

Village of Bergen
Black Creek Watershed

BMP #	Best Management Practices (BMP)	Existing Means of Implementation (law, regulation, practice, etc)	Implementation
			2-full, 1-partial, 0-not at all, n/a-not applicable
Section 1: Development			
<i>Existing Developments</i>			
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		0
1-02	Identify habitat and natural conveyance system restoration opportunities		0
1-03	Establish retention/detention areas		0
1-04	Acquire additional land for locating treatment facilities		0
1-05	Encourage homeowners to place compost piles away from waterbodies and roadways	Practice: 1999-2003 GLOW Composting Education Demonstration Sites set up with informational brochures	2
1-06	Encourage proper use and disposal of lawn and other household chemicals	Practice: 1995, 1999, 2003, 2006 GLOW Region Solid Waste Management Committee, in cooperation with GLOW Region Soil and Water Conservation, Farm Bureau and Cornell Cooperative Extension offices, farm pesticide collection programs; Household Hazardous Waste programs held regularly	2
1-07	Institute turf management practices on golf courses and parks and recreation areas		0
1-08	Undertake storm drain stenciling	Practice: conducted in both watersheds at various points in time; MS4s and stormdrains are relatively limited in rural towns, however	2
1-09	Encourage volunteer programs, such as adopt-a-highways and adopt-a-stream, etc.	Practice: Oatka/Black Creek Watershed Committee, Cornell Cooperative Extension and SWCD have various programs and volunteer efforts geared toward stream and ecosystem stewardship	2
1-10	Include high percentage of indigenous plants in new landscaping on privately-owned properties (excluding arboretums, horticultural gardens, and sites requiring turf grasses)	Practice: SWCD tree and shrub sale, occurs on an annual basis; hardy varieties of native species are provided to the public at low-cost	2
1-11	Encourage water conservation		0
1-12	Develop outreach programs targeted at specific problems related to water quality management & resource conservation	C.P. Chapter 2, Section II. C. 4 - Program in place to monitor stormwater runoff. Enables the village to make needed repairs or improvements.	1
1-13	Encourage proper control of pet wastes		0
1-14	Encourage continued operation of private storm water runoff control structures	C.P. Chapter 2, Section II. C. 4 - Program in place to monitor stormwater runoff. Enables the village to make needed repairs or improvements.	1
1-15	Discourage feeding of waterfowl		0

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1-16	Discourage the introduction of exotic aquatic species (Eurasian water milfoil, zebra mussels, water chestnut, loosestrife, hogweed, etc		0
1-17	Encourage continued (periodic) operation and maintenance of private septic disposal systems	Z.O. Section 415 E. 1 - [Specific to Mobile Homes] Water supply and sewage treatment facilities shall be installed and maintained	1
1-18	Effective and consistent application and enforcement of stormwater regulations & requirements	C.P. Chapter 2, Section II. C. 4 - Program in place to monitor stormwater runoff. Enables the village to make needed repairs or improvements.	1
1-19	Require certification of existing on site septic systems for property transfers or building expansions.	Genesee County Sanitary Code: inspections performed when repairs, expansions or alterations take place; inspections performed when property transfers take place or upon request during refinancing	2
1-20	Require entire property (existing as well as proposed) to be included in stormwater analysis/calculation.	Z.O. Section 208 C. 2. a - f [Site Plan Review stipulations]	2
1-21	Use of drainage districts		0
<i>New Development and Substantial Redevelopment</i>			
1-22	Minimize the amount of land disturbed and the duration of disturbance		0
1-23	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	C.P. Chapter 5, Section III. F - Promote residential development at densities compatible with the scale of the surrounding environment and consistent with the natural and physical environment.	1
1-24	Retain and protect trees and other natural vegetation on and near disturbed sites		0
1-25	Account for topography and soil type in efforts to minimize erosion potential		0
1-26	Maintain runoff rates similar to pre-construction levels	Z.O. Section 208 D. 8. h - [Special Use Permits] Appropriate on-lot drainage shall be provided so as to eliminate any potential on-site water related problems.	2
1-27	Minimize the creation of impervious areas [encourage permeable surface]		0
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	Z.O. Section 208 C. 2. j - [Site Plan Review] Description of proposed measures to control runoff and drainage from the site and when required by NYSDEC and/or SEQ process, a Stormwater Management and Erosion Control Plan.	2
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)		0
1-30	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting		0

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1-31	Stabilize disturbed soils as soon as possible		0
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		0
1-33	Use appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	Z.O. Section 208 C. 2. k - [Site Plan Review] A description of the proposed generation, storage and/or disposal of hazardous materials and/or hazardous wastes on-site, including estimates of amounts involved and provisions for transport, storage and environmental protection.	2
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	Z.O. Section 208, C. 2, k - [Site Plan Review] Description of the proposed generation, storage and/or disposal of hazardous materials and/or hazardous wastes on-site, including estimates of amounts involved and provisions for transport, storage and environmental protection. Z.O. Section 208, D. 8, h - [Special Use Permits] Appropriate on-lot drainage shall be provided to eliminate any potential on-site water related problems. Z.O. Section 208 C. 2. j - [Site Plan Review] Description of proposed measures to control runoff and drainage from the site and when required by NYSDEC and/or SEQR process, a Stormwater Management and Erosion Control Plan.	2
1-35	Ensure proper operation and maintenance of runoff management facilities		0
1-36	Target training for contractors, developers, inspectors and zoning and planning officials.		0
1-37	Require tree surveys and/or cutting plans.		0
1-38	Develop priority list for BMP's - use of vegetative low areas for retention/infiltration.		0
1-39	Encourage cluster development/conservation subdivisions	Zoning Ordinance, Sec. 411 Cluster Residential Development: Cluster residential development of one-family dwellings may be permitted...	2
1-40	Require connection to and/or extension of existing water & sewer if project is within 500 feet of existing infrastructure		0
1-41	Enact limits on driveway grades.		0
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		0

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1-43	Implement Federal/State Stormwater (SPDES) Phase II requirements including MS4 and Construction Permits as well as Municipal and Industrial Discharge Permits	Z.O. Section 208 C. 2. j - [Site Plan Review] Description of proposed measures to control runoff and drainage from the site and when required by NYSDEC and/or SEQR process, a Stormwater Management and Erosion Control Plan. Construction site and Construction Permit inspection conducted by the county SWCD at the request of NYSDEC; G/FLRPC continues to assist municipalities with other aspects of Phase II Stormwater compliance	2
1-44	Discourage development in flood plain and/or development below base flood elevation	Z.O. Section 314 - The Flood Plain Overlay identifies potential areas of special flood hazard, to insure coordinated review of zoning and flood damage prevention regulations and to minimize the threat of flood damages.	2
Section 2: Forestry and Agriculture			
<i>Forestry</i>			
2-01	Consider potential water quality impacts when selecting silviculture system (yarding system, site preparation, pesticides employment, etc)		0
2-02	Consider harvesting practices	Practice: SWCD encourages good woodland management and proper harvesting techniques to maintain present and meet future needs in cooperation with NYSDEC state foresters, and the Genesee County Park and Forest; also, a display at the County Park is being considered that can describe different woodlot management approaches	2
2-03	Seasonal preference for logging operations		0
2-04	Have specialists (geologist, soil scientist, geotechnical engineer, wildland hydrologist) review plans in high erosion hazard areas		0
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.		0
2-06	Limit grades of access roads.		0
2-07	Require stabilization of roads/drives to forestry site.		0
2-08	Employ natural topography and contour for design of road network		0
2-09	Require stormwater controls for increased runoff from ground cover modification		0
2-10	Consider site restoration		0
<i>Agriculture</i>			
2-11	Use Agricultural Environmental Management (AEM)	Practice: See county SWCD AEM Five Year Plan	2
2-12	Require farms seeking agricultural value assessment to participate in AEM	Does not apply: Legality of such a practice questioned by regional SWCD managers	n/a

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2-13	Concentrated Animal Feeding Operations (CAFO) regulations and permits being followed	Practice: See county SWCD AEM Five Year Plan	2
2-14	Use of Comprehensive Nutrient Management Plans	Practice: The latest NYS Ag and Markets Comprehensive Nutrient Planning Grant through the Ag Nonpoint Source Abatement program consists of cost sharing for the development of CNMPs for 18 farms in the Oatka Creek watershed, 12 in Wyoming County, 5 in Genesee County and 1 in Monroe County	2
2-15	Barnyard runoff controls	Practice: Most recently, Barnyard Runoff Management Systems and other operational BMPs were implemented on farms in Ogden(2), Wheatland(1), LeRoy(3), Pavilion(2), Byron(1), Warsaw(5), Covington(3), Orangeville(1), and Middlebury(1) through the Genesee River Implementatin Grant project	2
2-16	Grazing in environmentally sensitive areas (e.g. streams)	Practice: Caring for Creeks, EPF Ag NPS Abatement grants	2
2-17	Use of agricultural protection such as Agricultural Districts, agricultural preservation ordinances and practices, right to farm laws, and Agricultural and Farmland Protection Plans	C.P. Chapter 2, Section II. F - Agricultural Districts. ; County Agricultural and Farmland Protection Plan under production.	2
2-18	Existing Open Space Plans	Genesee County Smart Growth Plan, 2005 Review Report, page 7: Purpose of the plan is to minimize the impacts from additional growth and development that would otherwise occur as a result of the extension of water service.	2
Section 3: Waterways and Wetlands			
<i>Modified Waterways</i>			
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.		0
3-02	Improve stream quality by controlling instream sedimentation and selectively clearing debris	Practice: SWCD	2
3-03	Establish or reestablish riparian buffers	Practice: SWCD works in conjunction with land owners, farmers in particular, implementing federally-funded programs	2
3-04	Prevent animal wastes from entering waterbodies. Examples may include: animal control ordinances and/or practices that pertain to animal waste disposal; waterfowl abatement programs.	Practice: SWCD/NRCD implementing AEM, comprehensive nutrient management plans, bunker storage systems, etc.	2
3-05	Attempt vegetative stabilization before undertaking structural measures	Practice: SWCD has used vegetated systems, such as downed trees and logs, to stabilize severely eroded banks	2

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3-06	Schedule the periodic maintenance of sediment control measures, and inspect and repair them as needed in conformance with established schedule.	T of B. SM&ECL Section VIII, 1 - Stormwater management facilities maintained by an owner(s) shall have adequate easements to permit the Town of Bergen to inspect and, if necessary, to take corrective action should the owner(s) fail to properly maintain the system. 2: Stormwater management facilities may be dedicated to the Town for maintenance... Practice: SWCD is always looking for opportunities to devise check dams; maintains several that are in operation	2
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	Practice: SWCD has used vegetated systems, such as downed trees and logs, to stabilize severely eroded banks	2
3-08	Use setbacks to minimize disturbance of land adjacent to streambanks and shorelines		0
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	C.P. Chapter 2, Section II. E - New York State Department of Environmental Conservation regulates development, in accordance with the provisions of Article 15 of ECL.	2
<i>Wetlands and Riparian Area Management and Restoration</i>			
3-10	Consider wetlands and riparian areas and their non-point source (nps) control potential	C.P. Chapter 2, Section II. D. 1 - Protected by the State Department of Environmental Conservation (DEC). Development within wetland areas is restricted and regulated by the U.S. Department of Interior and the Fish and Wildlife Service. Practice: guiding principle of SWCD operations, as exemplified in efforts in the field (Wetland Reserve Program) as well as education and outreach programs	2
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	C.P. Chapter 2, Section II. D. 1 - Protected by the State Department of Environmental Conservation (DEC). Development within wetland areas is restricted and regulated by the U.S. Department of Interior and the Fish and Wildlife Service.	2
3-12	Conduct permitting, licensing, certification and nonregulatory nps pollution activities in a manner that protects wetland functions		0

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3-13	Special zoning considerations to protect wetland areas		0
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		0
3-15	All projects should require wetlands certification.		0
Section 4: Recreation			
<i>Docks and Launches</i>			
4-01	Required site planning and approval for docks and launches		0
4-02	Use of naturally resistant non-treated wood for docks		0
4-03	Docks constructed to allow for free-flow of water beneath them to prevent erosion and sedimentation along shoreline		0
4-04	Limit size of docks		0
4-05	Maintenance of dock - application of preservatives and paints		0
4-06	Consideration of access to dock and launches to mitigate erosion		0
<i>Golf Courses</i>			
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		0
4-08	Pesticide mixing and loading - use of chemical mixing center and proper operation and maintenance		0
4-09	Solvents and Degreasers - separate solvent collection systems such as solvent wash baths		0
4-10	Solvents and Degreasers - consideration of storage, use (contained), and disposal		0
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		0

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4-12	Fertilizer Loading: Make specific accommodations for fertilizer loading and mixing so that spills may be collected and managed. Examples include covered, impermeable surfaces intended for mixing; sloped surfaces that direct spills toward a liquid-tight sump for recovery; provision of appropriate cleaning materials, such as cat litter or sand.		0
4-13	Disposal of grass clippings: Grass clippings should remain on the surface in order to provide a natural source of organic matter and nutrients. If this is not preferred, clippings should be spread lightly in the rough or other unmanaged areas away from surface waters, outside of aquatic buffer zones.		0
4-14	Used Oil, antifreeze and lead acid batteries - collection and recycling		0
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		0
4-16	General Equipment Washing: Minimize the use of detergents or degreasers; high pressure systems are used to decrease water usage; If less than 500 gallons per day, wastewater from equipment washing may drain to a grassed retention area or swale away from receiving waterbodies; otherwise discharges should be directed to a municipal treatment system		0
4-17	Encourage use of vegetated buffers near aquatic areas, such as streams, ponds, lakes and wetlands		0
Section 5: Roads and Bridges <i>[incomplete pending conversation with Highway Superintendent]</i>			
<i>Existing Roads and Bridges</i>			
5-01	Conduct road and bridge maintenance (de-icing material usage and storage, pothole repair, bridge washing, scraping and painting, etc) according to best management practices		0
5-02	Conduct right-of-way activities (mowing, brush removal, pesticide and fertilizer use, etc) - according to best management practices		0

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5-03	Include high percentage of indigenous plants in new landscaping on public-owned properties (excluding arboretums, horticultural gardens, and site requiring turf grasses)		0
5-04	Implement a regular inspection and maintenance plan of existing structures		0
5-05	Develop and identify erosion/sediment control areas (examples include steep slopes, easily erodible soils, and nearby sensitive areas) and retrofit opportunities		0
5-06	Incorporate alternatives to traditional de-icing practices, including adjusting mix rates, using non-salt and non-sand alternatives	Practice: according to the Road Deicing and salt storage inventory, alternatives have been tested in the past and salt is contained within an enclosed shed	2
<i>New Roads and Bridges (Road Rehabilitation Only)</i>			
5-07	Minimize the amount of land disturbed and the duration of disturbance		0
5-08	Preserve natural features and conform substantially with the natural boundaries and alignment of waterbodies	C.P. Chapter 5, Section III. I - Avoid environmentally sensitive areas such as wetlands, or areas of steep slopes.	1
5-09	Retain and protect trees and other natural vegetation on and near disturbed sites		0
5-10	Retain additional runoff sites		0
5-11	Minimize the creation of impervious areas		0
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		0
5-13	Use temporary vegetation and mulching to protect exposed and critical areas during development		0
5-14	Redistribute topsoil within the boundaries of the disturbed land for seeding and planting		0
5-15	Stabilize disturbed soils as soon as possible		0
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		0
5-17	Control erosion and sedimentation prior to, during and after site preparation and construction		0

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5-18	Require long term stormwater management plan.		0
5-19	Require long term sedimentation control & maintenance.	Practice: Stormwater Phase II Pre/Post Regulations are required; SWCD will inspect implementation at the request of the DEC or constituent municipalities	1
<i>All Roads and Bridges</i>			
5-20	Target existing public holdings, such as parks, for removing unnecessary impervious surfaces		0
5-21	Incorporate New York State Department of Transportation design and guidance documents, standard specifications, and procedural manuals (<i>Highway Design Manual, Environmental Procedures Manual, Maintenance Guidelines</i> , etc) into local laws and operating procedures		0
5-22	Ensure application of appropriate solid and hazardous waste generation and disposal practices including source controls and recycling	Z.O. Section 208 C. 2. k - [Site Plan Review] A description of the proposed generation, storage and/or disposal of hazardous materials and/or hazardous wastes on-site, including estimates of amounts involved and provisions for transport, storage and environmental protection.	2
5-23	Ensure proper operation and maintenance of runoff management facilities		0
5-24	Participate in Cornell Local Roads Program activities and training		0
5-25	Target training programs at highway officials, contractors, construction workers, inspectors, zoning and planning officials		0
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		0
5-27	Culvert maintenance: Culverts are routinely inspected and maintained so that they will remain unobstructed, allowing for the free flow of water during storm events. Blockages resulting from sedimentation, debris, excessive vegetation and structural failure are issues to be aware of.		0
5-28	Culvert sizing for existing land use		0
5-29	Culvert sizing for changes in upstream land use and imperviousness		0
Section 6: Onsite Wastewater Treatment Systems			

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6-01	Conduct regular inspections of OWTS at a frequency adequate to determine failure and undertake required maintenance		0
6-02	Institute setback guidelines		0
6-03	Promulgate plumbing codes that require practices that are compatible with OWTS		0
6-04	Target outreach programs at homeowners, contractors and developers	Practice: Genesee County DOH, CCE, SWCD all offer various education and outreach materials and programs	2
6-05	Inspection of all OWTS at property transfer or within 1 year prior to transfer	Genesee County Sanitary Code: inspections performed when repairs, expansions or alterations take place; inspections performed when property transfers take place or upon request during refinancing	2
6-06	Require all properties within 500' of municipal service to connect.		0
6-07	Set goals for effluent limits (nitrogen, phosphorous, BOD, etc)		0