



Pennsylvania Water Planning

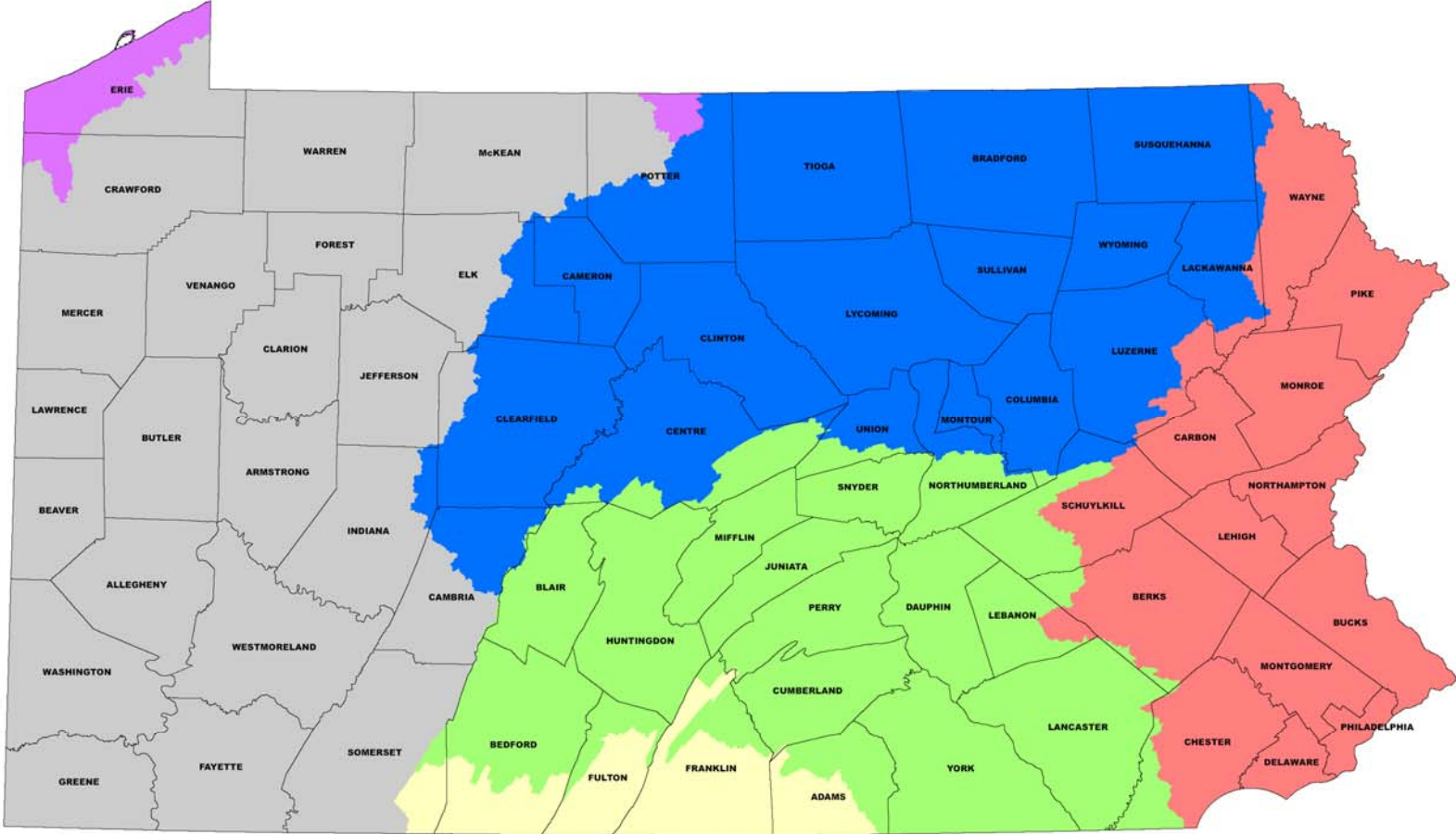
Shared Resource...Shared Responsibility

The Pennsylvania State Water Plan: A Non-Traditional Approach



- **Benchmark Plan sets vision for 2008...2030**
- **Collaboration with 169 appointed Statewide and Regional Committee Members**

Regional Water Resource Planning Areas



-  Delaware River
-  Lake Erie and Genesee River
-  West Branch, Upper, Middle Susquehanna and Chemung River
-  Ohio River
-  Potomac River
-  Juniata River, Lower Susquanna River, Gunpowder, Northeast and Elk Creek

“The Layer Cake Approach”

State Water Plan Principles

Priorities, Policies and
Recommendations

Pennsylvania Water Atlas

Statewide and Regional maps, Regional highlights, Simple statistics

Data & Analysis

What will the State Water Plan do to enhance planning efforts in Pennsylvania?

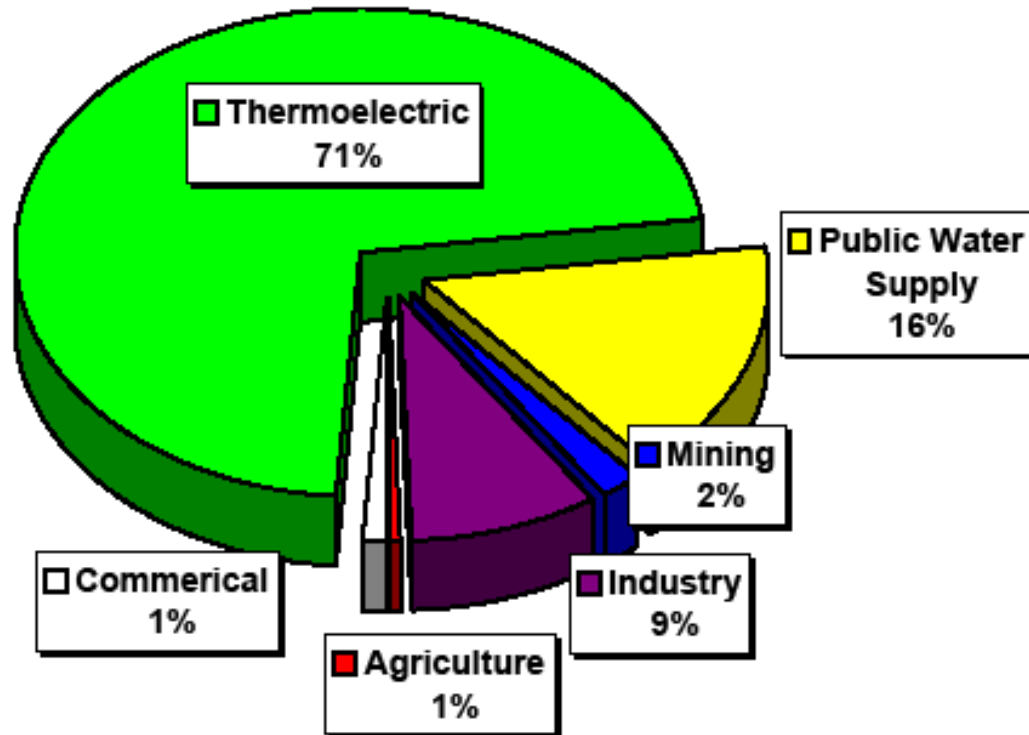
- Answer the following questions:
 - How much water do we have?
 - How much water do we use? and,
 - How much water do we need?
- Provide information to make more informed decisions

What Are We Trying to Protect?

Balanced approach to ensure resources needs are met to sustain:

- A high quality of life for residents, businesses, and visitors
- Jobs
- Recreational opportunities
- Natural resources
- Heritage as a manufacturing and agricultural leader
- Habitat
- Drinking water supplies
- Water for residential needs

Total Water Withdrawals in Pennsylvania

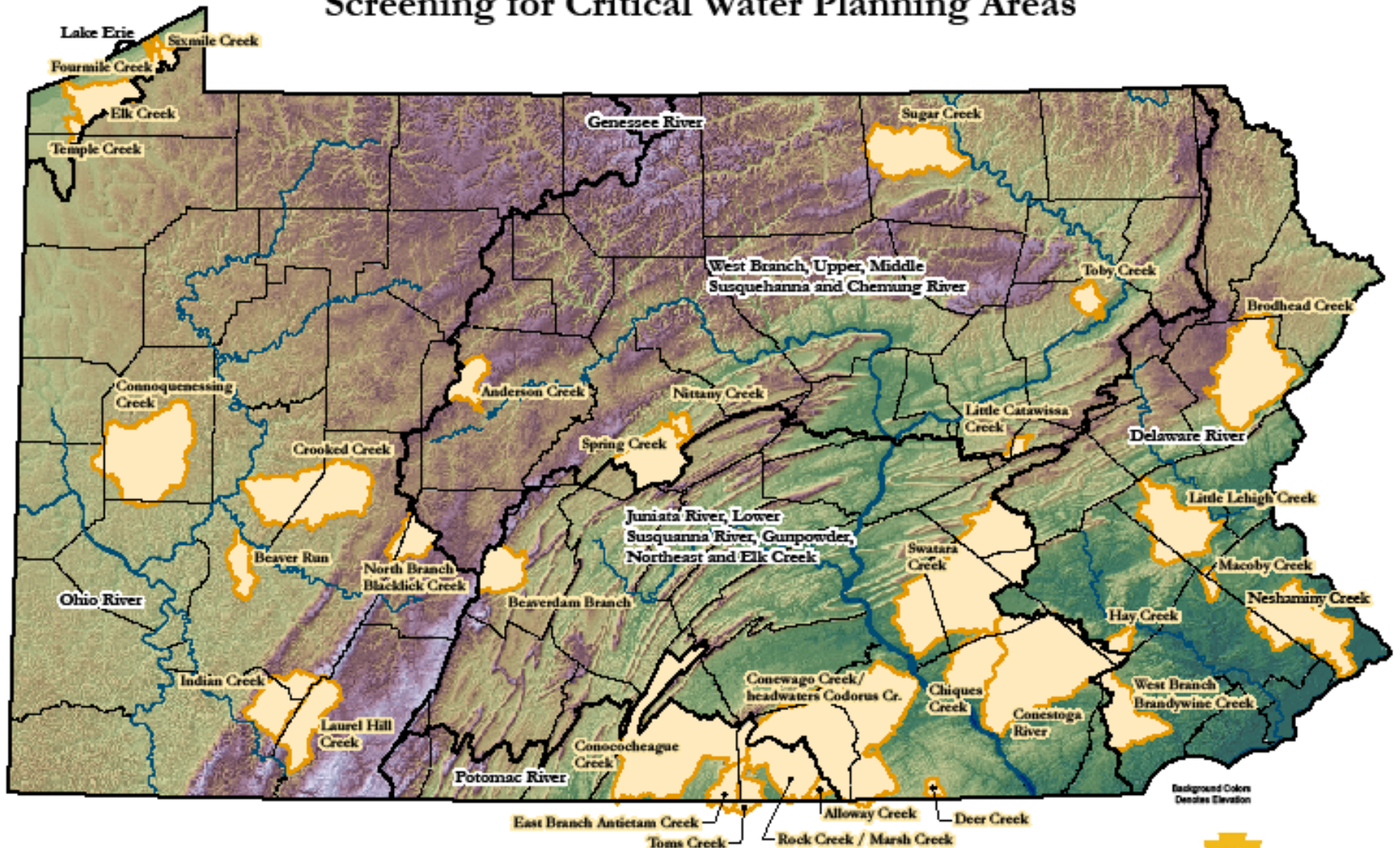


Data, Tool Development and Use



- Registration, Reporting and Record Keeping
- Water Analysis Screening Tool

Statewide Watersheds Selected for Data Verification Screening for Critical Water Planning Areas



Background Color Denotes Elevation



Watershed
(33 Selected)

Regional Water Resource Planning Area

County

Major Rivers

State Water Atlas

Water, Land and People—everything is Connected

Nearly three-fourths of the Earth's surface is covered by water. However, 97% of the resource is saltwater in the oceans and 2% is locked in glaciers, ice caps and mountain snow. This leaves only 1% of the earth's water available as freshwater for use in agriculture, electricity generation, drinking water, manufacturing and mining operations. Water continuously moves throughout the hydrologic cycle—recharging groundwater reserves, discharging to surface waters, or being drawn up through the soil profile for plant uptake. Although the total quantity of water on the planet stays the same, its availability may vary over time within particular watersheds and aquifers due to climatic conditions or changes in human use of local water resources.

Small watersheds serve as sources of clean drinking water, filter and purify groundwater, provide industrial process and irrigation water and offer natural flood control and protection. These natural processes can only take place if we conserve riparian areas, wetlands, water recharge zones, forested slopes and other "green infrastructure" in our watersheds. Land use planning and practices have a direct and immediate impact on water flow and resources, as well as wildlife habitat for all aquatic and terrestrial species.

Adding humans to the landscape complicates the natural water cycle. As populations increase or spread out and land development continues, demand for freshwater also increases. Normal precipitation amounts should be enough to meet current demands in Pennsylvania. However, certain regions may experience water shortages



during times of drought.

Not only do Pennsylvanians depend on our water resources, but people in many other states do as well. Water from the Susquehanna, Potomac, Delaware and Ohio rivers that flow through and from Pennsylvania are used by millions of people downstream. Pennsylvanians are connected through our rivers to the Delaware Estuary, Chesapeake Bay, Great Lakes, Gulf of Mexico and every state in between. Considering the ever-increasing demands for water in every basin, the management of Pennsylvania's water resources is a top priority.

■ **Chemical pollutants** – Factories, wastewater treatment plants, cars, boats, lawns, mining operations and crop fields may release chemicals into the environment. Insecticides, acid mine drainage, petroleum products and mercury, to name a few, can compromise drinking water systems, water quality and aquatic species health.

■ **Nutrients** – Although nitrogen and phosphorus are found naturally in healthy aquatic ecosystems, excessive amounts of these nutrients can be harmful to the environment. Runoff from agricultural areas (fertilizers and manure) and developed areas (failing septic ecosystems and excessive lawn fertilization) containing high levels of

these nutrients lead to impaired waters with low dissolved oxygen levels, decreased water clarity and algal blooms

Source Water Protection Tips

Individual actions play an important role when it comes to protecting drinking water supplies. Here are a few things you can do to reduce water pollution:

- Minimize use of fertilizers and chemicals in your yard and do not apply them right before it rains. Use natural fertilizers like manure, mulch, or compost.
- Plant trees or grass next to streams in your watershed. They will help keep the soil in place and out of the stream. Plants also help catch chemicals that can get washed into streams.
- Always pick up after your pet.
- Do not dispose of used motor oil, antifreeze, solvents, hazardous chemicals or waste in storm or home drains
- Make sure your septic tank is properly sited, designed, constructed and maintained.
- Don't allow heavy metals, batteries, solvents, pesticides or petroleum products to go to landfills.
- Make sure that wells are properly constructed.
- Refrain from dumping trash in areas other than those indicated safe.
- Rather than salting, shovel small amounts of snow to keep it from turning to ice

Statewide Priorities

1. Continue Data Gathering, Analyzing and Disseminating
2. Promote Integrated Water Resources Management
3. Encourage Innovative Technologies

Potomac Regional Committee Priorities

Address land use planning and growth



Potomac Regional Committee Priorities

Develop land use programs that protect water quality and quantity and preserve the ecological integrity of groundwater and surface water, including springs, streams, lakes and wetlands



Recommendations in the State Water Plan Include:

- **Trend Assessment**
- **Integrated Water Resource Management**
- **Water Conservation and Efficiency**

Highlights of the State Water Plan

- Sound science is the baseline for the Plan
- Statewide and Regional Recommendations and Priorities
- *Water Atlas*

All of these elements provide data for more informed decision making

Next Steps: Beyond the 2008 State Water Plan

