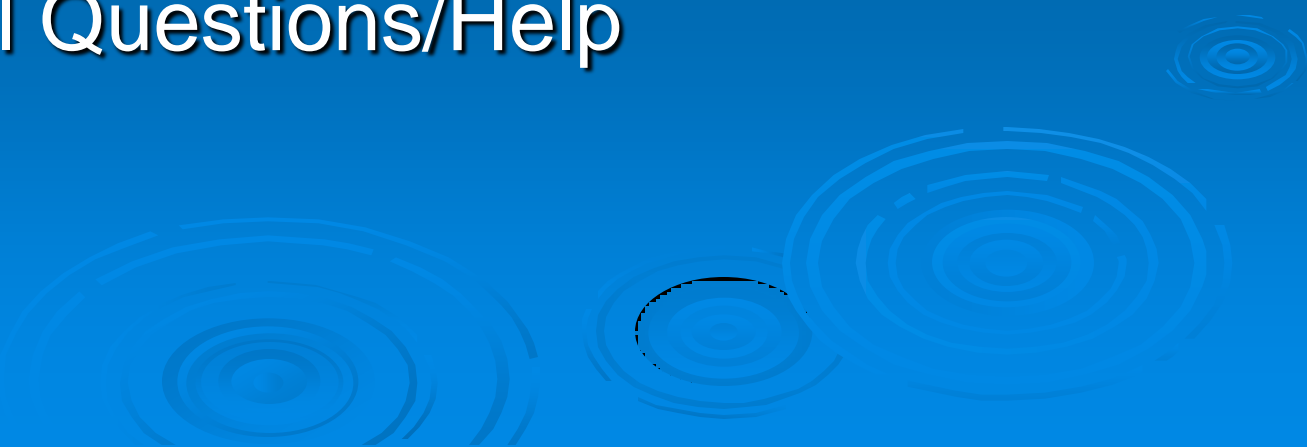


# Datashed Workshop

**2011 PA Abandoned Mine Conference  
August 6, 2011**

**Cliff Denholm & Shaun Busler, Stream Restoration Inc.**

# Workshop Outline

- I. Dashed Intro/Background/History
  - II. Using Dashed for Finding Information
  - III. Creating an Account
  - IV. Adding and Editing Project information
  - V. Future Updates
  - VI. Additional Questions/Help
- 

# What is Datashed?

- Datashed is a
  - GIS-enabled
  - Web-based
  - Database

**FREE**

The screenshot shows the Datashed website interface. At the top, there is a navigation bar with the 'Datashed' logo and a 'Log in' button. Below the navigation bar, there is a 'Home' section with a 'Welcome to Datashed' message. The message states that Datashed is a fully-featured, GIS-enabled, Internet database designed to assist watershed groups, academic institutions, private industry, and government agencies in the operation and maintenance of passive treatment systems. It also lists the types of data and documents available, such as O&M inspection sheets, site schematics, and dynamically-generated location maps. A 'Restoration Tote Board' section follows, highlighting positive improvements in Pennsylvania's streams and providing a table of pollutant load reductions. The table shows that 300 passive treatment systems have been installed, reducing the load of pollutants. The table lists the following data:

Water Treated	11,016,054,822 (gal/yr)	Projects Included	94
Iron	3,101,387 (lb/yr)	Manganese	179,746 (lb/yr)
Aluminum	171,937 (lb/yr)	Acidity	3,939,191 (lb/yr)

Below the table, there is a 'Weekly Project Spotlight' section with tabs for 'Overview', 'Downloads', 'FACTS', 'Photos', and 'Reports'. The spotlight project is 'Clover Run # 1 (barrett)', a passive treatment system in Mahoning Creek, Pennsylvania, with a construction year of 2010. On the right side of the interface, there is a 'Project Partners' section listing various organizations, including 241 Computer Services, BioMost, Eastern PA Coalition for Abandoned Mine Reclamation, EPA Watershed Initiative, Foundation for Pennsylvania Watersheds, PA Department of Environmental Protection, Stream Restoration Inc., and Western PA Coalition for Abandoned Mine Reclamation.

[www.datashed.org](http://www.datashed.org)

# Purpose

- Facilitate O&M and monitoring of passive treatment systems
- Store information relating to watershed restoration efforts
- Assist local watershed groups to maintain & manage their efforts



# Background/History

- Began development in 2002
  - 241 Computer Services & Stream Restoration Inc.
  - SRWC volunteers/interns (Grove City College)
- Partnered with:
  - WPCAMR - *Funding AMD Chemistry for Treatment Systems* (FACTS) Program
  - PADEP, BAMR – Snapshot and data of publicly-funded passive systems
  - EPCAMR – Education/outreach
  - Foundation for PA Watersheds - SIS-Datashed “Link”

# Datashed 2.0

- Web architecture was outdated & needed to be brought up to date to ensure stability
  - Originally all custom code
  - Converted to Drupal – Open Source Content Management System
- Received Growing Greener Grant for updates, uploading of data, training workshops, and providing technical assistance

# Features

- User-friendly
- 24/7 access to data
- Password-protected
  - Password needed only to upload data
- GIS-connected
  - No plug-ins needed to view GIS
- Free and Open Source Software (FOSS)



# What Can Datashed Do?

- Store project information
  - Water quality data
  - Important documents - site schematics/drawings, O&M plans, inspection forms, final reports, etc
  - Photos (limited number)
- Access to aerial views (Bing)
- Directions to site
- Limited GIS capabilities
- Triggers (email alerts)



# What is the Value of Datashed?

## ➤ Watershed Groups

- Provides database for groups to store their data
  - Don't have to “reinvent the wheel”
- Easy access to data & documents
  - Not stored on someone's home computer
- Data backed up daily
- Education/Outreach
  - Each project has a web page
  - Community has access to info



# What is the Value of Datashed?

## ➤ Government and Funding Agencies

- Central location for the management of restoration projects and related data
- “One-stop-shop” to gather data for reporting program success
  - GG, 319, Foundation for PA Watersheds



# What is the Value of Datashed?

## ➤ Researchers, Students, Designers

- Single, largest-known, publicly-available repository of data related to passive treatment systems
- Searchable by treatment technology
- World-wide access



## II. Using Datasheet for Finding Information





**Now, on this slide, may I direct your attention  
to the flashy animation and cool transition effects...  
because I worked really, really hard on them.**

# F.A.C.T.S.

- Funding AMD Chemistry for Treatment Systems
- Datashed – FACTS data management system
  - Coordinates watershed groups and labs
  - Creates programs with unique IDs
  - Manages and schedules sample collection
  - Tracks progress (email alerts)
- 8 groups sampling ~25 systems (quarterly)

[article](#) [edit](#) [history](#)

## FACTS

### FACTS: Funding AMD Chemistry for Treatment Systems



The [FACTS Program](#) (Funding AMD Chemistry for Treatment Systems) provides free chemical analyses to monitor passive abandoned mine drainage treatment systems. The program uses **Datashed** to make the systems' data available to the public, and to streamline the transfer of analysis results from laboratories.



The FACTS Program is administered by the [Western Pennsylvania Coalition for Abandoned Mine Reclamation](#) (WPCAMR).

Nonprofit watershed groups, county conservation districts, local governments, and RC&D councils in Pennsylvania can apply to the Program online at [www.wpcamr.org/facts](http://www.wpcamr.org/facts).

### Using Datashed with the FACTS Program to store sampling data

Upon admission to the FACTS Program, a passive treatment system is prescribed a **monitoring plan**, which includes sampling points, analytes, and sampling dates. These are managed on Datashed's [FACTS Sessions page](#).

### Watershed Groups and Volunteers

Upon collecting a water sample, a volunteer must send bottles to the laboratory and submit field data to Datashed:


- [Instructions for Field Volunteers](#)

### Laboratories

Under the FACTS Program, all water samples sent to laboratory are labeled on the bottle with a **Bottle Number** and **Sample ID**. Datashed uses these numbers to track water samples through the laboratory analysis process.

When processing water samples, labs need to interact with Datashed at two points:

- [Mark bottles received when checked in by laboratory](#)
- [Submit data after chemical tests](#)

Channel Effluent	Cessna Run
SAMPLE ID 3 3 3 4 4 4 4	BOTTLE NUMBER 3 3 3 4 4 4 4 1
SAMPLE DATE	
SAMPLED BY	PREPARATION 500mL bottle unacidified
ANALYSES REQUESTED Alkalinity (mg/L), pH (S.U.), Acidity (mg/L)	

Example of a bottle label with Sample ID and Bottle Number



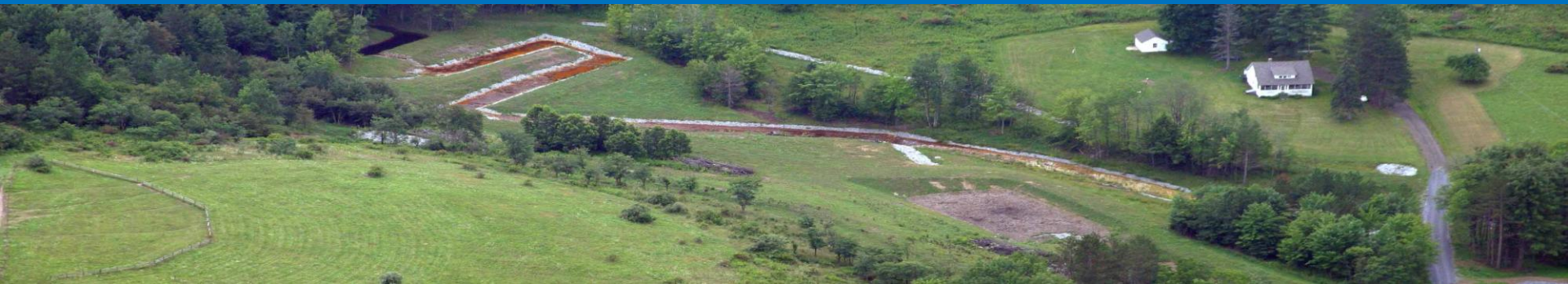
navigation

- [Help Index](#)
- [FACTS Help](#)
- [Recent Changes](#)
- [Printable version](#)

search

# Passive Treatment Snapshot

- Funded by DEP
  - WPCAMR's Growing Greener FACTS grant
- 2 Snapshots
  - Fall 2009
  - Spring 2010 (Almost completed)
- 8 Organizations + FACTS
- Data to be uploaded to Datashed (July 2010)





# Passive Treatment Snapshot

- 280 projects in OSM Database
  - 7 - not applicable (active, limestone sand, etc)
  - 4 - duplicates (multiple phases, repairs, etc)
  - 12 - were not constructed yet
- 257 passive systems
  - 235 sampled in Fall 2009 (91%)
  - 22 not sampled
    - 8 - not flowing (low flow conditions)
    - 7 - access issues (landowners, etc)
    - 7 - misc. (not functioning, missed, etc)

# SIS-Datashed “Link”

- SIS – Sample Information System
  - PA DEP Water Quality Database
- Foundation for PA Watersheds
  - Provided funding to develop “link”
- Working with PA DEP
  - Live connection not possible – Security risks
  - Data transfer and upload program created
  - To be completed by June 2010

# Future Upgrades

- Update architecture
- Help Section (Wiki)
- Tutorials
- Online calculators
- i-Map
- Custom graphs, reports, data downloads
- Modeling?
- Others? - Feel Free to make suggestions



# Stuck/Questions/Comments?

- Contact: Cliff Denholm or Shaun Busler
- Email: [sri@streamrestorationinc.org](mailto:sri@streamrestorationinc.org)
- Phone: (724) 776-0161



