



Chapter 3: Basinwide Recommendations and Commitments

Introduction

Chapter 3 of the GRBAS provides an inventory of Basinwide water protection and restoration commitments and, where needed, recommendations that effectively address macro-level water quality pollutants and their sources.

The primary pollutant sources that exist in the Genesee River Basin have been documented to various degrees of intensity by a number of state and local agencies and organizations over time. For the purposes of clarity and consistency, water quality pollutant sources have been summarized here using the findings put forth in the 2001 NYSDEC Waterbody Inventory/Priority Waterbodies List (WI/PWL).

THE WATERBODY INVENTORY/PRIORITY WATERBODIES LIST

“The *Waterbody Inventory* refers to the listing of all waters, identified as specific individual waterbodies, within the state that are assessed...The *Priority Waterbodies List* is the subset of waters in the *Waterbody Inventory* that have documented water quality impacts, impairments or threats. The *Priority Waterbodies List* provides the candidate list of waters to be considered for inclusion on the [federal] Section 303(d) List.”

~NYS DEC, *New York State Water Quality Management Strategy 2000*, 12

While the WI/PWL is utilized as a guide for obtaining the status of water quality in the Basin, further background data regarding pollutant sources, specific agency commitments and proposed recommendations were solicited from regional stakeholders during a public forum held in March of 2004. Specific operational details and progress of local programs have therefore been added at the discretion of Action Strategy stakeholders.

Explanation of Chapter Structure and Components

Source Categories

Data contained in Chapter 3 has been organized by pollution source categories. A tabular assessment was conducted which focused on the pollution source categories of the 43 waterbodies/segments included in the *2001 Priority Waterbodies List* for the Genesee River Basin.¹ From this, seven primary pollutant source categories were derived. These are considered to be the most pervasive water quality pollutant sources presently found in the Genesee River Basin.

PRIMARY BASINWIDE POLLUTION SOURCES

- *Agriculture*
- *Streambank Erosion*
- *Stormwater Runoff*
- *Hydrologic and Habitat Modification*
- *Failing On-Site Wastewater Treatment Systems*
- *Municipal Drainage/Industrial Discharge*
- *Toxic and Contaminated Sediments*

¹ The full *2001 Genesee River Basin WI/PWL* is available for viewing and download at <http://www.gflrpc.org/GeneseeRiver.htm>.



Tabulation of source categories by this means provides insight to the most severely polluted waterbodies in the Basin; however, it is not an entirely comprehensive means of illustrating the pervasiveness of source pollutants. For example, a waterbody may be found to support its primary uses (fishing, bathing, drinking source, etc.) while being subjected to sporadic periods of significant stress from a pollution source (stormwater runoff, for example). Because its uses are only impacted temporarily, such a waterbody would fall short of the PWL threshold. This is a relatively common occurrence throughout the Basin, one that is difficult to track due to fluctuating annual and seasonal trends in water quality and the expenses associated with providing accurate and up-to-date monitoring data.

The method used herein nonetheless provides a useful benchmark for assessing the sources of pollution in the Basin, their severity, and the means of addressing them on a broad scale. Where available, more specific information relative to localized pollution sources is provided at the watershed level in Chapter 4.

Problem Description

Details regarding the source pollutant and its impact(s) within the Basin are provided here.

Key Goals

Realistic and measurable short- and long-term goals are summarized for each pollution source category. Details relating to the programs specified and progress toward meeting those goals are contained in the sections that follow.

Actions Needed

Specific institutional and programmatic actions that should be implemented in order to resolve the issue are listed within this section. General measures have been provided in instances where no definitive program exists to address the source.

Commitments and Recommendations

Throughout the Basin, federal, state and local agencies are either actively addressing pollutant sources or developing programs and strategies that will do so. Details regarding the status of programs currently in effect are provided under the *Commitments* section; *Recommendations* include those that may be scheduled, partially underway or under discussion.

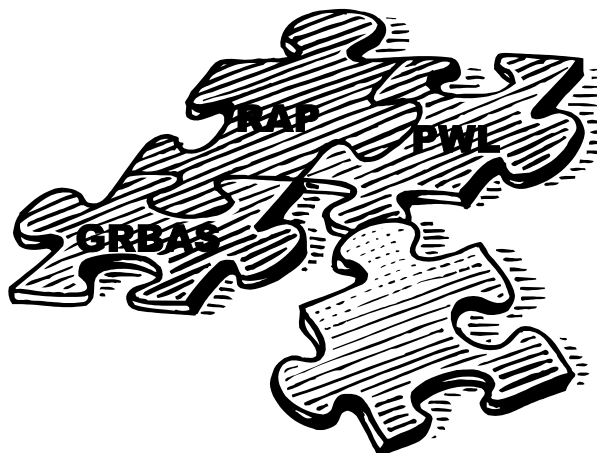
The Rochester Embayment Remedial Action Plan (RAP)

Beginning in 1993, the RAP was developed over a ten-year period in order to advance the Great Lakes Water Quality Agreement between the United States and Canada. The purpose of the RAP is to: “1) identify water quality problems and outline specific actions that need to be taken



to address these problems; 2) to prevent further pollution of water resources; and 3) to protect human health.”² The RAP process continues to be active and has created an immense volume of detailed data regarding the physical, chemical and environmental characteristics of the Rochester Embayment. The study, however, focuses attention primarily on problems within the Embayment and does not contain explicit courses of action to address upstream activities. In conjunction with this GRBAS, the two reports comprise a comprehensive approach to addressing water quality concerns throughout the entire Genesee River Basin.

RAP data has been referenced under the Commitments and Recommendations sections and includes terse descriptions of suggested and ongoing remedial measures in the Basin. Furthermore, RAP information has been listed under “Agencies” because there are a number of partner agencies and subcommittees charged with monitoring and implementing RAP action items. Readers should refer to the full RAP report for greater details on referenced items.³



Assessment and Compliance

The final section of Chapter 3 lists actions and recommendations relative to the continued monitoring of Genesee River Basin waterbodies and enforcement and compliance activities among federal, state and local agencies regarding related laws and regulations.

² Rochester Embayment Remedial Action Plan, Stage II. September 1997: 3

³ General information regarding RAP status, use impairments, study area and contact information may be found online at the following address: <http://epa.gov/greatlakes/aoc/rochester.html>. Retrieved 8/13/04.



Agriculture

PWL WATERBODY SEGMENTS IMPACTED BY AGRICULTURE

Rivers and Streams		Lakes, Ponds and Reservoirs	
<i>Impaired</i>	<i>Minor Impacts</i>	<i>Impaired</i>	<i>Minor Impacts</i>
5	16	3	2

Problem Description

Empirical data indicates that agricultural practices constitute a major threat to water quality in the Genesee River Basin, the pollutants of which are known to cause both short- and long-term water quality problems. These problems often begin as temporary and isolated issues, gradually becoming cumulative and pervasive across a large area of land and water. Poor practices in barnyard and feedlot design, silage storage, manure storage and spreading, and grazing can ultimately lead to problems such as organic enrichment and streambank erosion, resulting in an overall degradation of area lakes and tributaries. Short and long term effects of these pollutants may include depleted oxygen levels, increased pathogens (attributing to beach closures and drinking water contamination), sedimentation and eutrophication. Furthermore, the improper storage and use of hazardous materials, such as chemical pesticides, herbicides and fertilizers, can be a major detriment to surface and groundwater supplies, the bio-accumulative effects of which pose serious threats to human and animal populations.

Mitigating this source of pollution presents a myriad of challenges given the diversity in size, capacity, and nature of private agricultural operations, as well as the strict regulatory protection afforded to such operations in New York State. Proper management of agricultural lands and related facilities requires complex coordination and cooperation in order to ensure that environmental goals are met without inflicting an undue financial burden on landowners.

Key Goals for Addressing Source Pollutant:

- *The NYS Agriculture Environmental Management (AEM) approach to whole farm planning will be pursued and implemented by farms within the NYS portion of the Genesee River Basin (GRB) to address and mitigate water quality and other environmental concerns. Specifically:*
 - *AEM is initiated on all farms in GRB watersheds that are found to pose a real or potential nonpoint source threat to area waterbodies*
 - *Where AEM has already been initiated, all farms will complete through Tier III (planning stages) and continue to Tiers IV and V (implementation and evaluation stages, respectively)*
- *Conditions under the 2004 SPDES CAFO permits are met with full compliance by all medium and large CAFOs in the basin; specifically, the NYS DEC will ensure that implementation schedules are being met on or ahead of schedule.*
- *Components of the Genesee River Basin Sediment Transport Model will be used to address agricultural erosion and nutrient and pesticide loading concerns of GRB stakeholders*



Actions Needed

- **Agriculture Environmental Management (AEM):** AEM is a voluntary, watershed-based approach to farm planning and implementation in regions where agriculture has been identified as a known or high-potential non-point source pollutant. The program is implemented in five successive stages:
 - Tier 1:* Questionnaire designed to solicit information on farm practices
 - Tier 2:* Worksheets that assess the farm's actual and potential impact on the environment
 - Tier 3a/3b:* Plans are developed to mitigate specific environmental concerns (3a); if proposed solutions are likely to have a substantial impact on farm viability, a more comprehensive "Whole Farm Plan" is developed (3b)
 - Tier 4:* Plan implementation through the use of Best Management Practices (BMPs)
 - Tier 5:* Evaluation of the AEM initiative and success of meeting environmental goals
- **Natural Resources Conservation Service (NRCS) Comprehensive Nutrient Management Plans (CNMPs):** Conservation planning is a natural resource problem-solving process. The process integrates ecological (natural resource), economic, and production considerations in meeting both the owner's/operator's objectives and the public's natural resource protection needs. This approach emphasizes identifying desired future conditions, improving natural resource management, minimizing conflict, and addressing problems and opportunities. Comprehensive nutrient management plans (CNMPs) are developed in accordance with NRCS conservation planning policy and rely on the planning process and established conservation practice standards. CNMPs are often used to meet AEM Tier 3 requirements.⁴
- **State Pollution Discharge Elimination System (SPDES) 2004 General Permit for Concentrated Animal Feeding Operations (CAFOs):** In February, 2003 the EPA released new rules for guiding state CAFO permits; NY's new permit took effect on July 1, 2004. As of June 30th, 2004 all large and medium sized CAFOs in NYS were required to have a *Notice of Intent* (NOI) filed with the NYSDEC regarding the development of a CNMP for their farm; CNMPs must then be completed within 2 years or less of NOI filing. Implementation of CNMPs for large CAFOs must be completed by the end of 2004; for medium CAFOs, CNMP implementation is incremental and must be completed by June, 2009.⁵
- **Environmental Quality Incentives Program (EQIP):** EQIP offers contracts with a minimum term that ends one year after the implementation of the last scheduled practices and a maximum term of ten years. These contracts provide incentive payments and cost-shares to implement conservation practices. Persons who are engaged in livestock or agricultural production on eligible land may participate in the EQIP program. EQIP activities are carried out according to an environmental quality incentives program plan of operations developed

⁴ NRCS: National Planning Procedures Handbook. Retrieved 13 August, 2004 from: http://www.nrcs.usda.gov/programs/af/cnmp_guide_index.html.

⁵ NYSDEC, SPEDES General Permit for CAFOs: *CAFO Fact Sheet No. 1*. Retrieved 13 August, 2004 from: <http://www.dec.state.ny.us/website/dow/cafohome.html>.



in conjunction with the producer that identifies the appropriate conservation practice or practices to address the resource concerns. The practices are subject to NRCS technical standards adapted for local conditions. The local conservation district approves the plan.⁶

- **Conservation Reserve Enhancement Program (CREP):** A voluntary program that pays participant farm owners to implement conservation practices on environmentally sensitive lands. Enrollment for the latest extension of CREP contracts began in December of 2003 and extends to the end of 2007. During this contract period the USDA will contribute an estimated \$52 million to NYS watersheds with an additional \$10 million put forth by the state. Contracts for lands enrolled in the program are generally written to last between 10 to 15 years. Areas targeted for CREP include cropland and marginal pastureland adjacent to streams and wellhead areas that provide drinking water to rural municipalities, to include projects such as buffer strip construction and moving grazing areas away from water sources. Specific CREP goals in NYS include the annual reduction of phosphorous by 73,000 pounds, nitrogen by 29,000 pounds and sedimentation by 109,000 tons.⁷
- **Genesee River Basin Sediment Transport Model:** The Sediment Transport Model for the Genesee River Basin is designed to simulate water and sediment yields in large, complex watersheds that feature varying soils and land use patterns. The model consists of two primary components. The first is used as a tool for predicting the impact of land management practices on water, sediment, and agricultural chemical yields. The second component can evaluate the design efficiency of efforts to reduce sedimentation, stabilize stream channels and improve local habitat conditions.
- **Information, Education and Outreach for Landowners and Farm Operators:** Farm operators need to be aware of the latest developments in agricultural BMPs that can reduce soil loss and nutrient loading in area waterbodies and, more importantly, the programs available to assist with implementation of such BMPs and the costs associated therein.

Commitments

Counties

Allegany

- Agricultural pollution control listed as a high priority issue in the Water Quality Strategy for Allegany County (2002)
- Rushford Lake Watershed - AEM, BMPs being implemented
- Prescribed Grazing Management Project: \$24,976 awarded from The Great Lakes Commission to the Seneca Trail Resource Conservation and Development Council, Inc. Contact: JoAnn Kurtis
- AEM: 13 CAFOs in the Basin being assisted in developing BMPs conjunction with FL/LOWPA to develop CNMPs in 2003; cost sharing to assist a minimum of 3 farms with BMP implementation

⁶ USDA, Environmental Quality Incentives Program. Retrieved 13 August, 2004 from: <http://www.nrcs.usda.gov/programs/eqip/>.

⁷ USDA, Conservation Reserve Enhancement Program: *State Updates*. Retrieved 13 August, 2004 from: http://www.fsa.usda.gov/dafp/cepd/state_updates.htm#ny.



Genesee

SWCD:

- All CAFO plans complete (through Tier IIb); CNMP ongoing in cooperation with Monroe County in the Oatka Creek Watershed
- AEM: Tier I and II set to begin on 14 farms in the Oatka and 17 in the Black Creek Watersheds, pending Round X grant funding

Livingston

Planning:

- *Conesus Lake Watershed Restoration and Protection Plan* was completed in March, 2003 and is currently undergoing incremental implementation. Visit <http://co.livingston.state.ny.us/conesus.htm> for more information.
- Study *Experimental Manipulation of Entire Watersheds through Best Management Practices (BMPs): Nutrient Fluxes, Fate, Transport and Biotic Responses* being conducted in Conesus Lake; Project leader: SUNY Brockport; website: http://www.envsci.brockport.edu/Conesus_Project/index.htm.

SWCD:

- AEM: 9 plans to be completed through Tier 3
- EQIP: Priority areas established throughout the county; three farms receiving EQIP funding
- CREP: Vegetative buffer strips being constructed on area farms

Monroe

SWCD:

- AEM- Multi-county project being conducted in the Oatka Creek watershed in conjunction with Genesee and Wyoming counties; one CAFO in Monroe completed through Tier III(b) using a CNMP

Ontario

SWCD:

- AEM - Northern Watersheds Agriculture Program providing funds for planning and implementation activities

Potter (PA)

- Potter County Conservation District implementing agricultural BMP's, specifically nutrient management plans for compliance with the PA Nutrient Management Act
- Selection of priority landowners based on severity of problems; survey, design, implementation and inspection of BMPs therein

Wyoming

SWCD:

- Silver Lake Monitoring Report completed; implementation of recommendations underway
- All CAFO plans complete (through Tier IIb)
- AEM: underway in the Wiscoy and East Koy watersheds; 10 farms to be identified for plan completion through Tier III; multi-county project being conducted in the Oatka Creek watershed in conjunction with Genesee and Monroe

Agencies

FL/LOWPA

- Committed to channeling funds from the NYS Environmental Protection Fund to county SWCD offices and other organizations for the purposes of AEM cost sharing and BMP implementation. See <http://www.fllowpa.org/County.htm> for specific county programs and project schedules.

NYS DEC

- Inspection of CAFOs occurring (20%/yr)
- ArcView coverage of CAFOs being produced

RAP

- Addendum, Sec. 2.1: *Provide technical services to property owners in the area below the dam where erosion rates are the highest - High Priority*
- Rural Remedial Measures

CHAPTER THREE



USACE

- Working in conjunction with G/FLRPC, development and implementation of the Genesee River Basin Sediment Transport Model to assist in evaluating alternatives for soil conservation and non-point source pollution prevention in the Basin

Recommendations

- **The DEC must strictly enforce and, if possible, expedite implementation schedules among all CAFOs in the Basin. County SWCDs can and should provide assistance when and where possible.** Primary emphasis should be focused on implementing CNMPs among both medium and large CAFOs. Large CAFOs are required to have all aspects of their CNMP in place by December 31, 2004. Medium CAFOs are required to adhere to the following incremental implementation schedule:
 - All non-structural practices in place by October 1, 2007
 - “High risk conditions” addressed by October 1, 2008
 - Complete implementation by June 30, 2009⁸
- **Agricultural pollution prevention mechanisms such as AEM and CREP should continue to be expanded to high-risk farms in the Basin, particularly those that are not covered under the CAFO General Permit.** All farms that are located near waterbodies impacted by agricultural pollution sources should be implementing BMPs to mitigate pollution and the potential to pollute. Adequate sources of funding for planning and cost sharing should be actively sought by local, county and regional agencies.

⁸ NYSDEC, SPEDES General Permit for CAFOs: *CAFO Fact Sheet No. 1*. See footnote #5 above for web address.



Streambank Erosion

PWL WATERBODY SEGMENTS IMPACTED BY STREAMBANK EROSION

Rivers and Streams		Lakes, Ponds and Reservoirs	
<i>Impaired</i>	<i>Minor Impacts</i>	<i>Impaired</i>	<i>Minor Impacts</i>
1	13	0	0

Problem Description

Streambank erosion involves the removal of bank material and supporting sediments during periods of high or normal water flows. The problem can be attributed primarily to the removal of protective vegetative cover in riparian areas or by altering land uses in upland areas in a manner that increases stormwater runoff velocities during high flow events. In this regard, streambank erosion is often the end result of a number of contributing factors. The direct end results of streambank erosion include: the loss of lands in upstream areas, particularly fertile and productive farmland; increased levels of sedimentation and turbidity, which act to disrupt critical habitat for fish and other native plant and animal communities; deposition and accumulation of materials in downstream areas; considerable alterations in channel courses; damage to nearby structures such as bridges and road embankments; and an overall reduction in water quality.

Key Goals for Addressing Source Pollutant:

- *The Genesee River Basin Sediment Transport Model will be used to identify critical areas within Basin watersheds where excessive erosion is occurring. Output from the model will be used as a decision support mechanism for watershed organizations and government agencies in cooperation with local landowners.*
- *Streambank inventories will be conducted on all river and stream segments within the Basin that are identified to have significant water quality impacts resulting from streambank erosion.*
- *Structural and riparian controls, BMPs, bioengineering and regulatory controls deemed to be the most effective and appropriate will be implemented within priority riparian corridors that have been identified to be impacted from streambank erosion.*

Actions Needed

- **Genesee River Basin Sediment Transport Model:** See model description under *Agricultural Actions Needed*, page 19 and in Appendix D.
- **Streambank Inventories:** High detailed analyses should be conducted in areas heavily or moderately impacted by streambank erosion in order to determine the location and extent of damage.



- **Erosion and Sediment Control:** Upon completion of detailed streambank analyses, effective mechanisms to control streambank erosion in affected areas should be explored and implemented. These may include the revision or creation of local laws based on information gathered through streambank inventories or through other means of assessing local impacts, such as a stream segment analysis or watershed characterization report.
- **Initiate Model Riparian Corridor and Shoreline Practices:** Model riparian corridor and shoreline practices can provide a number of immediate benefits to lakes, rivers and streams and, when initiated consistently throughout a watershed, can also have a positive, cumulative affect on regional water quality. Vegetated buffer strips comprise the core of such practices. Buffer strips can work to reduce rates of shoreline and streambank erosion, absorb nutrients, decrease thermal pollution and provide critical wildlife habitat to a diverse array of animal species.

Commitments

Counties

Genesee

- Streambank Inventory of Black, Oatka Creeks

Livingston

- *2001 State of Conesus Lake, Watershed Characterization Report* details problems associated with erosion and sedimentation and presents general recommendations for controlling source pollutants

Monroe

- Streambank Erosion Assessment Program is being implemented by the SWCD in order to assess severity of impact(s) and prioritize implementation projects

Ontario County

SWCD:

- Timber Harvest Local Ordinance - standardize for municipal adoption
- Roadbank Stabilization occurring on Honeoye, Canadice, and Hemlock Lakes

Wyoming County

SWCD:

- 2 log crib walls on Wiscoy with stream fencing and bridge
- East Koy stream stabilization
- Streambank Inventory of Black, Oatka Creeks

Agencies

RAP

- Addendum, Sec. 2.1: *Provide technical services to property owners in the area below the dam where erosion rates are the highest - High Priority*
- Stage II RAP Sec. 7.16: *Institute streambank erosion control programs as part of developing watershed-based drainage plans – Ongoing*
- Study, Stage II RAP Sec. 4.4: *Genesee River erosion study focusing on the area between the Letchworth Park flood control dam and Genesee - Phase I report completed;⁹ Phase II ongoing* (i.e. sediment transport model)

⁹ Young, Dr. Richard A. *Postglacial to Modern Channel Erosion and Overbank Deposition Rates Mt. Morris to Genesee Reach, Genesee River, NY*. Dept. of Geological Sciences, SUNY Genesee: 1997.



G/FLRPC

- Great Lakes Commission grant of \$99,450 awarded for study *Controlling Sediment in the Black and Oatka Creek Watersheds* to be completed by December, 2005

USACE

- Genesee River Basin Sediment Transport Model (complete and ready for implementation by fall 2004)

Recommendations

- **A streambank inventory should be conducted for the entire main stem of the Genesee River**, as well as any other tributaries known or suspected to be experiencing impairments from streambank erosion.



Stormwater Runoff and Other Nonpoint Sources

PWL WATERBODY SEGMENTS IMPACTED BY STORMWATER RUNOFF OR OTHER NONPOINT SOURCES

Rivers and Streams		Lakes, Ponds and Reservoirs	
<i>Impaired</i>	<i>Minor Impacts</i>	<i>Impaired</i>	<i>Minor Impacts</i>
3	3	1	0

Problem Description

Stormwater is excess water from precipitation or thawing events that is unable to infiltrate into the ground, thereby entering nearby waterbodies. Stormwater flows can be exacerbated by impervious surfaces such as roads, parking lots, and rooftops. As stormwater travels across the landscape, materials such as animal waste, soils, garbage, fertilizers, pesticides, and petroleum products are collected and ultimately deposited into receiving waterbodies. The quality and rate of stormwater runoff is dependent upon a variety of factors, including the season, amount of precipitation, local geography and the types of on-land activities that are occurring in the area.

Specific environmental problems associated with stormwater runoff include nutrient loading (particularly phosphorus and nitrogen), which can promote oxygen depletion and eutrophication; toxic chemical and sediment accumulation (from residential yards, parking lots, construction sites, etc.) causing overall water quality and habitat degradation; bacteria and illicit connections to sewerage systems, which can result in beach closings and other serious public health concerns; and general aesthetic degradation.¹⁰

Other nonpoint sources may include (but are not limited to) runoff/septage from landfills, salt storage facilities, road deicing activities and atmospheric deposition.

Key Goals for Addressing Source Pollutant:

- *Stormwater management programs that address the “Six Minimum Measures” of Phase II Stormwater Regulations are implemented among all MS4 communities by or before the 2008 deadline.*
- *Construction activities that disturb one or more acres of land are closely monitored by the DEC or other relevant agencies (SWCD staff, for example) to ensure that Stormwater Pollution Prevention Plans are being properly devised and fully implemented by responsible parties, especially within rural communities that lie outside of MS4 communities.*
- *Stormwater compliance among communities and activities that fall below the established Phase II Stormwater thresholds are addressed in a reasonable and timely manner.*

¹⁰ NYS DEC, Division of Water: *NYS Stormwater Information*. Retrieved 13 August 2004 from: <http://www.dec.state.ny.us/website/dow/mainpage.htm>.



Actions Needed

- **Phase II Stormwater Regulations:** Adopted by the EPA in 1999, Phase II regulations cover two specific areas: operators of small municipal separate storm sewer systems (MS4s) located in urbanized areas (population of 50,000 or more) and operators of construction activities that disturb greater than 1 acre of land. Basic responsibilities of operators include the control of stormwater from small MS4s and on-site management of stormwater from small construction projects. These responsibilities are to be accomplished through either the development of comprehensive stormwater management plans (MS4 operators submit NOI to the DEC) or the development of Stormwater Pollution Prevention Plans (SWPPP) and compliance with local laws (NOI regarding construction activities submitted to the DEC).

Commitments

Counties

Livingston

- Model Erosion and Sediment Control Law adopted by the majority of municipalities in the Conesus Lake Watershed

Monroe

- Study initiated in 1995 to evaluate the impacts of road deicing materials by the Monroe County Environmental Management Council. Document “Strategy to Initiate a Deicing Task Group, January 31, 2000” Available online (retrieved 8/13/2004) at: <http://www.monroecounty.gov/documentView.asp?docID=446>. This process is now continued by G/FLRPC; see below.
- Monroe County Stormwater Coalition (MCSC) drafting model ordinances for local municipalities
- MCSC: Small Business Pollution Prevention Program
- Monroe County Planning and Development: A stormwater management training session is offered as part of the Land Use Decision Making Training Program

SWCD:

- Phase I & II SPDES Construction Inspection Program/Great Lakes Commission Grant
- Education and Outreach to highway superintendents other relevant agents re: model practices for storage and spreading of de-icing materials

Ontario

SWCD:

- Timber Harvest Local Ordinance created/standardized for municipal adoption

Agencies

G/FLRPC

- Regional Road Deicing and Storage Inventory studies. Surveys conducted in 1999 and 2004. See G/FL website *Water Resources Planning*: <http://gflrpc.org/Planning/WQ/wqdata.htm> (retrieved 8/13/2004).
- Flood Mitigation Plan for communities in the Oatka Creek watershed
- Facilitation of Stormwater Management and Erosion and Sediment Control technical development and training (in conjunction with Cortland County SWCD)
- Stormwater Phase II Implementation Program: assisting MS4 communities and other regulated entities with the development of Stormwater Management Plans and Construction permits in conjunction with the NYSDEC. Visit <http://www.gflrpc.org/Planning/WQ/wqplanning.htm> for information on G/FLRPC’s Baseline program.

NYSDEC

- Phase II Stormwater Regulations: Ongoing Implementation of MS4 and Pre/Post Construction Regulations

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- Enforcement efforts regarding permits for stormwater discharges
- Churchville – Leachate from Riga Landfill being addressed. See website <http://www.history.rochester.edu/class/MILLSEAT/MILLSEAT.htm> for more information on remedial measures (website **NOT** associated with DEC; retrieved 8/13/2004).

RAP

- Stage II RAP Sec. 7.10: *Develop created wetlands that manage stormwater quality by instituting intergovernmental agreements* - **Ongoing**
- Stage II RAP Sec. 7.10: *Expand the Highway Projects Task Group effort to include state and municipal departments of transportation and public works* - **High Priority**
- Stage II RAP Sec. 7.10: *Continue the dry basin conversion program to manage stormwater quality* - **Ongoing**
- Stage II RAP Sec. 7.10: *Conduct a demonstration of a swirl concentrator as a stormwater management strategy for urbanized areas* - **Ongoing**
- Stage II RAP Sec. 7.4: *Develop watershed-based drainage plans that identify drainage-related water quality problems and recommend remedial actions such as creation of stormwater wetlands* - **2 plans completed; 3 plans underway**
- Stage II RAP Sec. 7.6: *Stencil storm drains with the message 'Do Not Dump – Drains to Stream'; educate the neighborhoods and others about proper disposal of household haz. substances* - **Ongoing**
- Stage II RAP Sec. 7.5: *Communicate with the NYSDEC about Monroe County sites listed in the NYS Haz. Substance Waste Disposal Site Study to promote remediation of local sites* - **Ongoing**
- Stage II RAP Section 9.17: *Monitor road salt usage* - **See listing above under Monroe County**
- RAP 1999 Adden. 3.10: *Study alternative for the use of herbicides to control roadside vegetation on the Monroe County highway system* - **Some alternatives evaluated in 1999**

Recommendations

- **Creation of an inventory documenting historic hazardous waste sites.** In certain instances, old co-disposal municipal dumps and brownfield sites have been forgotten over time. An inventory documenting the location, history, and degree of contamination and containment of such sites should be created. Existing inventories of inactive hazardous waste sites produced by the NYSDEC and EPA may be used as useful starting points.
- **Stormwater Phase II Outreach:** Information and assistance regarding implementation of Phase II regulations and requirements should be provided to all municipal boards, contractors, developers, enforcement officers, public works department, municipal engineers, and highway superintendents\
- **Assessment and Revision of Local Laws:** Municipal zoning codes and ordinances should be reviewed and assessed to determine the degree to which they effectively address stormwater management, erosion and sediment control
- **Stormwater Drainage Districts:** The possibility of instituting special jurisdictions (stormwater drainage districts) to facilitate the implementation, maintenance and financing of stormwater BMPs should be explored and encouraged where feasible
- **Stage II RAP Sec. 9.8:** *Determine the status of chemical seeps on the face of the Lower Falls of the Genesee River* – Recommendation put forth as part of Aesthetics delisting criteria



Hydromodification and Habitat Modification

PWL WATERBODY SEGMENTS IMPACTED BY HYDRO- AND HABITAT MODIFICATION

Rivers and Streams		Lakes, Ponds and Reservoirs	
<i>Impaired</i>	<i>Minor Impacts</i>	<i>Impaired</i>	<i>Minor Impacts</i>
1	7	0	0

Problem Description

Examples of hydro- and habitat modification include channel modification, draining or altering wetlands, and the construction of dams and transportation embankments. As stated by the EPA’s *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* report:

Channel modification activities have deprived wetlands...of enriching sediments, changed the ability of natural systems to both absorb hydraulic energy and filter pollutants from surface waters, and caused interruptions in the different life stages of aquatic organisms (Sherwood et al., 1990). Channel modification activities can also alter instream water temperature and sediment characteristics, as well as the rates and paths of sediment erosion, transport, and deposition. A frequent result of...channel modification activities is a diminished suitability of instream and riparian habitat for fish and wildlife. Hardening of banks along waterways has eliminated instream and riparian habitat, decreased the quantity of organic matter entering aquatic systems, and increased the movement of NPS pollutants from the upper reaches of watersheds into coastal waters.

Channel modification projects undertaken in streams or rivers to straighten, enlarge, or relocate the channel usually require regularly scheduled maintenance activities to preserve and maintain completed projects. These maintenance activities may also result in a continual disturbance of instream and riparian habitat. In some cases, there can be substantial displacement of instream habitat due to the magnitude of the changes in surface water quality, morphology and composition of the channel, stream hydraulics,

Key Goals for Addressing Source Pollutant:

- *Where and when applicable, the Genesee River Basin Sediment Transport Model will be used to help guide stream corridor rehabilitation measures that will improve stream stability and habitat improvement among waterbodies impacts by hydro- and habitat modification.*
- *Continue to develop watershed based wetland and riparian area programs that target issues of concern (flooding, nutrient loading, silt and sediment) and implement in areas adversely affected by hydro/habitat modification with priority given to PWL waterbody segments.*
- *Wetlands and riparian habitats will be improved by working with federal, state, and county partners, as well as other non-governmental agencies.*



and hydrology... Excavation projects can result in reduced flushing, lowered dissolved oxygen levels...loss of streamside vegetation, accelerated discharge of pollutants, and changed physical and chemical characteristics of bottom sediments in surface waters surrounding...channel modification projects. Reduced flushing, in particular, can increase the deposition of finer-grained sediments and associated organic materials or other pollutants.¹¹

Actions Needed

- **Genesee River Basin Sediment Transport Model:** See model description under *Agricultural Actions Needed*, page 18.

Commitments

Counties

Livingston County

SWCD:

- Roadbank stabilization project – ongoing, including an active hydro-seeding program

Planning:

- Conesus Lake Watershed Management Plan – completed and implementing
- Model Erosion Control Law – all towns have adopted – code enforcement officers conducting enforcement

Ontario County

SWCD:

- Timber Harvest Local Ordinance - standardize for municipal adoption
- Roadbank Stabilization occurring on Honeoye, Canadice, and Hemlock Lakes

Potter County (Potter County Conservation District)

- Working with PA Dept. of Environmental Protection to get dikes and flood issues fixed
- Roadbank stabilization, particularly ditch design review in areas w/dirt roads

Wyoming County

- SWCD: -2 log crib walls on Wiscoy with stream fencing and bridge
-East Koy stream stabilization

Agencies

G/FLRPC

- Flood mitigation plan for communities in the Oatka Creek Watershed: provides detail regarding drainage, including data regarding the condition of impoundments and culverts

NYSDEC

- Keshequa Creek erosion control
- Exploring the impacts of streambed gravel mining on downstream habitat; specifically, Cold, Angelica and Rush Creeks
- Conesus Lake level management

RAP

¹¹ US EPA. Wetlands, Oceans and Watersheds: *Nonpoint Source Pollution*. Retrieved 14 August 2004 from: <http://www.epa.gov/owow/nps/MMGI/Chapter1/index.html>.



- RAP 1999 Adden. Sec. 2.2: *Support a proposed study on ways to reduce erosion in the Genesee River due to the flow regime from the dam - Underway* (in conj. with sediment transport model)

USACE

- Sediment Transport Model – Navigation study
- WQMP Mt. Morris Dam Study – recreation and future management (ongoing)
- FEMA Flood Study: Oatka Creek at Warsaw

Recommendations

- **Water Withdrawals for Agricultural/Industrial Processes:** An assessment of the implications of significant water withdrawals (for irrigation and other utilitarian functions) on local waterbody health and function should be conducted. Heavy water withdrawals that occur during dry periods create stressful conditions for a great variety of aquatic organisms. Reduced stream flow, stream size and an increase in water temperature are common impacts.
- **Water Diversions:** A greater understanding and awareness of the impacts on water quality resulting from water diversion to and from the Erie Barge Canal at the Genesee River should be sought by local officials and disseminated to the public.
- **Stage II RAP Sec. 7.17:** *Plan annual workshops for local officials to educate about the benefits of wetlands and how land use decisions affect wetlands; include a wetland tour as part of each workshop - Ongoing*
- **Stage II RAP Sec. 7.19:** *Implement a program to identify and rank critical habitat in and along waterways with the goal of restoring, enhancing and protecting the most significant habitats - Recommended remedial action; no action taking place*



Failing Onsite Wastewater Treatment Systems (OWTS)

PWL WATERBODY SEGMENTS IMPACTED BY FAILING ONSITE WASTEWATER TREATMENT SYSTEMS

Rivers and Streams		Lakes, Ponds and Reservoirs	
<i>Impaired</i>	<i>Minor Impacts</i>	<i>Impaired</i>	<i>Minor Impacts</i>
1	4	1	1

Problem Description

Failing onsite wastewater treatment systems (septic systems) is a widespread and yet relatively unknown and often overlooked source of water quality contamination in the Genesee River Basin. Onsite systems are made up of several interrelated components that require regular maintenance and inspection by qualified personnel for them to operate properly over time. Prohibitive maintenance costs, owner negligence and a general lack of understanding of onsite treatment systems often preclude routine system maintenance. Systems can fail suddenly due to localized damage or gradually over time through the natural accumulation of biological debris within the leach field or from vegetative growth (root damage). When failures occur, they may not be readily apparent to the property owner. Furthermore, systems may be illegally or improperly installed (insufficient capacity, illicit discharges, etc.) and can be sighted in areas that lack adequate or appropriate soil cover and composition to allow sufficient time for the biological breakdown (i.e. treatment) of effluent.

The primary water quality threats associated with failing septic systems include nutrient loading (phosphorous and nitrogen), low dissolved oxygen and pathogens which may lead to eutrophication, beach closings, adverse health effects among human and animal populations and an overall decline in water quality and aesthetics.

Key Goals for Addressing Source Pollutant:

- *Designated best uses are restored for all waters where OWTS or direct discharges from homes are currently the primary source of pollutants causing PWL listing*
- *Public education and outreach efforts advocating proper system design, construction, use and maintenance for homeowners, public officials and contractors*
- *Routine inspection and maintenance of OWTS by county officials and/or certified professionals to insure proper system operation. Aerial infrared thermography and die testing should be conducted in households and businesses in areas with waterbodies that are known to be impacted by failing OWTS in order to detect illicit discharges.*
- *Administrative control measures or alternative design standards should be instituted in communities that are serviced by OWTS and are located near waterbodies known to be impacted by failing OWTS.*



Actions Needed

- **Strict adherence to NYS Standards Addressing OWTS:** Design standards put forth by the NYS Dept. of Health (refer to NYS Public Health Law, 201(1)(1)) and the *Individual Residential Wastewater Treatment Systems Design Handbook* will be understood and strictly adhered to by local agency officials in the Genesee River Basin.¹²

Adherence to guidelines put forth in the *On-Site Wastewater Treatment Systems Management Practices Catalogue for Nonpoint Source Pollution Prevention and Water Quality Protection in New York State*, including:¹³

- **Public Education and Outreach:** Training of onsite wastewater treatment installers and maintainers, code enforcement officers, inspectors and homeowners regarding the proper installation and maintenance of onsite wastewater treatment systems and on the appropriate use and disposal of household hazardous substances.
- **Routine Inspection:** Homeowners and local officials should devise methods to insure that area systems are functioning properly. This includes the routine inspection of absorption fields and pumping of tanks on a regular schedule (based on household size). Methods such as die testing and aerial infrared thermography should be applied in areas with known water quality problems stemming from failing OWTS in order to detect possible illicit discharges.
- **Administrative Control Measures:** These may include NYS Health Department regulation addendums, septic surveys, property/home sale contingencies, subdivision rules and regulations, and site review and zoning regulations. Measures should be adopted at the most appropriate management level (county, town, homeowners association, environmental overlay district, watershed protection district, etc.). Common components of OWTS control measures include a sound, legal framework, financial guarantees or bonds, inspection, enforcement, and penalty provisions, and a public education program. Administrative control measures may be tied to state or federal legislation.
- **Conservation Measures:** Conservation measures may include enforcing the use of high efficiency plumbing devices for new systems and promoting their use as a contingency for the approval of a replacement system or upgraded system. The purpose is to reduce hydraulic loading and promote an unsaturated, aerobic condition in the leachfield.

¹² NYSDOH, Div. of Environmental Protection. *Individual Residential Wastewater Treatment Systems Design Handbook*. 1996. Available from Health Education Services, P. O. Box 7126, Albany, N Y 12224 (\$12/copy)

¹³ Document published in 1994 by the NYSDEC OWTS Management Subcommittee of the NYS NPS Management Practices Sub-Committee. While not available online, copies can be made available by Brian Slack, G/FLRPC.



Commitments

Counties

Livingston

- Failing OWTS in Hemlock Lake, Lime Kiln Creek and Springwater Creek cited as High Priority issues in the Water Quality Management Strategy (1992); Clean Water/Clear Air Bond Act and EPF funds for a package sewage treatment facility in the Hamlet of Springwater have been secured

Ontario

- County wide uniform wastewater treatment law and the development of uniform procedures for individual residential treatment systems (referenced in Ont. Water Quality Strategy)

Wyoming

- Village of Castile centralized wastewater treatment system

Agencies

NYSDEC

- Septic issues on Wolf Creek stemming from the Village of Castile are fully funded for remediation

Recommendations

- **Elected officials and agency heads should actively explore alternatives to failing OWTS, particularly in high-density communities that lack a centralized treatment facility.**
- **In instances where funding for construction of centralized treatment systems is unavailable, or their construction is deemed to be impractical, administrative control measures should be implemented in regions where failing OWTS are known or suspected to be a significant source of water pollution.**
- **Organizations such as the Water Education Collaborative and county agencies should be encouraged to promote education and outreach programs.** Effective programs will cover proper system design, construction, use and maintenance of OWTS for homeowners, code enforcement officers and other relevant agency officials.



Municipal Drainage and Industrial Discharge

PWL WATERBODY SEGMENTS IMPACTED BY MUNICIPAL DRAINAGE AND INDUSTRIAL DISCHARGE

Rivers and Streams		Lakes, Ponds and Reservoirs	
<i>Impaired</i>	<i>Minor Impacts</i>	<i>Impaired</i>	<i>Minor Impacts</i>
4	0	0	0

Problem Description

Municipal drainage and industrial discharge consists primarily of domestic wastes from households and industrial wastewater from manufacturing and commercial activities. Both types of wastewater are generally collected in sanitary sewers and conveyed to municipal wastewater treatment plants. Wastewater entering a treatment plant may contain organic pollutants (sewage) pathogens and sediments, as well as toxic substances used in the home or in industrial processes. These may include household cleaners, motor oil, pesticides, paint or other hazardous compounds. Industrial processes generate significantly larger volumes of wastewater than do household uses, and discharges are generally more concentrated and exotic (heavy metals or synthetic organic compounds, for example). Combined sewer overflows (CSOs) and sanitary sewer overflows (SSO) should also be considered here. CSOs are discharges of a mix of raw household and industrial sewage that occur when a system is inundated with stormwater prior to reaching a treatment facility. SSOs can occur under the same conditions as CSOs or they can be the result of leaks or breaks in conveyance systems due to gradual deterioration and/or neglect of the system.¹⁴

All such facilities in NYS must possess a State Pollution Discharge Elimination System (SPDES) permit in order to operate. Under this permit, plants are required to file monthly discharge monitoring reports to the DEC. Large industries (Eastman Kodak, Rochester Gas and Electric) with their own private treatment plants are also regulated under the SPDES permit.

Key Goals for Addressing Source Pollutant:

- *Viability and remaining useful life of aging wastewater treatment plants is assessed; Consolidations should take place wherever and whenever feasible*
- *All CSO communities will meet State and Federal policy commitments; specifically, in accordance with NPDES regulations, the “Nine Minimum Controls” and the establishment of long term control plans for CSOs should be in place.*
- *Full compliance and improvements related to SPDES permits*

¹⁴ EPA, Office of Water: *Wastewater Primer*. Retrieved 13 August 2004 from: <http://www.epa.gov/npdes/pubs/primer.pdf>.



Actions Needed

- **State Pollution Discharge Elimination System (SPDES):** NYSDEC requires that every point source discharger obtain a SPDES permit in order to legally discharge sanitary, industrial, or commercial wastewater. The permit is a comprehensive legal document and all of its provisions and conditions are enforceable under the law. Under SPDES, NYSDEC reviews permit applications to develop the limits for types and quantities of pollutants in the effluent. The permit also includes the schedules and conditions under which discharges are allowed. Owners or operators of facilities must treat wastewater in order to meet the limits listed in their SPDES permit. In the case of municipal facilities, permits also require industries discharging into the municipal collection system to pre-treat their wastes. Compliance and self-monitoring reports are a major part of this program. Permits are reviewed and reissued every five years.

Commitments

RAP

- Stage II RAP Sec. 7.13: *Provide technical assistance to small wastewater treatment plants if necessary to reduce phosphorus discharges* - **Underway**
- Stage II RAP Sec. 7.7: *Investigate the feasibility of pumping contaminated fluid at the site of the Brewer St. tunnel under the Genesee River and remediating it – ; Monroe County Environmental Services DNAPL (Dense Non-Aqueous Phase Liquid) Project, Completed fall 2003*
- RAP 1999 Adden. Sec. 3.12: *Identify and eliminate problems caused by in-building drains and cross connections* - **Ongoing**
- Stage II RAP Sec. 9.14: *Establish volunteer environmental observers to report on unusual discharges to water* - **Ongoing**

Recommendations

- **NYSDEC assures that all CSO communities have developed long-term CSO control plans and that SPDES permits meet the requirements of the federal Clean Water Act.** The NYSDEC is responsible for coordinating the implementation and review of long-term CSO control plans.
- **Changes in SPDES permit limits for chemicals on the list of high priority chemical pollutants should be documented to the greatest degree possible when permits for facilities in the Genesee River Basin are renewed.** (Similar to Stage II RAP Section 9.14: *Suggested Monitoring Method*)
- **Assess upstream measures to address industrial discharge.** While data regarding industrial discharges in the lower reaches of the Genesee River are generally well known, concern has been raised regarding industrial discharges from small public wastewater treatment plants in upstream/rural areas. An assessment addressing the degree to which discharge permits are being properly acquired and enforced should therefore be conducted.



Toxic and Contaminated Sediment

PWL WATERBODY SEGMENTS IMPACTED BY TOXIC AND CONTAMINATED SEDIMENT

Rivers and Streams		Lakes, Ponds and Reservoirs	
Impaired	Minor Impacts	Impaired	Minor Impacts
1	0	0	0

Problem Description

While hazardous discharges into the waters of the Genesee River Basin have gradually decreased over time, the legacy of those discharges remains in the form of toxic and contaminated bottom sediments of rivers, lakes and harbors. Contaminated and toxic sediments are among the most expensive remedial measures present in the Genesee River Basin. Their mitigation poses several difficulties, primarily preventing the re-suspension of materials from occurring as well as locating appropriate disposal sites if and when remediation takes place. Regarding contaminated sediments, the US EPA states:

...[C]ontaminated sediments have been created by decades of industrial and municipal discharges, combined sewer overflows, and urban and agricultural non-point source runoff. Buried contaminants posing serious human and ecological health concerns can be re-suspended by storms, ship propellers, and bottom-dwelling organisms. Many of these small bottom-dwellers ingest toxins as they feed in the mud. As larger animals eat these smaller animals, the toxins move up the food chain, with their concentrations getting higher, often thousands of times higher. Fish at the top of the food chain, such as lake trout and salmon, can be unsafe to eat in some areas because of the heavy concentrations of toxic substances in their tissues. Fish-eating birds, including the bald eagle, may suffer low reproductive rates or produce offspring with birth defects.¹⁵

Key Goals for Addressing Source Pollutant:

- *The possibility of developing an innovative mechanism for studying the extent of the problem and assessing possible cost sharing options with responsible parties and relevant agencies should be explored.*
- *In the absence of an innovative strategy to remove contaminated sediments from areas within the Basin, containment must be a top priority. Long-term agreements regarding the type of dredging activities and the extent to which they should occur should continue to be made with relevant authorities—in particular, the USACE.*

¹⁵ US EPA, Great Lakes Monitoring Program: *Contaminated Sediments Program*. Retrieved 13 August 2004 from: <http://www.epa.gov/greatlakes/sediments.html>.



Actions Needed

- **Continued regulation, monitoring, and remediation of contaminated sediments.**

Commitments

RAP

- Stage II Rap Section 9.2: *USACE monitors sediments as part of its dredging activities in the Rochester harbor.*
- RAP 1999 Adden. Sec. 2.4: *Establish an [intergovernmental agreement] with the USACE to prevent future increase in the area of the Turning Point Basin that is dredged - **Ongoing**; no long term agreements established, however the USACE holds informational meetings before dredging to establish clear expectations*
- Stage II Rap Sec. 7.4: *Enact a long-term agreement with the USACE to ensure that restrictions on overflow dredging in the Rochester harbor continue despite changes in personnel and political climate - **Ongoing**; see above statement regarding Turning Pt. Basin*
- Stage II RAP Section 9.1: *Monitor levels of toxic chemicals in residential turtles – **Analysis conducted by SUNY Brockport; findings delivered to NYSDEC***

Recommendations

- **Stage II RAP Sec. 7.1:** *Develop a program for removal and disposal of equipment containing PCBs within industrial, commercial, municipal and residential locations – **Underway: Monroe County Environmental Management Council, Waste Site Advisory Committee.** Contact: Louise Hartshorn, Coordinator (see Appen. D for contact information).*
- **Stage II RAP Sec. 7.7:** *Educate developers about the history of contamination in the Genesee River gorge - **Recommended; no action***
- **Stage II RAP sec. 9.2.2:** *Establish chemical sediment quality goals for the Rochester harbor at the mouth of the Genesee River and sample sediments to monitor progress toward goals.*
- **Stage II RAP Sec. 9.2.3:** *Obtain data from the USACE on results of required sediment sampling in the Rochester harbor.*



Assessment

In accordance with the federal Clean Water Act (CWA), New York State is required to monitor and assess state water quality in an effort to ensure that water resources can viably support three essential functions: wildlife propagation, recreation and public consumption. In accordance with this mandate, the CWA specifies four primary activities that the State must carry out:

- Develop and adopt water quality standards designed to protect these functions (Sec. 303)
- Establish monitoring programs to collect and analyze data regarding water quality (Sec. 106)
- Report on the status of waters and the degree to which designated uses are supported (Sec. 305(b))
- Identify and prioritize waters that are not meeting water quality standards (Sec. 303(d))¹⁶

Monitoring and assessment in the Genesee River Basin was last conducted between 1999 and 2001 (with some revisions added in 2002). The next five-year Rotating Basin Studies (RIBS) monitoring cycle will take place in the basin between 2004 and 2006.

Actions Needed

NYS DEC: WI/PWL

- The 4% of lakes, reservoirs and ponds and 12% of river and stream segments currently listed as *Needing Verification* on the Genesee River Basin WI/PWL will be assessed and verified during the 2004—06 RIBS monitoring cycle.
- The segment of the main stem of the Genesee River from Portageville to Mt. Morris which forms the border between Wyoming and Livingston County is listed solely as part of Livingston County. Given that the river is shared between the two counties, an appropriate reference to this fact should be cited in the WI/PWL so that Wyoming County is fully eligible for any and all federal and state funding resources incumbent therein.
- The NYS DEC should attempt to address the limitations that the linear stream segment monitoring approach has when conducting watershed-wide monitoring. Oftentimes segment-by-segment monitoring does not accurately reflect overall in-stream conditions; this problem is most readily evident in instances where upstream conditions are found to be worse than downstream conditions.

Stressed Stream Analysis

- In order to compile a more comprehensive body of information relative to stressed waterways in the Genesee River Basin, stressed stream analyses should be conducted among all major streams in high-priority watersheds (as ranked in Chapter 4 of the report).

CSLAP

- The Citizens Lake Assessment Program will continue on Genesee River Basin lakes, ponds and reservoirs and be expanded to those waterbodies where the integrity of local water quality may be in question

¹⁶ NYS DEC, Div. of Water. *NYS Water Quality Monitoring Strategy*. 1



RAP

- Stage II RAP Sec. 7.23: *Complete basin water quality plans for the...Genesee RiverBasin; focus on plans for individual stream watersheds within the basins* - **Plans completed for North Chili trib. of Black Creek; State of the Basin/Characterization reports completed for Black and Oatka Creek watersheds**
- RAP 1999 Adden. Sec. 2.9: *Reevaluate the rankings of remedial measures, studies and monitoring methods every 6 years* - **High Priority**
- Stage II RAP sec. 7.9: *Continue developing and implementing intermunicipal agreements (IMAs) between Monroe County and the municipalities to protect water quality* - **Ongoing**
- Stage II RAP Sec. 4.6: *Study to learn if contaminants affect the benthic community in the lower Genesee River and, if so, which ones* - **Will be done by NYSDEC as part of Rotating Intensive Basin Studies (RIBS) and benthic delimiting criteria monitoring**

Source Water Assessments

- Source Water Assessment data for all public water supplies in the Basin is underway and near completion (originally scheduled for completion in 2002). Data should be obtained from the NYS Department of Health upon completion so that the potential impact related to publicly owned treatment plants can be reviewed and verified.

Compliance

Actions Needed

NYS DEC: SPDES

- The NYSDEC will maintain SPDES facility surveillance as resources allow and take timely action when non-compliance is identified
- SPDES facilities include both medium and large CAFOs, publicly owned WWTPs, all Phase I and Phase II Stormwater communities and construction sites, and any other public or private facilities covered under SPDES permits
- Stage II RAP Sec 9.14: *Monitor enforcement efforts for NYS DEC permits for stormwater discharges* – **Initiated; Monroe Co. SWCD and the DEC have been steadily increasing monitoring efforts.**