



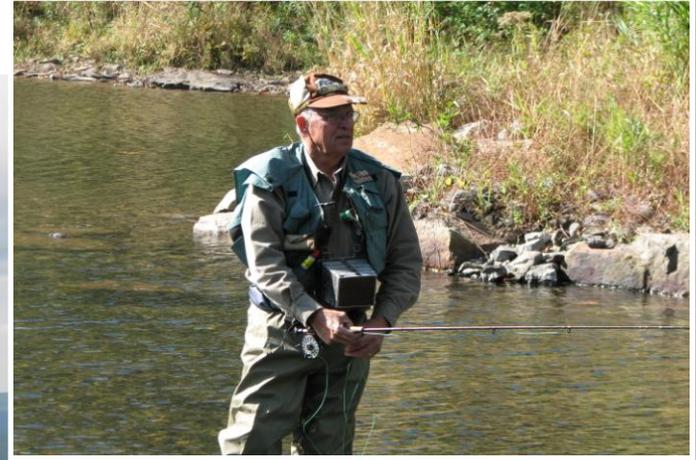
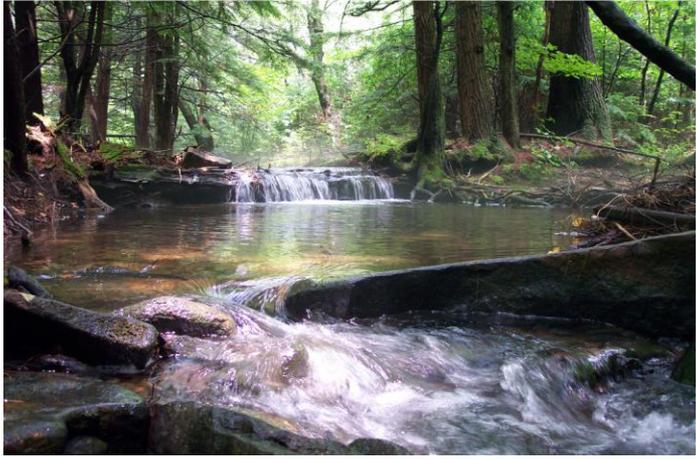
TROUT UNLIMITED'S MISSION IS TO CONSERVE,  
PROTECT AND RESTORE NORTH AMERICA'S  
COLDWATER FISHERIES AND THEIR WATERSHEDS

# Trout Unlimited's AMD Technical Assistance Program



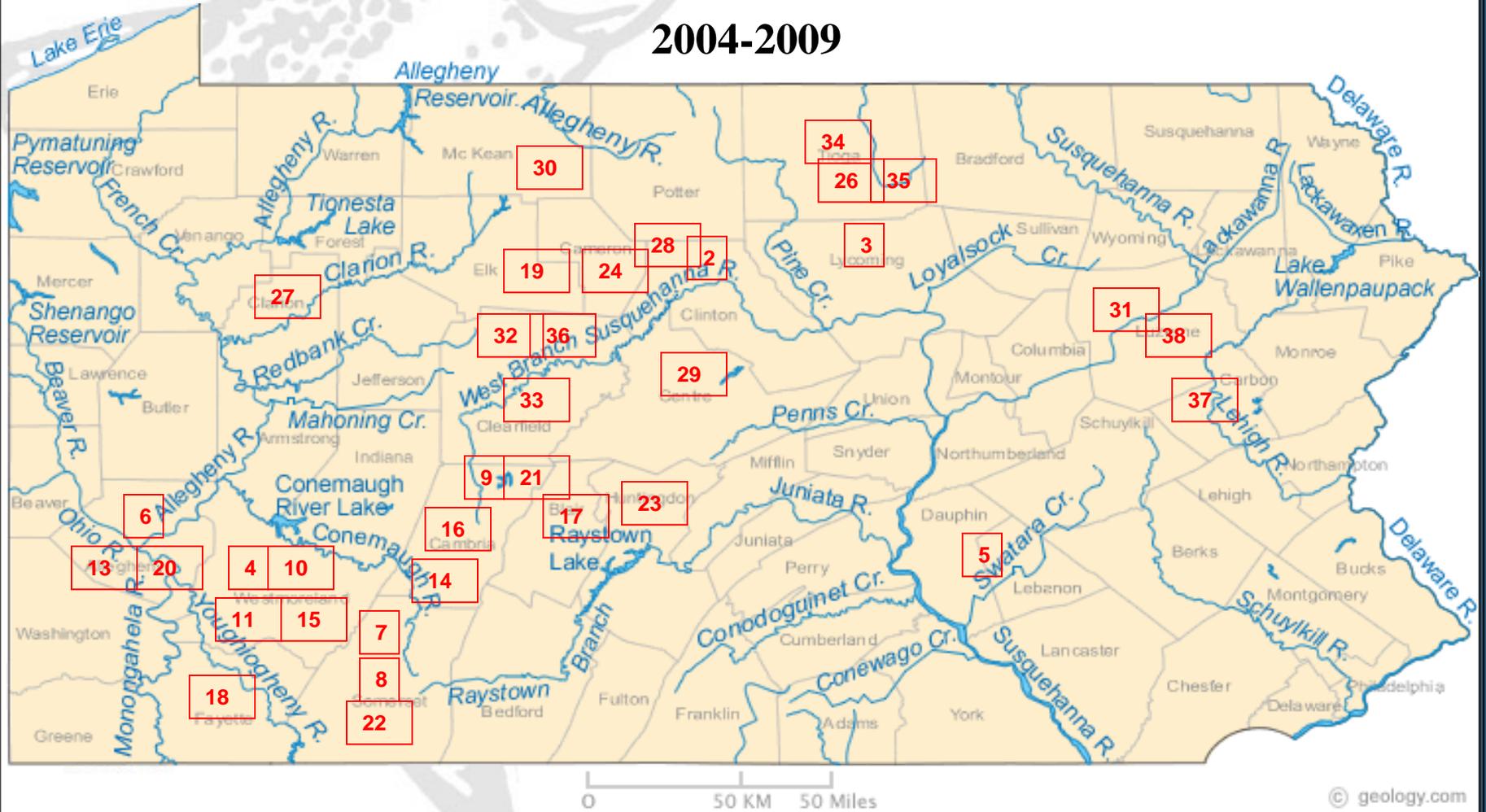
Amy Wolfe  
Director  
Abandoned Mines Program

...to conserve, protect, and restore North America's coldwater fisheries and their watersheds



# Trout Unlimited's AMD Technical & Organizational Assistance Project Locations

2004-2009



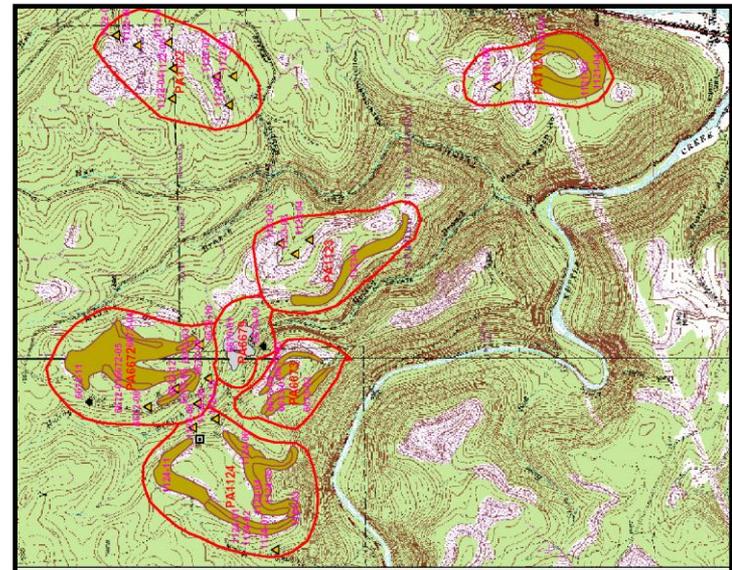
# What type of AMD technical assistance?

- Rapid AMD watershed snapshot
- Rapid AMD characterization
- Conceptual design of AMD treatment systems
- Existing treatment system evaluation and recommendations
- Construction oversight
- Biological surveys (fish, macroinvertebrates, habitat)
- Other, as treated on a case-by-case basis



# Rapid AMD watershed snapshot

- Needs assistance with locating and identifying AMD discharges
- Help with assessing the impacts that the discharges have on in-stream water quality and biota



# Rapid AMD characterization

- “Mini-assessment”
- Needs assistance with identifying and implementing next steps for prioritization of treatment, monitoring, and potential treatment solutions



# Conceptual design of AMD treatment systems

- Group knows which discharge or suite of discharges it would like to remediate
- Remediation alternatives will be provided that include cost estimates for system design and construction

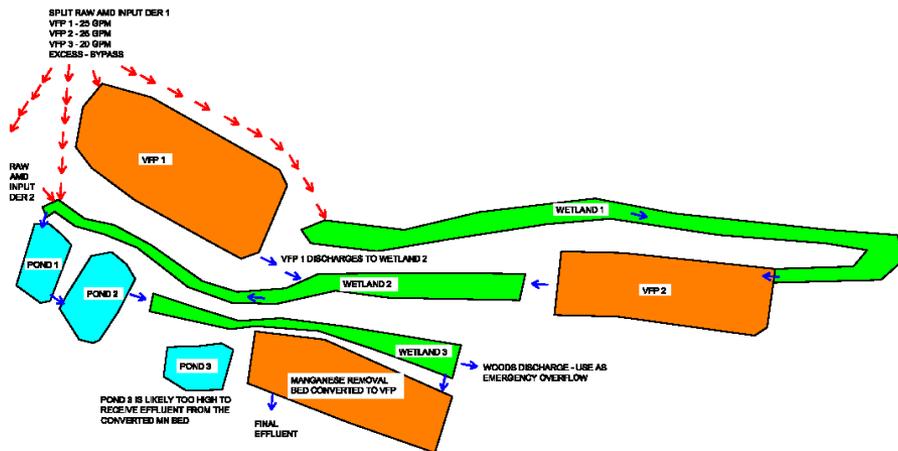
*Passive System quantities for the LP-127 discharge.*

Unit	Item	quantity
VFP and Pond	Design flow	19 gpm
VFP	Alkalinity generation (net)	300 mg/L
VFP	Acid removal rate	$40 \text{ g m}^{-2} \text{ day}^{-1}$
VFP	Surface area	11,000 ft <sup>2</sup>
VFP	Limestone	900 tons
VFP	Organic substrate	200 CY
VFP	Excavation	3,600 CY
Settling Pond	Capacity	55,000 gal



# Existing treatment system evaluation and recommendations

- Group would like recommendations for how to improve performance of AMD treatment system
- Group would like assistance with evaluating specific components of a treatment system and recommendations for planning of maintenance and replacement activities



# Construction oversight

- Group may not have enough funds and need professional assistance with oversight of AMD treatment system construction



# Biological surveys

- Group would like to document quantitative and qualitative data for benthic macroinvertebrate and/or fish upstream and downstream of proposed treatment site and/or constructed treatment system
- Group would like to know habitat condition in AMD-impaired stream to plan for fish restoration activities



# Others, as treated on a case-by-case basis

- Selecting and prioritizing discharges in watershed for remediation and funding
- Evaluating and reviewing remediation alternatives, along with cost-benefits of proposed alternatives
- Development of a monitoring plan
- Selecting locations for weirs, installing weirs, and/or training volunteers to collect water samples and flow data



# How do I request TU's technical assistance?

- Fill out request form and submit to TU

## What happens next?

- Subcontractor and TU staff develop a scope of work and budget and send to DEP project advisor, county conservation district manager, and DEP mining office watershed manager for review and comment
- If/when project is approved (1-2 weeks) you will be contacted by TU staff or subcontractor to schedule a site visit



**Questions?**

**Download request forms at**

**[www.wbsrc.org](http://www.wbsrc.org)**

**Contact**

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