



**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

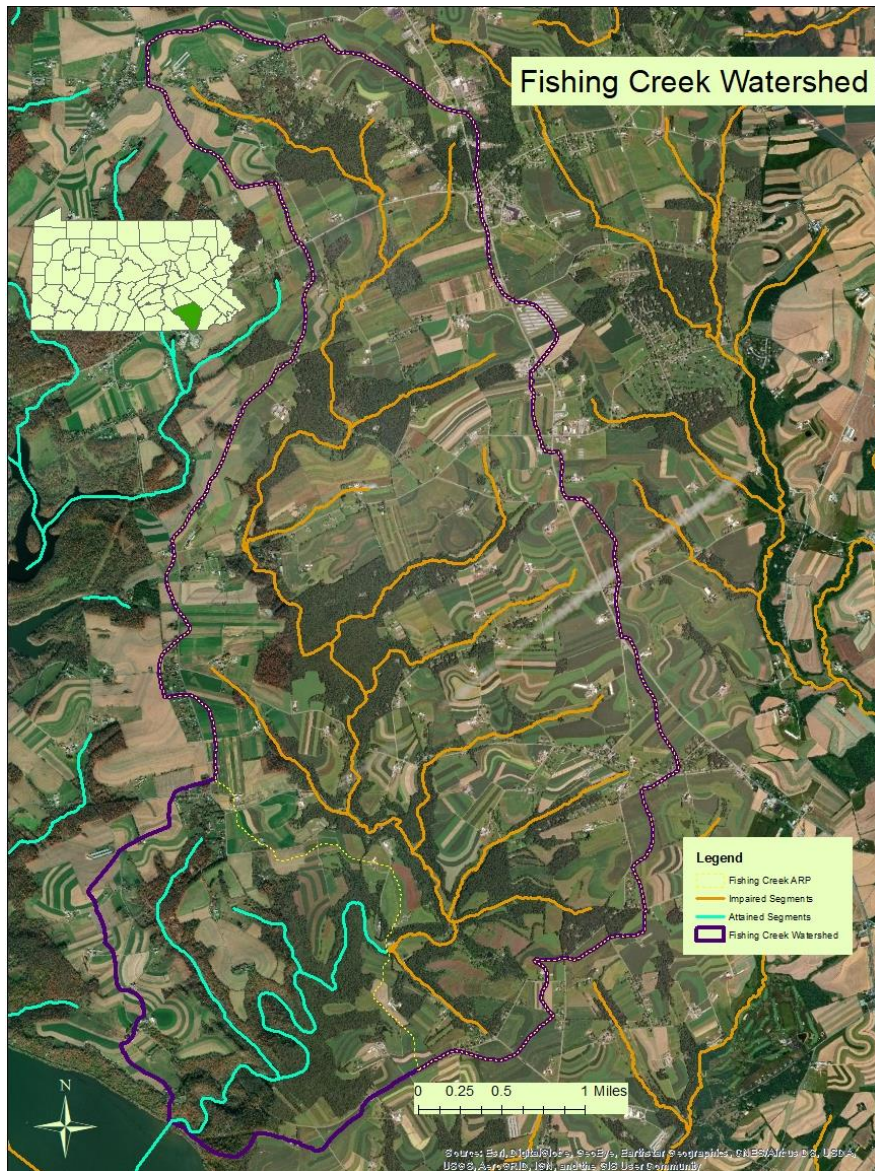
# Kishacoquillas Creek ARP



- 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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