

*ADB version 2*

assessment  
database



# EPA Assessment Database Version 2

## User's Guide

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## **About the User's Guide**

The User's Guide is designed to aid users with the functionality of the Assessment Database version 2 (ADBV2). It is not intended to familiarize the user with Microsoft (MS) Access, SQL Server, or Oracle. This user guide will help you in getting started with the ADB, as well as understanding some of the features that the ADB will offer.

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## Table of Contents

About the User's Guide .....	i
List of Acronyms .....	vii
1. Introduction .....	1
What's New in Version 2.3? .....	1
What's New in Version 2.2? .....	2
System Overview for Microsoft Access .....	3
System Overview for Oracle .....	3
System Overview for SQL Server .....	4
Capabilities .....	4
2. Getting Started .....	6
What You Need .....	6
Installing the ADB .....	6
Microsoft Access Version .....	6
Oracle Version .....	6
SQL Version .....	7
Starting the ADB .....	7
Microsoft Access Version .....	7
Oracle Version .....	8
SQL Version .....	8
Demo Data .....	9
Check for Updates .....	10
3. Managing Data with the ADB .....	11
Assessments .....	11
Assessment Units .....	11
Sidebar Menu Options .....	12
Uses .....	18
Causes .....	23
Observed Effects .....	24
Sources .....	25
Determining Categories .....	27
Delisting .....	28
Managing 303(d) Information .....	29
Atlas Information .....	33
Browsing Data .....	34
Full Browse .....	34
Browse by Category .....	35
4. Modifying Data Elements .....	37
Look-Up Groups .....	37
Pollutants and Nonpollutants .....	38
Observed Effects .....	38
Assessment Method Codes .....	39
Locations .....	39
User-Defined Categories .....	40

Atlas Topic Items .....	40
5. Other Features .....	42
Backing-up and Restoring Data .....	42
Performing Cycle Tracking.....	43
Providing Help Messages .....	44
Providing Category Listing Definitions.....	44
Exporting Data .....	44
Migrating to New Cycle.....	45
Serving as a Shell to External Applications.....	46
Resetting the Database .....	46
Compacting the Database .....	46
6. ADB Modules.....	47
Data Validation Module.....	47
Check Dates .....	47
Finalize Cycle .....	48
Connections Module .....	50
Establishing a Database Connection.....	51
Establishing a Table Connection .....	52
Viewing Data Within the ADB.....	54
Reports Module.....	54
State Reports .....	54
Summary Reports.....	55
AU Detail Reports.....	56
Probability Survey Module.....	57
Results.....	58
Adding Projects.....	58
Viewing and Updating Projects .....	59
Deleting Projects .....	59
View Summary .....	60
View Report .....	60
Browse .....	60
7. Submitting the Database.....	61
8. Frequently Asked Questions .....	63
9. User Support and Technical Assistance .....	65
Appendix A – Assessment Database Installation Guide.....	A-1
Assessment Database Installation Guide for Microsoft Access .....	A-3
System Requirements.....	A-3
Installing the ADBv2 .....	A-3
Assessment Database Installation Guide for Oracle .....	A-4
System Requirements.....	A-4
Installing the ADBv2 .....	A-4
DBA Tools .....	A-5
Synonyms.....	A-5
Privileges.....	A-5

Assessment Database Installation Guide for SQL Server.....	A-6
System Requirements.....	A-6
Installing the ADBv2 .....	A-6
DBA Tools .....	A-7
Appendix B – Troubleshooting.....	B-1
Troubleshooting for the Access Version.....	B-3
Troubleshooting for the Oracle Version .....	B-3
Troubleshooting for the SQL Server Version.....	B-4
Appendix C – ADB Data Dictionary .....	C-1

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## List of Acronyms

ADB	Assessment Database
ADBv2	Assessment Database version 2
AU	Assessment Unit
CAS	Chemical Abstracts Service
CWA	Clean Water Act
DBA	database administrator
EPA	U.S. Environmental Protection Agency
GIS	geographic information system(s)
GUI	graphical user interface
HABs	harmful algal blooms
HUC	hydrologic unit code
IBIs	Indices of Biotic Integrity
MS	Microsoft
NHD	National Hydrography Dataset
ODBC	Open Database Connectivity
RBS	rollback
RTF	Rich Text Format
STORET	STOrage and RETrieval system
TMDL	Total Maximum Daily Load
TNS	Trivial Name Server
WQS	Water Quality Standards
WQSDB	Water Quality Standards Database

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## 1. Introduction

The U.S. Environmental Protection Agency's (EPA's) Assessment Database (ADB) software was developed as a tool for State environmental agencies to store assessment information generated under Section 305(b) of the Clean Water Act (CWA). The EPA supported the development and distribution of ADB software to help ease the burden of State reporting, encourage standardization of reporting between States and facilitate the generation of the National Assessment Database and the biennial National Water Quality Inventory. The ADB software is designed to store assessment information in a manner consistent with EPA's *Guidance for 2008 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act* (EPA 2006); henceforth referred to as the Guidance, which is available at [http://www.epa.gov/owow/tmdl/2008\\_ir\\_memorandum.html](http://www.epa.gov/owow/tmdl/2008_ir_memorandum.html). In the Guidance, EPA encourages States to integrate the reporting requirements under Sections 305(b) and 303(d) of the CWA (EPA 2003). The ADBv2 is designed to facilitate the integration of the two programs.

The main function of the ADBv2 is to store assessment information in compliance with EPA's Guidance on generating 305(b) and 303(d) reports. The ADBv2 can also produce the attainment category report, as defined by the Guidance, based on that assessment information. This report can be exported from the database in tabular format.

### *What's New in Version 2.3?*

**Modified Delisting Forms and Delisting Reason List.** The modified delisting reason list now includes a designation between delistings and WQS attainment. The updated list is as follows:

#### Delistings:

- Data and/or information lacking to determine water quality status; original basis for listing was incorrect (Category 3)
- TMDL approved or established by EPA (Category 4A)
- TMDL Alternative (Category 4B)
- Not caused by a pollutant (Category 4C)

#### WQS Attainment:

- Applicable WQS attained; original basis for listing was incorrect
- Applicable WQS attained; due to restoration activities
- Applicable WQS attained; due to change in WQS
- Applicable WQS attained; according to new assessment method
- Applicable WQS attained; threatened water no longer threatened
- Applicable WQS attained; reason for recovery unspecified

**5M – Mercury Reduction Strategy Information.** Added in description and URL fields to track mercury reduction strategy information.

**NPDES ID field added.** Expanded data fields for 4B (TMDL alternative) to include NPDES information.

**User Defined Category at the Use and Cause levels.** Added a field for states to designate a user defined category at the use and cause levels. In the case of the user defined cause category, this will be the place for a state to designate a 5M water.

**EPA Added Flags.** Added flags at the assessment unit, use attainment, and cause levels to track if a cause of impairment was added by EPA.

**Consent Decree.** Added a field to track the cycle of consent decree if an AU-cause combination was part of a consent decree.

**Improved Data Exports.** Added TMDL and other fields to data exports.

**Comment Fields.** Added in comment filed at the observed effects and sources levels.

**New Water Types.** Added in new water types:

- Great Lake Connecting Channel
- Ditch or Canal
- Inland Lake Shoreline

**New Assessment Type.** Added in new assessment type:

- Other

## *What's New in Version 2.2?*

**Probability Survey Module.** The Probability Survey Module is designed to store water quality assessment information, which has been gathered using probability-based assessment methods. The user can store all of the data elements suggested by the Guidance, as well as geographic information system (GIS) coverages, documents, and other assessment-related information. The probability survey also allows the user to browse, export, summarize, and report the information within the module.

**Category Determination at the Assessment Unit, Use, and Cause Levels.** The ADBv2.2 has been updated to support multiple category determinations per assessment unit in accordance with the Guidance. A single Assessment Unit (AU) can now have one attainment category, one attainment category per designated use, or one attainment category per use and cause.

**Delisting.** The ADBv2.2 allows a user to keep track of causes that were previously listed on the State's 303(d) list for a particular cause of impairment, the dates of delisting, and the reason or rationale for delisting.

**Atlas Information.** The **Atlas Information** screen allows a user to independently track the total water size in the state according to each source and/or scale cited.

**Trend Analysis.** The ADBv2 includes the ability to track the trend status for each AU.

**New Reports.** The ADBv2 now offers an Atlas Information Report, a delisting summary, and a Total Maximum Daily Load (TMDL) status update report. Additionally, the AU Summary Report has been updated to provide more flexibility in report creation.

**Copy an Assessment Unit.** The ADBv2 allows a user to copy an AU within the cycle and use it as a template to create a new AU.

**TMDL Information.** Additional fields have been added to aid States in tracking TMDL status and project information.

**Cycle Last Assessed.** A user can now view the last time an assessment unit was assessed from the main **Assessment Units** screen.

**Assessment Date.** The *Assessment Date* field has been moved to the designated use level to allow for the possibility that waters may be assessed for different uses on different dates.

### ***System Overview for Microsoft Access***

The ADBv2 is a relational database application based on an MS Access database with a Visual Basic user interface. The ADB includes two files: a user interface file and a database file. The user interface file must be installed locally on each user's machine. This file contains all of the graphical screens and tools that allow the user to enter and view data. The second file is a database file (MS Access file) that stores all of the data. This file may be stored on an individual machine or on a server to allow access by multiple users. One of the advantages of this two-file design is that the graphical interface can be improved without affecting the table structure or data stored in the database file.

The user interface of the MS Access version is virtually the same as the Oracle version, which was originally used to develop the ADBv2; however, choosing to use the MS Access version does not allow the user to take advantage of the power of the Oracle database. MS Access ADBv2 users will sacrifice 1) a more secure environment for data storage and the ability to create user profiles with specific data privileges, 2) the ability to restore lost or corrupted data and significantly lower incidents of database corruption, 3) data back-up features, 4) increased data storage capacity (e.g., Oracle version of ADBv2 can store data from multiple reporting cycles that could easily exceed the 2 gigabyte storage space capacity in MS Access), and 5) Web servability.

### ***System Overview for Oracle***

The ADBv2 for Oracle is a relational database application based on an Oracle database with a Visual Basic user interface. The ADB includes two files: a user interface file and a database file. The user interface file must be installed locally on each user's machine. This file contains all of the graphical screens and tools that allow the user to enter and view data. The second file is a database file (Oracle 8.1.x) that stores all of the data. This file may be stored on an individual machine or onto a server for access by multiple users. An advantage of this two-file design is that the graphical interface can be improved without affecting the table structure or data stored in the database file.

## ***System Overview for SQL Server***

The ADBv2 for SQL is a relational database application based on a SQL Server database with a Visual Basic user interface. The ADB includes two files: a user interface file and a database file. The user interface file must be installed locally on each user's machine. This file contains all of the graphical screens and tools that allow the user to enter and view data. The second file is a database file that stores all of the data. This file may be stored on an individual machine or on a server for access by multiple users. An advantage of this two-file design is that the graphical interface can be improved without affecting the table structure or data stored in the database file.

## ***Capabilities***

Some of the things you can do with the ADBv2 include the following:

- # Create category listing reports for the new Guidance
- # Create reports that can be presented in ArcView
- # Store documents associated with AUs
- # Add comments in Rich Text Format (RTF)
- # Connect to different data sources (e.g., Oracle, SQL Server, MS Access, Open Database Connectivity [ODBC])
- # Browse data in table form
- # Migrate data from previous cycles
- # Create Summary Reports.

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## **2. Getting Started**

### ***What You Need***

The purpose of the ADB is to store and track assessments using a core unit called an AU. An AU is a unique waterbody segment identifier with assigned designated uses based on the State's Water Quality Standards (WQS). These designated uses can be assessed and the assessment results stored in the ADB. Before you get started with the ADB, you'll want to take some time to examine your assessment methodologies and data tracking techniques. You may want to consider how you want to define your AUs. Because Category 5 waters become the 303(d) list, make sure to delineate these AUs appropriately and assign them the correct size. The Guidance looks to States to provide information about the status and progress made towards achieving comprehensive assessment of all waters in the State for the Integrated Report. This means that you will need to think about how to categorize the waters that are not currently part of your 305(b) program. You will want to think about how to break up these unassessed waters into AUs. If you georeference your AUs to National Hydrography Dataset (NHD), there are GIS tools available from EPA to help you with this process.

You will also want to have a copy of your State's WQS document on hand. ADBv2 uses EPA's Water Quality Standards Database (WQSDB) as the basis for the uses in the ADB. You can obtain a copy of your State's designated uses as they appear in the WQSDB at <http://www.epa.gov/ost/wqs>.

### ***Installing the ADB***

#### **Microsoft Access Version**

For detailed instructions on installing the ADB, see *Appendix A* of this document or "Installing the ADB," which is available in the "Reference" section at <http://www.epa.gov/waters/adb>. There are two parts to the installation of the ADB: installing the user interface, such as data entry and viewing forms, and installing the database, or the actual MS Access data tables. You do not need MS Access installed to run the ADB.

#### **Oracle Version**

For detailed instructions on installing the ADB, see *Appendix A* of this document or "Installing the ADB," which is available in the "Reference" section at <http://www.epa.gov/waters/adb>. There are two parts to the installation of the ADB: installing the user interface, such as data entry and viewing forms, and installing the database, or the actual Oracle data tables. You may want to have your Oracle database administrator (DBA) handle the database installation for you.

You can also set up users for the ADB. There are two types of ADB users: Administrators and Users. Personnel who have been assigned an administrator role can add, delete, and modify data. Personnel who have been assigned a user role can only view data. The



ADBv2 comes with a default user called ADBUSER (this is also the password). ADBUSER has administrative privileges, so all of your assessment data may be entered using this login. You can also have your DBA remove ADBUSER if database security is a concern.

## SQL Version

For detailed instructions on installing the ADB, see *Appendix A* of this document or “Installing the ADB,” which is available in the “Reference” section at <http://www.epa.gov/waters/adb>. There are two parts to the installation of the ADB: installing the user interface, such as data entry and viewing forms, and installing the database, or the actual SQL Server data tables. You may want to have your SQL Server DBA handle the database installation for you.

Your DBA can also set up users for the ADB. There are two types of ADB users: administrators and users. Personnel who have been assigned the administrator role can add, delete, and modify data. Personnel who have been assigned a user role can only view data. Users’ roles must be set up set up before data can be entered or viewed via the user interface.

## Starting the ADB

### Microsoft Access Version

After installing the ADB Interface, you will have a new item on your *Start->Programs* menu in Windows called *ADBv2 for Access*. Select *ADBv2* from this menu to start the application. You will be prompted to navigate to the ADBaccess.mdb database if you see the following message:



The ADBaccess.mdb database will be located where you or your DBA has saved the file. The default pathway for the database is *C://ADBaccess.mdb*.

The first time you start the ADB, you will be prompted to select the State with which you will be working. If no data exists for the current cycle, you will be asked if you want to begin working on the current cycle. If you click *No*, you will then be asked to select an existing cycle. The ADB will default to this selected state and cycle the next time you start the ADB. You can change the state and cycle you are working with at any time using the *Data* menu.

## Oracle Version

After installing the ADB Interface, you will have a new item on your *Start->Programs* menu in Windows called *ADBv2 for Oracle*. Select *ADBv2* from this menu to start the application. You will be prompted to enter the database name, a user name, and password. Use the default settings (shown below) or check with your Oracle DBA for the appropriate entries for this dialog.

Database Name:	ADB
User name:	ADBUSER
Password:	ADBUSER

**Default settings for accessing ADB v.2**

The first time you start the ADB, you will be prompted to select the State with which you will be working. If no data exists for the current cycle, you will be asked if you want to begin working on the current cycle. If you click *No*, you will then be asked to select an existing cycle. The ADB will default to this selected state and cycle the next time you start the ADB. You can change the state and cycle you are working with at any time using the *Data* menu.

## SQL Version

After installing the ADB Interface, you will have a new item on your *Start->Programs* menu in Windows called *ADBv2 for SQL Server*. Select *ADBv2* from this menu to start the application. In the “Connect to Database” dialog box, you will have to enter the name of the server that has the SQL Server database. Next, specify a security option. You have two security choices: Windows NT security or user-level security. If you use NT security, you will need to enter a user name and password. Before you can use the ADB you will need to be set up as a user and assigned an ADB User role. Once you enter this information, the ADB will record your entries (except for the password) to speed up your login to the ADB. Use the default settings (shown below) or check with your SQL Server DBA to find the appropriate entries for this dialog. User-level security does not require you to enter a password.

Database Name:	ADB
User name:	ADBUSER
Password:	ADBUSER

**Default settings for accessing ADB v.2**

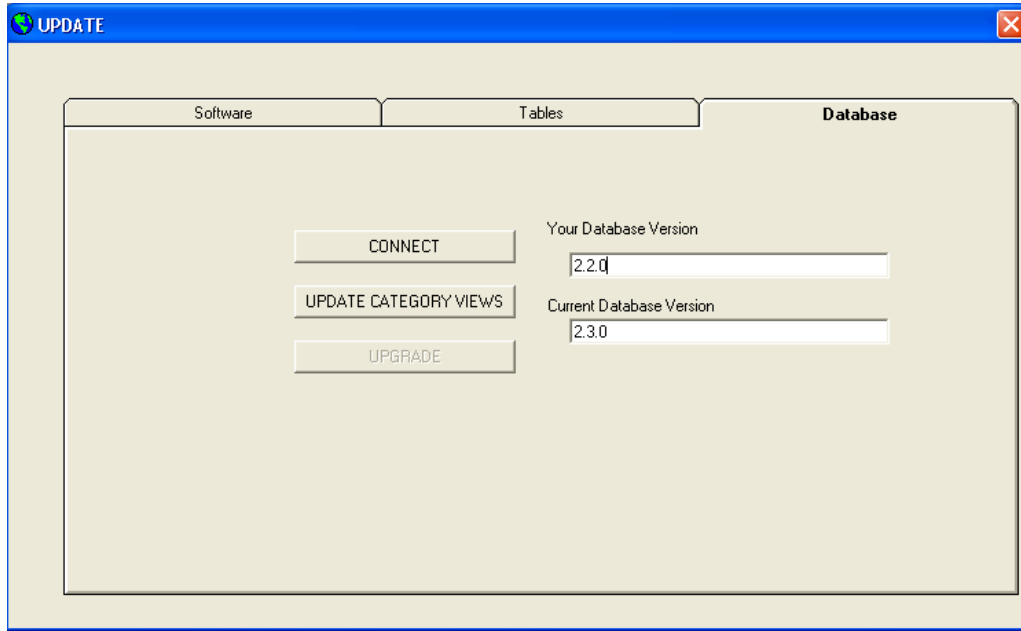
The first time you start the ADB, you will be prompted to select the State with which you will be working. If no data exists for the current cycle, you will be asked if you want to begin working on the current cycle. If you click *No*, you will then be asked to select an existing cycle. The ADB will default to this selected state and cycle the next time you start the ADB. You can change the state and cycle you are working with at any time using the *Data* menu.

### *Demo Data*

The ADB is currently loaded with two cycles of demo data. It is not necessary for you to delete this data before you start. Adding new AUs, deleting AUs, adding causes or comments, or any other changes, may be made to this demo data without affecting your State's data in any way.

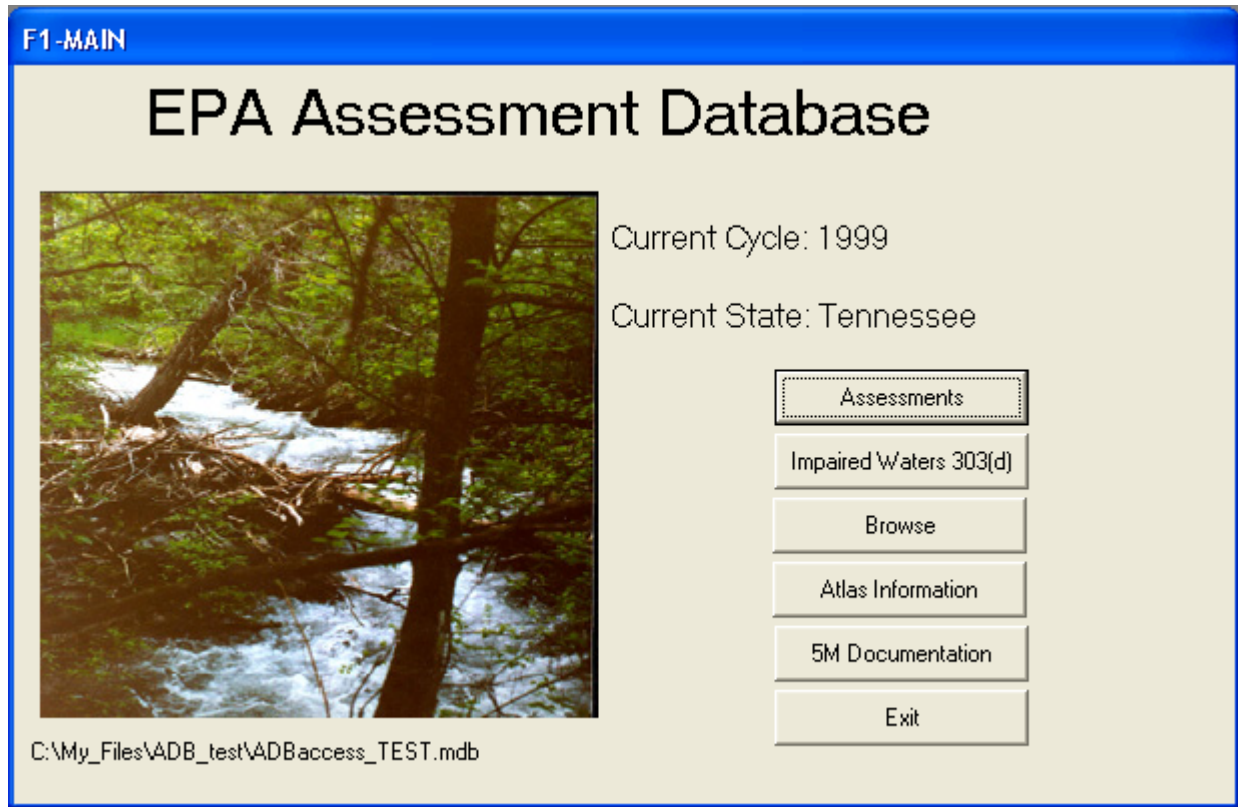
## *Check for Updates*

The *Check for Updates* feature is available from the **File** menu in the main ADBv2 screen. You can use this feature to check for any new sources, causes, and software updates to the database.



When updating your ADB to the most current version, be sure to check all three tabs: **Software**, **Tables**, and **Database**. Start with the Database tab on the right, followed by Tables and Software. In the **Database** tab, click **CONNECT** and wait for the system to analyze your working database version. When the text box below **Your Database Version** is populated, click the **UPDATE CATEGORY VIEWS** button, then the **UPGRADE** button (the button will be grayed out until the category view update completes). In the **Tables** tab, follow Steps 1 through 3 sequentially; and simply hit the **UPDATE** button in the **Software** tab to complete the ADB upgrade.

### 3. Managing Data with the ADB



The main screen of the ADB features six directional buttons:

- # *Assessments*
- # *Impaired Waters 303(d)*
- # *Browse*
- # *Atlas Information*
- # *5M Documentation*
- # *Exit*

#### *Assessments*

To track the assessments and assessment results for your AUs, ADBv2 requires you to enter information about the type and quality of the assessment that was performed. If an AU is not meeting one or more of its designated uses, the causes and sources of impairment for each use can be recorded. This section will give an overview of how to enter an assessment into the database.

#### **Assessment Units**

To access assessments, click on the *Assessments* button on the main **EPA Assessment Database** screen. Assessment information associated with an AU may include designated uses,

assessment metadata, causes of impairment (or observed effects), and sources of impairment. This information can be accessed using the sidebar on the left side of the dialog box.

To return directly to the **Assessment Units** screen from anywhere in the database, click on the “Assessment Unit” icon. To exit the “Assessments” portion of the ADB application, go to the “Assessment Units” screen and click **CLOSE**. This will return you to the main ADB menu.

### Sidebar Menu Options

Throughout the application, there are a series of buttons that line the left side of each screen. These buttons will always take you to the selected information; however, the level of information detail will depend on the screen from which they are accessed. For example, the **Causes** button always lists contaminants associated with selected AUs. Clicking on the **Causes** button on the **Assessment Units** screen will show all causes associated with a selected AU. However, clicking on the **Causes** button on the **Uses** screen will show only the causes associated with the selected AU and selected use. A brief description of each button follows:



**Assessment Units:** This button takes the user to the **Assessment Unit** screen.



**Uses:** This button takes the user to the **Uses** screen.



**Assessment Documentation:** This button shows metadata associated with the AU and designated use. Metadata can be added, removed, or changed when accessed through the sidebar on the **Uses** screen.



**Observed Effects:** This button directs the user to observed effects associated with the AU and designated use. Observed effects can be added, removed, or changed when accessed through the sidebar on the **Uses** screen.



**Causes:** This button shows causes associated with the AU and designated use. Causes can be added and deleted when accessed through the sidebar on the **Uses** screen.



**Sources:** This button shows sources of impairment for the selected AU, designated use, and cause. Sources can be added and deleted when accessed through the sidebar on the **Causes** screen.



**Determine Category:** This button informs users of the AU's category as defined in the Guidance.



**Delisting:** This button shows any delistings associated with the selected AU.

## Viewing or Updating Assessment Information

An AU may be updated by selecting its name or ID from the drop-down boxes so that the descriptive information for the selected unit appears in the **Assessment Units** screen. You may also choose to limit by category the list of AUs that appear in the **Select an Assessment Unit** drop-down list if you want to examine the information for waters that fall within a specific group. In the **Information** screen, the user may edit the assessment unit ID, AU name, waterbody type and size, location, use class, user defined category, trophic status, trend, whether the AU was an EPA added water, and 314 public lake status. Click the **Update Current Assessment Unit** button to replace the former values. The size may be updated by double-clicking on the current value.

## Adding an Assessment Unit

The user may add new AUs by clicking **Create New Assessment Unit** in the “Assessment Unit Functions” section on the **Assessment Units** screen. This opens a new dialog that prompts the user to enter the AU ID, name, and location. All of these data elements are required. You may also use the “Copy Information from Existing Assessment Unit” to quickly add any assessment metadata that is identical to an existing AU. For instance, two AUs sharing the same geographic location may share identical uses, causes, or documents.

W2-ADD ASSESSMENT UNIT

### Add Assessment Unit

Assessment Unit ID  
Assessment Unit Name  
Location Description

Copy Information From Existing Assessment Unit?

Add  
Cancel

After the information is entered and the **Add** button is clicked, another dialog box opens that prompts the user for water type and size. Once you select the desired water type, the size units you should enter will appear in the dialog. When you are finished, click **Add**.

W5 - Add Assessment Unit Info

Water Type  
Size

Add

Once this information is entered, the new AU is created and will appear in the drop-down boxes and frames on the **Assessment Units** screen. If you wish to add additional water types to an AU, click on the **Add Type** button in the “Information” section of the “Assessment Units” dialog box.

### Deleting an Assessment Unit

An AU may be deleted by selecting the name or ID from the **Select an Assessment Unit** drop-down boxes and clicking the **Delete Current Assessment Unit** button. This will remove the AU and all related assessment information from the database.



## Splitting an Assessment Unit

An AU may be split by selecting the name or ID from the **Select an Assessment Unit** drop-down boxes and clicking the *Split Current Assessment Unit* button. An AU may be split into two and any or all of assessment information may be copied to each unit by checking the appropriate boxes below *Select data to transfer to new assessment unit*. Use the tabs located on the upper right side of the dialog box to switch between the units.

## Associating a Use Class with an Assessment Unit

*Note: The Use Class drop-down list will only be visible if the state you are working on uses the class system.*

For States or jurisdictions that use a class system to group designated uses, the ADBv2 allows users to add a class to a new AU. After adding a new AU, click the **Use Class** drop-down box to see a list of available classes. The *See Definition* button will provide a description of the selected class. After the appropriate class is selected, click the *Update Current Assessment Unit* button under “Assessment Unit Functions.” When you add designated uses to the AU, the list of uses you may choose from will be limited to uses associated with the class you assigned to the AU. You can change the class of an AU in the main **Assessment Units** screen.

### **Assigning a User-Defined Category to an Assessment Unit**

In some cases, States have categories for reporting at a State and local level. ADBv2 allows users to create “User Defined Categories.” The name and description of these categories is left completely to the discretion of the user. While these categories may be applied to group AUs for a State’s own reporting purposes, it is important to remember that the AUs will still be placed in one of the five categories defined by the *Guidance* that are based on use support.

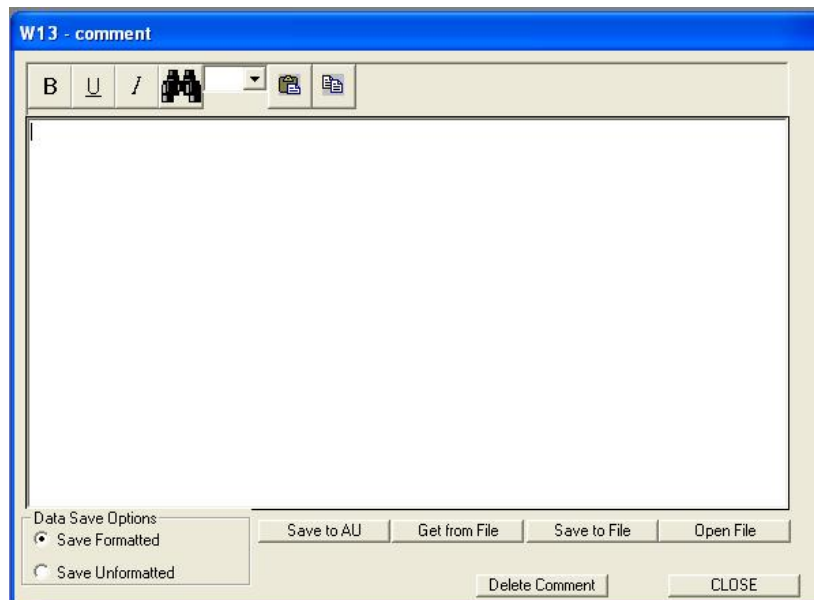
To create your own categories, select *User Defined Categories* from the **Modify** drop-down list in the menu bar. Click *Add Category* and type the name or ID of the category (10 character maximum) into the text box and click **OK**. Select the category from the **User Defined Category** drop-down box and then type the category description (4,000 character maximum) in the space below. Click *Save Description* to save the new category and description to the database.

### **Assigning a Trophic Status and Trend Information**

From the main assessment unit screen, you can also enter trophic status and trend information. Trophic status can only be assigned to assessment units encompassing lakes, reservoirs, and/or ponds; whereas trend information may be added to all water types. To assign a trophic status or trend to an assessment unit, use the drop-down lists located in the lower right corner of the screen.

### **Adding Comments**

If you click on the *Add Comment* button below the sidebar in the “Assessment Units” dialog box, the “Comment Editor” dialog box opens. ADBv2 allows you to add comments to AUs in RTF. This feature also allows you to format comments for easier reading.



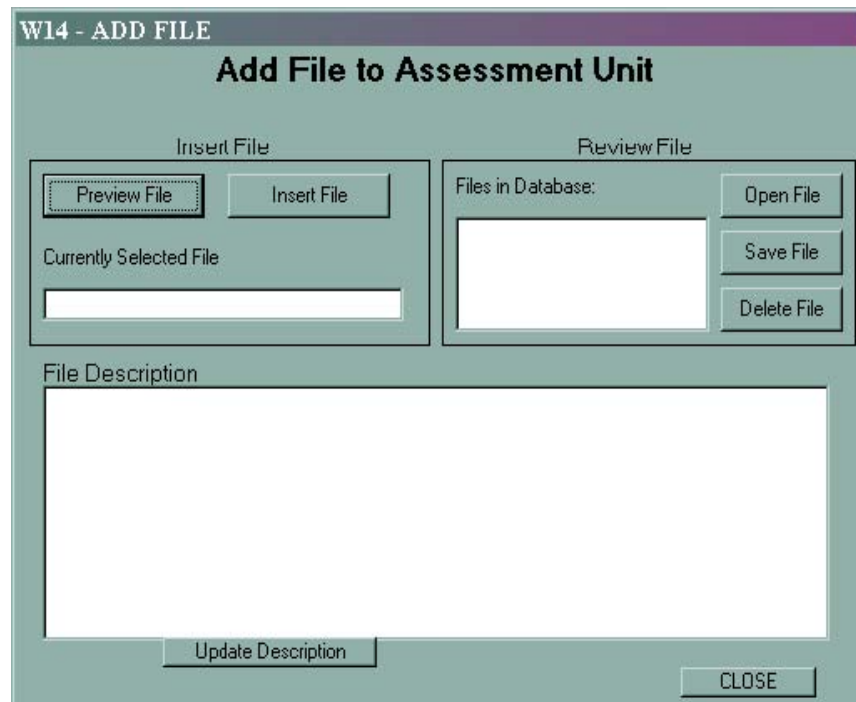
Comments may be typed directly into this dialog box or imported from other word processing documents. This feature can allow you to more extensively edit the created comment, including some minor word processing abilities and spell checking features that are built into the *Comment Editor* feature; however, for more extensive formatting, you will need to use word processing software. The following features are built into the *Comment Editor* feature.

- # Bold
- # Underline
- # Italic
- # Change font size
- # Find (**Control+F**)

Comments in the ADB can be a maximum of 4,000 characters long. The RTF alters two aspects of your comments 1) RTF comments take up more disk space than they usually would, and 2) viewing the comment in the database table may look strange because it contains all of the RTF codes formatting.

### **Adding Files to Assessment Units**

The ADBv2 allows you to associate graphics or other types of files with an AU. You can add a .jpeg showing a photo of the site where the assessment was performed or a lengthy document describing the AU. To associate a document with an AU, just click **Add File** on the **Assessment Units** screen. The **Add File to Assessment Unit** screen will appear.



Click **Preview File** to add the file to the database. The file will open to allow you to review it before adding it to the database. Close the file and click **Insert File**. You will be prompted to enter a description for the file. Once files are added, you can open them, save them to another folder, or delete them by clicking one of the buttons under the “Review File” section.

There is no limit to the number of documents you can add to an AU; however, the database may not be the most effective place to store a large number of documents. It may be more efficient to store documents on a file server rather than in your database.

### **Accessing Previous Cycle Assessment Information**

By clicking **Previous Cycle Info** in the lower left corner of the **Assessment Units** screen, you can view assessment information from previous cycles for the selected AU. The ADB automatically associates all AUs from previous cycles with identical IDs, however you can associate additional AUs or delete associations from this screen. To view a Summary Report for a previous cycle, highlight the AU and click the **View** button. For more information, please see the Cycle Tracking section in *Chapter 6*.

### **Adding Other Location Information**

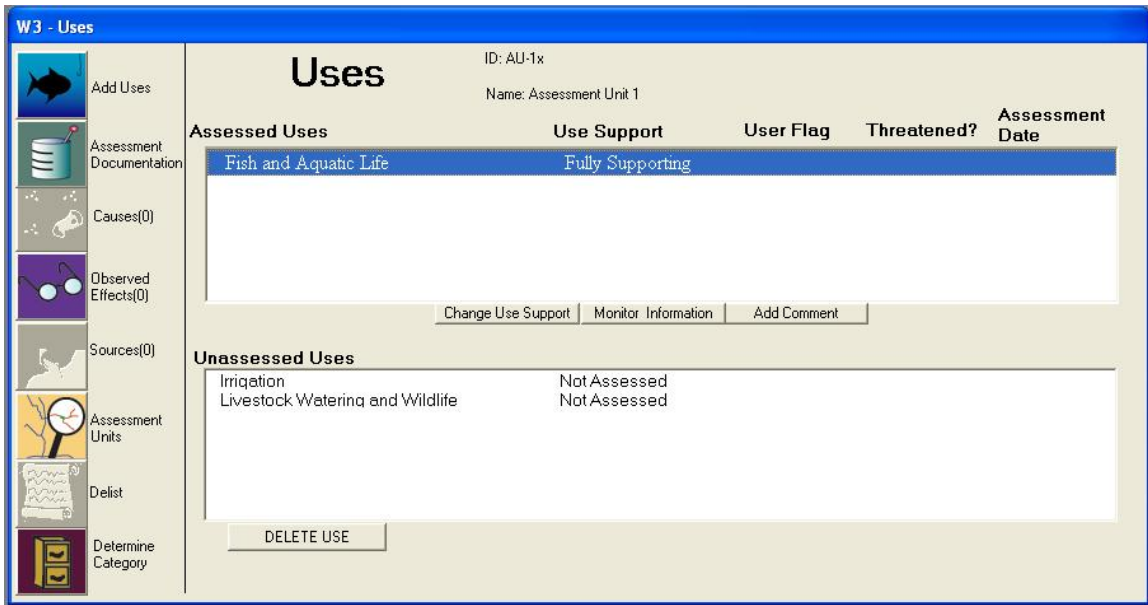
The ADB allows you to enter Other Location Information, including hydrologic unit code (HUC), county, and latitude/longitude.

To add location types or location descriptions to the list available in the drop-down box, go to **Modify->Locations** in the toolbar at the top of the screen and add the respective locational types and descriptions.

### **Uses**

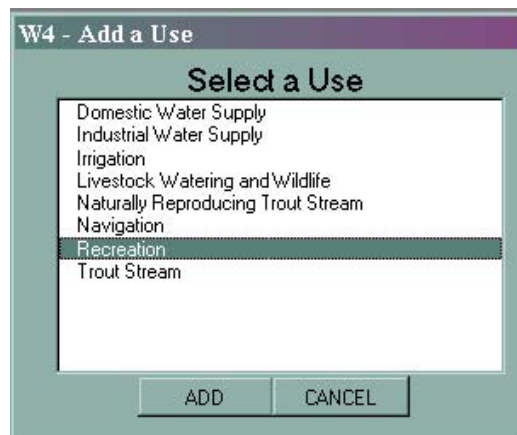
The “Uses” icon will load a screen that lists all designated uses for the selected AU. Each use will be categorized as “Assessed” or “Unassessed.” If the designated use is assessed, it will also list the AU’s use support (i.e., fully supporting, insufficient information, or not supporting). Users may add designated uses to the selected AU and add or view assessment metadata associated with each use.

*Note: The “Designated Uses” that are listed are from EPA’s WQSDB, which is populated with the data from the States’ WQS documents. If a “Use” is not specified in your WQS document, it will not be available in this list. For more information on the WQSDB, visit <http://www.epa.gov/wqsdatabase>.*



### Adding Uses

To add a use to an AU, click on the “Uses” icon at the top of the sidebar. The “Select a Use” dialog box will open. You can choose a single designated use or select multiple uses by holding down the **Shift** key when selecting.



When you click the **ADD** button, the selected use(s) will be added to the list of unassessed uses on the **Uses** screen.

### Use Support and Assessment Documentation

The “Assessment Documentation” dialog box shows the use support rating and all assessment documentation currently associated with the selected designated use. Assessment documentation in the ADB includes the type of assessments that were made (e.g., biological, habitat) and the confidence in the assessment (e.g., good, fair).

To add assessment documentation for a designated use, change the **Use Support** rating from **Not Assessed** to one of the other categories in the drop-down list by double clicking an unassessed use or by selecting one (or choose several by holding down the **Shift** key) and clicking on the “Assessment Documentation” icon in the sidebar. When you do this, the “Assessment Documentation” dialog box will open. Please note that you cannot save the **Use Support** for a designated use without assigning at least one assessment type and confidence rating.

Once you have assigned a use support, click **ADD** under **Assessments Performed** to add assessment metadata. When asked if you want to save changes to the AU, click *Yes*. This will open the “Add Assessment Metadata” dialog box.

The metadata choices in the database should reflect the decision logic in a State’s Assessment Methodology Document. The required metadata elements are *Available Assessment Types* and *Confidence of Assessment*. Descriptions of the options for both choices are below.

### *Types of Assessments*

**Biological:** A biological assessment can include any type of biological (bioassessment) indicators that were used (e.g., macroinvertebrate indicators, fish Indices of Biotic Integrity [IBIs]).

**Habitat:** A habitat assessment can include habitat indicators or other types of geofluvial analyses related to features, such as riffle and pool analyses, substrate, bank stability, and stream buffer zone plant cover analyses.

**Physical/Chemical:** This is a broad category that can include any number of different types of analyses. Physical monitoring involves measures for system properties, such as pH, turbidity, or temperature. Chemical monitoring is typically performed for specific analytes (e.g., copper) that can be defined through reference to Chemical Abstracts Service (CAS) registry numbers. If this category clearly defined in a State's Assessment Methodology Document, then it could cover the xenobiotic chemical pollutants in tissue residues associated with fish or wildlife consumption advisories.

**Toxicological:** This category includes use attainment conclusions based on methods such as bioassays. These can include acute or chronic bioassays for ambient water or for interstitial pore water. Other types of monitoring information may be relevant depending on how toxicity concerns are addressed in a State's Assessment Methodology Document. For instance, if this category is clearly defined in a State's Assessment Methodology Document, then it could cover the xenobiotic chemical pollutants (e.g., mercury/methyl mercury) in tissue residues associated with fish or wildlife consumption advisories. This category would also be appropriate to document biogenic toxic concerns related to red tides, cyanobacteria toxins, toxins from *Pfesteria*, or other harmful algal blooms (HABs).

**Pathogen Indicators (Microbials):** This assessment type can include any standard pathogen (microbial) indicators. An example of a pathogen indicator would be *E. coli* counts. It can also include conclusions from screening test determinations for actual bacterial and viral pathogens (e.g., tests for *Cryptosporidium*).

**Other Public Health Indicators:** Other indicators related to public health (e.g., oil spills) that could not be categorized by other assessment types.

**Other Aquatic Life Indicators:** Other indicators related to aquatic life that could not be categorized by one of the other assessment types.

**Other:** Any other assessment type that cannot be categorized into one of the above assessment types.

When making entries into the ADB, the user should be certain that a given metadata category is related to the specific use being assessed. For example, it would not make sense to have a *Habitat* assessment associated with a *Primary Contact Recreation* use. The State's Assessment Methodology Document should describe what types of assessment metadata categories can be associated with each WQS designated use.

### ***Confidence of Assessment***

The database no longer requires that a statement be made about the confidence of the assessment or the confidence of the data used to make the assessment. The levels of confidence defined in the database include the following:

1. Low
2. Fair
3. Good
4. Excellent

How a State assigns these levels of confidence should be explained in its Assessment Methodology Document.

### **Assessment Date and Assessed By**

You may now enter what date the assessment was taken and by whom.

### **User Flag**

The *User Flag* field may be used to track certain data situations in the ADBv2. For example, if a user wants to indicate that an assessment partially supports a designated use, they can enter the word **Partial** in the *User Flag* field for that AU. The *User Flag* has no effect on the AU's category.

### **User Defined Use Category**

This is similar to the User Defined Category at the AU level, but is specific to the use level.

### **Assessment Method Codes**

Users can add custom assessment method codes under **Other Assessment Information** by clicking on the drop-down box and selecting a code. Users may also add their own assessment codes by clicking on *Modify->Assessment Methods* from the menu bar. Assessment methods are not required as part of the assessment documentation.

### **EPA Added Flag**

This flag will determine if the use was added by EPA.

### **Threatened Status**

If an AU is fully supporting its use, but a non attaining use support is anticipated by the next cycle, the AU should be designated as threatened. You can change the status of the threatened flag by selecting the *Yes* button under the "Threatened" dialog box on the right side of the "Assessment Documentation" window. Please note that changing the threatened status from *No* to *Yes* will impair the use for the purposes of determining the category.



## Causes

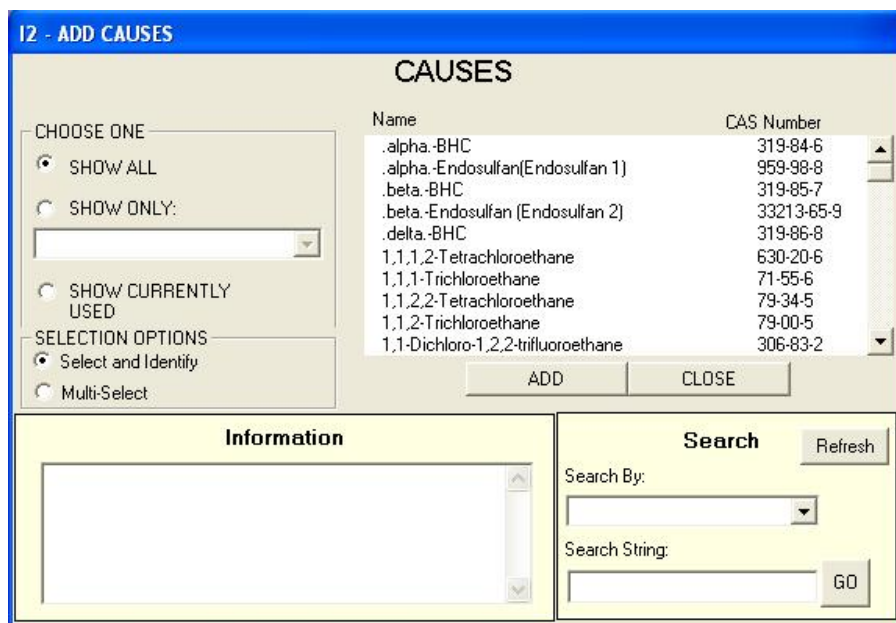
In ADBv2, causes are assigned to uses that are assigned to an AU. Causes may only be added to uses that have a not supporting, threatened, or insufficient information attainment status. To add or view causes, select an assessed use from the “Uses” dialog box and click on the *Causes* button. This will open the “Causes” dialog box.

Double click on the *Causes* to view their descriptions or remove a cause by selecting it and clicking delete. You can enter a date or priority that the AU is scheduled to receive a TMDL by selecting a *Cause* and clicking the *TMDL Information* button near the right side of the screen. You can also associate causes with TMDLs by clicking on the *303(d) Information* button near the bottom of the screen. When you click this button, you can select an EPA-approved TMDL. (See Managing 303(d) Information later in *Chapter 3*). You should note that information entered on the main *Cause* screen can influence the determined assessment category of a use or AU. For example, if you determine that a Cause is not a pollutant, then that will change the cause to Category 4C and can change the use and AU to a Category 4C.

### Adding a Cause

To add a *Cause*, either click on the **ADD** button near the middle of the *Causes* screen or click the *Add Cause* button on the sidebar. This will open the “Add Causes” dialog box. You can select the causes you want to assign to a designated use from the list box on the right side of the dialog box. There are currently about 500 causes to choose from and this number will grow over time. To make it easier to find the causes you need, this program defaults to only show the causes you have assigned to other AUs. You can view all of the available causes by clicking the *Show All* button. You can also show select groups of causes (i.e., nutrients, pathogens, bioassays) by clicking the *Show Only* button and selecting one of the groups from the drop-down

list. Additionally, the ADBv2 allows you to create custom groupings of causes (see the section on Look-Up Groups in *Chapter 4*).



The “Add Causes” dialog box has a built-in search feature that will allow you to limit the list of causes by words or phrases. In the “Search” portion of the dialog box, select the type of search you would like to perform. You can search by cause name, CAS number, or cause description. Type in the corresponding search text and click on **GO**. The **Causes** list will show only the causes that contain the word or phrase you searched. Clicking the **Refresh** button will return the list to its previous state before the search.

To view the information for a cause, select the cause from the **Causes** list. The description for the cause will appear in the “Information” section. If you would like to select multiple causes to assign to a designated use, click on the **Multi-Select** button. This will allow you to select multiple causes in the **Causes** list by holding down the **Shift** key, but the cause description will no longer be updated in the “Information” section. When you are finished adding causes, click **ADD** to update the data and return to the main “Causes” dialog box.

To return to the **Uses** screen when you are finished entering causes, click on the **Uses** button on the sidebar.

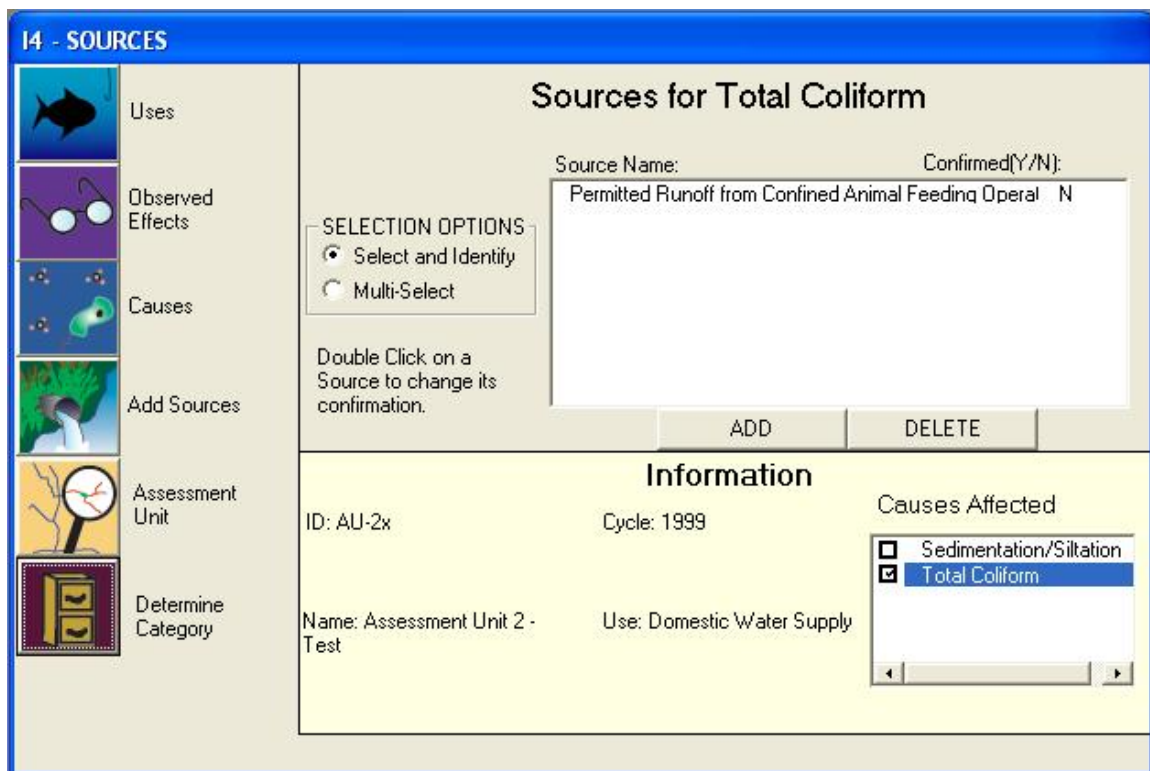
## Observed Effects

Observed effects are added to a designated use similarly to the ways causes are added; however, observed effects can be added to uses that are “Fully Supporting” and not threatened, whereas causes cannot. Observed effects are monitoring observations that indicate a decline in water quality, but are not necessarily considered causes of impairments. Some examples of observed effects might include Secchi Depth measurements or fish kills. For a discussion on observed effects and how to use them, see the *ADB Best Practices Document* available from the **Reference** section at <http://www.epa.gov/waters/adb>.

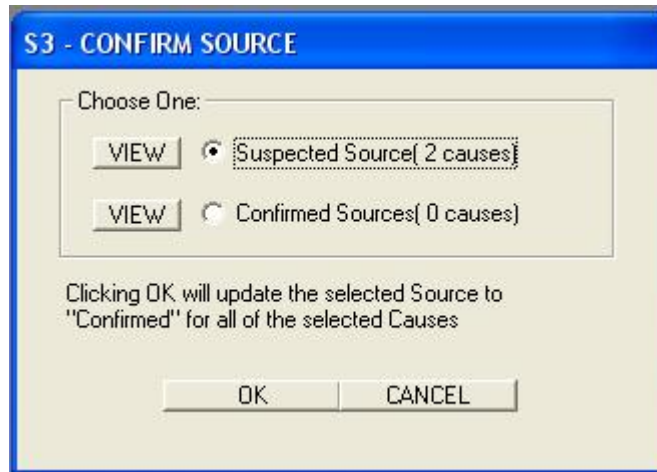
To add an observed effect to a designated use, select the use from the “Uses” dialog box and click on the **Observed Effects** button on the sidebar. This opens the “Observed Effects” dialog box, which will show you all of the observed effects currently associated with the selected use. Click **ADD** to add observed effects. The “Add Observed Effects” dialog box functions in the same manner as the “Add Causes” dialog box described in the previous section.

## Sources

In ADBv2, sources are associated with the causes for each designated use. To add sources, select the **Cause** from the “Causes” dialog box and click on the **Sources** button. This will open the “Sources” dialog box. By default, sources will be associated with whatever cause was last selected. This Cause will show in the title. To associate a source with more causes, select additional causes in the **Causes Affected** box. Clicking on **ADD** will take you to an “Add Sources” dialog box that is very similar to the “Add Causes” dialog box. You will be able to do the same types of searches and groupings as you could in the “Causes” dialog box.



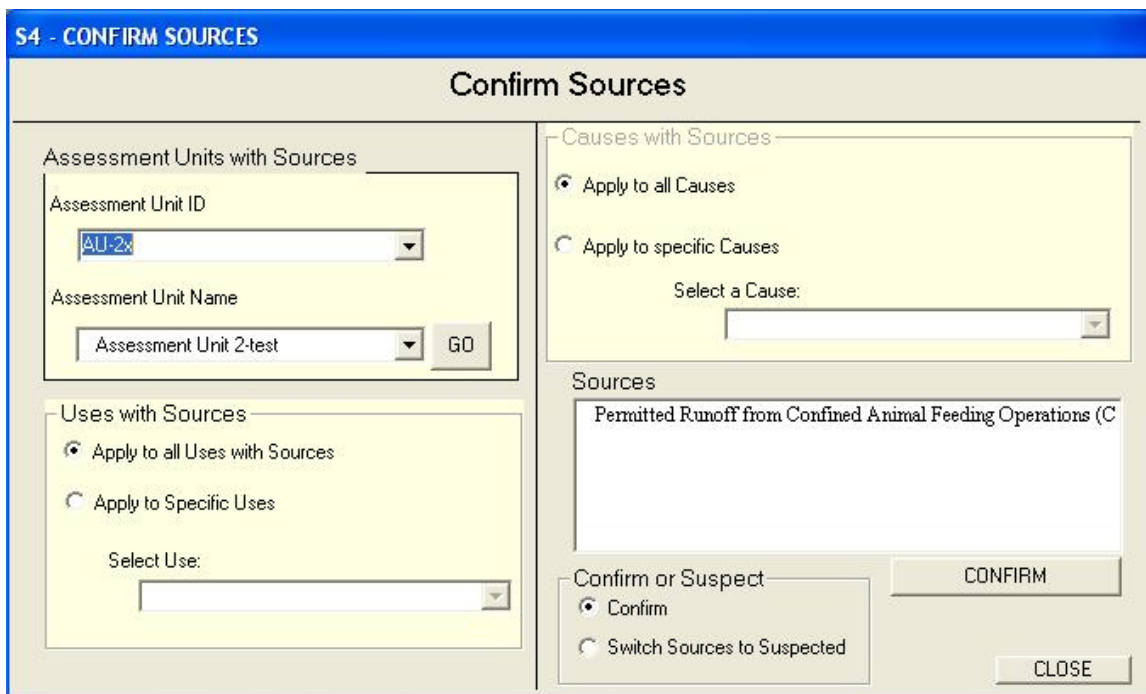
The “Sources” dialog box allows you to indicate whether the sources you enter for causes are **Confirmed (Y)** or **Unconfirmed (N)**. The default for sources is **N**. You may confirm a source by double-clicking on it.



You may also change source confirmation by clicking on *Data->Confirm Sources* in the menu bar.

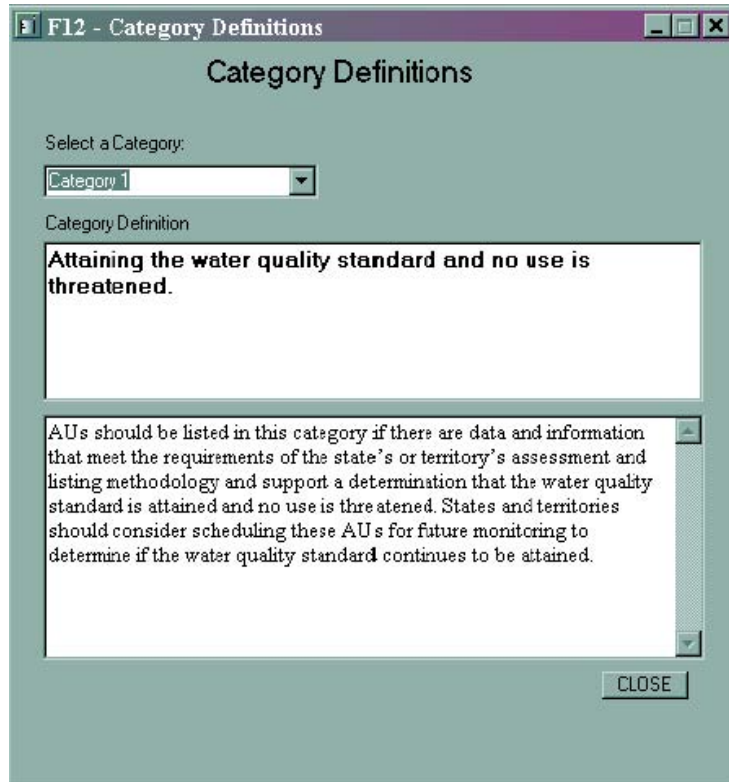
*Note: You should be in the Assessment Units screen or the main database screen to confirm sources through the Data menu.*

To use the “Confirm Sources” dialog box in the **Data** drop-down list, select an AU. Now, confirm all sources associated with the AU by selecting the *Apply to all Uses with Sources* radio button (the default), and then clicking the **Confirm** button. If you want to confirm only sources associated with specific uses, click the *Apply to Specific Uses* radio button, select the sources that appear in the text box, and click the **CONFIRM** button. You can also confirm sources associated with specific causes of a specific use by clicking the *Apply to specific Causes* button, selecting a cause from the drop-down box, and then clicking **CONFIRM**.



### Determining Categories

The Guidance calls for all water quality attainment statuses to be fully described for each AU on the basis of a five-part categorization of use support. As with previous guidances, assessment category is fundamentally decided at the designated-use level. The ADBv2 will automatically assign AUs to the appropriate category based on information you enter about the use support rating of the AU. You can view the category definition assigned to an AU at any time by clicking on the **Determine Category** button in the sidebar or read a detailed description of each category in the Guidance by selecting **Show Category Definitions** from the **View** menu.



Categories can be determined at the AU level, the uses level, and/or the causes level by switching from Single Category Reporting (assessment-level category determinations) to Multiple Category Reporting (use- and cause-level category determinations). Table 1 illustrates the difference between single- and multi-category reporting.

Uses	Attainment	Single Category	Multiple Category (Uses)	Causes	TMDL?	Multiple Category (Causes)
Aquatic Life	Not Supporting	5	5	Chlorine	Yes	4A
				Mercury	No	5
Recreation	Insufficient Information		3			

### Changing from Single to Multiple Category Reporting for a Single Assessment Unit

To change the category reporting options for a single AU, click the **Category Reporting** button in the lower left corner of the “Assessment Units” page. The “Assessment Unit” **Category Reporting** screen will appear. Any modifications performed on this screen are specific to the AU and are not applied to all AUs in the database. Use the check boxes under the **Multiple Category** button to determine the category by the use and/or cause level. Click **Update** and then click **OK** to return to the “Assessment Units” information page.

### Changing from Single to Multiple Category Reporting for All Assessment Units

To change the category reporting options for all AUs within the selected reporting cycle, select the **Category Reporting** option from the **Data** drop-down list in the menu toolbar. The **Category Reporting** screen will appear. You may modify the category reporting options for a single AU or all AUs in the reporting cycle. Use the check boxes under the **Multiple Category** button to determine the category by the use and/or cause level. Click **UPDATE** to save any changes to the database and then click **CLOSE** to return to the previous screen.

### Delisting

Delisting was introduced in ADBv2.2.0. It allows users to track delistings within the cycle. To view previous delisting information users can select the **Delist** button on the main AU navigation bar. This form, which is D1, shows the delisting tracking entries. If the user performs an operation in the ADB, which could be a delisting action, then the user will be prompted by the system. Because there is no way for the system to be certain that any of the actions are definite delistings, there are no automatic additions to the delisting list.

Cause	Delisting/ WQS Attainment Date	Reason	Delisting/WQS Attainment
-------	--------------------------------	--------	--------------------------

There are several ways of generating delisting information in the ADB. A modified delisting reason list includes a designation between WQS attainment and delisting. The updated available delisting and WQS attainment reasons are as follows:

Delisting:

- # Data and/or information lacking to determine water quality status; original basis for listing was incorrect (Category 3)
- # Adding a TMDL (4A)
- # Adding in expected-to-attain date (4B)
- # Adding a nonpollutant cause of impairment (4C)

WQS Attainment:

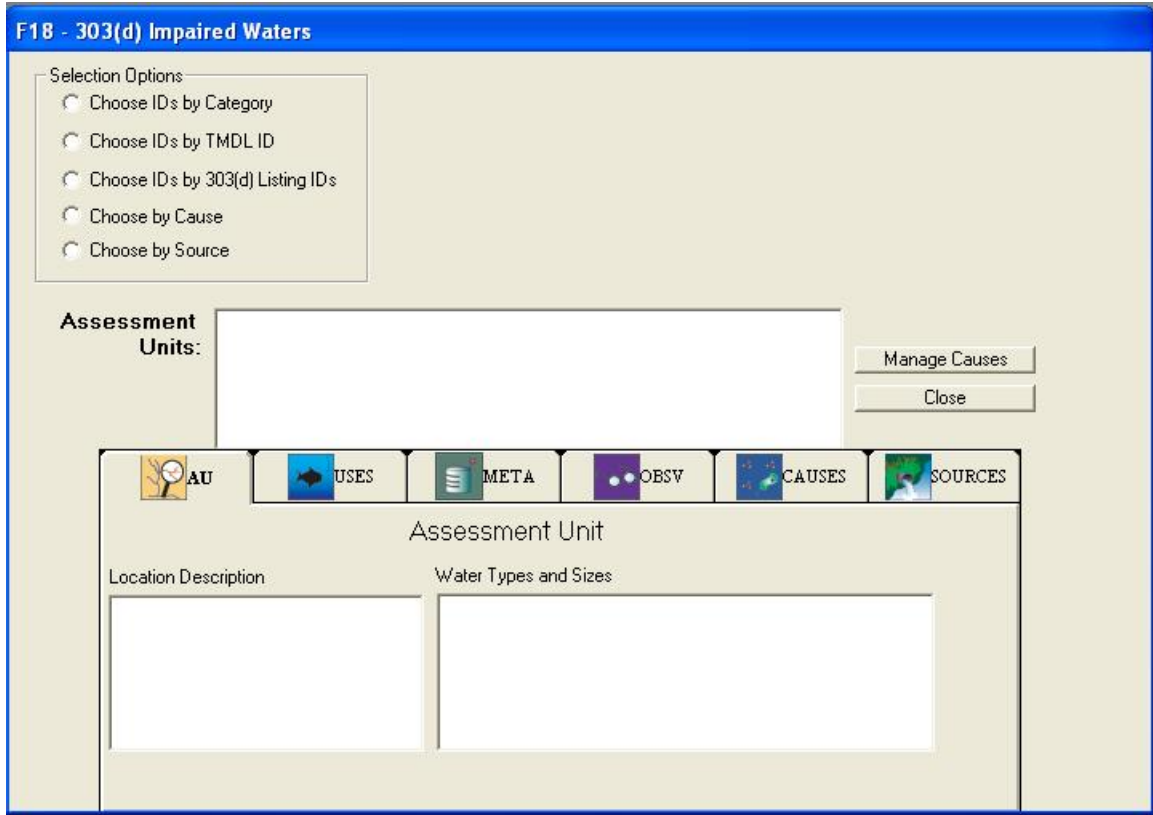
- # Applicable WQS attained; original basis for listing was incorrect
- # Applicable WQS attained; due to restoration activities
- # Applicable WQS attained; due to change in WQS
- # Applicable WQS attained; according to new assessment method
- # Applicable WQS attained; threatened water no longer threatened
- # Applicable WQS attained; reason for recovery unspecified

For manual delistings, the ADB application does not allow the user to choose reasons associated with categories 4A, 4B, or 4C without entering the corresponding underlying data. For instance, to delist a cause for a TMDL approval, the user will first need to enter the related TMDL information before the AU/Cause combination can be delisted. Please note, if you are delisting multiple causes, you must individually assign a delisting reason to each cause, otherwise the other causes will be deleted with no delisting reasons associated with them.

### ***Managing 303(d) Information***

The ***303(d) Impaired waters*** button on the main database screen functions similarly to the *Browse* feature (see the section on Browsing Data in ***Chapter 3***). The user can view AUs by selecting one of the buttons, such as ***Choose by Cause***. Once an AU is selected, users can view assessment information by clicking on the tabs on the screen.





Users can access the **Cause Information: 303(d)** screen by clicking the *Manage Causes* button.

*Note: The **Cause Information: 303(d)** screen is also accessible through the main **Causes** screen in the database.*



T1 - Cause Information: 303(d)

### Cause Information: 303(d)

**Assessment Unit**

**Water Name**

In order to be in Category 4A or 4B, ALL causes must be moved to these categories, and, there must not be any impaired or threatened uses without causes.

**Impaired or Threatened Uses without Causes**

Category 5	Category 4B	Category 4A
<p style="font-size: small;">Sedimentation/Siltation Total Coliform</p>		
<input type="button" value="View Information"/>	<input type="button" value="View Information"/> <input type="button" value="Implementation Actions"/>	<input type="button" value="View Information"/>

**Determine Category**

To move a cause from one Category Bin to another, simply select the cause and drag it to one of the other bins.

Here, users can move an AU between Categories 5, 4B, and 4A by clicking and dragging the cause to another bin. Before AUs can be moved out of Category 5, causes have to be linked to AUs that are “Not Supporting” or “Threatened.” If an AU needs to have causes linked to a use, the use will appear in the text box at the top of the screen. Causes can be added with the **Add Causes** button. After a cause is added, the cause will appear in a category. You can assign 303(d) List IDs with **View Information** button under Category 5. The AU can be moved from Category 5 to other categories. To move an AU from Category 5 or 4A into Category 4B, the user will have to enter an **Expected to Attain** date. You may also enter implementation actions with the **Implementation Action** button below the Category 4B box. To move an AU from Category 5 or Category 4B to Category 4A, a TMDL must be assigned.

T3 - Expected To Attain Dates

Assign TMDLS

TMDL Snapshot date: 10/21/2005

**Causes**

Sedimentation/Siltation
-------------------------

**Current TMDLs**

--

**Assessment Unit:**

**Water Name:**

**Cycle First Listed:**

Information

**TMDL IDs - TMDL NAME - ESTABLISHMENT DATE**

212	CANE CREEK (METALS)	08/24/1999	▲
4296	CANE CREEK (PATHOGE	05/21/2003	▲
11536	CANEY FORK SILTATIO	08/03/2005	▲
1451	CASH HOLLOW CREEK	03/27/2001	▲
4104	COLLINS RIVER WATEF	02/13/2003	▲
1664	CRAB ORCHARD CREEK	12/14/2001	▼

**303(d) List IDs currently in ADB - Associated Cause**

--

**303(d) List IDs from TMDL Snapshot - Pollutant - Cause**

--

Search

Search By:

### Implementation Actions

Implementation actions help define plans for waters expected to attain their standards. There is no set list of EPA-approved implementation actions, so a State should enter what seems practical. An implementation action can be up to 4,000 characters and can be typed directly into the database or imported as a text file that you have created with a word processing program. All implementation actions require a date by which that action will take place. An AU can have as many implementation actions as desired; however, they can only be assigned to AUs that are expected to meet their standards.

V5 - Implementation Actions

**Implementation Actions**

Assessment Unit: AU-2x

Impairment: Total Coliform

Implementation Action Date: 12/1/2004

Add Action

Delete Action

B U / [Icons]

The CAFO will move operations from sensitive areas near the stream. It will further provide for the protection of the stream by erecting berms and sedimentation ponds designed to divert runoff from entering the stream.

Data Save Options

Save Formatted(389)

Save Unformatted(219)

Save Action Get from File Save to File Open File

Clear Action CLOSE

Like the *Comments* feature, you can type implementation actions directly into the database or import a text file that you have previously created. Click the **Add Action** button and use the calendar feature to assign an **Implementation Action Date**, then type or insert text from a file. Click the **Save Action** button to associate the **Implementation Action** with the AU.

### ***Atlas Information***

The *Atlas Information* feature allows the user to do the following:

- # Add information for water types that may not be supported for individual AUs (e.g., canals)
- # Store the number of waterbodies as indicated by various geographic scales
- # Report the total sizes of waterbodies according to several sources.

The data stored within the *Atlas Information* fields are independent of data related to individual AUs and therefore does not affect the assessment calculations or reports produced by the ADB. You can view create, update, and delete records from the Atlas Information screen.

Topic	Topic Item	Count	Size	Unit	Source	Scale
▶ STREAM/CREEK/RIVER	DITCHES AND CANALS	47	65.2	MILES	USGS	1:100K
BAY/HARBORS/ESTUARY	TOTAL BAYS/HARBORS/ESTUARIES	4	15	SQUARE MILES	NHD	1:24K

To update an existing record, highlight the record, then edit the size, count, scale, or source using the text boxes in the lower left corner. Click the **Update** button to save the information. To add or delete an Atlas Item, click the **Add New** or **Delete** buttons located to the lower of the **Atlas Information** list box.

New topic names may be added to the drop-down list by modifying the **Atlas Information** elements. To add new topic names, go to the **Modify Menu** located in the toolbar at the top of the screen. Choose **Atlas Topic Items** from this menu. From here, you may add as many water types to each atlas topics as needed. Click **Cancel** to return to the **Add New Atlas Information** screen.

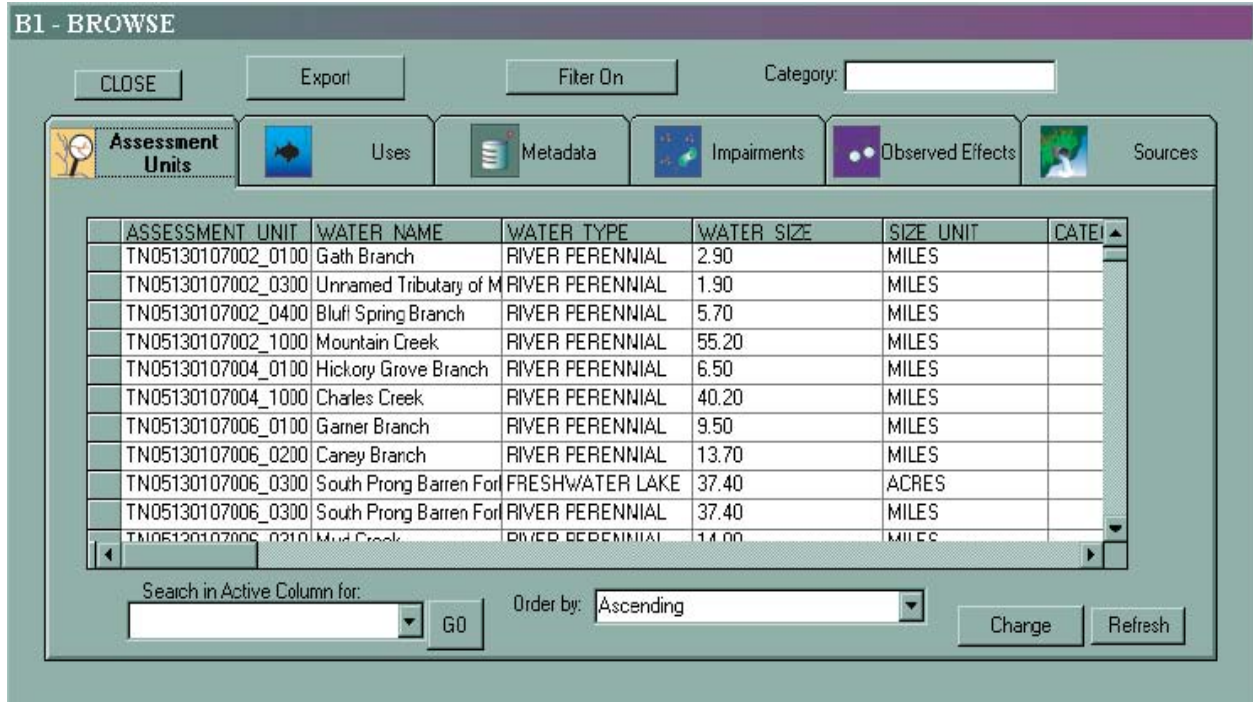
## Browsing Data

When **Browse** is selected from the main menu screen, you can view and search assessment information. Users without administrative privileges will have access to the **Browse** feature. There are two browse options: *Full Browse* and *Browse by Category*.

### Full Browse

The *Full Browse* option allows you to view descriptive information, use support designations, causes, observed effects, assessment metadata, and sources of impairment for all AUs. The records can be sorted by clicking on a column heading, which will populate the **Search in Active Column** for drop-down box with all of the values in that selected column. The **Order by:** drop-down box allows the user to sort by ascending or descending values. The user may change assessment information by selecting an AU and clicking the **Change** button. Assuming the user has appropriate database permissions, this will route him or her to whatever area he or she wishes to update. For example, if a user is on the **Uses** tab and clicks on the **Change** button, he or she will be routed to the **Uses** screen; if a user is on the **Sources** tab, he or she will be routed to the **Sources** screen, and so on. The **Refresh** button updates the form to show the most recent data in the database. This is helpful if you suspect that data has been

changed, but the changes are not showing on the screen. The **Filter On** button will allow you to filter by AU. If you click on **Filter On**, all of the tabs will show *only* the AU you have selected. You can export the data in **Browse** by clicking the **Export** button. This will create a comma delimited file (.csv) in a file that you specify.



## Browse by Category

The *Browse by Category* option allows you to view assessment information by use support category (e.g., all Category 1 waters). When a selection is made from the **Select a category** drop-down box, all AUs falling into that category will be listed on the screen. A summary of water types and sizes will also appear on the screen. The **CHANGE** button routes the user to the **Assessment Units** screen where information can be added or deleted. Clicking on a column heading will sort the table and populate the **Search in Active Column** drop-down box. If the user selects one AU, he or she may view assessment level information by clicking on the tabs at the bottom of the screen.

**B3 - BROWSE BY CATEGORY**

Browse by Category

CLOSE

Select a Category

Category 1 ▼

Number of Assessment Units

330

ASSESSMENT UNIT	WATER NAME
TN05130107002_0400	Bluff Spring Branch
▶ TN05130107002_1000	Mountain Creek
TN05130107004_1000	Charles Creek
TN05130107006_0100	Garner Branch
TN05130107006_0200	Cancy Branch
TN05130107006_0300	South Prong Barren Fork
TN05130107006_0320	Witty Creek
TN05130107006_0400	North Prong Barren Fork

Water Types and Sizes

FRESHWATER LAKE	37.4	ACRES
FRESHWATER RESERVOIR	167059	ACRES
RIVER INTERMITTENT	29.7	MILES
RIVER PERENNIAL	6209.6	MILES

Search in Active Column

▼

GO

AU

USES

META

OBSV

IMPAIR

SOURCES

Assessment Unit

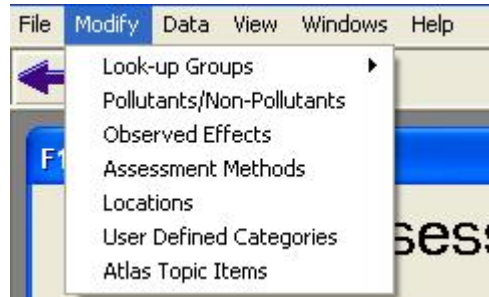
Location Description	Water Types and Sizes
Mountain Creek from Collins River to headwaters.	RIVER PERENNIAL <span style="float: right; text-align: right;">55.2 MILES</span>

CHANGE

Refresh

## 4. Modifying Data Elements

The primary mechanism for adding data elements such as look-up groups, new user-defined categories, and assessment methods is through the **Modify** menu in the toolbar. Some modifications should be done prior to data entry. For example, the pollutant status and observed effects status modifications will not affect data that is already entered into the ADB.



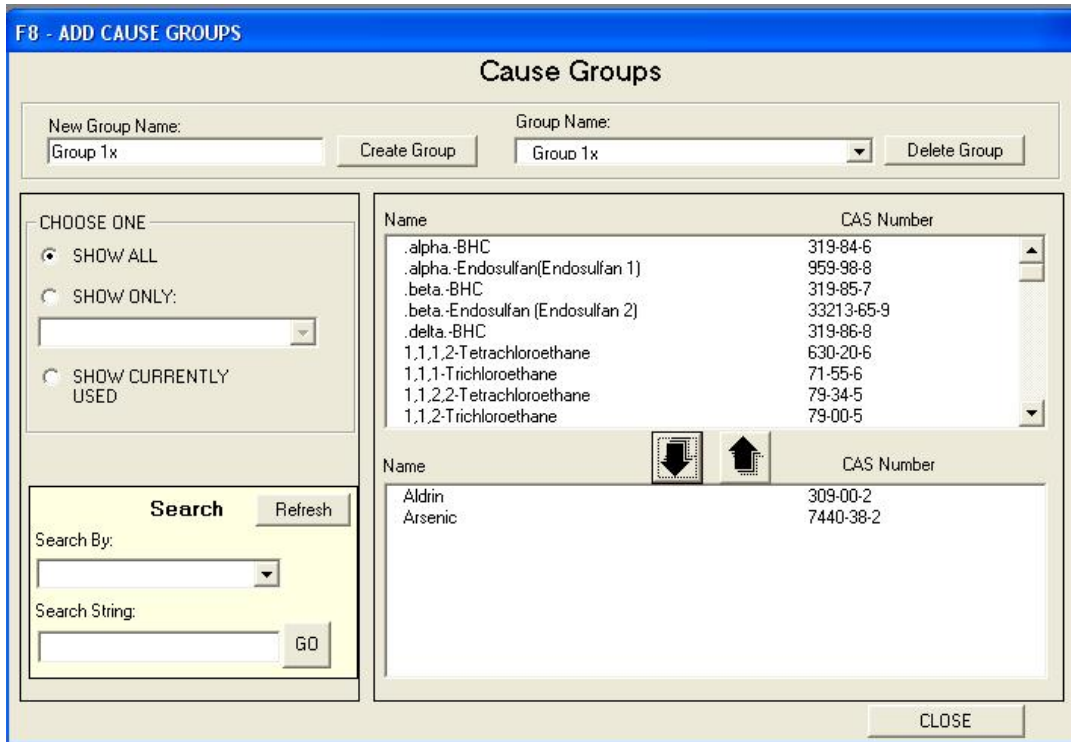
### **Look-Up Groups**

Look-Up Groups allow the user to create groupings of causes or sources to simplify data entry. If you create a group of causes that are common in your State, you can select that group in the “Causes” dialog box, and choose from that short list rather than view the more than 500 causes in the database.

The ADBv2 already contains some groupings of causes and sources for your convenience. For example, nitrogen is part of the “Nutrients” group. The purpose of these groups is to facilitate data entry, as well as provide a framework for creating Summary Reports.

To add a new group, type the name of the group in the *New Group Name* field. Then click on the **Create Group** button. You can then select the new group from the drop-down list of group names. Add items to your new group by clicking the down arrow. Remove items from the group by clicking the up arrow.





### ***Pollutants and Nonpollutants***

Every cause can be categorized as either a “Pollutant” or a “Nonpollutant.” Whether a use is impaired by a pollutant can affect which category an AU falls in. By default, all causes will be flagged as pollutants. You can change a cause’s category by clicking on the ***Modify*** menu, and selecting ***Pollutants/Nonpollutants***. If a cause is defaulted as a nonpollutant, then every time that cause is added to a use, the pollutant flag will be set to false. Changing the default pollutant status of a cause will not affect any causes that have already been added to uses, although the user can change the pollutant flag at any time.

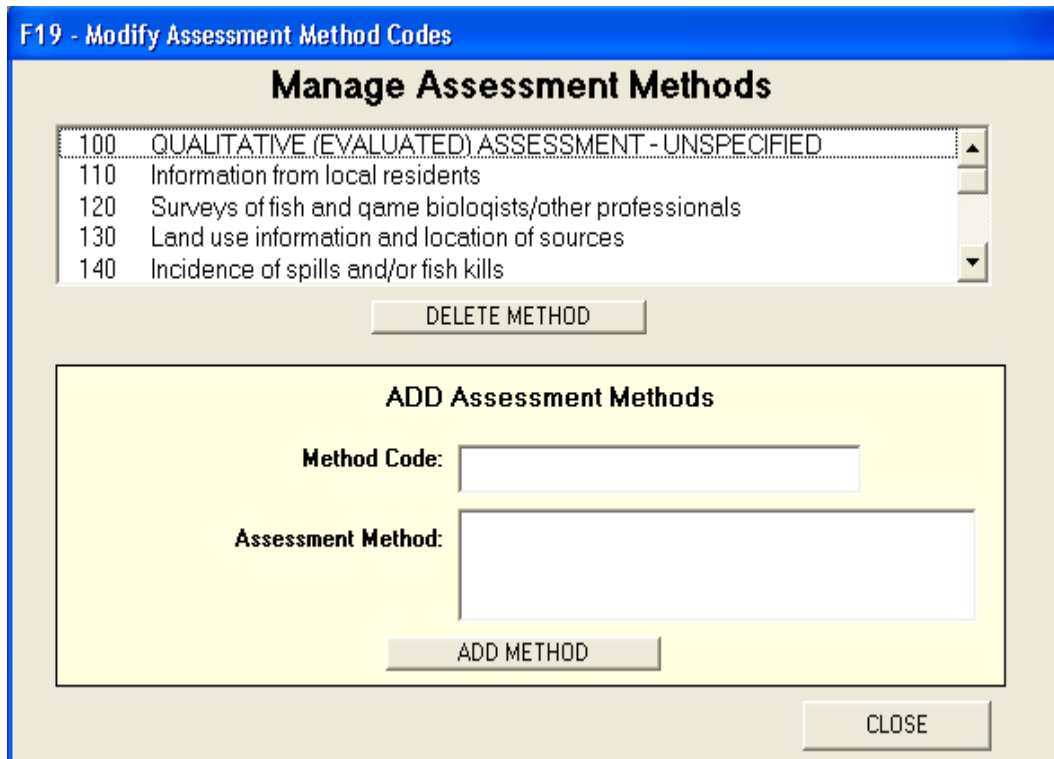
### ***Observed Effects***

Any cause can be assigned as an observed effect, but you may assign some causes to be used strictly as observed effects. To assign an observed effect, click on the ***Modify*** menu, and then click on ***Observed Effects***. This will open a screen where observed effects can be assigned. This screen functions in the same manner as cause and source group screens. Please note that if the cause you wish to designate as an observed effect has been associated with any AU within the reporting cycle, it cannot be designated as an observed effect; however, it can still be assigned as an observed effect on an individual AU basis.



### Assessment Method Codes

Users may manage their own Assessment Method Codes by clicking on **Modify->Assessment Methods** from the menu bar. You may add or delete any state-specific methods from the *Manage Assessment Methods* screen.



### Locations

To add location types or location descriptions to the list in the “Additional Locations” dialog box, go to **Modify->Locations** in the toolbar at the top of the screen and add the respective locational types and descriptions. From this screen, you may add, rename, or delete location elements.



### *User-Defined Categories*

To create your own categories, select *User Defined Categories* from the **Modify** drop-down list in the menu bar. Click **Add Category** and type the name or ID of the category (10 character maximum) into the text box and click **OK**. Select the category from the **User Defined Category** drop-down box and then type the category description (4,000 category maximum) in the space below. Click **Save Description** to save the new category and description to the database.

### *Atlas Topic Items*

To create your own Atlas Topic Items, select *Atlas Topic Items* from the **Modify** drop-down list in the menu bar. From the **Select a Topic** drop-down list, select the *Atlas Topic* to which you would like to add an item, then type the topic item name into the text box at the bottom of the dialog box. Click **Add** and click **OK**.

**A3 - MANAGE ATLAS TOPIC ITEMS**

**Manage Atlas Topic Items**

Select a Topic:

Current Topic Items:

---

**Add a new item to the selected topic**

Topic Item Name:

## 5. Other Features

ADBv2 has several additional features. These features include:

- # Backup/Restore
- # Performing cycle tracking
- # Providing help messages
- # Providing a “category listing” of definitions
- # Exporting data
- # Migrating to new cycle
- # Serving as a shell to external applications
- # Resetting the database
- # Compacting the database

### *Backing-up and Restoring Data*

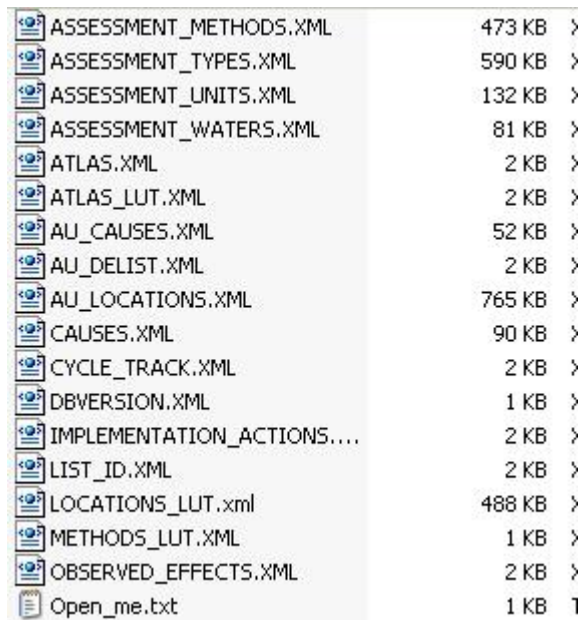
You can create a backup of the data in the database by using the *Back-up* feature. To do this, open the ADB by going to the *Start->Programs->ADBv2 for [database type]* menu and choose *ADBv2*. From the *Data* menu, click on *Back-up/Restore*. The “Data Back-up/Restore Data” dialog box will appear.

F13 - BACK-UP DATABASE AND RESTORE FROM FILE

### Data Back-up/Restore Data

Back-up	Restore
<p>Back-up Options</p> <p><input checked="" type="radio"/> Back-up All</p> <p><input type="radio"/> Select Cycle and State</p> <p>Files associated with Assessment Units will not be backed-up. Click here to see a list of files. <input type="button" value="Files"/></p> <p>State: <input type="text"/></p> <p>Cycle: <input type="text"/></p> <p>Data will be saved in C:\ADB\data\backup\All_2-2-2006\</p> <p><input type="button" value="Back-up"/></p>	<p>Restore Options</p> <p><input type="radio"/> Delete and Replace (This will delete all of the current data that matches the state and cycle)</p> <p><input checked="" type="radio"/> Replace (This will replace any Assessment Units in the current data that match the back-up file. This will not change any Assessment Units not in the Back-up file)</p> <p><input type="button" value="Choose Back-up"/></p> <p><input type="button" value="View Assessment Units"/></p> <p><input type="button" value="Restore"/></p> <p>Back-up State: <input type="text"/></p> <p>Back-up Cycle: <input type="text"/></p> <p><input type="button" value="CLOSE"/></p>

Under the “Back-up” column, click the **Back-up All** button to create a backup of all data in the ADB, including the sample data, by creating an **Openme.txt** file in **C:\ADBdata\backup\XXAll\_\***.



ASSESSMENT_METHODS.XML	473 KB	>
ASSESSMENT_TYPES.XML	590 KB	>
ASSESSMENT_UNITS.XML	132 KB	>
ASSESSMENT_WATERS.XML	81 KB	>
ATLAS.XML	2 KB	>
ATLAS_LUT.XML	2 KB	>
AU_CAUSES.XML	52 KB	>
AU_DELIST.XML	2 KB	>
AU_LOCATIONS.XML	765 KB	>
CAUSES.XML	90 KB	>
CYCLE_TRACK.XML	2 KB	>
DBVERSION.XML	1 KB	>
IMPLEMENTATION_ACTIONS....	2 KB	>
LIST_ID.XML	2 KB	>
LOCATIONS_LUT.xml	488 KB	>
METHODS_LUT.XML	1 KB	>
OBSERVED_EFFECTS.XML	2 KB	>
Open_me.txt	1 KB	1

You can create a backup of a subset of data in the database (for a specific cycle and state) by clicking the **Select Cycle and State** button. Specify the state and cycle that you want to create a backup for, and then click **Back-up**. This will create an **Openme.txt** file in **C:\ADBdata\backup\[state abbreviation]**.

There are two options for restoring data. The first option, *Delete and Replace*, deletes any data that was not originally included in the demo data and restores other data to its original state. Any additional AUs and the new data associated with them will be deleted. The second option, *Replace*, only restores the original data. All AUs added to the demo data will be untouched. To restore data, choose the type of restore you want to perform under “Restore Options,” then specify the “Back-up State” and “Back-up Cycle.” Next, click on the **Choose Back-up** button and navigate to the **Openme.txt** file in **C:\ADBdata\backup\XXAll\***.

### Performing Cycle Tracking

Cycle tracking was introduced in ADBv2.1.4. It allows users to track an AU across multiple cycles. To view previous cycle information, users can select the **Previous Cycle Info** button on the main **Assessment Unit** page. This screen, **Related Assessment Units**, shows the cycle tracking entries that were automatically or manually generated.

In the ADB there are two ways of generating tracking information

1. Automatically – The user can rename or split an AU in the main **Assessment Units** screen, using the **Update** or **Split command** buttons. If a previous cycle exists within the

database, the ADB will track AU name changes. When splitting an AU, 1 of the splits may have the same AU ID as the original, but that is not required.

2. Manually – The user can manually add tracking information from the **Related Assessment Units** screen. From the main **Assessment Units** screen, select the *Previous Cycle Info* button. Select the AU in the list to add in previous information and select the *Add Previous* button. Select or type in an AU from a previous cycle, enter the previous cycle, and enter a reason (split, rename, or join). Manual entry does not require any previous cycle to be in the database.

In automatic tracking, it is important to note that in the case of renaming an AU, only the current AU is renamed (i.e., if the AU exists in future cycles, it is not being renamed or updated). However, a cycle tracking entry is created to allow the user to track the AU from the current to the future cycles. In the cause of splitting an AU if the AU exists in future cycles, it is also being split in future cycles.

### ***Providing Help Messages***

Help messages are available through *View->Show Help Messages*. The help messages change as you move to different areas of the database using the sidebar buttons on the left.

### ***Providing Category Listing Definitions***

The ADBv2 contains all of the definitions for the listing categories as they appear in the Guidance. If at any point in the application you want to know how a category is defined, click on *View->Show Category Definitions* in the main menu.

### ***Exporting Data***

From the **EPA Assessment Data** or **Assessment Units** screens you can export data in .csv format that can be opened in MS Excel. The data export file can be used in ArcView to display categories of AUs in a map. To do this, a State must have GIS coverage of AUs that have the same unique identifiers that are in the ADB. To export data for the selected cycle, choose *Data Exports* from the *Data* menu.

- # **303(d) List** – The available exports include the following AUs on the 303(d) list.
- # **Category 4A List** – AUs that are impaired or threatened for one or more designated uses that already have a TMDL completed.
- # **Category 4B List** – AUs that are impaired or threatened for one or more designated uses, but do not require the development of a TMDL because they are expected to attain the water quality standard in the near future.
- # **Category 4C List** – AUs that are impaired or threatened for one or more designated uses by a non-pollutant and do not require the development of a TMDL.

# **Category List** – All AUs and what category listing they fall into from the ADBv2.

### Migrating to New Cycle

With ADBv2, you can avoid having to re-enter data. The **Cycle Migration** tool allows you to migrate data from a previous cycle. You can migrate data pertaining to AUs, use attainment, or causes. From the menu bar, choose **Data->Migrate to New Cycle**. Select the appropriate cycles in the **TO** and **FROM** drop-down boxes, then select the data types that you want to migrate in the check boxes below. Click the **Start Migration** button to begin migrating data.

**F15- Cycle Migration**

## Cycle Migration

MIGRATION INFORMATION

Cycle to Migrate FROM:

Cycle to Migrate TO:  (i.e., 2004)

**Start Migration**

**Tables to be Migrated**  
Select one or more types of tables to migrate

<input type="checkbox"/> <b>Uses</b> <input type="checkbox"/> <b>Attainments</b> <input type="checkbox"/> Comments <input type="checkbox"/> User Flags <input type="checkbox"/> Monitoring Information <input type="checkbox"/> Observed Effects <input type="checkbox"/> Assessment Methods <input type="checkbox"/> <b>Causes</b> <input type="checkbox"/> Comments <input type="checkbox"/> User Flag <input type="checkbox"/> TMDL Schedule/Status <input type="checkbox"/> TMDLs <input type="checkbox"/> 303(d) Listing <input type="checkbox"/> Sources <input type="checkbox"/> <b>TMDL Alternative Information</b> <input type="checkbox"/> Implementation Actions <input type="checkbox"/> NPDES IDs	<b>Other Information to Include in Migration:</b> <input checked="" type="checkbox"/> <b>Assessment Units</b> <input type="checkbox"/> Assessment Unit Comments <input type="checkbox"/> Location Information <input type="checkbox"/> Next Scheduled Monitoring Date <input type="checkbox"/> Water Quality Trends <input type="checkbox"/> Category Reporting <input type="checkbox"/> Associated Files <input type="checkbox"/> <b>5M Documentation</b> <input type="checkbox"/> <b>Atlas Information</b> <input type="checkbox"/> <b>Probability Survey Information</b> <input type="checkbox"/> Documents <input type="checkbox"/> GIS Information <input type="checkbox"/> Uses <input type="checkbox"/> Causes <input type="checkbox"/> Sources
--	---

**Close**

**Select All**

### *Serving as a Shell to External Applications*

Some ADB users have developed companion applications that perform analyses or generate reports that are not necessary to satisfy the Integrated Report requirements, but are needed to support local, State, or jurisdiction programs and reporting requirements. In ADBv2, there is an option to link to external applications and pass the selected AU ID to this application.

To set the external application, choose **View->External Application->Set External Application** from the menu bar. Enter the application name and navigate to the application in the **Application Path** box. You can also navigate to a **Button Icon Path**.



If you do not choose a **Button Icon Path**, the default icon will be used. The button icon will appear beside the module icons below the menu bar. To launch the external application, simply click the new button.



### *Resetting the Database*

At any time while using the ADBv2, you may reset the database by going to the **File** menu and choosing **Reset Database**. Doing this will return you to the ADBv2 main menu screen and reset all of the IDs, so that when you work with the database again, it will function as if you had just opened it. If you do not want to reset the database, but would rather just return to the main database screen, you can click on the blue arrow button below the menu bar.

### *Compacting the Database*

If the database needs to be compacted, you will be prompted when you open the MS Access version of the ADB. You can also compact the database at any time by choosing **Compact Database** from the **File** menu.



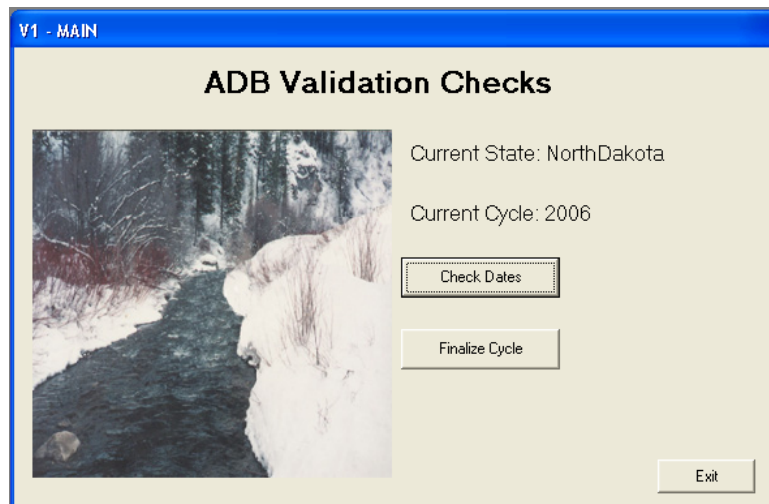
## 6. ADB Modules

The ADBv2 comes with four additional application modules: **Data Validation**, **Connections**, **Reports**, and **Probability Survey**. You can access these modules by using the buttons under the ADB main menu bar or by selecting them from the *Start->Programs->ADB v.2* menu. You will be prompted with a login for these applications, as you are for the ADB. You can use the same database name, user name, and password. The icons for these modules are shown below.



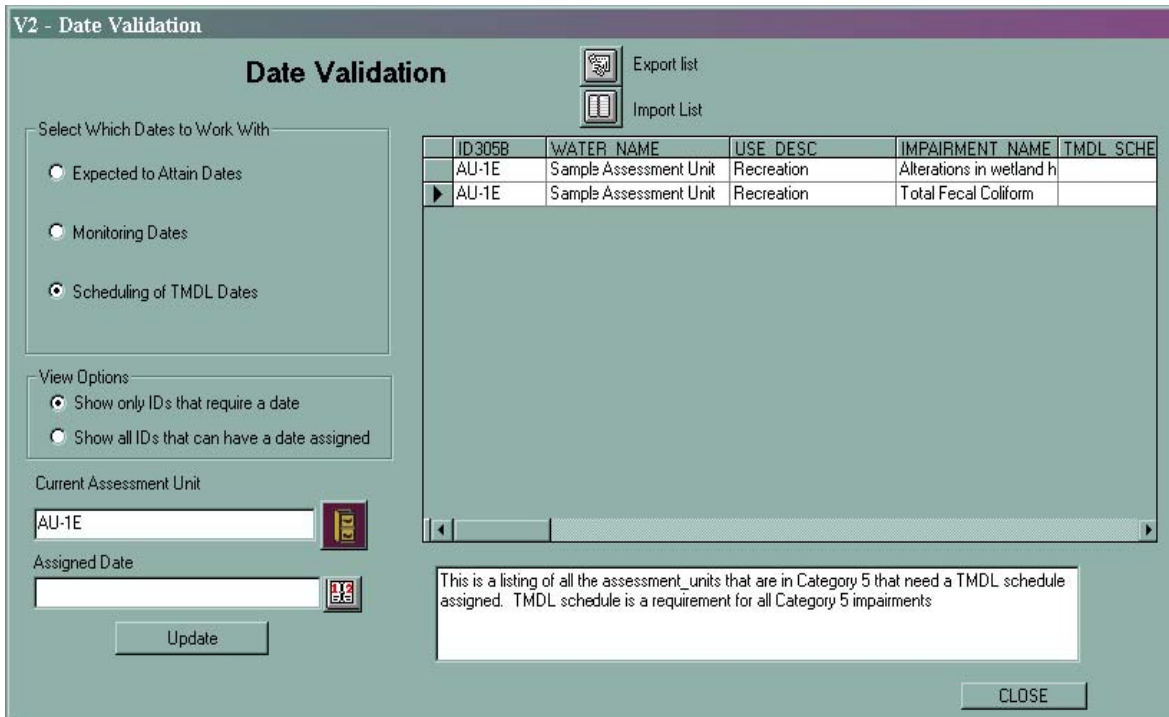
### *Data Validation Module*

The Data Validation Module serves two purposes: (1) to ensure that all dates were entered properly, and (2) to run any final data validation checks to ensure that all of the appropriate data have been entered.



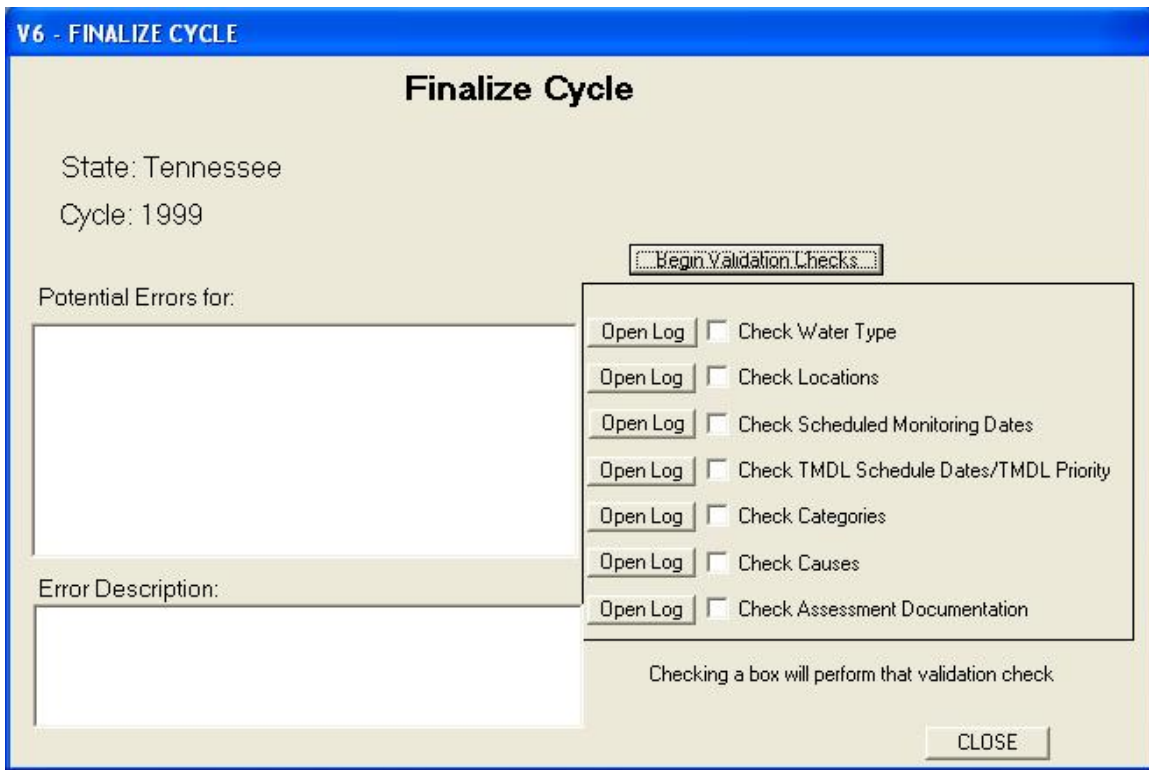
### **Check Dates**

It is understood that often times the person entering the assessment data in the ADB may not be the same person determining the crucial dates (i.e., date scheduled to receive a TMDL) for the AUs. The *Check Dates* feature allows you to view and export a list of all of items requiring a date or scheduling priority to a comma delimited text file (\*.csv), which can be opened using MS Excel. This file can then be sent to the person responsible for these crucial dates. That person can fill in the dates, save the file as a .csv file, and return the file to the person responsible for the ADB. The Data Validation Module will allow you to import this file and will update all of the crucial dates for you. You can also enter the dates directly into this form with the "Assigned Date" box.

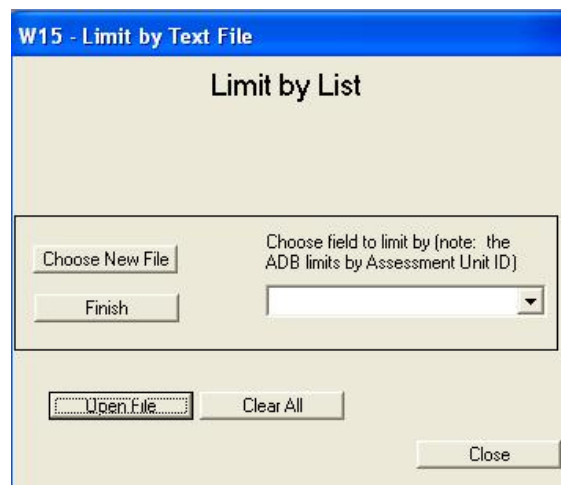


## Finalize Cycle

When you finish a reporting cycle, the *Finalize Cycle* feature can help you make sure that your data has all of the necessary components. The *Finalize Cycle* feature will create log files of all the errors that it found during the check. To use the feature, check the appropriate box for the validation check you want to perform on the “Finalize Cycle” dialog box and click the ***Begin Validation Checks*** button. You will be prompted for a storage location for the log files. The log files will be saved in .csv format, which can be opened with several different software programs, including MS Excel. These log files can also be viewed by opening them in the “Finalize Cycle” dialog box. The log files will give you a listing of all of the AUs that may have problems to be fixed. You can also view errors in the “Finalize Cycle” dialog box by clicking the ***Open Log*** button beside the appropriate validation check box.



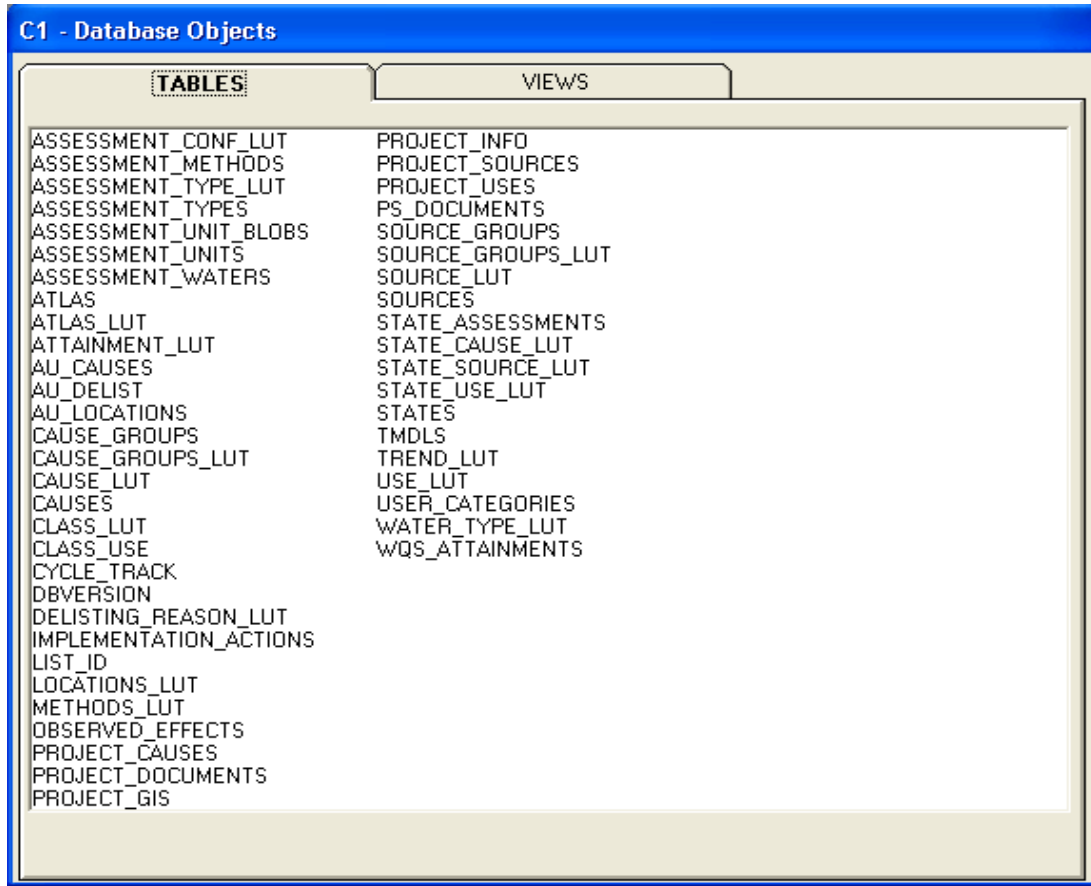
You may use the log files created by this process to limit the list of AUs accessible in the **Assessment Units** screen of the main ADBv2. This is helpful if the validation check encounters problems. The log file can limit the AUs to only those that need additional information or corrections. To limit the list of AUs by a text file, open the ADB, click the **Assessments** button and choose **Limit by Text File** from “Limit List By:” dialog box in the “Select an Assessment Unit” section of the **Assessment Units** screen. In the “Limit by List” dialog box, click on the **Choose New File** button to navigate to the file you want so you can limit your AUs. In the drop-down list, choose the field in the .csv file that corresponds to **Assessment Unit ID**, then click **Finish** and then **Close**.





## Connections Module

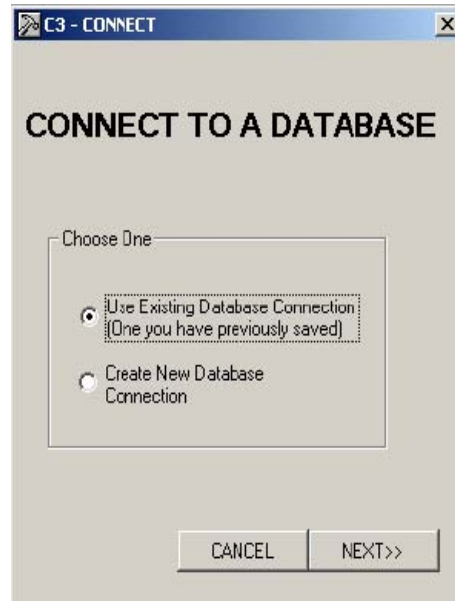
The ADBv2 comes with a companion application called Connections. This application allows the user to access data from other databases (i.e., Oracle, MS Access, SQL Server, or any ODBC-compliant database). The Connections Module can be used to link tables of information in other databases so they can be viewed within the ADB. Any data accessed through the Connections Module will not be included in the electronic submission to EPA. This feature is solely for the convenience of the ADB users.



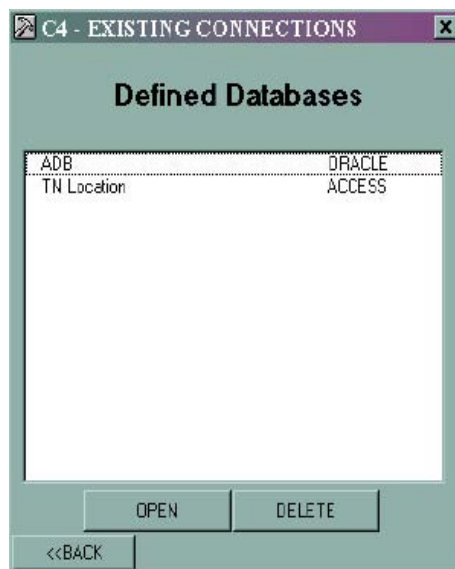
There are four toolbar menus to help you in setting up **Connections**. The **File** menu allows you to manage database connections or quit the application. The **Save database information** option under the **File** menu allows you to save database connections so they appear under **Existing Connections** during subsequent uses of the application. The user may click on **Quit** under the **File** menu or press **Control+Q** to exit the application. The **Connections** menu allows you to manage table connections. The **Windows** menu lists the names of all open screens and designates the active screen with a check mark. The **Help** menu provides version information and a phone number and email address for user support help.

## Establishing a Database Connection

Two types of database connections must be established to access data: (1) a connection to the database file itself, and (2) a connection to the actual table or query you want to access. You can establish a database connection by clicking on *Connect to a database* under the *File* menu.



You can choose to use a database connection established in a previous session or you can create a new connection. To use an existing connection, select the *Use Existing Database Connection* button and click **NEXT**. This opens a dialog listing of all saved database connections. You can delete old database connections or select one to open. If the database you are connecting to is password-protected, you will be prompted to enter a password. Otherwise, the names of the tables from the database will appear on the **Tables** tab, and the names of the queries will appear in the **Views** tab.



To establish a new database connection, select the **Create New Database Connection** button from the **Connect to a database** screen. You will be prompted to select the database type (i.e., Oracle, SQL Server, MS Access, or ODBC Data Source).

After selecting a database format, you will be prompted to enter the database location, specify security options, and decide whether the connection will be saved after the session ends. You may click on the “...” button to navigate to the database file rather than typing in the path. Security options allow the user to limit access by a user name and password. The **Test Connection** button allows you to test whether the connection will be successfully established. If the connection is successful, you will receive the message “Test Successful.” Checking the **Save connection on finish** box will enable you to access this connection in a later database session. You should click on the **Finish** button to establish the connection. The database tables will appear on the **Tables** tab, and the queries will appear in the **Views** tab.



## **Establishing a Table Connection**

You can create table connections to allow you view data while you are working in the ADB. For example, if you have an MS Access database that contains data associated with your AUs, but are not stored in the ADB, you can create a connection to that MS Access database and view and update that MS Access data while working in the ADB.

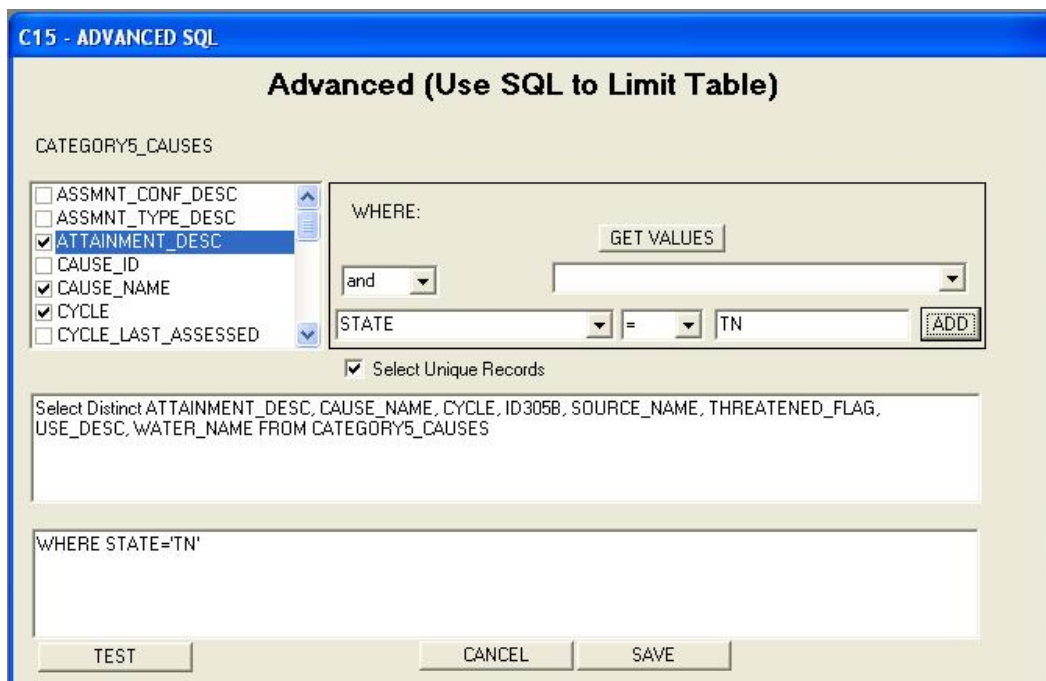
You can manage table connections via the **Connections** menu. The **View Existing Connection** option opens a screen of all saved table connections. You can delete table connections from this screen or select one to open. When the connection is opened, you will see a table of data; the same table that may be viewed within the ADB.

You can create a new table connection by choosing a table or query name and selecting **Make New Table Connection** from the **Connections** menu. You will be prompted to name the new connection. You can limit the information included in the table connection by AU ID, cycle, or TMDL ID.

Once the table connection is made, you may open it by double clicking on the table name in the **Tables** tab. When the table is open, there are a variety of functions you can use to modify it by making a field active and right clicking on the field name. You may do the following:

- # Sort Ascending/Descending
- # Copy/Paste
- # Filter
- # Find
- # Export Data

It may be useful to connect to the ADB tables. Doing this will allow you to create custom queries to answer questions, such as, “Which AUs that have the Fish and Aquatic designated use are on the Category 5 list for causes from Iron?” To answer this question, you can connect to the ADB by selecting *Create New Database Connection* from the **CONNECT TO A DATABASE** screen. Select **Oracle, SQL Server, or Access** as the database type depending on your database version. Fill out the appropriate entries to connect to your database (for SQL or Oracle users, you may need to check with your DBA to find out what these are). Click on the **Views** tab and select **Category 5 Causes**. From the **Connections** menu, choose **Advanced SQL**. This brings up a screen that will allow you to write a query (in much the same way that a query would be written in MS Access).



You may include fields in your query output by checking the boxes next to the field names. The selected field names will appear in a box at the bottom of the screen. Several drop-



down boxes on the right side of the screen can help you compose a query. One drop-down box contains a list of all the field names. Choose the *State* field from this box. The middle drop-down box allows you to select the filter type (i.e., =, >, <, >=, <=, or < >). The right drop-down box allows you to type in or select the filter criteria. Choose a *State* from this box. You can also click **GET VALUES** to get a full list of available values for the selected field. Once all of the selections criteria have been entered, click **ADD**. You can add additional criteria using “and” or “or” statements. Go back to the drop-down box for selecting fields and to choose *Cause\_Name*. Type **Iron** into the text box on the right, or use the **GET VALUES** button from a list. Once all of the queries have been entered, you can either click **TEST** to see a preview of the table, or click the **Finish** button to execute your query and exit the dialog box. When you click the **Finish** button to complete the query, you will be prompted to name the query. If you click **CANCEL**, the query information will be lost.

## **Viewing Data Within the ADB**

Once a table connection has been established in the Connections Module, you may access the data through the ADB. All saved table connections can be accessed through the *Show Connections* option under the *View* menu. This option allows you to view the data and copy and paste it into the ADB.



## **Reports Module**

The Reports Module allows users to create “canned” reports. You can access the Reports module by going to *Start->Programs->ADBv2->Reports* or by clicking on the button below the menu bar in the ADB application.

There are four types of reports that can be generated in the module: (1) *State Reports*, (2) *Summary Reports*, and (3) *AU Detail Reports* and (4) *Cycle Comparison Reports*. Reports will appear in a separate window. If you wish to save a report, go to *File->Save As* in the toolbar of the report window and save it as a text or .html file where appropriate.

## **State Reports**

State Reports were a new feature in the ADBv2.2. The following are the six reports that are available under this dialog:

- **Assessment Unit Summary List** – This report has general information associated with the assessment unit including, AU Name, Water Type, Water Size, Location Description, Use and associated Attainments, Causes, Sources, and TMDL Status. If you have additional locational information (HUC, county, etc.) for each assessment unit you can select to have the report organized by one of these instead of just alphabetical order.
- # **303(d) List Report** – This report shows all waters on the 303(d) list with their associated causes, TMDL status, uses, and sources.



- # **303(d) Delisting Report** – This report contains the assessment unit – cause combinations that have been removed from the 303(d) list since the last reporting cycle and were designated by the ADB user as a delisting.
- # **WQS Attainments Report** – This report contains the assessment unit – cause combinations that have been assigned WQS attainment reason for the recovery of the waterbody. Some of these may also be delistings and will appear in the delistings report as well.
- # **TMDL Status Report** – This report lists all of the impaired AUs that require a TMDL and any information the user has entered regarding the progress towards submitting a TMDL. Each assessment unit-cause combination without a TMDL or expected to attain date where the cause is a pollutant must have either a TMDL priority or TMDL schedule date.
- # **Atlas Report** – This report contains a summary of the waterbody information entered under **Atlas Information** and is independent of AU information in the database.

## Summary Reports

Several different report types can be generated in Summary Reports. These reports summarize data in the database and create a table in .html format. Summary Reports allow the user to:

- # Generate reports by State-specific water type or general EPA water type
- # Generate summaries based on uses, causes, or sources
- # Create data dumps
- # Produce trophic status reports on all lakes
- # Produce summaries in waterbody quality trends.

**X1: Summary Reports**

**Summary Reports**

Current State: TN

Current Cycle: 1999

Select Waterbody By:

- EPA Water Type
- Water Type

LAKE/RESERVOIR/POND  
STREAM/CREEK/RIVER

**General Reports**

- Individual Use Support Summary
- Cause Summary
- Source Summary
- Category Summary
- Trends Summary
- Trophic Status of Lake

Create New Report    Display Existing Report

**Data Dump**

Assessment Data: New Existing    Legend?

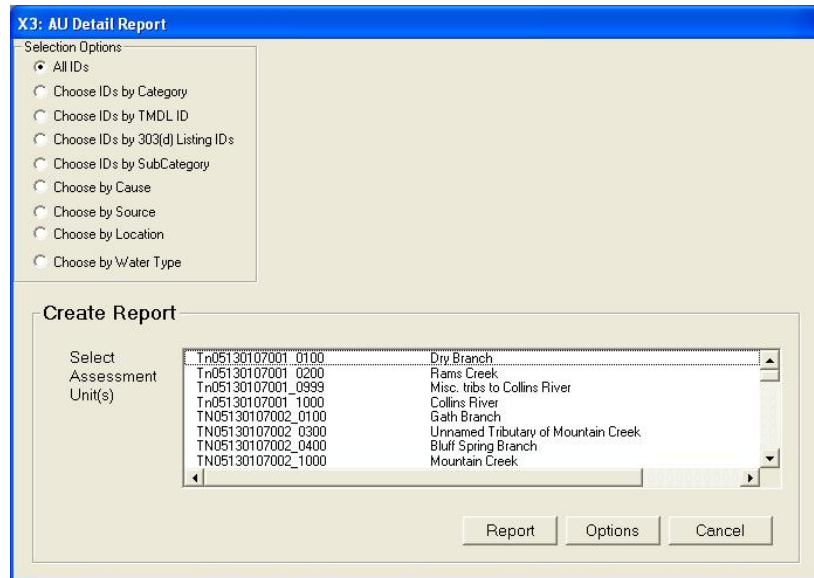
303(d) Data: New Existing

**NOTES:**  
Data dumps display information of each segment for selected states, cycle, and water types only.  
Creating new data dump can take several minutes depending upon data.

Cancel

## AU Detail Reports

The AU Detail Reports allow you to choose specific AUs based on various criteria and create custom reports on the selected AU(s).



To limit or add assessment information to be included in the report, select the options button in the lower right corner of the screen. The report **Options** screen has several data elements you can choose to include or exclude in an AU Detail Report by checking or unchecking the appropriate boxes.

## Cycle Comparison Reports

Cycle Comparison Reports is a new feature in the ADBv2.3. This reporting feature allows you to select a range of information in which you can compare data from the current cycle to the previous cycle. There are 5 available reports to choose from:

- # **Summary Statistics** – This report allows you to view the total number of assessment units in the current cycle compared to the previous cycle. You can also compare the current cycle Assessment Unit – Cause Combinations and compare Water Sizes by Category for both the current and previous cycle.
- # **Assessment Unit – Cause Combinations Added to List** – This report provides a detailed list of those assessment unit-cause combinations added to the 303(d) list since the last reporting cycle.
- # **Changed Use Attainments** – This report provides a detailed list of those assessment unit-use combinations where the use attainment has changed since the last reporting cycle.
- # **Changed Category (Assessment Unit)** – This report provides a detailed list of those assessment units that have changed overall category since the last reporting cycle. You can

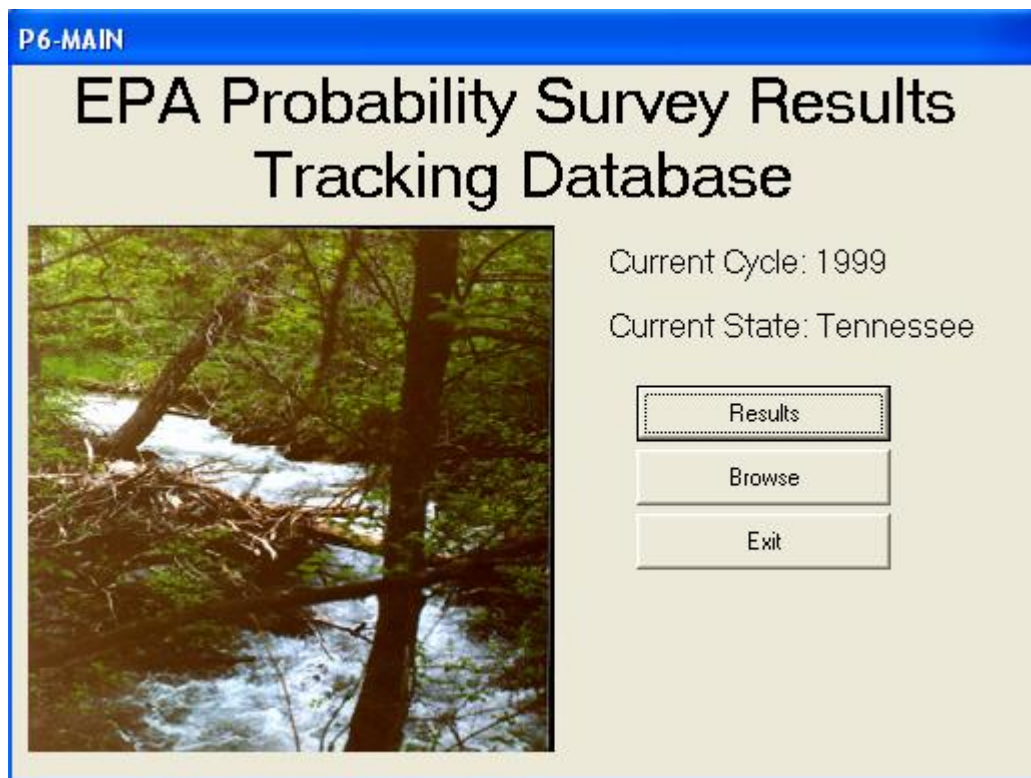
view the current assessment unit ID and overall category in comparison to the previous cycle assessment unit ID and overall category. This report is the most time consuming to run.

- # **Waters Unaccounted For** – This report provides a detailed list of those assessment unit-cause combinations that were on the 303(d) list in the last reporting cycle but are unaccounted for because a delisting/WQS attainment reason has not been provided.



### *Probability Survey Module*

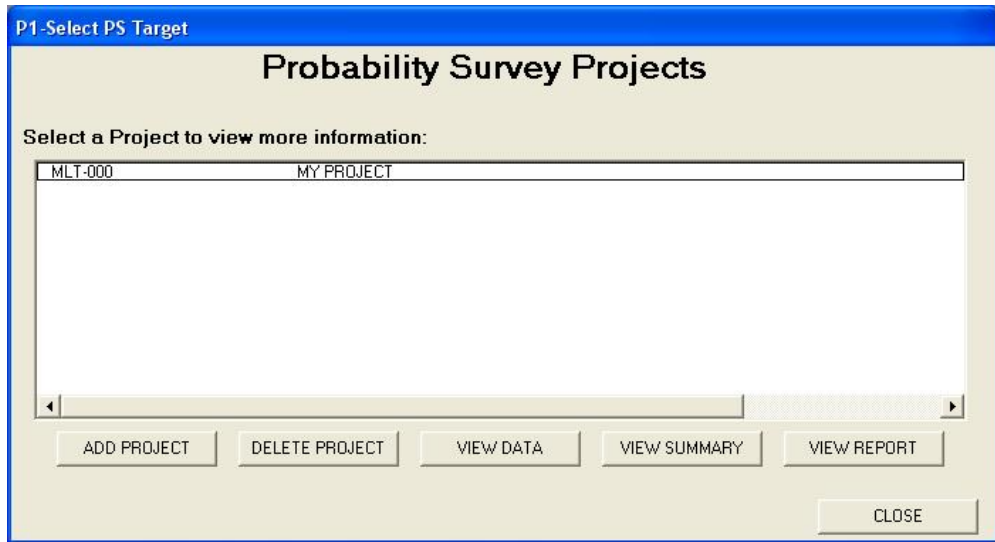
The Probability Survey Module is a new addition to the ADB and allows you to track probability-based survey information in the ADB. Within the Probability Survey Module, you can browse, add a new project, import GIS coverages, create a project report, and enter your State's probability-based assessments.



The main **Probability Survey Module** screen is structured similarly to the main ADB screen, and the features within the “Results” and “Browse” dialog function are similar to the **Assessments** and **Browse** screens in the main ADB.

## Results

The “Results” dialog box is the principal location to add probability monitoring data, update existing data, and create probability survey project reports. In the probability survey, a project is the unique unit with which all probability data is associated.



## Adding Projects

To add a probability-based project, click the **ADD PROJECT** button in the lower left corner of the dialog box. A new dialog box will open so you can add required project details.

The screenshot shows a dialog box titled "P4 - Add Project" with a main heading "Add a New Project". It contains the following fields and controls:

- Project ID:** Text box containing "P-1x"
- Project Name:** Text box containing "Project 1x"
- Indicator:** Dropdown menu with "BIOLOGICAL" selected
- Water Type:** Dropdown menu with "LAKE/RESERVOIR/POND" selected
- Total Water Size:** Text box containing "40" followed by "ACRES"
- Target Population:** Text box containing "Canyon lakes"
- Percent Not Attaining:\*** Text box containing "15"
- Percent Attaining:\*** Text box containing "80"
- Percent Nonresponsive:\*** Text box containing "5"

At the bottom right are "ADD" and "CANCEL" buttons. A note at the bottom center reads: "\* attainment percentages must sum to 100%".

Click **ADD** to save this project in the database. The “Project Details” window will appear. From here, you can add the project details and documents as desired. Click **UPDATE** to save the information, and click **CLOSE** when you are ready to return to the **Results** screen.

## Viewing and Updating Projects

To view or update the details associated with an individual project, select the record in the list box you wish to view and click the **View Data** button in the lower middle portion of the dialog box. The **Project Details** screen will open.

**P2 - Project Details**

Project Information | Geographic Information | Attainment | Uses | Causes | Sources | Documents

Target Population:\* Canyon lakes      Water Type:\* LAKE/RESERVOIR/POND

Number of Sites:      Total Water Size:\* 40 ACRES

Assessed Water Size: 10 ACRES

GIS Coverages:

GIS File ID	Datum	Scale	Projection
-------------	-------	-------	------------

GIS File Description:

Update Description

ADD NEW | UPDATE | DELETE | SAVE FILE | VIEW FILE

Current Project:

Project ID:\* P-1x      UPDATE      CLOSE

Project Name:\* Project 1x

\* denotes required fields, attainment percentages should sum to 100%

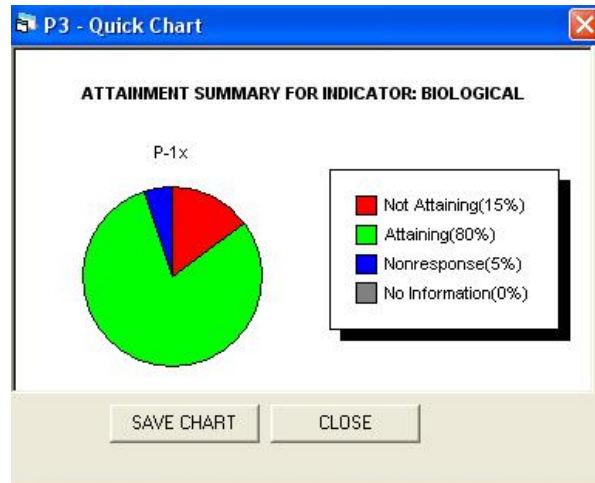
Use the tabs at the top of the dialog box to migrate between the project, geographic, attainment, uses, causes, sources, and document information. If you would like to make changes to the assessment information, click **UPDATE** to save any modifications you have made. Adding information, such as uses, causes, and files, can be executed using the techniques applied in the main ADB interface.

## Deleting Projects

To delete a project, select the record from the list box you wish to delete and click the **Delete Project** button in the lower middle portion of the dialog box. Click the **Yes** button to confirm the deletion.

## View Summary

The Probability Survey Module can create pie charts summarizing the attainment information associated with each project. To create a summary chart, select the record from the list box you wish to summarize and click the *View Summary* button in the lower middle portion of the dialog box.



You can save this chart as a .jpg image by clicking *SAVE CHART*. Navigate to the location you wish to save the chart and click *Save* in the "Choose Location" window.

## View Report

The Probability Survey Module can also create report summarizing the attainment information associated with each project. To create a report, select the record from the list box you wish to summarize and click the *View Report* button in the lower right portion of the dialog. The report will open in a separate window. If you wish to save a report, go to *File->Save As* in the toolbar of the report window and save the file as a text or .html where appropriate.

## Browse

The "Browse" dialog box is nearly identical in form and function to the *Browse* feature in the main ADB. For more information, please see Browsing Data in **Chapter 3**.

## **7. Submitting the Database**

After the data for a reporting cycle is correctly entered into the database, it should be submitted to your EPA Regional Coordinator. Your database submission should consist of a .zip file that includes the .XML files created by backing up your data. When submitting your data, also be sure to include any GIS materials that you have developed for the purpose of recording location information.

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## **8. Frequently Asked Questions**

*Q: If I begin using the MS Access or SQL Server version of the ADBv2 and later decide to use the Oracle version, will this be an easy transition?*

A: Yes. All you would need to do is back-up your data in the MS Access version, then use the *Replace* feature (**Data->Back-up/Restore**) to import your data once you have the Oracle version installed.

*Q: Can I import previous ADB versions?*

A: Yes if it is an ADBv2 database. Use the Backup/Restore feature to import your data. Run Check for Updates feature to update your data to the most recent ADBv2 version. You cannot import any ADBv1 databases.

*Q: Where do I enter the listing category for an Assessment Unit?*

A: You do not have to enter the listing category. The ADBv2 will automatically assign a category to the AU based on the information you enter in the database.

*Q: Can I change the look-up tables?*

A: No, the look-up tables cannot be changed. This is to ensure reporting consistency throughout the nation.

*Q: Can I add my own codes?*

A: The ADBv2 contains nearly 500 cause codes (many come directly out of EPA's STOrage and RETrieval system [STORET]) and nearly 200 source codes. There will always be a need for new codes to be added; however, in the interest of national consistency, it is important that all new codes be entered through one contact. Before attempting to get a new code added, you should use the *Check for Updates* feature (available from the **File** menu in the ADBv2 main screen). This will check to see whether new causes or sources have been added. If you still need to add a code, contact attainshd-hq@epa.gov.

*Q: Will the ADBv2 work with MS Vista?*

A: The current version of the ADBv2 is not supported in the MS Vista operating system environment.

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## **9. User Support and Technical Assistance**

If you require user support or technical assistance for ADBv2, you can e-mail [attainshd-hq@epa.gov](mailto:attainshd-hq@epa.gov).

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**Appendix A**  
**Assessment Database Installation Guide**

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## *Assessment Database Installation Guide for Microsoft Access*

### **System Requirements**

#### **Client (Interface):**

- # MS Windows 95, 98, NT, 2000, XP
- # 200 MHz processor
- # 64 MB RAM
- # 20 MB disk space

#### **Server (Database):**

- # 500 MHz processor
- # 128 MB RAM
- # 280 MB disk space

### **Installing the ADBv2**

#### **Before Getting Started:**

Before you install the ADB, make sure you do the following:

1. Confirm that you have administrative privileges on your computer
2. Remove previous installations of ADBv2, including both the interface and the database (Note: This installation will not interfere with ADBv1x).

#### **Interface:**

To install the ADB Interface, which contains all of the forms and graphical user interface (GUI) to interact with the database, double click on **Setup.exe**. You will be prompted to choose a location to install the ADB Interface. By default, it will install in *C:\Program Files\ADB v. 2*.

#### **Database:**

To install the ADB, which contains all of the data tables and data structure, unzip the file **ADBaccess.mdb** on either your local hard drive or a network location. Where you store the database will affect its performance. **ADBaccess.mdb** is in a .zip file in the “Databases” folder on the CD.

## *Assessment Database Installation Guide for Oracle*

### **System Requirements**

#### **Client (Interface):**

- # MS Windows 95, 98, NT, 2000
- # 200 MHz processor
- # 64 MB RAM
- # 20 MB disk space
- # Oracle 8.1.x Client

#### **Server (Database):**

- # Oracle 8.1.x Server
- # 500 MHz processor
- # 128 MB RAM
- # 280 MB disk space

### **Installing the ADBv2**

#### **Before Getting Started:**

Before you install the ADB, make sure you do the following:

1. Confirm that you have administrative privileges on your computer
2. Remove any previous installations of ADBv2, including both the interface and the database (Note: This installation will not interfere with ADBv1x)
3. Make sure you do not have another Oracle database named **ADB** before installing the database
4. Confirm that you are running Oracle 8.1.x on either the client or the server
5. Delete or rename the folder "C:\ADBdata" if it already exists on your PC.

#### **Interface:**

To install the ADB interface, which contains all of the forms and GUI to interact with the database, double click on **ADBSetup.exe**. To install only the interface, click on the option that says ***Install Application Only***. This will install the ADB interface on your computer. You will be prompted to choose a location to install the ADB interface. By default, it will install in *C:\Program Files\ADB v. 2*.



## **Database:**

To install the ADB, which contains all of the data tables, and Oracle data structure, double click on **ADBSsetup.exe**. To install both the interface and the database, click on the *Install Application and ADB Database* option. To install only the database, click on the *Install ADB Database only* option. The installation program will create the database in the folder “C:\ADBdata.” This installation may take up to 20 minutes. The installation will create one user, ADBUSER, with a password of ADBUSER. This user has all of the basic privileges to add, delete, update, and view data. However, this user does not have the privileges to delete or modify any of the existing tables or view structures. The installation creates a log called **log.txt** that will show if any problems were encountered during the installation.

## **DBA Tools**

### **Tablespaces:**

The ADB requires the following tablespaces:

- # SYSTEM: 75 MB
- # Rollback (RBS): 50 MB
- # USERS: 10 MB
- # TEMP: 20 MB
- # TOOLS: 8 MB
- # ADB\_INDX: 10 MB
- # ADB\_DATA: 100 MB

### **Users:**

The ADB comes with a default user: ADBUSER. To add new users, use the following script:

```
CREATE USER &USERNAME IDENTIFIED BY &PASSWORD DEFAULT
TABLESPACE USERS TEMPORARY TABLESPACE TEMP QUOTA UNLIMITED
ON USERS QUOTA UNLIMITED ON TEMP;
```

## **Synonyms**

For a new user to be able to access the data, he or she will need to have synonyms created. To create synonyms for a new user, run the **SYN.sql** script.

## **Privileges**

There are two roles built into the ADB: the ADB\_ADMIN\_ROLE and the ADB\_USER\_ROLE. The ADB\_ADMIN\_ROLE has all the privileges necessary to add, delete, and modify data. The ADB\_USER\_ROLE can only view data. Users should be granted roles based on what level of access to the database you want them to have. To grant roles, use the following script:

```
GRANT ADB_ADMIN_ROLE TO &USERNAME; or GRANT ADB_USER_ROLE
TO &USERNAME;
```

## *Assessment Database Installation Guide for SQL Server*

### **System Requirements**

#### **Client (Interface):**

- # MS Windows 95, 98, NT, 2000, XP
- # 200 MHz processor
- # 64 MB RAM
- # 20 MB disk space

#### **Server (Database):**

- # SQL Server 7.0 or higher
- # 500 MHz processor
- # 128 MB RAM
- # 280 MB disk space

### **Installing the ADBv2**

#### **Before Getting Started:**

Before you install the ADB, make sure you do the following:

1. Confirm that you have administrative privileges on your computer
2. Remove any previous installations of ADBv2, including both the interface and the database (Note: This installation will not interfere with ADBv1x)
3. Confirm that you have access to a SQL Server 7.x or higher data server.

#### **Interface:**

To install the ADB interface, which contains all of the forms and GUI to interact with the database, double click on **Setup.exe**.

#### **Database:**

To install the ADB, which contains all of the data tables and SQL Server data structure, create a new database on your SQL Server data server called **ADB**. On the ADB CD in the folder "Database" is a SQL Server 7.x backup of the ADB. Use the *Restore* option under **SQL Server Enterprise Manager** to import all of the **ADB Tables** and **Views**.

## **DBA Tools**

### **Users:**

The ADB does not pre-install any users; instead, you can set up whatever users you want to have access to the database. The ADB can support both levels of SQL Server security (both Windows NT security and user-specific security). The types of logins that can be accepted are managed by the server and not by the ADB.

### **Privileges:**

There are two roles built into the ADB: the ADB\_ADMIN\_USER and the ADB\_GUEST\_USER. The ADB\_ADMIN\_USER has all the privileges necessary to add, delete, and modify data. The ADB\_GUEST\_USER can only view data. Users should be granted roles based on what level of access to the database you want them to have. To grant roles, use **Enterprise Manager** to grant the desired role to a new user. Please note that a user will not be able to access any of the ADB data tables until he or she has been granted one of these roles.

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**Appendix B**  
**Troubleshooting**

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***Troubleshooting for the Access Version***

<b>Problem</b>	<b>Cause</b>	<b>Fix</b>
Error: Provider not available	This error can occur when you try to connect to the ADB via the interface. This error is caused by a corrupt .dll file on your computer.	Run Internet Explorer Service Pack 2. This will replace all of these critical data connection .dlls. This service pack is available at <a href="http://windowsupdate.microsoft.com/">http://windowsupdate.microsoft.com/</a> .
RunTime Error: "Out of Memory"	One of the .dll's required by the application did not install correctly.	Run the file <b>Setupdcp.exe</b> found in the folder "ActiveX" on the CD. You should not need to reinstall the ADB.
Cannot delete causes. Other unexplainable errors when working with <b>Cause</b> or <b>Source</b> tables	This error occurs in machines that have Windows 95, 98, and NT. A service pack for the Jet 4 (the database engine behind MS Access) must be updated.	Run <b>Jet40SP6_9xNT.exe</b> in the folder "Jet40update." Then restart your computer.

***Troubleshooting for the Oracle Version***

<b>Problem</b>	<b>Cause</b>	<b>Fix</b>
Error: No listener	The Oracle listener has not been started.	Start the listener by running <b>LSNRCTL.EXE</b> . This file is located in the Oracle home/bin. Type "Start" to start the listener.
Error: Provider not available	This error can occur when you try to connect to the ADB via the Interface. This error is caused by a corrupt .dll file (msdaora.dll) on your computer.	Run the Internet Explorer Service Pack 2. This will replace all of these critical data connection .dlls. This service pack is available at <a href="http://windowsupdate.microsoft.com/">http://windowsupdate.microsoft.com/</a> .
Error: No connect privileges	This error can occur if the user you are trying to log on as does not have "connect" privileges.	Make sure that the proper role has been assigned to the user, either <b>ADB_ADMIN_ROLE</b> or <b>ADB_USER_ROLE</b> .
When I try to install the database, I just get a DOS prompt with a lot of scrolling data.	This is not an error, but rather is part of the install. The Setup must run through a number of default oracle scripts in order to create the database.	What you should expect when you see the DOS prompt is that it should stall for a minute as it creates the tablespaces (this is normal). If you are ever prompted for a password or a username, then the install was <i>NOT</i> successful. Check the <b>log.txt</b> file in <b>C:\ADBdata\Build</b> to see a description of what happened.
Log.txt: Not connected	This error can occur during the installation of the database. The cause of this error is that the setup scripts are unable to connect to the Oracle database. There are two possible causes for this error. Either the database did not setup properly or the database requires a TNSNAMES entry in order to connect to the database.	Check to see if the folder "C:\ADBdata\Build" was created along with the folders "C:\ADBdata\admin" and ":\ADBdata\oradata." See if the "admin" folder and "oradata" folder contain an "ADB" folder. Create a <b>TNSNAMES</b> entry for the ADB.

*(continued)*

***Troubleshooting for the Oracle Version (continued)***

<b>Problem</b>	<b>Cause</b>	<b>Fix</b>
Run makedbNt.bat Error: Service not started	This error can occur if the ADB Oracle database is not mounted.	Go to <i>Start-&gt;Programs-&gt;ADB v.2</i> , then click on <i>Start Database</i> .
Error: Invalid UserName/Password	This error can occur if either the user does not exist or if the password supplied for that user is incorrect.	Make sure the user exists. If the user exists, then make sure the password is correct.
Error: Trivial Name Server (TNS) could not resolve service name	This error can occur if your database name does not match anything in your TNSNAMES.ora file.	Make sure you have pointed to the database using the <b>TNSNAMES</b> file. You can modify <b>TNSNAMES</b> by using the Oracle program "Net8 Configuration Assistant."
Error on Install: Oraclient8.dll was not found	This error occurs if the Oracle 8 client is not installed on your computer.	Install the Oracle 8 client.
Error: No table or synonym invalid	This error occurs if the synonyms were not properly created for the tables and views.	Run <b>syn.sql</b> to create the synonyms for a user.
Error: Data type not supported by this client.	This error occurs if you try to use the file or document features of the ADB and you are using an Oracle 7 client.	The document and file features of the ADB will not work with the Oracle 7 client; however, the rest of the database will function fine. You can either install the Oracle 8 client or continue to use the Oracle 7 client and not use the document or file features.

***Troubleshooting for the SQL Server Version***

<b>Problem</b>	<b>Cause</b>	<b>Fix</b>
Error: The connected database does not appear to be an ADB	This error can occur if the user you are trying to log on as does not have "connect" privileges.	Make sure that the proper role has been assigned to the user, either ADB_ADMIN_USER or ADB_GUEST_USER.
Error: Login failed	This error can occur if either the user does not exist or if the password supplied for that user is incorrect.	Make sure the user exists. If the user exists, then make sure the password is correct.
Error: Provider not available	This error can occur when you try to connect to the ADB via the interface. This error is caused by a corrupt .dll file on your computer.	Run the Internet Explorer Service Pack 2. This will replace all of these critical data connection .dlls. This service pack is available at <a href="http://windowsupdate.microsoft.com/">http://windowsupdate.microsoft.com/</a> .
RunTime Error: "Out of Memory"	One of the .dll's required by the application did not install correctly.	Run the file <b>Setupdcp.exe</b> found in the folder "ActiveX" on the CD. You should not need to reinstall the ADB.

This document is intended to assist a user in installing ADBv2. It is not expected that a user be fully familiar with all of the aspects of an MS Access, SQL, or Oracle database in order to install and run the software. For further technical assistance, please call EPA's toll-free hotline at 1-800-844-0638.



**Appendix C**  
**ADb Data Dictionary**

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**ADB 2.3.0 Data Dictionary**  
**November 2007**

**ASSESSMENT\_METHODS**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – WQS_ATTAINMENTS
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – WQS_ATTAINMENTS
USE_ID	EPA unique identifier assigned to a designated use	NUMBER(6)	Y	PK, FK	FK – WQS_ATTAINMENTS
METHODCODE	EPA unique identifier assigned to a method	NUMBER(6)	Y	PK, FK	FK – METHOD_LUT
STATE	State or other jurisdiction	CHAR(2)	Y	FK	FK – METHOD_LUT

**ASSESSMENT\_TYPES**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – WQS_ATTAINMENTS
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – WQS_ATTAINMENTS
USE_ID	EPA unique identifier assigned to a designated use	NUMBER(6)	Y	PK, FK	FK – WQS_ATTAINMENTS
ASSMNT_TYPE	Code designating a category of data types used to make attainment/impairment decision	NUMBER(6)	Y	PK, FK	FK-ASSESSMENT_TYPE_LUT
ASSMNT_CONF	A score ranging from a lower range of 1 to an upper range of up to 4 indicating the reliability and precision of the applied assessment for a category of use-specific assessment type	CHAR(2)	N	PK	Values in (1, 2, 3, 4)

**ASSESSMENT\_UNIT\_BLOBS**

Field Name	Description	Type	Not Null	Constraint	Comment
AU_BLOB_ID	Unique identifier for the file	NUMBER(7)	Y	PK	
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	FK	FK – ASSESSMENT_UNITS
CYCLE	Calendar year of the assessment	CHAR(4)	Y	FK	FK – ASSESSMENT_UNITS
AU_BLOB_DESC	Description for the AU Blob	VARCHAR2(255)	Y		
AU_BLOB	Stored file associated with assessment unit/cycle	BLOB	N		

**ASSESSMENT\_UNITS**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK	
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – STATE_ASSESSMENTS
STATE	ST - the 2 letter postal state abbreviations (e.g., VA for Virginia); exceptions are for 2 Interstate commissions. OV stands for ORSANCO (the Ohio River Valley Water Sanitation Commission) and DR stands for the Delaware River Basin Commission	CHAR(4)	Y	PK, FK	FK – STATE_ASSESSMENTS
WATER_NAME	Assessment unit name	VARCHAR2(100)	Y		
LOCATION	Description of the assessment unit's location	VARCHAR2(255)	Y		
TROPHIC_STATUS	Trophic status of publicly owned lakes	VARCHAR2(80)	N		Values in ('U', 'D', 'H', 'E', 'M', 'O')
PUBLIC_LAKE	Flag used to track public lakes	CHAR(1)	N		Values in ('Y', 'N')
MONITORING_SCHEDULE_DATE	Calendar year by which additional monitoring for attainment status will be completed	CHAR(4)	N		
CLASS_ID	Unique identifier for class assigned from WQSDB	NUMBER(6)	N	FK	FK – CLASS_LUT
CATEGORY_ID	State defined identifier for a category	VARCHAR2(10)	N		
AU_COMMENTS	Additional free-text information concerning the assessment unit	VARCHAR2(40)	N		
AU_OWNER	Used to track owner of the assessment unit	VARCHAR2(10)	N		
CYCLE_LAST_ASSESSED	Last cycle in which this assessment unit was assessed	CHAR(4)	N		
TREND	Trend as defined in Section 314 of the Clean Water Act	CHAR(1)	N	FK	FK – TREND_LUT
CAT_REPORT_FLAG	Flag used to track whether an assessment unit will be reported in	CHAR(1)	N		Values in ('S', 'U', 'C', 'B')

**ADbv2 User Guide**

	single category (S) or multiple categories, uses (U) or causes (C) or both (B)				
EPA_ADDED	Flag indicates whether EPA added a water or cause of impairment to the 303(d) list	CHAR(1)	N		

**ASSESSMENT\_WATERS**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – ASSESSMENT_UNITS
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – ASSESSMENT_UNITS
WATER_TYPE	Water type of the assessment unit (e.g., River, Estuary, Wetland)	VARCHAR2(30)	Y	PK, FK	FK – WATER_TYPE_LUT
WATER_SIZE	Size of the assessment unit	NUMBER(38,6)	Y		

**ATLAS**

Field Name	Description	Type	Not Null	Constraint	Comment
STATE	State or other jurisdiction	CHAR(2)	Y	PK, FK	FK – STATE_ASSESSMENT
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – STATE_ASSESSMENT
TOPIC_ID	Code for the water type (i.e., River) or population being reported on	NUMBER(6)	Y	PK, FK	FK – ATLAS_LUT
TOPIC_OWNER	Denotes whether the topic is one of the default options or one added by the state	CHAR(2)	Y	FK	FK – ATLAS_LUT
TOPIC_SIZE	Water or population size for a given topic	NUMBER(28,6)	N		
TOPIC_SCALE	Scale at which the total size is determined (i.e., 1:100,000)	VARCHAR2(30)	N		
TOPIC_SOURCE	Source for the size information	VARCHAR2(40)	N		
TOPIC_COUNT	Count (number) of the specified water type in the state	NUMBER(6)	N		

**ADbv2 User Guide**

**AU\_CAUSES**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – ASSESSMENT_UNITS
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – ASSESSMENT_UNITS
CAUSE_ID	EPA unique identifier assigned to the cause	NUMBER(6)	N	PK	
CYCLE_FIRST_LISTED	Cycle in which as assessment unit was first listed	CHAR(4)	N		
EXPECTED_TO_ATTAIN_DATE	Calendar year for which the associated uses impaired by this impairment will meet their standards by other means	CHAR(4)	N		
TMDL_SCHEDULE	Calendar year when the jurisdiction anticipates submitting the TMDL to EPA for approval	CHAR(4)	N		
TMDL_PRIORITY	Represents a States TMDL priority. Allowed values are H, M, L for High, Medium, and Low.	CHAR(1)	N		Values in ('L', 'M', 'H')
TMDL_COMPLETION_DATE	Date the TMDL was completed or the date by which a TMDL is expected to be completed	DATE	N		
TMDL_PROJECT_STATUS	Brief description regarding the status of the TMDL development for a given assessment unit/cause combination.	VARCHAR2(255)	N		
TMDL_PROJECT_COMMENT	Additional free-text information concerning the TMDL	VARCHAR2(4000)	N		
CONSENT_DECREE_CYCLE	Field indicates whether this assessment unit-cause combination was included in a consent decree and for what cycle.	CHAR(4)	N		
POLLUTANT_SOURCE_TYPE	Indicates whether the pollutant source type is a point source, non-point source, or both (PS/NPS/BOTH)	CHAR(1)	N		Values in ('P','N','B')
JUSTIFICATION_URL	Field stores the URL to a website or document justifying a 4B designation	VARCHAR2(250)	N		
OTHER_POINT_SOURCE_ID	Field stores information on other point sources associated with a 4B	VARCHAR2(4000)	N		

	designation				
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**AU\_DELIST**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – ASSESSMENT_UNITS
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – ASSESSMENT_UNITS
CAUSE_ID	EPA unique identifier assigned to the cause	NUMBER(6)	Y	PK,FK	FK – CAUSE_LUT
DELISTING_REASON	Reason given for delisting	NUMBER(6)	Y	FK	FK – DELISTING_REASON_LUT
DELISTING_DATE	Date on which the delisting occurred	DATE	N		
DELISTING_COMMENT	Additional comment regarding delisting	VARCHAR2(4000)	N		

**AU\_LOCATIONS**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – ASSESSMENT_UNITS
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – ASSESSMENT_UNITS
LOCID	Unique identifier assigned to a location	NUMBER(6)	Y	PK, FK	FK – LOCATIONS_LUT
STATE	State or other jurisdiction	CHAR(2)	Y	FK	FK – LOCATIONS_LUT
LATDD	Latitude in decimal degrees (only used if loctype is lat/long)	NUMBER(18,6)	N		
LONDD	Longitude in decimal degrees (only used if loctype is lat/long)	NUMBER(18,6)	N		

**AU\_NPDES**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – ASSESSMENT_UNITS
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – ASSESSMENT_UNITS
CAUSE_ID	EPA unique identifier assigned to the cause	NUMBER(6)	Y	PK,FK	FK – CAUSE_LUT
NPDES_ID	NPDES ID number	VARCHAR2(9)	Y		

**CAUSE\_GROUPS**

Field Name	Description	Type	Not Null	Constraint	Comment
CAUSE_GROUP_ID	Code designating a grouping of causes	NUMBER(6)	Y	PK, FK	FK – CAUSE_GROUP_LUT
CAUSE_ID	EPA unique identifier assigned to the cause	NUMBER(6)	Y	PK, FK	FK – CAUSE_LUT

**ADbv2 User Guide**

**CAUSES**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – WQS_ATTAINMENTS
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – WQS_ATTAINMENTS
USE_ID	EPA unique identifier assigned to a designated use	NUMBER(6)	Y	PK, FK	FK – WQS_ATTAINMENTS
CAUSE_ID	EPA unique identifier assigned to the cause	NUMBER(6)	Y	PK, FK	FK – CAUSE_LUT
POLLUTANT_FLAG	Flag used to track if cause is a pollutant ('Y') or non-pollutant (NULL)	CHAR(1)	N		Values in ('Y', NULL)
CONFIDENCE	Represents a States confidence in the impairment. Allowed values are 'H', 'M', 'L' for High, Medium, and Low	CHAR(1)	N		Values in ('L', 'M', 'H')
CAUSE_COMMENTS	Additional free-text information concerning the impairments	VARCHAR2(4000)	N		
USER_FLAG	State definable field for causes	VARCHAR2(15)	N		
STATE_CAUSE_CATEGORY	The integrated report category for the assessment unit-cause combination reported by the state	VARCHAR2(10)	N		
EPA_ADDED	Flag indicates whether EPA added a water or cause of impairment to the 303(d) list	CHAR(1)	N		

**CLASS\_USE**

Field Name	Description	Type	Not Null	Constraint	Comment
CLASS_ID	Unique identifier for CLASS_ID assigned from WQSDB	NUMBER(6)	Y	PK, FK	FK – CLASS_LUT
USE_ID	EPA unique identifier assigned to a designated use	NUMBER(6)	Y	PK, FK	FK – USE_LUT



**ADbv2 User Guide**

**CYCLE\_TRACK**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK	
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK	
PREID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK	
PRECYCLE	Calendar year of the assessment	CHAR(4)	Y	PK	
PURPOSE	Reason for change in assessment unit – Allowed values are split, join or rename	CHAR(10)	Y		Values in ('Split', 'Rename', 'Join')
AUTO_FLAG	Flag used to track if entry is automatic (1) or manual (0)	NUMBER(1)	Y		Values in (0, 1)

**DBVERSION**

Field Name	Description	Type	Not Null	Constraint	Comment
VERSION	Version of the back-end database	VARCHAR2(10)	Y		

**IMPLEMENTATION\_ACTIONS**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – AU_CAUSES
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – AU_CAUSES
CAUSE_ID	EPA unique identifier assigned to the cause	NUMBER(6)	Y	PK, FK	FK – AU_CAUSES
ACTION_DATE	Date other pollution control requirement was/will be completed.	DATE	Y	PK	
IMPLEMENTATION_ACTION	Pollution control requirements other than a TMDL taken for an assessment unit to meet standards.	VARCHAR2(4000)	N		

**LIST\_ID**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – AU_CAUSES
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – AU_CAUSES
CAUSE_ID	EPA unique identifier assigned to the cause	NUMBER(6)	Y	PK, FK	FK – AU_CAUSES
ID303D	Unique identified for 303(d) listing ID	VARCHAR2(50)	Y	PK	

**OBSERVED\_EFFECTS**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – WQS_ATTAINMENTS
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – WQS_ATTAINMENTS
USE_ID	EPA unique identifier assigned to a designated use	NUMBER(6)	Y	PK, FK	FK – WQS_ATTAINMENTS
CAUSE_ID	EPA unique identifier assigned to the cause	NUMBER(6)	Y	PK, FK	FK – CAUSE_LUT
OBSERVED_EFFECTS_COMMENT	Comment on the observed effect	VARCHAR2(4000)	N		

**PROJECT\_CAUSES**

Field Name	Description	Type	Not Null	Constraint	Comment
PROJECT_ID	Unique identifier for probability survey. ID state defined	VARCHAR2(50)	Y	PK, FK	FK – PROJECT_INFO
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – PROJECT_INFO
CAUSE_ID	EPA unique identifier assigned to the cause	NUMBER(6)	Y	PK, FK	FK – CAUSE_LUT
P_CAUSE_EST	Percent of non-attaining population impaired by the specific cause	NUMBER(28,5)	N		

**PROJECT\_DOCUMENTS**

Field Name	Description	Type	Not Null	Constraint	Comment
PROJECT_ID	Unique identifier for probability survey. ID state defined	VARCHAR2(50)	Y	PK, FK	FK – PROJECT_INFO
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – PROJECT_INFO
DOC_ID	Identifier for the stored file	NUMBER(6)	Y	PK, FK	FK – PS_DOCUMENTS
STATE	State or other jurisdiction	CHAR(2)	Y	PK, FK	FK – PS_DOCUMENTS

**PROJECT\_GIS**

Field Name	Description	Type	Not Null	Constraint	Comment
PROJECT_ID	Unique identifier for probability survey. ID state defined	VARCHAR2(50)	Y	PK, FK	FK – PROJECT_INFO
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – PROJECT_INFO
GIS_ID	Unique State assigned identifier use to identify the GIS zip file	VARCHAR2(50)	Y	PK	
GIS_DATUM	Datum of the GIS file e.g., NAD83	VARCHAR2(30)	N		
GIS_SCALE	Scale of the GIS file e.g., 1:100K	VARCHAR2(30)	N		
GIS_PROJECTION	Projection of the GIS file	VARCHAR2(30)	N		
GIS_DESC	Description of the contents of the GIS files e.g., target population	VARCHAR2(255)	N		
GIS_FILE	The stored zipped GIS files	BLOB	N		

**PROJECT\_INFO**

Field Name	Description	Type	Not Null	Constraint	Comment
PROJECT_ID	Unique identifier for probability survey. ID state defined	VARCHAR2(50)	Y	PK	
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK	
STATE	State or other jurisdiction	CHAR(2)	Y		
PROJECT_NAME	Name of the project	VARCHAR2(255)	Y		
TARGET_POPULATION	Description of the project target population	VARCHAR2(255)	Y		
NUM_SITES	Number of sites included in the project	NUMBER(6)	N		
WATER_TYPE	EPA Watertype represented by the target population	VARCHAR2(30)	Y		
TOTAL_WATER_SIZE	Total size represented by the target population	NUMBER(28,6)	Y		
ASSESSED_WATER_SIZE	Total size of the waters assessed	NUMBER(28,6)	N		
LOCATION_TYPE	Description of the type of location (i.e., 8-digit HUC, County, Statewide, etc.)	VARCHAR2(50)	N		
LOCATION_DESC	Values or description of the locations associated with a project	VARCHAR2(4000)	N		
INDICTATOR_NAME	Indicator that was monitored (e.g. Biological, Trophic State Index, etc.)	VARCHAR2(50)	Y		
INDICATOR_DESC	Description of the indicator monitored	VARCHAR2(4000)	N		
ANALYSIS_DATE	Date the attainment decision was made	DATE	N		
PERCENT_ATTAINING	Percent of target population attaining standards	NUMBER(28,6)	Y		

**ADbv2 User Guide**

PERCENT_NOT_ATTAINING	Percent of target population not attaining standards	NUMBER(28,6)	Y		
PERCENT_NON_RESPONSIVE	Percent of target population for which a use attainment assessment could not be completed	NUMBER(28,6)	Y		
N_CONF_INTERVAL	Precision of the not attaining estimate in the form of 90%, 95% or 99% confidence intervals	NUMBER(28,6)	N		Values in (90, 95, 99)
N_STANDARD_DEV	Standard deviation for the not attaining decision	NUMBER(28,6)	N		
N_LOWER_CL	The lower confidence interval for the not attaining decision	NUMBER(28,6)	N		
N_UPPER_CL	The upper confidence interval for the not attaining decision	NUMBER(28,6)	N		
A_CONF_INTERVAL	Precision of the attaining estimate in the form of 90%, 95% or 99% confidence intervals	NUMBER(28,6)	N		Values in (90, 95, 99)
A_STANDARD_DEV	Standard deviation for the attaining decision	NUMBER(28,6)	N		
A_LOWER_CL	Standard deviation for the attaining decision	NUMBER(28,6)	N		
A_UPPER_CL	The lower confidence interval for the attaining decision	NUMBER(28,6)	N		
I_CONF_INTERVAL	Precision of the non responsive estimate in the form of 90%, 95% or 99% confidence intervals	NUMBER(28,6)	N		Values in (90, 95, 99)
I_STANDARD_DEV	Standard deviation for the non responsive decision	NUMBER(28,6)	N		
I_LOWER_CL	Standard deviation for the non responsive decision	NUMBER(28,6)	N		
I_UPPER_CL	The lower confidence interval for the non responsive decision	NUMBER(28,6)	N		
ASSMNT_METHODODOLOGY	Flag used to track whether an assessment methodology document was used to make the attainment decisions	CHAR(1)	N		Values in ('Y', 'N')
MONITORING_STRATEGY	Flag used to track whether a	CHAR(1)	N		Values in ('Y', 'N')

**ADbv2 User Guide**

	monitoring strategy document is associated with the project				
USES_OPTION	Code used to track whether the project is associated with state or national uses	CHAR(1)	N		

**PROJECT\_SOURCES**

Field Name	Description	Type	Not Null	Constraint	Comment
PROJECT_ID	Unique identifier for probability survey. ID state defined	VARCHAR2(50)	Y	PK, FK	FK – PROJECT_INFO
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – PROJECT_INFO
SOURCE_ID	EPA unique identifier assigned to the source of the pollutant	NUMBER(6)	Y	PK, FK	FK – SOURCE_LUT
P_SOURCE_EST	Percent of non attaining population attributable to a particular source of pollution	NUMBER(28,6)	N		

**PROJECT\_USES**

Field Name	Description	Type	Not Null	Constraint	Comment
PROJECT_ID	Unique identifier for probability survey. ID state defined	VARCHAR2(50)	Y	PK, FK	FK – PROJECT_INFO
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – PROJECT_INFO
USE_ID	EPA unique identifier assigned to a designated use	NUMBER(6)	Y	PK, FK	FK – USE_LUT

**PS\_DOCUMENTS**

Field Name	Description	Type	Not Null	Constraint	Comment
DOC_ID	Identifier for the stored file	NUMBER(6)	Y	PK	
STATE	State or other jurisdiction	CHAR(2)	Y	PK	
DOC_DESC	Description of the stored document	VARCHAR2(255)	Y		
PS_DOCUMENT	Stored file	BLOB	N		

**SOURCE\_GROUPS**

Field Name	Description	Type	Not Null	Constraint	Comment
SOURCE_ID	EPA identifier indicating the source of the pollutant	NUMBER(6)	Y	PK, FK	FK- SOURCES_LUT
SRC_GROUP_ID	Code designating a group of sources	NUMBER(6)	Y	PK, FK	FK – SOURCE_GROUPS_LUT

**SOURCES**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK - CAUSES
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – CAUSES
USE_ID	EPA unique identifier assigned to a designated use	NUMBER(6)	Y	PK, FK	FK – CAUSES
CAUSE_ID	EPA unique identifier assigned to the cause	NUMBER(6)	Y	PK, FK	FK – CAUSES
SOURCE_ID	EPA identifier indicating the source of the pollutant	NUMBER(6)	Y	PK, FK	FK – SOURCE_LUT
SOURCE_COMMENTS	Additional free-text information concerning the source	VARCHAR2(4000)	N		
CONFIRMED	Flag used to identify whether the source has been confirmed ('Y', 'N')	CHAR(1)	N		Values in ('Y', 'N')

**STATE\_ASSESSMENTS**

Field Name	Description	Type	Not Null	Constraint	Comment
STATE	State or other jurisdiction	CHAR(2)	Y	PK, FK	FK – STATES
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK	
MERCURY_COMMENT	Comment on the 5M mercury reduction strategy	VARCHAR2(4000)	N		
MERCURY_URL	Field stores the URL to a website or document detailing the 5M mercury reduction strategy	VARCHAR2(250)	N		

**TMDLS**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK – AU_CAUSES
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK – AU_CAUSES
CAUSE_ID	EPA unique code identifying cause code TMDL applies to	NUMBER(6)	Y	PK, FK	FK – AU_CAUSES
TMDL_ID	The EPA total maximum daily load (TMDL) document ID that was developed for this assessment unit	NUMBER(6)	Y	PK	

**USER\_CATEGORIES**

Field Name	Description	Type	Not Null	Constraint	Comment
STATE	State or other jurisdiction	CHAR(2)	Y	PK	
CATEGORY_ID	State defined identifier for a category	VARCHAR2(10)	Y	PK	
CATEGORY_DESC	Description of state defined category	VARCHAR2(4000)	N		

**WQS\_ATTAINMENTS**

Field Name	Description	Type	Not Null	Constraint	Comment
ID305B	Unique identifier for assessment unit (water segment) ID state defined	VARCHAR2(50)	Y	PK, FK	FK –ASSESSMENT_UNITS
CYCLE	Calendar year of the assessment	CHAR(4)	Y	PK, FK	FK –ASSESSMENT_UNITS
USE_ID	EPA unique identifier assigned to a designated use	NUMBER(6)	Y	PK, FK	FK – USE_LUT
ATTAINMENT	The attainment status for a particular assessment unit's designated use	CHAR(1)	Y	FK	FK – ATTAINMENT_LUT
THREATENED_FLAG	Flag used to indicate threatened waters. Threatened waters are those assessment units where designates uses are being attained, but non-attainment is predicated by the time the next Integrated Report is due to be submitted	CHAR(1)	N		Values in ('Y', NULL)
USER_FLAG	State definable field for uses	VARCHAR2(15)	N		
USE_COMMENT	Additional free-text information concerning the use	VARCHAR2(4000)	N		
ASSMNT_DATE	Date on which the use was assessed	DATE	N		
START_DATE	Date on which the use assessment was started	DATE	N		
END_DATE	Date on which the use assessment ended	DATE	N		
SAMPLE_DATE	Date on which a sample was taken	DATE	N		
KEY_DATE	Date use to mark a key date associated with the use	DATE	N		
ASSESSOR	Individual performing assessment	VARCHAR2(40)	N		
EPA_ADDED	Flag indicates whether EPA added a water or cause of impairment to the 303(d) list	CHAR(1)	N		
STATE_USE_CATEGORY	The integrated report category for the assessment unit-use combination reported by the state	VARCHAR2(10)	N		

**LOOKUP TABLES**

**ASSESSMENT\_CONF\_LUT**

Field Name	Description	Type	Not Null	Constraint
ASSMNT_CONF	A score ranging from a lower range of 1 to an upper range of up to 4 indicating the reliability and precision of the applied assessment for a category of use-specific assessment type	CHAR(2)	Y	PK
ASSMNT_CONF_DESC	The textual description of the reliability and precision of the applied assessment for a category of use-specific assessment type	VARCHAR2(200)	Y	

**ASSESSMENT\_TYPE\_LUT**

Field Name	Description	Type	Not Null	Constraint
ASSMNT_TYPE	Code designating a category of data types used to make attainment/impairment decision	NUMBER(6)	Y	PK
ASSMNT_TYPE_DESC	Description of the assessment type	VARCHAR2(4000)	Y	

**ATLAS\_LUT**

Field Name	Description	Type	Not Null	Constraint
TOPIC_ID	Code for the water type (i.e., River) or population	NUMBER(6)	Y	PK
TOPIC_OWNER	Denotes whether the topic is one of the default options or one added by the state	CHAR(2)	Y	PK
TOPIC	Description of the water type or population	VARCHAR2(50)	N	
TOPIC_GROUP	Denotes higher level group the topic belongs to (i.e., rivers would belong to the TOTAL STREAMS/CREEKS/RIVERS topic group	VARCHAR2(50)	N	
SIZE_UNIT	Size of the topic	VARCHAR2(15)	N	
MAJOR_FLAG	Denotes whether the topic is one of the major topic groups	NUMBER(6)	N	

**ATTAINMENT\_LUT**

Field Name	Description	Type	Not Null	Constraint
ATTAINMENT	Code for the attainment status for a particular assessment unit's designated use	CHAR(1)	Y	PK
ATTAINMENT_DESC	Description of the attainment status for a particular assessment unit's designated use	VARCHAR2(80)	Y	

**CAUSE\_GROUP\_LUT**

Field Name	Description	Type	Not Null	Constraint
CAUSE_GROUP_ID	Code designating a grouping of causes	NUMBER(6)	Y	PK
CAUSE_GROUP_NAME	Cause group or classification name like "priority pollutant," "metals," or "carcinogens"	VARCHAR2(240)	Y	



**CAUSE\_LUT**

Field Name	Description	Type	Not Null	Constraint
CAUSE_ID	EPA unique identifier assigned to the cause	NUMBER(6)	Y	PK
CAUSE_NAME	Name of the impairment cause	VARCHAR2(240)	Y	
CAS_NO	Chemical abstract number for chemical impairment causes	VARCHAR2(11)	N	
EPA_NO	EPA chemical identifier for biological impairment cause	VARCHAR2(240)	N	
BIN	Biological identifier number for biological impairment cause	VARCHAR2(10)	N	
STORET_NO	Storet system number	VARCHAR2(10)	N	
CAUSE_DESC	Additional information concerning the impairment cause	VARCHAR2(4000)	N	

**CLASS\_LUT**

Field Name	Description	Type	Not Null	Constraint
CLASS_ID	Unique identifier for CLASS_ID assigned from WQSDB	NUMBER(6)	Y	PK
CLASS_NAME	Name of the class from WQS Regs Document	VARCHAR2(100)	Y	
CLASS_DESC	Description of Class from WQS Regs Document	VARCHAR2(4000)	N	
STATE	ST - the 2 letter postal state abbreviations (e.g., VA for Virginia); exceptions are for 2 Interstate commissions. OV stands for ORSANCO (the Ohio River Valley Water Sanitation Commission) and DR stands for the Delaware River Basin Commission	CHAR(2)	N	

**DELISTING\_REASON\_LUT**

Field Name	Description	Type	Not Null	Constraint
DELISTING_REASON	Code for the rationale for the delisting of an Assessment Unit/Pollutant combination	NUMBER(6)	Y	PK
DELISTING_REASON_DESCRIPTION	Description of the rationale for the delisting of an Assessment Unit/Pollutant Combination.	VARCHAR2(255)	Y	
REASON_FLAG	A flag indicating whether this is a delisting reason (D) or WQS attainment (W) reason	CHAR(1)	N	Values in ('D','W')
CURRENT_FORMAL_DESCRIPTION	The current formal EPA delisting or WQS attainment description	VARCHAR2(250)	N	
SORT_ORDER	Column used to sort the rows in a particular order	NUMBER(6,0)	N	
CURRENT_FLAG	Column used to determine which delisting reasons are current	NUMBER(6,0)	N	

**LOCATIONS\_LUT**

Field Name	Description	Type	Not Null	Constraint
LOCID	Identifier assigned for the location	NUMBER(6)	Y	PK
STATE	State or other jurisdiction	CHAR(2)	Y	PK

**ADBV2 User Guide**

LOCTYPE	Type of location (e.g., HUC, County, Eco-region, etc)	VARCHAR2(20)	Y	
LOCATION	Name of the location	VARCHAR2(100)	Y	

**METHODS\_LUT**

Field Name	Description	Type	Not Null	Constraint
METHODCODE	EPA unique identifier assigned to a method	NUMBER(6)	Y	PK
STATE	State or other jurisdiction	CHAR(2)	Y	PK
METHODNAME	Name of method	VARCHAR2(90)	Y	

**SOURCE\_GROUPS\_LUT**

Field Name	Description	Type	Not Null	Constraint
SRC_GROUP_ID	Code designating a group of sources	NUMBER(6)	Y	PK
SRC_GROUP_NAME	The name of the source group		Y	

**SOURCE\_LUT**

Field Name	Description	Type	Not Null	Constraint
SOURCE_ID	EPA identifier indicating the source of the pollutant	NUMBER(6)	Y	PK
SOURCE_NAME	The source of a pollutant	VARCHAR2(250)	Y	
SOURCE_DESC	Additional information about the pollutant source	VARCHAR2(4000)	N	

**STATES**

Field Name	Description	Type	Not Null	Constraint
REGION	EPA Region ID	VARCHAR2(2)	Y	
STATE	State or other jurisdiction	CHAR(2)	Y	PK
STATE_FIPS_CODE	Federal Information Processing Standard Codes for the Identification of the States, The District of Columbia and the Outlying Areas of the United States, and Associated Areas	VARCHAR2(2)	Y	
STATE_NAME	The name of the State	VARCHAR2(20)	Y	

**TREND\_LUT**

Field Name	Description	Type	Not Null	Constraint
TREND	Code for the water quality trend for a particular assessment unit as defined in Section 314 of the Clean Water Act	CHAR(1)	Y	PK
TREND_DESC	Description of the water quality trend for a particular assessment unit as defined in Section 314 of the Clean Water Act	VARCHAR2(50)	Y	

*ADbv2 User Guide*

**USE\_LUT**

<b>Field Name</b>	<b>Description</b>	<b>Type</b>	<b>Not Null</b>	<b>Constraint</b>
USE_ID	EPA unique identifier assigned to a designated use	NUMBER(6)	Y	PK
USE_DESC	Water use description as defined by EPA's Water Quality Standards System	VARCHAR2(4000)	Y	
STATE	State or other jurisdiction	CHAR(2)	N	
EFFECTIVE_DATE	The date that the state established the water use	DATE	N	

**WATER\_TYPE\_LUT**

<b>Field Name</b>	<b>Description</b>	<b>Type</b>	<b>Not Null</b>	<b>Constraint</b>
WATER_TYPE	Water type of the assessment unit (e.g., River, Estuary, Wetland)	VARCHAR2(30)	Y	PK
EPA_WATER_TYPE	An EPA defined water type (e.g., STREAM/CREEK/RIVER)	VARCHAR2(30)	Y	
SIZE_UNIT	The standard unit of measure to use for this Watertype (miles, acres, square miles)	VARCHAR2(15)	Y	