How Trout Unlimited's FREE AMD Technical Assistance Program Can Help You

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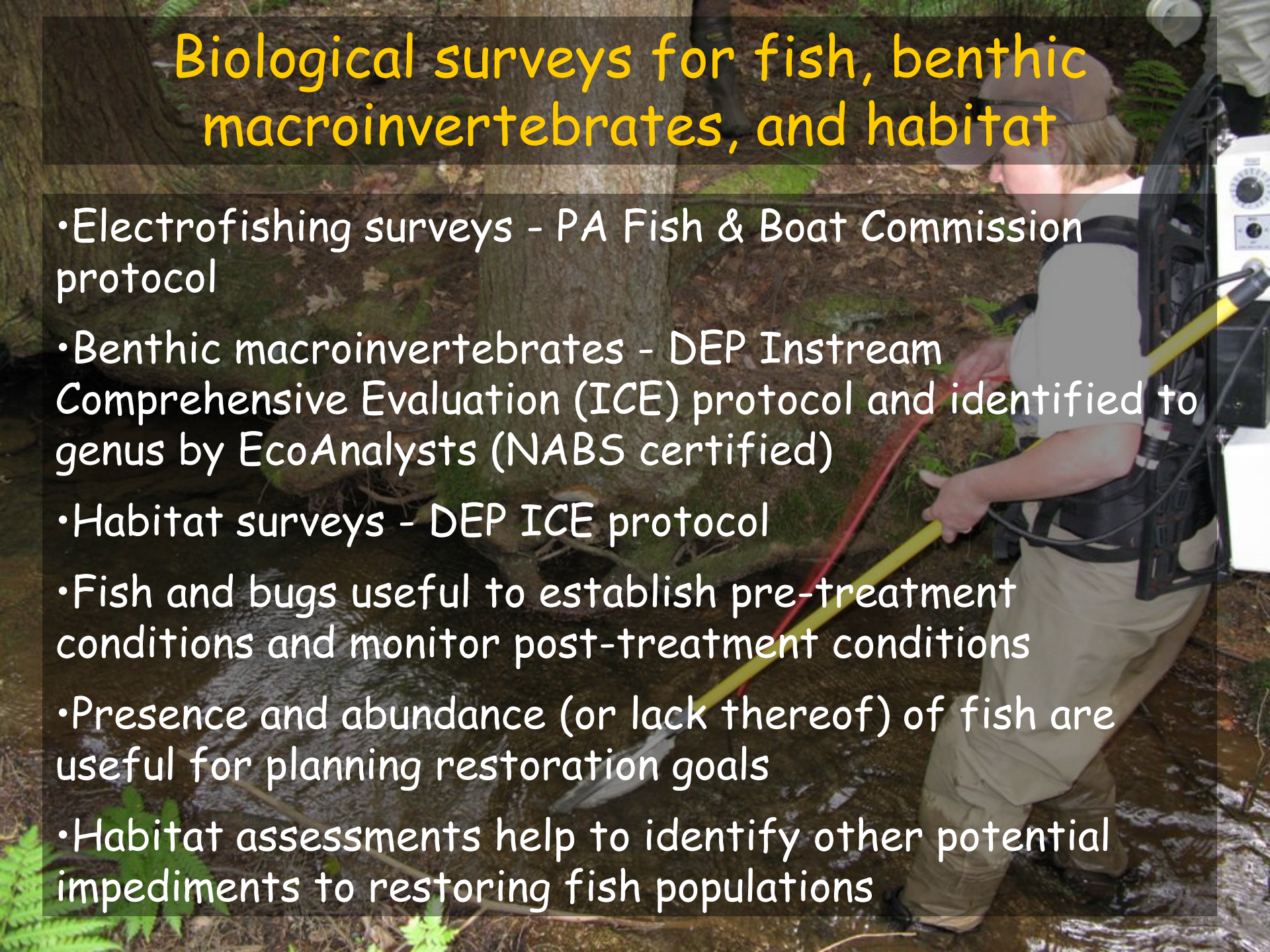
Eastern Abandoned Mine Program


TROUT
UNLIMITED
Mission is to conserve, protect, and restore North America's coldwater fisheries and their watersheds.

Need help with addressing AMD, but don't have the $$?

- Biological surveys for fish, benthic macroinvertebrates, and habitat
- Treatment system evaluation and recommendations for improvement
- Conceptual design plan for treatment system
- Rapid AMD characterization or watershed snapshot
- Monitoring plan development
- Qualified Hydrologic Unit Plan development
- Technical capacity building
- Others on case-by-case basis

Biological surveys for fish, benthic macroinvertebrates, and habitat



- Electrofishing surveys - PA Fish & Boat Commission protocol
- Benthic macroinvertebrates - DEP Instream Comprehensive Evaluation (ICE) protocol and identified to genus by EcoAnalysts (NABS certified)
- Habitat surveys - DEP ICE protocol
- Fish and bugs useful to establish pre-treatment conditions and monitor post-treatment conditions
- Presence and abundance (or lack thereof) of fish are useful for planning restoration goals
- Habitat assessments help to identify other potential impediments to restoring fish populations

Biological surveys for fish, benthic macroinvertebrates, and habitat

Moravian Run

Clearfield Creek

Wilson Creek

Buck Run

Treatment system evaluation and recommendations for improvement

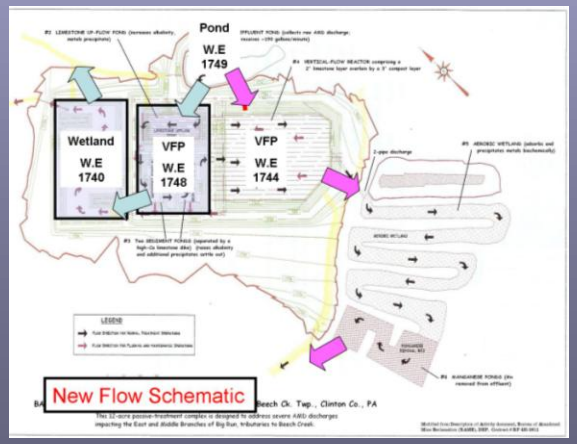
- Individual system components and overall system performance are evaluated
- Recommendations for improvement, or rehabilitation if necessary, are developed
- When possible, specific cost estimates are given
- Caretakers of the treatment system can be trained to properly inspect system, monitor water quality, and identify problems
- Treatment system "autopsies" can be conducted

Treatment system evaluation and recommendations for improvement

C&K Pit 431

Bear Creek

Markle



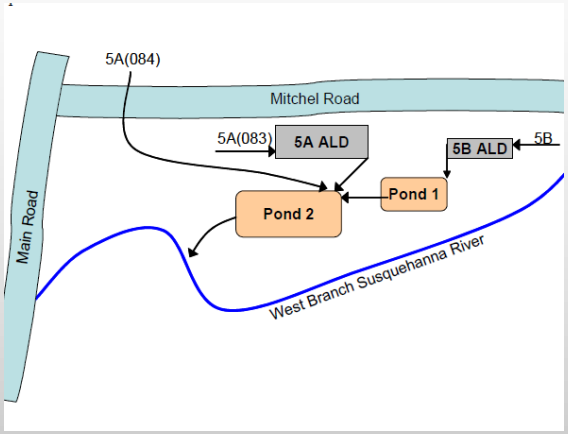
Avery Site

Conceptual design plan for treatment system

- Historical data for discharge(s) to be treated are helpful
- New water quality and flow measurements are collected
- Potential for land reclamation is investigated
- Site topography, landowner cooperation, and access are taken into consideration
- Conceptual design plan includes basic system layout of individual components, general cost estimate, and presentation of other abatement alternatives if available

Conceptual design plan for treatment system

Muddy Run



West Branch

Espy Run

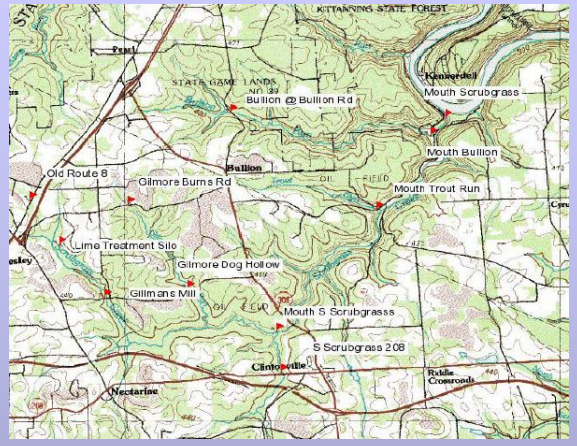
Coal Run

Rapid AMD characterization or watershed snapshot

- Characterization of individual or suite of discharge(s)
  - > Locate and identify AMD discharges/sources
  - > Assess impact of AMD on receiving stream and biota
  - > Type and severity of AMD
  - > May include setting up monitoring stations
- One-time snapshot of water quality and flow
  - > Assess metals and acidity loadings on receiving stream
  - > Prioritize discharges for strategic planning
  - > Evaluate post-treatment progress

Rapid AMD characterization or snapshot

Plum Creek



Scrubgrass Creek

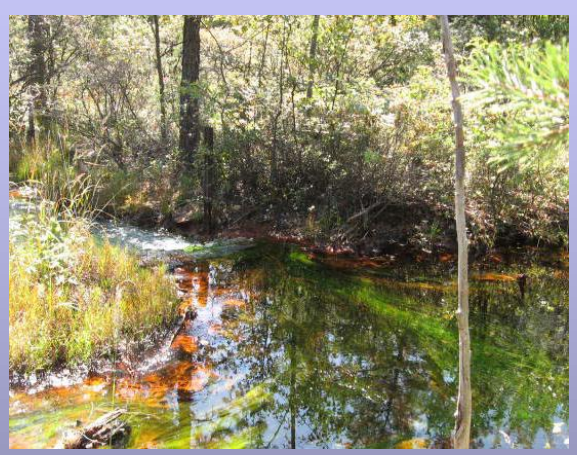
Douglass Run

Moravian Run

Monitoring plan development

- Identification and prioritization of discharges and instream locations for long-term monitoring
- Assistance with locating sites to install weirs, flumes, etc. for flow monitoring
- Development of monitoring plan, along with maps
- Reevaluation and updating of existing monitoring plan, taking into consideration post-treatment changes and changes in restoration goals

Monitoring plan development



Black Creek

Chartiers Creek

Qualified Hydrologic Unit Plan development

- Watershed must be located in DEP-approved Qualified Hydrologic Unit (QHU), which requires a restoration plan, to be eligible for Growing Greener and AMD Set-Aside funding
- QHU Plan components
  - > Cost-benefit analysis
  - > Local support
  - > Background data
  - > Restoration goals
  - > Technological and alternative analysis for projects
  - > Benefits of implementing restoration plan
  - > Capital $$, OM&R requirements/$$, Other $$ sources

Qualified Hydrologic Unit Plan development

Babb Creek

Shamokin Creek

Technical capacity building

- Training to volunteers on proper techniques of water quality sampling, flow measurement, benthic macroinvertebrate sampling/id, etc.
- Assistance with reevaluation of long-term restoration plans and goals, and prioritization of remediation objectives and projects
- Assistance with educational outreach projects to increase community support and understanding of AMD cleanup efforts
- Assistance with finding possible sources of $$ for projects
- Assistance with grant/contractual paperwork requirements

Technical capacity building

Weatherly Planning Commission

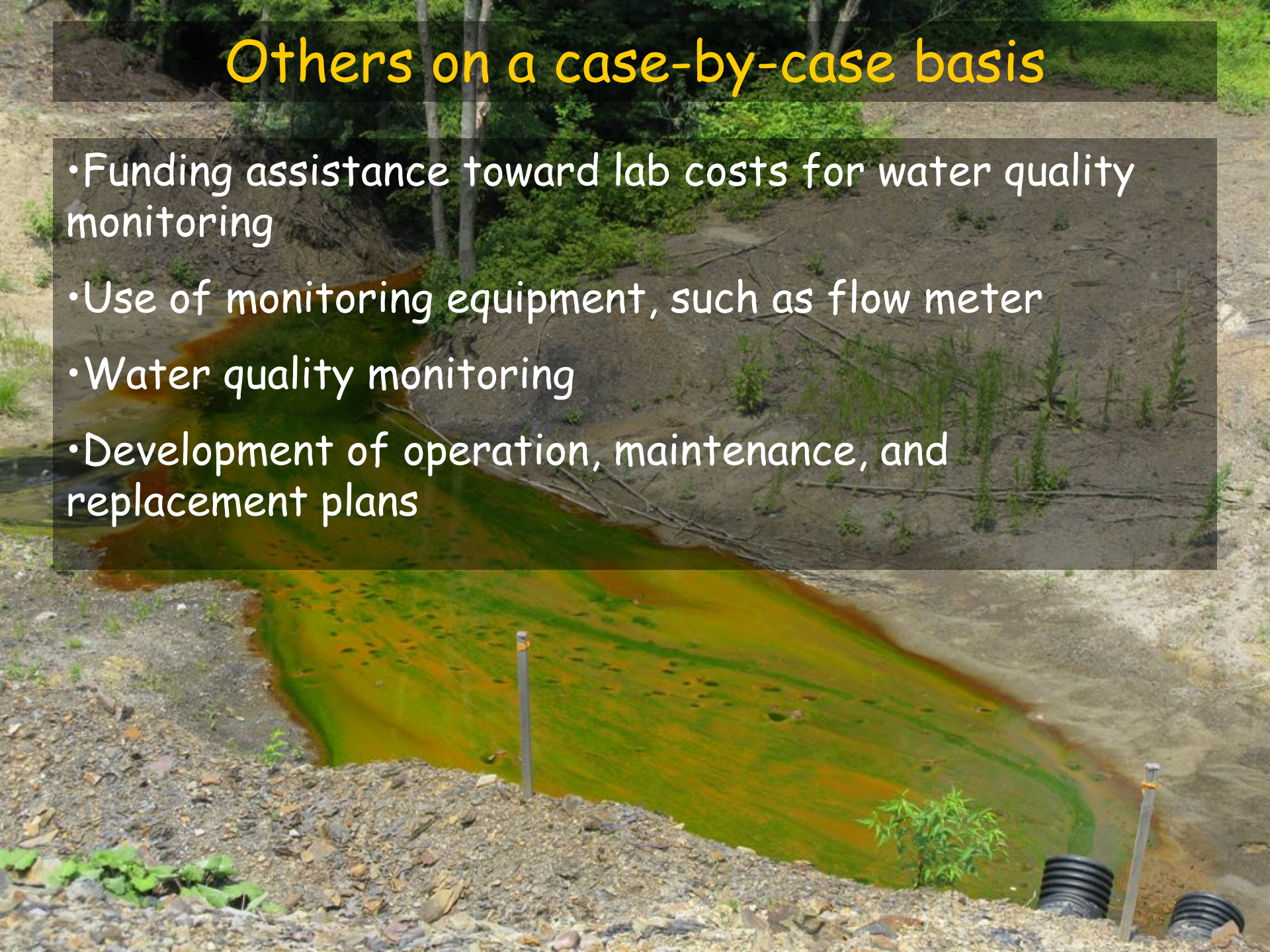
Moshannon Creek Watershed Coalition

Westmoreland County Cons. District

Clinton County Cons. District

Others on a case-by-case basis

- Funding assistance toward lab costs for water quality monitoring
- Use of monitoring equipment, such as flow meter
- Water quality monitoring
- Development of operation, maintenance, and replacement plans



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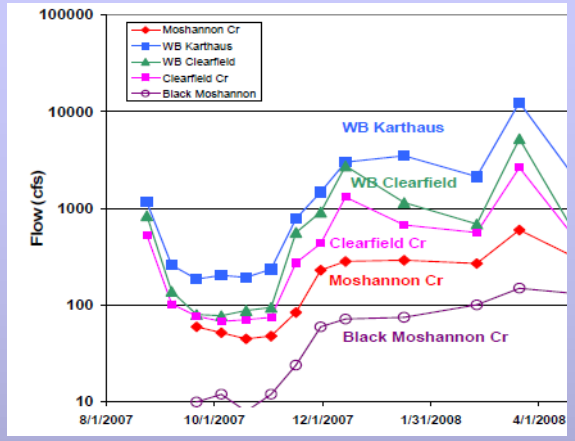
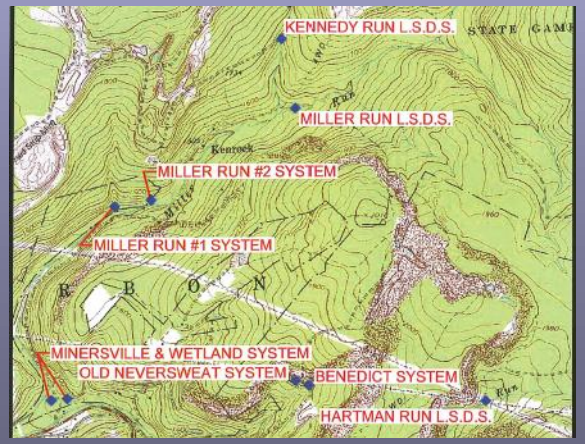


Clearfield Creek Watershed Assoc.

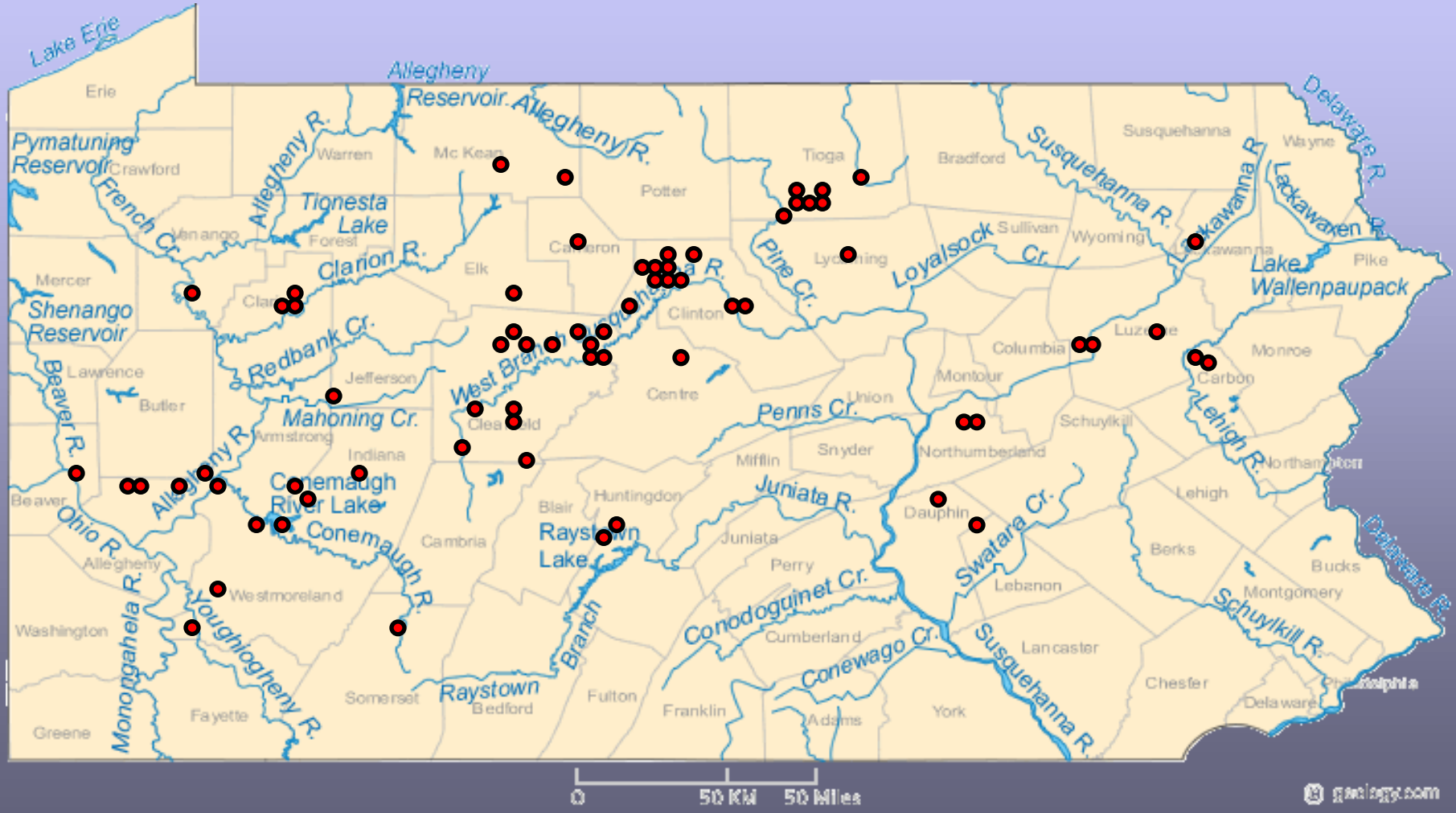
Susquehanna River Basin Commission

DEP BAMR



Huntingdon County Cons. District

AMD Technical Assistance Projects 2005-2011



Brook Trout Restoration - AMD Mini Grants

Eligibility

- Watershed groups, conservation districts, and municipalities
- AMD project must be located within West Branch Susquehanna River watershed
- Ultimate goal of project must be to restore native brook trout

Mini Grant Amount

- Up to $10,000 per project

How Does Mini Grant Work?

- TU will pay either pay contractor/consultant/vendor directly or reimburse the grantee for expense

When/How to Apply

- No deadline; Contact TU directly

Funding of the Trout Unlimited AMD Technical Assistance Program

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Growing our Economy
Growing our Communities
Growing Greener Plus

Richard King Mellon Foundation

Technical Consultants

HedinEnvironmental

SKELLY AND LOY
ENGINEERING - ENVIRONMENTAL CONSULTANTS

THANK YOU!

Thank You!
Questions??

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