

River Flow and Water Use in the Susquehanna River Basin



Smallmouth Bass Public Workshop
January 31, 2009

Susquehanna River Basin

The Basin

- 27,510-square-mile watershed
- Nearly 4 million people
- 69 percent forested
- 49,000+ miles of waterways

The Susquehanna River

- 444 miles long
- Largest tributary to the Chesapeake Bay



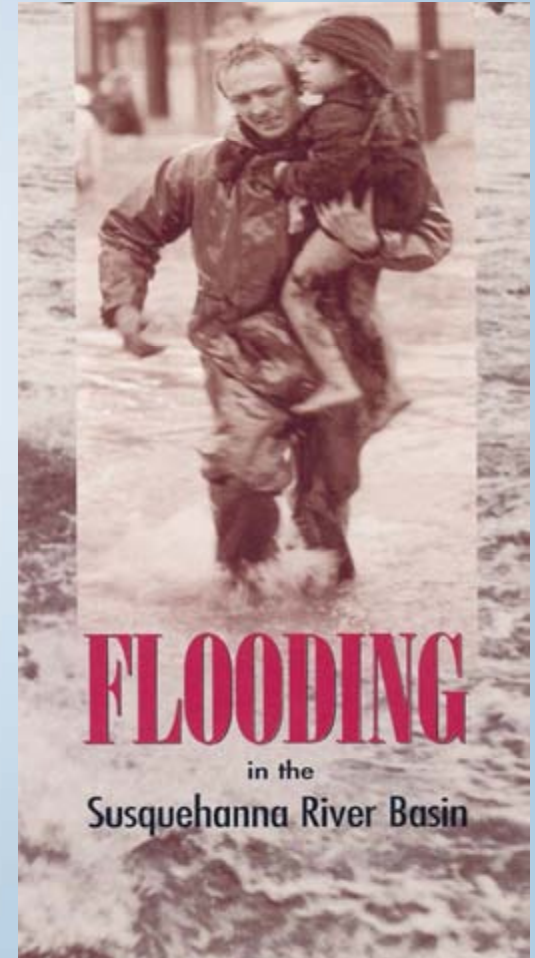
Susquehanna River Basin Commission

- Federal-interstate compact commission established by the federal government and the states of New York, Pennsylvania, and Maryland.
- Responsible for managing the basin's water resources and providing interstate coordination.



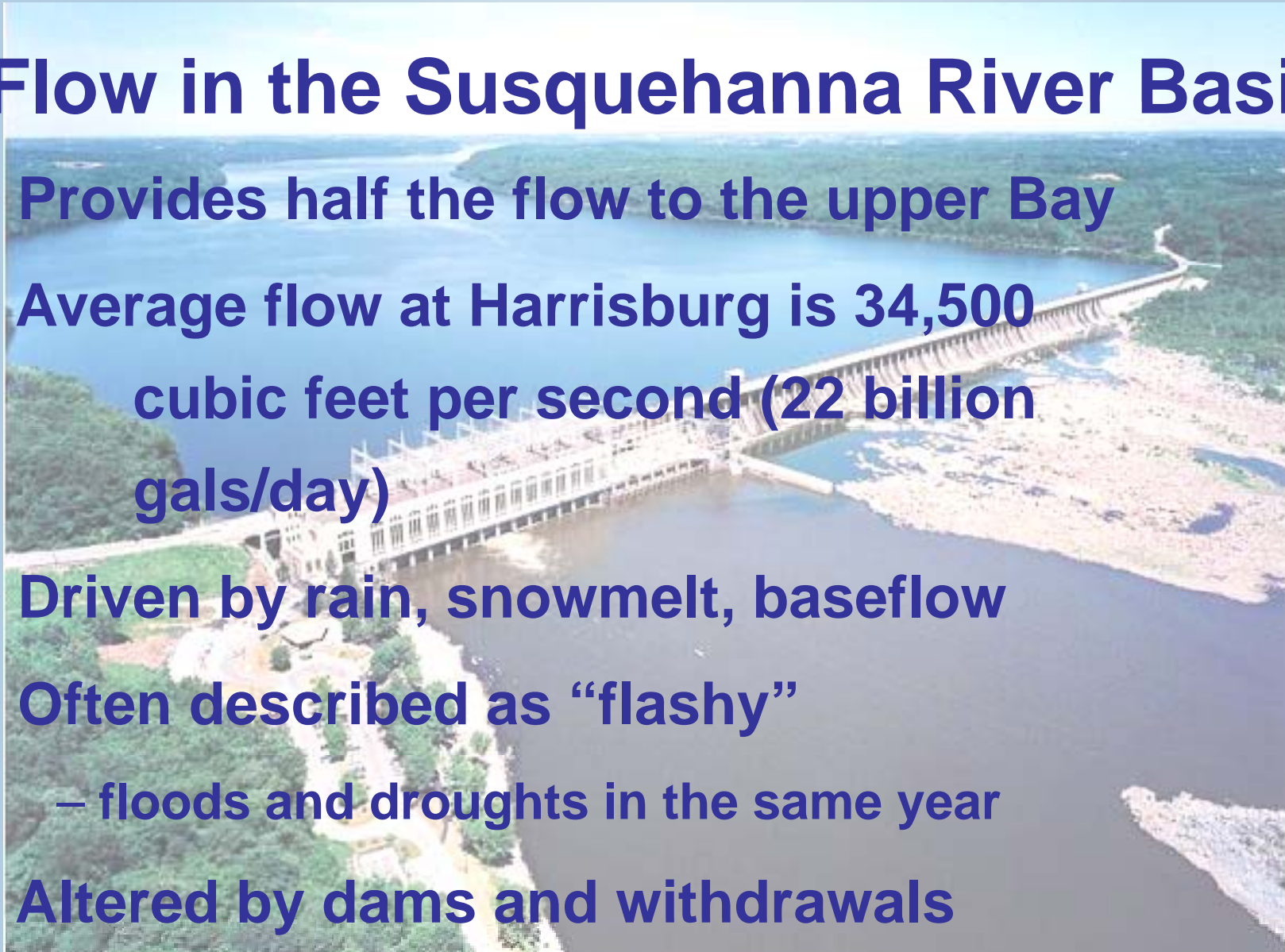
Commission Programs

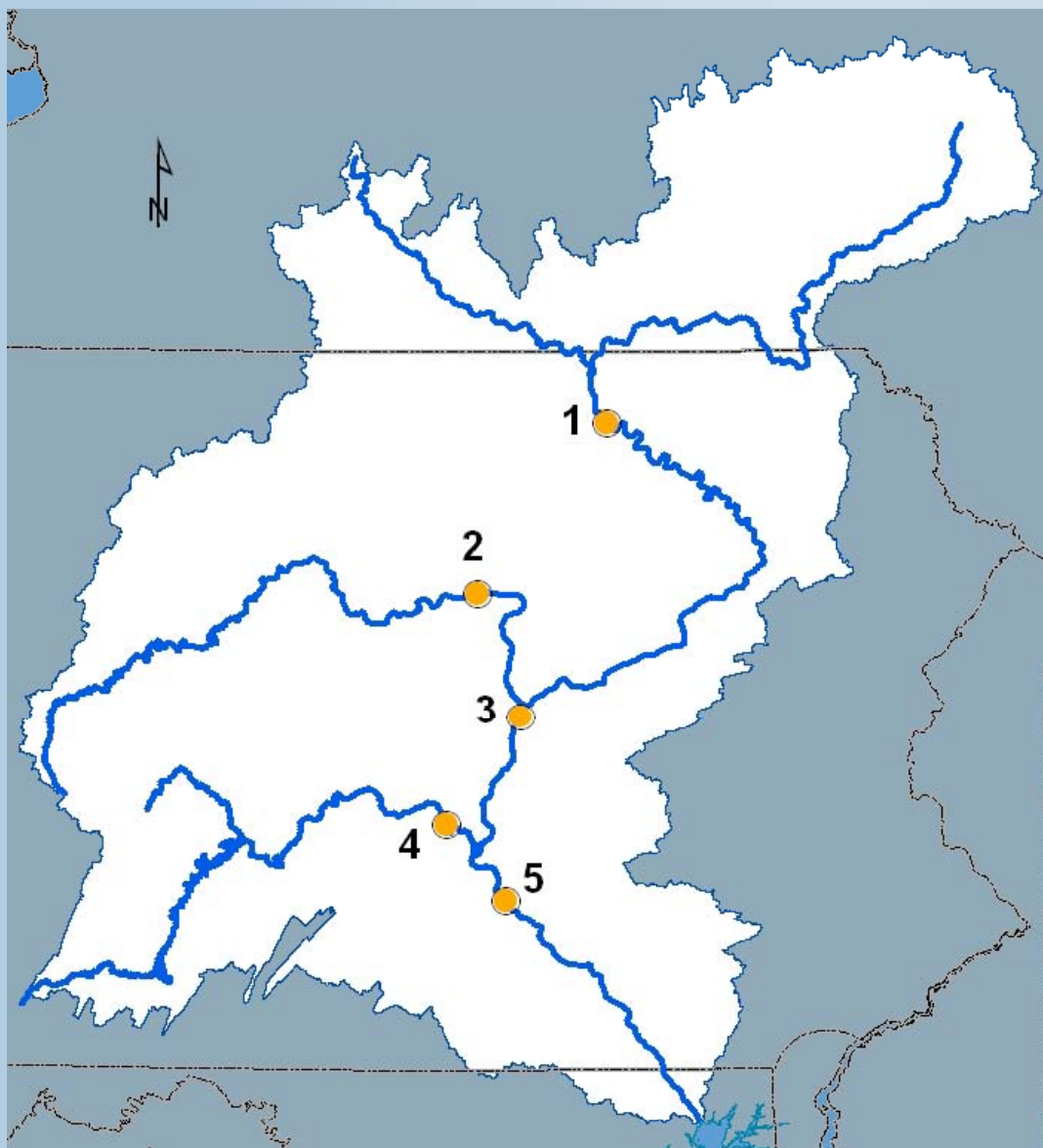
- Flood Forecast and Warning System
- Drought Coordination
- Monitoring and Assessment
- Public Education and Outreach
- Water Resources Planning
- Regulatory Program



Flow in the Susquehanna River Basin

- Provides half the flow to the upper Bay
- Average flow at Harrisburg is 34,500 cubic feet per second (22 billion gals/day)
- Driven by rain, snowmelt, baseflow
- Often described as “flashy”
 - floods and droughts in the same year
- Altered by dams and withdrawals

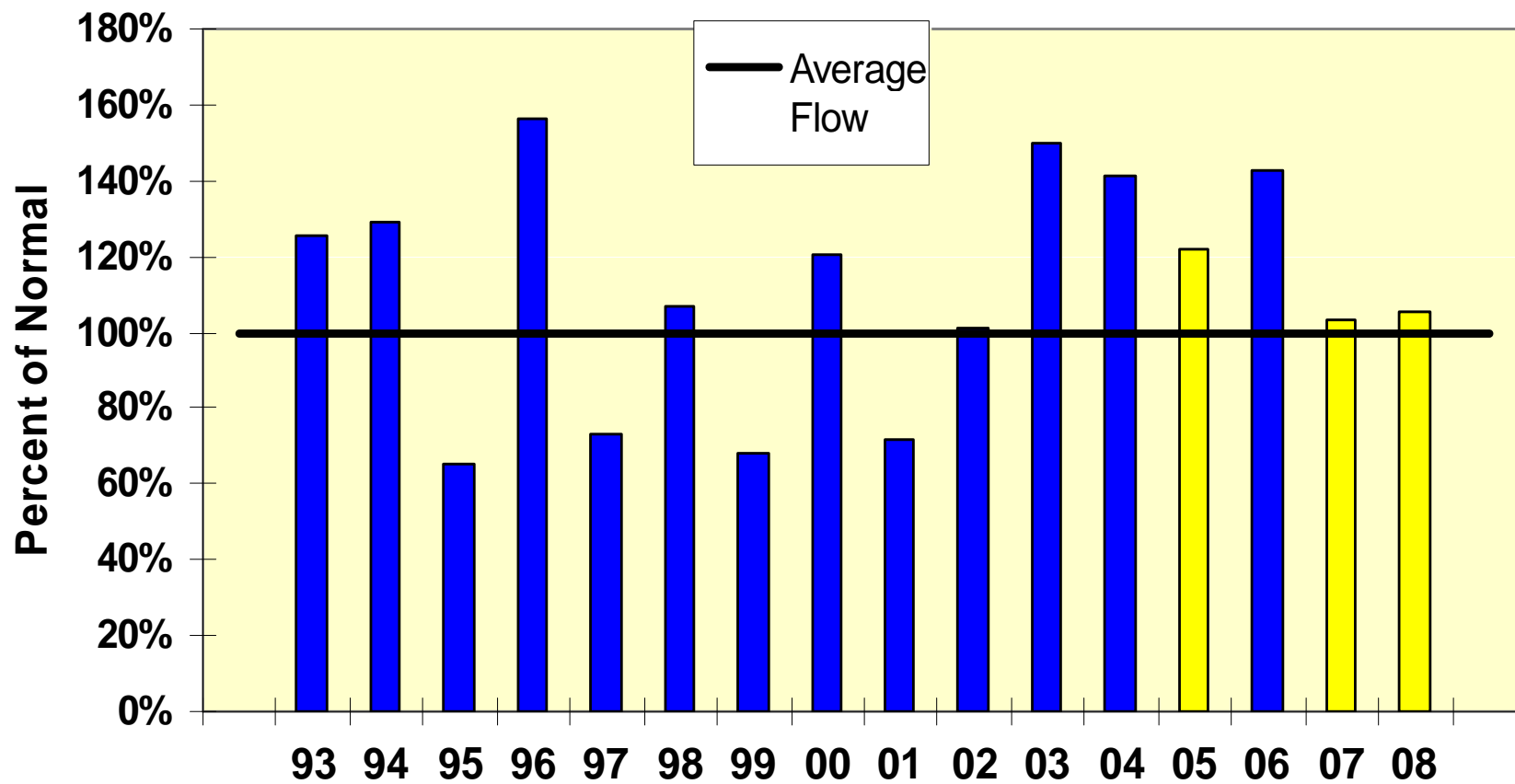




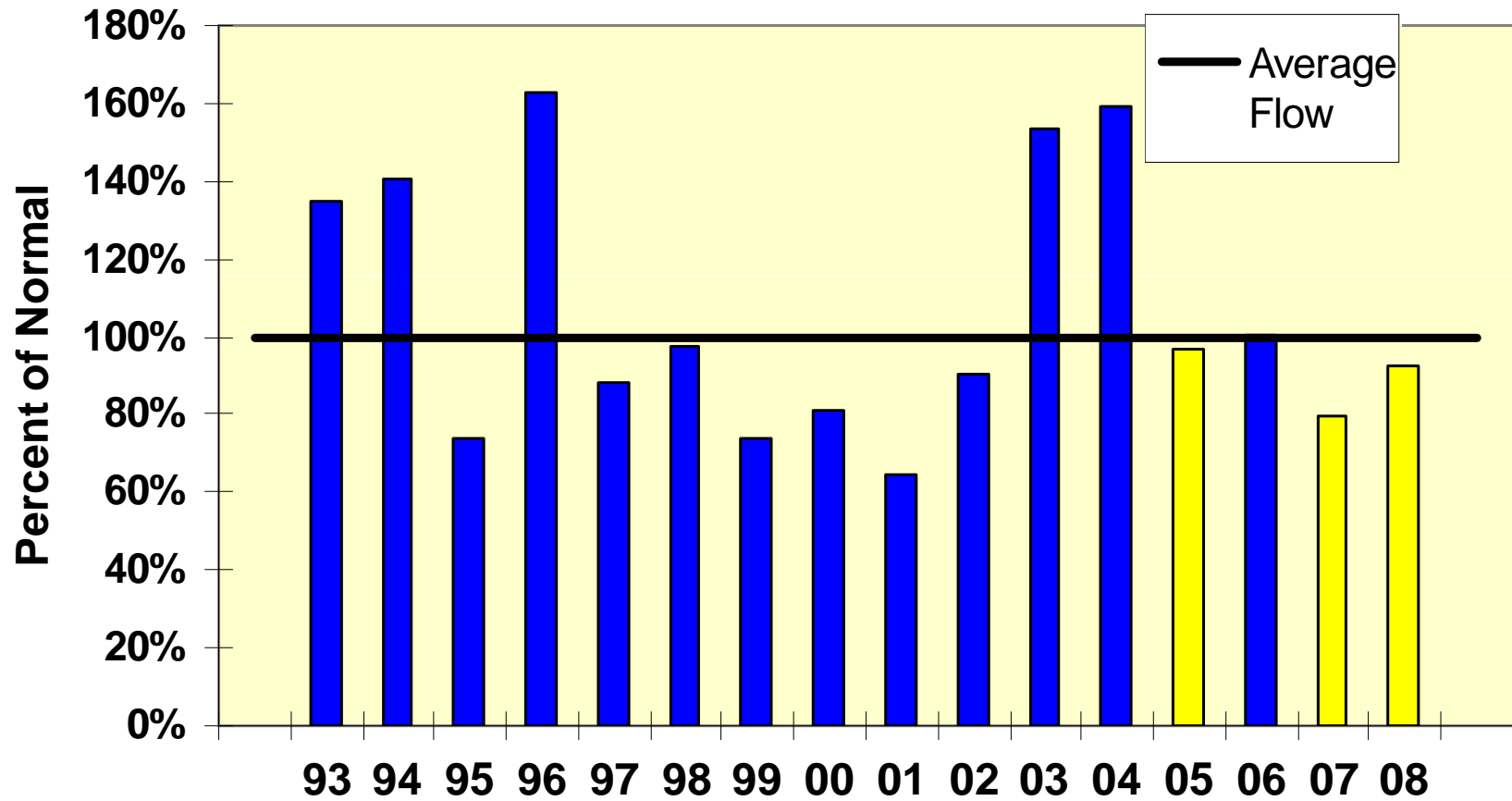
River Gauges

1. Susq. River at Towanda
2. West Branch at Williamsport
3. Susq. River at Sunbury
4. Juniata River at Newport
5. Susq. River at Harrisburg

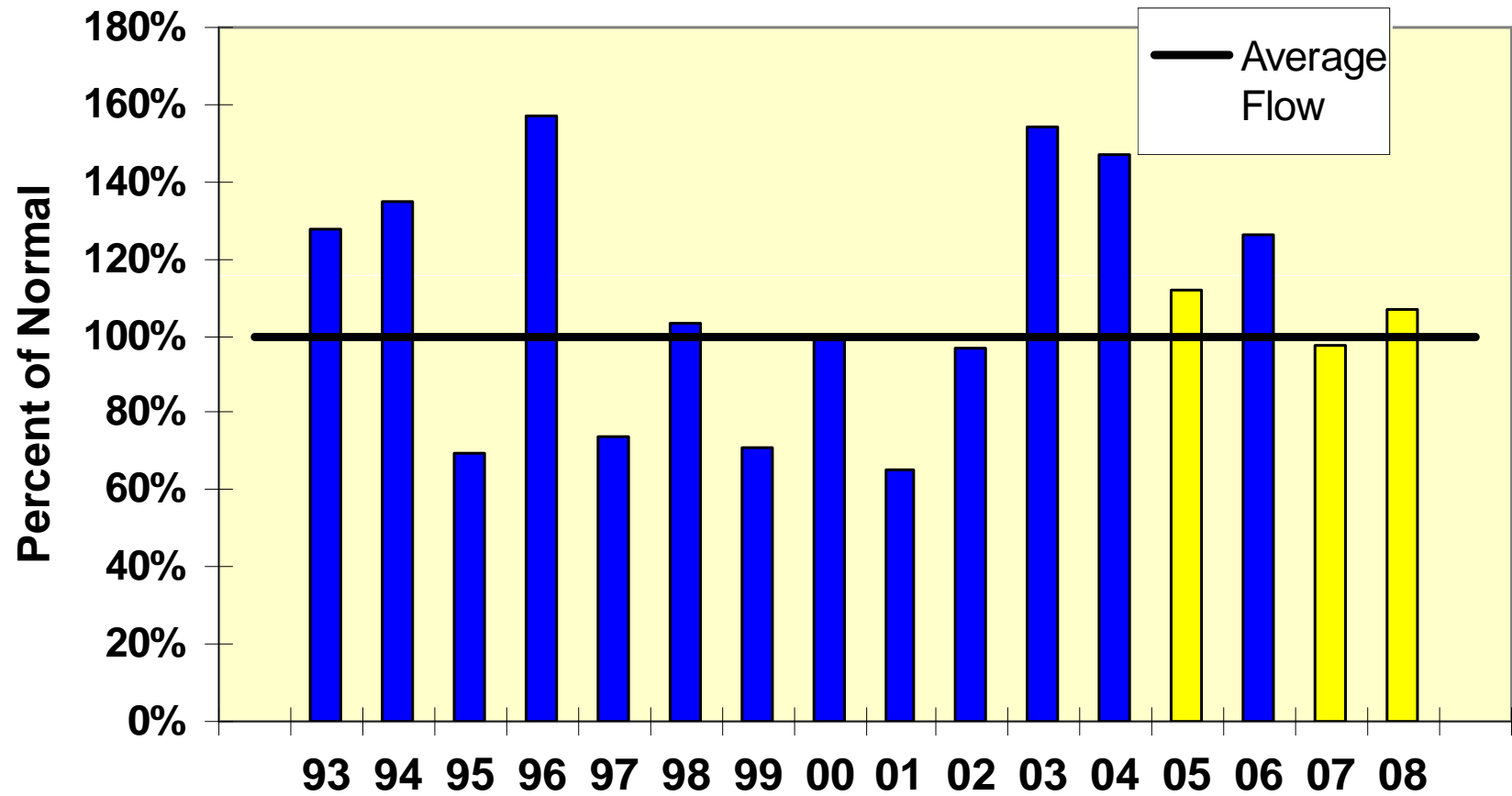
Yearly Flow at Towanda, Pa.



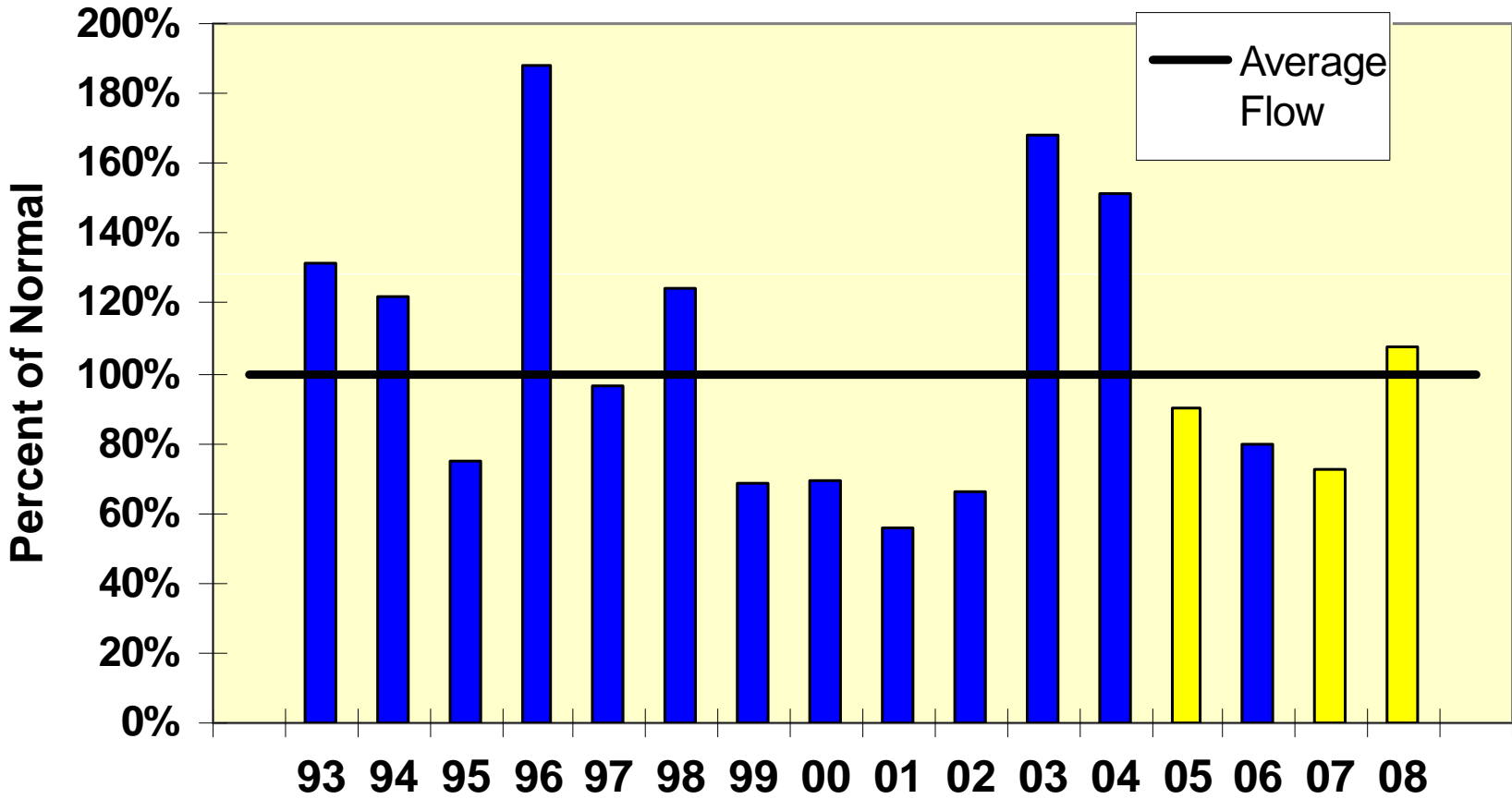
Yearly Flow at Williamsport, Pa.



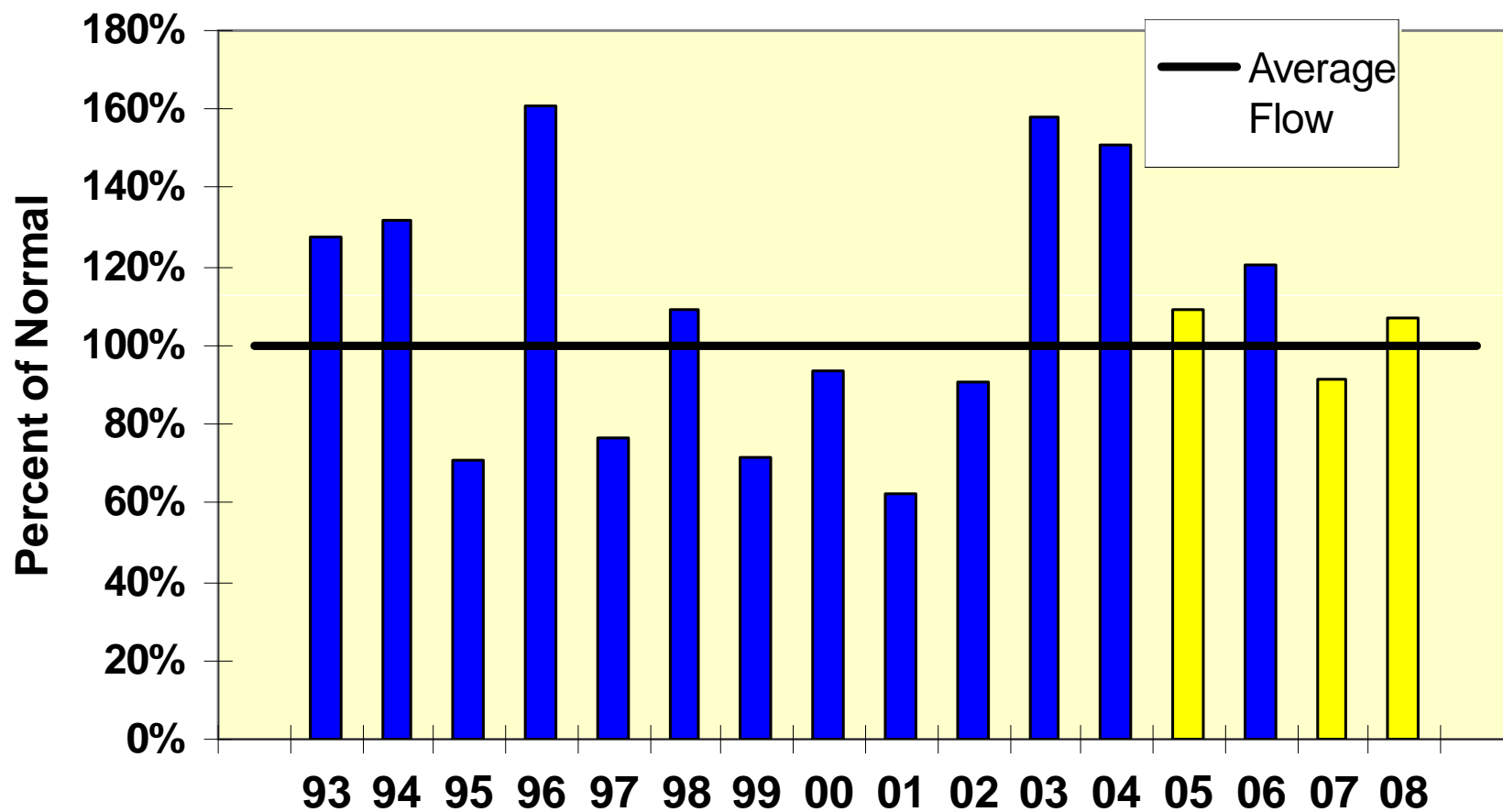
Yearly Flow at Sunbury, Pa.



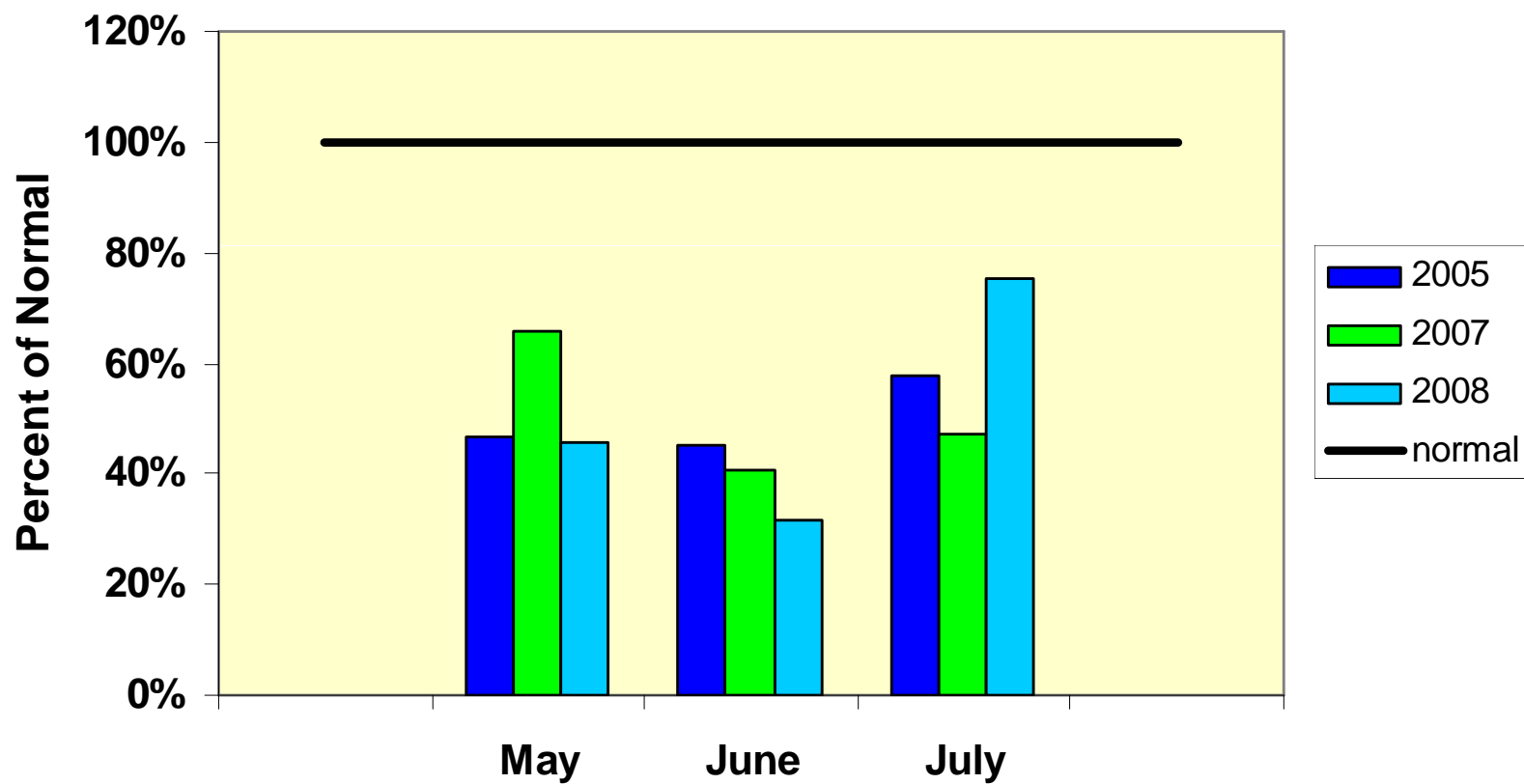
Yearly Flow at Newport, Pa.



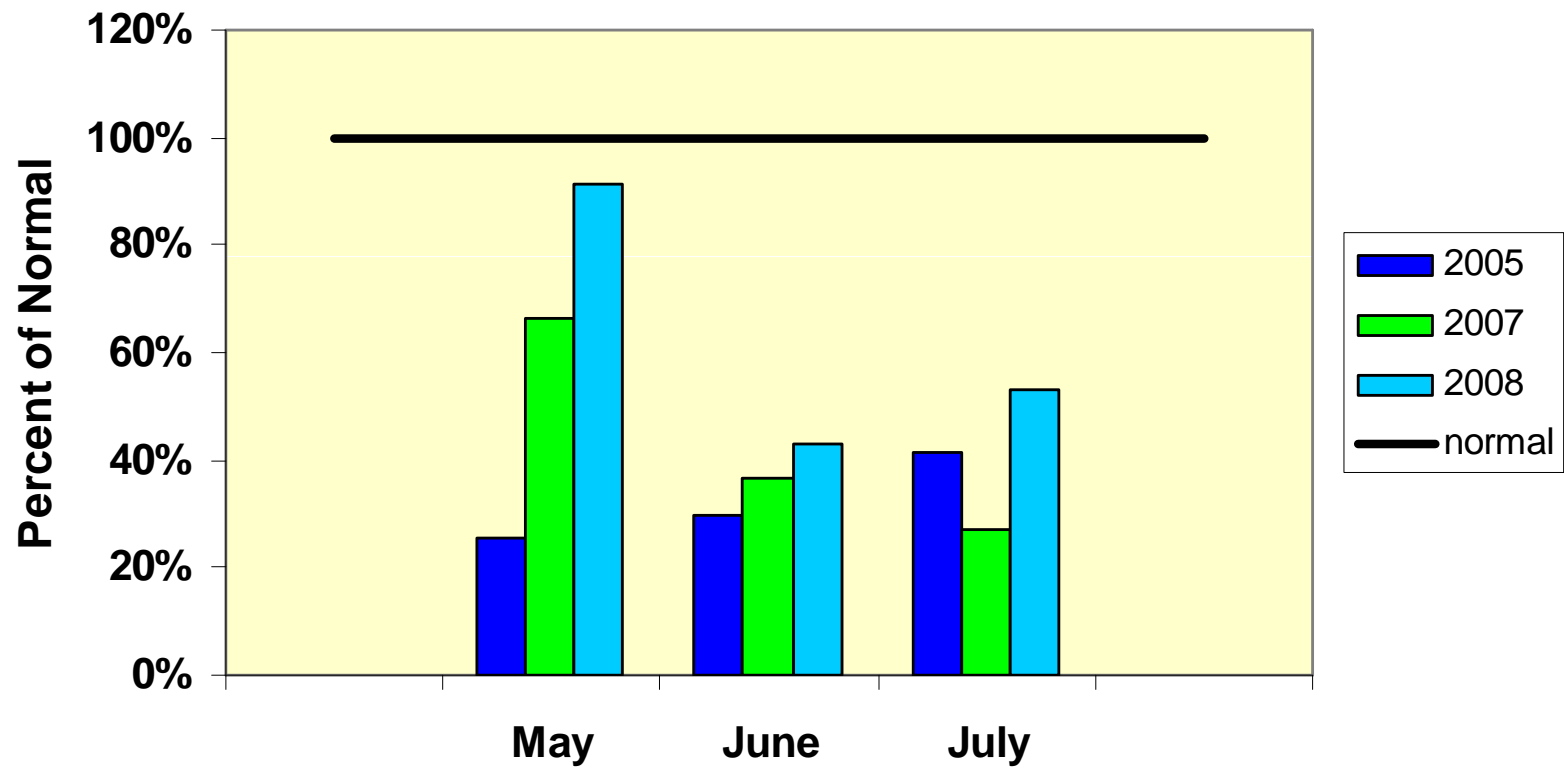
Yearly Flow at Harrisburg, Pa.



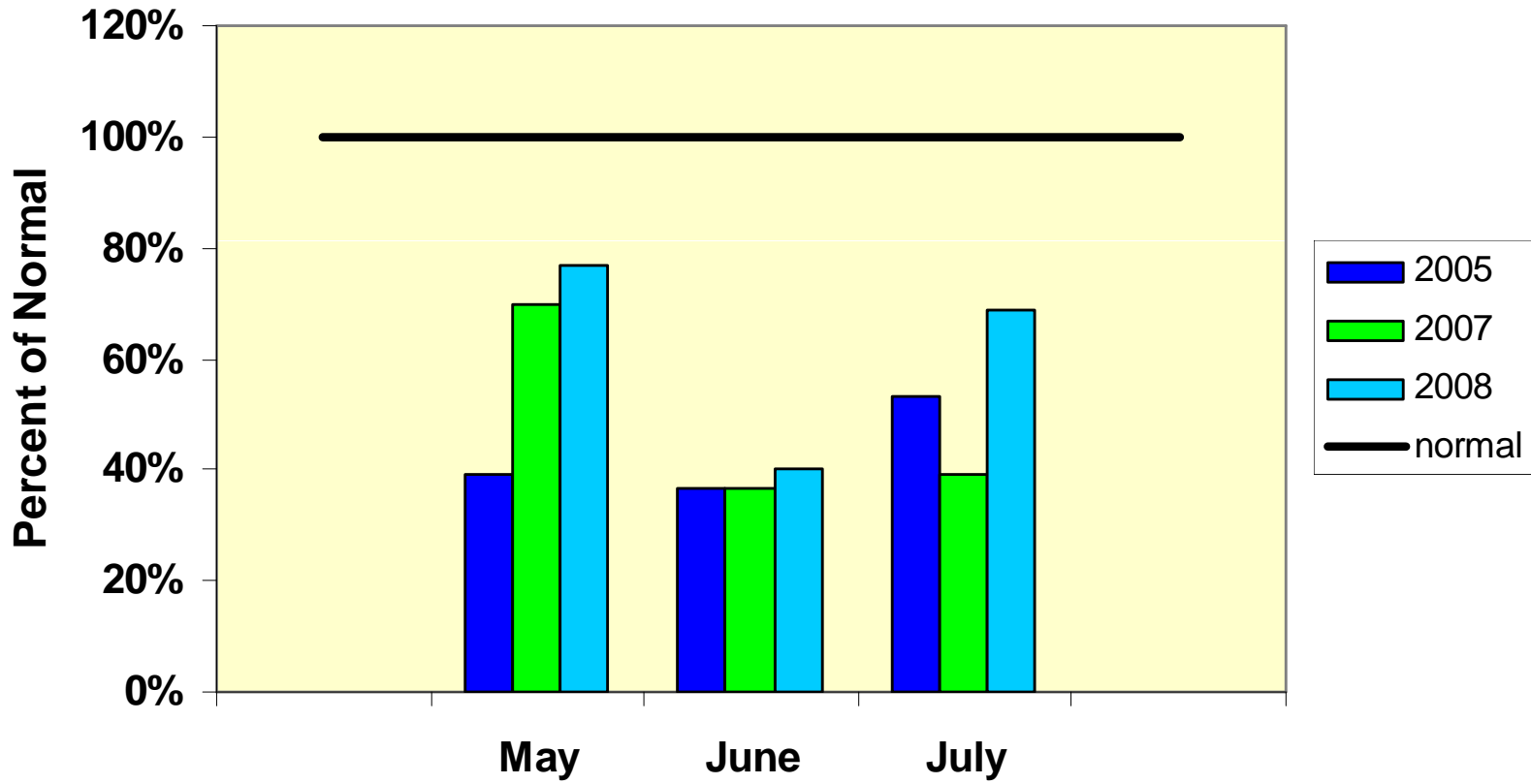
Monthly Flows at Towanda, Pa.



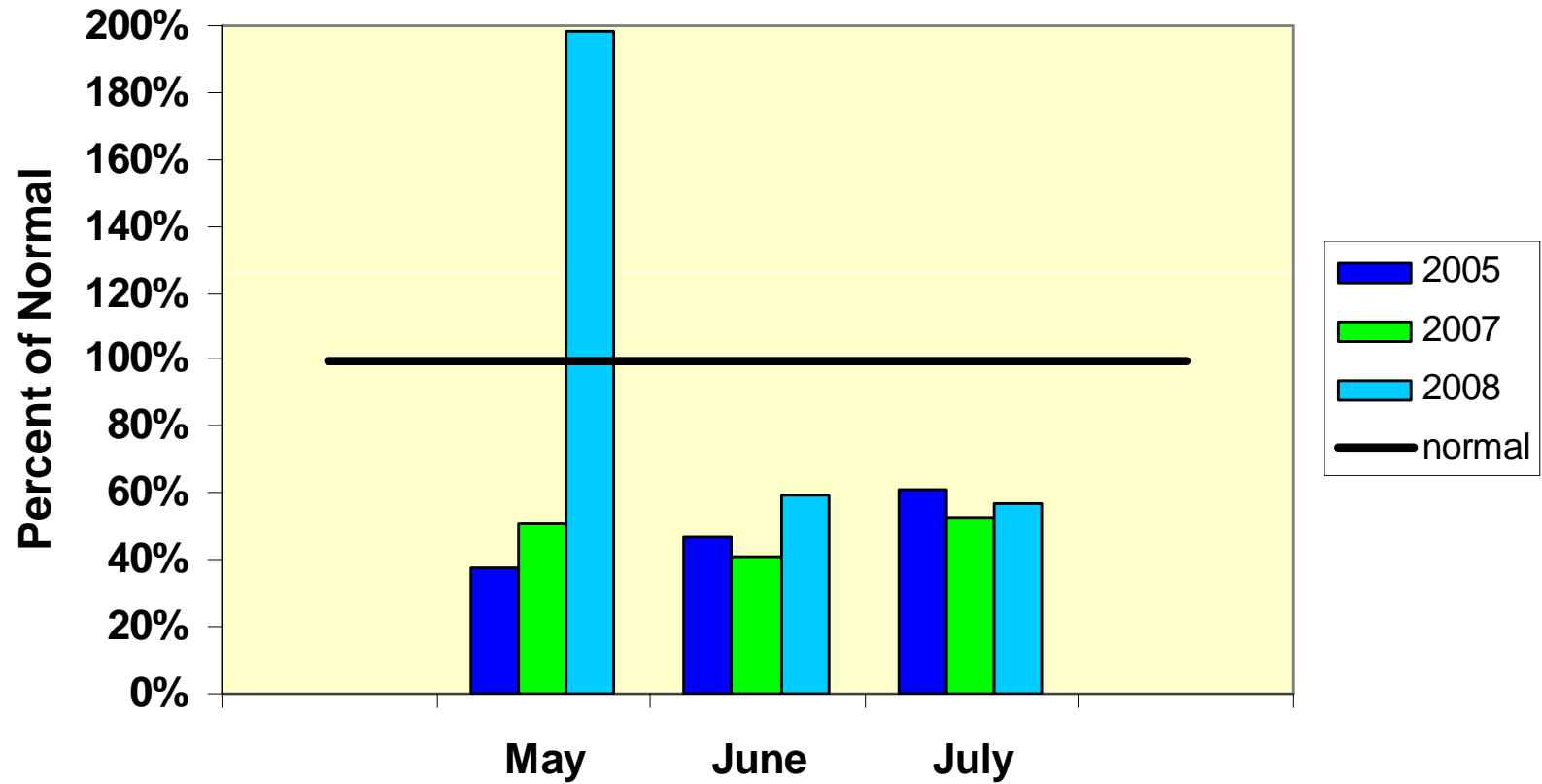
Monthly Flows at Williamsport, Pa.



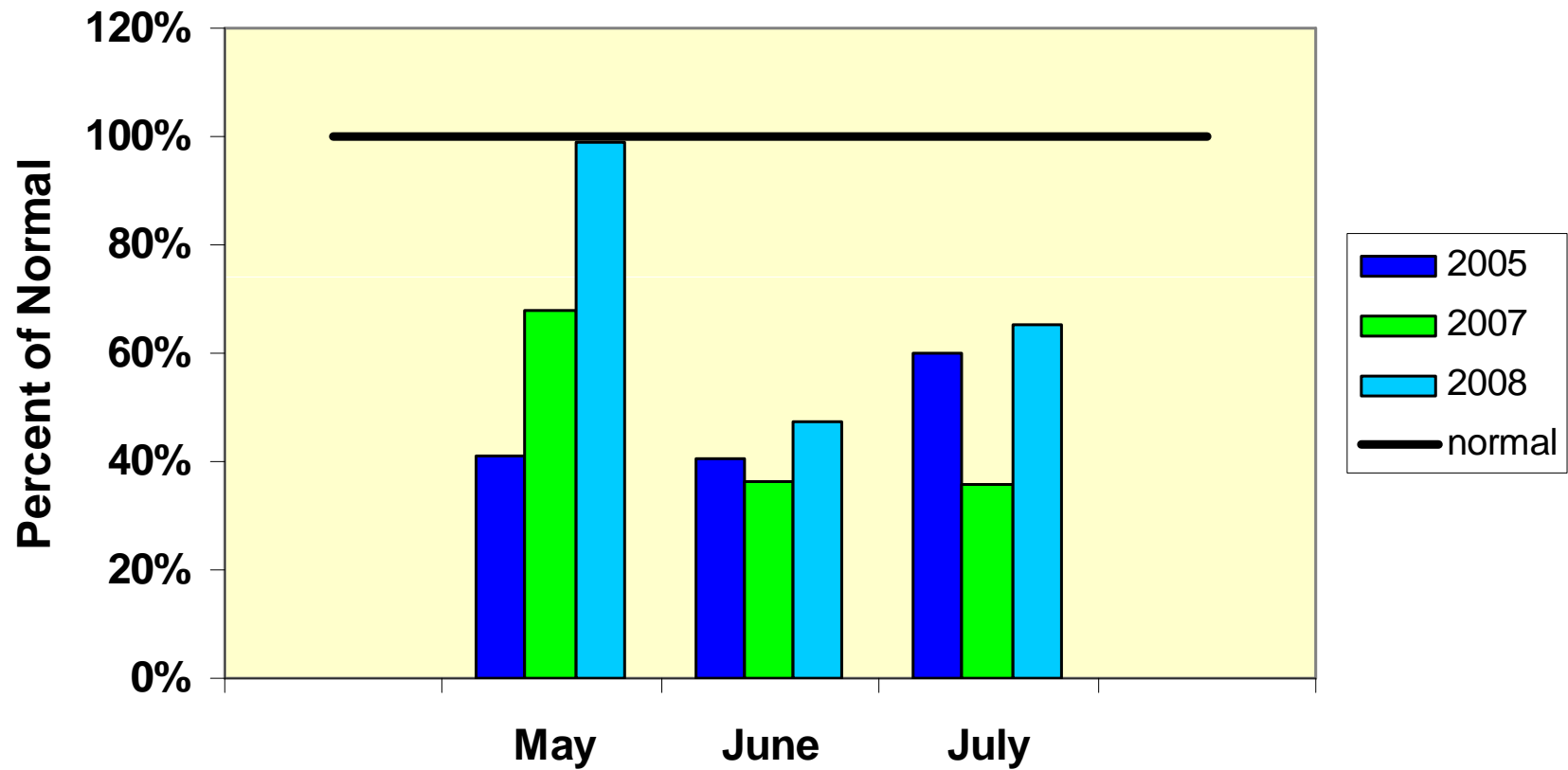
Monthly Flows at Sunbury, Pa.



Monthly Flows at Newport, Pa.



Monthly Flows at Harrisburg, Pa.



Susquehanna River flows were abnormally low during the time of disease incidence



Sinnemahoning
State Park boat
launch,
September 2008

Water Use in the Susquehanna River Basin



Consumptive Water Use Regulation

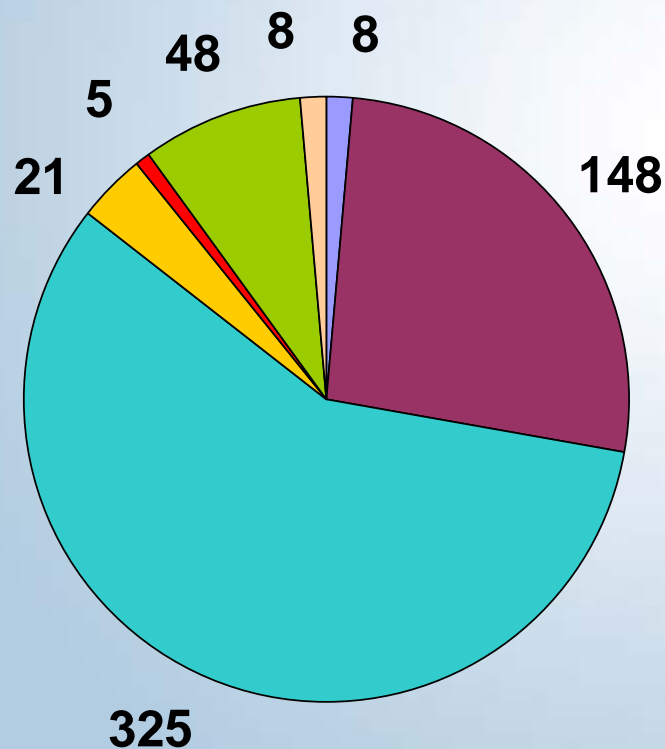
Purpose:

- safeguard adequate flows for public water supplies, industries, agriculture and recreation, and
- protect aquatic life, habitat and water quality during times of critical low flows.



Maximum Approved Daily Use by Category

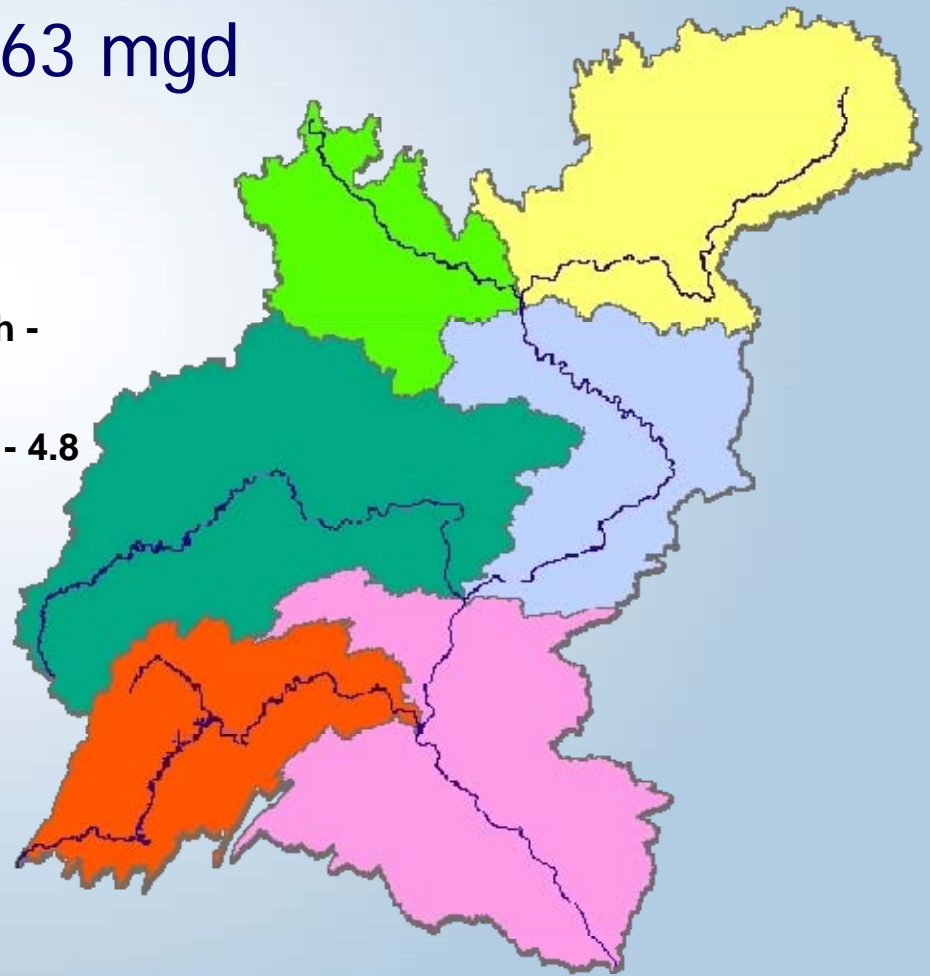
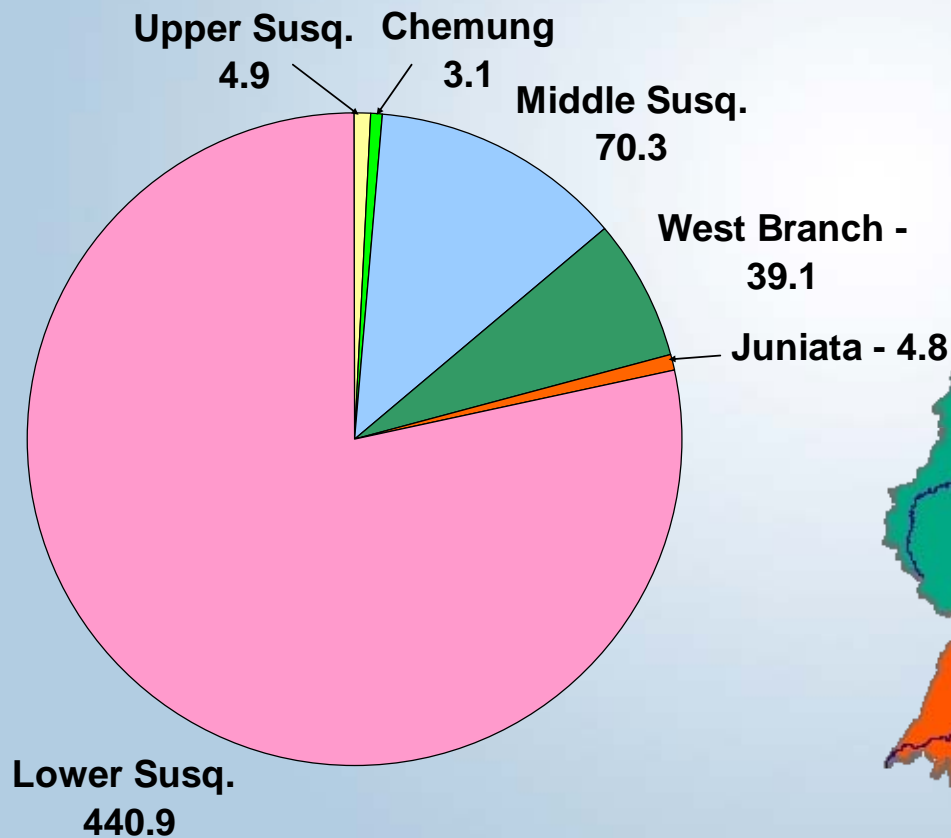
Total = 563 million gallons per day



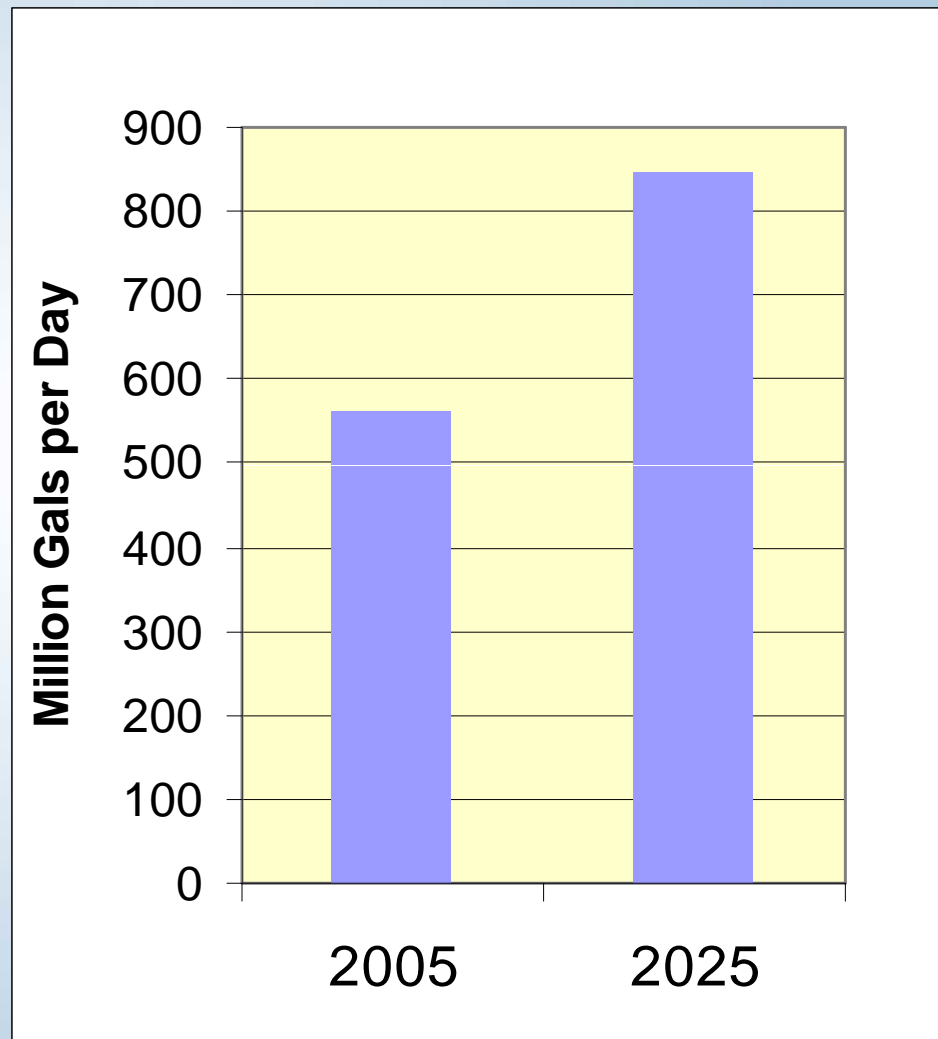
- Mining - 1%
- Power Generation - 26%
- Diversions - 58%
- Manufacturing - 4%
- Education - 1%
- Recreation - 9%
- Other - 2%

Approved Daily Use By Subbasin

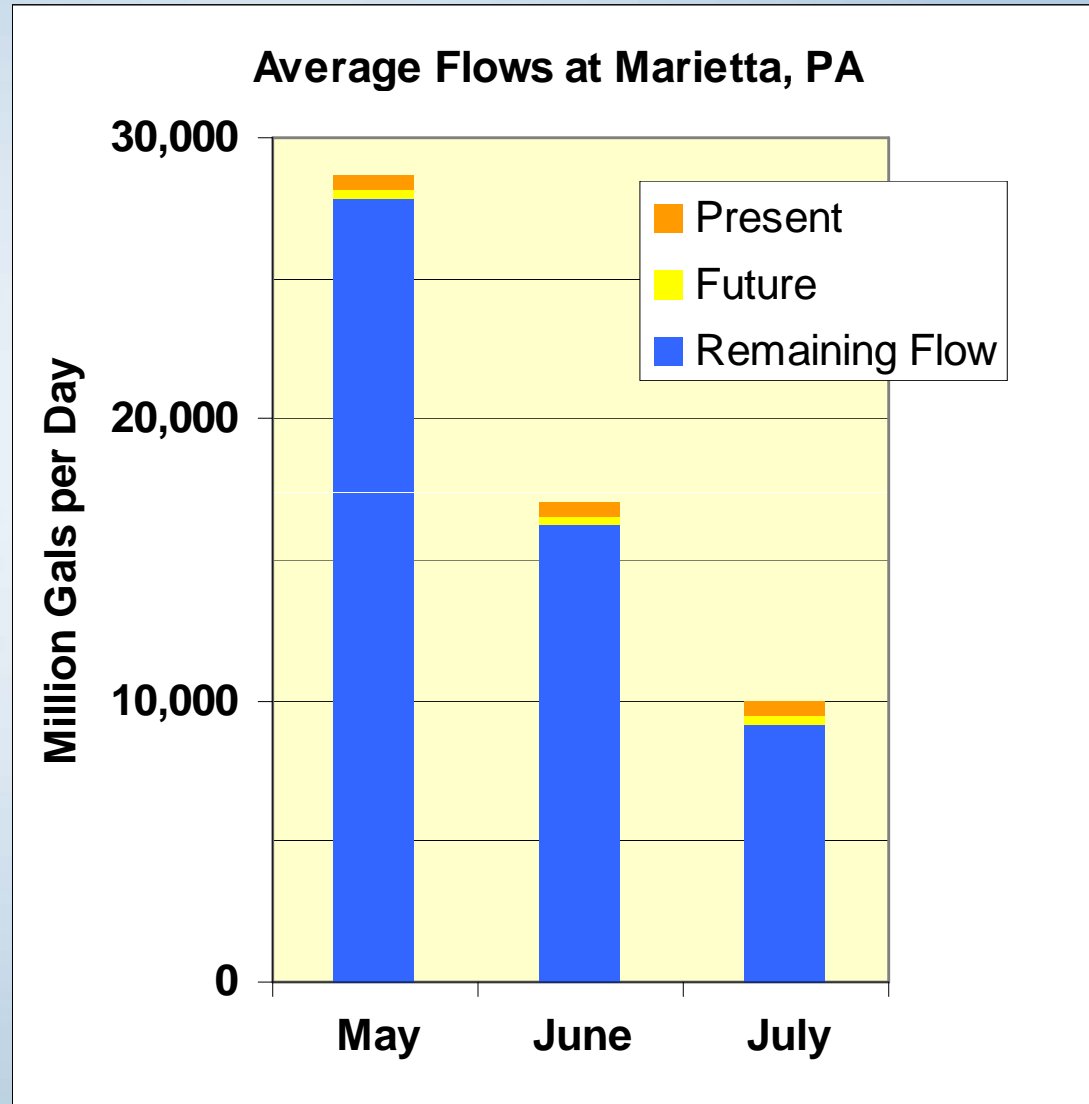
Total = 563 mgd



Peak Water Demand is Expected to Grow



How does
Water
Demand
Impact Flow?



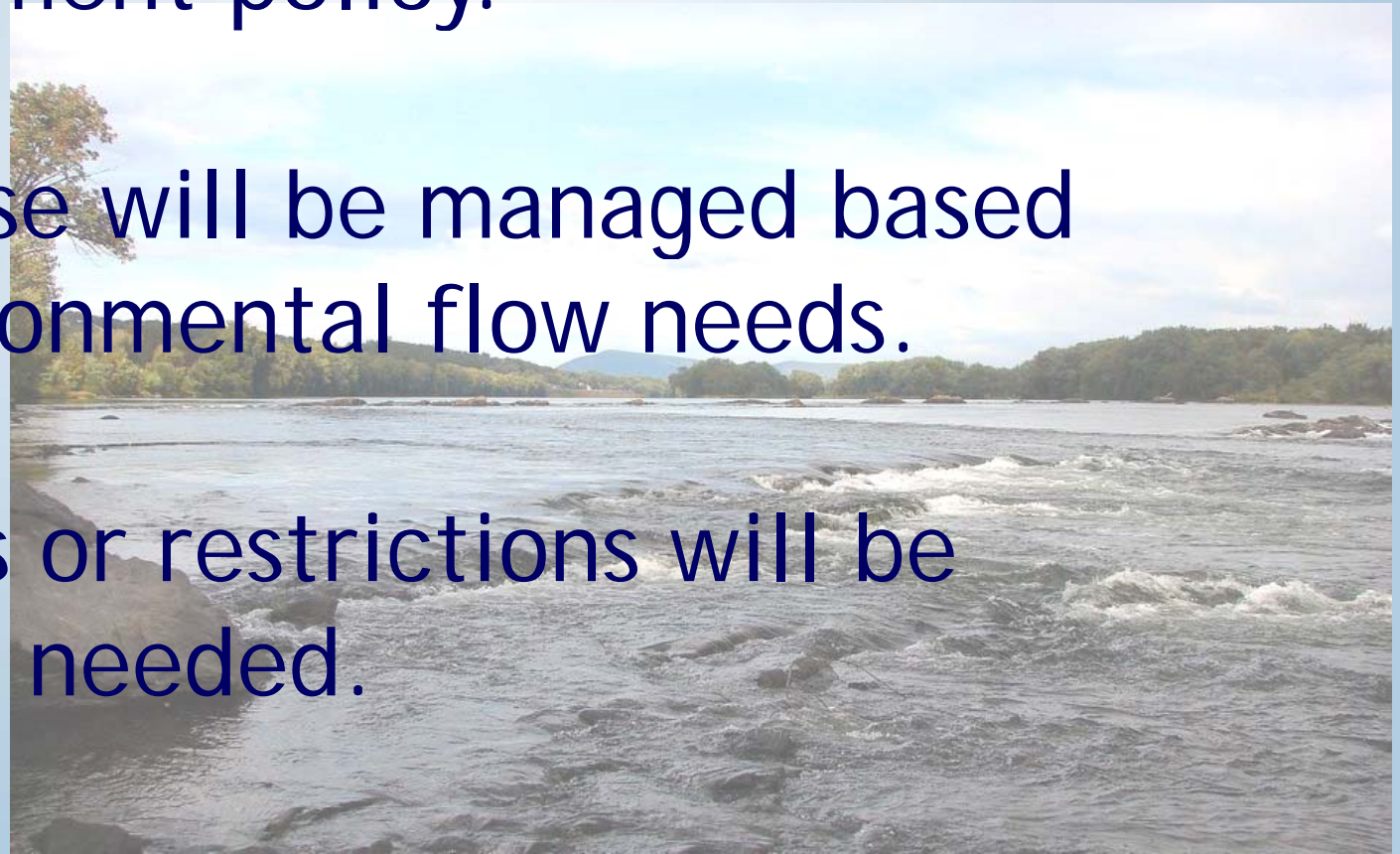
SRBC Protection and Monitoring Efforts



SRBC is moving toward a more environmentally protective management policy.

Water use will be managed based on environmental flow needs.

Releases or restrictions will be made as needed.



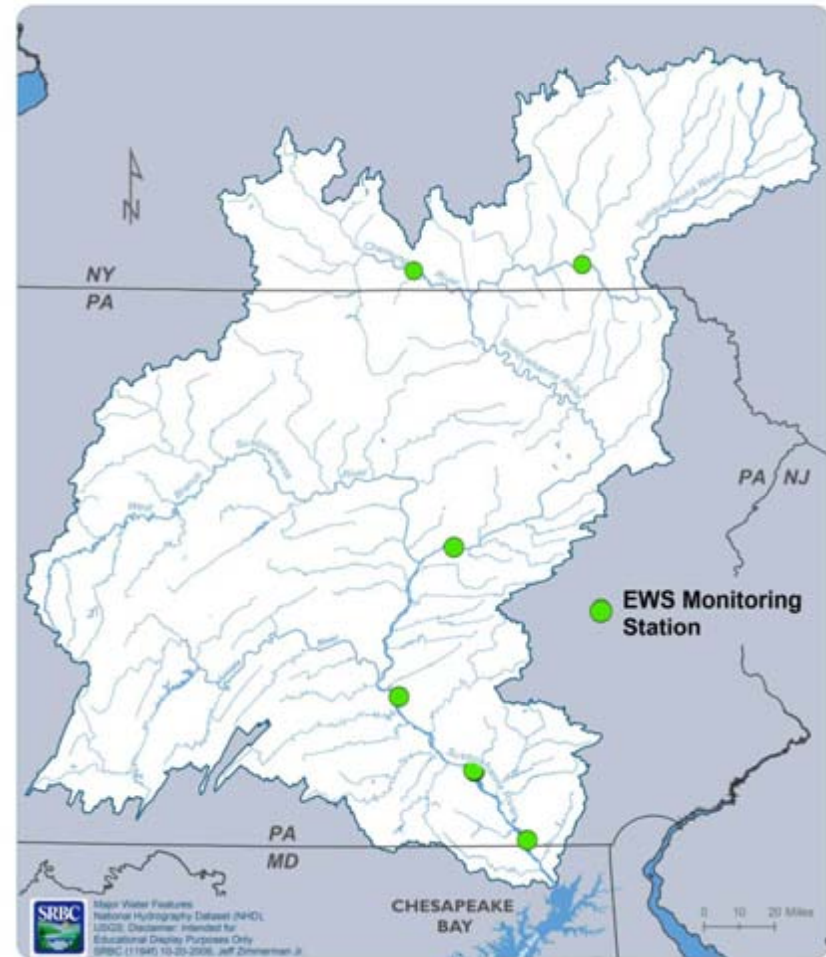
Environmental Flow Efforts

- Cold-water In-stream Flow Studies w/PA, MD, US Army Corps of Engineers
- PA In-stream Flow Project by The Nature Conservancy
- SRBC's Study of Environmental Flow Needs with TNC in Susquehanna Basin



Susquehanna Basin Early Warning System (EWS)

- PA start – 2003
- NY expansion - 2006
- Enhancing drinking water protection efforts
- Temperature, pH, and turbidity @ intake locations with real-time data transmission
- Organic contaminant detection capabilities at select stations



SRBC Contact Information



www.srbc.net

Andrew Dehoff

adehoff@srbc.net

238-0423 ext 221