



ATTAINS and How's My
Waterway
Secret Sauce

Introduction to the Trainers

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Training Objective

This ATTAINS training is meant for ATTAINS users who are responsible for entering and/or reviewing data in ATTAINS.

We will discuss:

- Tips and tricks for how to navigate through ATTAINS
- Dealing with common problems
- Certain tricks that can simplify ATTAINS entry and review
- Highlight how data go from ATTAINS to HMW to help trainees understand how their data will show up to the public



Overview

Topic	Trainer	Duration
General Tricks	Jesse Boorman-Padgett	15 minutes
Assessment Units	Jesse Boorman-Padgett	15 minutes
Assessments	Jesse and Wendy	15 minutes
Batch Upload	Jesse and Wendy	20 minutes
Accessing Data	Wendy Reid	15 minutes
HMW Tips	Jesse Boorman-Padgett	10 minutes

General Tricks

During this Section, we'll cover the following items:

1. Navigation in ATTAINS using the URLs – DEMO
2. Using multiple tabs in the browser – DEMO



*Advanced tip – It is possible to link directly into ATTAINS from other web applications (e.g. Excel online, Google Sheets, ArcGIS Online). You must be authenticated in ATTAINS and have the other tool open in the same browser.

DEMO



NAVIGATION



USING MULTIPLE TABS IN THE
BROWSER

Assessment Units

During this Section, we'll cover the following items:

1. Using Filters / Advanced Filters – DEMO



DEMO



USING FILTERS / ADVANCED
FILTERS

Questions?

Assessments

During this Section, we'll cover the following items:

1. Filters - DEMO
 - Using the Validation Flag in filters
 - Power of Cycle Last Modified
2. Printed Report / Last Change Date - DEMO
3. Parameter Status – What does this mean?
4. Understanding Errors / Common Errors
5. Delisting Woes and How to Fix Them – DEMO



DEMO



FILTERS



PRINTED REPORT /
LAST CHANGE DATE



DELISTING WOES AND
HOW TO FIX THEM



Parameter Status – What does this mean?

Each AU / Parameter combination can only have 1 Parameter Status

- You should use the following priority order in determining the right status:
 1. Cause: The parameter is a cause for 1 or more uses
 2. Meeting Criteria: The parameter is not a cause for any uses and is meeting criteria for at least 1 use
 3. Observed Effect: The parameter is an observed effect for all relevant uses
 4. Insufficient Information: The parameter is insufficient information for all relevant uses
- When a parameter is no longer a cause, you don't need to remove it. You can just change the status.

Understanding Errors / Common Errors

Getting from: **Needs Information** To: **OK**

 *This assessment is incomplete.* [Show Details](#) 

- Invalid cause (CHLOROPHYLL-A). A cause that is part of a 303(d) list must include a cycle scheduled for TMDL or a 303d priority ranking.
- Invalid cause (CHLOROPHYLL-A). The cycle first listed is required when the pollutant indicator is yes.


Where the error is


A Description of the Error

Common Errors:

- Any Category 5 parameter must have a cycle first listed
- Any Category 5 parameter must have either a TMDL schedule or a priority to develop a TMDL
- Any Not Supporting Use must have at least 1 Cause parameter associated with it
- Sources can only be associated with Cause parameters
- You must associate an action if you want the parameter in Categories 4A, 4B, or 5A/5R
- You must connect your parameters back to your uses

Questions?

Batch Upload

- How Batch Upload Works
 - The 'Header'
 - Update vs. Replace
 - The 'uncaught' error and other common errors
- Troubleshooting your files – DEMO
 - Naming of Files
 - One File at a Time
 - Domains / Case Sensitivity
 - Finding Orphan Records
 - The Impaired Waters Block
 - Associated Actions



How Batch Upload Works

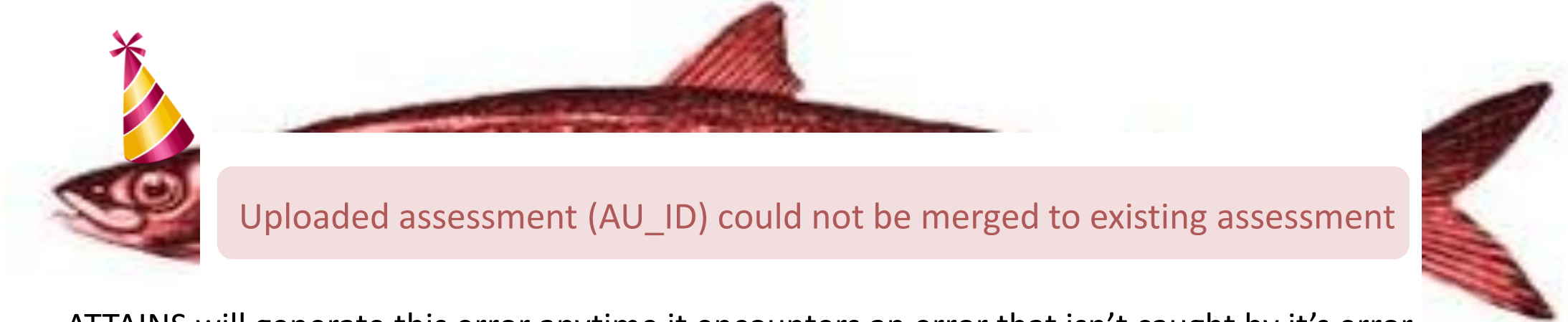
The Header

- ATTAINS is looking for specific column names. It doesn't matter what order they're in. The template is a good resource. The data export is also a great resource.

Update vs. Replace

- Update leaves in place existing data and tries to either update based on the batch file or 'add to' the existing record.
- Replace removes existing data and replaces it with the data in the uploaded file. It replaces information for only those Assessment Units that are in the file. ALWAYS have a copy of the original data before performing a replace!

Batch Upload Errors



Uploaded assessment (AU_ID) could not be merged to existing assessment

ATTAINS will generate this error anytime it encounters an error that isn't caught by its error checking routines. It basically means that there is an error that ATTAINS didn't expect. It can often be caused by bad domains, case sensitivity issues with Assessment Units or across batch upload files, trying to upload all three parameter files at once during an update, or other situations that we just haven't thought about.

Other Common Errors:

- Missing Agency Code
- Missing Cycle Last Assessed
- Providing Parameter Agency Code, Pollutant Flag, Cycle First Listed, TMDL Schedule/Priority with parameters that aren't 'Causes'
- Having more than one parameter status associated with a parameter

Troubleshooting DEMO



One File at a Time



Domains / Case Sensitivity



Finding Orphan Records



The Impaired Waters Block

Questions?

Accessing Your Data



MULTIPLE WAYS TO
ACCESS YOUR DATA



WHAT'S A SNAPSHOT?



USING FILTERS IN
REPORTS TO ANSWER
SPECIFIC QUESTIONS



THE POWER OF CYCLE
COMPARISON REPORTS

Multiple Ways to Access Your Data



Data Exports



Reports



Web Services (Publicly Accessible Data Only)



GIS Services (Org Final or Later Data Only)



How's My Waterway

DEMO



Snapshots



Using Filters in Reports to
Answer Specific Questions



The Power of Cycle Comparison
Reports

How's My Waterway Tips



Navigating waterbody reports
and state advanced search



Provide Meaningful Action Names



State-Scale Surveys can be a valuable way
to communicate on water quality state-
wide



The State page 'blurbs' and 'metrics' are
completely in your control



Data without GIS is practically invisible

DEMO



Navigating
Waterbody Report
Pages




State Advanced
Search

HMW Tips for Assessment Units

Use meaningful Assessment Unit Names. This will make it easier for the public to understand which waters are showing up in HMW.

Location Descriptions show up in HMW. Good locations descriptions will make your data more meaningful.

 **Middle Fork Browns Creek**
Assessment Unit ID: TN05130202023_0200

Waterbody Condition: Impaired

Existing Plans for Restoration: No

303(d) Listed: Yes

Year Last Reported: 2020

Organization Name (ID): Tennessee (TDECWR)

What type of water is this?


River (3.5 Miles)

Where is this water located?

Middle Fork Browns Creek from Browns Creek to headwaters. Ecoregion 71h
Davidson County

HMW Tips for Assessments

Waterbody Report


 Animas River (San Juan River to Estes Arroyo) Assessment Unit ID: NM-2403.A_00
Waterbody Condition: Impaired
Existing Plans for Restoration: Yes
303(d) Listed: No
Year Last Reported: 2018
Organization Name (ID): New Mexico (21NMEX)
What type of water is this? River (16.82 Miles)
Where is this water located? Animas River (San Juan River to Estes Arroyo)

Decision Rationale

ALU was changed to coolwater. The EPA Office of Research and Development (ORD) consolidated all available data in part to document the fate and transport of heavy metals released from the GKM spill (EPA 2017). These data were downloaded from EPAs GKM website (<https://www.epa.gov/goldkingmine/data-used-support-epa-report>). Additional 2017 sampling data provided by ORD was added to the consolidated dataset. Post-spill surface water quality data collected at mainstem Animas and San Juan River sampling stations in New Mexico 2015-2017 were assessed against applicable water quality standards found in 20.6.4 NMAC. Although the 2015 dataset contained a very small percentage of exceedences of applicable dissolved arsenic water quality criteria, the magnitude and frequency of these few exceedences combined with no exceedences of any applicable criteria 2016-2017 do not warrant surface water impairments listing. As stated in New Mexicos listing methodology, more recent data may take precedence over older data, especially in cases where there was a temporary disturbance and several consecutive years of data before and after the event ((NMED/SWQB 2017). Available surface water data indicate that surface water metals levels in the Animas and San Juan Rivers have returned to pre-spill conditions.

Decision Rationale can be used as a good way to communicate more details about a particular assessment.

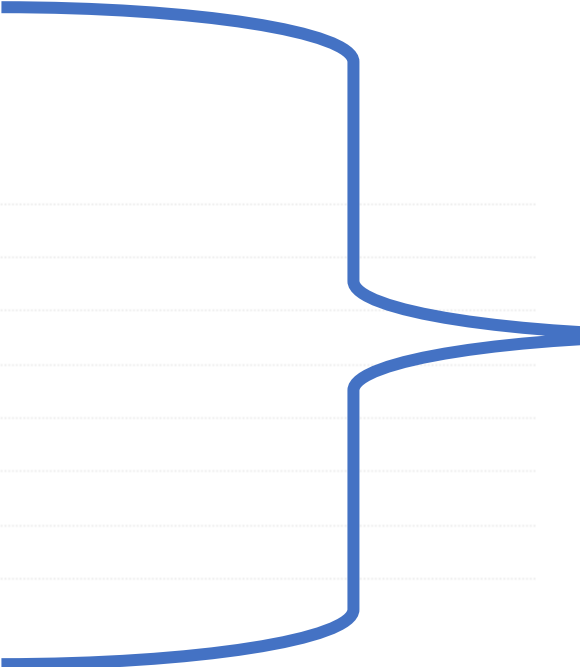
More HMW Tips

Aquatic Life Use Good 

Impairments Evaluated
No impairments evaluated for this use.

Other Parameters Evaluated
Assessed Good

- Cadmium
- Aluminum, Dissolved
- Copper, Dissolved
- Nickel
- Chromium, Trivalent
- Dissolved Oxygen
- Arsenic
- Zinc, Dissolved
- Lead



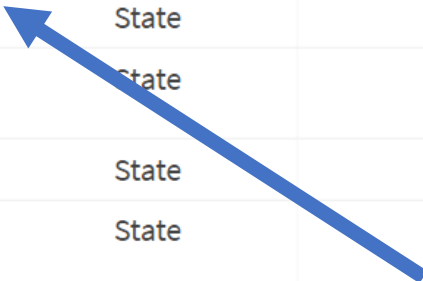
Reporting Parameters that are 'Meeting Criteria' can help provide additional context for your assessments.

HMW - Documents

New Mexico Documents

Documents Related to Integrated Report

Document Types	Document	Agency Code	Document Description
Integrated Report Document	NM WQCC-approved Integrated Report	State	
Assessment and listing methodology	2018 IR Listing Methodology (CALM)	State	
Data Sources List	QA Review of Outside Data Submission and Acquisition	State	
Other Supporting Documents	NM WQCC Approval Order 08-14-18	State	
Public Process	Public Notice of 30-day CALM Comment Period and Call for Data	State	
Public Process	Public Notice of 45-day Comment Period on Draft 2018-2020 Integrated Report and List	State	
Summary of State Response to Public Comments	IR Appendix C - Response to Public Comment	State	



Uploading your documents provides an additional one-stop-shop for the public

Questions?

Addendum – Common Errors

Common Errors and troubleshooting

ABC123			<ul style="list-style-type: none">• ERROR: The assessment unit ABC123 does not exist in the system. Please provide all necessary data.	ERROR
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The above error indicates an AUID is not active in ATTAINS. Check the Assessment Unit Tab and determine whether or not the AUID has ever been created (e.g. retired previously). If not, add it under the Assessment Unit tab and then reload.

CC_WH-R- WHITE_04	White River	Needs Information	<ul style="list-style-type: none">• WARN: Invalid cause (ENTEROCOCCUS). A cause parameter must have at least one use that is not supporting or threatened.• WARN: Invalid cause (FECAL COLIFORM). A cause parameter must have at least one use that is not supporting or threatened.	OK
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The above error indicates the assessment has causes but is not associated with an impaired Use. The Use attainment and parameter attainment must be consistent.

CC_BF-R- BEAR_BUTTE_01	Bear Butte Creek	Needs Information	<ul style="list-style-type: none">• ERROR: Invalid parameter (SEDIMENT). The assessment parameter references a use that is not associated with this assessment.• WARN: Invalid parameter (SEDIMENT). One or more of the seasons have overlapping days for associated use (IRRIGATION WATERS).	ERROR
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The above error indicates the use for the parameter and uses file do not match. This can be because the use is truly not in the file or that the allowable value in the parameter file is a different case or misspelled.

Common Errors and troubleshooting (cont)

CC_CH-L- BISMARK_01	Bismark Lake	Needs Information	<ul style="list-style-type: none">• WARN: Invalid cause (DISSOLVED OXYGEN). The cycle first listed is required when the pollutant indicator is yes.	OK
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The above error indicates the required listing information is missing. Provide the required metadata and reload.

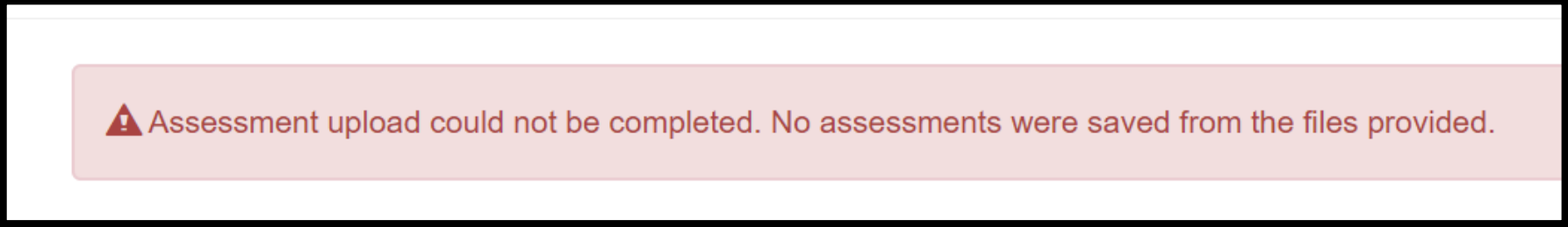
CC_CH-L- BISMARK_01	Bismark Lake		<ul style="list-style-type: none">• ERROR: The agency code () is not a valid domain value and it is a required field.• ERROR: The cycle last assessed is a required field and must be a valid 4 digit year.• INFO: The existing assessment for CC_CH-L-BISMARK_01 will be replaced as a result of this upload.	ERROR
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The above error indicates the assessment is missing essential metadata. It usually is referencing a file that you did not provide during a replace upload. If you are doing a replace, you must provide all the essential files for the replace. (e.g. load at least the assessments, Use, and parameter files all at once)

CC_WH-R- WHITE_02	White River	Needs Information	<ul style="list-style-type: none">• WARN: Invalid probable source (WILDLIFE OTHER THAN WATERFOWL). A probable source must be associated with one or more assessment cause parameters.	OK
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The above error indicates there are sources on parameters that are not a cause. The system doesn't allow that. Remove the source for the parameters identified.

Uncaught error

A screenshot of a system interface showing an error message. The message is contained within a light red rectangular box with rounded corners, which is itself inside a larger white rectangular box with a black border. The error message text is in a dark red font and reads: "Assessment upload could not be completed. No assessments were saved from the files provided." There is a small red triangle icon with a white exclamation mark to the left of the text.

⚠ Assessment upload could not be completed. No assessments were saved from the files provided.

Congratulations! You have found the red herring. The file could not load because the error hasn't been logged in the system yet. ATTAINS error reports are derived from previous errors encountered. Sometimes the file contains a situation the system has not encountered yet. To isolate the issue, do the one file at a time approach and see where the process breaks down. Continue to isolate the problem within the file by checking any rule you know of. (e.g. allowable values, consistency with other files such as with the sources file, making sure all required data is provided). If you work through the files and are still having trouble, email attains@epa.gov and we will help diagnose the uncaught error and log it for the system to catch in the future.