Genesee/Finger Lakes Regional Planning Council

**Controling Sediment in the Black and Oatka Creek Watersheds**

# Municipal Law Review & Ordinances and Practices Assessment Form

# Introduction

This assessment form has been developed by the Genesee/Finger Lakes Regional Planning Council in collaboration with the Black Creek Watershed Coalition and the Oatka Creek Watershed Committee in order to gain a thorough understanding of existing local laws, ordinances, and practices that impact water resources, and particularly erosion and sediment in the Black and Oatka Creek Watersheds.

Much of the funding for the Controlling Sediment in the Black and Oatka Creek Watersheds project is provided by the Great Lakes Program for Soil Erosion and Sediment Control.

Please take a moment to review the form. The form is divided into two main sections. The Ordinances and Practices Assessment forms are further divided into six sections based on subject area. Some of the sections are, in turn, organized into parts. The Municipal Law Review Chart is provided as both an assessment tool and for information purposes. See the Table of Contents on the following page for more detail.

There is a three column format throughout the entire Ordinances and Practices Assessment form. Column 1 describes an action or practice that is known and understood to promote good water quality. Column 2 is to be filled in based on whether a municipality enforces any local laws, or performs any practices that implements the action described in Column 1. Column 3 is to be filled in based on the level of implementation indicated in Column 2. Column 3 can be filled in simply by indicating the number (2, 1, 0, or n/a) that corresponds to the level of implementation described below:

**2 - Fully:** The municipality implements the practice or its equivalent across the entire area of the municipality. The practice is a) codified in municipal code; b) included in internal operating procedure guidelines or manuals; c) included in specification manuals, or d) is part of a special municipal initiative.

**1 - Partially**: The municipality implements the practice or its equivalent in a specific area of the municipality or implements part of the practice or its equivalent. The practice is a) routinely followed but not codified in the Town Code; or b) routinely followed but not included in written internal operating procedure guidelines or manuals which may or may not include specifications.

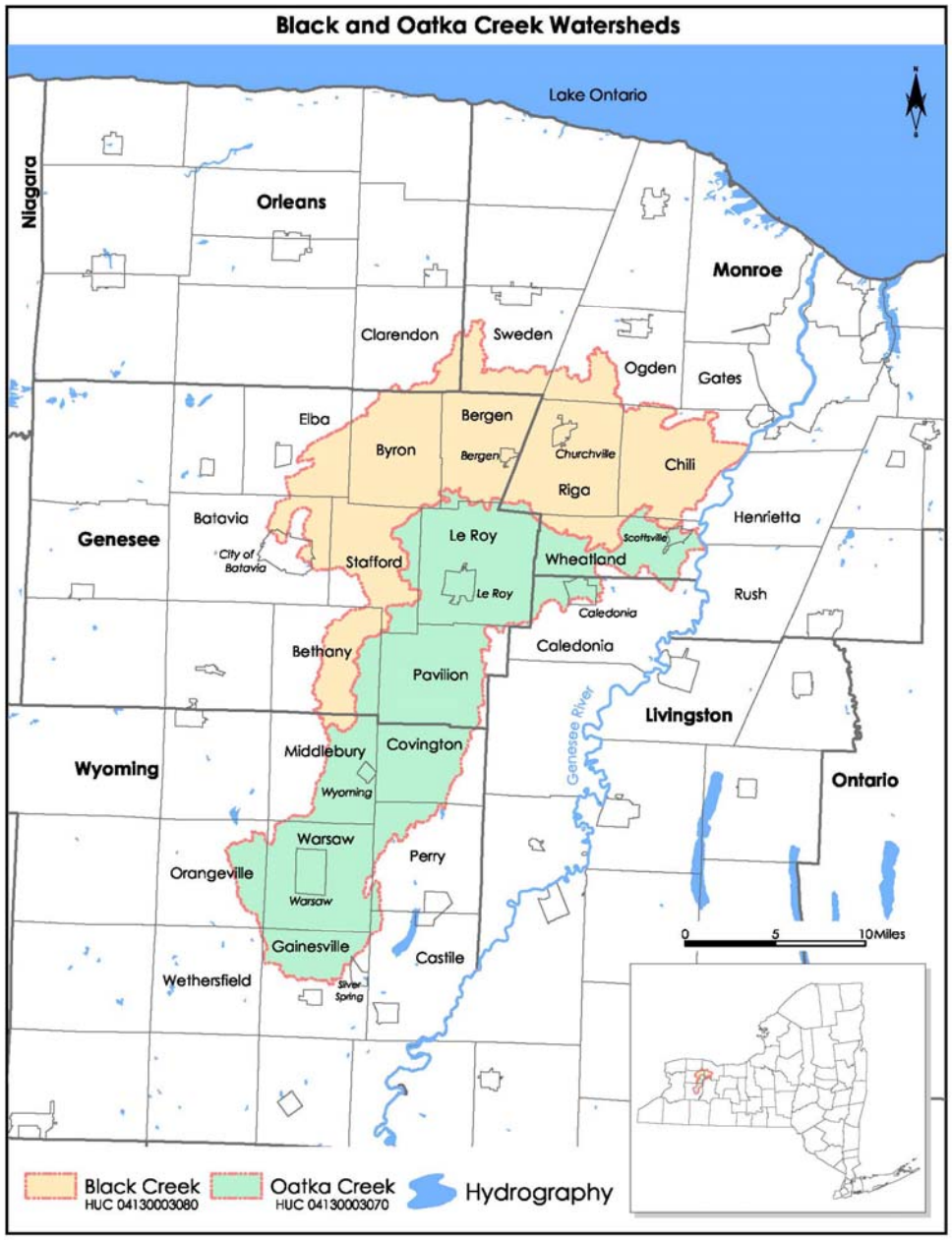
**0 - Not at all**: The municipality does not implement the practice or its equivalent.

**Not applicable**: (n/a) The practice does not appear to be relevant to the municipality.

The following charts contain many possible practices. Not every practice needs to be implemented to ensure the control of nonpoint source pollution.

Note: Where the practice is under the jurisdiction of and fully or partially implemented by another entity such as the federal or State government, the County Department of Health or a special sewer district, please indicate this.

# Table of Contents




*Genesee/Finger Lakes Regional Planning Council*

# Ordinances and Practices Assessment Form

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 1-01 | Identify retrofit opportunities such as addition of stormwater ponds to older developments or construction of wastewater treatment systems to replace older septic systems | | |
| 1-02 | Identify habitat and natural conveyance system restoration opportunities | | |
| 1-03 | Establish retention/detention areas | | |
| 1-04 | Acquire additional land for locating treatment facilities | | |
| 1-05 | Encourage homeowners to place compost piles away from waterbodies and roadways | | |
| 1-06 | Encourage proper use and disposal of lawn and other household chemicals | | |
| 1-07 | Institute turf management practices on golf courses and parks and recreation areas | | |
| 1-08 | Undertake storm drain stenciling | | |
| 1-09 | Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc. | | |
| 1-10 | Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses) | | |
| 1-11 | Encourage water conservation | | |
| 1-12 | Develop outreach programs targeted at specific problems related to water quality management & resource conservation | | |
| 1-13 | Encourage proper control of pet wastes | | |
| 1-14 | Encourage continued operation of private storm water runoff control structures | | |
| 1-15 | Discourage feeding of waterfowl | | |

| | | | |
|---|---|---|---|
| 1-16 | Discourage the introduction of exotic aquatic species (Eurasion water milfoil, zebra mussels, water chestnut, loosestrife, hogweed, etc | | |
| 1-17 | Encourage continued (periodic) operation and maintenance of private septic disposal systems | | |
| 1-18 | Effective and consistent application and enforcement of stormwater regulations & requirements | | |
| 1-19 | Require certification of existing on site septic systems for property transfers or building expansions. | | |
| 1-20 | Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation. | | |
| 1-21 | Use of drainage districts | | |

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 1-22 | Minimize the amount of land disturbed and the duration of disturbance | | |
| 1-23 | Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies | | |
| 1-24 | Retain and protect trees and other natural vegetation on and near disturbed sites | | |
| 1-25 | Account for topography and soil type in efforts to minimize erosion potential | | |
| 1-26 | Maintain runoff rates similar to pre-construction levels | | |
| 1-27 | Minimize the creation of impervious areas [encourage permeable surface] | | |
| 1-28 | Control increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion, sedimentation and pollutants entering waterbodies prior to, during and after construction | | |
| 1-29 | Use temporary vegetation, silt barriers, and mulching to protect exposed and critical areas during development including timeline requirements (i.e. two weeks of no activity would need to be seeded) | | |
| 1-30 | Redistribute topsoil within the boundaries of the disturbed land for seeding and planting | | |
| 1-31 | Stabilize disturbed soils as soon as possible | | |
| 1-32 | Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff | | |
| 1-33 | Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling | | |

| | | | |
|---|---|---|---|
| 1-34 | Encourage construction site management techniques which include erosion control practices (follow SWPPPs) and the proper handling and disposal of pesticides and petroleum products and containers | | |
| 1-35 | Ensure proper operation and maintenance of runoff management facilities | | |
| 1-36 | Target training for contractors, developers, inspectors and zoning and planning officials. | | |
| 1-37 | Require tree surveys and/or cutting plans. | | |
| 1-38 | Develop priority list for BMP's - use of vegetative low areas for retention/infiltration. | | |
| 1-39 | Encourage cluster development/conservation subdivisions | | |
| 1-40 | Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure | | |
| 1-41 | Enact limits on driveway grades. | | |
| 1-42 | For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize efficiencies and address "challenging" sites | | |
| 1-43 | Implement Federal/State Stormwater (SPDES) Phase II requirements including MS4 and Construction Permits as well as Municipal and Industrial Discharge Permits | | |
| 1-44 | Discourage development in flood plain and/or development below base flood elevation | | |

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 2-01 | Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc) | | |
| 2-02 | Consider harvesting practices | | |
| 2-03 | Seasonal preference for logging operations | | |
| 2-04 | Have specialists (geologist, soil scientist, geotechnical engineer, wildland hydrologist) review plans in high erosion hazard areas | | |
| 2-05 | Preplan harvest areas, skid trails, and access so as to be on stable soils, avoiding steep gradients, multiple stream crossings, poor drainage areas, etc. | | |
| 2-06 | Limit grades of access roads. | | |
| 2-07 | Require stabilization of roads/drives to forestry site. | | |
| 2-08 | Employ natural topography and contour for design of road network | | |
| 2-09 | Require stormwater controls for increased runoff from ground cover modification | | |
| 2-10 | Consider site restoration | | |

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 2-11 | Use Agricultural Environmental Management (AEM) | | |
| 2-12 | Require farms seeking agricultural value assessment to participate in AEM | | |
| 2-13 | Concentrated Animal Feeding Operations (CAFO) regulations and permits being followed | | |
| 2-14 | Use of Comprehensive Nutrient Management Plans | | |
| 2-15 | Barnyard runoff controls | | |
| 2-16 | Grazing in environmentally sensitive areas (e.g. streams) | | |
| 2-15 | Use of agricultural protection such as Agricultural Districts, agricultural preservation ordinances and practices, right to farm laws, and Agricultural and Farmland Protection Plans | | |
| 2-16 | Existing Open Space Plans | | |

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 3-01 | Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristics of these streams. | | |
| 3-02 | Improve stream quality by controlling instream sedimentation and selectively clearing debris | | |
| 3-03 | Establish or reestablish riparian buffers | | |
| 3-04 | Prevent animal wastes from entering waterbodies | | |
| 3-05 | Attempt vegetative stabilization before undertaking structural measures | | |
| 3-06 | Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule. | | |
| 3-07 | Protect streambanks through direct nonstructural means, such as new vegetation or protection of existing vegetation; direct structural means, such as revetments and bulkheads; indirect nonstructural means, such as regulating irrigation near streambanks or rerouting overbank drainage; or indirect structural means, such as deflecting channel flow away from streambanks with dikes, board fences and gabions | | |
| 3-08 | Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines | | |
| 3-09 | Prevent discharges to waterbodies in amounts that would adversely affect the taste, color or odor of the waters, or would impair the waters for their best usages | | |

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 3-10 | Consider wetlands and riparian areas and their non-point source (nps) control potential on a watershed scale | | |
| 3-11 | Identify existing functions of those wetland and riparian areas with significant nps control potential when implementing nps management practices. Do not alter wetlands or riparian areas to improve their water quality at the expense of their other functions | | |
| 3-12 | Conduct permitting, licensing, certification and nonregulatory nps pollution activities in a manner that protects wetland functions | | |
| 3-13 | Special zoning considerations to protect wetland areas | | |
| 3-14 | Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminants | | |
| 3-15 | All projects should require wetlands certification. | | |

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 4-01 | Required site planning and approval for docks and launches | | |
| 4-02 | Use of naturally resistant non-treated wood for docks | | |
| 4-03 | Docks constructed to allow for free-flow of water beneath them to prevent erosion and sedimentation along shoreline | | |
| 4-04 | Limit size of docks | | |
| 4-05 | Maintenance of dock - application of preservatives and paints | | |
| 4-06 | Consideration of access to dock and launches to mitigate erosion | | |

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 4-07 | Pesticide storage - covered, locked concrete or steel building with adequate ventilation and metal shelving, no floor drains, and berm or sill to contain spills | | |
| 4-08 | Pesticide mixing and loading - use of chemical mixing center and proper operation and maintenance | | |
| 4-09 | Solvents and Degreasers - separate solvent collection systems such as solvent wash baths | | |
| 4-10 | Solvents and Degreasers - consideration of storage, use (contained), and disposal | | |
| 4-11 | Fertilizer Storage - covered fertilizer storage areas with curbs or berms to prevent water from entering. Secondary containment should be used even where not required | | |
| 4-12 | Fertilizer Loading | | |
| 4-13 | Disposal of grass clippings | | |
| 4-14 | Used Oil, antifreeze and lead acid batteries - collection and recycling | | |
| 4-15 | Gasoline, Diesel fuel - compliance with DEC regulations for above-ground and below ground tanks, closing of stormwater drains in immediate vicinity of fueling point | | |
| 4-16 | General Equipment Washing | | |
| 4-17 | Encourage use of buffers near streams | | |

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 5-01 | Conduct road and bridge maintenance (de-icing material usage and storage, pot-hole repair, bridge washing, scraping and painting, etc) according to best management practices | | |
| 5-02 | Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) - according to best management practices | | |
| 5-03 | Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses) | | |
| 5-04 | Implement a regular inspection and maintenance plan of existing structures | | |
| 5-05 | Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities | | |
| 5-06 | Require percentage of roads to be tested with non-ice and non-sand de-icing. | | |

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 5-07 | Minimize the amount of land disturbed and the duration of disturbance | | |
| 5-08 | Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies | | |
| 5-09 | Retain and protect trees and other natural vegetation on and near disturbed sites | | |
| 5-10 | Retain additional runoff sites | | |
| 5-11 | Minimize the creation of impervious areas | | |
| 5-12 | Treat increased runoff caused by changed surface conditions to minimize the danger of flooding, erosion and pollutants entering waterbodies prior to, during and after construction | | |
| 5-13 | Use temporary vegetation and mulching to protect exposed and critical areas during development | | |
| 5-14 | Redistribute topsoil within the boundaries of the disturbed land for seeding and planting | | |
| 5-15 | Stabilize disturbed soils as soon as possible | | |
| 5-16 | Minimize the use of cut and fill operations. Conform such operations to topography and soils to minimize erosion potential and adequately accommodate runoff | | |
| 5-17 | Control erosion and sedimentation prior to, during and after site preparation and construction | | |
| 5-18 | Require long term stormwater management plan. | | |
| 5-19 | Require long term sedimentation control & maintenance. | | |

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 5-20 | Target existing public holdings, such as parks, for removing unnecessary impervious surfaces | | |
| 5-21 | Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (*Highway Design Manual, Environmental Procedures Manual,* Maintenance Guidelines, etc) into local laws and operating procedures | | |
| 5-22 | Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling | | |
| 5-23 | Ensure proper operation and maintenance of runoff management facilities | | |
| 5-24 | Participate in Cornell Local Roads Program activities and training | | |
| 5-25 | Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials | | |
| 5-26 | Target training and outreach programs about the proper handling of materials, leakage and spill prevention and spill response procedures at maintenance staff and workers | | |

| | Best Management Practices (BMP) | Existing Means of Implementation (law, regulation, practice, etc) | Degree of Implementation |
|---|---|---|---|
| 6-01 | Conduct regular inspections of OWTS at a frequency adequate to determine failure and undertake required maintenance | | |
| 6-02 | Institute setback guidelines | | |
| 6-03 | Promulgate plumbing codes that require practices that are compatible with OWTS | | |
| 6-04 | Target outreach programs at homeowners, contractors and developers | | |
| 6-05 | Inspection of all OWTS at property transfer or within 1 year prior to transfer | | |
| 6-06 | Require all properties within 500' of municipal service to connect. | | |
| 6-07 | Set goals for effluent limits (nitrogen, phosphorous, BOD, etc) | | |

# Municipal Law Review

**Controlling Sediment in the Black Oatka Creek Watersheds Project**
**Municipal Law Review Chart**

| | Water Related Issue | Why address at the local level? (benefits) | How to address it? (practices) | How to implement? (models) |
|---|---|---|---|---|
| | | | | |
| 1 | Agricultural Practices | Ag can have significant impacts on water quality; while many ag issues are regulated at the State level (Ag & Mkts, DEC), local knowledge and support of good ag practices can greatly assist water quality efforts | Agricultural Districts, Right to Farm Laws, Agriculture Environmental Management (AEM) I, Conservation Reserve Enrollment Program (CREP), Conservation Plan, Ag Preservation Plan (stand alone or part of Comprehensive Plan), Farmland Protection Plan | AEM II-VIII, Buffer Strips, Environmental Quality Incentive Program (EQIP) |
| 2 | Boating/Docks/ Access | Boating can have significant impacts on water quality; some boating infrastructure (launches, docks) undergo local permitting processes | Adoption and rigorous enforcement of a comprehensive Dockings and Moorings Law | Dockings and Moorings model and state and federal permits |
| 3 | Erosion and Sediment Control | Activities that are regulated by the municipality, such as construction of roads or buildings, can create significant erosion and sedimentation issues | Adoption and rigorous enforcement of Sediment and Erosion Control Law and enforcement of federal and state Stormwater Phase II regulations | Erosion and Sediment Control model law |
| 4 | Fill | Substantial filling and grading not associated with landscaping can create significant erosion and sedimentation issues | Adoption and rigorous enforcement of Sediment and Erosion Control Law | Erosion and Sediment Control model law |
| 5 | Flood Prevention | Required by NYS Environmental Law; allows participation in National Flood Insurance Program (NFIP); benefits property owners | Adoption and rigorous enforcement of Flood Prevention Ordinance (FPO) | Flood Prevention Ordinance model (DEC) |
| 6 | Flood Plain Management | Improves public safety and property protection. Increases participation in NFIP and Community Rating System. Property owners receive lower Flood Insurance Premiums | Most municipalities have their floodplains mapped. Most municipalities **do not have** a detailed base flood elevation mapped. Therefore, all communities should be mapped so that there is a defined base flood elevation (A Zone). If there is no defined base flood elevation an engineer should be used, along with design standards for siting of every new development in the floodplain. | Municipality should designate and publicize a Flood Plain Administrator (as required by the FPO). The Flood Plain Administrator should attend training sessions provided by NYSDEC, FEMA, and other agencies. |
| 7 | Forest Management | Municipalities can and do regulate timber harvesting since it, like any land disturbance, can create water quality problems. | There are several ways to address this issue, from property owner education, to registration of large timber harvests, to enforcement of existing public highway laws. There is also the possibility of adopting a well thought out Timber Harvesting Law | Timber Harvesting model law (Canandaigua Lake); enforcement of existing public highway laws; education and outreach through County Soil and Water Conservation Districts and/or Cornell Cooperative Extensions. Oversight of timber harvesting BMPs can also promote Wildlife and Fisheries Habitat Protection. |

| | Water Related Issue | Why address at the local level? (benefits) | How to address it? (practices) | How to implement? (models) |
|---|---|---|---|---|
| 8 | Impervious Surfaces | Impervious surfaces such as roofs and parking lots allow stormwater to run off much more quickly and without the benefit of filtering impurities through vegetation and soil. Watersheds can begin to degrade with as little as 10% impervious cover. Impervious surfaces are regulated by the municipality when it promulgates zoning ordinances and issues building permits. | Adoption of appropriate language in zoning regulations and subsequent enforcement through Zoning Officer and Site Plan Review. There is also the possibility of adopting a Water Protection Overlay district, which covers all zoning areas but more strictly regulates activities near streams and lakes. | Zoning language models; Water Protection Overlay model (Skaneateles); Stream setback requirements for parking lots; Filtering of runoff from parking lots and roads prior to entering a waterway; adequate culvert installation, sizing, and maintenance. |
| 9 | Road Deicing and Snow Removal Practices | Local governments perform activities to maintain road safety in the winter. Salt and other deicing chemicals can concentrate in runoff, which enters surface water and ground water. | Adoption of best management practices through highway department, Department of Public Works, Department of Transportation. Winter driving training. | Snow Removal - under local government's SPDES storm water permit. Road Deicing and Storage - institute USEPA guidelines for Managing Highway Deicing to Prevent Contamination of Drinking Water |
| 10 | Intermunicipal Cooperation | Promotes dialogue, cooperation and sharing of services among municipalities on an issue (water resources) that are multi-jurisdictional in nature (watershed-wide). See NYSDOS guidebook - Intergovernmental Cooperation | Article 12-C of the General Municipal Law authorizes formation of joint survey committees for this purpose | Intermunicipal Agreement (IA), several models available |
| 11 | Junkyards | In addition to aesthetic reasons, junkyards can have significant impacts on water quality; junkyards undergo local permitting processes; Abandoned vehicles and appliances might leak oil or other hazardous and toxic liquids into the soil. After first contaminating the soil, liquid waste will eventually reach the groundwater level and pollute local water resources. | Revising zoning to limit junk yards to certain areas that will not impact water quality as much as other areas. A municipality may (and should) expand the state definition of "junk" to encompass such things as old appliances, household waste, or uninhabitable mobile homes. Such an action helps to regulate aspects of junk not covered by state law and to ensure greater compatibility with surrounding land-uses. | Model zoning language |
| 12 | Stream and Waterway Access | Public access to steams is important as a community amenity and tourism benefit. If all citizens have access to waterways, they are more apt to care about water quality issues and see the waterway as a community amenity, not just an amenity for those who own property along it. Properly constructed stream access also helps maintain at least a small portion of the streambank as greenspace | Open space plan or include an assessment of stream-buffer open space resources as part of the comprehensive plan. Categorize open space resources, examine their use and function within the community, set priorities for their protection, and consider the best way to use and protect open spaces | It is important to ensure that the open space policies of the comprehensive plan are implemented through the municipality's land use controls. General Municipal Law Section 247 authorizes acquisition of open land in fee (purchase) or by easement for public purposes |
| 13 | Recreation Uses (e.g. Parklands, Fishing, Golf Courses) | Parklands, public access sites, and fishing access should consider streambank and stream maintenance. Golf courses engage in irrigation, mowing, fertilization and pesticide application. | Published best management practices for type of use. | Public lands - through education and enforcement of regulations. Private lands - through education and permitted uses. |
| 14 | Mining | Mining operations can have significant impacts on surface and groundwater resources. Improper practices can lead to contamination of these resources. | Enforcement of NYS Environmental Conservation Law. Local municipalities also have the option of prohibited mining outright through zoning. | Code enforcement officer training on NYS Law; model zoning language |

| | Water Related Issue | Why address at the local level? (benefits) | How to address it? (practices) | How to implement? (models) |
|---|---|---|---|---|
| 15 | Onsite Wastewater | Onsite wastewater (septic) systems are regulated by county and state health laws, but localities can offer an additional level of regulation of these crucial pieces of the community's infrastructure. Septic systems are the number one source of nonpoint source pollution within New York State. A high percentage of private wells are contaminated by improperly functioning septic systems. This poses not only a threat to water quality but also an immediate public health hazard. | A locality can amend their existing laws to include the provisions of a on-site waste water system model ordinance. They can also customize a model ordinance to address situations that may be unique to their community. County Health Departments, Soil and Water Conservation Districts, and Cornell Cooperation Extensions can be valuable partners on this issue. | Uniform onsite wastewater management model law (Seneca Lake Watershed); Steam-septic setback requirement based on DHEC guidelines. |
| 16 | Open Space Preservation | Open space, i.e. vacant land and land without significant structural development, is often valued by community residents for its aesthetic qualities. In addition, open space can serve important water quality and natural resource goals (open space should not be confused with farmland) | Open space plan or include an assessment of open space resources as part of the comprehensive plan. Categorize open space resources, examine their use and function within the community, set priorities for their protection, and consider the best way to use and protect open spaces | It is important to ensure that the open space policies of the comprehensive plan are implemented through the municipality's land use controls. General Municipal Law Section 247 authorizes acquisition of open land in fee (purchase) or by easement for public purposes |
| 17 | Wildlife and Fisheries Habitat Protection | Diverse communities of plant and animals contribute to the overall health of an ecosystem and are important for protection of aesthetic values, increase in property values. | Maintain riparian corridors of naturally occurring vegetation of at least 100-300 feet from the ordinary high water mark | Education and permitted uses within the buffer. |
| 18 | Purchase of Development Rights | The PDR system, which has been used extensively in Dutchess and Suffolk Counties to preserve farmland, can also protect ecologically important lands or scenic parcels essential to rural character of the community. This is a form of open space preservation without the municipality having to purchase the property outright. | Involves the purchase by a municipal or county government of development rights from private landowners whose land it seeks to preserve in its current state without further development. | There are local, state, and federal programs. Non-profit organizations such as the Finger Lakes Land Trust (Ithaca and Canandaigua) and the Trust for Public Land (New York City) can offer assistance with models that have worked in communities across New York State |
| 19 | Riparian Buffers | Prevents encroachment of new development upon water resources; natural buffer areas improve water quality, in part by limiting the effects of erosion and sediment transport | Adoption of appropriate language in zoning regulations and subsequent enforcement through Zoning Officer and Site Plan Review. There is also the possibility of adopting a Water Protection Overlay district, which covers all zoning areas but more strictly regulates activities near streams and lakes. | Zoning language models; Water Protection Overlay model (Skaneateles); Establish minimum buffer; New homes - setback requirement from stream. |
| 20 | Road Ditching | Roadside ditches collect water from the public road but also abutting private properties. There are many ways the locality can improve the construction, operation and maintenance of these drainage structures, which in turn leads to less damage to both private and public (roads, bridges, etc) property and improved water quality | Make certain that the local highway department follows best management practices; regulate new road ditches through Subdivision Regulations and Site Plan Review | Road and Water Quality Handbook (G/FLRPC), many other options for best management practices. Typically ensuring the use of these practices is the greatest challenge. |

| | Water Related Issue | Why address at the local level? (benefits) | How to address it? (practices) | How to implement? (models) |
|---|---|---|---|---|
| 21 | Sewer and Water Infrastructure | This infrastructure is usually approved by and/or built by the municipality. Careful review of all such infrastructure is important since new sewers can significantly improve water quality in an area with failing septic systems, but also lead to increased development and potential water quality problems that are associated with development | Participate as a community in dialogue/planning with regional entities on sewer and water provision such as water authorities and watershed councils. Specifically state in comprehensive plans where the community would like to see such infrastructure and areas where it should be kept out of | Dialogue, outreach, involvement. Having an up to date Comprehensive Plan that is consulted and enforced is very important. |
| 22 | Special Districts | Special Districts are used for many reasons across New York State. Schools, libraries, fire protection, sewer, and lighting are several examples of services that are paid for by a special taxing district. Drainage districts are becoming more and more important as municipalities seek stable funding sources for the improvement, construction, operation, and maintenance of drainage structures, basins, streams, and culverts. | Drainage Districts can cover a single neighborhood or subdivision, the entire municipality, or several municipalities. Charges are typically levied on a per parcel basis to fund drainage work and maintenance. This fund is usually administered by the Highway Department or Department of Public Works, but is separate from, for instance, the road maintenance budget. By utilizing technology, such as GIS, the per parcel charge can be levied based on the amount of impervious surface, which is what ultimately leads to drainage issues. "The more you pave the more you pay." | The NYS DOS is currently researching the legal and legislative background of drainage districts, particularly town-wide examples. However, several municipalities across NYS have used drainage districts very successfully to address drainage issues. The Town of Ogden in Monroe County is one example. |
| 23 | Steep Slopes | Disturbance of steep slopes for construction or other purposes can significantly increase erosion; many of these disturbances must undergo the local permitting process | Zoning and/or site plan review. There is also the option of adopting a specific steep slopes ordinance. | Model zoning language and model ordinance (Canandaigua Lake, Livonia) |
| 24 | Stormwater Management and Drainage | Once water runs off of private property, it tends to become the problem of the local municipality. There are many ways the locality can improve drainage, which in turn leads to less damage to both private and public (roads, bridges, etc) property and improved water quality | Knowledge and enforcement of Stormwater Phase II Regulations. Drainage districts. Using wetlands, detention and retention facilities, regional drainage, and other stormwater best management practices (BMPs) | Local law (NYSDOS revision language); Regional or municipal-wide drainage district models (Town of Ogden) |
| 25 | Transfer of Development Rights | The 'transfer' of development rights is similar to the 'purchase' of development rights (see #18). Transferring development rights can protect ecologically important lands or scenic parcels essential to rural character of the community. This is a form of open space preservation without the municipality having to purchase the property outright. | Under the state zoning enabling statutes, areas of the municipality which have been identified through the planning process as in need of preservation (e.g., agricultural land) or in which development should be avoided (e.g., municipal drinking water supply protection areas) are established as "sending districts." Development of land in such districts may be heavily restricted, but owners are granted rights under the TDR regulations to sell the rights to develop their lands. Those development rights may thereby be transferred to lands located in designated "receiving districts." Transferable development rights usually take the form of a number of units per acre, or gross square footage of floor space, or an increase in height. The rights are used to increase the density of development in a receiving district. | Development of local program with local, state, and/or federal funds. There are several community models in New York State. |

| | Water Related Issue | Why address at the local level? (benefits) | How to address it? (practices) | How to implement? (models) |
|---|---|---|---|---|
| 26 | Vegetation Retention | Retaining natural vegetation is an important factor in limiting erosion and sedimentation, especially during construction activities. Local governments have the ability to control the disturbance of vegetation through zoning, site plan review, and the issuance of permits. Good agricultural practices can also limit the amount of disturbed vegetation. | A local law specifically addressing vegetation retention can be adopted and enforced. Alternatively, the issue can be addressed as part of a more comprehensive sediment and erosion control law, zoning revisions, and/or site plan review. | Vegetation retention model or combination with other model laws such as sediment and erosion control. |
| 27 | Waste Storage | Storing of waste (hazardous waste, garbage, etc.) can have water quality impacts when rainwater runs-off such materials and into local water bodies. Whether dealing with their own facilities or regulating private property, municipalities can enforce waste storage regulations | Knowledge and enforcement of State and Federal regulations is important. Similar to junk yards, municipalities can enforce stricter requirements at the local level | Appropriate Code Enforcement Officers (CEO) training with the possibility of a new local law that is more stringent than federal and state regulations. |
| 28 | Extraction Wells | The siting and drilling of gas, oil, brine, and other types of wells can impact water quality. Local knowledge of state regulations in this matter is important. | Knowledge and enforcement of State and Federal regulations is important. | Appropriate CEO training with the possibility of a new local law that is more stringent than federal and state regulations. |
| 28 | Wetlands | Wetlands, including temporary wetlands known as 'vernal ponds' contribute an important natural habitat, are often a scenic amenity, and act as a natural stormwater retention system, often lessening the need for costly man-made systems. | Wetlands are often in flood plains, so limiting flood plain development has the added benefit of protecting wetlands. Local knowledge of appropriate state and federal regulations (especially on the part of the Code Enforcement Officer or whoever issues the building permits) is very important. They can be seen as the "first line of defense" in protecting our resources and can encourage property developers to file for all appropriate permits with the Army Corps of Engineers and the DEC | Knowledge of and effective enforcement of all zoning and building codes, especially the Flood Prevention Ordinance. CEO training is important |

**Controlling Sediment in the Black Oatka Creek Watersheds Project**
**Municipal Law Review Chart**

| | Water Related Issue | Why address at the local level? (benefits) | How to address it? (practices) | How to implement? (models) |
|---|---|---|---|---|
| | **Land Use Tools** | *In New York State, all of the land use tools listed below MUST occur at the local level. Because local municipalities enjoy many rights of "home rule" they also bear many responsibilities* | | |
| A | Comprehensive Plan | Since comp plans set out the broad goals of a community, and land use decisions ultimately occur at the local level in NYS, good municipal comprehensive plans make the most sense | Well conceived comprehensive plan that is inclusive, concise, well written, frequently consulted, enforced, and periodically reviewed | Department of State and G/FLRPC guidance |
| B | Zoning | Zoning is the most commonly and extensively used local technique for regulating use of land as a means of accomplishing municipal goals. According to a 2003 survey by the Legislative Commission on Rural Resources, 100% of cities, 70% of towns and 88% of villages in New York had adopted zoning laws or ordinances. | Concise, easy to understand zoning that is a direct result of goals and objectives expressed in the comprehensive plan and used to enforce these objectives. | Department of State and G/FLRPC guidance |
| C | Environmental Protection Overlay Districts (EPODs) | EPODs can be considered a sub-area of zoning. EPODs are designated areas within a municipality that have been identified as being particularly sensitive to development. Examples include steep slopes, wetlands, floodplains, bluffs or shorelines, and woodlots. Since the local municipality is responsible for development review and approval, creating an extra level of local oversight for these sensitive areas is beneficial. | The first step to creating an EPOD is consulting a municipality's comprehensive plan to see what areas of the town are particularly sensitive to development. Agencies such as the NYSDEC can also assist a community in recognizing important areas. Actually creating the EPODs is done through zoning revision or amendment to codify the actual overlay district geography and regulations as part of the zoning law. | Many communities have used EPODs to improve their development review process and benefit their environment. Examples include the Town of Irondequoit in Monroe County and the Town of Ulysses (pending) in Tompkins County. G/FLRPC can provide EPOD models. |
| D | Subdivision Ordinance (this includes the option for 'Conservation Subdivision') | One of the most common forms of land use activity is the subdivision of land. The subdivision process controls the manner by which land is divided into smaller tracts of land. Subdivision regulations ensure that when development does occur, streets, lots, open space and infrastructure are adequately designed and the municipality's land use objectives are met. | Concise, easy to understand subdivision ordinance that is a direct result of goals and objectives expressed in the comprehensive plan and used to enforce these objectives. | Department of State and G/FLRPC guidance, Town of Canandaigua model |
| E | Site Plan Review | The site development review process is one of several means of plan implementation that communities may utilize. It is commonly considered supplemental to other land development guidance controls. | Concise, easy to understand site plan review process that is a direct result of goals and objectives expressed in the comprehensive plan and used to enforce these objectives. Municipalities should review Stormwater Pollution Protection Plan (SWPPP) | Department of State and G/FLRPC guidance |

## Glossary of Terms

**Agriculture Environmental Management (AEM):** A voluntary, multi-agency New York State program that provides farm operators with assistance in protecting land and water resources and sustaining their agricultural markets. Usually administered through the county Soil and Water Conservation Districts

**Berm:** A linear mound or series of mounds of earth, planted with grass, generally paralleling the water

**Best Management Practice (BMP):** A practice or combination of practices determined to be the most effective and practicable (including technological, economical, and institutional considerations) means of preventing or reducing the amount of environmental damage in an area

**Cluster Development:** A subdivision where houses are sited on smaller parcels of land, while the additional land that would have been allocated to individual lots is retained as open space

**Cut and Fill:** When the terrain is not flat, it may be necessary to level spots for a proposed road. This is done by taking soil (cut) from high areas and placing it (fill) in the low areas. Cuts and fills should be balanced to minimize the need for extra material and to maximize roadbed stability.

**Detention Area/Pond/Basin:** A low-lying area that is designed to temporarily hold a set amount of water while slowly draining it into another location. Generally designed for purposes of flood control when large amounts of rain could cause flash flooding if allowed to flow unrestrained

**Gabion:** Steel wire-mesh basket to hold stones or crushed rock to protect a stream bank or bottom from erosion

**Impervious/Impermeable Areas:** Areas where the infiltration of water or other aqueous substances (gasoline, oil, antifreeze, etc.) into the ground is difficult or impossible; high likelihood of runoff occurring (Ex: streets, sidewalks, paved driveways and parking lots, roofs, etc.)

**Non-point Source Water Pollution:** Pollution coming from many diffuse sources; caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into water bodies. (by contrast, "Point Source Water Pollution" is generally discharged from an outflow or pipe and is supposed to be permitted, typically thought of as "traditional" sources of pollution such as industrial waste and sewage).

**Retention Area/Pond/Basin:** Area intended to capture diverted stormwater runoff from streets and gutters and hold the runoff indefinitely. Secondary benefits include pollutant removal through settling and biological uptake as well as habitat creation for various types of organisms

**Return/Return Wall:** A facing, usually made of stone or concrete, installed to protect an eroding shoreline from the force of water (see also *revetment*)

**Revetment:** Sloping surface of stone, concrete or other material used to protect an embankment, natural coast or shoreline against erosion (see also return wall)

**Riparian Buffer:** Zone of vegetation along a river or stream that works to trap and filter pollutants and stabilize bank sediments

**Silviculture:** The science, art, and practice of caring for forests with respect to human objectives

**Soil Bio-engineering:** Techniques used to stabilize land by using live plant materials to provide erosion control, slope and stream bank stabilization, landscape restoration, and wildlife habitat. Used alone or in conjunction with conventional engineering techniques

**Wing Wall**: Wall attached to the headwall of a culvert, set at an angle with the centerline, that prevents earth from spilling into a channel and improves hydraulic efficiency.

**Yarding system:** Method of log transport that allows for the harvesting of timber in an environmentally sound manner. A tractor with a mounted tower and winches moves through forests to preplanned locations, while a "yarding" cable is run down to an anchor tree. There are no wide landing areas to bulldoze and no excessive ground disturbances. Narrow skid trails replace the high disturbance skid roads of the past

## About Genesee/Finger Lakes Regional Planning Council

*The Genesee/Finger Lakes Regional Planning Council (G/FLRPC) will identify, define, and inform its member counties of issues and opportunities critical to the physical, economic, and social health of the region. G/FLRPC provides forums for discussion, debate, and consensus building, and develops and implements a focused action plan with clearly defined outcomes, which include programs, personnel, and funding.*

The Genesee/Finger Lakes Regional Planning Council (G/FLRPC) was established in 1977 by a joint resolution approved by its eight original member counties, including Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, and Yates. Wyoming County was admitted in 1986. The Council was organized pursuant to Articles 5-G and 12-B of the New York State General Municipal Law.

The nine counties in the Genesee/Finger Lakes Region comprise 4,680 square miles, and have a population exceeding 1,199,000 residents. There are 32 voting members of the Council representing participating counties, the City of Rochester, and the community at-large. These members include chief elected officials, local legislators, department heads, and key community leaders in the region.

The primary functions of G/FLRPC include Local, Regional and Water Resources Planning, Regional Economic Development, Strategic Planning, Program and Grant Development, Surveys, and Data, Technology, and Resource Center.

Municipal Planning services include comprehensive planning and land use controls, and a host of other planning initiatives such as Open Space and Agricultural Plans, build-out and fiscal impact analyses, and cultural resource surveys. G/FLRPC staff has knowledge and experience in a wide range of planning issues and are here to assist and collaborate with municipal officials, staff and citizens as needed.

Water Resources Planning encompasses a variety of services, which advance the overall goal of protecting and improving water quality and quantity. As a regional agency. G/FLRPC is able to examine and coordinate eater resource issues at a watershed wide level. Services include watershed management planning, wellhead protection and implementation of state and federal regulations. Assistance is provided to member municipalities with land use regulation and their relationship to water quality, proposal and grant development, and outreach and education.

Flood & Hazard Mitigation Planning services involve risk assessment, establishing goals and objectives, and mitigation strategies, along with adoption and approval and a stakeholder and public outreach process. G/FLRPC can develop flood & hazard mitigation plans and evaluate appropriate mitigation activities to reduce or eliminate the long-term risks posed by these hazards to the communities of our region.

**Contact:**
David S. Zorn
Genesee/Finger Lakes Regional Planning Council
50 West Main Street, Suite 8107
Rochester, New York 14614
http://www.gflrpc.org
585-454-0190 x14
dave.zorn@gflrpc.org