

**Introduction to Water Policy & Laws in New York: Tools & Perspectives for the  
Protection of Streams, Water Quality and In-stream Flow**

# **Instream flow and water budgets**

**Including a summary of Water Resources Laws, Policies and Local Options  
for Watershed Protection, presented May 13, 2015 in Newburgh NY**

**Black Rock Forest  
Cornwall, NY  
June 8, 2015**

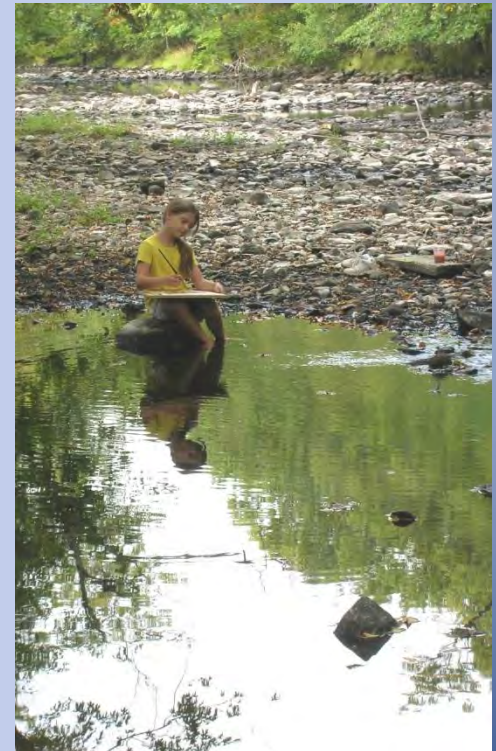
**Simon Gruber  
Consultant, Hudson Valley Regional Council  
Fellow, CUNY Institute for Sustainable Cities**

“... ten thousand River Commissions, with the mines of the world at their back, cannot tame that lawless stream, cannot curb it or confine it, cannot say to it, “Go here,” or “Go there,” and make it obey; cannot save a shore which it has sentenced; cannot bar its path with an obstruction, which it will not tear down, dance over, and laugh at.”

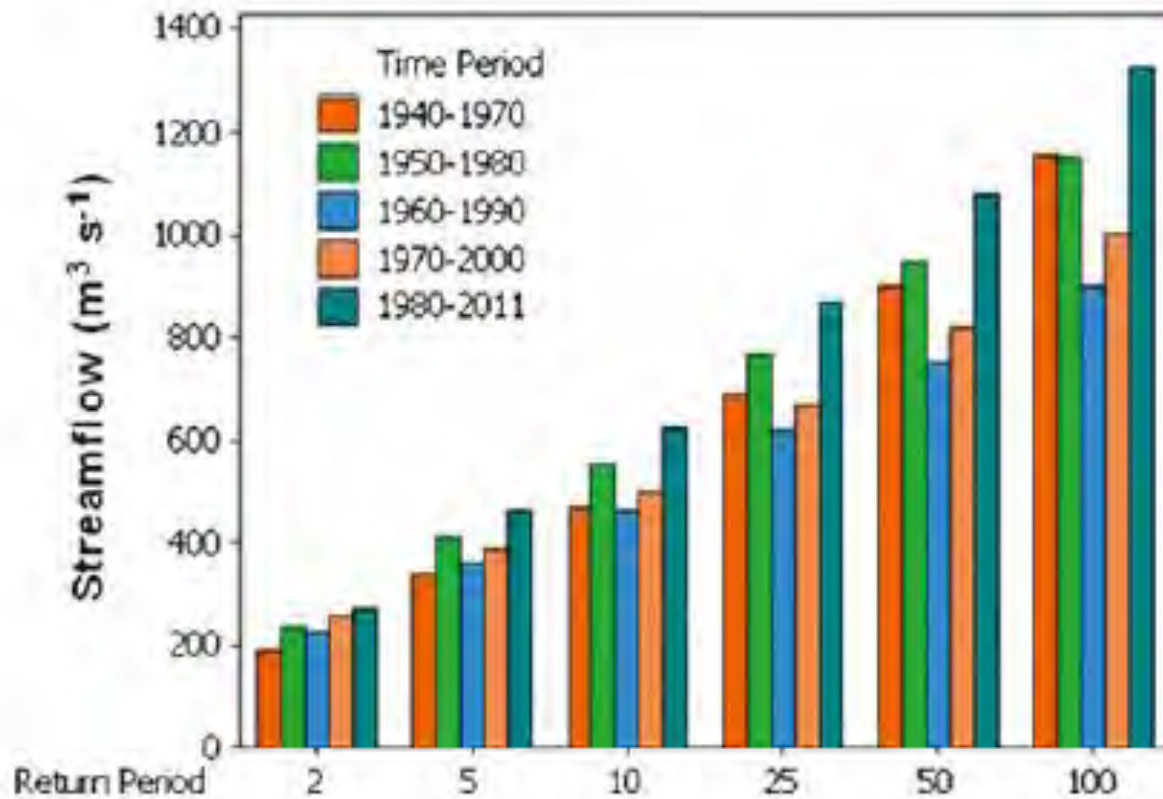
Mark Twain, in *Life on the Mississippi*

# Issues in Quassaick Creek and Moodna Creek watersheds, and everywhere else

- Drinking water protection
- Water withdrawals
- Interbasin transfers
- Stormwater management
- Drainage and water diversions
- Responsibility and authority for managing water releases, flows, and diversions

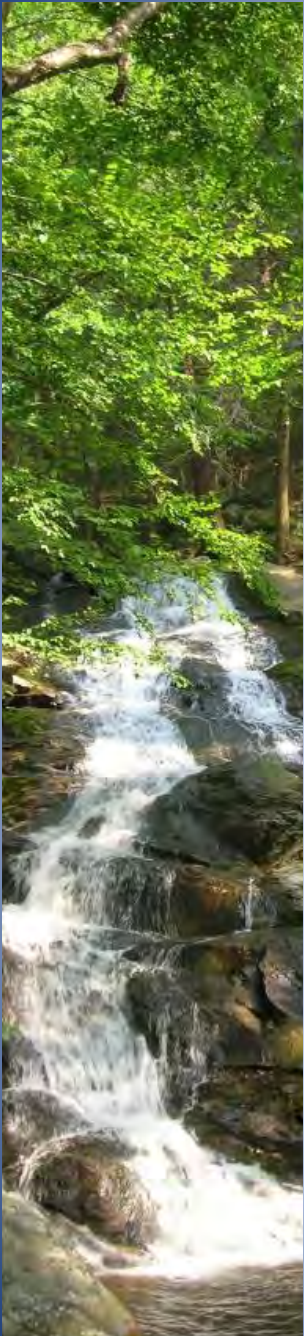


Precipitation patterns are changing. There have been significant changes in the last 60 years in measured storms.



In the Hudson Valley & Catskill Mountain region, the 10-year flood from the period 1960-1990 became the 5-year flood during 1980-2011, and the 25-year flood from 1960-1990 became the 10-year flood for 1980-2011

From Matonse, Adão H, Allan Frei, 2013: A Seasonal Shift in the Frequency of Extreme Hydrological Events in Southern New York State. *J. Climate*, 26, 9577-9593



Interconnected water resources management issues  
Stormwater management policies and practices to protect water quality and reduce runoff

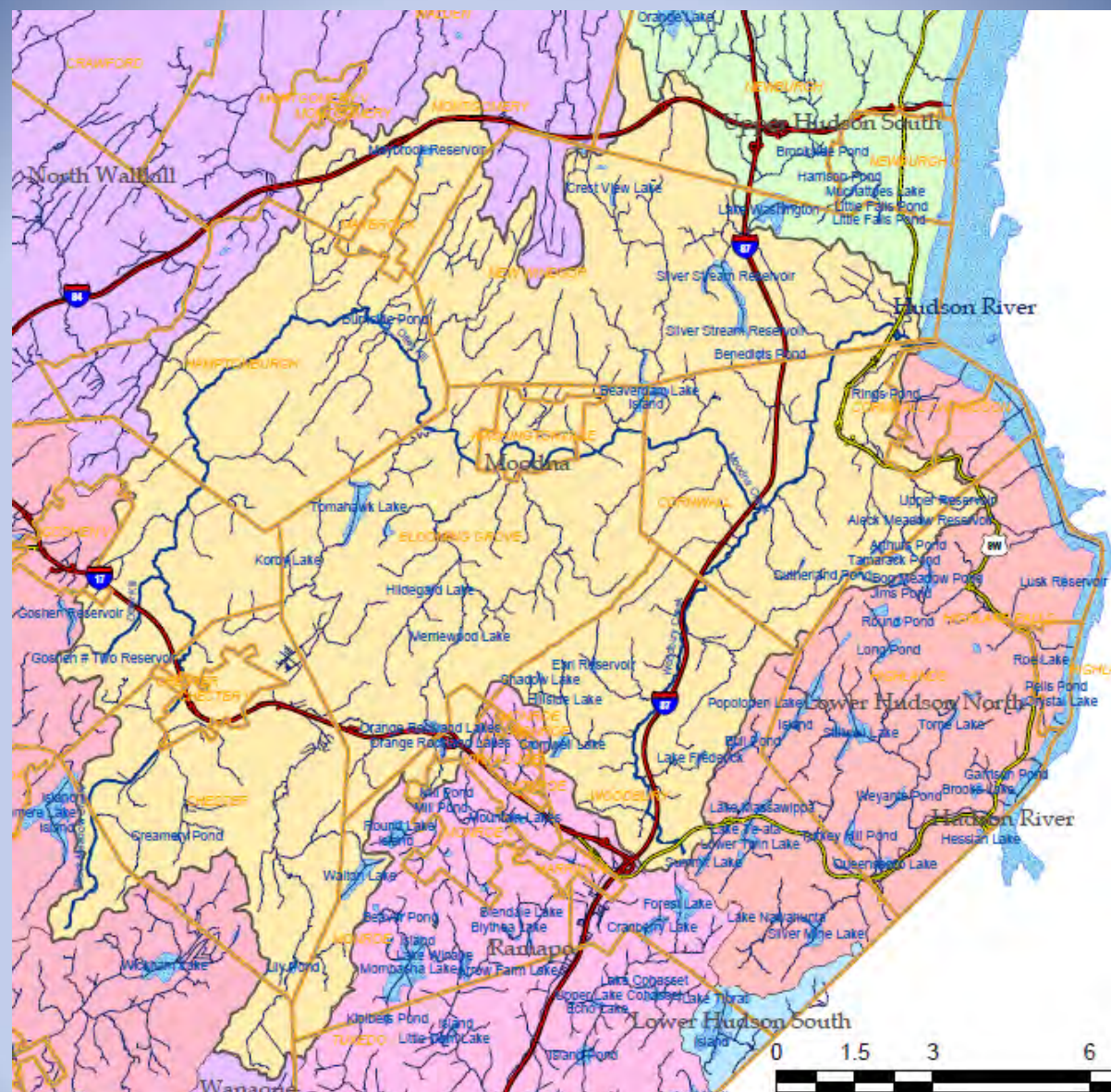
Nutrients and turbidity contribute to eutrophication of waterbodies, a major challenge for drinking water supply management

Drainage practices and rights and responsibilities for drainage, managing runoff and water diversions

Who is responsible for coordinating releases of water from ponds, lakes and reservoirs?

Interaction of stormwater planning, drainage issues, and potential risks to downstream properties and water quality





Location map with Walton Lake, Moodna Creek, Woodbury Creek, Brown's Pond aka Silver Stream Reservoir, and Washington Lake OCWA 6/2006



Washington Lake and Brown's Pond in the towns of New Windsor and Newburgh are the City of Newburgh's water supply

Brown's Pond aka Silver Stream Reservoir is naturally located in the Moodna Creek watershed – note diversion location along Rt. 207 at Rt. 300

Silver Stream flows along public trail to Moodna Creek through Knox HQ State Park

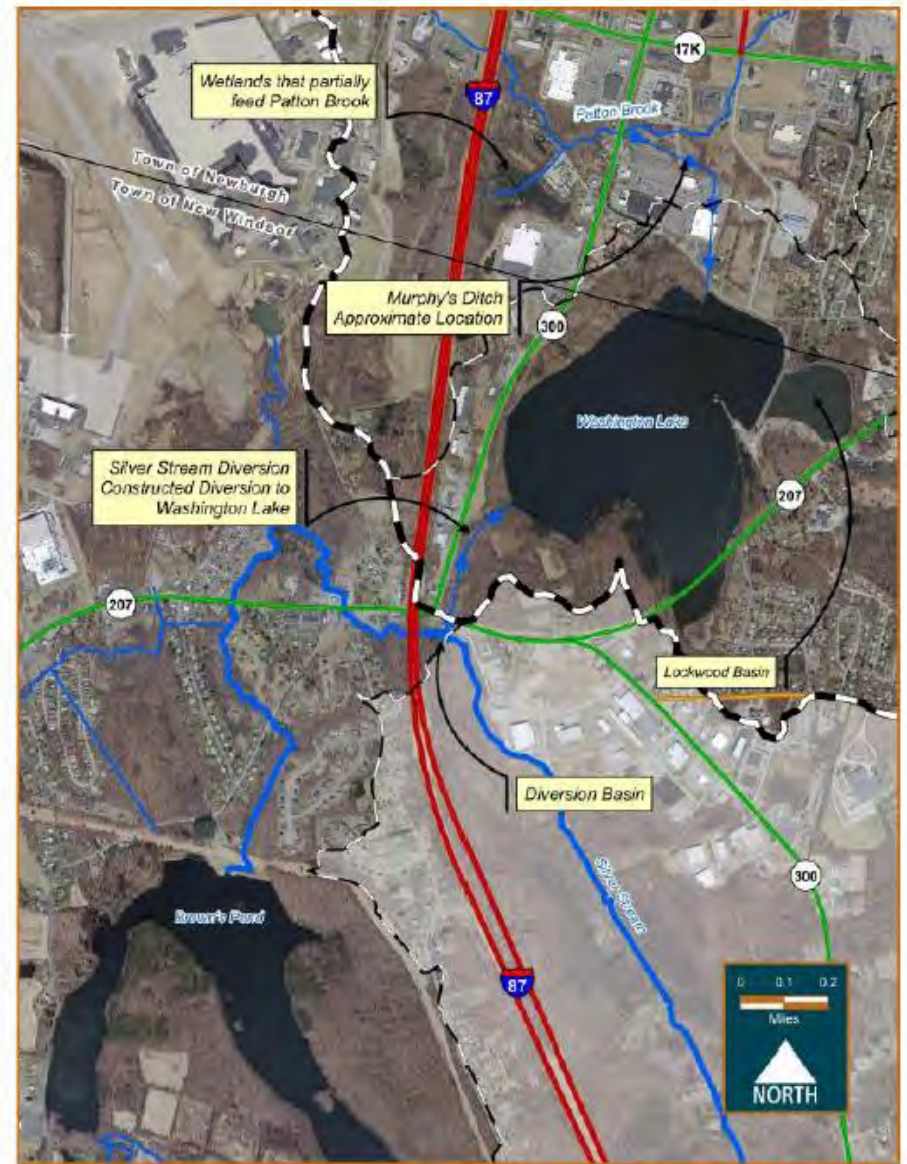


Figure 2. Graphic depicting hydrology among Upper Silver Stream, Patton Brook, and Washington Lake subwatersheds.

From Quassaick Creek Watershed Management Plan  
Orange County Water Authority, June 2014

# NY State Watershed Rules & Regulations - summary

- NY State law – origin of Department of Health role dates to 1834
- Rules enacted as part of NY State health code for individual municipalities – most date from early 1900s

## Changes in recent decades:

- Virtually all WRRs are outdated
- New regulations for NY City – unfiltered water supplies
- DEC and EPA have taken over water quality, so the NYS Department of Health role is supplanted, BUT the DEC is not specifically charged with protecting public health the way DOH is, some items fall through the cracks
- DOH no longer gives WRRs priority and advises intermunicipal agreements as an alternative (IMAs)
- Source Water Assessment Program authorized by Federal Safe Drinking Water Act in 1996 – NYS DOH SWAP staff now disbanded
- Coordination of roles of NYS DEC vs. NYS DOH for water resources management and protection remains problematic in some ways

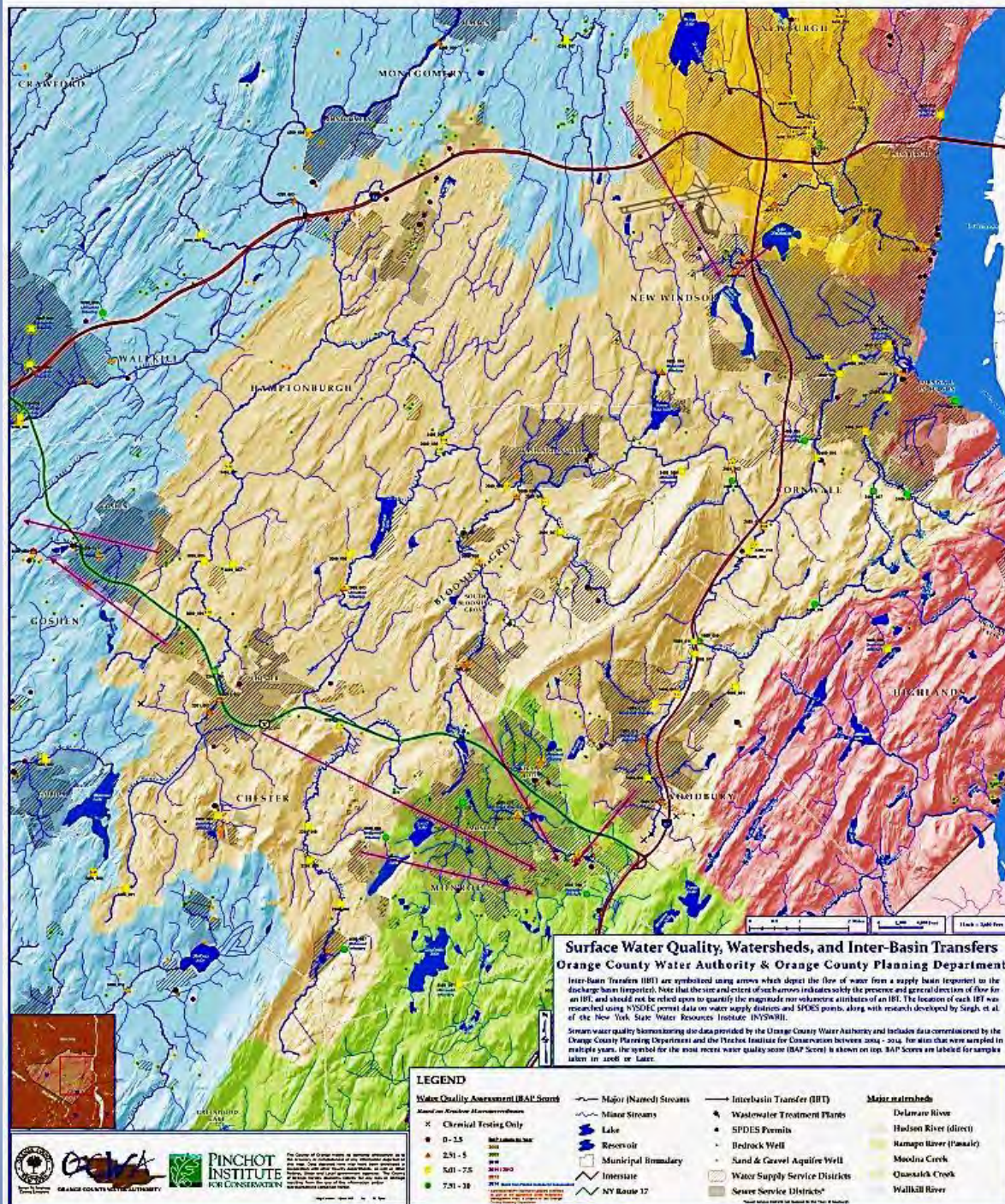


# NY State Water Withdrawal regulations – summary

- Requires a permit for all water withdrawals of 100,000 gallons/day or more
- Administered by NYS DEC, went into effect on April 1, 2013
- DEC must consider many factors including:
  - adequacy of supply;
  - is the project just and equitable to all affected municipalities;
  - can need be lessened through water conservation;
  - is the proposed withdrawal reasonable; and
- DEC must weigh impacts on quantity or quality and consistency with regional agreements
- Includes withdrawals for water supply purposes and other uses; before, water supplies were the only regulated uses requiring water withdrawal permits









Interconnected issues - water withdrawal, interbasin transfers, and managing in-stream flow for wildlife, recreation and aesthetic values

Moodna Creek main stem –  
creek bed was dry in 2005  
photo taken in Washingtonville

*Modeling study and field observations indicate Moodna basin may be at higher risk for low-flow stream conditions in dry weather, a particular concern for the Woodbury Creek and lower Moodna and potentially in other areas*





## Summary

Emerging priorities for the Hudson River Estuary  
watershed:

Water budgets and instream flow  
&  
Water conservation

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