

Water/watershed

Water is one of the most taken for granted natural resources we have. We use our water resources for drinking, recreation, agriculture, and for environmental benefits. Water sources should be protected and used appropriately.

The three major categories of water resources are surface water, groundwater, and wetlands. Surface water consists of streams, creeks, lakes, and ponds. Groundwater is water that is stored in the underground spaces between deposits of sand, gravel, and silt, and in the cracks in bedrock. Groundwater deposits that can be expected to yield significant quantities to wells are called aquifers. Areas where surface water infiltrates into these aquifers are called recharge areas and are particularly important to the protection of groundwater quantity and quality. Wetlands include land areas that are inundated with water year-round, as well as areas that are dry for part of the year but collect water seasonally.

Wetlands and riparian areas (lands associated with streams and rivers) are important because they temporarily store floodwaters, filter pollutants from surface waters, control erosion and sediment, supply surface water flow and recharge groundwater supplies, and provide habitat for fish and wildlife. (From the Tompkins Co. Comprehensive plan)

Humans use on the average use 80 – 100 gallons of water per day. The greatest use is flushing toilets and taking showers/baths (as shown below). Cows and horses will drink on the average of 8 – 15 gallons of water per day, depending on the life stage, weight, and climate.

Some water consumption facts are:

- 3.3 gallons of water is required to make 1/4 pound of hamburger
- 7 gallons of water is required to flush a toilet (without water saving methods)
- 30 gallons of water is used for the average shower (without water saving methods)
- 7.7 gallons of water is used to process one can of vegetables

Water in the town of Newfield is abundant, given the aquifers, stream system and wetlands within the town. The town has two water districts (see chapter on town utilities). Outside of the water districts homes have drilled wells.

Wastewater is handled through the town sewer district (see chapter on town utilities), outside of the district homes have independent septic systems. Streams are monitored on a voluntary basis.

Wetlands provide filtration for stormwater runoff. A large wetland exists between Route 13 and Sebring Road. Protection of wetlands is important especially since many were drained or tilled so the land could be used for farming in the 1960's. Many ponds are located in the rural areas of the town. These ponds are used for recreation, fire control, and agricultural purposes.

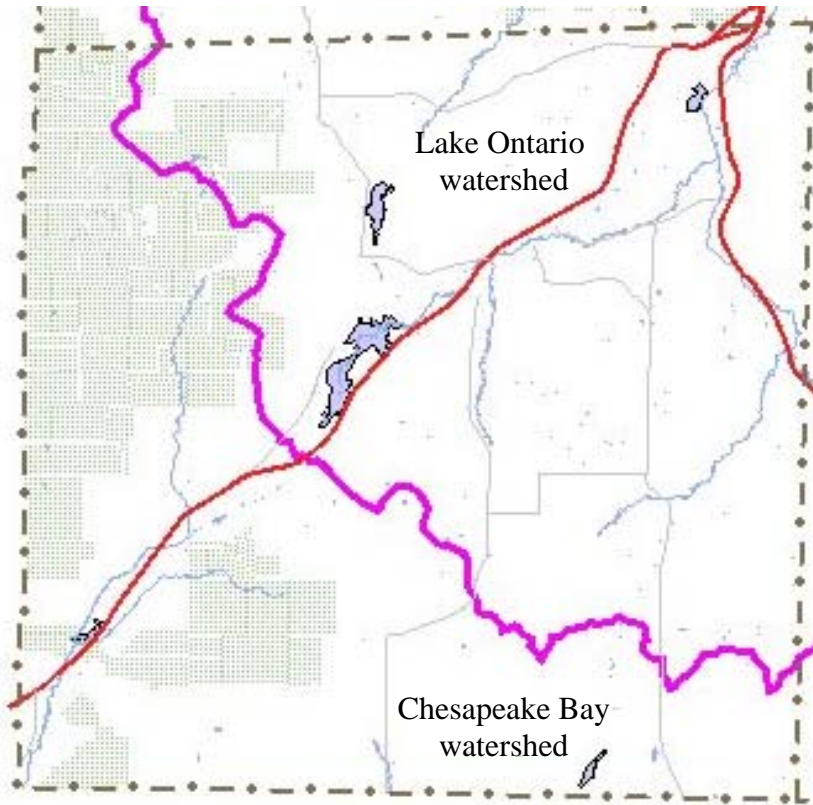
The town is unique with two watersheds, approximately 60% of the town water runoff supplies the watershed for Lake Ontario, and 40% supports the Chesapeake Bay watershed (see attached map).

Issues regarding water:

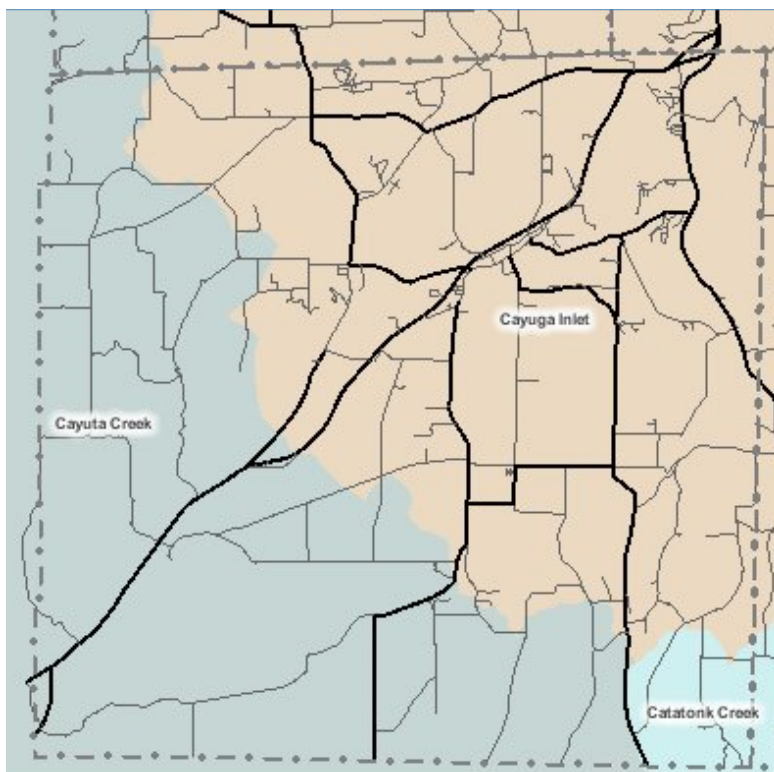
- The need for stream buffers.
- Leaking faucets/use of water.
- Climate change will affect our water supply.
- Development of floodplains
- Roadside ditch management is a cause for concern for stormwater runoff.
- Effects our water supply will/could have on our abundance of forestlands in the town.

- The effects of wastewater on the watershed.
- How will we fare if a water shortage occurs, how can we prepare?

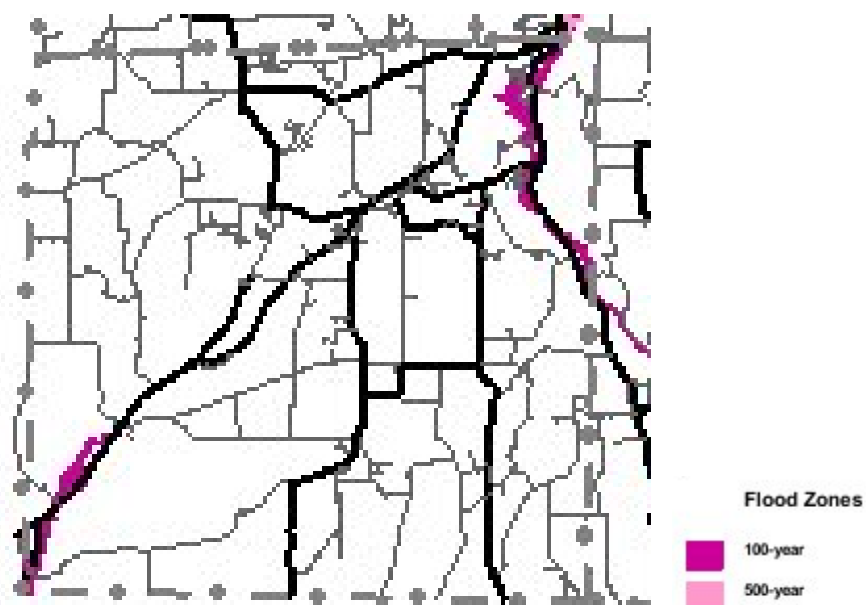
The following maps of Newfield are from an interactive map at:
<http://gisweb.tompkins-co.org/tcimap/CORE/MAIN.ASP>



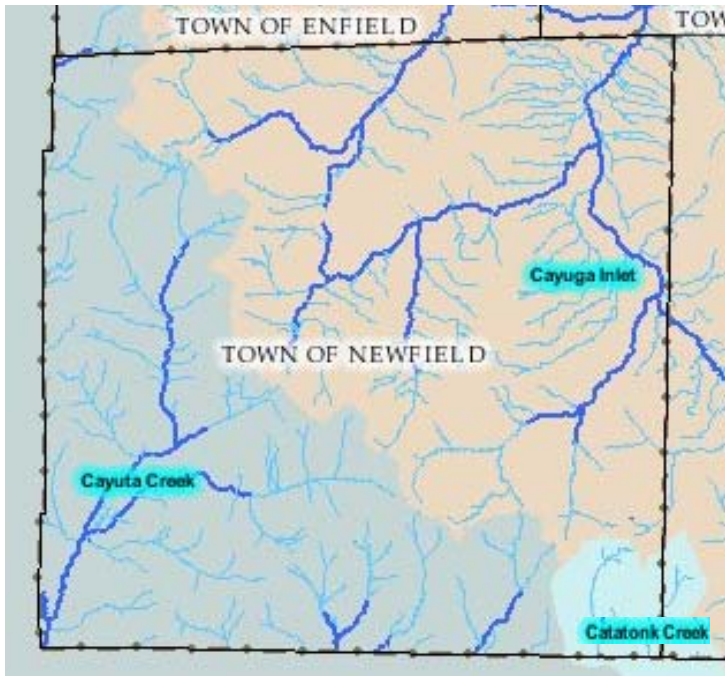
Watershed Map



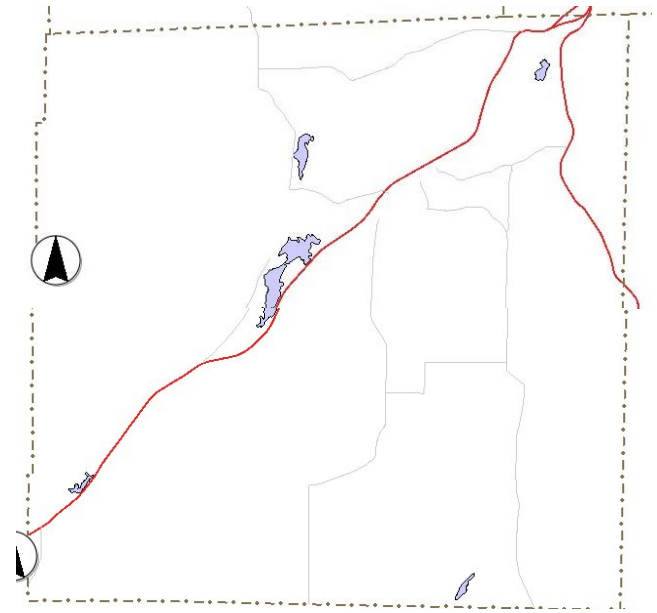
Surficial Aquifers



Floodplains



Streams of Newfield



Wetlands in Newfield

Useful websites:

Tompkins County Planning board: <http://www.tompkins-co.org/planning/Water%20Resources/index.htm>

Comprehensive Plan chapter on water: <http://www.tompkins-co.org/planning/compplan/5%20environment.pdf>

NYS Department of Environmental Conservation, Division of Water <http://www.dec.ny.gov/>

Taken from the website: To care for these diverse resources, DEC uses regulation, scientific study, planning, technical assistance and land acquisition. For landowners, local officials, businesspeople, householders, the regulated community, students, teachers and all citizens, the department provides information about resources, how to protect them, and how to participate in department programs.

This website brings together much of this information. It also shows some of DEC's resource management techniques, and provides opportunities for individuals and groups to give input for planning and management for the future of our lands and waters.

Cayuga Lake Watershed Network <http://www.cayugalake.org/>

Mission: The Cayuga Lake Watershed Network identifies key threats to Cayuga Lake and its watershed, and it advocates for solutions that support a healthy environment and vibrant communities.

Cayuga Lake Watershed Intermunicipal Organization <http://www.cayugawatershed.org/>

Mission: "To create, modify, and implement a watershed management plan to allow local governments within the watershed to work together for the purposes of accessing dollars, cost savings, cost sharing, and efficiency of activities among municipalities. This plan, when completed, will prioritize water quality problems and solutions.

The Inter-municipal Organization will provide direction for the regional planning boards and other staff, and oversee the entire project."

Tompkins County Soil and Water Management District <http://www.tcsxcd.org/>

About the District: The Tompkins County Soil and Water Conservation District was created in the 1940's, along

with 37 other county Soil and Water Conservation Districts. However, Tompkins County Soil and Water Conservation District has only been active since 1994.

The District is governed by a Board of Directors made up of representatives from Grange, the Farm Bureau, two County legislators, and an At-large member.

Stormwater Runoff in Roadside Ditches <http://ei.cornell.edu/watersheds/Ditches/default.asp>

Roadside ditches drain stormwater from roads, fields, parking lots, and buildings. Ditches are designed and managed to prevent flooding of these structures by providing rapid flow of runoff water. However, impacts on quantity and quality of water in streams and lakes typically is not considered when ditches are designed, built, and maintained.

Natural Resources Conservation Service (originally called the Soil Conservation Service)

<http://www.ndcsmc.nrcs.usda.gov/technical/Stream/>

Stream Corridor Restoration Team Workgroup. Purpose is to provide an easy to access repository of technical training and design resources for NRCS employees.

USDA and Forest Service have put out a booklet, or downloadable pdf on buffers.

<http://www.bufferguidelines.net/>

The Conservation Buffers website offers resources for planning and designing buffers in rural and urban landscapes. The primary resource is *Conservation Buffers: Design Guidelines for Buffers, Corridors, and Greenways* which provides over 80 illustrated design guidelines synthesized and developed from a review of over 1400 research publications.

Each guideline describes a specific way that a vegetative buffer can be applied to protect soil, improve air and water quality, enhance fish and wildlife habitat, produce economic products, provide recreation opportunities, or beautify the landscape.

USGS has many publications that have come out the last couple of years about contaminants found in groundwater. The impacts of those on human health or other factors would be another step (not sure which step the organization wants).

Domestic Well Water Quality study - March 2009

http://water.usgs.gov/nawqa/studies/domestic_wells/

Pesticides in streams and groundwater - major publication in 2006 plus others

<http://water.usgs.gov/nawqa/pnsp/>

Publications search page

<http://water.usgs.gov/nawqa/bib/>

Tompkins County Water Quality Strategy 2009 Update



Fact Sheet:

Floodplain Easement Program

- **Permanent Floodplain Easements** will be acquired by NRCS.
- Applications will be taken by NRCS staff at local USDA Service Centers.
- Applications will be ranked using the New York Floodplain Easement Program Eligibility Determination and Ranking Worksheet (attached).
- Land **eligible** for enrollment in the Floodplain Easement Program (FPE) includes:
 - Land damaged by flooding at least **twice in last 10 years** or **once in the last twelve months**.
 - **Other land** within the floodplain that is functionally dependent on eligible acres as described above, or that would improve the practical management of the easement. Only one acre of other land may be enrolled for each acre of land eligible as described above.
 - Land that would be inundated or adversely impacted as a result of a dam breach.
 - Land **must** be privately owned or owned by State or local units of government. Federally owned land is not eligible.
- Landowners must provide copy of deed for property offered. If property is owned by an entity, the entity must provide the necessary documentation to prove ownership.
 - A title search must be conducted prior to an offer being made.
- **Easement compensation** will be based on the least of the following 3 criteria:
 - **Area-Wide Market Analysis**, establishing fair market value of land
 - **Geographic Area Rate Cap** (see attached rates)
 - **Landowner's Offer**
- A hazardous substance database records search will be conducted prior to an FPE offer.
- An environmental evaluation and cultural resources review will be completed.
- **All** legal and administrative costs are paid 100% by NRCS.
- A restoration plan will be developed.
 - **NRCS pays 100% of the restoration costs** (removing dikes, fencing out livestock, alternative water, planting trees or native vegetation, etc.).
- **Compatible Uses:** If landowner requests compatible uses, such as haying, grazing or managed timber harvesting, those associated costs are the responsibility of the landowner. Compatible use authorization will only be made if the agency determines that the proposed use is consistent with the long-term protection and enhancement of the floodplain functions and values of the easement area. NRCS will prescribe the amount, method, timing, intensity, and duration of the compatible use in a management plan.
- Landowners still own the land and must pay real estate taxes, control noxious plants and pests, and maintain all fences at their own expense. Landowners retain the right to control public access, quiet enjoyment, and undeveloped recreational use such as hunting and fishing.
- Timelines
 - National Sign-up Period is **March 9-27, 2009**.
 - All offers for acquiring easement will be made to landowners by **May 4, 2009**.
 - All easements will be recorded by **December 3, 2009**
 - All restoration will be fully completed by **December 30, 2010**.