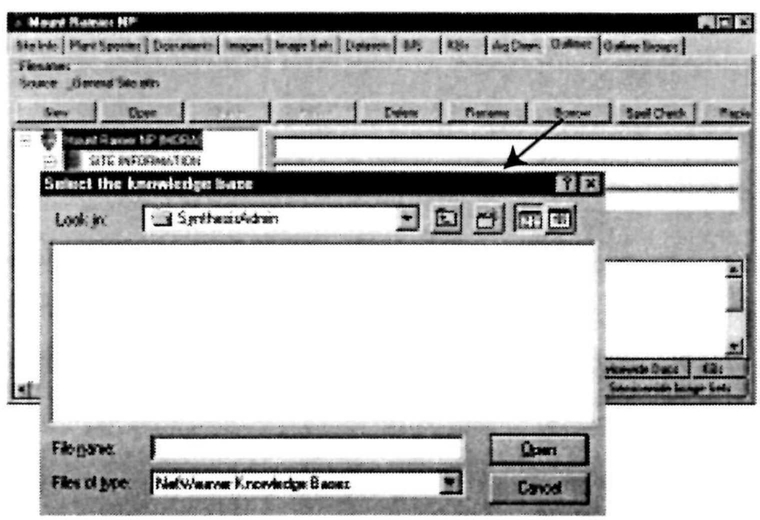
### Adding a New Site Outline:

To add a new site outline, click on **New**. The **"New outline name"** window will appear. Type in the name of the new outline. Click on **Save**. *Synthesis Administration* will create a new outline file.

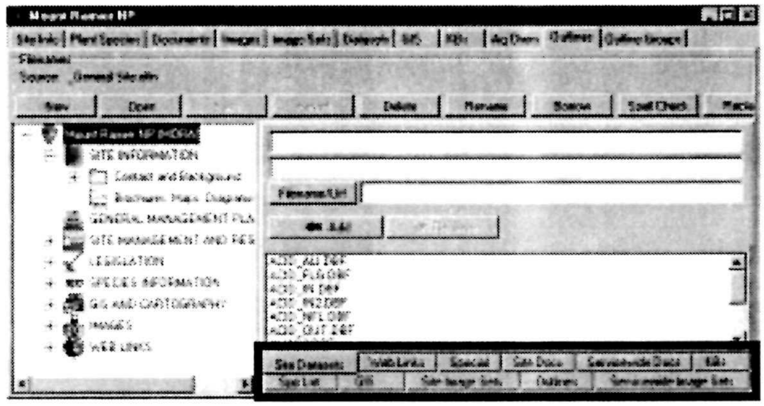



### Using an Outline Template:

To use another site outline or outline template, click on **Borrow**. The **"Open"** window will appear. Navigate to the outline file you want to borrow. Click on the **file name (*.otln)**, and then click on **Open**. The "borrowed" outline will be appear in the current **"Outline Area"** window.



## Site Outlines



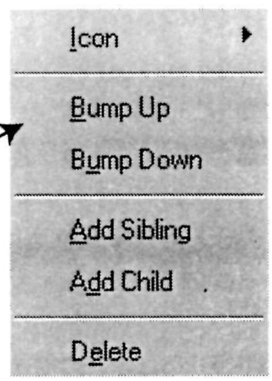
### Modifying a Site Outline:

Once an outline opens, the outline information is displayed in the **"Outline Area"** window, allowing you to modify the outline.

To **add data** to the outline, click on one of the data tabs in the **"Available Data Area."** Scroll through the list of available files under the tab. Click on the **file** you want to add to the outline. (Information about the file will appear in the fields located in the upper-right part of the window.)

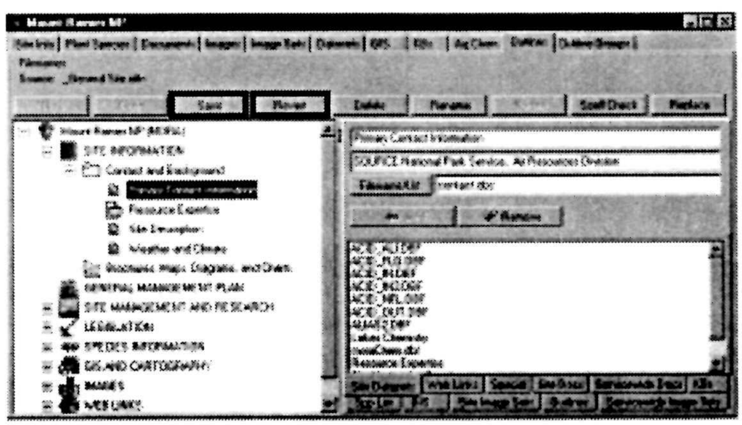
In the "**Outline Area**" window, click on and **highlight the heading** under which you want the file to be linked. Then, click on **Add**. The file will be added under the heading you designated.

It is important that you make sure that you have selected the heading under which you intend to link the data file. The file will be linked under whatever heading is highlighted in the outline.




To **modify the position** of a data item in the outline, click on that **data item**. Right-click to bring up a menu of editing tools. Choose **Bump Up** to move the **higlighted data item** up in the outline list, or click on **Bump Down** to move it down in the outline list.

To **remove a data item** from the outline, click on the **data item** (Information about the data item will appear in the fields in the upper-right part of the window and the **Remove** button will become active). Click on **Remove**.



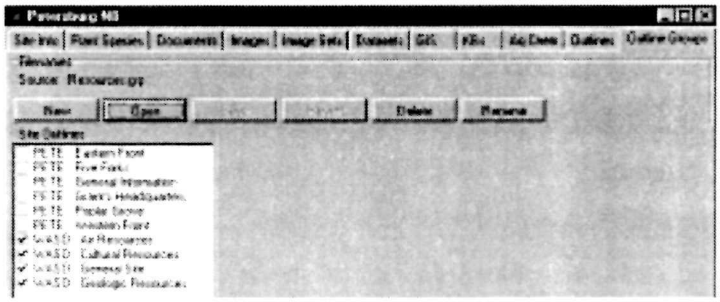
## Site Outlines

### Modifying a Site Outline:

Note: Headings in a site outline are placeholders, not data items. Highlighting them will not activate the "Remove button in the "Available Data Area." To remove a heading, **click on and highlight the heading**, then **right click to bring up a menu of editing tool**s. Click on **Delete**.

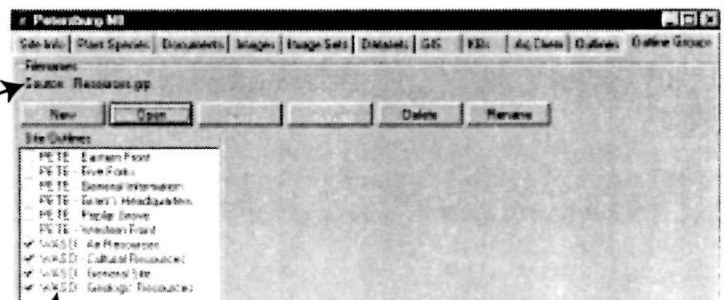
Once you have finished making changes to the outline, click on **Save** to save the changes. If you don't want to save the changes, click on **Revert**.

**Site Outline Groups**



Site outline groups organize the various outlines associated with a particular site. The "WASO" outlines that currently exist in <u>all</u> sites are grouped in the the **"Resource"** outline group. Outlines that pertain to a specific site are grouped in the **"Unit Area"** outline group.

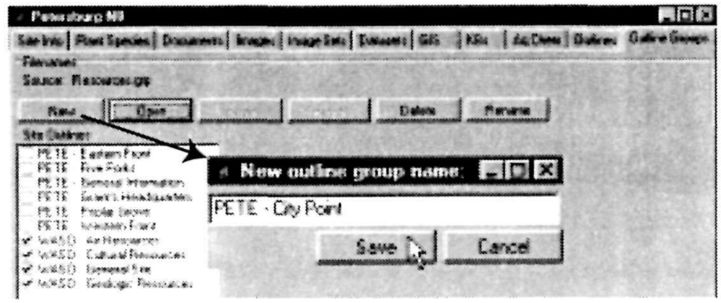
To create, modify, or remove an outline group, select the **"Outline Groups"** tab in the **"Site"** window.



## <u>Site Outline Group Tab Components:</u>

- **<u>Source:</u>** displays the file name of the outline group being viewed
- **<u>New Button:</u>** creates a new outline group
- **<u>Open Button:</u>** opens the outline group and displays a checklist of available outlines, allowing the user to select or unselect any outline.
- **<u>Save Button:</u>** saves any changes to the outline group
- **<u>Revert Button:</u>** reverts back to the previously saved changes
- **<u>Delete Button:</u>** deletes the outline group
- **<u>Rename:</u>** allows you to rename the outline group
- **<u>Site Outlines Area:</u>** displays all of the available outlines and which are assigned to each outline group.

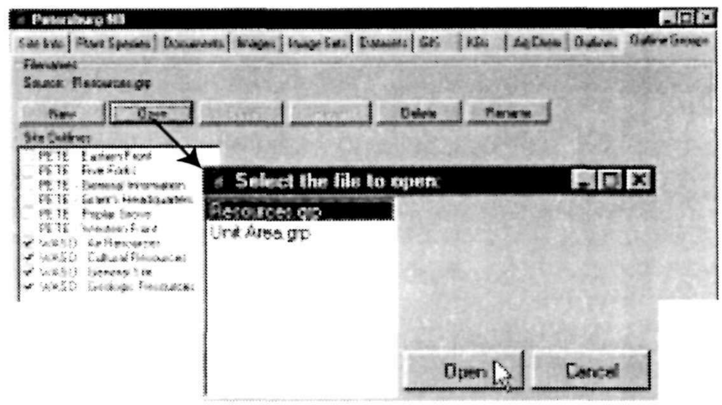
## Creating a New Outline Group:




To create a new outline group for the site, click on **New**. The **"New outline group name"** window will appear. Type in the name of the outline group, and then click on **Save**.

When the site outlines reappear in the **"Site Outlines Area,"** check the box next to all of the outlines that you want to include in the new outline group. Click on **Save**.

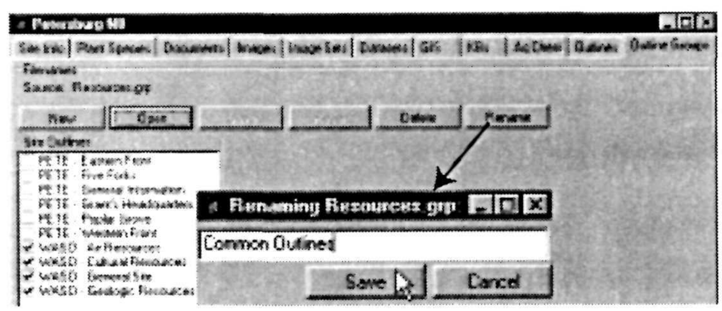
## Opening an Outline Group:




Opening an existing outline group allows you to rename or edit the outline group.

To open an existing outline group, click on **Open**. The **"Select the file to open"** window will appear. Select the outline group, and then click on **Open**. At this point, there are only two outline groups to choose from: **"Resource"** and **"Unit Area."**

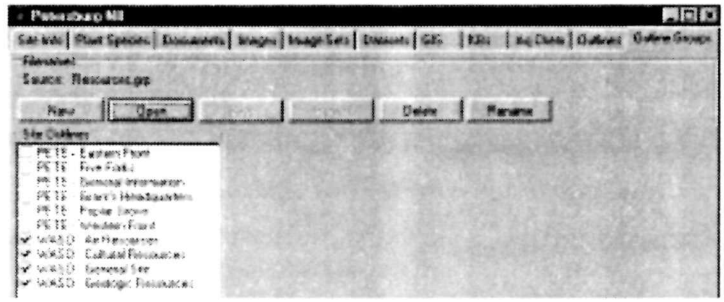
## Renaming an Outline Group:




Renaming the outline group allows you to edit the name (**Source**) of the outline group.

To rename the outline group, click on **Rename**. The **"Renaming"** window will appear. Type the new name of the outline group, and click on **Save**. The new name will appear as the **Source**.

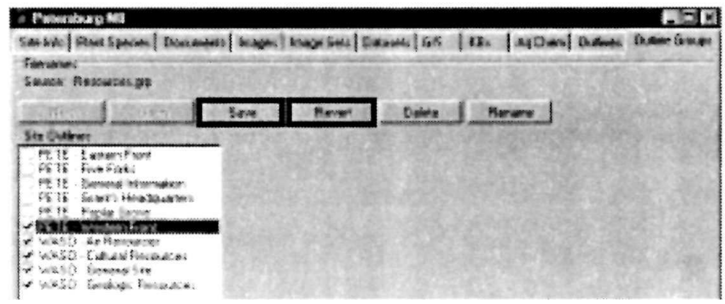
## Site Outline Groups



### <u>Modifying an Outline Group:</u>

Once an outline group opens, you will see which of the outlines in the **"Site Outlines Area"** are assigned to the outline group, allowing you to modify the information.

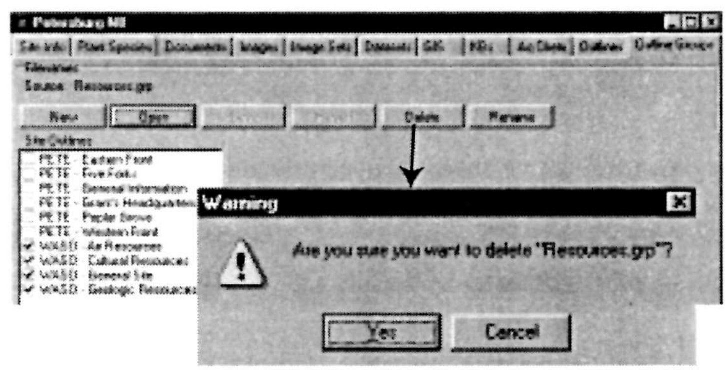
To **add an outline** to the outline group, check the box to the left of the site outline name.



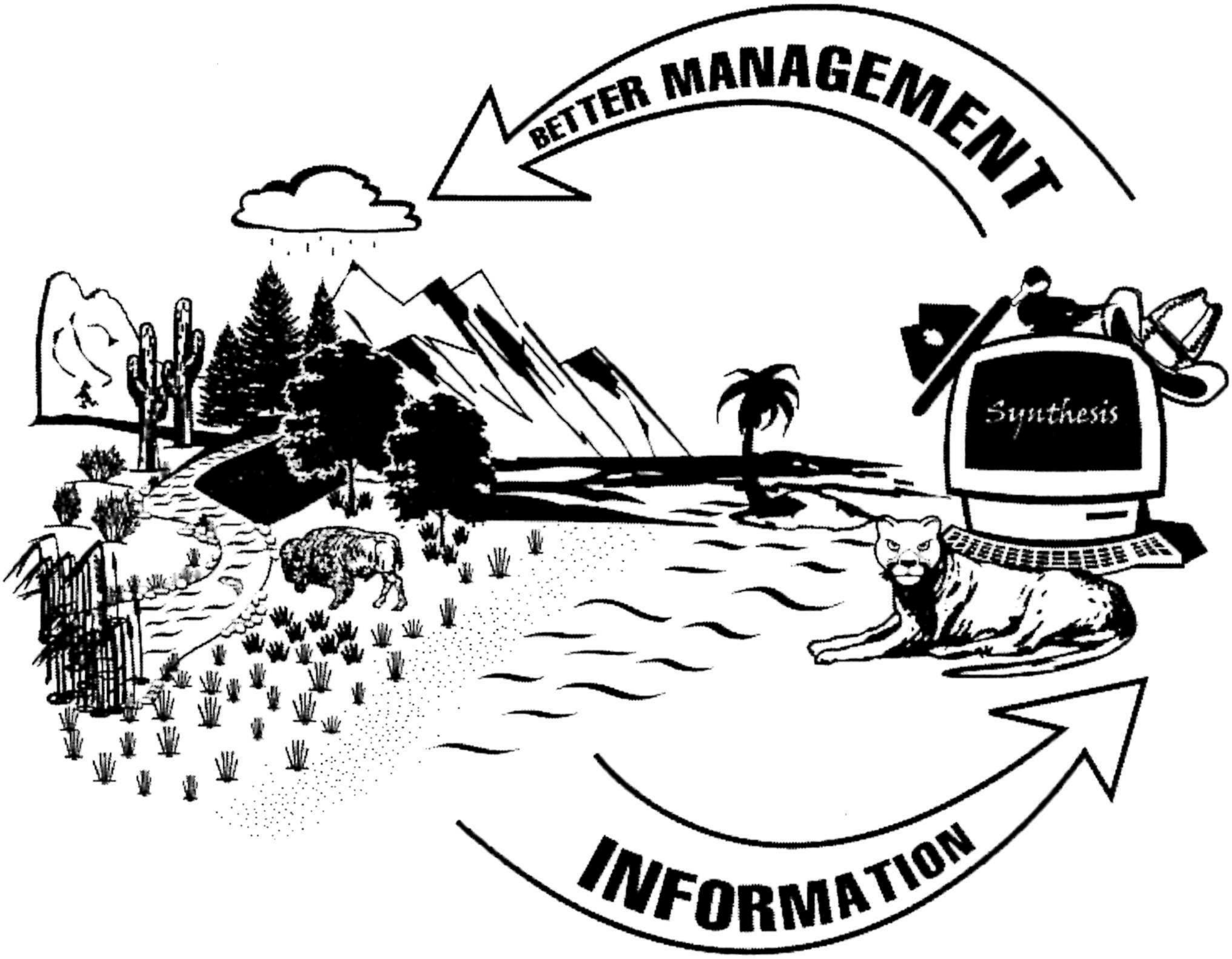
To **remove an outline** from the outline group, uncheck the box to the left of the outline name.

Once changes to the outline group have been made, click on *Save* to save the changes. If you <u>don't</u> want to save the changes, click on the **Revert** button.

### <u>Deleting an Outline Group:</u>




To **delete an outline group**, open the outline group. Then, click on **Delete**. When you click on the **Delete** button, a warning box will appear asking you if you want to delete the outline group. Click on **OK** or **Cancel**. Deleting an outline group does not affect the site outlines located in the **"Site Outlines Area"** but does delete the oultine group.




Information Management System

*Using Synthesis*

**Synthesis Reference Manual Three**

The *Synthesis* team appreciates your comments, particularly if you find any of the instructions confusing or difficult to follow. For assistance, please contact:


Bruce Nash
National Park Service - NRID
12795 W. Alameda Parkway
Lakewood, CO 80228

Phone: 303 987-6697
Fax: 303-969-2822
cc:Mail or Internet
bruce_nash@nps.gov

Jessica Dempsey
National Park Service - NRID
12795 W. Alameda Parkway
Lakewood, CO 80228

Phone: 303-987-6942
Fax: 303-969-2822
cc:Mail or Internet
jessica_dempsey@nps.gov

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### *Launching Synthesis Runtime*



## Section Two

### *Outlines and Data Items*



## Section Three

### *Aquatic Chemistry Decision Support System*

## Section Four

### *Atmospheric Deposition Information*



## Section Five

### *Ozone Injury Decision Support System*



## Section Six

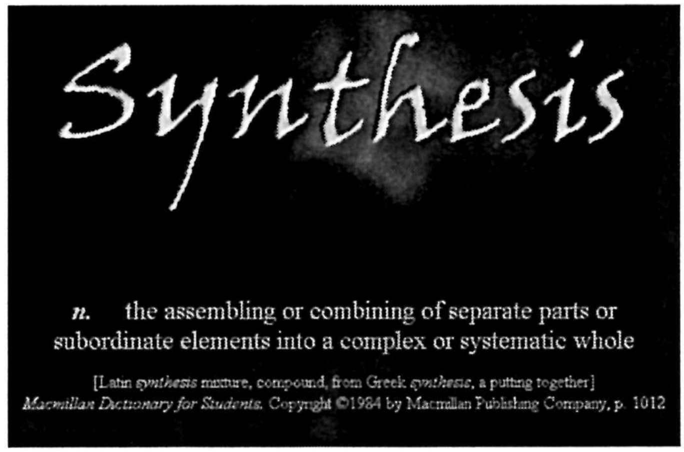
### *Visibility Related Information and AQRVs*

# Section One:

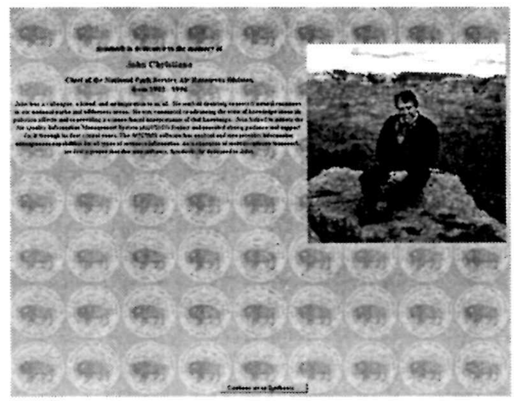
*Launching Synthesis*

# Synthesis:

*Synthesis* is a software package that provides a computerized framework for delivering resource information in an efficient manner.




*Synthesis* is a cooperative effort between the National Park Service, Fish and Wildlife Service, Penn State University, and University of Denver. The *Synthesis* program is dedicated to the memory of John Christiano, Chief of the National Park Service Air Resources Division from 1985 to 1996.

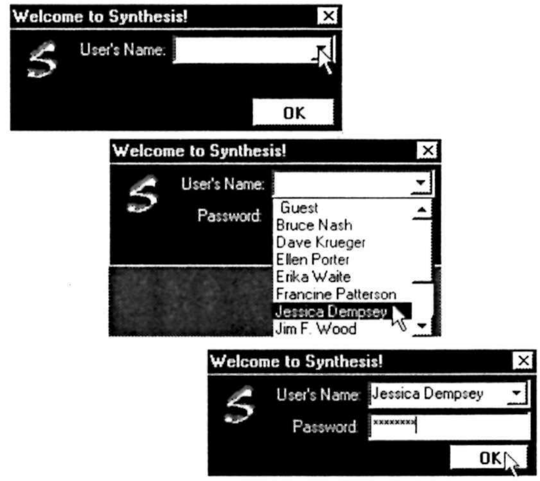


After selecting a site of interest in *Synthesis*, the user has direct access to various data such as: site species lists, general site information, documents, spreadsheets, databases, GIS data, annotated references, summary monitoring information, photographic libraries, web sites, and embedded decision support systems (DSS).

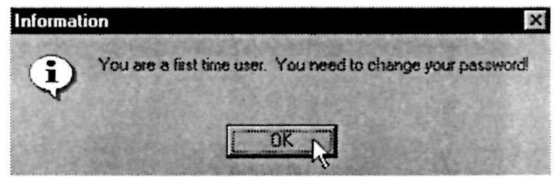
## Launching *Synthesis*:

To launch *Synthesis*, go to the Windows **Start** button. Navigate to Programs and then select *Synthesis*.

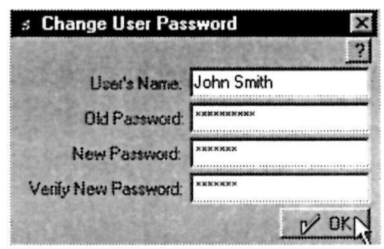
## Logging into Synthesis:




When the *Synthesis* application opens, you will go through some start-up screens. To skip these screens, press the **Esc** button. A dialog box will appear asking for a user name. Begin typing your name or click on the **down arrow to get the drop-down list of users**. Select your name. You will then be asked to type in your password.

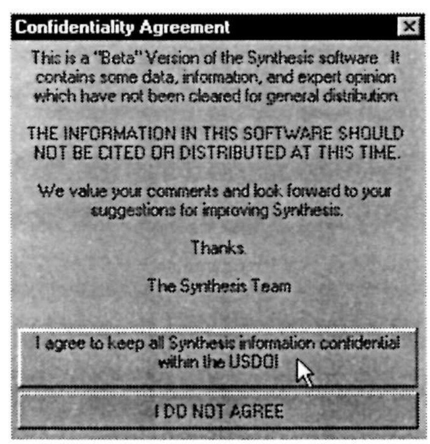



The first time you use *Synthesis*, your password is your name **EXACTLY** as it appears in front of you in the dialog box, including any uppercase letters and spaces. The program will then ask you to provide a new password. This will be your password from now on until you change it.




Type your old password (your name); then, type a new password. It must be at least **six** characters and can contain both letters and numbers. Retype your new password and click on **OK**.

## Confidentiality Agreement:



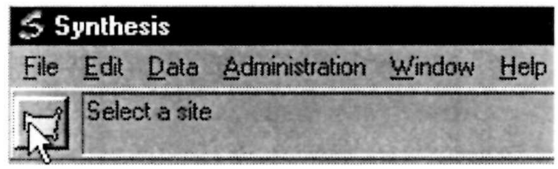

The **"Confidentiality Aggreement"** window will appear. Click on the **I agree** button to continue with *Synthesis*. The **I agree** button exists mainly be-cause we would like to get feedback, make revisions, and QC data before the software is widely distributed.

Clicking on the **I DO NOT AGREE** button causes *Synthesis* to close.

**Obtaining the Site Menu:**

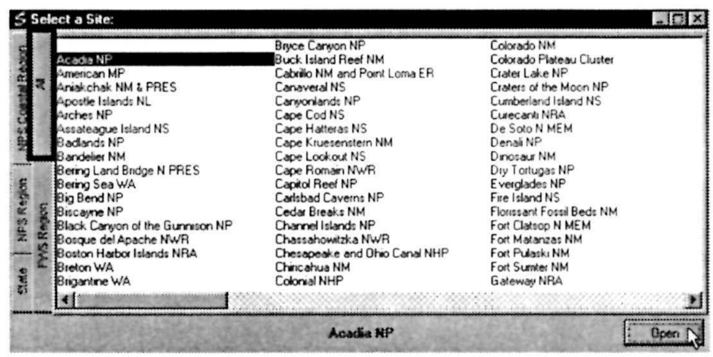
Once *Synthesis* opens, you will see a *Synthesis* toolbar across the top of your monitor screen. If the toolbar is not as wide as your monitor screen, stretch it out across the top of your screen. The program will store that size, so that next time you login, the toolbar will default to the width you set.

Click on the **USA map icon** to select a site.

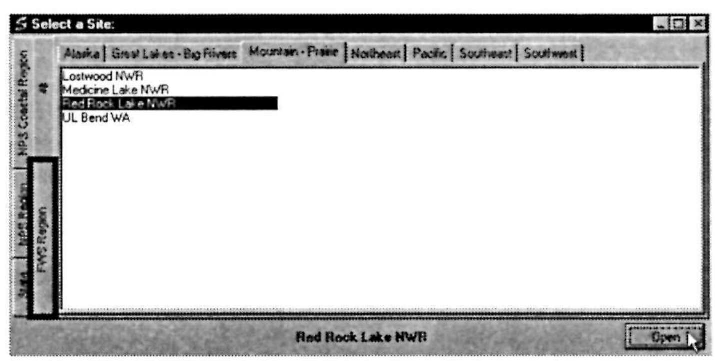



**Selecting a Site:**

There are several options for selecting a site to view in *Synthesis*. The default option is the **"All"** tab, in which all installed sites are listed in alphabetical order. Locate the site, click on its name, and then click on **Open**.

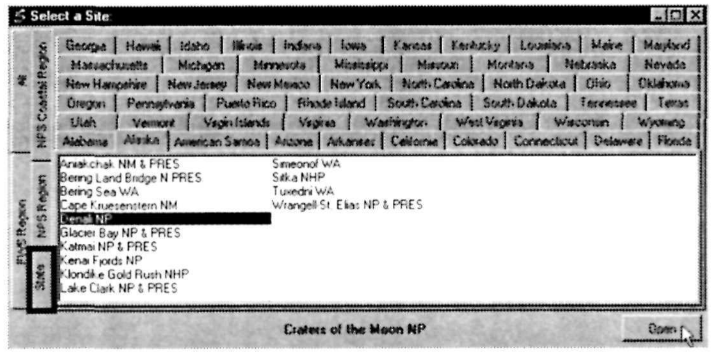



Installed Fish and Wildlife Service (FWS) sites are organized by FWS region under the **"FWS Region"** tab. Click on the individual region tab and locate the site. To open the site, double-click on the site name -- or click on the site name, and then click on **Open**.

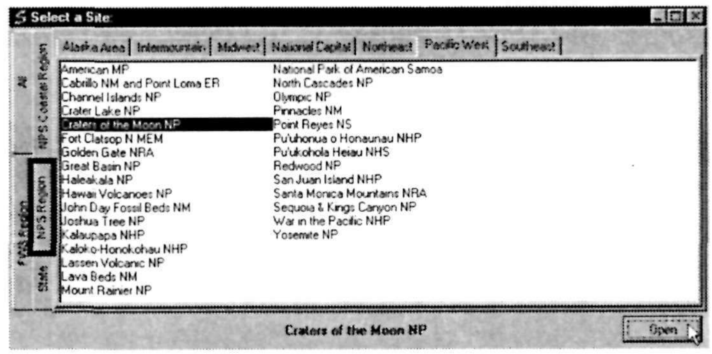


**<u>Selecting a Site:</u>**

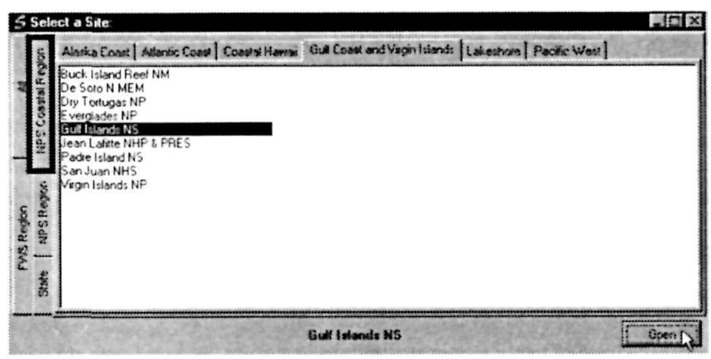
To browse sites by state, click on the individual state tab under the main **"State"** tab. Locate the site and double-click on the site name -- or click on the site name and then click on **Open**.




National Park Service (NPS) sites can be located using the **"NPS Region"** tab. Select the individual region tab, and locate the site. Double-click on the site name -- or click on the site name and then click on **Open**.




You may also select an NPS coastal park by using the **"NPS Coastal Region"** tab. Select the individual region tab, and locate the site. Double-click on the site name -- or click on the site name, and then click on **Open**.

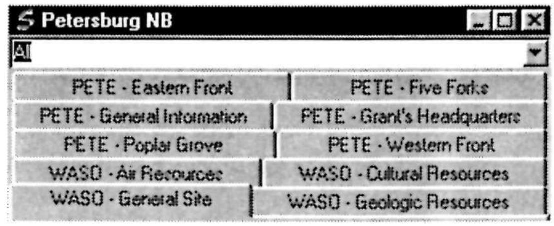


# Section Two:

***Outlines and Data Items***

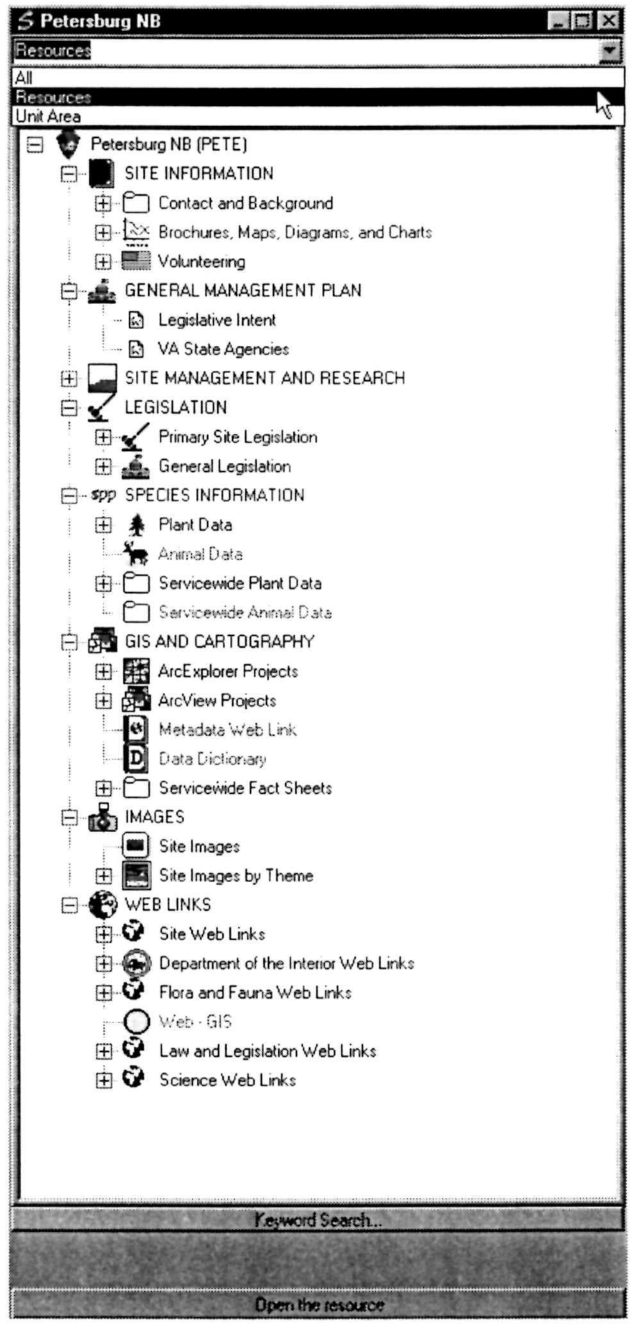
# ***Synthesis Outlines and Data Items:***

Once you have selected a site in *Synthesis*, you can view each of the outlines available for that site. Click on the outline tab (e.g. General Site, Air Resources, or Pete-Poplar Grove) that you want to view.




You can toggle between viewing all outlines for a given site or outline sets created for that site, such as the Resource and Unit Area sets created for Petersburg NB, in the example at right.

To expand an outline, click on the plus sign located next to the site name. Then, click on the plus sign to expand any of the suboutlines of each category.




## **Main Icons in the Outline:**

 Word Document™

 Datasets

 Access™ Database

 Excel™ Spreadsheet

 Image

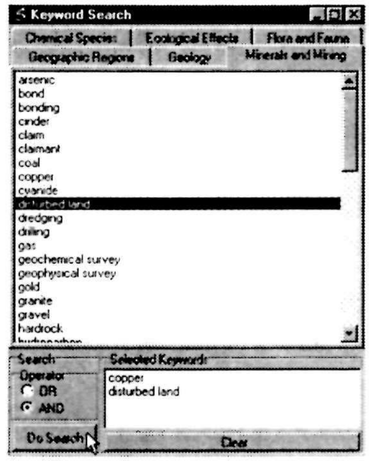
 Web link

## **Opening a Data Item:**

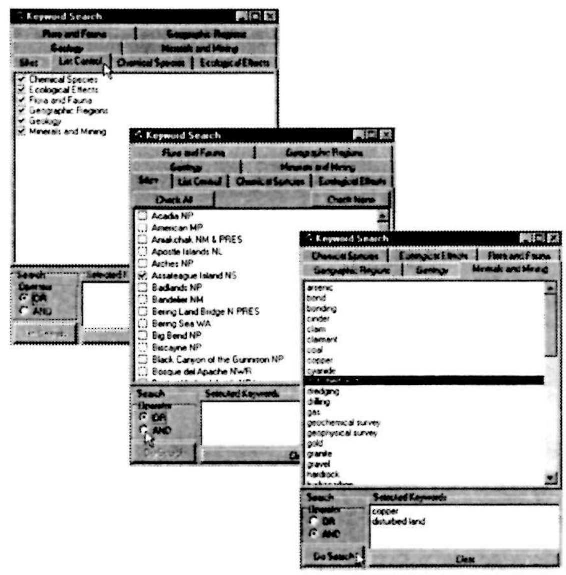
To open a data item located in the site outline, highlight the item and double-click on the data item in the outline. Or, click on the **Open the Resource** button located at the bottom of the site outline. (Depending on screen settings, you may not be able to see the **Open the Resource** button).

**<u>Performing a Keyword Search:</u>**

Once you have a site outline opened, you can do a keyword search to find any data items that might relate to a topic of interest. Click on the **Keyword Search** button located at the buttom of the outline. When the **"Keyword Search"** window appears, check any and all (or none) of the sites.



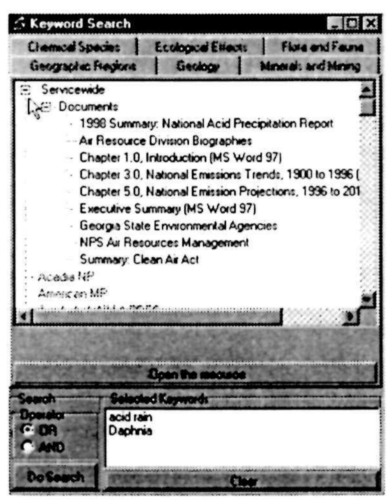

Under each tab is a list of keywords relevant to that topic. The **"List Control"** tab contains a list of all keyword lists and allows you to control the keyword lists that are displayed in the Keyword Search window. Under the **"List Control"** tab, check any or all of the keyword lists you would like *Synthesis* to display.



Under each keyword list tab, double-click on the word(s) you would like to search for. Select the **"or"** or **"and"** option under the **Search-Operator** box. You'll see each selected keyword appear in the **Selected Keywords** field. Your keyword search will be based on the words in that window.

Once you have selected keyword(s), click on the **Do Search** button.

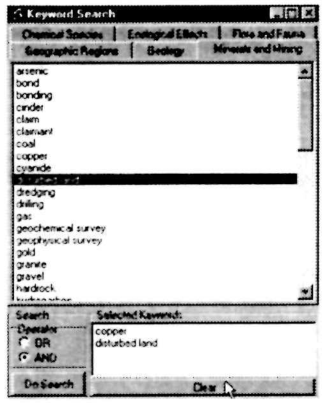
When the search is completed, a list of all the site and servicewide locations and the data items will appear in the **"Keyword Search"** window. Data items containing your keyword(s) can be found in site or servicewide locations that are not grayed out.




Scroll down the list to browse the available data items. When you locate an item of interest, double-click on it to open it in its respective application such as Microsoft Word™.

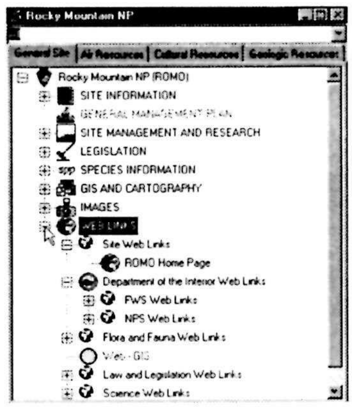
## Performing a Keyword Search:

Click on **Clear** to remove selected keywords so that you can begin a new keyword search.



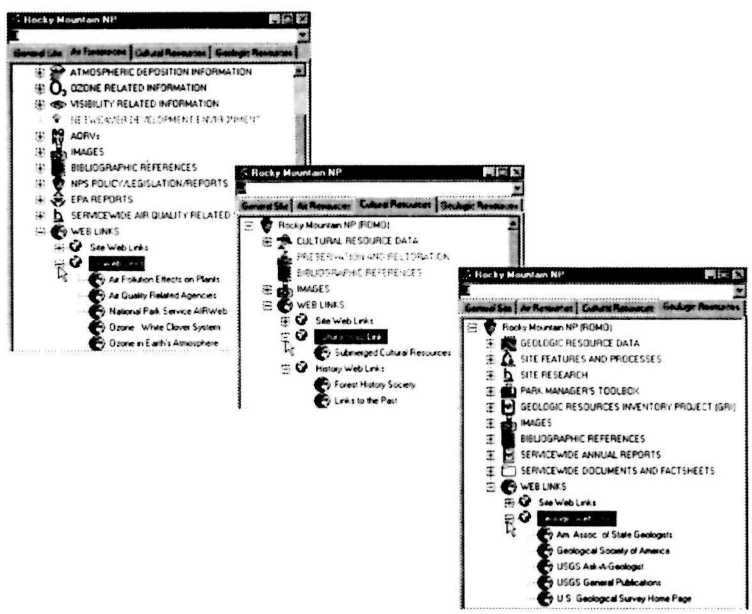

## Using Web Links:

Selected web links are located in the various outlines under the **WEB LINKS** category. You must have an internet connection to access web sites using *Synthesis*.



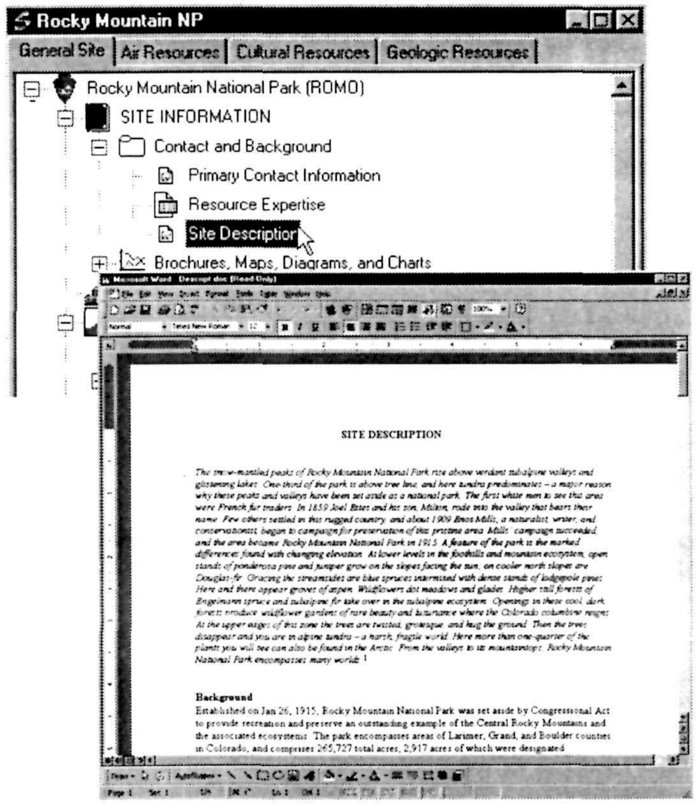

Each site contains a link to its homepage. In the General Site outline, you can also link to the Fish and Wildlife Service (FWS) main web site as well as the National Park Service (NPS) Homepage. There are several other web sites listed that are relevant to resource management at most of the sites.

You can access web sites that are topic related under other outline tabs. The Air, Cultural and Geologic outlines have web sites listed under the **WEB LINKS** category that are more topic specific.



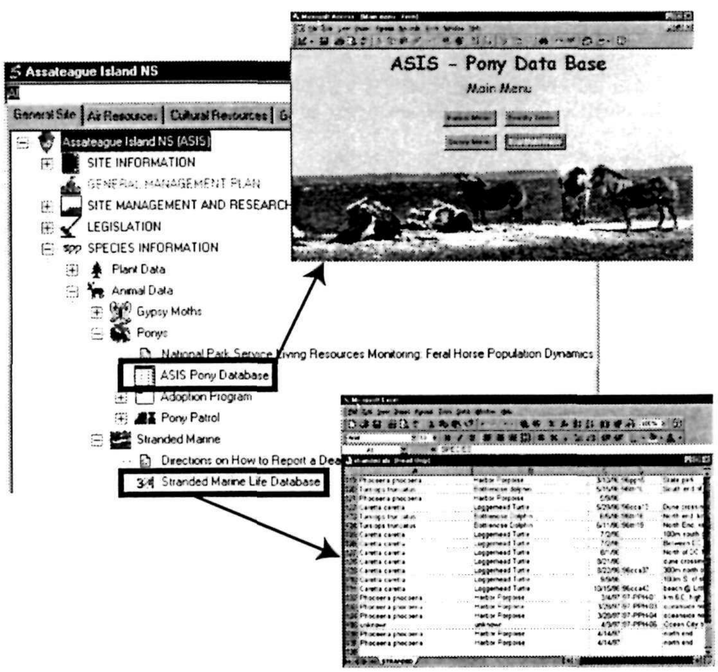
## Working with a Word™ Document:

To view a Word Document™, highlight the item and double-click (or click on the **Open the Resource** button after clicking on the item). Double-clicking on a document opens Microsoft Word™ as well as the document you have selected. For example, if you were to double-click on the **Site Description** document under **SITE INFORMATION**/Contact and Background, you would bring up the document in Word™. The document may now be manipulated in the same manner as any Microsoft Word™ document.

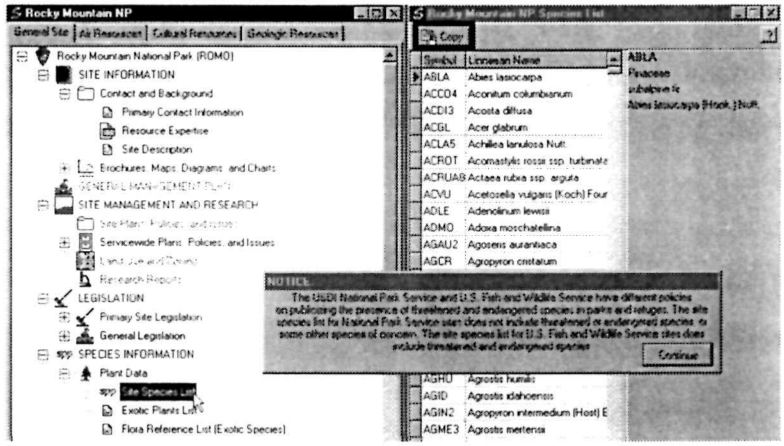



## Working with Datasets:

Datasets, including Access™ databases and Excel™ Spreadsheets, can be viewed or copied into other applications. To view a dataset, double-click on the item (or click on the **Open the Resource** button after clicking on the item). Double-clicking on the dataset item will open the file in its original application. If you wish to copy only certain columns and rows, select them in the lower left corner of the datasets window. To select multiple rows and columns, hold down the **Ctrl** key while clicking with the mouse.



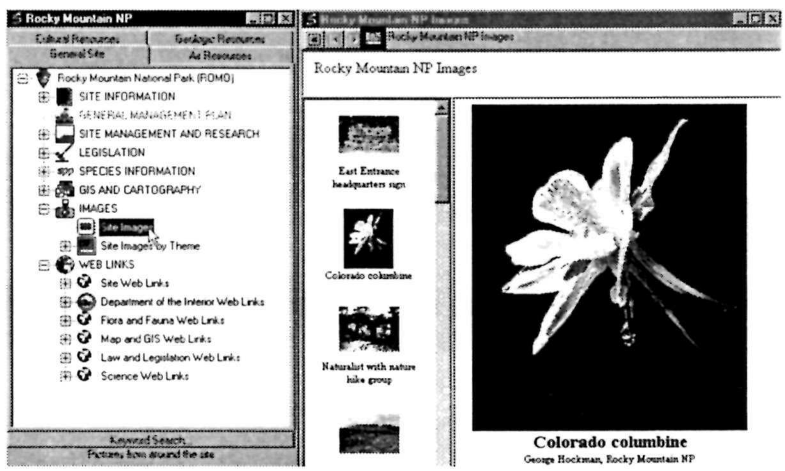
## Opening the Site Species List:




The **Site Species List** is a subset of the Natural Resource Conservation Service (NRCS) PLANTS database, which contains a list of plant species found at that site. The entire **Site Species List** can be copied to the clipboard by clicking on the **Copy** button at the top of the list.

For some sites, the site species list is also available as an Microsoft Access™ database called "Site Vegetation Database." *Synthesis* will be moving to NPSpecies as the source for plant species at NPS sites.

## Opening a Site Image:

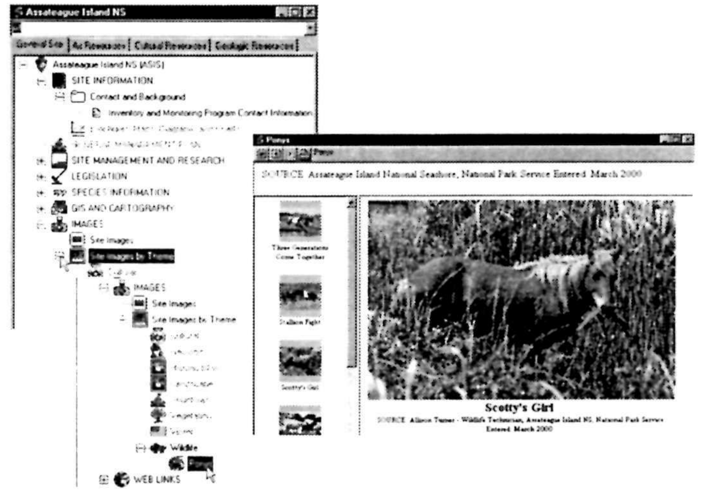



Double-click on **Site Images** to open the file of images for the site. To view an image, click on the thumbnail image on the left-hand side of the window.

These images can be copied and pasted into other applications by placing the mouse cursor on the large format picture at the right and right-clicking on **Copy**. All of the **Image** files under the **IMAGES** category open and copy the same way.

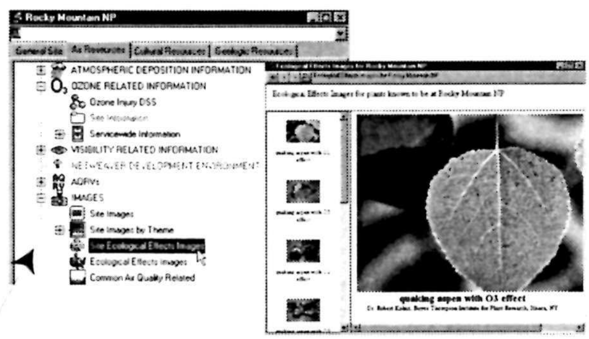
To print the enlarged picture, click somewhere in the image area, and then, click the **printer icon** at the top of the window.

**Opening a Site Image Set:**



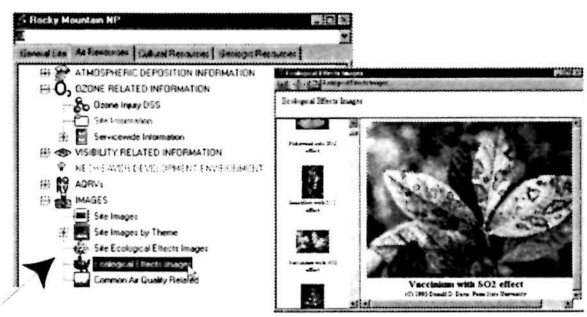

You can locate a particular type of image more efficiently under the Site Images by Theme category using the images sets created for that site. Double-click on an image theme. Then, click on any thumbnail to view the large format JPEG version of the picture. Images can be copied and pasted into other applications by placing the mouse cursor on the large format picture at the right and right-clicking on **Copy**. To print the enlarged picture, click somewhere in the image area, and then, click the **printer icon** at the top of the window.

**Working with Other Images:**

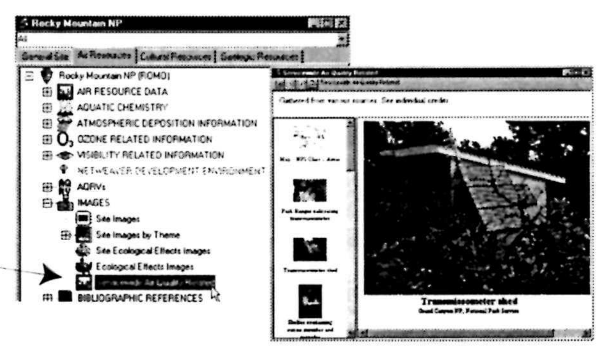



Other specialized image sets, including **Site Ecological Effects Images, Ecological Effects Images, and Servicewide Air Quality Related Images** may be viewed within the respective tab, such as Air Resources.

To view an image, click on the thumbnail on the left side of the screen. To print an image, click anywhere in the image area and click on the **printer icon**. To copy an image, place the mouse on the large format picture, right click on the mouse, and click on **Copy**.




**Site Ecological Effects Images** provides pictures of air pollution effects on vegetation found at the site.

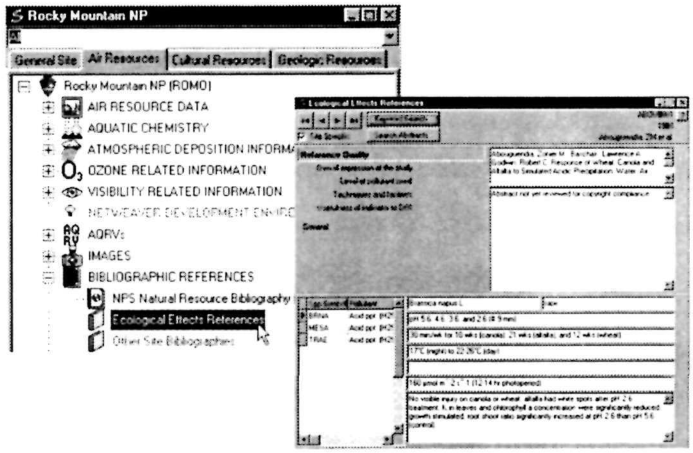



**Ecological Effects Images** displays a library of images illustrating pollution effects on various plants, not limited to those found in the selected site.

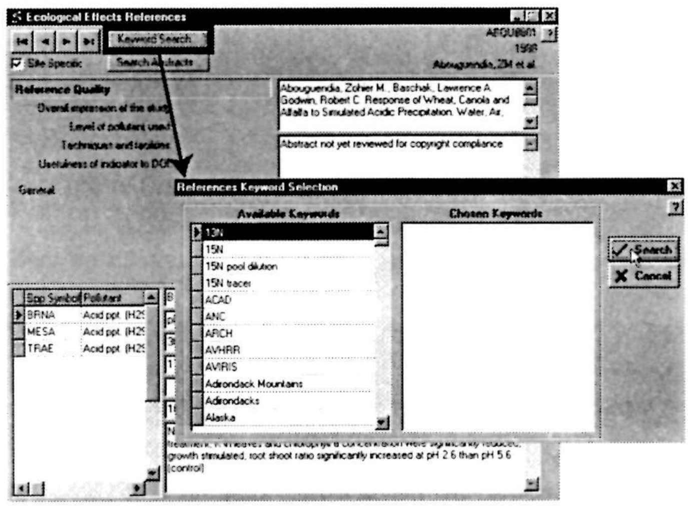
**Servicewide Air Quality Related Images** includes images related to air quality monitoring that are relevant to all sites.

## Using Ecological Effects References:

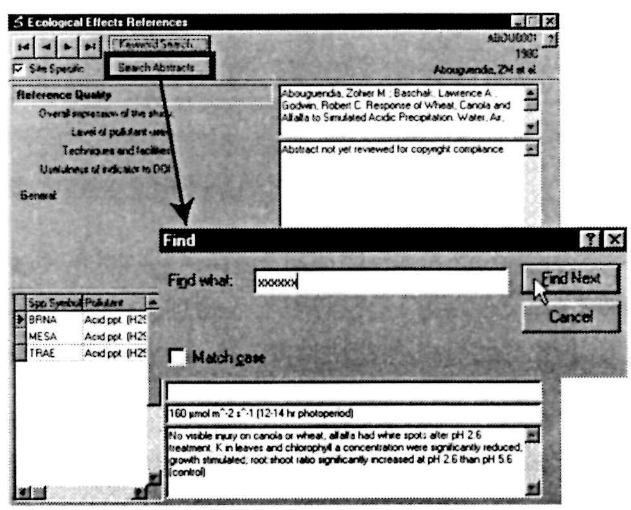
The ecological effects references section is located under the **BIBLIOGRAPHIC REFERENCES** category in the Air Resources outline. The **Ecological Effects References** provides basic bibliographic citations. In some cases, interpretation, such as remarks concerning experimental techniques and usefulness of the study to the US Department of Interior, are provided.




If you double-click on the **Ecological Effects References**, the **"Ecological Effects References"** window appears. In this window, you can either perform a keyword search or search among the references that are present in the database.




To perform a keyword search, click on the **Keyword Search** button. Then, double-click on the word(s) in the column on the left side of the window for which you want to search. If you want to delete **"Chosen Keywords,"** double-click on the word(s) on the right side of the window. After you have selected keywords, click on the **Search** button. Click on **Cancel** to exit the **"References Keyword Selection"** window.




You may also search references that are available. Click on the **Search Abstracts** button. In the **"Find"** window that appears, type in your search string and click **Find Next**. Click on **Cancel** to exit from **Search Abstracts**.

## Opening a GIS Project:

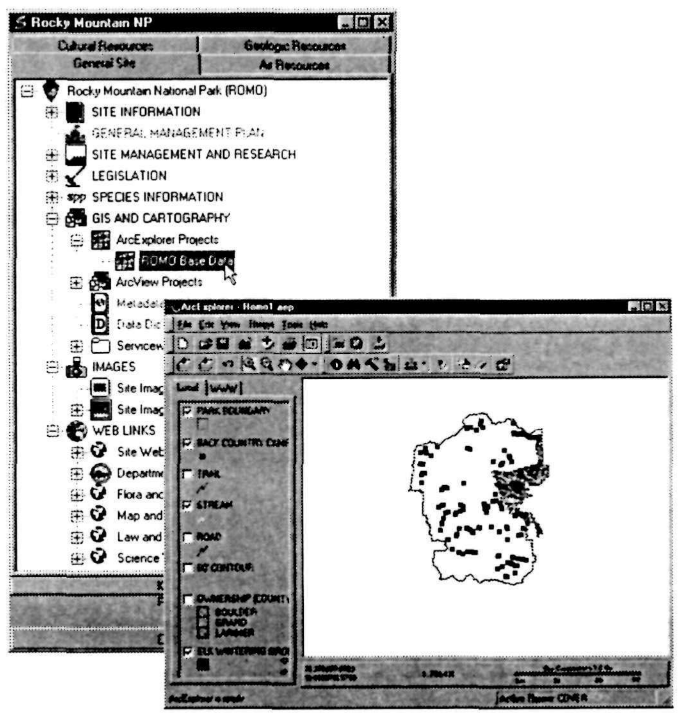
GIS data are presented through ArcExplorer™ projects, ArcView™ projects, and the NPS GIS Data Browser generally located under the GIS DATA category in the outlines. For instructions on using ArcView™ and the NPS GIS Data Browser, click on the Help files in those applications.

If ArcExplorer™ is not installed on your computer, ask your system administrator to install it from the *Synthesis* CD. The following pages contain brief instructions on using the basic functions available in ArcExplorer™ GIS data browser.

**NOTE**: The complete instruction manual for ArcExplorer™ has been included on the *Synthesis* Installation CD; contact your system administrator. The manual is also available in .pdf format from the following web site: http://www.esri.com/software/arcexplorer/aedownload.html. You will need Adobe Acrobat Reader™ (also a free software) to open the .pdf file. Adobe Acrobat Reader™ is available from the following web site: http://www.adobe.com/prodindex/acrobat/readstep.html.

To view GIS data in ArcExplorer, locate the ArcExplorer™ project in the site outline. Double-click (or highlight and click on the **Open the Resource** button) on the project name or icon.

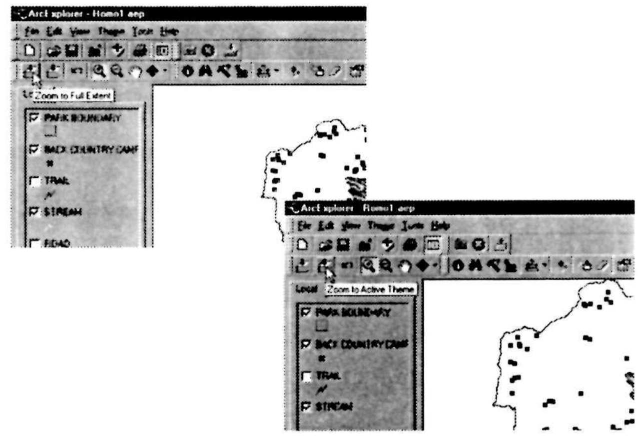
ArcExplorer™ opens and a project, such as ROMO Base Data (file name Romo1.aep) is displayed. Checking the box beside each theme, for example trails, displays the features of that theme. To turn off the display of any theme, uncheck the box. A theme is made "active" by clicking on the theme name. The theme name will appear slightly raised.



## Working with GIS Data:

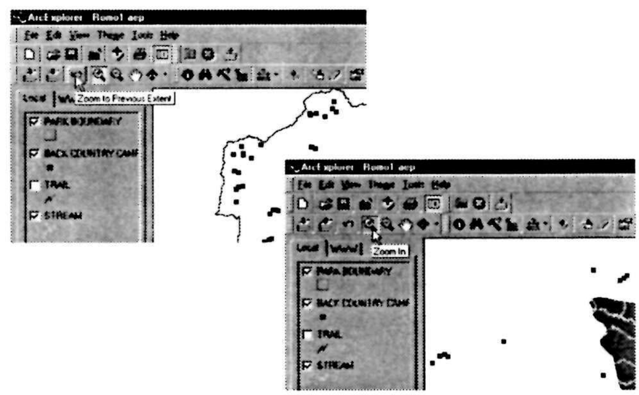
The **Zoom to Full Extent** button zooms the view to the extent of all themes included in the project.

The **Zoom to Active Theme** button zooms the view to the extent of the "active" theme in the project, such as Romo trails in the example at right.



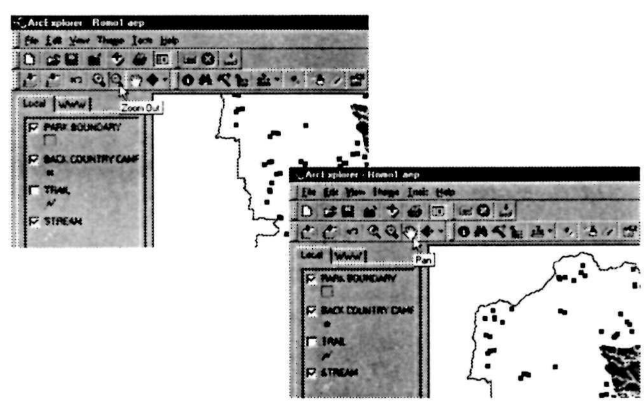
The **Zoom to Previous Extent** button zooms the view to the previous setting.

Use the **Zoom In** button to zoom in on a theme from a specific point. Click on a spot using the button. You can also use the **Zoom In** button to select an area on which to zoom in. Click on the **Zoom In** button, hold down the left mouse button, and drag to select an area on which to zoom.

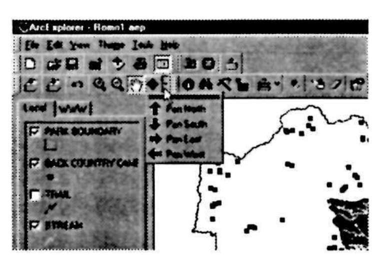


Use the **Zoom Out** button to zoom out on a theme from a specific point. Click on a spot using the button. You can also use the **Zoom Out** button to select an area to zoom out from. Click on the **Zoom Out** button, hold down the left mouse button, and drag to select an area from which to zoom.

The **Pan** button allows you to move throughout the view and to bring into view any features outside the current map extent.



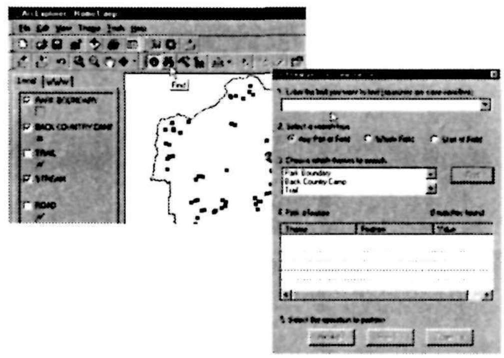
The **Pan Arrow** button allows you to move throughout the view by direction and to bring into view any features outside the current map extent.



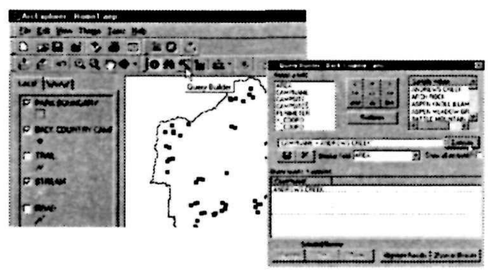
## Working with GIS Data:

The **Identify** button allows you to identify any feature within a given theme and to view the attributes of that feature. First, make the theme "active" by clicking on the theme name. When "active," the theme's box will appear slightly raised. In the example to the right, the Back Country Camps theme is active.

Click on the **Identify** button. Then, click on a segment or portion of the feature. The attributes of that feature will be displayed, identifying the feature, including the number and name assigned to the camp.

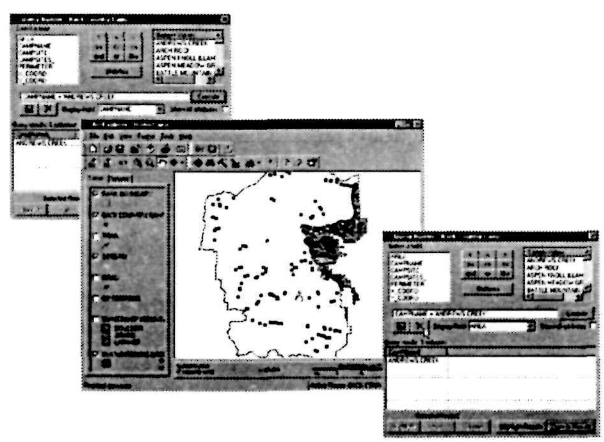


The **Find** button allows you to search for a feature using a text search. Click on the **Find** button, and then type in the text you want to find.



The **Query Builder** button allows you to select a subset of features in a given theme based on one or more attribute values. To build and execute a query:

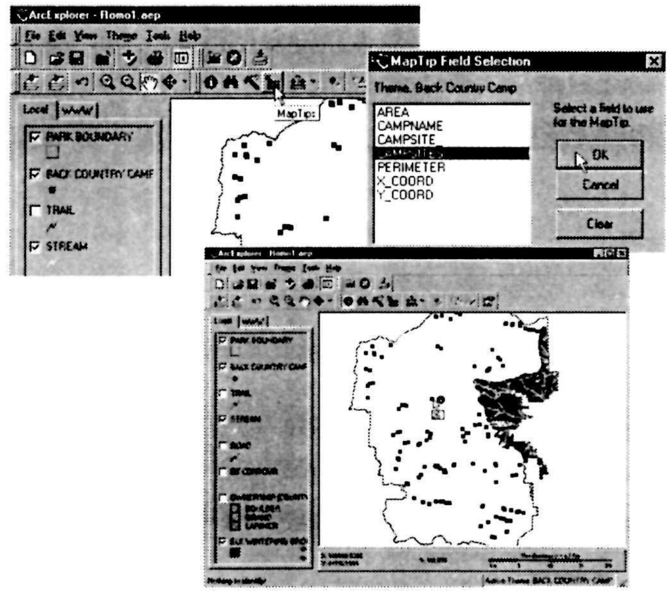
1. Click on the **Query Builder** button.
2. Click on a **Field**. (A list of available values will appear on the right side of the dialog box.)
3. Click on an **Operator** (=, <, ≥, etc.).
4. Click on a **Sample Value**.
5. Click on **Execute**.



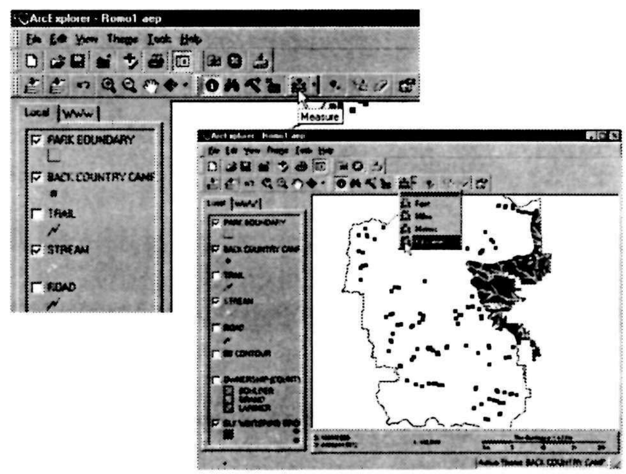
**Query Results** are displayed as in the example to the right. Click on **Highlight** and **Zoom to Results** to better see the results of your query, as shown in the example to the right. Click on the **(X)** to clear the results of the last query.

## Working with GIS Data:

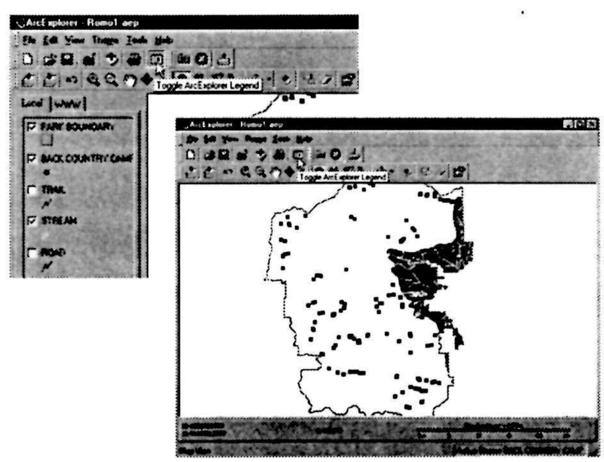
**Map Tips** provides information about features, such as the acreage or area of a polygon feature. First, make "**active**" the theme you want tips on. Click on **Map Tips**. Then, select a **field** (attribute) to use for the map tip. **Click on the feature** to display the tip.




The **Measure** tool allows you to make on-screen measurements of displayed features. First, using the adjacent down-facing **arrow button**, select an appropriate **unit of measure**, such as miles or kilometers. A crosshairs will appear. Use the **crosshairs** to select a feature or a portion of a feature to measure.

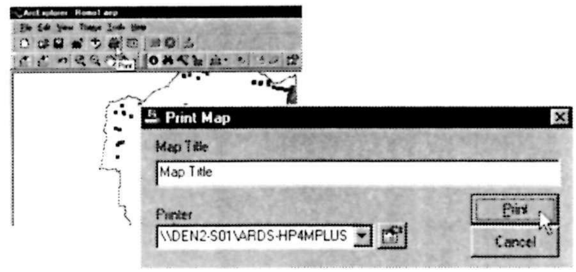



The **Toggle ArcExplorer Legend** button allows you to display the GIS layers without the legend displayed to the left of the view. In the example at right, the legend is displayed. After clicking on the **Toggle ArcExplorer Legend** button, the legend is removed and only the view of data layers is displayed. Click on the **Toggle ArcExplorer Legend** button again to re-display the legend.

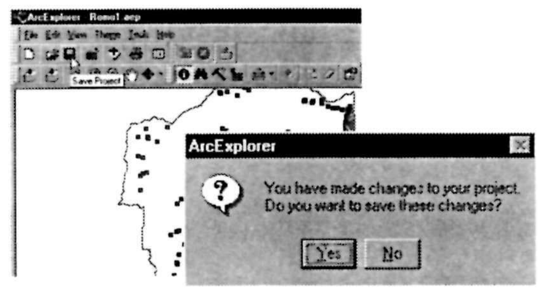


## Working with GIS Data:

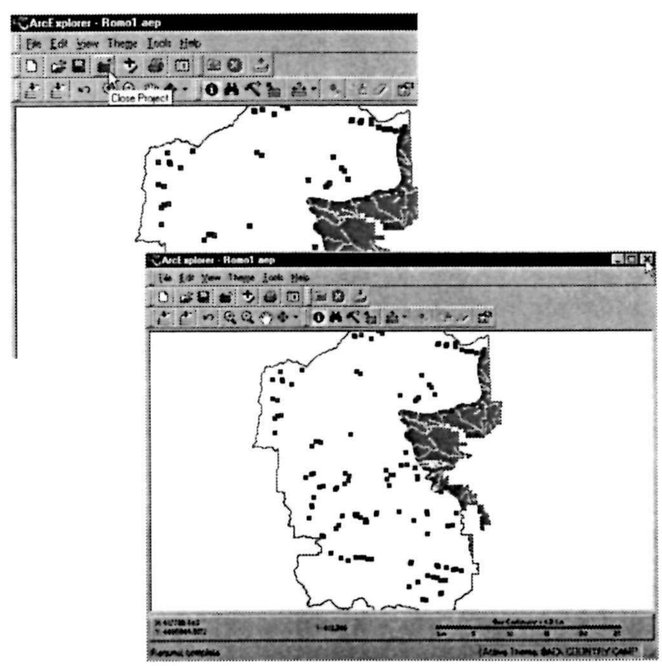
To print the view you see using the default map layout provided, click on the **Print** icon.




We recommend that you **DO NOT** save the project prior to exiting the ArcExplorer™ GIS data browser. However, please note that if you do click **Save Project**, you will not be able to overwrite the existing project. ArcExplorer™ is integrated with *Synthesis* in a way that prevents the overwriting of the existing project file.




The results of any **Save Project** action are written to a copy of the project file and are stored at **C:\Temp**. If you do make changes to the symbolization and display and would like to save them, then click on **Save Project**. A copy of the project file will be saved at **C:\Temp**. You may then view the saved version of the project by directly opening the ArcExplorer™ application installed on your hard drive.




To **close** the ArcExplorer™ project, click on the **Close Project** icon. Or, click on the **(X)** in the upper right-hand corner of the project window as in the example to the right.

# Section Three:

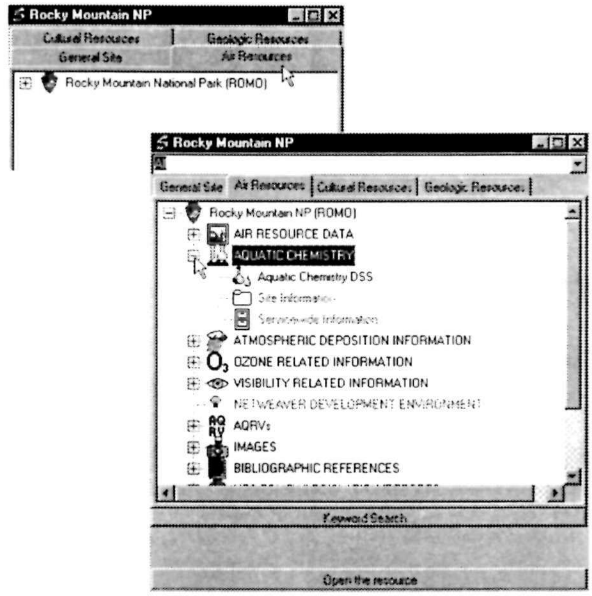
## *Aquatic Chemistry Decision Support System*

# Aquatic Chemistry Decision Support System:

The **Aquatic Chemistry Decision Support System (DSS)** can be found in the Air Resources outline under the AQUATIC CHEMISTRY category.

NOTE: You can run the Aquatic Chemistry DSS ONLY if you have a valid MapObjects™ license AND if *Synthesis* was installed on your computer using the **"Custom"** install option.

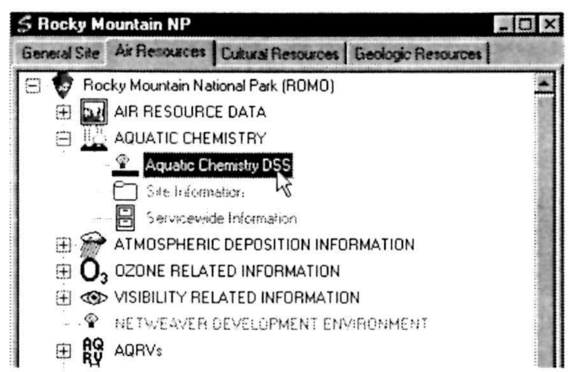
Also, if when you open the Aquatic Chemistry DSS under a site, you get the message "**Valid object expected as argument**" when you click on "**Load Aquatic Chemistry GIS**" -- it means that no aquatic chemistry data are available for that site.




If you have any questions or need more information about this, contact your system administrator. You can also contact the *Synthesis* development team. Contact information is provided on the first page of this manual.

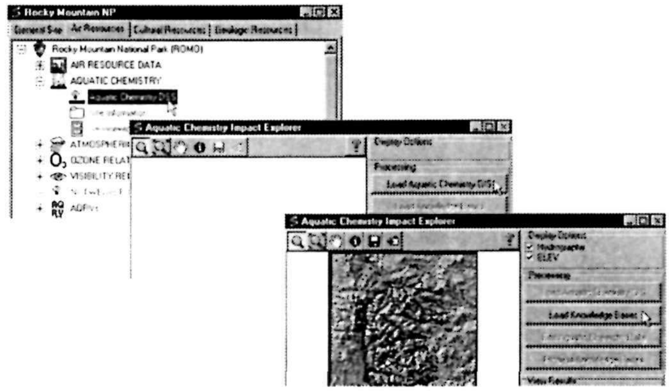
## Aquatic Chemistry DSS:

The **Aquatic Chemistry Decision Support System (DSS)** assists resource managers who must characterize the chemical status of surface waters. The system requires certain data inputs and was developed by experts nationwide based on sets of regional rules.



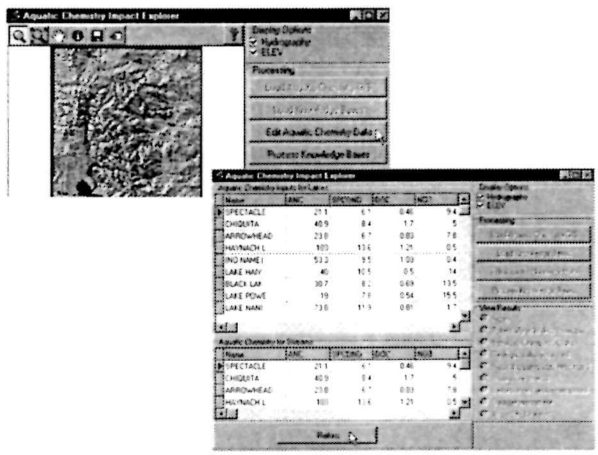
## Aquatic Chemistry DSS:

The following steps demonstrate the use of the decision support system as well as display possible outcomes.

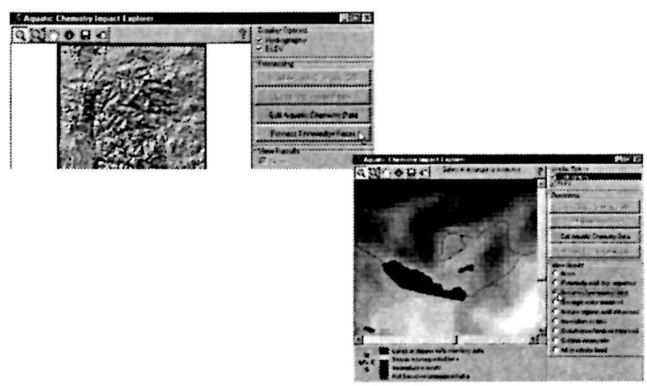


Double-click on the **Aquatic Chemistry DSS** category to open the decision suppport system. Click on **Load Aquatic Chemistry GIS**. Then, click on **Load Knowledge Base**.

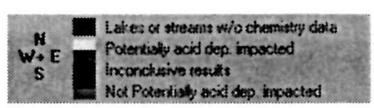
Click on **Edit Aquatic Chemistry Data**. The **"Aquatic Chemistry Impact Explorer"** window will appear. This window shows USGS data for various lakes and streams at Rocky Mountain National Park. You could edit the data at this point, before clicking on Process Knowledge Base. However, note that the original dataset cannot be overwritten and will revert to the original values when the application is closed. To exit this window and return to the main Aquatic Chemistry DSS window, click on **Return**.



Click on **Process Knowledge Base**. Processing the knowledge base produces a list of spatially referenced outcomes. Selecting an outcome will result in a new display on the map. At right is a display of the chemical status of certain surface waters in Rocky Mountain National Park. In some instances, you may need to zoom in on the view to see the results for smaller water bodies.

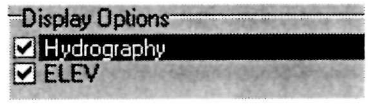


The color legend represents the degree to which an outcome is true or false for a given surface water. **Light green** signifies **completely true**, and **red** signifies **completely false**. Other shades represent greater or lesser degrees of trueness based on fuzzy logic of captured expertise by nationwide experts.

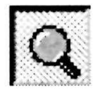


## Tools for the Aquatic Chemistry DSS:

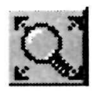
In the ROMO example, the **Display Options** window includes **Hydrography** and **Elevation**. As the default, the software has both boxes checked. To remove a data layer from the display, uncheck the box for that layer under the **Display Options** window.




The **Zoom In** tool allows you to select an area on which to zoom. When you click on the **Zoom In** button, a set of crosshairs appear. Hold the left mouse button and drag to define your area of interest.

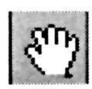


The **Zoom to Full Extent** tool zooms the view to the extent of all themes included in the map image.

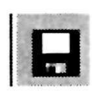


The **Identify** button allows you to identify a surface water's name. Click on the **Identify** button, and then click on a surface water feature. The feature's name will appear at the top of the window, to the right of the tool buttons.

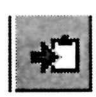
The **Pan** tool will allow you to move throughout the map image and to bring into view any features outside the current map image extent.



To save the map image, click on the **Save Map** tool. The **"Save Map Image As"** window will appear and will allow you to save the image as an image file in the location of your choice.



You can use the map image in a Word™ document. To do so, copy it to the clipboard by clicking on the **Copy to Clipboard** tool key. Open an application such as Microsoft Word™. Then, simply paste the map image into the document.

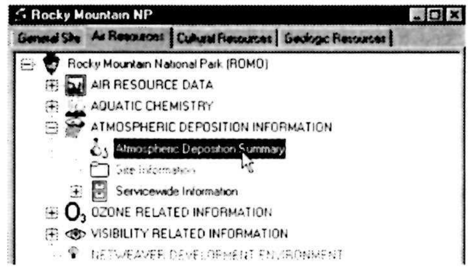


# Section Four:

***Atmospheric Deposition Information***

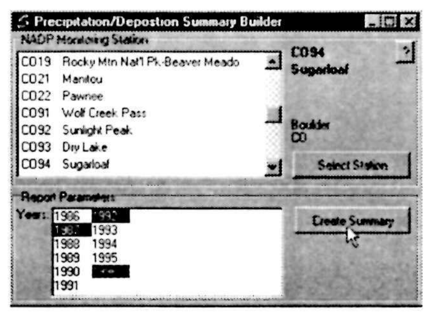
# *Atmospheric Deposition Summary:*

The **Atmospheric Deposition Summary** can be found in the Air Resources outline under the ATMOSPHERIC DEPOSITION INFORMATION category. To view atmospheric deposition data collected under the National Atmospheric Deposition Program (NADP), double-click on **Atmospheric Deposition Summary**.




## Summary Builder:

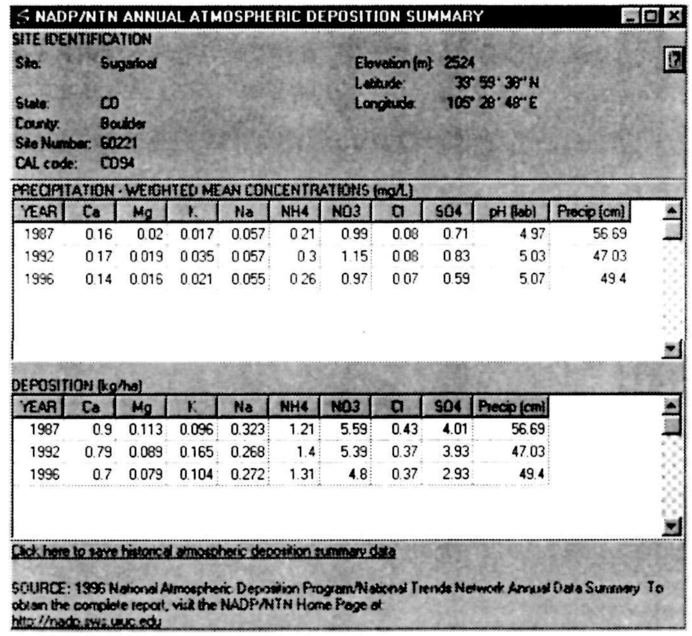
To select a monitoring station, click on the **station name**. Then, click on **Select Station**. If there is an NADP monitoring station at the site you are currently in, the software automatically highlights the station at the site. If the site has no monitoring station, the software defaults to the first station listed or a nearby monitoring station designed by NPS Air resources Division. Data from all stations in the NADP network are available.




Next, select the **year(s)** you would like to see. To select multiple years, hold down the **Ctrl** key while clicking on the years. Click on **Create Summary**.

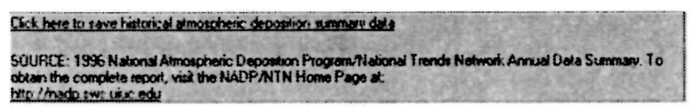
## Atmospheric Deposition Summary:

A window similar to the one to the right will appear after you click on **Create Summary**. The upper portion of the screen provides locational information for the monitoring site. Below that information are precipitation and deposition chemistry data for the selected years at that site.




The parameters displayed in the window to the right were identified by nationwide atmospheric deposition experts as key indicators.

Select **"Click here to save historical atmospheric deposition summary data"** to save the precipitation and deposition data to a file. Unless otherwise specified, the data are saved as a text file to **C:\temp\depsum.txt**.




The entire NADP data set is available at the NADP web site. The direct link will work <u>ONLY</u> if you have an internet connection.

Click on the following web address at the bottom of the NADP window to activate your web browser and go to the NADP web site:

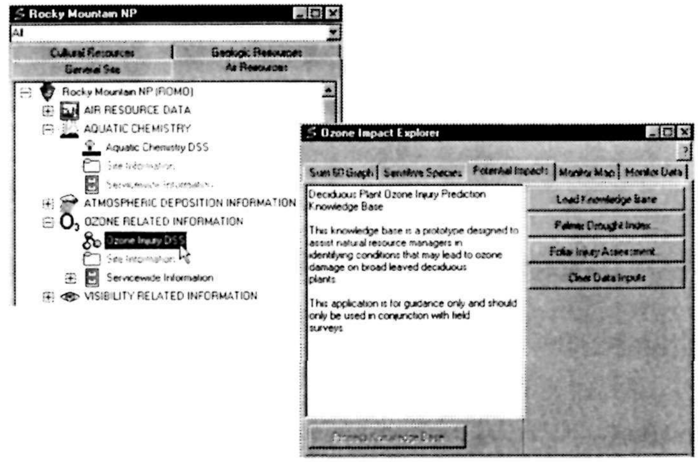
**http://nadp.sws.uiuc.edu**.

# Section Five:

## *Ozone Injury Decision Support System*

# *Ozone Injury Decision Support System:*

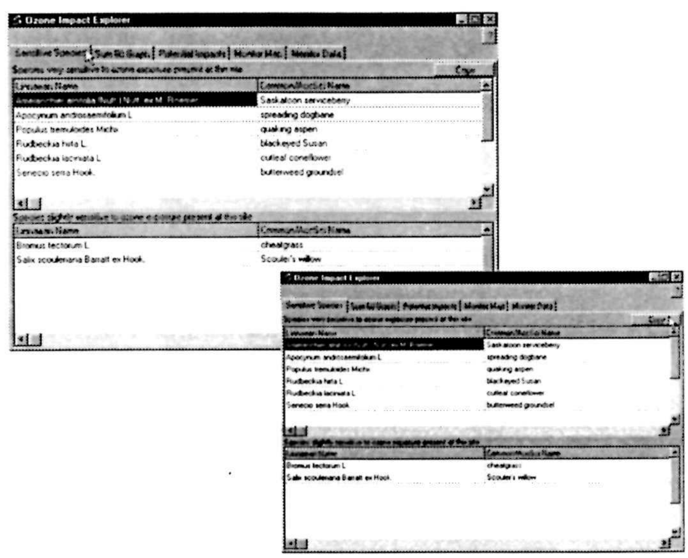
The **Ozone Injury Decision Support System (DSS)** can be found in the Air Resources outline under the OZONE RELATED INFORMATION category. The **Ozone Injury DSS** provides various types of information relating to ozone effects on vegetation. If you double-click on **Ozone Injury DSS**, the **"Ozone Impact Explorer"** window will appear. As the default, the **"Ozone Impact Explorer"** window opens up immediately with the **"Sensitive Species"** tab activated. At this point, information can be accessed under the various tabs.



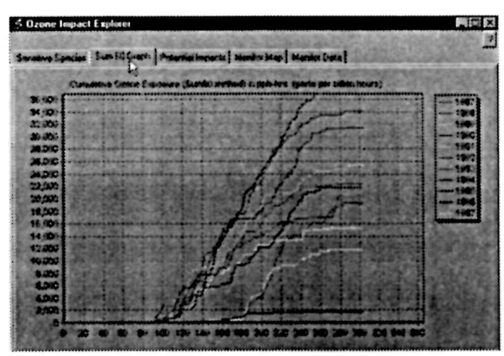

NOTE: The software builds the graphs on the fly, so it takes a while to display them. Please be patient. Also, information may not be available under every tab for all sites.

## Ozone Impact Explorer Tabs:

The **"Sensitive Species"** tab opens a list of plant species located at the site that are either very sensitive or slightly sensitive to ozone. Both scientific and common names are provided. You can copy the sensitive species list to the clipboard and then paste it into a Word™ document. Just click on **Copy**, and then open up a Word™ document to paste the list.

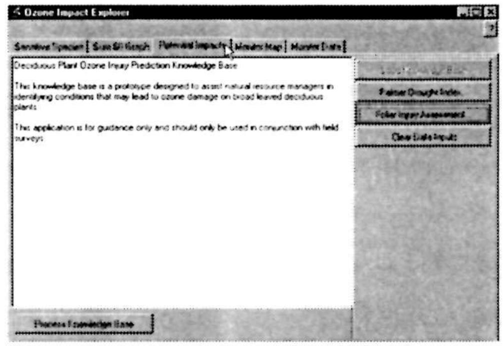



The **"Sum 60 Graph"** tab provides a graphic representation of ozone Sum 60. Depending on the number of years for which data are available, the graphs take some time to "create," so please be patient.

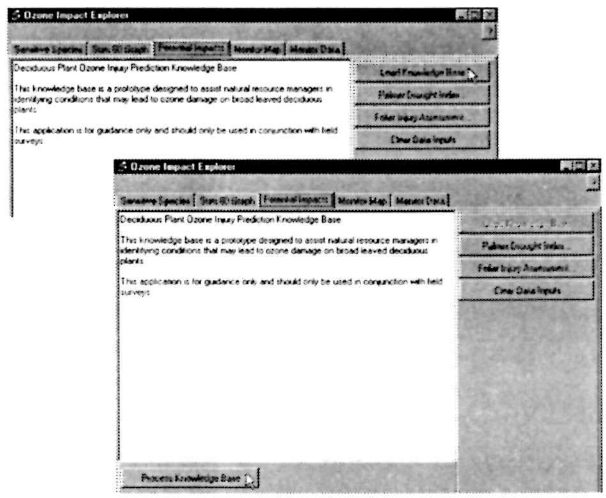


## Ozone Impact Explorer Tabs:

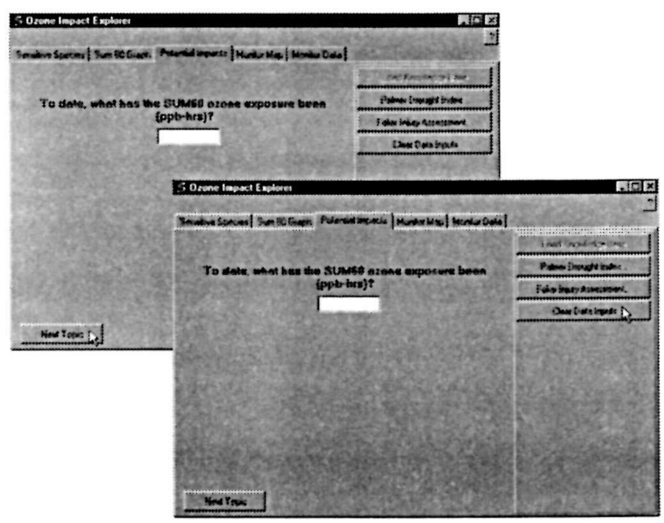
The **"Potential Impacts"** tab provides access to a decision support system, which presents a list of plants that are at risk from ozone based upon the amount of ozone present (Sum 60), the degree of soil moisture (Palmer Drought Severity Index), and the presence of mature leaves.




To start this decision support system, click on the **Load Knowledge Base** button. Then, click on the **Process Knowledge Base** button at the bottom of the window.

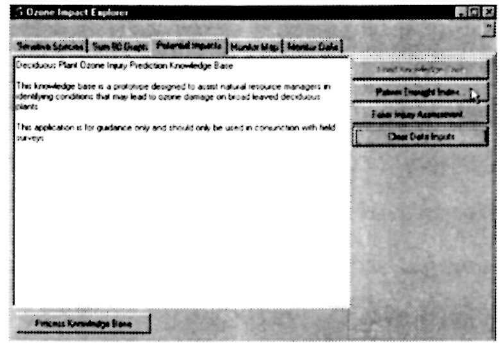



The software will then present a window in which the user must provide the input when requested. After entering the information, click on the **Next Topic** button to advance to the next screen. To return to the original Potential Imapcts screen, click on the **Clear Data Inputs** button. The output of the Ozone Injury DSS is a list of species present at the site which are either very sensitive or slightly sensitive to ozone, based on the values you input for each parameter.

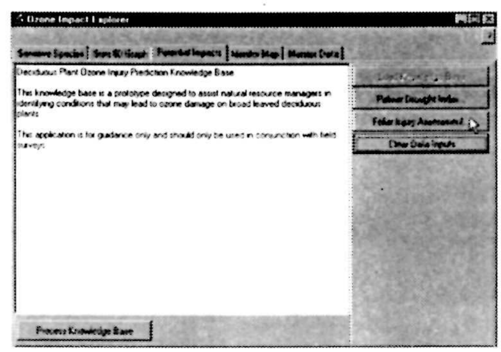


## Ozone Impact Explorer Tabs:

If you have an internet connection, you can look up an appropriate **Palmer Drought Severity Index** number by clicking on that button under the **"Potential Impacts"** tab, and searching the web site for data on your region/site.

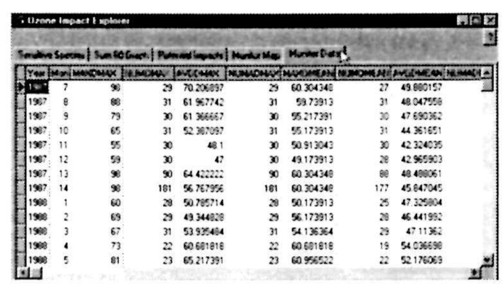


The **"Potential Impacts"** tab also provides access to the web-based **ForestHealth** program. You will need an internet connection to access and run ForestHealth, which may be used to train researchers/staff to correctly estimate the percent of surface area affected by ozone. Click on the **Foliar Injury Assessment** button to open the Forest Health program.



The **"Monitor Map"** tab presents a map showing the location of the ozone monitor.

The **"Monitor Data"** tab presents a summary of the ozone monitor data in tabular form for that particular site. These data are taken from the Air Resources Division's "Quick-Look Annual Summary Statistics Report."



# Section Six:

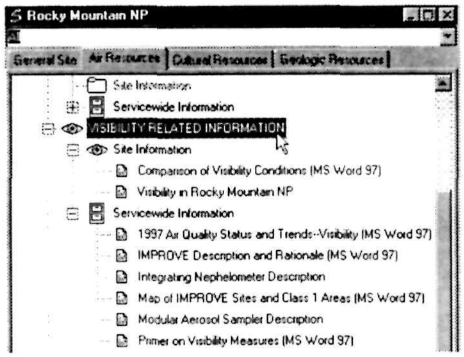
## *Visibility Related Information and AQRVs*

# *Visibility Related Information and AQRVs:*

Both the **Visibility Related Information** and **Air Quality Related Values (AQRVs)** categories are located in the Air Resources outline.

## Visibility Related Information:

The **Visibility Related Information** category is divided into **Site Information** and **Servicewide Information**. Most of the information available is in document form. Double-click on the document name to open it in Microsoft Word™.




Under the **Site Information** sub-outline, you can look at a Word™ document that is the **"Comparison of Visibility Conditions."** This document opens with three pictures taken at the site. The pictures provide examples of conditions ranging from good visibility through poor visibility. Deciview, extinction and visual range values are provided for each visibility condition.