



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION



Bureau of Clean Water

TMDL Alternative

2019

Tom Wolf, Governor

Patrick McDonnell, Secretary

Objectives

- Review the legal history of Total Maximum Daily Loads (TMDLs)
- Discuss TMDL Revisioning of 2014
- Introduce Alternative Restoration Plans (ARPs)

Legal History of TMDLs

- Section 303(d) of the Federal Clean Water Act (40 CFR §130.7(a)), in summary:
 - States must assess all waters and list impairments
 - Total Maximum Daily Loads (TMDLs), also known as pollution diets, must be developed to address impairments
- EPA sued for failing to enforce Section 303(d)
- 1997 Memorandum of Understanding (MOU) for states to write TMDLs for the 1996 listed waters (570 in PA) by 2009
 - Target successfully hit
- PACE of 350 segments/year from 2010 to 2014
 - Target successfully hit

Revisioning

- That's roughly 15 years and many TMDLs developed
- Enter our new tool: Alternative Restoration Plans (ARPs)
 - Substitute for TMDLs but similar as they:
 - Identify pollution sources and loads
 - Develop pollution diets to stop the bleeding
 - ARPs differ from TMDLs by providing local partners a pollution diet to stop the bleeding and a restoration plan to start the healing

ARPs

- Ideal for small agricultural watersheds
- DEP connects with active local partners
 - County Conservation Districts and Land Owners
 - Groups like Trout Unlimited and Watershed Associations
- Develop a pollution diet
- Develop a restoration plan
- Attain grant funding
- Phased restoration in a reasonable timeframe
- Ongoing Adaptive Management
 - Monitor implementation, chemistry, habitat and aquatic life
 - Remodeling to maximize BMP targeting and grant funds

Ag ARPs: Phases & Milestones

- Phase 1, years 1-5, Ag Regulatory Compliance
 - Outreach and Education
 - Ag E&S Plans and Nutrient Management Plans developed, implemented and inspected
- Phase 2, years 5-10, Targeted BMP Implementation of the restoration plan
 - Grant management for design and construction of:
 - Animal Waste Management Systems (AWMS)
 - Crop and Pasture BMPs
 - Streambank Stabilization and Floodplain/Wetland Restoration

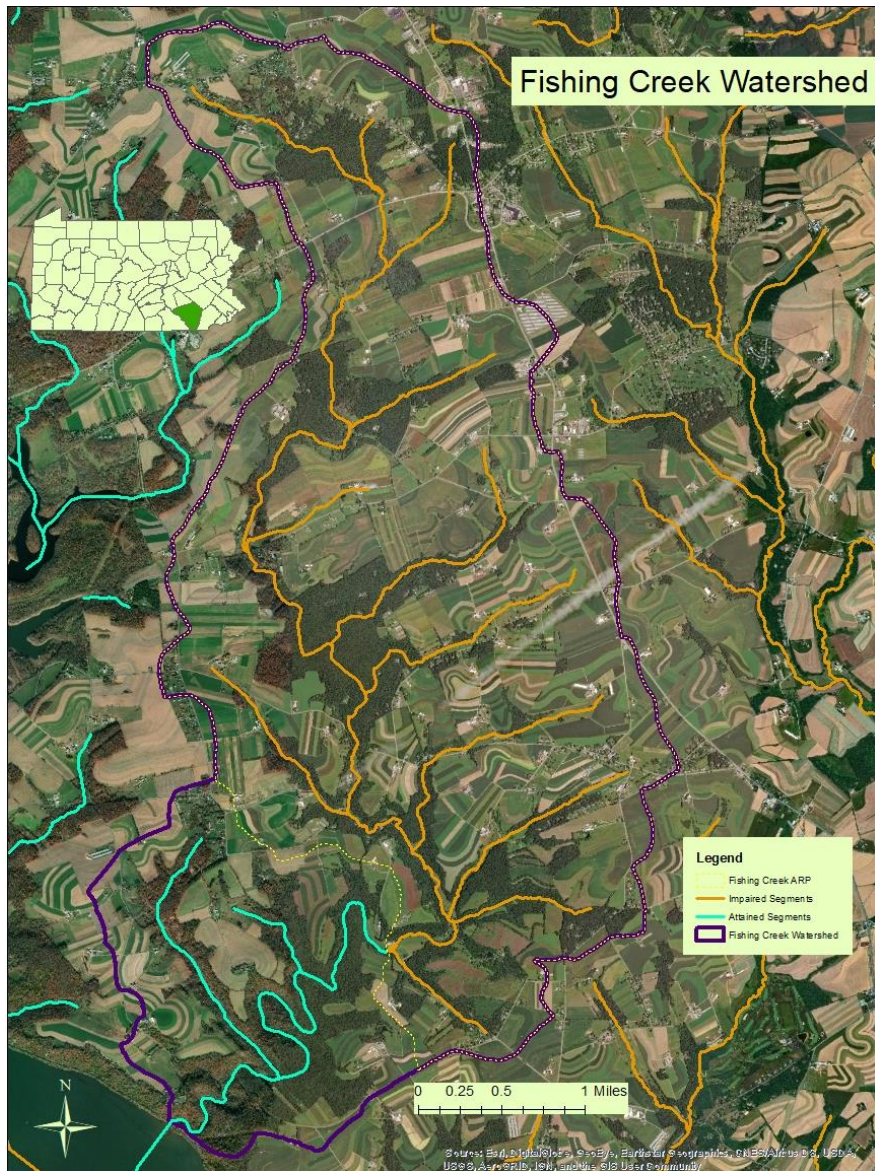
Kishacoquillas Creek ARP



- Example of 319 Grant funded Streambank fencing Pre- and Post-BMP
- Mifflin County Conservation District is the lead restoring a trout fishery
- DEP included Mifflin County's restoration work into the ARP while planning future restoration targets



Fishing Creek ARP



- NFWF, GG and 319 grants
- Multiple active partners
 - Federal, state, county, municipal, dairy industry, Amish and English farmers, Trout Unlimited
- Linking higher milk profits with streambank fencing/grazing land management and ag BMP implementation
- Reducing Bay Watershed pollutants
- Restoring waters of Exceptional Value and a High Quality Cold Water Fishery
- Protecting a globally limited and Threatened Species, Chesapeake Logperch

Summary

- TMDLs have been enhanced with a new tool, ARPs
- ARPs are effective at healing agricultural subwatersheds
- Active local leadership and grant funding is essential to the success of ARPs
- DEP coordination with local partners produces implementable ARPs
- Adaptive Management and communication helps to ensure the effectiveness and efficiency of ARPs through time



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