

# Overview of EDAS2 for Managing and Analyzing Water Quality Data

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# Environmental Data Analysis System



**EDAS2**  
Environmental Data  
Analysis System

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## EDAS2 Topics

1. Background and overview of the advancement from EDAS to EDAS2.
2. Key Features of EDAS2 that enhance the ability of states and organizations to manage data.
3. The link from data management to biological data analysis.
4. Sending or retrieving data from WQX\STORET, easy export of data to WQX.
5. Questions, comments, future enhancements, contact information

Draft 3/19/2009





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## 1. Background

Tetra Tech developed EDAS and EDAS2 as a tool to support our own data management, data QC, and data analysis tasks related to developing water quality indices for agencies engaged in water quality monitoring. EDAS and EDAS2 will continue to be maintained, enhanced, and supported as these products are used continually by Tetra Tech. Reasons for developing EDAS2 include:

- Maintaining compatibility with EPA's Water Quality Exchange (WQX). EDAS2 contains the same data elements, data types, and naming conventions as found in the WQX data model/database.
- Providing the option of managing and evaluating water chemistry parameters along with biology.
- To take advantage of current database and software technologies.
- To promote data sharing and exchange of analytical methods



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➤ Overview of the advancement from EDAS

| EDAS                                                                                      | EDAS2                                                                                                     |
|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Desktop database developed in MS Access                                                   | Server based for multiple users                                                                           |
| Includes Biological and Habitat data with limited water chemistry                         | Includes the complete data base as found in WQX allowing storage of biological and physical/chemical data |
| Limited data sharing and limited number of users<br>Must use correct version of MS Access | No software to install on the user's PC. Connect to EDAS2 using your web browser.                         |
|                                                                                           |                                                                                                           |

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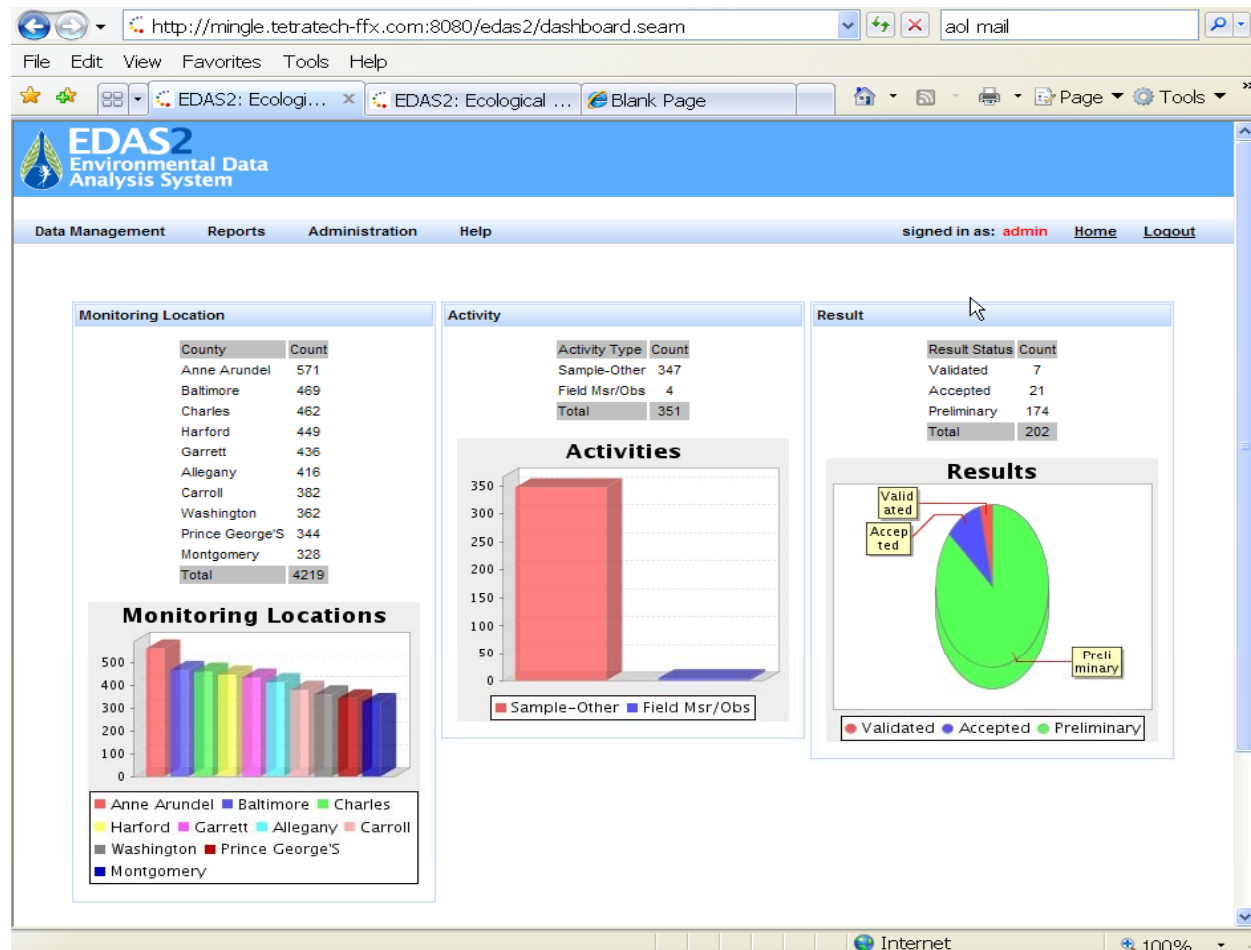


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## 2. Key Features of EDAS2 that enhance the ability of states to manage monitoring data

- The EDAS2 home page includes a 'Dashboard' view of the database.
- The Dashboard can be customized and provides data summaries by location, activity, and results



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- Navigation is easily accomplished using the drop-down menus

The screenshot shows the EDAS2 Environmental Data Analysis System web interface. The browser address bar displays the URL: <http://mingle.tetrattech-ffx.com:8080/edas2/dashboard.seam?cid=929>. The interface includes a navigation menu on the left with options like 'Data Management', 'Reports', 'Monitoring Locations', 'Activities', 'WQX', and 'Imports'. A dropdown menu is open under 'Data Management', showing options like 'Monitoring Locations', 'Activities', 'WQX', and 'Imports'. The main content area displays a table of 'Monitoring Location' data, a bar chart of 'Monitoring Locations', and a 'Results' section with a pie chart showing 'Validated', 'Accepted', and 'Preliminary' data.

| County          | Count |
|-----------------|-------|
| Anne Arundel    | 347   |
| Baltimore       | 4     |
| Charles         | 351   |
| Harford         |       |
| Garrett         |       |
| Allegany        |       |
| Carroll         |       |
| Washington      |       |
| Prince George's |       |
| Montgomery      |       |
| Total           | 4219  |

| Result Status | Count |
|---------------|-------|
| Validated     | 7     |
| Accepted      | 21    |
| Preliminary   | 174   |
| Total         | 202   |

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- The monitoring location screen is typical of screens in EDAS2, allowing users to view, create, or update records.

- This Monitoring Location screen includes multiple tools and appears when the user selects monitoring locations from the drop down menu.

Search for stations, user filters on station name by enter 'PI', Stations starting with 'PI' show on Map and data grid. Selected station is highlighted in blue

1. User may download and display stations\data from STORET  
2. User may move station using the Google Map Window

Monitoring Location Filter

| ID | Name | HUC8 | Location | Status | Tag |
|----|------|------|----------|--------|-----|
|    | PI   |      |          |        |     |

Apply Filter Reset Filter

Add Monitoring Location

displaying 1 - 10 of 11

Monitoring Locations

| Action | ID              | Name                            | Location             | HUC8    | Latitude           | Longitude           | Status                 | Tag           | Details | Image(s) | WQX Status | Activities |
|--------|-----------------|---------------------------------|----------------------|---------|--------------------|---------------------|------------------------|---------------|---------|----------|------------|------------|
|        | PISC-103-R-2001 | <a href="#">PISC-103-R-2001</a> | Prince George's - MD | 2140203 | 38.800509009999999 | -76.901633380000007 | Maryland Pre Validated | EPA3 Maryland |         |          |            | (1)        |
|        | PISC-104-R-2001 | <a href="#">PISC-104-R-2001</a> | Prince George's - MD | 2140203 |                    |                     |                        |               |         |          |            | (1)        |
|        | PISC-105-R-2001 | <a href="#">PISC-105-R-2001</a> | Prince George's - MD | 2140203 |                    |                     |                        |               |         |          |            | (1)        |

1. User clicks here to add a monitoring location  
2. User clicks pencil to edit individual record

Monitoring Location data are valid for WQX upload

Activity exists for the location. User clicks on the activity icon to open activity data grid.

1. User clicks Details Icon for more information on the monitoring location. 2. User clicks on the image view to manage and see larger site images (see next slide) 3. User can see the number of activities for the station.

Map Center  
Latitude: 38.79316214013487  
Longitude: -77.18307495117187  
Options  
☐ Display STORET Stations  
☐ Move Stations

Map Satellite Hybrid

PISC-104-R-2001





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- From the Monitoring Location screen a user may add multiple pictures of a monitoring location, clicking on the thumbnail opens the picture in a larger window.

The screenshot displays the EDAS2 Monitoring Locations application interface. The main window shows a large image of a lake with lily pads and dead trees. The left sidebar contains a map, a filter section, and a table of monitoring locations. The right sidebar shows user information and a table of activities.

**Monitoring Location Filter**

| ID                   | Name                 |
|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> |

**Add Monitoring Location**

Displaying 1 - 10 of 23

| Action | ID  | Name                          |
|--------|-----|-------------------------------|
|        | 686 | <a href="#">NLA06608-0042</a> |
|        | 687 | <a href="#">NLA06608-0090</a> |

**WQX Status**

| WQX Status | Activities |
|------------|------------|
|            | (0)        |
|            | (0)        |



- Back to the Monitoring Location Screen and 'drilling' down to activities and results for our selected monitoring location (PISC-104-R-2001)

Displaying 1 - 10 of 28

| Monitoring Locations                                                                                                                                                |                 |                                 |                      |         |                    |                    |                        |               |                                                                                                          |                                                                                     |                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------------------|----------------------|---------|--------------------|--------------------|------------------------|---------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Action                                                                                                                                                              | ID              | Name                            | Location             | HUC8    | Latitude           | Longitude          | Status                 | Tag           | Details                                                                                                  | Image(s)                                                                            | WQX Status                                                                          |
|   | PISC-103-R-2001 | <a href="#">PISC-103-R-2001</a> | Prince George's - MD | 2140203 | 38.800509009999999 | 76.901633380000007 | Maryland Pre Validated | EPA3 Maryland |  <a href="#">View</a> |  |  |
|   | PISC-104-R-2001 | <a href="#">PISC-104-R-2001</a> | Prince George's - MD | 2140203 | 38.723885260000003 | 76.968612440000001 | Maryland Pre Validated | EPA3 Maryland |  <a href="#">View</a> |  |  |
|   | PISC-105-R-     | <a href="#">PISC-105-R-</a>     | Prince George's -    | 2140203 | 38.772525          | -                  | Maryland Pre           | EPA3          |  <a href="#">View</a> |  |  |

1. Click on the activity icon for the monitoring location and the activity screen opens.
2. The user may edit an existing activity or create a new activity.



### Activity Details

|                           |                            |                             |                                                          |
|---------------------------|----------------------------|-----------------------------|----------------------------------------------------------|
| Monitoring Location       | PISC-104-R-2001            | Start Date                  | 2001-03-01                                               |
| ID                        | 5847                       | End Date                    |                                                          |
| Project                   | MD Test                    | Latitude                    |                                                          |
| Activity Type             | Sample-Other               | Longitude                   |                                                          |
| Media                     | Biological                 | Sample Collection Method    | Benthic Macroinvertebrate Sample Processing and Analysis |
| Media Subdivision         |                            | Sample Collection Equipment | D-Frame Net                                              |
| Assemblage                | Benthic Macroinvertebrates | Comments                    |                                                          |
| Relative Depth            |                            |                             |                                                          |
| Depth Top (Value Unit)    |                            |                             |                                                          |
| Depth Bottom (Value Unit) |                            |                             |                                                          |

Add New Edit Close

Displaying 1 - 1 of 1

| Action                                                                                                                                                                  | ID   | Project |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------|
|   | 5847 | MD Test |

Records per Page 10

3. Drill down to Results



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- Drill down from the activity to results for site PISC-104-R-2001

EDAS2 Environmental Data Analysis System

Activity Details

Monitoring Location: PISC-104-R-2001 Start Date: 2001-03-01

ID: 5847 End Date:

Displaying 1 - 17 of 17

| Action | Taxon *          | Count * | Status      | Exclude | Comments           | Details | WQX Status |
|--------|------------------|---------|-------------|---------|--------------------|---------|------------|
|        | Tipula           | 30      | Validated   |         | Most found in CPOM |         |            |
|        | Stegopterna      | 6       | Validated   |         |                    |         |            |
|        | Rheotanytarsus   | 12      | Validated   |         |                    |         |            |
|        | Prostoia         | 27      | Validated   |         |                    |         |            |
|        | Paratanytarsus   | 42      | Validated   |         |                    |         |            |
|        | Parametriocnemus | 5       | Validated   |         |                    |         |            |
|        | Microtendipes    | 1       | Preliminary |         |                    |         |            |
|        | Lumbriculidae    | 1       | Preliminary |         |                    |         |            |
|        | Dubiraphia       | 1       | Preliminary |         |                    |         |            |
|        | Dicranota        | 1       | Not set     |         |                    |         |            |
|        | Diamesa          | 32      | Accepted    |         |                    |         |            |
|        | Crangonyx        | 1       | Validated   |         |                    |         |            |
|        | Conchapelopia    | 11      | Rejected    |         |                    |         |            |
|        | Clioperla        | 3       | Preliminary |         |                    |         |            |
|        | Clinocera        | 4       | Preliminary |         |                    |         |            |
|        | Cheumatopsyche   | 2       | Preliminary |         |                    |         |            |
|        | Ameletus         | 4       | Preliminary |         |                    |         |            |

Records per Page 25

1. The user clicked on the Result Icon which opens the results screen



2. The results screen is like other EDAS2 screens, records are editable and many fields are tied to lists to reduce typing and errors.

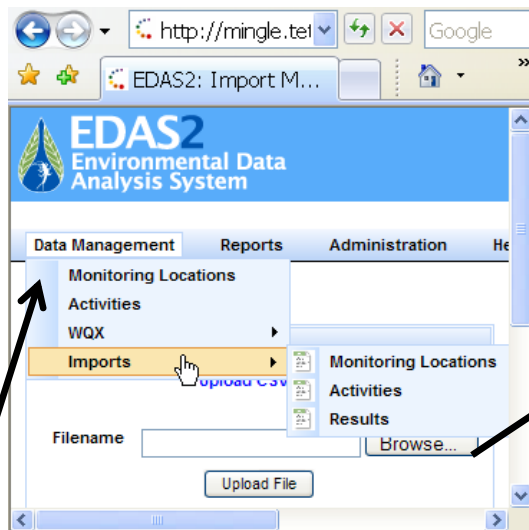




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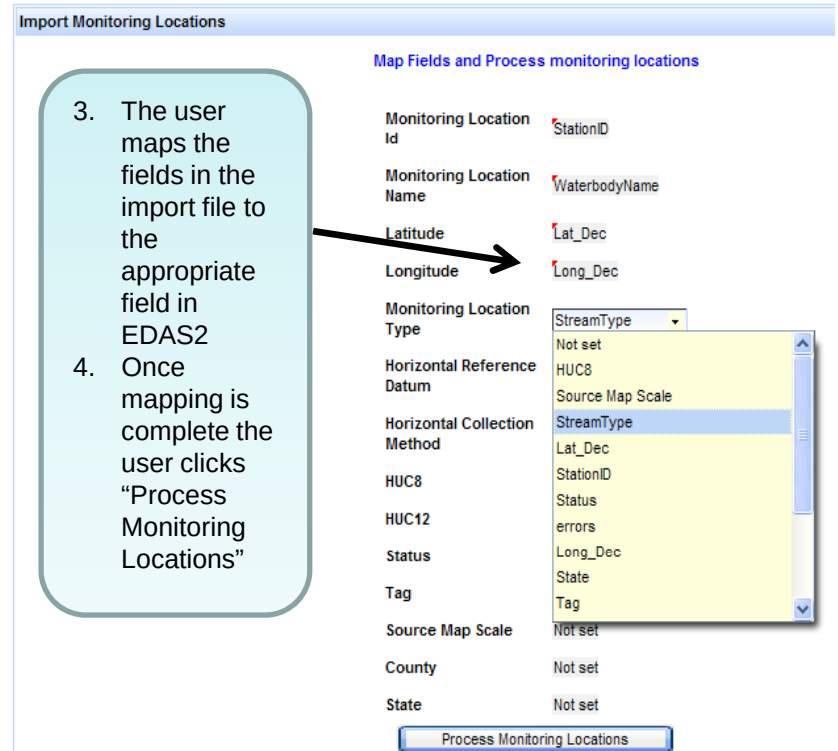


- EDAS2 lets you import data from a flat file that you would receive from a lab



1. The user clicks on Data Management > Imports > Monitoring Locations (or activities or results)

2. The user finds the file for importing by using the Browse feature



3. The user maps the fields in the import file to the appropriate field in EDAS2
4. Once mapping is complete the user clicks "Process Monitoring Locations"

5. Next Slide



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- EDAS2 Imports bulk data from a flat file.

1. After clicking "Process Monitoring Stations" (previous slide), EDAS2 opens this window confirm data import

Import Monitoring Locations

Confirm Monitoring Locations

Import Monitoring Locations Discard Monitoring Locations

Only valid Monitoring Locations will be imported

| Row | Monitoring Location Id | Name                  | Latitude    | Longitude    | Type         | Horizontal Ref Datum | Horizontal Coll Method | HUC8 | HUC12 | Status    | Tag      | Map Scale | County     | State | Valid |
|-----|------------------------|-----------------------|-------------|--------------|--------------|----------------------|------------------------|------|-------|-----------|----------|-----------|------------|-------|-------|
| 0   | 05NPonil000.1          | North Ponil Creek     | 36.58805556 | -104.9655556 | River/Stream | NAD27                | GPS-Unspecified        |      |       | NM - Test | Region 6 |           | Colfax     | NM    | ✓     |
| 1   | 28GRanc013.1           | Rio Grande del Rancho | 36.29777    | -105.58194   | River/Stream | NAD27                | GPS-Unspecified        |      |       | NM - Test | Region 6 |           | Taos       | NM    | ✓     |
| 2   | 29RChama143.8          | Chama River           | 36.66583333 | -106.6597222 | River/Stream | NAD27                | GPS-Unspecified        |      |       | NM - Test | Region 6 |           | Rio Arriba | NM    | ✓     |
| 3   | 29RPuerc037.5          | Rio Puerc de Chama    | 36.10022222 | -106.7269167 | River/Stream | NAD27                | GPS-Unspecified        |      |       | NM - Test | Region 6 |           | Rio Arriba | NM    | ✓     |
| 4   | 50Gallin119.7          | Gallinas River        | 35.65194444 | -105.3183333 | River/Stream | NAD27                | GPS-Unspecified        |      |       | NM - Test | Region 6 |           | San Miguel | NM    | ✓     |

2. After clicking "Import Monitoring Locations". EDAS2 opens this window

3. FYI.. The process for importing activities and results follows the same process. You start by importing Monitoring locations (ML) because activities must be associated with ML and results must be associated with activities.

http://node2a.tetrattech-ffx.com:8080/edas2/impmonloc.seam

File Edit View Favorites Tools Help

EDAS2 Environmental Data Analysis System

Data Management Reports Administration Help signed in as: admin Home Logout

Import Monitoring Locations

Confirm Monitoring Locations

Import Monitoring Locations Discard Monitoring Locations

Only valid Monitoring Locations 5 out of 5 will be imported  
No Invalid Records found in the imported file. Please click import monitoring locations button to import valid records.

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[ Reset session | Debug console ]  
conversation: id = 50, long running  
Date rendered: 2/10/09 7:59:16 AM

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- More EDAS2 Features that enhance the ability of states to manage monitoring data

- Support Cross-Media monitoring data management and submission
- Assemblages include benthic macroinvertebrates, fish, periphyton, etc.

EDAS2 Environmental Data Analysis System

Data Management Reports Administration Help

signed in as: admin Home Logout

Activity Filter

ID Sample Collection Method After Start Date Before End Date

Assemblage Any Media Sample Collection Equipment

Any Air Biological Habitat Other Sediment Soil Tissue Water

Displaying 1 - 10 of 241

| Action | ID      | Media      | Start Date | End Date   | Sample Collection Method | Sample Collection Equipment | Details | WQX Status | Results |
|--------|---------|------------|------------|------------|--------------------------|-----------------------------|---------|------------|---------|
|        | 1232889 | Tissue     | 2008-11-20 | 2008-11-21 | method                   | A-Frame Net                 |         |            | (8)     |
|        | 1234    | Biological | 2008-11-04 |            | asdf                     | Artificial Substrate        |         |            | (4)     |
|        | 12345   | Water      | 2008-10-02 | 2008-11-20 | Grab23                   | Kemmerer Bottle             |         |            | (29)    |

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Browser address bar: <http://mingle.tetrattech-ffx.com:8080/edas2/acts.seam?cid=0>

File Edit View Favorites Tools Help

EDAS2: Activities x EDAS2: Ecological D... Blank Page

## EDAS2 Environmental Data Analysis System

Data Management Reports Administration Help signed in as: admin Home Logout

Activity Filter

Displaying 1 - 10 of 351

| Action | ID   | Project | Assemblage                 | Media      | Start Date | End Date | Sample Collection Method                                 | Sample Collection Equipment | Details | WQX Status | Results |
|--------|------|---------|----------------------------|------------|------------|----------|----------------------------------------------------------|-----------------------------|---------|------------|---------|
|        | 3159 | MD Test | Benthic Macroinvertebrates | Biological | 2001-03-03 |          | Benthic Macroinvertebrate Sample Processing and Analysis | D-Frame Net                 |         |            | (0)     |
|        | 3161 | MD Test | Benthic Macroinvertebrates | Biological | 2001-03-03 |          | Benthic Macroinvertebrate Sample Processing and Analysis | D-Frame Net                 |         |            | (1)     |
|        | 3162 | MD Test | Benthic Macroinvertebrates | Biological | 2001-03-03 |          |                                                          | D-Frame Net                 |         |            | (0)     |
|        | 3288 | MD Test | Benthic Macroinvertebrates | Biological | 2000-04-29 |          |                                                          |                             |         |            | (0)     |
|        | 3289 | MD Test | Benthic Macroinvertebrates | Biological | 2000-04-01 |          |                                                          |                             |         |            | (0)     |
|        | 3290 | MD Test | Benthic Macroinvertebrates | Biological | 2000-04-01 |          |                                                          | D-Frame Net                 |         |            | (0)     |
|        | 3291 | MD Test | Benthic Macroinvertebrates | Biological | 2000-04-01 |          |                                                          | D-Frame Net                 |         |            | (0)     |
|        | 3292 | MD Test | Benthic Macroinvertebrates | Biological | 2000-04-01 |          |                                                          | D-Frame Net                 |         |            | (0)     |
|        | 3293 | MD Test | Benthic Macroinvertebrates | Biological | 2000-04-01 |          |                                                          | D-Frame Net                 |         |            | (0)     |
|        | 3294 | MD Test | Benthic Macroinvertebrates | Biological | 2000-04-01 |          |                                                          | D-Frame Net                 |         |            | (0)     |

Records per Page 10

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[ Reset session | Debug console ]  
conversation id = 101, log running

➤ Provides data standard compliance using result and activity-level record flagging that alerts the user to missing or non-valid data.



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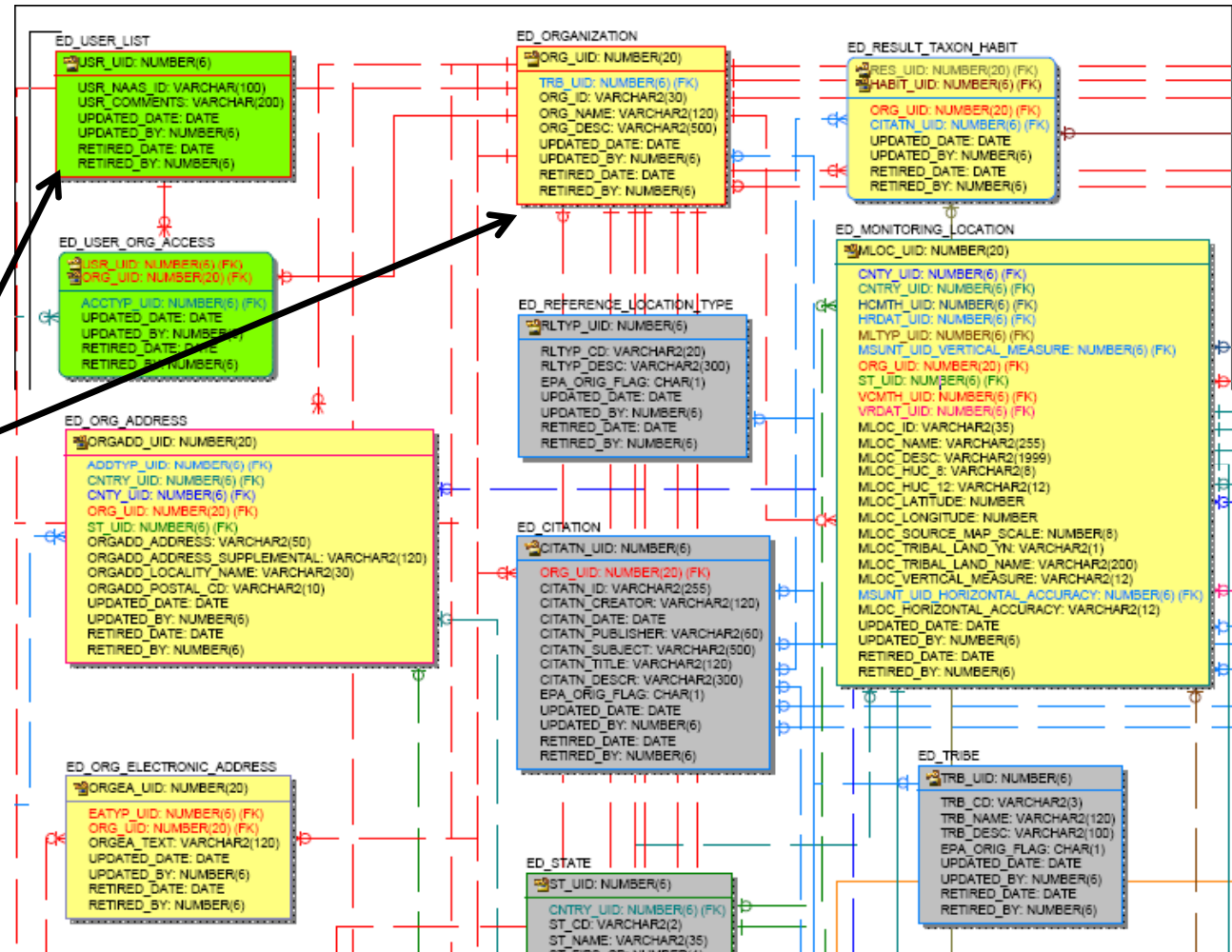
- Manage characteristics or domain lists including the taxonomy list
- Taxonomy browser for managing the taxa list.

The screenshot displays the EDAS2 Environmental Data Analysis System interface. The top navigation bar includes 'Data Management', 'Reports', 'Administration', and 'Help'. The 'Administration' menu is open, showing options like 'Organization', 'Projects', 'Characteristic Types', 'Characteristic Type Media Associations', 'Characteristics', 'Taxonomy', 'Analytical Methods', and 'Functional Feeding Groups'. The 'Taxonomy' option is selected, leading to a 'Taxonomy' browser window. This window shows a tree view of taxonomic levels, with 'Plecoptera' selected. A 'Selected Taxonomy' panel on the right displays details for 'Plecoptera', including 'EPA Original Value', 'Taxon Rank', 'Assemblage', 'Pollution Tolerance', 'Feeding Group', 'Life Stage', 'Habitat', 'Class', 'Division', 'Family', 'Form', 'Genus', 'Infraclass', 'Infraorder', 'Kingdom', 'Order', 'Phylum', 'Species', and 'Is EPA Original Value'. A 'Photo of subject taxon coming Soon' placeholder is overlaid on the 'Taxonomy' browser. A dropdown menu is open, showing a list of taxonomic levels: 'Class', 'Division', 'Family', 'Form', 'Genus', 'Infraclass', 'Infraorder', 'Kingdom', 'Order', 'Phylum', 'Species', and 'Not set'.



## 3. The link from data management to data analysis

- The data elements and metadata in EDAS2 provide the who, what, when, where, why, and how required for complete and known quality data.
- The back-end database includes all the data elements found in WQX, multiple users and multiple organizations are supported.
- EDAS2 can be customized by adding additional data elements to accommodate requirements for an organization. Examples may include staffing, monitoring location reconnaissance, sample chain of custody, etc.







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- Tools for data analysis
- EDAS2 can export raw data or metric values

1. Select Reports > Benthic Macro Invertebrate Data

2. After selecting the report EDAS2 opens this window that allows the user to filter or select specific Monitoring locations, activity dates, and characteristics such as 'count' for taxa abundance data.

3. FYI... Additional analysis tools and report templates are currently being added to EDAS2

4. Next Slide

| County       | Count |
|--------------|-------|
| Anne Arundel | 571   |
| Baltimore    | 469   |
| Charles      | 462   |
| Harford      | 449   |
| Total        | 352   |

| Activity Type | Count |
|---------------|-------|
| Sample-Other  | 347   |
| Field Msr/Obs | 5     |
| Total         | 352   |

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[ Reset session | Debug console ]  
conversation: id = 1133, long running  
Date rendered: 2/18/09 4:07:09 PM





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1. User clicked "Generate Report" (previous slide). Report is generated and can be saved or opened

EDAS2: Field Measurement Report - Windows Internet Explorer

http://mingle.tetrattech-ffx.com:8080/edas2/report.seam?type=1&cid=0

File Edit View Favorites Tools Help

EDAS2: Field Measur... EDAS2: Field Mea... EDAS2: Monitoring L...

EDAS2 Environmental Data Analysis System

Data Management Reports Administration Help signed in as: admin Home Logout

Benthic Macro Invertebrate Data Report

0% of report.seam from mingle.tetrattech-ffx.com

Monitoring Location

Name

Activity

Start Date

End Date

File Download

Do you want to open or save this file?

Name: benthicMeasurementsReport.zip

Type: WinZip File, 1.52KB

From: mingle.tetrattech-ffx.com

Open Save Cancel

Getting File Information:

...thidMeasurementsReport.zip from mingle.te

Estimated time left

Download to:

Transfer rate:

☐ Close this dialog box when download comp

Open Open

While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. [What's the risk?](#)

Done Internet 100%

| A  | B       | C       | D      | E          | F          | G       | H       | I        | J       | Q        | R        | S       | T               | U        |
|----|---------|---------|--------|------------|------------|---------|---------|----------|---------|----------|----------|---------|-----------------|----------|
| 1  | ORG_UID | TRB_UID | ORG_ID | ORG_NAM    | ORG_DES    | UPDATED | UPDATED | MLOC_UID | NTY_UID | CNTRY_UI | VCMT_VRD | MLOC_ID | MLOC_NAM        | MLOC_DES |
| 2  | 1       | 1       | TTECH  | Tetra Tech | Tetra Tech | 00:00:0 | 1       | 5928     | 1218    |          |          |         | PISC-104-R-2001 |          |
| 3  | 1       | 1       | TTECH  | Tetra Tech | Tetra Tech | 00:00:0 | 1       | 5928     | 1218    |          |          |         | PISC-104-R-2001 |          |
| 4  | 1       | 1       | TTECH  | Tetra Tech | Tetra Tech | 00:00:0 | 1       | 5928     | 1218    |          |          |         | PISC-104-R-2001 |          |
| 5  | 1       | 1       | TTECH  | Tetra Tech | Tetra Tech | 00:00:0 | 1       | 5928     | 1218    |          |          |         | PISC-104-R-2001 |          |
| 6  | 1       | 1       | TTECH  | Tetra Tech | Tetra Tech | 00:00:0 | 1       | 5928     | 1218    |          |          |         | PISC-104-R-2001 |          |
| 7  | 1       | 1       | TTECH  | Tetra Tech | Tetra Tech | 00:00:0 | 1       | 5928     | 1218    |          |          |         | PISC-104-R-2001 |          |
| 8  | 1       | 1       | TTECH  | Tetra Tech | Tetra Tech | 00:00:0 | 1       | 5928     | 1218    |          |          |         | PISC-104-R-2001 |          |
| 9  | 1       | 1       | TTECH  | Tetra Tech | Tetra Tech | 00:00:0 | 1       | 5928     | 1218    |          |          |         | PISC-104-R-2001 |          |
| 10 | 1       | 1       | TTECH  | Tetra Tech | Tetra Tech | 00:00:0 | 1       | 5928     | 1218    |          |          |         | PISC-104-R-2001 |          |
| 11 | 1       | 1       | TTECH  | Tetra Tech | Tetra Tech | 00:00:0 | 1       | 5928     | 1218    |          |          |         | PISC-104-R-2001 |          |
| 12 | 1       | 1       | TTECH  | Tetra Tech | Tetra Tech | 00:00:0 | 1       | 5928     | 1218    |          |          |         | PISC-104-R-2001 |          |
| 13 |         |         |        |            |            |         |         |          |         |          |          |         |                 |          |

2. Benthic Measurements data (raw) open in Excel.
3. The same process is used to select biological data, calculate metrics, download metric values (results).

|           |      |           |        |
|-----------|------|-----------|--------|
| Clipboard | Font | Alignment | Number |
|-----------|------|-----------|--------|

G8

| A               | B               | C      | D        | E       | F       | G        | H          | I          |
|-----------------|-----------------|--------|----------|---------|---------|----------|------------|------------|
| MLOC_ID         | MLOC_NAME       | ACT_ID | ACT_STAR | ACT_END | TAXA_NO | INDIV_NO | EPHEM_TAXA | PERC_EPHEM |
| PISC-104-R-2001 | PISC-104-R-2001 | 5847   | 3/1/2001 |         | 11      | 61       | 1          | 1.64       |



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#### 4. Sending or retrieving data to\from WQX\STORET, easy export of data to WQX.

EDAS2 Environmental Data Analysis System

signed in as: admin Home Logout

Data Management Reports Administration Help

Monitoring Locations Activities

WQX Imports

Export Import

| County       | Count |
|--------------|-------|
| Anne Arundel | 8     |
| Rio Arriba   | 2     |
| Neshoba      | 2     |
| Monroe       | 1     |
| Panola       | 1     |
| Taos         | 1     |
| Pike         | 1     |
| Bolivar      | 1     |
| Colfax       | 1     |
| Lafayette    | 1     |

Activities

| Activity Type  | Count |
|----------------|-------|
| Sample-Other   | 27    |
| Sample-Routine | 1     |
| Total          | 28    |

Result

Validation Accept Preliminary Total

Export WQX

Do you want to open or save this file?

Name: wxq.zip  
Type: WinZip File  
From: node2a.tetrattech-ffx.com

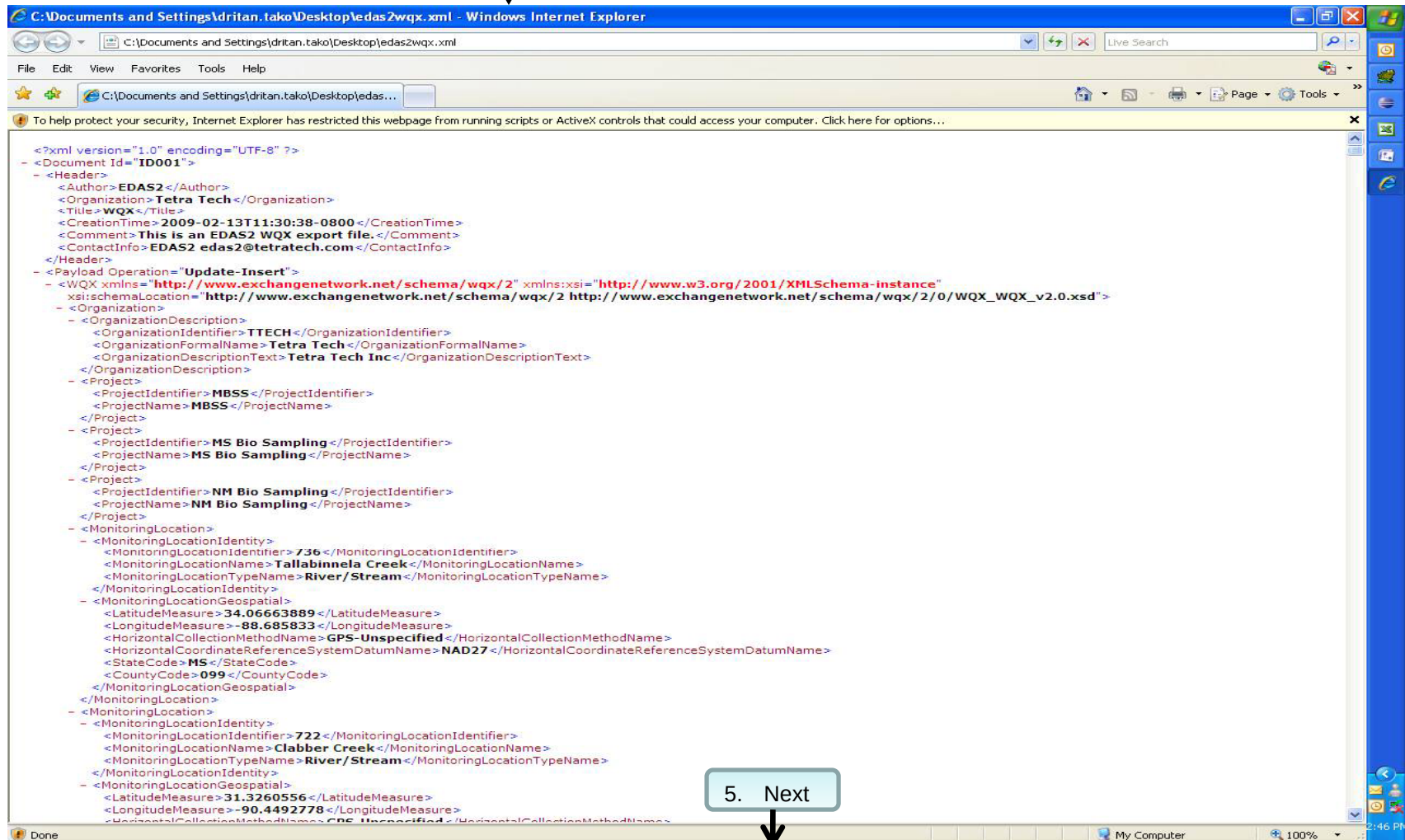
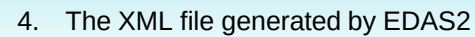
Open Save Cancel

While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or use the file. [What's the risk?](#)

3. Next Slide

/edas2/wqxexp.seam Internet 100%

1. User selects data management > WQX > Export
2. EDAS2 generates an XML file for upload to WQX.
3. Next Slide



## 5. Next





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6. Options for loading the EDAS2 XML file to WQX



1. Once you generate a WQX file and you have a node, a node user/administrator can **submit** the WQX file to EPA's CDX through the node (after generated and downloaded from EDAS2).
2. If you already have a node, you can **implement** a node flow (plugin) that will read the EDAS2 database, generate the WQX file and submit to CDX (all these operations being done either manually or automatically through the node).
  - a. Tetra Tech has available a flow (plugin) created for the CGI Node, but it will **only** work with the CGI node.
  - b. The Tetra Tech CGI node plugin will allow the above described operations to be done manually only from the node client interface or through web services, there is no automatic functionality at this time:
    - user authenticates to the node
    - user calls the EDAS2 WQX flow which will generate the WQX file
    - user will download the generated file from the node client
    - user will use the node SUBMIT method to submit the downloaded file to CDX
  - c. The reverse flow is defined for the CGI node as a plugin:
    - user authenticates to the node
    - user uses the WQX EDAS2 flow to upload an existing WQX file
    - user downloads an error report /success report after the transaction is done (import into EDAS2)

Draft 3/19/2009



## 4. Questions, comments, and future enhancements

### Additional Comments:

- Tetra Tech's new, web-based Environmental Data Analysis System (EDAS2) is an open source database and application for management, analysis, and exchange of monitoring data.
- Targeted at organizations that need a simple to use system for managing, analyzing, visualizing and sharing a wide range of environmental data
- Tetra Tech provides EDAS2 to states as part of their data management and analysis services.
- EDAS2 consists of an Oracle database and user interface (UI). The UI is written in Java.
- EDAS2 can be enhanced or modified to accommodate the requirements of an organization while retaining the required data elements for WQX





## Additional Comments:

- EDAS2 can support multiple user with different roles or privileges. As example certain users could see and edit all data while basic or public user could only view certain data.

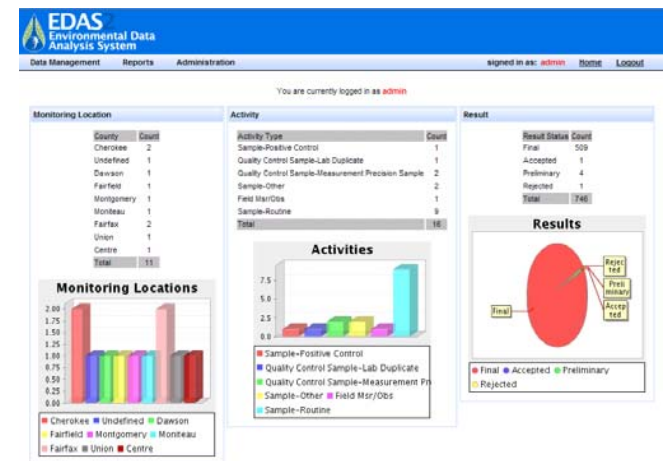
- Supported through community portal

<http://www.edas2.com>

- This presentation can be found on the portal and may be updated from time to time.
- Please provide comments or suggestions for enhancements to the EDAS2 contacts

## Highest Priority Enhancements:

- Add all the metrics as found in the original EDAS
- Add additional query tools for selecting data for analysis and export
- Enhance the taxonomy browser





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Planned enhancements continued:

- Add additional analysis tools including Biological Condition Gradient (BCG), O/E index, Relative Bed Stability
- User's manual and installation manual
- The complete addition of EMAP habitat assessment forms for use on a rugged PC tablet. Users will record habitat data in the field on rugged PC tablets for use in EDAS.
- Enhancements to accommodate wetland monitoring and analysis



**EDAS2**  
Environmental Data  
Analysis System







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