Newburgh's Drinking Water

Where it comes from

Keeping it Safe

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May 13, 2015

Aerial view of Washington Lake and Newburgh

Figure 2: Aerial photography/map of the City of Newburgh's reservoir system, showing constructed connection of Brown's Pond to Washington Lake.

Newburgh's Water Sources:

Washington Lake; is the City of Newburgh's primary source of drinking water.

It lies three miles to the west of the City, outside the City's municipal boundaries, in the neighboring towns of Newburgh and New Windsor.

The water supply system was carefully planned, engineered developed in the 19th century on lands that were pristine and expected to remain so.

As the City of Newburgh grew so did its water needs.

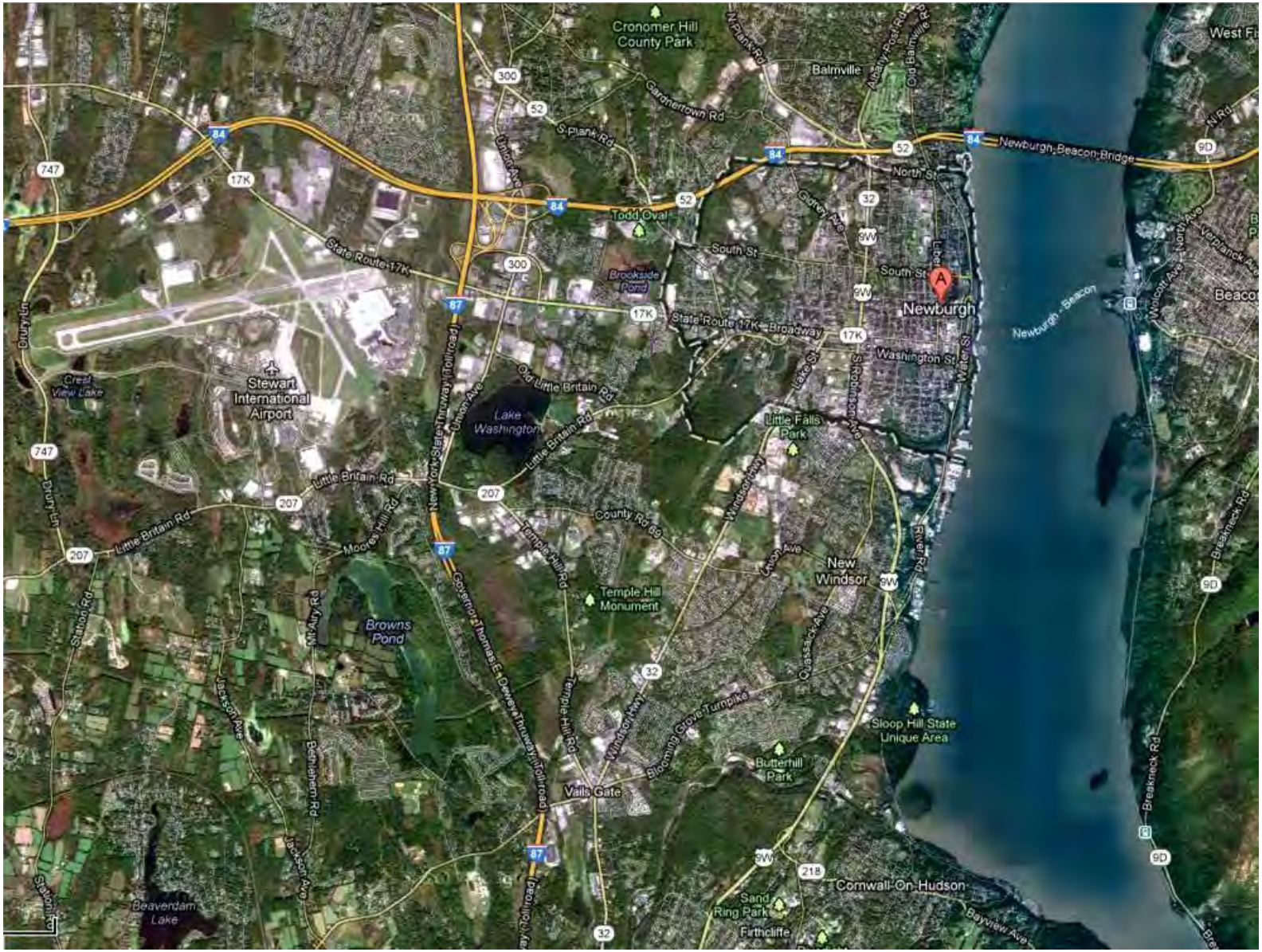
Washington Lake was enlarged and ***two supplemental sources*** were tapped to meet the growing demand.

The upper reaches of Patton Brook ; which lies mostly to the north of route 17K, was diverted through a channel called Murphy's Ditch to the north side of Washington Lake.

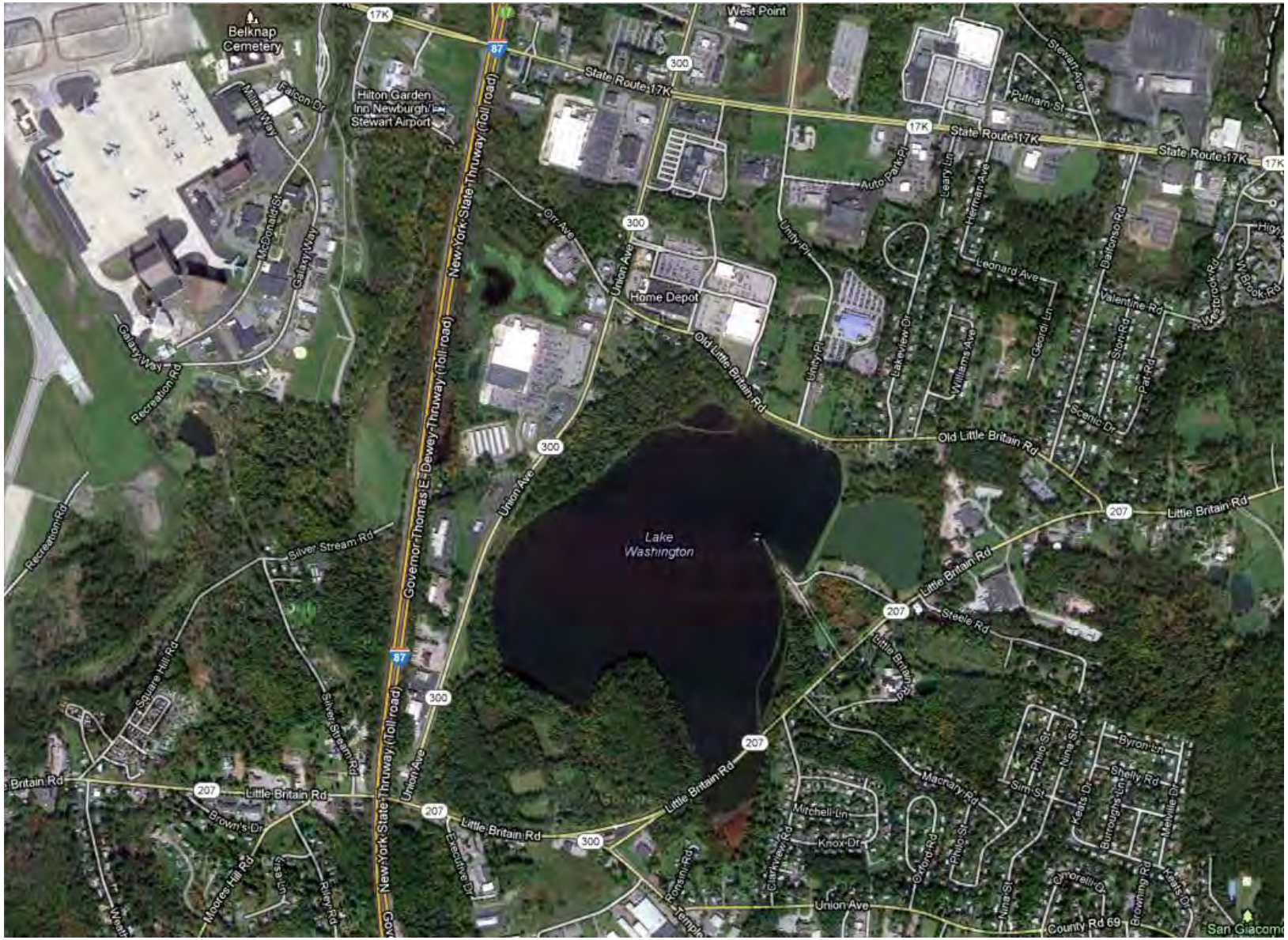
The uppermost reach of Silver Stream was dammed to create Silver Stream Reservoir; which is also known as Brown's Pond.

Diversion gates from an impoundment near the junction of routes 300 and 207 divert water from Silver Stream to the South side of Washington Lake.

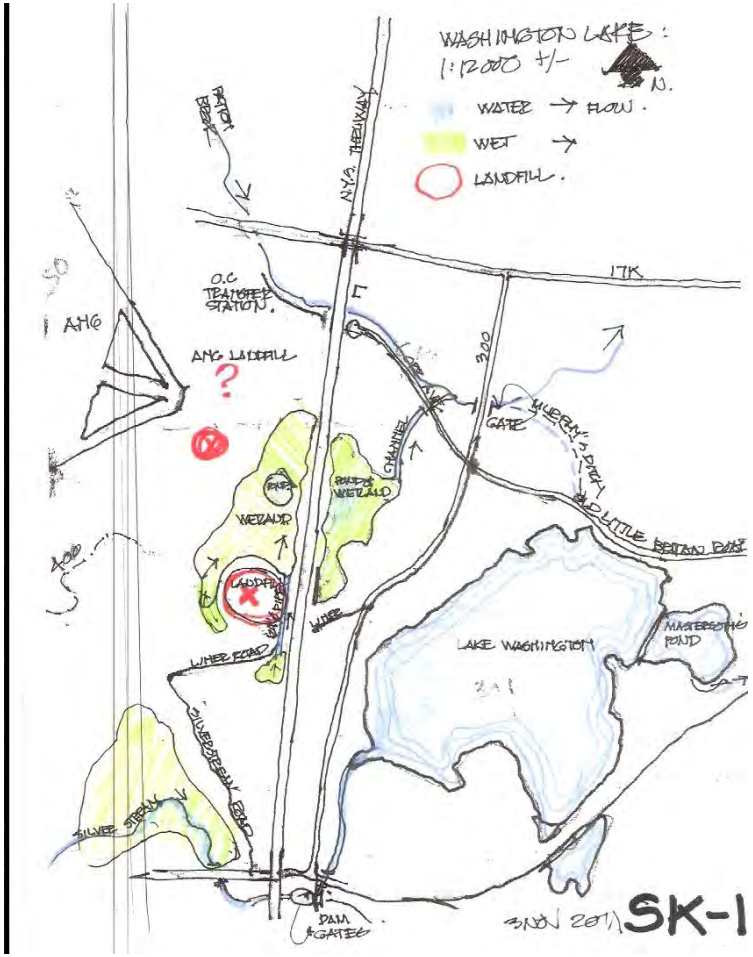
Newburgh Regional Context



Washington Lake Watershed



Patton Brook



The City of Newburgh is no longer a regional hub.

The automobile, The NYS Thruway and the advent of the Interstate highway system changed that starting in the 1950's.

The region's commercial center shifted away from the Hudson River westward to the intersection of I-87 and I-84.

The region's commercial center, along with its most valuable real estate lies within the City of Newburgh's drinking watershed.

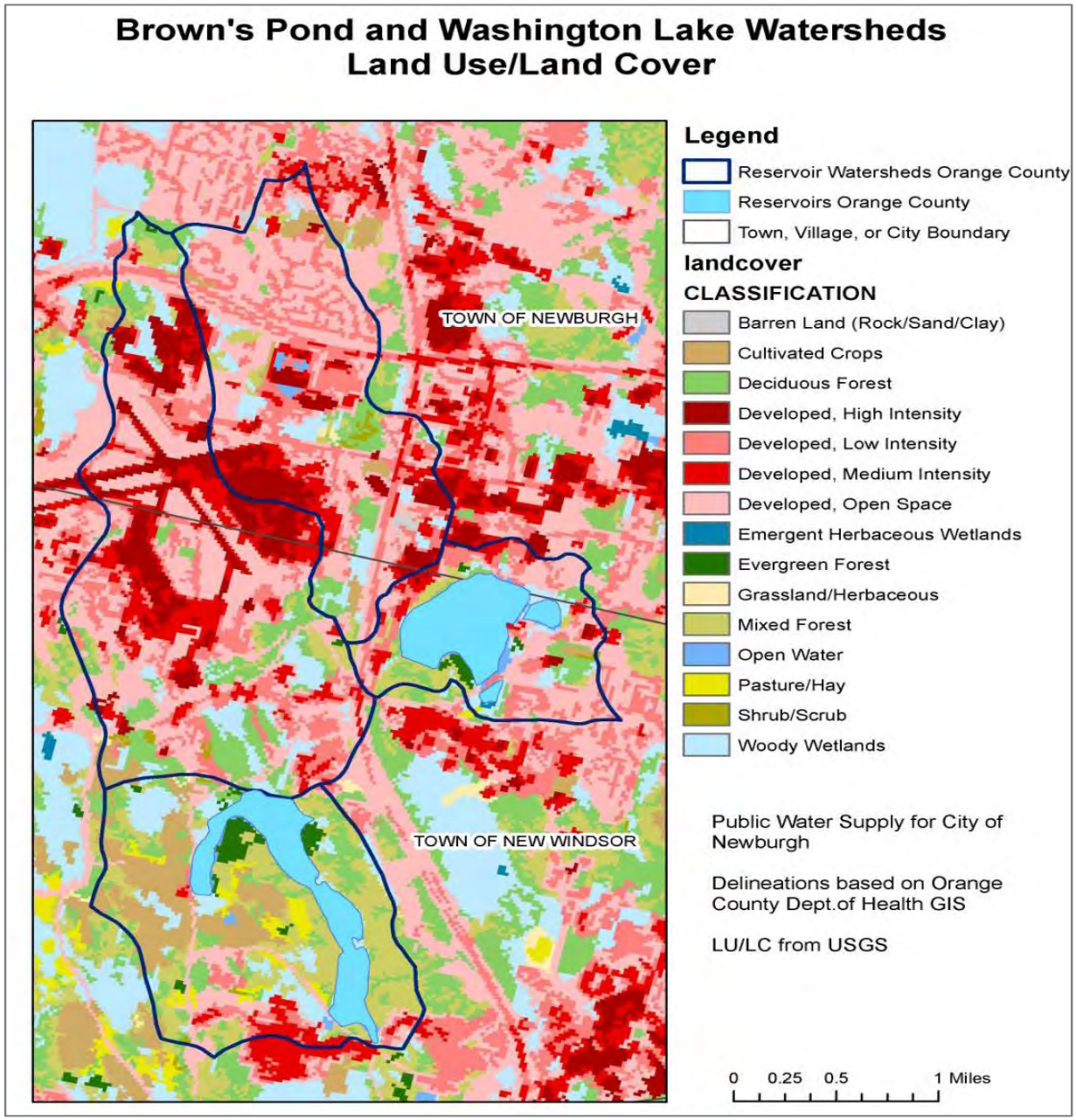
Upper Patton Brook has been segmented; its wetlands and flood plains have been filled and to accommodate the I087/I-84 interchange and commercial real estate developments along route 300 and 17K.

Field work indicates wetlands along the Thruway are not listed as source drinking water by the NYS DEC, while they most certainly are.

A capped Town of New Windsor landfill sits in this wetland. Marked by an **X.**

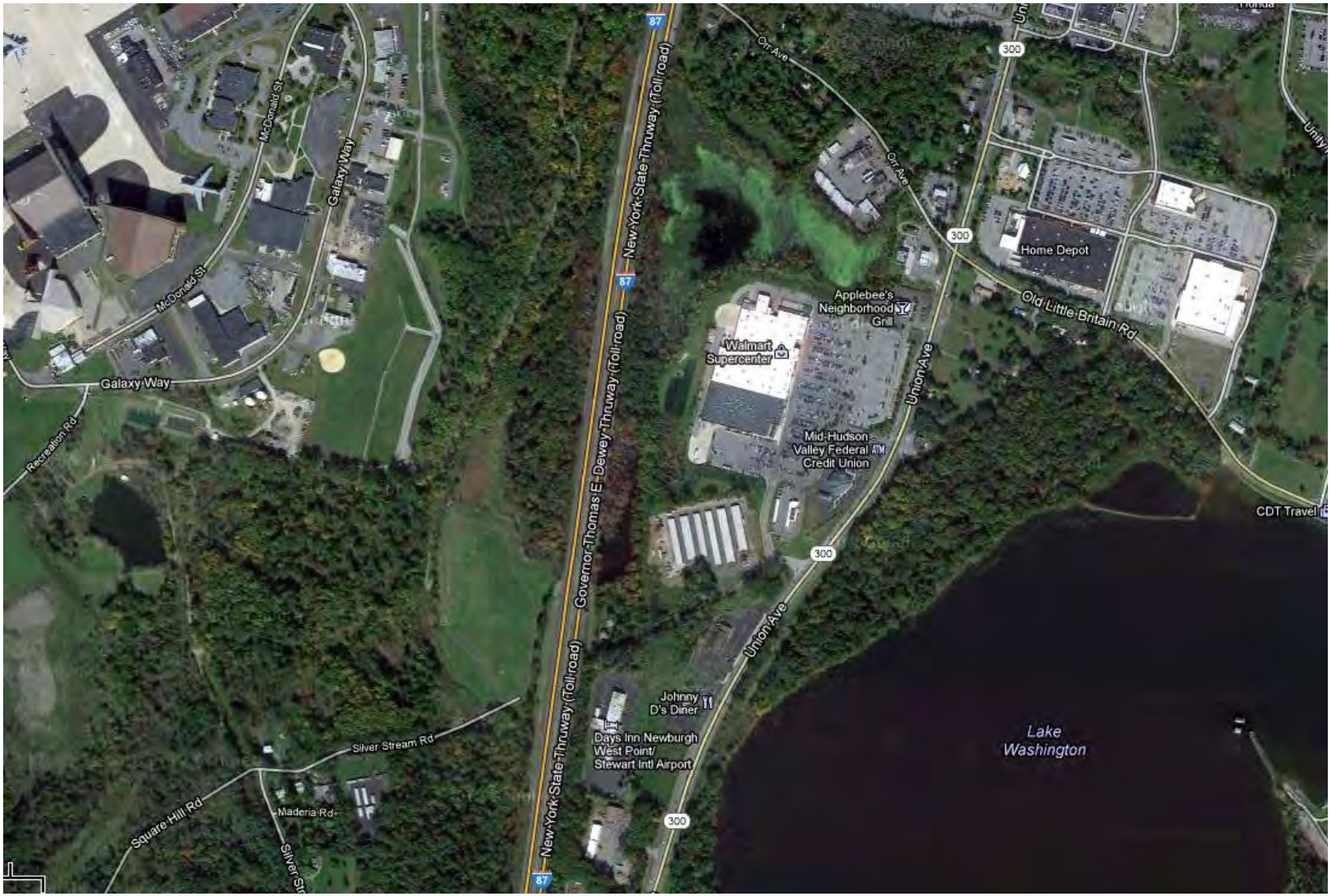
The Patton Brook sub-watershed is not listed as source drinking water by the New York State Dept. of Health.

Bloody Map


Brown's Pond and Washington Lake Watersheds
Land Use/Land Cover
TOWN OF NEWBURGH
TOWN OF NEW WINDSOR
Legend
Reservoir Watersheds Orange County
Reservoirs Orange County
Town, Village, or City Boundary
landcover
CLASSIFICATION
Barren Land (Rock/Sand/Clay)
Cultivated Crops
Deciduous Forest
Developed, High Intensity
Developed, Low Intensity
Developed, Medium Intensity
Developed, Open Space
Emergent Herbaceous Wetlands
Evergreen Forest
Grassland/Herbaceous
Mixed Forest
Open Water
Pasture/Hay
Shrub/Scrub
Woody Wetlands
Public Water Supply for City of Newburgh
Delineations based on Orange County Dept.of Health GIS
LU/LC from USGS
0 0.25 0.5 1 Miles


U.S. Fish and Wildlife Service
National Wetlands Inventory
Tools
Print Map
Streets
Imagery/Labels
Topo
USGS Topo
Type Address, Landmark, etc...
Find Location
Zoom to:
select
Zoom History
Available Layers
Help
Wetlands
Wetland Status
Riparian
Riparian Status
Data Source
Source Type
Image Scale
Image Year
Areas of Interest
FWS Refuges
Wetlands
Freshwater Emergent
Freshwater Forested/Shrub
Estuarine and Marine Deepwater
Estuarine and Marine
Freshwater Pond
Lake
Riverine
Other
Riparian
Herbaceous
Forested/Shrub
PFO5Fb
PUBHh
PUBHh
Lake Washington
0 km
400 m
0 m
1000 ft
Map Scale: 1:9028
Lat: 41.5002, Lng: -74.0853

Wetlands Flanking the Thruway



Wetland on western side of Thruway, Listed on Federal maps, not acknowledged on State DEC maps.

Downstream of capped landfill on its way to Patton Brook.

Culvert under Thruway

The NYS Thruway interrupts a wetland. This culvert connects the wetlands on the western side to those on the eastern side; which are visible behind Wal-Mart.

Orange What…?

Route 300


SOUTH
300
STEWART
300
NEWBURGH PLAZA
ADAMS
FAIRACRE FARMS
ADOPT-A-HIGHWAY
PROGRAM
NEXT 1.4 MILES
LARKIN,AXELROD,INGRASSIA
& TETENBAUM, LLP

Here at its lowest point Route 300 is also at its closest to Washington Lake, and the lake most vulnerable contamination from a spill.

Murphy’s Gate

Patton Brook Above Murphy's Gate

left: Patton Brook crossing under Orr Avenue at the Transfer Station
right: Retention Pond at Corporate Drive Diverts Patton Brook under the ANG to Silverstream

Left: Patton Brook at Orr Avenue
Diesel Storage Tank with trench to channel from wetland. Sewer crossing.

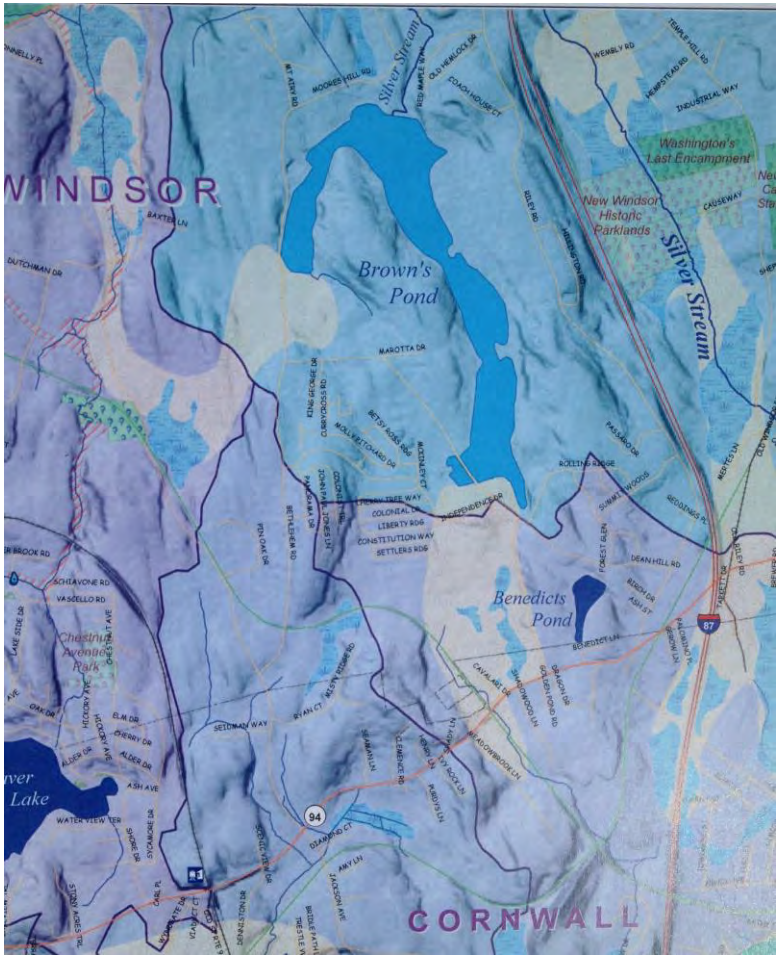
Right: Patton Brook at Orr Avenue Discharge

Murphy’s Ditch Outlet

Washington Lake, Summer 2012

Washington Lake, Summer 2012

Silver Stream



Silver Stream Reservoir, also known as Brown's Pond, is the City of Newburgh's back up reservoir, and lies wholly within the neighboring Town of new Windsor.

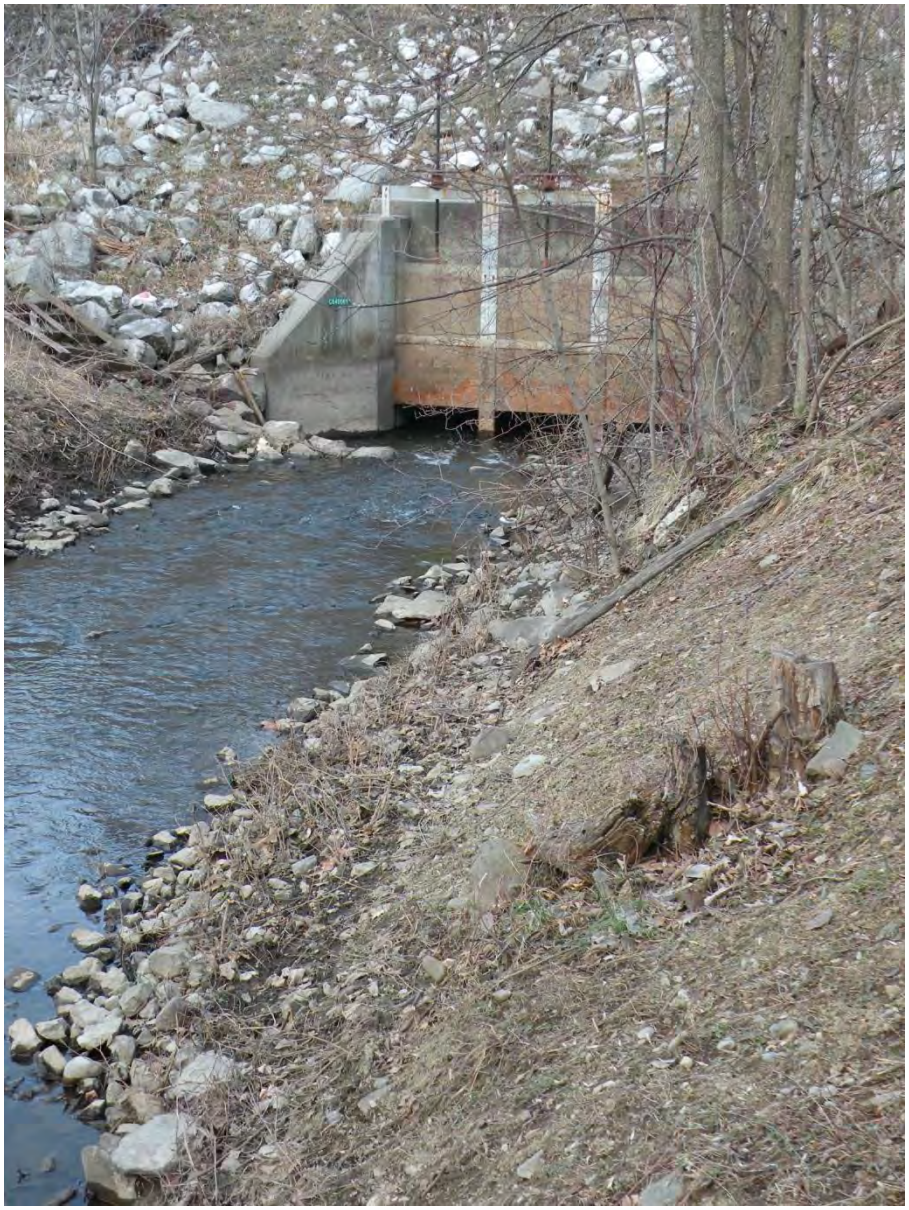
It lies over an important ground water source.

The Catskill Aqueduct passes to the north of the reservoir and can be tapped when needed.

The Town of New Windsor has drilled wells into the ground water to the south of the western bay of the reservoir.

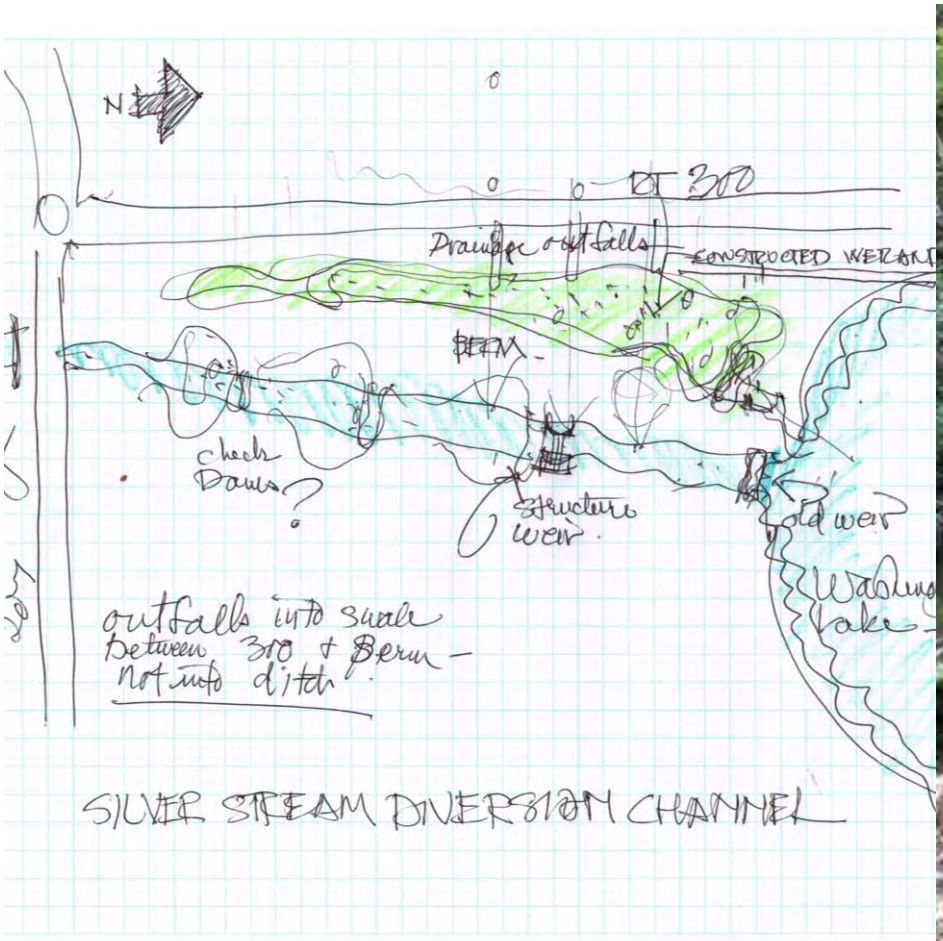
Will this have a negative impact on the quantity and quality of water available to the City of Newburgh from this reservoir?

Silver Stream Diversion Gates



Silverstream Diversion Channel

Left: Sketch showing the location for potential for phyto-remediation practices along the channel and the swale that takes surface runoff from route 300. Enhancement of these channels with the appropriate plant material will biologically filter water before it enters the reservoir.
Right: Structure for a century old weir, that can be redeployed to slow down water.

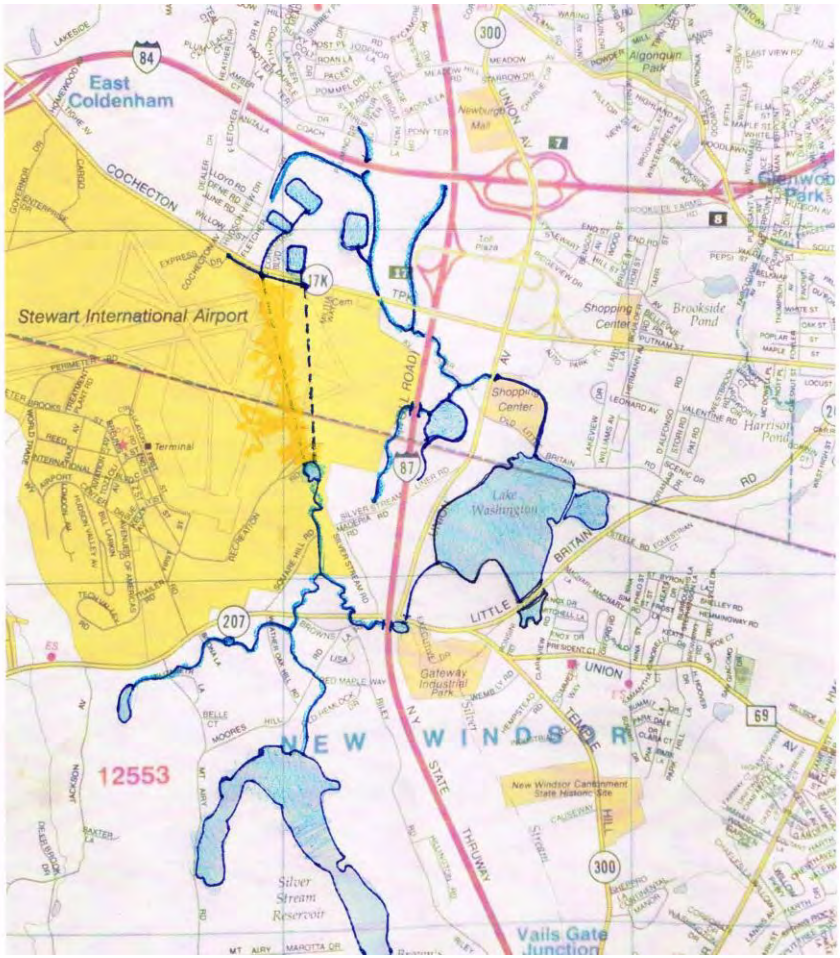


Silverstream above the Diversion Gates

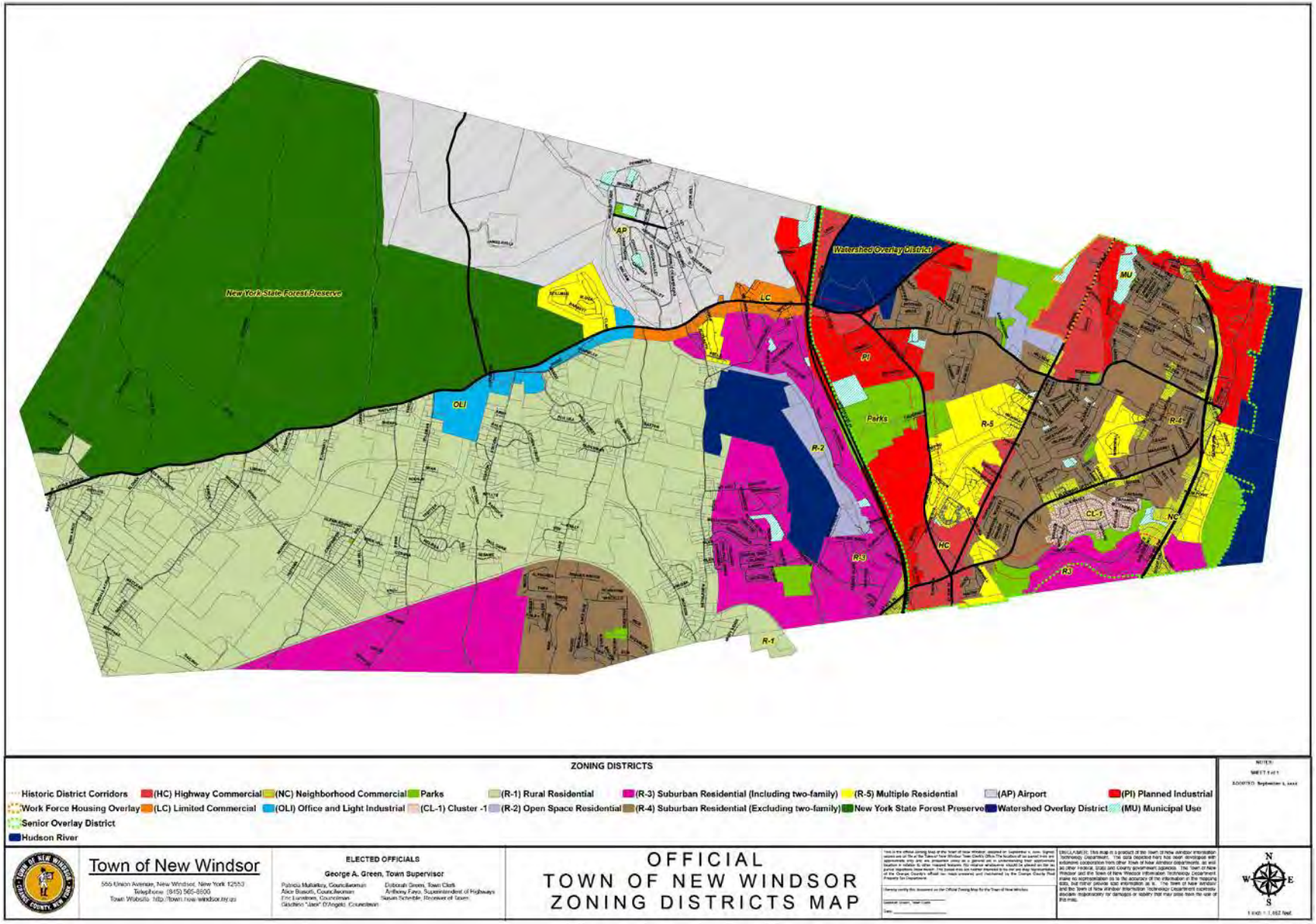
Discharges are permitted into Silver Stream above the Diversion Gates. Shown is a site behind the aluminum can factory on the way to Stewart Airport.

Vulnerabilities

Sketch map on the left shows flowing surface waters to Washington Lake
Sketch map on the right shows the watershed's exposure to spills occurring on the area's roads.

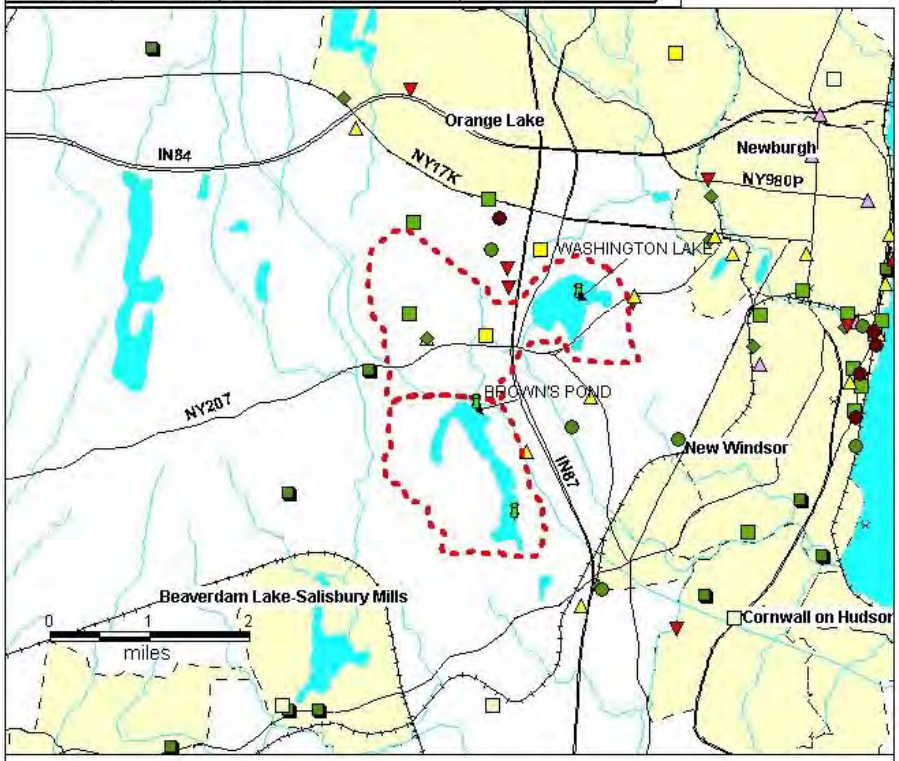


Town of New Windsor Watershed Overlay District



System_#	System_Name	County_Served
NY3503549	NEWBURGH CITY	ORANGE

Report_ID#	External_#	Source_Name	Waterbody_type
2,571,316	47,603	WASHINGTON LAKE	SMALL LAKE



Railroads
Petroleum Pipelines
Major Roads
Surface Waters
Watersheds
Urban Areas
PWS intake

Permitted Discharge Potential Contaminant Sources

- Surface Water Sanitary Waste Discharge
- Non-Sanitary Waste Discharge
- Groundwater Sanitary Discharge

Other GIS Potential Contaminant Sources

- Chemical Bulk Storage
- Cerclis Sites
- Hazardous Subtance Spills
- Hasardous Waste Sites
- Landfills
- Mines
- Petroleum Bulk Storage
- Oil and Gas Wells
- RCRA facilities
- TRI facilities

STATE OF NEW YORK
DEPARTMENT OF HEALTH

Questions

- How could a drinking water system, so clearly understood, planned and engineered more than a century ago become so forgotten and disregarded in the last 30 years? How did this happen?
- Historic documents show that an entity called the New York State Water Commission closely monitored and approved the development and expansion of the City of Newburgh's water supply system, including construction and modifications to dams and diversions. Does such State oversight still exist?
- If not did any other overarching State or Federal Agency replace it?
- Are there remedies in the law to efficiently correct the errors that we see: the misidentification of the large wetland through which the NYS Thruway runs, and the absence of Upper Patton Brook as source drinking water?
- Are there ways that the City of Newburgh can assert the right to protect the quality and safety of its drinking water in the neighboring Towns, where no meaningful protections now exist?
- Have the **Environmental Impact Statements** of development projects located in the drinking watershed specifically recognized that condition? Projects such as those on Corporate Drive, along route 300, The I-84/I-87 interchange, businesses and homes in the upper Silverstream drainage.
- Do hazard mitigation protocols exist in the event of spills along the roads and highways that pass through the watershed? Route 300, the interstates, route 17K, route 207.
- Who should foot the bill for the corrective measures that need to be taken?