

Cayuga County Water Quality Management Agency

2011 Year End Report

Approved 2/2/2012

The Cayuga County Water Quality Management Agency's Mission

The Cayuga County Water Quality Management Agency (WQMA) was created by County Legislative Resolution #445-90 to serve the Cayuga County Legislature in meeting its responsibilities in the management and protection of the County's water resources.

The WQMA advises the Cayuga County Legislature on matters related to water resource management and planning. The WQMA is charged with identifying problems, proposing priorities, and promoting the coordination of activities in the management and protection of the County's water resources. More specifically, the Agency is charged with:

1. Creating and maintaining a comprehensive planning and implementation program for water quality management in Cayuga County.
2. Coordinating the responsibilities of agencies and watershed associations with interest in water quality management in Cayuga County.
3. Providing greater public input into the process of water quality management and related programs.
4. Providing an effective public education program to develop public understanding and support for water quality management in Cayuga County.

2011 Cayuga County Water Quality Management Agency Membership

Chair: Bruce Natale

Vice-Chair: Gary Duckett

Cayuga County Legislature's Environmental Advisors:

Director of Cayuga County Planning and Economic Development

Director of Cayuga County Environmental Health

Director of Cayuga County Parks and Trails

Director of Cayuga County Soil and Water Conservation District

Cayuga County Solid Waste Management Program Administrator

Cayuga County Cooperative Extension Executive Director

Stephen Lynch

Eileen O'Connor

Gary Duckett

Ron Podolak

Bruce Natale

Doug Ververs

Non-County, Local Officials

Town of Owasco

City of Auburn

Cayuga County Association of Town Supervisors

Cayuga County Association of Villages

Edward Wagner

Vicky Murphy

Keith Batman

Harry Hinman

Representatives from Waterbody Associations in Cayuga County

Cayuga Lake Watershed Network

Duck Lake Association

Lake Como Association

Owasco Watershed Lake Association

Jim Young

Dale Powell

Barb Harvey

Robert Brower

Partners

Central New York Regional Planning and Development Board

Finger Lakes Institute

Institute for the Application of Geospatial Technology, Inc.

Lake Ontario Coastal Initiative

2011 Cayuga County Critical Water Quality Issues

1. Invasive Species (Asian Clam, Chinese Mystery Snail, Water Chestnut)
2. Phosphorus Loading
3. Owasco Lake Watershed Inspection Program
4. Stormwater Runoff, Erosion and Sedimentation
5. Geese and Gulls

WQMA Priority Projects for 2011

1. Update the Cayuga County Water Quality Management Strategy
2. Continue to participate in the Owasco Lake Watershed Management Council Implementation
3. Engage stakeholders and examine the next steps for projects identified in the “Restoration Feasibility Report for the Owasco Inlet and Owasco Flats Restoration Project” report.
4. Owasco Lake Asian Clam Task Force (original priority project was “Asian clam and Chinese mystery snail survey of Owasco Lake”).
5. Continue to work on the reanalysis of Owasco Lake level and options available.

Acronyms and Abbreviations

CCC: Cayuga Community College

CCE: Cayuga County Cornell Cooperative Extension

CNY RPDB: Central New York Regional Planning and Development Board

FLLOWPA: Finger Lakes Lake Ontario Watershed Protection Alliance

Health: Cayuga County Department of Health and Human Services Environmental Health Division

Highway: Cayuga County Highway Department

IAGT: The Institute for the Application of Geospatial Technology

NYSDEC: New York State Department of Environmental Conservation

OWLA: Owasco Watershed Lake Association

Parks: Cayuga County Parks and Trails Commission

Planning: Cayuga County Department of Planning and Economic Development

SWCD: Cayuga County Soil and Water Conservation District

SWMO: Cayuga County Solid Waste Management Office

WQMA: Water Quality Management Agency

2011 Cayuga County Water Quality Management Agency Priority Projects

1. Update the Cayuga County Water Quality Strategy.

- Incomplete. Work was to continue on the update of the Cayuga County Water Quality Strategy, but the response to the Asian clam took most of the WQMA staff's time over the year.

2. Continue to participate in the Owasco Lake Watershed Management Council implementation.

- Steve Lynch assisted in the 501(c)3 application for the Owasco Lake Watershed Management Council and the Council was incorporated in February.
- Eileen O'Connor is the Secretary to the Council.
- WQMA members attend meetings and participate in the Council.
- Eileen O'Connor, Bruce Natale and Steve Lynch participated in the Owasco Lake Watershed Management Council meetings and provided technical information as requested to the Council.
- Eileen O'Connor, Bruce Natale, Michele Wunderlich and Steve Lynch worked with the Owasco Lake Watershed Management Council and the Cayuga County Attorney, Town of Owasco and City of Auburn on the transitional Owasco Lake Watershed Inspector Agreement.

3. Engage stakeholders and examine the next steps for projects identified in the "Restoration Feasibility Report for the Owasco Inlet and Owasco Flats Restoration Project" report.

- Cayuga County was awarded a \$712,000 grant on April 21st through the Green Innovation Grant Program from the New York State Environmental Facilities Corporation to conduct riparian buffering and wetland restoration on City of Auburn property in Owasco Flats.
 - The Planning Department is working to get the State Aid Contract for this project by conducting environmental reviews, archeological reviews, surveying, getting agreements in place, preparing engineering reports and other required paperwork.

4. Owasco Lake Asian Clam Task Force (original priority project was "Asian clam and Chinese mystery snail survey of Owasco Lake")

- The WQMA passed a resolution forming the Owasco Lake Asian Clam Task Force on March 3rd.
 - Staffed by Michele Wunderlich of the Planning Department.
 - Participants were from Planning, CCE, the Finger Lakes Institute, Town of Owasco, City of Auburn, OWLA, IAGT, and the public.
 - Consisted of three committees: Analysis Committee, Mitigation Committee and Education Committee.
- Michele Wunderlich of the Planning Department maintained and updated the WQMA Owasco Lake Asian Clam Task Force website. The Owasco Lake Watershed Network website hosted by IAGT and the Finger Lakes Institute website provided information on Owasco Lake and the Asian clam.
- Bob Brower, Bruce Natale and Dick Coalson conducted shoreline visual surveys in March and April for the Asian clam and Ed Wagner and others conducted scuba visual surveys in 3 to 5 feet of water along the north end of the lake.
- WQMA provided a letter of support for the Finger Lakes Institute's proposal to the Mid-Atlantic Panel on Aquatic Invasive Species small grant competition to determine the extent of Asian clams in Owasco Lake and based upon that determination, development of a response plan.

- The WQMA submitted a grant application to the Delevan Foundation at the beginning of April for additional biological surveying of Owasco Lake, training of staff to identify invasive species and education to prevent spread. No funding decisions have been issued.
- On April 13th OWLA hosted David Decker at their monthly meeting to present on Lake George's plans to deal with the Asian Clam.
- Shoreline Survey in April and May
 - Nick Colas from Planning developed a stratified shoreline survey and provided a map of sampling locations along the Owasco Lake shoreline for a visual survey of Asian clam shells.
 - Robert Brower, Dick Coalson, and Ed Wagner implemented this survey. The majority of shell samples were collected during a one month period between April 11th and May 12th.
 - Rick Oughterson and Lee Coalson of OWLA assisted.
 - Professor Walt Aikman of CCC and Amy Work of the IAGT coordinated student participation by the Spring Geography 101 Class at CCC.
 - Survey results were placed on the Owasco Watershed Network website.
 - From this survey, Bob Brower wrote the "Asian Clam Pre-Survey Report" and these findings were placed on the Owasco Watershed Network website.
- Amy Barra of CCE provided educational information in the litter bags that were distributed at the May 14th electronics collection event to approximately 800 people. This included educational information on Asian clams and also promoted the information on Asian clams on the WQMA, Owasco Watershed Network and the Finger Lakes Institutes' websites.
- Eco-Talk article in The Citizen by Amy Barra on May 27th: "Swap a plant, hunt for clams."
- At the June 1st OWLA meeting, David MacNeill from Sea Grant presented on how to identify the Asian clam. This was organized by CCE, Finger Lakes Institute, OWLA and Planning and his presentation was placed on the WQMA website.
- In June, Bruce Natale received a NYSDEC License to Collect or Possess for Asian clam and other nonindigenous species covering Planning, Health and CCE employees. The Owasco Lake Watershed Inspectors received theirs in July.
- Bruce Natale was interviewed by Channel 9 WIXT television news for the story "Asian Clams threaten region's lakes" on June 22nd.
- A boat wash/inspection workgroup was formed in July and is working with OWLA.
- July Survey
 - The WQMA submitted a grant application to the Fred L. Emerson Foundation and received \$10,000 in funds. SWCD administered the grant.
 - The grant funded the survey of Owasco Lake for the presence and distribution of Asian clams by the Darrin Freshwater Institute, InnerSpace Scientific Diving and Scientific Diving International.
 - This survey confirmed the locations of the Asian clam, determined the outer boundaries of the Asian clam bed and trained volunteers and divers on Asian clam identification and survey methods.
 - The Planning Department distributed a press release on work being conducted in Owasco Lake and how to avoid spreading Asian clam.
 - Participating and providing assistance were Ed Wagner, Dick Coalson, Don Seitz, Katie Jakaub, Alessandro Valle, Eric Townsend, Jason Guy, Bruce Natale, Michele Wunderlich, Gary Duckett, Owasco Marine, Cayuga County Sheriff's Department Marine Patrol and Auburn Fire Department. Cayuga Community College donated laboratory space to conduct the survey work and assistance was

provided by Ed Wagner, Christine Walters, Walt Aikman, Mike Pacelli and Bob Brower.

- The final report “Preliminary Survey for Asian clams (*Corbicula fluminea*) in Owasco Lake, Cayuga County, NY” is available on the WQMA website.
- Kara Mariano, an intern at CCE, wrote “Asian clams threaten Owasco Lake” for The Citizen on July 29th.
- Bruce Natale presented on Asian clam at Owasco Lake Day. Michele Wunderlich and Bruce Natale staffed a table with information on invasive species, Chinese Mystery Snail and Asian clam.
- In August, the Planning Department created educational piece containing information on the Asian clam infestation areas and how to prevent its spread. This piece was distributed at the Great Race as well as to boaters, kayakers, paddleboarders and canoers.
- Planning is continuing to work with NYSDEC to get free signs for invasive species disposal stations at public boat launches.
- September Survey:
 - An additional diving survey was conducted in September by Ed Wagner, Don Seitz, Bruce Natale, Robin Warne and Dick Coalson to more clearly define areas where freezing may not be an effective treatment method (deeper than 6 feet) and to collect sand samples.
 - This fall survey found that the clams go to 11 feet deep and lowering the lake that low is not possible, so other control methods will need to be discussed.
 - The sand samples were collected to analyze for grain size to discover what bottom sediments the clams prefer. Dick Coalson and Anthony DeCaro conducted size analysis on sand samples collected during the September survey.
- Dick Coalson presented information on Asian clam at the Finger Lakes Regional Watershed Alliance meeting.
- Bob Brower presented “The Owasco Lake Asian Clam Task Force” at the 7th Annual Finger Lakes Institute’s Finger Lakes Research Conference on November 19th.
- The Task Force Mitigation Committee decided to manage the Asian clam by lowering Owasco Lake's level one foot lower than normal during the winter to freeze the Asian clams and reduce their population.
 - Anthony DeCaro had began discussing the possibility of lowering the lake level during the winter with the United States Army Corps of Engineers in June.
 - Health researched shore wells and possible impacts.
 - A letter from the Owasco Lake Watershed Management Council and WQMA to all lakefront property owners was sent in December to prepare them for the lowering of the lake level.
- Bruce Natale was interviewed by Guy Cosentino on Asian clams on his cable show on November 15th.
- Bruce Natale was interviewed in The Citizen article “Weather hurting effort to kill clams in Owasco Lake” published on December 27th.

5. Continue to work on the reanalysis of Owasco Lake level and options available.

- Eileen O’Connor took the lead to work with the United States Army Corps of Engineers (ACOE) to request that the Owasco Lake Rule Curve be reopened for evaluation. A conference call in January with the ACOE and the NYSDEC showed that the ACOE is responsive to reopen the rule curve for re-evaluation, however, there is no funding at this time and the earliest there may be is 2013.

2011 Cayuga County Water Quality Management Agency Priorities

1. Monitor, educate about and attempt control of exotic, introduced and invasive species before they become established.

- Work conducted on the invasive species, Asian clam, is listed under Priority Project #4 (page 5).
- Michele Wunderlich maintains the WeedsWatchOut! website on invasive plants.
- Michele Wunderlich and Amy Barra were trained in the iMapInvasives Program, which is a program to track invasive species.
- Bruce Natale attended Tompkins County's Water Resources Council's meeting on January 24th to discuss ways to slow the spread of new invasive species to Cayuga, Skaneateles and other Finger Lakes.
- Amy Barra attended the April 5th Invasive Species Database Symposium, presented by the New York Natural Heritage Program and held in conjunction with the Northeast Natural History Conference, to learn about invasive species and plant identification.
- Michele Wunderlich and Bruce Natale worked with Lyubov E. Burlakova, PhD. from Buffalo State College in confirming the presence of Chinese Mystery Snail in the Owasco Outlet. They reported this presence to the United States Geologic Survey's Nonindigenous Aquatic Species database.
- WQMA submitted a grant to the Delevan Foundation for additional biological surveying of Owasco Lake, training of staff to identify invasive species and education to prevent spread. No funding decisions have been issued.
- Cayuga County and the Finger Lakes Institute submitted an application for funding to the NYSDEC for United States Fish and Wildlife funds from the Great Lakes Restoration Initiative. This application was accepted and is in the process of being funded for \$296,000. Grant funds will be used to conduct macroinvertebrate studies of seven Finger Lakes; a plankton study of all eleven Finger Lakes; nine watercraft stewards for seven Finger Lakes and two for bays along Lake Ontario in Wayne and Cayuga Counties; and further research on Asian clam in Owasco Lake and the development of a response.
- Michele Wunderlich and Bruce Natale staffed a table with information on Asian clam, Chinese mystery snail and other invasive species at Owasco Lake Day in August.
- CCE coordinated a water chestnut pull on Cross Lake on July 21st and at Howland's Island on August 17th.
- Planning is working with NYSDEC to try to get free signs for invasive species disposal stations at public boat launches.
- Amy Barra responded to a reported incident of water chestnut in Owasco Lake but did not find any.
- October WQMA resolution to create a county-wide aquatic invasive species task force and establish membership by the November Cayuga County Water Quality Management Agency meeting. This was completed.
- Doug Ververs attended the public information session held by the Cayuga Inlet Hydrilla Task Force that was held in Ithaca on October 4th and reported on the meeting at the October 6th WQMA meeting.

2. Continue to monitor for and educate on blue-green algae.

- Information on blue-green algae is provided on the WQMA website.

- Eileen O'Connor and Bruce Natale participated in algae webinar "Nitrogen and Phosphorus Pollution and Harmful Algal Blooms in Lakes" in January.
 - Bruce Natale attended the "Lake Algae Symposium" hosted by the FLI, Finger Lakes Community College's Muller Field Station, and Honeoye Valley Association on April 9th.
 - SWCD provided information on blue-green algae in their Summer 2011 edition of Conservation Highlights.
 - Health provided information on blue-green algae at Owasco Lake Day in August.
 - Health identified the presence of blue-green algae in Owasco Lake in September and Eileen O'Connor discussed with the City of Auburn and the Town of Owasco how to optimize their treatment plant when the algae is present.
- 3. Continue to focus on nutrient reduction in County waterbodies.**
- See Nutrient Management section (page 17).
- 4. Educate the public on water quality and stewardship.**
- See Education section (page 13).
- 5. Continue to monitor waterbodies and coordinate with the Finger Lakes Institute and others.**
- See Monitoring section (page 17).
- 6. Follow Marcellus Shale and other drilling activities and effects on surface and ground water resources.**
- WQMA resolution in August to rework the Finger Lakes Regional Alliance's "Statement Concerning Horizontal Drilling with High-Volume Hydraulic Fracturing for Natural Gas in the Finger Lakes Region" into a resolution to present at the September WQMA meeting.
 - Cayuga County WQMA passed a position document on horizontal drilling with high-volume slick water hydraulic fracturing technology in September.
 - Lake Como Association held a meeting on June 3rd with speakers on code enforcement and hydrofracking.
 - Lake Como Association asked Town of Summer Hill to prohibit the withdrawal of Lake Como water for anything other than household use or fire department use.
 - Eileen O'Connor distributed a draft letter based on a letter sent by the Cayuga County Board of Health commenting on the Draft Supplemental Generic Environmental Impact Statement (SGEIS) for potential natural gas drilling activities in the Marcellus Shale formation. The Agency decided to revise this comment letter to the New York State Department of Environmental Conservation and submit it to them in January 2012.
 - CNY RPDB issued an addendum to its 2010 "Marcellus Shale Communities" report. The addendum provides legal information for local governments and citizens that are looking for guidance on land use and local laws as they relate to shale gas mining in NYS.
- 7. Search for funding for the actions listed in this work plan.**
- WQMA provided a letter of support for the Finger Lakes Institute's proposal to the Mid-Atlantic Panel on Aquatic Invasive Species small grant competition to determine the extent of Asian clams in Owasco Lake and development of a response plan.
 - WQMA submitted a grant to the Delevan Foundation for additional biological surveying of Owasco Lake, training of staff to identify invasive species and education to prevent spread. No funding decisions have been issued.

2011 WQMA Year End Report

- Cayuga County and the Finger Lakes Institute submitted an application for funding to the NYSDEC for United States Fish and Wildlife funds from the Great Lakes Restoration Initiative for invasive species work, which is in the process of being funded for \$296,000.
- The WQMA submitted a grant application to and received \$10,000 in funds from the Fred L. Emerson Foundation to survey for the presence and distribution of Asian Clams in Owasco Lake.
- SWCD secured \$581,123 in Agricultural Nonpoint Source Abatement and Control Program grants.
- SWMO received a grant from the NYSDEC to conduct household hazardous waste and electronics collection events. Also received sponsorship from NUCOR for the Freon appliance collection events.
- Cayuga County provided \$26,500 in funds for monitoring of Owasco Lake and its tributaries.

2011 Cayuga County Water Quality Management Agency Other Projects and Programs

WOMA Long Term Initiatives

- 1. Develop a monitoring framework for Cayuga County.**
 - On hold until water quality strategy is complete.

- 2. Develop templates for stormwater and steep slope ordinances for Cayuga County municipalities and distribute to and educate town/village boards, planning boards, code enforcement officers and zoning boards.**
 - The Planning Department has templates for stormwater and steep slope ordinances.
 - CNYRPDB provides access to model stormwater and erosion ordinances, regulatory updates, and implementation/compliance guidelines through a regularly updated municipal stormwater website.
 - CNYRPDB maintains a website with information on stormwater for the general public.
 - CNYRPDB provided the “Central New York Stormwater Management Training Series.”

WOMA Administration

- 1. Administer WQMA including minutes, announcements, agendas, year-end reports, work plans, and other documents needed.**
 - Planning provides administrative support to the WQMA

- 2. Maintain the WQMA website.**
 - WQMA website maintained and updated monthly by Planning.

- 3. Write letters of support upon request.**
 - WQMA provided a letter of support for the Finger Lakes Institute’s proposal to the Mid-Atlantic Panel on Aquatic Invasive Species small grant competition to determine the extent of Asian clams in Owasco Lake and based upon that determination, development of a response plan.
 - WQMA provided a letter of support for the Town of Owasco’s proposed public sewer district #3.

- 4. Assist with Owasco Lake Day.**
 - WQMA and OWLA co-sponsored the Owasco Lake Day at Emerson Park in August.
 - OWLA is working on a March 2012 event at the Cayuga Community College to promote the citizen scientist and the 2012 Owasco Lake Day.
 - Bruce Natale and Michele Wunderlich staffed a table with information on Asian clam and other invasive species, solid waste issues, recycling, natural gas facts and other issues. Amy Barra had a display with more Asian clam information and a fishing game.

- 5. Administer the grant and complete the work in the NYSDEC Water Quality Improvement Grant funded “Cayuga County Water Quality Management Agency Annual Report Project.”**
 - Planning Department administers and conducts the work for a 2009 NYSDEC Water Quality Improvement Projects (WQIP) grant to publish and distribute WQMA annual reports for 2010 and 2011.
 - The “Cayuga County Water Quality Management Agency Annual Report 2010” was presented to the Cayuga County Legislative Planning and Economic Development Committee and the full

Cayuga County Legislature. It was sent to all the towns and villages in the County and is available on the WQMA website at <http://co.cayuga.ny.us/wqma/projects/annual2010.pdf>.

Finger Lakes Lake Ontario Watershed Protection Alliance (FOLLOWPA) Funded Projects

1. Administer FOLLOWPA funds including contracts, requests, budgeting, narratives and attend meetings as requested.

- Planning administers the FOLLOWPA Program.
- Planning worked with the United States Geological Survey for the operation and maintenance of the Owasco Inlet gage station. FOLLOWPA provided the funds for 2011 and 2012.
- Funds were also provided to the SWCD for aquatic vegetation harvesting and the Health Department for septic system investigations.
- Cayuga County CCE hosted the regional FOLLOWPA meeting in November.

Agriculture

1. Assist in the development and review of Comprehensive Nutrient Management Plans and Agricultural Environmental Management (AEM) Plans for farms.

- SWCD administered the Agricultural Environmental Management Program in which ten Tier 1, ten Tier 2, ten Tier 3A, five Tier 3B, five Tier 4 and three Tier 5A farm evaluations, assessment and plans were completed throughout Cayuga County.
- SWCD worked on four Comprehensive Nutrient Management Plans: two in the Cayuga Lake Watershed, one in the Owasco Lake Watershed and one in the Seneca River Watershed.
- SWCD sponsored the Aurora Ridge Dairy, LLC of Aurora for a New York State Agricultural Environmental Management (AEM) Award and this farm was recognized by the Commissioner of the NY Department of Agriculture & Markets as an Honorable Mention.

2. Promote and assist in the implementation of best management practices (BMPs).

- SWCD has an agricultural plastics baler and provides the Recycling Agricultural Plastics Program for farmers and marina owners who want to recycle their plastic.
- SWCD provided technical assistance to a farmer to prevent leachate from a silage bunk from reaching waterways in the Owasco Lake Watershed.
- SWCD assisted in the construction of an animal trail and walkway, totaling 1,385 feet in length and complete with water bars, on a grazing farm in the Owasco Lake Watershed.

3. Encourage and assist farmers in participating in state and federal programs that relate to water quality and issues. Programs include PDR (purchase of development rights), Conservation Reserve Program (CRP), Conservation Reserve Enhancement Program (CREP), and GrazeNY.

- SWCD secured grants from the Agricultural Nonpoint Source Abatement and Control Program.
 - One totaling \$172,068.00 in the Owasco Lake Watershed providing assistance to 7 farms.
 - One totaling \$75,090.00 in the Cayuga Lake Watershed providing assistance to 4 farms.
 - One totaling \$283,465.00 in the Seneca River Watershed (joint with Onondaga County) assisting 14 farms.
 - One totaling \$50,500.00 to implement winter and spring cover crops on 92 acres of highly erodible land on two farms in the Owasco Lake Watershed and one farm in the Cayuga Lake Watershed.
- SWCD can be hired to do no-till grass seeding. The District's eight foot wide no-till drill can handle a variety of seed types used for pasture, hay, wildlife habitat, and food plots. 31 acres of no-till were planted in 2011.

- SWCD performs conservation mowing throughout the year to assist landowners on the maintenance of their crop and Conservation Reserve Program lands. In 2011, SWCD mowed 133 acres of land and approximately 66 miles of conservation ditches.
- 4. Assist with hazardous waste and pesticide collection days for farms as funding is available.**
- Wastes from three former farms were collected at the household hazardous waste collection event on October 22nd.
- 5. Continue with the development and use of technologies to deal with agricultural waste.**
- Construction continued on the Cayuga Regional Methane Digester and the commissioning process began in December.
 - SWCD assisted in the construction of a concrete waste storage facility in the Owasco Lake Watershed which will provide the landowner the ability to manage manure during the winter months to prevent the landowner from having to spread it on frozen ground.
- 6. Continue the Lake Friendly Farms program.**
- The Cayuga Lake Watershed Network provides the Lake Friendly Farms program.
- 7. Miscellaneous**
- Geoff Milz worked as the project consultant to the Town of Cato as they developed an Agriculture and Farmland Protection Plan. This plan, which was adopted in June, won the New York Planning Federation's Heissenbuttel Award, which is given each year to an individual, municipality or agency for outstanding and innovative accomplishment in the field of planning.
 - SWCD worked with a Town of Sempronius farmer who lost a large portion of his buffalo herd by collecting water samples, reviewing their farm plan with the Skaneateles Watershed Program and assisting with the setup of an animal mortality composting site.
 - Dan Welch, Bruce Natale and Geoff Milz served on the steering committee for a project undertaken by American Farmland Trust aimed at strengthening agriculture's role in protecting water quality in the Owasco Lake Watershed.
 - CCE hosted the Owasco Lake Ag Forum on March 2nd which was conducted by American Farmland Trust. Approximately 50 farmers, agricultural land owners and others involved in agriculture attended the Forum which focused on agriculture's role in protecting the water quality of Owasco Lake and sought the agricultural community's input to pro-actively take steps to further enhance and protect water quality.
 - Bruce Natale and Geoff Milz attended one of the two public forums "Strengthening Agriculture's Role in Protecting Water Quality in the Owasco Lake Watershed" held in May by American Farmland Trust.
 - SWCD sells barley straw in rolls for use in ponds to help inhibit the new growth of algae.
 - SWCD won the New York Association of Conservation Districts 2011 Diversity Award which represents the diverse programs and jobs performed by the District over the years.

Education

- 1. Provide education on water, water quality, watersheds, agriculture and related issues to schools, children and adults; including use of Project WET and the Owasco Watershed Network.**
- Eco-Talk articles in The Citizen by Amy Barra:
 - "Returning to lawn care with environmental care" on May 20th.
 - "Get to know area around you" on August 12th.
 - "Don't treat the lake like your trash bin" on August 19th.

- “Doc looks at advantages of ‘Growing Outdoors’” on September 9th.
- Amy Barra held a workshop on February 12th on natural body care that concentrated on health issues and protecting water quality. Sustainable Tompkins acknowledged this workshop as one of 2011's "Signs of Sustainability" in their region.
- SWCD participated in the Regional Envirothon in April and the New York State Envirothon in May.
- The Cayuga Lake Watershed Network organized a spring symposium, “Our Wetlands: A Community Treasure” which was held April 9th at the Montezuma Audubon Center.
- SWCD and CCE participated in Conservation Field Days in September in Emerson Park. Over 300 sixth grade students from Union Springs, Southern Cayuga, Tyburn Academy, and St. Joseph’s attended.
- Additional education listed under Hazardous Materials section (page 14) and Solid Waste Issues section (page 18).

Exotic, Invasive, Introduced and Nuisance Species Management

1. Continue existing aquatic vegetation control programs.

- SWCD mechanically harvested aquatic vegetation and removed 1892 cubic yards of material from four Cayuga County waterbodies.
- The Duck Lake Association applied herbicide to 49 acres of milfoil on June 1st.
- The Lake Como Association’s weed harvester was vandalized so they could not use it this summer.

2. Monitor, educate and attempt control of exotic, introduced and invasive species before they become established. Includes maintaining the Weeds Watch Out! Program website.

- See WQMA Priority #1 (page 8).

Forestry

1. Provide forestry information and technical services for landowners.

- SWCD held its annual tree and shrub sale in April.

2. Provide the Trade-A-Tree Program.

- The Trade-A-Tree Program allows residents to bring their Christmas trees to the Natural Resource Center where the SWCD chips them into mulch which is used for public works projects and is available to the public. In return, residents receive a voucher for a free tree. Event is hosted and staffed by SWCD, funded by the SWMO and promoted by CCE.
- Eco-Talk article in The Citizen by Amy Barra on December 2nd: “Picking the right Christmas tree.”

Hazardous Materials

1. Provide opportunities to reduce hazardous materials in the County including household hazardous waste, tire, electronics and propane tank collections.

- SWMO, Planning, CCE and SWCD provided opportunities to reduce hazardous materials in the County. Combined participation at the public events was 2040, a new record high. Cayuga County recycled 167,811 pounds of electronics at three public events, ~88,000 pounds were recycled through four e-Waste Alliance Network sites serviced by RCR&R and an additional ~80,000 pounds were recycled from schools, industries and businesses, for a total of over 335,800 pounds. This is 4.19 pounds per person. NYSDEC’s 2011 goal was 2.25 pounds per person.

- Public events include:
 - Electronics Collection Event at BOCES on May 14th had approximately 807 cars and collected over 29,000 pounds of televisions, almost 13,000 pounds of CRTs and over 60,000 pounds of other electronics.
 - A tire collection event was held on June 11th that collected about 4,740 tires and 49 pounds of lead. This event is hosted and staffed by SWCD, coordinated by the SWMO and promoted by CCE.
 - Back-to-School "Electronics Plus" Collection Event on October 1st had approximately 354 cars and collected over 15,000 pounds of televisions, 3,300 pounds of CRTS and 16,400 pounds of other electronics.
 - Household Hazardous Waste Collection Event on October 22nd had approximately 287 cars and collected approximately 2,410 pounds of pesticides.
 - America Recycles "Electronics Plus" Collection Event on November 19th in cooperation with the City of Auburn had approximately 298 cars and collected approximately 13,000 pounds of televisions, 3,200 pounds of CRTs and 14,300 pounds of other electronics.
- SWMO conducted two clean-outs for obsolete electronics and fluorescent bulbs from County agencies. The April event recycled 5,567 pounds of electronic equipment and the November event recycled 4,343 pounds of electronic equipment.
- CCE and SWMO participate in the RecycleFirst cellular phone recycling program and printer cartridge recycling program.

2. Provide information and education on protecting water quality, reducing the use of hazardous materials, and the proper use and disposal of household chemicals and other hazardous material.

- SWMO, CCE and Planning provide information in litter bags distributed during collection events.
- SWMO, Planning and CCE maintain and update the SWMO website which includes information on the proper use and disposal of household chemicals and other hazardous materials.
- Eco-Talk articles in The Citizen by Amy Barra:
 - “Three R’s to saving the planet” on March 4th.
 - “Recycling cleans up environment” on April 8th.
 - “Go eco-friendly with your tax refund this year” on April 15th.
 - “Got electronics to dump?” on May 13th.
 - “Extension plans tire recycling event” on June 3rd.
 - “Rubber piles up at Cayuga County tire roundup” on June 12th.
 - “Buying local conserves resources” on July 1st.
 - “Don’t treat the lake like your trash bin” on August 19th.
 - “How to stay green at the state fair” on September 2nd.
 - “Recycle electronics this weekend” on September 30th.
 - “Get rid of that waste — the safe way” on October 7th.
 - “Add some green to the black and orange” on October 28th.
 - “Halloween brings chance to compost” on November 4th.
 - “Electronic junk can be recycled Nov. 19” on November 11th.
- Eco-Talk article in The Citizen by Andrew Chave on September 23rd: “Recycle your old cellphones.”
- CNYRPDB published articles in the GreenCNY section of the Post Standard; “Gardening to Protect Water Quality in CNY” on May 17th, “Stormwater – Friend or Foe” on July 19th: “Let it Snow, Let it Snow, Let it Drain” on November 15th.

3. Miscellaneous

- SWCD provided the wood waste recycling program and with its tub grinder processed approximately 45,000 cubic yards of woody debris for approximately 23 municipal organizations.
- Health has participated in the response to the Aurelius Gasoline Spill which occurred on September 20, 2011. The event was a rupture of a gasoline pipeline which spilled thousands of gallons of gasoline into a farm field and stream. Health has and still is monitoring the collection of private water well samples in the vicinity of the spill by the responsible party's contractor, provided information to the impacted residents and released press releases to keep the public informed.

Highway Maintenance

1. Continue to provide education and assistance to reduce roadbank erosion and other issues caused by highways.

- SWCD has hydroseeding equipment that can be utilized by local municipalities and highway departments. SWCD provides hydroseeding for County, Town and Village governmental departments at cost and hydroseeded 10.5 acres in 2011.
- SWCD staff attends and reports to the Cayuga County Highway Superintendents Association.
- SWCD, in conjunction with the Cayuga County Highway Superintendents Association, held a NYS DEC endorsed 4-hour erosion and sediment control workshop specifically for members of the Cayuga County Highway Departments. 31 people participated in the event with representation from 18 Cayuga County Towns and 4 Cayuga County Villages.

Land Use

1. Educate town/village boards, planning boards, code enforcement officers and zoning boards about land use issues that affect water quality such as drainage, buffer zones, stormwater runoff, PDR, etc.

- The Planning Department provides trainings and education to towns and villages in land use issues.

2. Provide assistance to towns and villages to design, adopt and/or implement standards and guidelines; provide model ordinances, regulations, standards, and guidelines that protect water quality.

- Planning provides assistance to towns and villages.
- CNYRPDB provides access to model stormwater and erosion ordinances, regulatory updates and implementation/compliance guidelines through a regularly updated municipal stormwater website.

3. Assist with the development of comprehensive plans, zoning laws and other land use tools for County municipalities.

- Planning provides assistance with the development of comprehensive plans upon request.
- CNYRPDB completed comprehensive land use plans for the Towns of Niles, Scipio and Victory.
- CNYRPDB completed an update of the Town of Locke Long Range Plan.
- CNY RPDB secured a \$5,000 National Trust for Historic Preservation grant to support the development of an engineering investigation and development of a Rehabilitation Plan for the Isabel Howland House in the Hamlet of Sherwood in the Town of Scipio in March.
- CNY RPDB secured a \$400,000 EPF Historic Preservation grant for the Howland Stone Store Museum (aka Isabel Howland House) in December.

Monitoring

1. Continue water sampling of County Lakes with the Citizens Statewide Lake Assessment Program (CSLAP).

- NYSDEC reduced the number of lakes that could participate due to state budget cuts and therefore, Duck Lake Association was unable to participate in the CSLAP in 2011.
- Lake Como Association was able to participate in the CSLAP in 2011.

2. Monitor lakes and tributaries for nutrients, coliform and other parameters.

- Cayuga County provided \$23,500 to John Halfman of the Finger Lakes Institute in order to sample two sites in Owasco Lake bimonthly from March through October for a total of sixteen survey dates and to sample eighteen sites on Owasco Lake's two largest tributaries for a total of sixteen survey dates.
 - John Halfman presented results at Owasco Lake Day in August, to the Owasco Watershed Lake Association in December and to the Owasco Lake Watershed Management Council in December.
- Cayuga County provided \$3,000 in funds for sampling of fecal coliform from eleven sites on Owasco Lake and its tributaries for twelve weeks. OWLA, SWCD, and the Owasco Lake Watershed Inspectors collected the samples and Planning graphed and distributed the results. An article entitled "Regionally Speaking: The Owasco Watershed Lake Association (OWLA) 2011 Water Sampling Data Analysis Report" was written by Dick Coalson of OWLA and published in the Finger Lakes Institute monthly newsletter Happenings.
- Health samples six Owasco Lake bathing beaches and three Cayuga Lake bathing beaches every summer for fecal coliform.
- OWLA provided funds to John Halfman of the Finger Lakes Institute to purchase an automated sampler for Dutch Hollow Brook that records stream height, temperature and conductivity each hour and conduct sample analysis throughout the April to October field-season.
- Planning worked with the United States Geological Survey for the operation and maintenance of the Owasco Inlet gage station. FLOWPA provided the funds for 2011 and 2012.
- OWLA, Planning and Health collaborated to verify that the Groton Wastewater Treatment Plant is achieving the phosphorus reduction required by its SPDES permit, and to encourage reductions beyond the minimum requirements of that permit.
- WQMA had a presentation by Maria Bachich and Steve Penningroth of the Citizen Science Institute on sampling of Cayuga Lake tributaries.
- The Duck Lake Association conducted two sets of coliform testing; one around July 4th and one around Labor day. Coliform levels were good in all but one location.
- The Finger Lakes Institute is working with the Weedsport High School to monitor Dutch Hollow Brook.

Nutrient Management

1. Provide education on nutrient management and reduction with the P-Project education program and website, as well as other educational materials.

- Michele Wunderlich maintained the P-Project website.
- Charlie Greene, President of OWLA, and Bruce Natale presented "Nutrient Placement and Protected Streams in the Owasco Lake Watershed: Considerations for Planners" at the Northeast Certified Crop Advisor Conference in November.
- SWCD sells zero phosphorus fertilizer and rain barrels.
- Eco-Talk articles in The Citizen by Amy Barra:
 - "Returning to lawn care with environmental care" on May 20th.

Private and Municipal Wastewater Treatment

1. Continue to implement the Cayuga County Sanitary Code and provide information to others as needed.

- Health implements the Cayuga County Sanitary Code and manages the septic system inspection program.
- Septic systems required to be inspected in 2011 under the Cayuga County Sanitary Code were those in Towns of Sennett, Brutus, Niles, and the portions of the Towns of Owasco, Moravia, Scipio, Fleming, and Sterling within the Owasco Lake or Little Sodus Bay watersheds.
- In 2011, Health identified 55 septic system violations, and all but 18 were corrected by the end of the year.
- Health investigates complaints of possible septic system problems in Cayuga County.
- Health reviews and approves all plans for new and repaired septic systems in Cayuga County.
- Health works with residents to have failing septic systems repaired or replaced throughout the County.

2. Provide education on proper septic system and holding tank use and maintenance.

- Health provides septic system maintenance folders/information to homeowners that install new septic systems.

3. Miscellaneous

- Health received a complaint of discharge of brine into wells on Cork Street and reported it to the NYSDEC. NYSDEC found no evidence of any discharge.

Solid Waste Issues

1. Provide education on solid waste and recycling issues.

- Eco-Talk articles in The Citizen by Amy Barra:
 - “Three R’s to saving the planet” on March 4th.
 - “Recycling cleans up environment” on April 8th.
 - “Go eco-friendly with your tax refund this year” on April 15th.
 - “Got electronics to dump?” on May 13th.
 - “Extension plans tire recycling event” on June 3rd.
 - “Rubber piles up at Cayuga County tire roundup” on June 12th.
 - “Buying local conserves resources” on July 1st.
 - “Don’t treat the lake like your trash bin” on August 19th.
 - “How to stay green at the state fair” on September 2nd.
 - “Recycle electronics this weekend” on September 30th.
 - “Get rid of that waste — the safe way” on October 7th.
 - “Add some green to the black and orange” on October 28th.
 - “Halloween brings chance to compost” on November 4th.
 - “Electronic junk can be recycled Nov. 19” on November 11th.
- Bruce Natale discussed the dangers of button batteries with the WQMA and provided education on them.
- Bruce Natale, Michele Wunderlich and Amy Barra advertized pharmaceutical collection events being held in the County hosted by the City of Auburn Police Department on April 30th and October 29th.
- Michele Wunderlich researched on how to dispose of tractor tires and provided the information to the WQMA.

- Bruce Natale, Michele Wunderlich and Amy Barra promoted businesses that can take electronics all the time.
- CCE hosted a Local Food and Composting Workshop on July 26th.

2. Conduct cleanup activities in the County.

- Bruce Natale provided an update on the work on the underground storage tanks on County properties to the WQMA in January.
- Bruce Natale reported the progress of the Meridian Brownfield Site Remedial Investigation and Alternative Analysis project for which Cayuga County received a \$121,500.00 NYSDEC Environmental Restoration Project grant. This location is the site of a gasoline/service station the County foreclosed on in 2000. Two interim remedial measures have been completed, which means that three leaking underground gasoline tanks and lead contaminated soil have been removed from the site but additional work is needed to finish the cleanup.
- Amy Barra coordinated the second Canal Clean Sweep event on April 23rd which was sponsored by CCE. Twenty-five volunteers consisting of Cub Scouts, Girl Scouts, and American Heritage Girls cleaned part of the towpath trail in Heritage Park in Montezuma.
- The Lake Como Association participated in a cleanup of Fall Creek in May.
- A tire collection event was held on June 11th that collected about 4,740 tires and 49 pounds of lead. This event is hosted and staffed by SWCD, coordinated by the SWMO and promoted by CCE.
- The Cayuga Lake Watershed Network conducted a program called "Embrace the Lake!" which included creek and lakefront cleanups around Cayuga Lake. Cleanups in Cayuga County included:
 - Graveyard cleanup in King Ferry.
 - Paines and Moonshine Creeks cleanup in Aurora.
 - Camp Gregory Creek cleanup in Aurora which included lakefront and ravine cleanup.
 - Lakefront cleanup at Long Point State Park.
 - Mill Creek cleanup south of King Ferry.
 - Levanna Creek in Scipioville.
 - Little Creek south of Aurora Ridge Dairy in Aurora.

3. Miscellaneous

- SWCD received a grant extension through the NYS DEC for funds to purchase a bark blower. SWCD does not have the matching grant funds available at this time to acquire the piece of equipment.

Stormwater and Sediment Control

1. Provide education and assistance on stormwater, sediment control and the Phase II Stormwater Rules & Regulations.

- SWCD held four NYSDEC endorsed 4-hour erosion and sediment control trainings for a total of 51 participants.
- SWCD, in conjunction with the Cayuga County Highway Superintendents Association, held a NYS DEC endorsed 4-hour erosion and sediment control workshop specifically for members of the Highway Departments in Cayuga County. 31 people participated in the event with representation from 18 Cayuga County Towns and 4 Cayuga County Villages.
- SWCD provided technical assistance on drainage and flooding issues this spring.
- SWCD assisted in the construction work at Emerson Park including the construction of a bio-retention basin that is designed to treat the stormwater run-off that is generated on the site.

- SWCD provided technical assistance to the Town of Owasco on a retention/detention pond on the Bench Tract that was not functioning properly.
- SWCD contracts with the NYSDEC to help enforce the Phase II Stormwater Rules and Regulations. SWCD has two Certified Professionals in Erosion and Stormwater Control (CPESC) to conduct inspections upon request (John Fraser and Doug Kierst). Doug Kierst is also a Certified Professional in Stormwater Quality (CPSWQ).
- Health investigated a drain at Dutch Hollow Golf Course that was discharging water with high nutrients. It did not appear to be a septic problem so it was referred SWCD.
- SWCD sells zero phosphorus fertilizer and rain barrels.
- CNYRPDB continues education on stormwater including newsletters, newspaper articles, planning board training and workshops on educating homebuilders.

Streambank, Lakeshore and Stream Corridor Management

1. Design and conduct stabilization work on tributaries and lakeshores.

- SWCD is working with a landowner on a fluvial geomorphology management project to protect eroding streambank of the Owasco Inlet in Locke.
- SWCD provided the landowners in Great Gully Cove with technical assistance related to the need for environmental permits from the United States Army Corps of Engineers and NYSDEC for a proposed dredging project.
- Parks worked with C&S Companies who were hired by CNYRPDB to design a green infrastructure project in Emerson Park to stabilize the bank between the canoe launch and the Owasco Outlet in Emerson Park. This project was funded by an American Recovery and Reinvestment Act planning grant received by the CNYRPDB.

2. Provide education and information for farmers and landowners about the importance of buffers adjacent to streambanks, lakeshore and other sensitive areas.

- Michele Wunderlich maintains the “Green Thumbs for Blue Water: Landscaping for Healthy Streams and Lakes” website.

3. Continue to participate in the future work and management of the Owasco Flats and Owasco Inlet area.

- Cayuga County was awarded a \$712,000 grant on April 21st through the Green Innovation Grant Program from the New York State Environmental Facilities Corporation to conduct riparian buffering and wetland restoration on City of Auburn property in Owasco Flats.
 - The Planning Department is working to get the State Aid Contract for this project by conducting environmental reviews, archeological reviews, surveying, getting agreements in place, preparing engineering reports and other required paperwork.

Waterborne Illness

1. Continue to enforce the Owasco Lake Watershed Rules and Regulations.

- The Owasco Lake Inspectors carry out inspections to find violations of the Owasco Lake Watershed Rules and Regulations and Health continues to take enforcement action against those that fail to comply with these Rules and Regulations.
- Health received a complaint that a spring box that waters cows was contaminated by another farmer's silage leachate and provided the farmer with information on how to sanitize the spring box. NYSDEC is working on the complaint.
- Health investigated three complaints of wells contaminated by manure.

- Eileen O'Connor, Bruce Natale, Michele Wunderlich and Charlie Greene met to discuss how to educate farmers and farm planners on what protected streams are in the Owasco Lake Watershed and the special protections they have.
- Charlie Greene, President of OWLA; Judy Wright from American Farmland Trust; Eileen O'Connor from Health; and Bruce Natale and Michele Wunderlich from Planning had meetings to discuss ways to educate farmers on the protected streams referenced in the Cayuga County Sanitary Code.
- Cayuga County provided \$3,000 in funds for sampling fecal coliform from eleven sites on Owasco Lake and its tributaries for twelve weeks. OWLA, SWCD and the Owasco Lake Watershed Inspectors collected the samples; Planning graphed and distributed the results; and Dick Coalson of OWLA analyzed the results.

2. Continue coliform monitoring of public bathing beaches.

- Health, Parks and Planning examined moving the bathing beach at Emerson Park to Deauville Island. Health took bacteria samples at different locations from the beach to see what area would have the lowest levels of bacteria and be most feasible for a beach location. The Island beach will be the primary beach in 2012.
- Health routinely samples six Owasco Lake bathing beaches and three Cayuga Lake bathing beaches every summer for fecal coliform.

3. Provide educational materials on waterborne illnesses.

- Health continues to provide information at the request of residents regarding the health risks associated with using untreated lake water as a drinking water source and provides information regarding filtration and disinfection systems.

4. Parks will continue to monitor the activity of the geese on Owasco Lake. If they deem it necessary they will apply for a nuisance permit from the NYS DEC.

- Parks staff worked to keep the geese and gulls out of the bathing beach area.

5. Miscellaneous

- Gary Duckett requested advice and support of the WQMA to have the CCE youth fair and the animals associated with it at Emerson Park.

Miscellaneous Work

1. Meetings

- Eileen O'Connor, Bruce Natale, and Michele Wunderlich attended a meeting put on by the ACOE to discuss and refine the potential scope for a Watershed Study of the Oswego River Watershed. Items discussed included project scope, budget, and non-federal sponsorship. Eileen O'Connor attended an additional meeting on July 21st.
- Michele Wunderlich attended the NYSDEC Statewide Water Quality Monitoring Program Seneca Oneida Oswego River Basin meeting on June 21st.
- Michele Wunderlich attended the Regional Non-Point Source Strategy meeting held by CNYRPDB on June 28th.

2. Dog Park

- June WQMA resolution that the preliminary concept of a dog park in Emerson Park is worth pursuing and the WQMA will investigate size, siting, etc. to minimize water contamination.

- Michele Wunderlich investigated size, siting, etc. of dog parks to minimize water contamination and presented to the WQMA in August.

3. Other

- Michele Wunderlich contacted Jeff Robins of the NYSDEC when the summer Owasco Lake Watershed Inspectors found fish with red spots. Andrew Noyes, the NYSDEC fish pathologist, was pretty certain that the fish had Epistylis (genus), a protozoan parasite that is fairly common.
- Parks and Planning worked together to get the wetlands delineated for the Cato-Brutus trail.
- Parks keeps the drain holes open on the stormwater retention pond in the north east corner of Emerson Park.