Data Management, Integration and Sharing at the State and Regional Level

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Overview

- Regional Data Sharing
  - Program Partners
  - Challenges
  - Benefits
- Using WQX as a Standard
- Program Outcomes
- Walkthrough of the Ambient Water Quality Management System (AWQMS)
Program Partners

- Region VIII Tribal Programs
  - 24 Tribal Programs in MT, UT, CO, ND, SD, & WY
- Colorado Data Sharing Network
  - Consortium of State, Local, and Volunteer Programs Throughout Colorado
Objectives

- Provide a regional platform for data sharing that would allow program partners to share data in a secure private environment.
- Develop integrated reporting and data analysis tools on this shared data.
- Leverage existing tools where available.
Data Sharing Challenges

- **Varying Data Formats**
  - Word, Excel, Access, SQL, Oracle, paper

- **Data Compatibility**
  - Data Elements
  - Data Domains

- **Data Integration**
  - How to Integrate Partner Data into Tools
    - Node to Node
    - Web Services
    - Regional Repository
Regional Data Sharing Benefits

- **Data Consistency**
  - Allows for Easy Data Sharing with Partners
  - Up-Stream / Down-Stream Influences
  - Overlapping Monitoring Efforts
  - Shared Experiences

- **Peer Program Support**
  - Data Management
  - Data Analysis
WQX as a Standard

- Addresses Comparability and Consistency
- Single Standard for:
  - Regional Data Sharing
  - Sharing with External Partners via the Exchange Network
  - STORET Submission via CDX
- Leverage Web Services for External Data Integration
AWQMS as a Solution

- Enforces WQX Standards
- Regional Repository
- Provides Additional Data Elements for Local Use
- Secure Environment for Data Review (QA/QC)
- Integrated Analytical Graphs and Reports
- Integrated Node Client for National Sharing
- Future Integration of Google Map
Region VIII Tribal Network

- 20 of 21 Tribes with Water Programs Participate
- Share data across all of EPA Region VIII
- Provides Access to Regional EPA for Data Review and Analysis
- View Partner Data via Reports and Graphs
- Configurable Security
  - Restricted Add, Edit, View Rights
  - Peer Trainer Assistance Capabilities
- Leveraged State AWQMS Development
Colorado Data Sharing Network

- 17 Organizations are Participating
- Data from Municipalities, Universities, Watershed Management Groups
- Developing Regional Map for Public Access
  - Customization
  - User Tracking
- Leveraged State and Tribal Development Efforts
- RiverWatch alone submitted over 400,000 results
AWQMS Walkthrough
Welcome!

The following links will assist you with the most common features of the application:

Create or Edit an Import Configuration: Create a reusable configuration that describes what your import file looks like and how it maps to data elements in this system.

Create a New Dataset: Import a set of data that can be validated and corrected before making it final.

Continue with an Existing Dataset: Continue where you left off on an existing dataset.

Review Lookup Values: Review the list of allowed values for a specific domain or add values to organization specific lists of values.
AWQMS Data Forms

- View, Add, Edit all WQX Data Elements
AWQMS – Import Configuration

- Allows Users to Map Their Data to AWQMS
AWQMS – Rapid Data Entry

### Leveraged Capabilities of Import Configurations

- **Leveraged Capabilities of Import Configurations**
- **Fully Customizable**
Regional Graphing Capabilities
Standardized Reporting

Reports & Graphs Leverage Same Criteria
AWQMS – Export

- Multiple Export Formats
AWQMS Node Client

- Supports Incremental Data Submissions to EPA
- Ad Hoc Export
AWQMS Security Page

- User Configurable Security Settings
Next Steps

- Google Maps Integration
- Consume National Web Services
  - USGS
  - EPA
  - Other
- Biological Reporting and Graphing
- Water Quality Standards??
- Cross-Tab Import Format
New Partners

- Additional State and Tribal Programs
  - Maryland, Alaska, Iowa, Kansas
  - Chickasaw Nation, Nez Perce

- Additional Tribal Consortiums

- Region 10 Superfund Program
Leveraged efforts from the Lower Colorado River Authority (LCRA)
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- **AWQMS**
  - View Information and Demos online at [www.AWQMS.com](http://www.AWQMS.com)
Questions?