

Atlantic States Legal Foundation

658 West Onondaga Street, Syracuse, NY 13204-3711 Autumn 2011

www.aslf.org www.onondagalake.org www.glgc.org

A Cleaner Lake: Progress Made in Syracuse, NY

Onondaga Lake, on the edge of Syracuse, NY, is coming back to life thanks to the combined efforts of ASLF, the NY Department of Environmental Conservation (DEC), Onondaga County, and others. Considerable progress has been made since 1988, when ASLF sued Onondaga County alleging that the Metropolitan Syracuse Wastewater Treatment Plant (Metro) and combined sewer overflows (CSOs) were violating the Clean Water Act. Since that time, under court order, Onondaga County has added advanced treatment for removal of ammonia and phosphorus at Metro and is working to abate CSOs in Syracuse. Onondaga Lake is responding - it is cleaner and more attractive while fish and valuable shoreline vegetation are increasing. When nutrient discharges from Metro were in excess, Onondaga Lake experienced unsightly algal blooms that produced decaying organic matter that created obnoxious odors and consumed oxygen from the water, leaving little for fish. Recently, more than 65 species of fishes have been caught in Onondaga Lake, compared to fewer than 15 species in the 1970s. The lake is now used for jet ski, fishing, and hydroplane tournaments, canoeing, rowing, and sailing.

Much still remains to be done. 2010-2011 have been busy years for Lake cleanup with several important long-term efforts coming to fruition. Onondaga County must meet water quality standards for phosphorus, ammonia, dissolved oxygen, bacteria, and floatable solids by 2018 and numerous deadlines and milestones



Photo by Michelle Osborne

must be met before that date. As Metro treatment improves, watershed and CSO sources become more significant. Phosphorus comes from multiple sources and is linked to dissolved oxygen challenges in the lake

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(the quantity of oxygen-consuming decaying matter is proportional to the amount of phosphorus). Bacteria and floatables are challenges associated with CSOs; during rainy weather the sanitary sewer system is overwhelmed and excess flows, containing both untreated sewage and stormwater runoff, are discharged to urban creeks.

The Onondaga Lake Water Quality Model has just been completed and future lake scenarios are now being run through the model. This model is able to examine watershed, CSO and Metro contributions of nutrients to Onondaga Lake, as well as the Seneca River downstream from the lake outlet. This effort will direct any further reductions in phosphorus entering the lake by analyzing contributions from Metro, CSOs and the watershed. Lake water quality is being examined under scenarios including even better treatment by Metro, best management practice implementation in the watershed, CSO abatement, Metro diversion directly to the Seneca River (bypassing the lake for all or part of the year), Metro discharge deeper into the lake, and a pre-Colonial forested condition, in various combinations. Examination of the results will inform regulators as they determine Onondaga County's compliance with Clean Water Act requirements.

The DEC is expected to complete a Total Maximum Daily Load (TMDL) analysis sometime during 2012. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards, in this case for phosphorus. Not only will the TMDL set an overall limit, but it will apportion that phosphorus "load" among all the contributors. Factors considered in determining the total maximum load include effects on dissolved oxygen, protection of aesthetics and water clarity, and support for human recreation and aquatic life. The TMDL for Onondaga Lake is heavily dependent on results from the water quality model.

Combined sewer systems are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. Most of the time, combined sewer systems transport all of their wastewater to a sewage treatment plant, where it is treated and then discharged to a water body. During periods of heavy rainfall or snowmelt, however, the wastewater volume in a combined sewer system can exceed the capacity of the sewer system. For this reason, combined sewer systems are designed to overflow occasionally and

ASLF & Forestry Highlights

ASLF has greatly expanded its program in forestry. This will be featured in our next newsletter.

Highlights in the program include:

- Relationship with Forest Keeling Nursery and the Lovelace family to grow genetically local root production method (RPM) trees in Syracuse as well as other cities.
- Construct a urban tree nursery and promote this as an urban model for other communities
- Investigate using RPM trees abroad for biomass, urban reforestation, erosion control, etc. Locations under consideration include East Africa, China, and possibly Haiti.
- Plan for developing a forest canopy in Syracuse
- Study the use of trees to restore abused landscapes: superfund sites, waste beds, strip mined lands, brownfields, etc.

discharge excess wastewater directly to nearby streams, rivers, or other water bodies. These overflows, called combined sewer overflows (CSOs), contain not only stormwater but also untreated human and industrial waste, toxic materials, and debris.

ASLF serves as one of the few ACJ official document repositories in Syracuse, and thus has copies of all reports and analyses, as well as informational materials developed by the various agencies and organizations involved in lake cleanup. Please call beforehand to arrange an appointment if you would like access to these materials.

Green Infrastructure

Atlantic States is proud to be an integral part of moving Onondaga County to the nation's forefront in dealing with stormwater runoff and combined sewer overflow (CSO) issues in Syracuse. Onondaga County, in coordination with the City of Syracuse, is making great efforts to accomplish the goal of capturing and treating 95% of the annual CSO volume via a Green & Gray Infrastructure program by 2018, which will

result in a cleaner lake and a more sustainable urban environment for our community. About fifty green infrastructure (GI) projects are to be implemented this year by the County and about the same number each year till 2018.

Green infrastructure, when it comes to stormwater management, refers to systems and practices that use or mimic natural processes to infiltrate, evaporate, or reuse stormwater runoff on the site where it is generated. Examples of GI practices include rain gardens, rain barrels & cisterns, porous pavements, green roofs, tree trenches, stormwater planters, and combinations of the above technologies. Compared to traditional “gray” solutions for CSOs such as separating sewer pipes and building storage and treatment facilities, green infrastructure technologies present no significant community disruption during construction while providing long-term secondary environmental and community benefits, such as improving water & air quality, increasing urban tree shade canopy, creating green jobs and beautifying the urban landscape, in addition to the stormwater management benefits.

Funding has been made available that allows owners of a commercial or not-for-profit 501(c)(3) property to implement green infrastructure practices at little to no cost by applying for grants under the Green Improvement Fund (GIF). Along with the GIF grants, the County is also exploring the implementation of green infrastructure at the gateways entering Syracuse. The County and the City would like to use GI to visually brighten the areas along main transportation corridors which are highly visible to the public, and which present

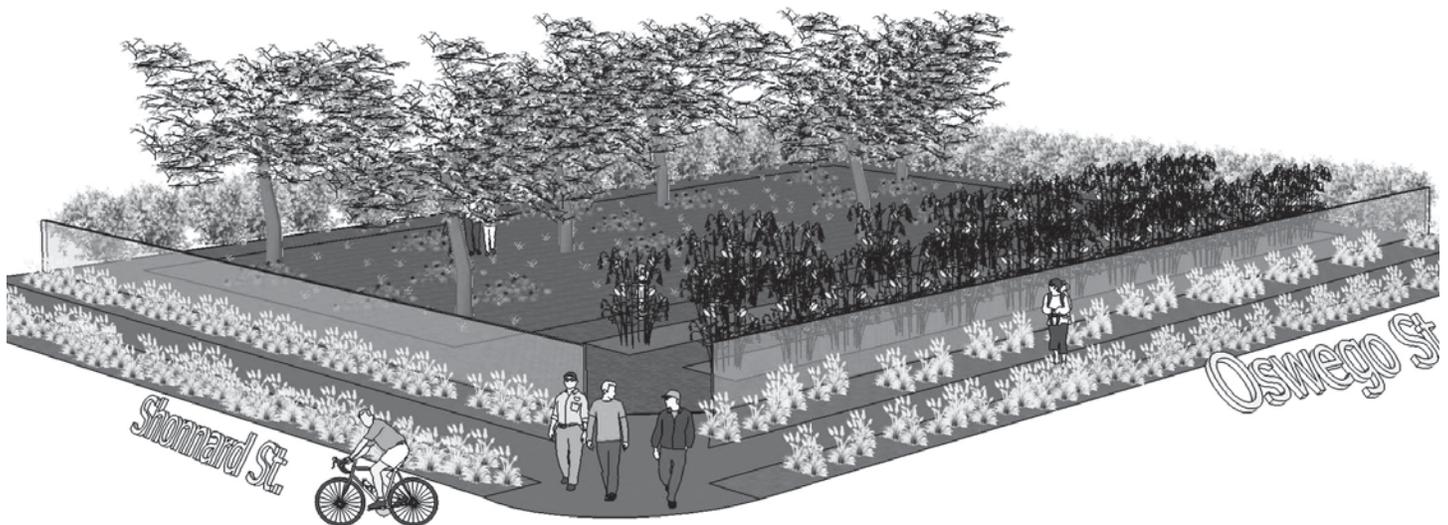
an initial image of the city. Improving these gateways, which are often large unattractive paved areas, will create an improved image that in turn should generate an increase in property values, economic development, improved aesthetics, and a stronger community.

Many properties are potentially under the scope of this GI gateway project. The County is currently evaluating applications for participation by local property owners in the GIF program. ASLF’s design team will help successful applicants with site evaluation and design during this great opportunity for property owners to improve our everyday urban environment while contributing to the Onondaga Lake recovery project.

Vacant Lot Management

The City of Syracuse (City) is facing the challenge of more than 2,000 vacant lots within its city limits which create liabilities such as safety, heavy littering, maintenance costs, and unpleasing aesthetics. Onondaga County has developed methods that will use green infrastructure (GI) on these lots to improve stormwater capture under the “Save the Rain” (STR) program. It is projected in the summer of 2012 that twelve to fifteen lots will have GI added to the landscape each year until 2018, covering 20 acres for a total capture of nine million gallons per year. ASLF has taken the lead with the County to develop a vacant lot program that will focus on stormwater management while incorporating other benefits for the surrounding community.

The program is currently in early development, so many concerns- such as ownership, maintenance & operation,



Graphic Rendering of the 701 Oswego St. Vacant Lot Program Pilot Site

funding, and liability - are still being negotiated. ASLF has developed much of the program to date with CH2M HILL (consulting engineers), county and city officials. The first properties used will be those owned by the City, and the County will provide the funding for the GI on these sites while also performing maintenance for each.

Green jobs are currently being considered for the maintenance of GI in vacant lots, with the support of ASLF. This could be a source of affordable maintenance for the County while providing much needed employment training to local residents. The first project has been designed and put out to bid; while ASLF created the detailed conceptual design of the site, CH2M HILL developed the construction documents to turn 701 Oswego Street into an Urban Orchard. Design elements include two water detention basins to capture stormwater from Shonnard and Oswego Streets, along with fruit trees and berry bushes. La Liga, the Spanish Action League of Onondaga County, has an office directly across the street and has expressed interest in operating and maintaining the parcel for educational and community development purposes. GI should be in place before winter arrives.

Land uses for vacant lots could include urban forests, community gardens (ornamental & vegetable), and non-food fiber/biofuel production. While all sites have their individual qualities, all share the benefits of but are not limited to encouragement of economic development, aesthetic improvement, enhanced emotional wellness, increase in habitat for urban wildlife, opportunity for green job programs and, of course, reduced stormwater in the sanitary sewer system.

Urban orchards are a sustainable food production site use that creates spaces for local groups to plant, maintain, and harvest fruit- and nut-bearing trees, shrubs, and vines on urban land. Urban orchards produce fresh fruits for the community and will improve the nutritional quality of community residents' diets.

Urban agriculture comes in different forms, community gardens for growing fresh vegetables or growing ornamental plants. Vegetables produce the same benefits as urban orchards; the beauty of ornamental gardens has been shown repeatedly to be therapeutic to people in the community while also creating habitat for wildlife.

Urban forests are dynamic ecosystems that provide environmental services such as clean air and water. Trees cool cities and save energy; improve air quality; strengthen quality of place and local economies; reduce storm water runoff; improve social connections; complement smart growth; and create walkable communities. (U.S. Forest Service)

Crops for fiber or biofuel production provide an alternative for sites that cannot or should not produce food crops. Fibers can be used to make clothing while biofuels can be used to run machinery or vehicles. This land use, however, requires a large amount of area to be effective.

The vacant lot program is not currently available to private landowners. After the pilot project has been completed and proven, ASLF and its partners hope to finalize the program by summer of 2012. Plans include publication of a "user's manual" for the public, to show how they can easily become involved in the program.



Current 701 Oswego St. Vacant Lot

Atlantic States Extends Its Overseas Presence

Medani Bhandari, a native of Nepal, is expanding the global network presence of ASLF. His past global affiliations have enabled ASLF to make international connections and we have applied and/or been accepted for membership in the following international organizations:

The Global Environment Facility (GEF) partnership includes 10 international agencies, and its Scientific and Technical Advisory Panel provides technical and scientific advice on the GEF's policies and projects. GEF unites 182 member governments — in partnership with international institutions, nongovernmental organizations, and the private sector — to address



Madani is pictured in the first row, first on the left

global environmental issues. The GEF provides grants to countries with economies in transition for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants. These projects benefit the global environment, linking local, national, and global environmental challenges and promoting sustainable livelihoods.

The United Nations Department of Economic and Social Affairs (DESA) NGO Branch is the focal point within the UN Secretariat for non-governmental organizations in consultative status with the Economic and Social Council (ECOSOC). ASLF has also applied for ECOSOC membership.

The United Nations Environment Programme (UNEP) provides leadership and encourages partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations.

The International Union for Conservation of Nature (IUCN) is a democratic membership union composed of over 1,000 members, 11,000 scientific experts in thematic commissions and 1,000 staff, who work together in more than 160 countries to help the world find pragmatic solutions to our most pressing environmental and developmental challenges.

Low Impact Development Symposium

An abstract submitted by ASLF was accepted by the Low Impact Development Symposium of 2011 and a presentation was given by ASLF staff on September

27 at the Symposium in Philadelphia. With a theme of “Greening the Urban Environment”, this conference brought together three separate organizations- the 19th National Nonpoint Source Monitoring Workshop, the 5th National LID Conference, and the 2011 Pennsylvania Stormwater Management Symposium- into a single venue to share information, exchange ideas, demonstrate technologies and discuss utilizing LID strategies to address changes to water quality and quantity in the urban environment. The ASLF presentation shared our experiences gained from the process that caused the EPA to recognize Onondaga County as one of the nation’s top 10 leaders in using green infrastructure to reduce CSOs. Deputy County Executive Matthew Millea and Brian Marengo of CH2M Hill also presented on the County’s “Save the Rain” program.

ASLF Expands and Broadens Staff

Since our last publication of a newsletter earlier this year, ASLF has moved to expand and broaden its staff. This reflects more intensive work that ASLF is doing regarding implementation of the amended order that settled litigation originally brought by ASLF in 1985 against Onondaga County as well as new initiatives relating to forestry, green jobs, agriculture, and related fields. Furthermore, we are developing our interests abroad, especially in Africa. We here offer short profiles of all current (as of September 2011) program staff at ASLF.

Nathaniel S. Appleton

Nathaniel came to Syracuse to supplement his education, receiving a Ph.D. in 1999. After a stint as urban forester in Tennessee, he returned to Syracuse and has joined ASLF to work on various forestry projects at home and abroad.

Medani Bhandari

Medani is currently a Research Associate in the Sociology Department of the Maxwell School of Citizenship and Public Affairs at Syracuse University, and is recognized as a global scholar in the fields of Biological Diversity, Green Economy and Sustainable Development. A member of the Editorial board of the Himalayan Journal of Sciences at Florida International University in Miami, Medani will represent ASLF in international affairs both here in the U.S. and abroad.

Lin Kaatz Chary

Lin Kaatz Chary, PhD, MPH, has had extensive experience in working with communities on environmental health issues and is the Project Director of the Great Lakes Green Chemistry Network. A resident of Northwest Indiana, Dr. Chary has over 25 years of experience in environmental health issues, with a focus on exposures to toxic chemicals and policy issues in the Great Lakes watershed. Lin, who has had a long relationship with ASLF, is also helping us expand our agenda, looking for pollution prevention opportunities and extending our core concerns to different geographical areas.

Hongbin Gao

After receiving training in horticulture in his native China, Hongbin obtained a Master's degree in landscape architecture at SUNY-ESF. He joined our staff to head our design team working on green infrastructure and related issues.

Paul M. Harris

Paul, with undergraduate and graduate degrees in landscape architecture, is part of our design team. He is focusing mostly on a major program aimed at converting vacant lots in Syracuse into productive green uses while diverting significant amounts of storm water away from our sewers.

Aaron M. Lehman

Aaron is working full time on green infrastructure issues locally and is in charge of our Bronx River project. Some of his time is occupied with managing a complete makeover of our two web sites.

Kathleen E. McGrath

Many of the issues related to the cleaning of Onondaga Lake involve state of the art science. With this in mind, Kathy, with a Ph.D. in fisheries biology, has joined ASLF to review, comment, and suggest better opportunities when Onondaga County or NYS propose various actions for the lake.

Thaismary Morales

With all the local activities going on about Onondaga Lake and its watershed, there is a need to get the message out to the public and receive their important input to include in the process. Also, as a significant part of the target population is much more comfortable using the Spanish language, Thaismary is our coordinator of

these efforts.

Patrick Sullivan

Patrick was hired to use his background in GIS to make maps for us and the public. He is leading the effort in this for our vacant lot, brownfield, and forestry programs. He also, most importantly, serves as chief editor for our numerous English publications and other materials while supervising the maintenance for our 120 year old Victorian office building.

China and South Africa

ASLF continues to work in China and South Africa. As this newsletter goes to press, plans are being made to visit both countries where we are involved in a variety of projects:

South Africa Work continues on assisting with training and employing youths for jobs that enhance environmental protection and provide living wages in Western Cape Province. Most of these jobs involve removing exotic trees that use up scarce water in an arid environment and turning them into useful products, such as handmade paper, furniture, and possibly charcoal. We are helping with marketing the products as well. Charcoal would help townships develop a cleaner healthier means of fuel for cooking and heating.

China As the partner to the International Fund for China's Environment, our current projects include a seminar on carbon sequestration and forestry in Chongqing, wetlands and lake restoration near Lijiang, and reforestation and erosion control near Three Gorges Dam.



Expanding Collaborations around the Great Lakes Basin

The Great Lakes Green Chemistry Network (GLGCN) continues to grow and is increasing its collaborative efforts throughout the Great Lakes Basin. The Network is working closely with the Michigan Green Chemistry Clearinghouse (www.migreenchemistry.org) who is

now co-sponsoring the Network's monthly webinar series. In addition, the Clearinghouse web site will host the home page of the Great Lakes Green Chemistry Student Network. The Student Network is in the process of forming a student advisory committee and will be working with students on campuses throughout the binational Great Lakes to make the Student Network a resource for students interested in all aspects of environmental science and policy, with a focus on information of particular use to students.

In another major collaboration, the GLGCN is a subgrantee on a Great Lakes Restoration Initiative grant and will be working with the primary grantee, the National Pollution Prevention Network (NPPR), to organize and do outreach for two major Green Chemistry conferences to be held in the U.S. Great Lakes

basin, one in 2012 and one in 2014. Other subgrantees partnering with the NPPR and the Network are the Great Lakes Regional Pollution Prevention Roundtable (GLRPPR) and Clean Production Action, creators of the Green Screen, a tool for helping companies evaluate the toxicity of the chemicals in their products (<http://www.cleanproduction.org/Greenscreen.php>) Clean Production Action will present six Green Screen workshops throughout the Great Lakes between 2012 and 2014, with support from the Network and GLRPPR in choosing cities and dates, and organizing for the workshops on the ground.

For more information about the Great Lakes Green Chemistry Network, please visit our website at www.glgc.org and be sure to "like" on Facebook!

<p><u>Board of Directors</u> Robin Chanay(Chair), Steven Kulick, Martha H. Loew, Theodore Newman, Samuel H. Sage</p> <p><u>General Counsel</u> Richard Lippes</p> <p><u>President</u> Samuel H. Sage</p>	<p><u>Staff</u> Nathaniel Appleton, Medani Bhandari, Lin Kaatz Chary, Hongbin Gao, Paul Harris, Kathleen McGrath, Aaron M. Lehman, Thiasmary Morales, Patrick J.Sullivan</p> <p><u>Interns & Volunteers</u> Kaylee Meredith,Micheal Grosso, Jenny Groeling Travis St. Louis, Melanie Kaden</p>
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Donating to ASLF is easy with "Network for Good" or by mail. Visitors to our websites now have the ability to donate simply by clicking the Network for Good logo. Of course, we still enjoy opening mail to find a donation by check, too! Please support your favorite local environmentalists!!! All contributions to ASLF are tax-deductible to the full extent of the law. Copies of ASLF's financial report may be obtained from the New York Department of State, Albany.

YES! I want to contribute to ASLF's important work.

I am already a member. Please update ASLF's records with the following information.

Sign me up at the following level:

- "Spill Stopper" (\$50-\$100)
- "Toxic Avenger" (\$100-\$250)
- "Super-funder" (\$250-\$500)
- "Benefactor" (\$500 +)



Donations link at www.aslf.org

Volunteer member (contribute time/services in addition to or instead of funds)

I can help ASLF out by:

- Doing research in my area.
- Helping out in the ASLF office.
- Providing a place to stay for ASLF associates working in my area.
- Other:

Send me newsletters to distribute

Name _____

Address _____

City/State/Zip _____

Phone (w) _____ (h) _____

E-mail _____

About Atlantic States Legal Foundation



Atlantic States Legal Foundation (ASLF) was established in 1982 to provide affordable legal, technical and organizational assistance to individuals, community groups, and other Non-Governmental Organizations (NGOs), as a way to effectively remediate threats to the natural environment. Throughout the 1980s and early 1990s, ASLF was the principal NGO utilizing the citizen suit provision of the Clean Water Act as a means of forcing polluters to cease the desecration of America's waterways. During that time, and continuing today, we work cooperatively with local environmental groups and attorneys throughout the United States to deter polluters, and would-be polluters, in a national litigation campaign.

In the early 1990s, ASLF also became known as the lead NGO in the national campaign forcing industries to disclose the extent and volume of toxic materials stored at individual facilities. Our previous efforts resulted in a vast number of industries becoming accountable to their residential neighbors in relation to potential risks to otherwise uninformed communities.

As ASLF grew, and as the nation's environmental problems and solutions have become more complex, we have been focusing a greater portion of our time participating extensively in stakeholder negotiations, scientific and technical review and consulting, and community education programs. Our staff scientists work in conjunction with leading experts in the fields of wastewater and mechanical engineering, GIS mapping, chemistry, biology, geology, hydrology, toxicology, and risk assessment, in order to provide affordable, accessible technical expertise to communities in need.



Atlantic States Legal Foundation, Inc.

658 West Onondaga Street

Syracuse NY 13204-3711

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