



Atlantic States Autumn 2009 Legal Foundation

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PROGRESS WITH ONONDAGA LAKE

Programs dealing with Onondaga Lake made significant progress during 2009. Objective water quality measurements show that the expensive County program is having positive effects. Phosphorus levels in the lake are now below 20 micrograms per liter and ammonia levels are way below standards on a monthly basis. Algal blooms have disappeared. Another fish species has been found in the lake. What is happening and what needs to be done? Atlantic States has been in the thick of these activities and in the following articles we will discuss some of the highlights.

Conventional pollutants and municipal programs

As a result of the ASLF lawsuit against Onondaga County first brought in 1988 and joined by New York State, many projects have been completed and these along with changes in the lake chemistry that have resulted from the shut down of the Honeywell (Allied) facilities have made the lake much healthier for both human activities and other biota. By all measures things have improved. For further information reference here various Onondaga Lake websites, the County's annual ambient monitoring report, etc.

But there is still much to be accomplished. Briefly, in review, municipal pollution of the lake came mainly from two sources: inadequacy in sewage treatment at the Metropolitan Sewage Treatment Facility on the south shore of the lake and discharging directly into the lake and from an antiquated combined sewer

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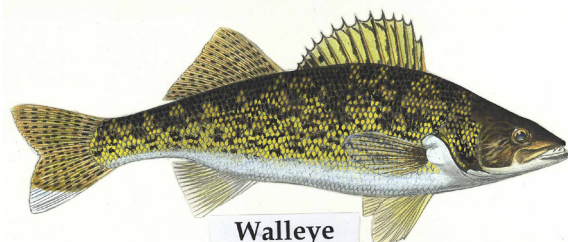
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SUPPORT OUR WORK ATLANTIC STATES NEEDS YOUR HELP

Given the current economic climate, ASLF's financial resources are shrinking— show you support our work by donating to Atlantic States Legal Foundation, Inc.

Use the "Donate Now" button at www.aslf.org or www.onondagalake.org, or send a check to the address above.

Contributors of \$100.00 or more will receive an autographed copy of Peter Thompson's most recent book *Freshwater Game Fish of North America, an Illustrated Guide* published by Fly Rod & Reel Books of Camden, Maine. Peter Thompson is a local artist and an Environmental Educator at ASLF.



Walleye

Illustration by Peter Thompson

“Progress on Onondaga Lake”—Continued from Page 1

system within the City of Syracuse. The former problems have largely been taken care of with a large expenditure to build sophisticated treatment to deal with phosphorus and ammonia and with an ultra-violet disinfection system negating the need for chlorine chemicals. Although there is now a state of the art mathematical model being prepared in an extended peer reviewed process that is much behind schedule that will lead towards data necessary for completion of a final phosphorus total maximum daily load (TMDL) calculation and hence a final permit limitation, current monitoring data are very promising.

As for the sewers, some progress has been made and raw sewage overflow volumes have been greatly reduced, there are still many too many millions of gallons of overflow getting into the tributaries and hence into the lake when there are storm events. In the original settlement of the lawsuit, and over the objections of ASLF, the County agreed to build inadequate, community disruptive, high maintenance regional treatment facilities (RTFs). Over much community and technical opposition, the Midland



RTF was built and is now in operation. New thinking from the scientific and technical community and new political leadership have now prevailed and the other three RTFs have been cancelled and a new plan that makes use of environmentally friendly green infrastructure substituted for them.

Long negotiations by the three parties has now resulted in a new revised settlement agreement that was presented to federal court in late September and after unanimous approval by the Onondaga County legislature approved by the court in early November. Under this new plan, officially called Stipulation 4 (Stip) to the Amended Consent Judgment the County will no longer have to build the RTFs, but will have to construct green infrastructure and some underground storage units (so-called grey infrastructure). In addition, deadlines have been revised, detailed plans with tight construction timetables have to be prepared, and ASLF gets a more active role in carrying all of this out.

On a related front, NYS DEC has finally issued the long-delayed discharge permit for Metro. This SPDES permit is

now open for public comments. Atlantic States has been active for many years working with DEC and the County to improve this permit and the current draft appears on first analysis to meet most of our concerns. This hopefully soon to be finalized permit, together with the recent Stip should enable provisions of the Clean Water Act to be fully implemented and will result in a greatly rehabilitated Onondaga Lake.

For the language of the Stip and more details of the County’s proposed green and grey infrastructure see our website, www.onondagalake.org. There is also a link from there to the County’s latest monitoring results.

The Long Term Future of Onondaga Lake

With design of remedial measures well underway and dredging of lake bottom sediments scheduled to begin in 2012, the time has come to look to the long-term future for Onondaga Lake. The Lake, at this point in time, is not a natural ecosystem. Filling of the surrounding wetlands and the earlier channelization and modification of its tributaries, to say nothing of the deposition of 3000 acres of Solvay waste in the Lake and on the uplands, has profoundly altered the Lake habitat.

To create a long term vision for Onondaga Lake, it is important to begin with an understanding of the habitat that has been lost. What plants and animals were found prior to the industrialization of the lake? What was the fishery composed of? What was the water quality and temperature regime?

We will not be able to re-create the lake of the past. The Lake is a dynamic ecosystem, which is in continuous change and flux. Global climate change, the presence of industrial activity including the Metropolitan Sewage Treatment Plant, and many other changes will all affect the Lake’s future. We must make sure that the regulators understand the Lake’s past as early as possible, so that decisions made during the remedial process do not preclude achievement of the highest possible use of the Lake. The ultimate future of the Lake should be determined as a public policy decision involving the entire community.

ATLANTIC STATES EXPLORES E-WASTE RECYCLING

Atlantic States Legal Foundation is exploring ways to responsibly dispose of electronic waste. Joining ASLF in this endeavor is Professor Craig Watters and the students from two of his entrepreneurship classes at the Syracuse University Whitman School of Management. Professor Watters and his students have been working on this issue in conjunction with ASLF staff Kerin Rosen and Jeremy Oliver, and ASLF President Samuel Sage.



are disposed of properly. ASLF is looking at the potential for building a similar facility here in Syracuse, in order to create sustainable jobs, reduce improper disposal of electronics in the local community, and serve the broader region as an environmentally-friendly, socially-responsible recycler of E-waste.

ATLANTIC STATES PARTICIPATES IN 2009 NY STATE FAIR

ASLF presented an exhibit explaining Green Infrastructure and its ability to manage stormwater at this year's State Fair. Our location was provided by the NYS Department of Environmental Conservation and the exhibit was funded by the Onondaga County Department of Water Environment



Many common electronic products, including cell phones, personal computers, televisions, and other audio and visual equipment contain materials which can be harmful to both human health and the natural environment. The simplest example is lead, which is contained in the glass of televisions and computer monitors, and in the solder used in circuit boards of all types.

Currently, most electronic waste (called "E-waste" for short) is disposed of improperly. Although there are laws and regulations to prevent certain types of E-waste from entering landfills or incinerators, much of it does anyway. Furthermore, most of the E-waste that is prevented from entering those conventional waste streams is instead sold in bulk and shipped overseas, mainly to China and other developing nations. There, anything of value is reclaimed, and the bulk of the waste is incinerated for cheap, unclean power, or otherwise disposed of irresponsibly. The environmental implications from this manner of disposal are both grim and far-reaching.

There is an upside to this issue. In addition to lead, E-waste contains a wealth of other metals, some of which are valuable. Gold and platinum, to name just two, are contained in electronic waste in significant amounts. In the past, it was considered too costly or inefficient to reclaim these products from old electronics. However, the current high commodity prices for these metals has created a new market for previously used electronic components. A handful of facilities have been built, mainly in the US and Japan, which use physical and chemical processes to reclaim the valuable metals contained in E-waste, while at the same time ensuring that the remaining materials

Protection. Located outside the DEC's Aquarium near the Main Gate, volunteers answered questions from a broad cross-section of local residents about rain gardens, rain barrels, porous paving materials, and current environmental issues.

ASLF OFFICE UPGRADES

On December 23, 2008 a fire in the offices of Atlantic States Legal Foundation and Fund For The Environment set in motion a series of events from which we are about to emerge. Fire damaged a second floor office, and the automatically-triggered sprinkler system caused water damage in that room and the adjacent hallway, while causing extensive water damage to rooms on the first floor. Dozens of books owned by Fund for the Environment were ruined by water flowing from the upper floor, and numerous pieces of furniture were damaged beyond repair.

The recovery process started immediately, with a contractor brought in to begin the drying process. Months later an excellent carpenter and crew completed the rehabilitation of the damaged rooms and the ruined carpeting was replaced. Somewhat back to normal, we still await FFE to finish some detail work in this historic building.

ONONDAGA LAKE

1 Ninemile Creek/Geddes Brook

Description: Ninemile Creek has been and continues to be the single largest external source of mercury to the lake. The major mercury source is the LCP Bridge Street site, from which industrial wastes are discharged into Geddes Brook via the West Flume, and finally into Ninemile Creek and the lake. Ninemile Creek also receives wastes from Solvay wastebeds located on each side of the creek.

Contamination: Mercury, chlorinated benzenes, dioxins and other toxic pollutants

Remediation: Dredge/excavate and remove about 117,000 cubic yards of contaminated channel sediments and floodplain soils/sediments from over approximately 30 acres along the streams. Restoration of the stream bed and banks, wetlands, and habitats would be performed following sediment and soil removal.

2 LCP Bridge Street Facility

Description: Site of former chlorine production facility, operated by Allied Chemical from 1953 to 1979, followed by Linden Chemicals and Plastics (LCP) from 1979 to 1988.

Contamination: Mercury and PCBs in both soil and groundwater; a major source of mercury to the lake through Ninemile Creek.

Remediation:

In 2005, more than eight tons of mercury were removed from the property through a process called "soil washing," and a protective barrier wall and cap installed. Wetland on LCP site was excavated to remove mercury contamination and invasive Phragmites, and was replanted with more than 20 native species in 2007.

3 Semet Residue Ponds (Tar Beds)

Description: A 22-acre site Used for disposal of about 80 million gallons of acidic tarry wastes from former Allied Chemical benzol production plant. In operation from 1917 to 1970.

Contamination: Benzene, toluene, xylene, diphenyl ethanes, and naphthalene, in the waste itself and in groundwater flowing beneath the site.

Remediation: A remedial plan is being developed. As an "Interim Remedial Measure (IRM)", a Lakeshore Barrier Wall was constructed between this site and Onondaga Lake in 2007. To date, over 38,000 gallons of dichlorobenzene liquids (denser than water) have been collected and disposed of off-site

4 Willis Avenue Facility

Description: Site of former chemical plants, used to produce chlorine, "light hydrocarbon" solvents, such as benzene, and chlorobenzene. In operation from 1918 to 1977.

Contamination: Benzene, toluene, xylene, mercury, chlorinated benzenes, naphthalene and chlorinated dioxins/furans in soils and in underlying groundwater.

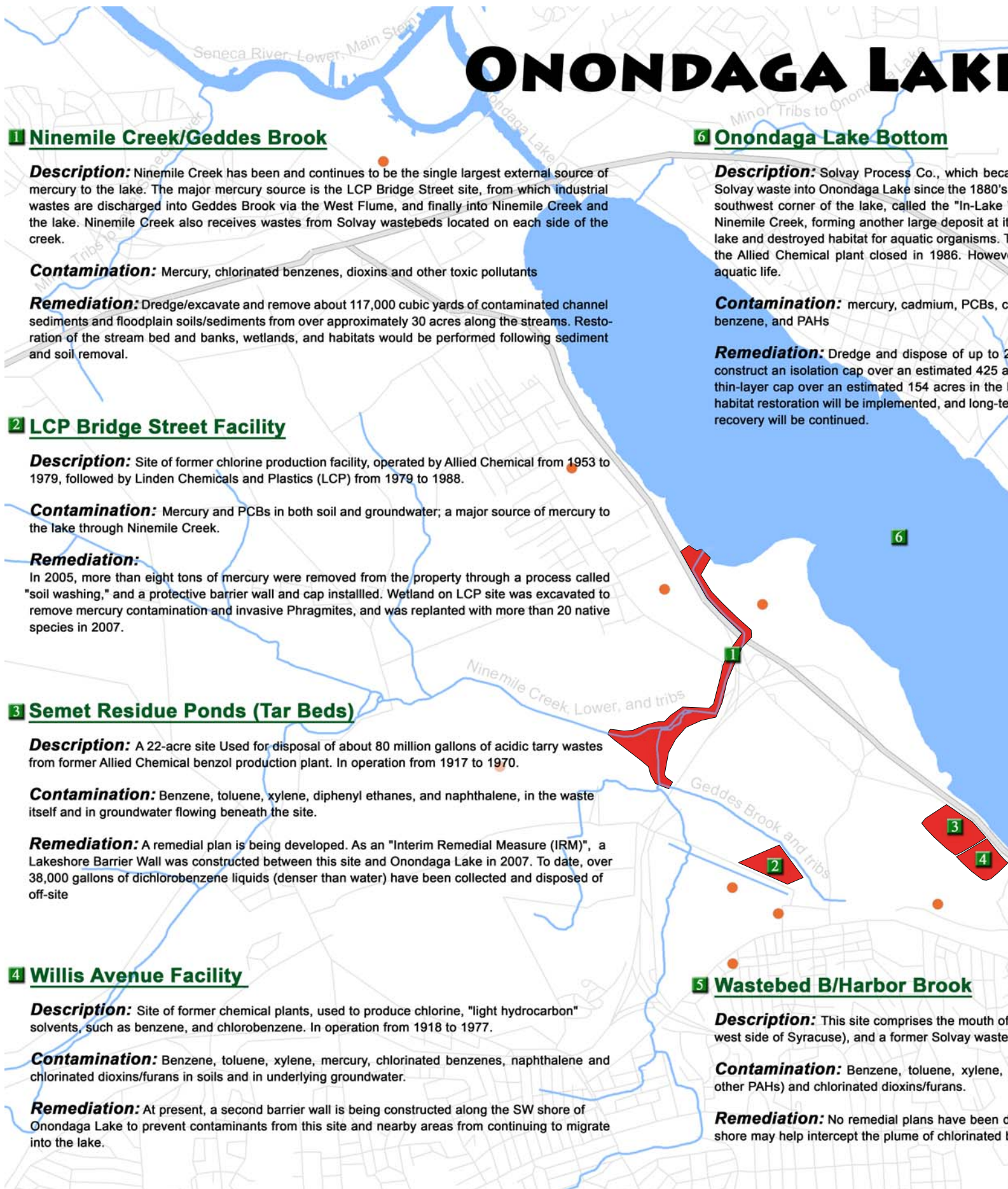
Remediation: At present, a second barrier wall is being constructed along the SW shore of Onondaga Lake to prevent contaminants from this site and nearby areas from continuing to migrate into the lake.

6 Onondaga Lake Bottom

Description: Solvay Process Co., which became Solvay waste into Onondaga Lake since the 1880's southwest corner of the lake, called the "In-Lake Ninemile Creek, forming another large deposit at its mouth. The waste was eventually buried under the lake and destroyed habitat for aquatic organisms. The Allied Chemical plant closed in 1986. However, the waste continues to affect aquatic life.

Contamination: mercury, cadmium, PCBs, chlorobenzene, and PAHs

Remediation: Dredge and dispose of up to 2 million cubic yards of waste. Construct an isolation cap over an estimated 425 acres. A thin-layer cap over an estimated 154 acres in the lake. Habitat restoration will be implemented, and long-term recovery will be continued.



E SUPERFUND SITE

ame Allied Chemical, discharged millions of tons of waste, forming a large deposit of white chalky waste in the "Waste Deposit." Additional wastes came by way of a pipe from its mouth. These wastes altered the chemistry of the lake. The lake water chemistry has improved greatly since the late 1970s, but bottom sediments remain inhospitable to much life.

chlorinated benzenes, chlorinated dioxins and furans, and polychlorinated biphenyls.

2.65 million cubic yards of contaminated sediments were removed from the shallower areas of the lake, and apply a barrier wall in the lake's deeper areas. At the same time, wetland and stream maintenance and monitoring of the lake's natural resources are ongoing.

Harbor Brook (a small tributary running through the lake bed located west of the brook.)

mercury, chlorinated benzenes, naphthalene (and other polycyclic aromatic hydrocarbons).

developed. The barrier wall along southwestern lake shore is designed to prevent PCBs underlying this site.

7 Town of Salina Landfill

Description: The former municipal landfill is situated in a flood prone wetland, on both sides of Ley Creek. During its operation (1950s to late 1970s), domestic, commercial and industrial wastes were landfilled there. The disposal of 640 tons of paint sludge, 40,000 tons buffing sludge, and 22 tons paint thinner has been documented. A partial soil cover was placed over the site in late 1982.

Contamination: PCB, heavy metals (cadmium, iron, mercury, nickel), solvents (1,2-dichloroethene, 1,1,1-trichloroethane, 1,4-dichlorobenzene, benzene, chlorobenzene, chloroethane, toluene, vinyl chloride, and xylenes), and PAHs.

Remediation: Plans, which were finalized in March 2007, call for installation of a multi-layer cap, leachate collection and on-site treatment of the leachate. Construction is tentatively scheduled to begin in the summer of 2009.

8 Ley Creek PCB Dredgings

Description: Site of over 4000 feet of dredgings piled along the banks of Ley Creek, downstream of Townline Rd.

Contamination: PCB-contaminated sediments

Remediation: Sediments containing >50 ppm PCBs were removed to a hazardous waste landfill. Remaining contaminated sediments were graded and covered with clean soil (1999-2001). This site is currently in an operation and maintenance phase. A five year review was issued by the USEPA in December 2006.

9 General Motors IFG Facility

Description: Automobile manufacturing facility which utilized polychlorinated biphenyl (PCB) oil, chlorinated solvents, and paints. Closed in November 1993.

Contamination: PCB-containing hydraulic oils; waste solvents (e.g. trichloroethylene), and paint sludge (xylenes, copper)

Remediation: An RI/FS (Remedial Investigation/Feasibility Study) is underway. Three major IRMs were completed in 2006, including a landfill cap, a soil removal IRM and a SPDES Treatment IRM.

Other Remediation Sites around the Lake

The dots on the map indicate other remediation sites around Onondaga Lake. 42 of a total of 85 sites in Onondaga County are shown on the map. For more information about those sites, please visit the Atlantic States Legal Foundation web site at www.aslf.org.

DUNBAR RAIN GARDEN COMPLETED

A rain garden was installed at the Dunbar Association in October as the first



phase of a long-term plan to incorporate green infrastructure at the facility with environmental education programs and the creation of “green jobs”. Approximately 800 square feet of the center’s front lawn was converted to rain garden under a joint grant between Atlantic States Legal Foundation (ASLF) and the Dunbar Association funded by the NYS Department of Environmental Conservation. While ASLF and the Dunbar Association headed the project, multiple organizations collaborated to see the garden successfully constructed.

ASLF landscape designer Alex Shisler did the planning, analysis, and design of the rain garden. Its intent is to not only reduce the amount of stormwater running off-site while being a social and aesthetic benefit, but to also be a highly visible, low maintenance, experimental demonstration project which will test uncertain parameters, such as vegetation success and the rerouting of Dunbar’s rain gutters from the storm drain to the garden. This project can be incorporated into a larger green infrastructure network in the future. The rain garden’s location, shape, size, and planting choices were all carefully considered to reflect these goals in unison.

Hope 4 Us Housing, a local contractor, used the garden as a green component of a construction training program for under-employed community members. Approximately nine local residents hired by the program learned the concept of the garden and its construction in a classroom setting, then excavated it by hand and amended the soil by mixing in free municipal compost. This was the first of what will hopefully be many job training initiatives in Syracuse centered on the construction of green infrastructure.

The planting and mulching of the garden was incorporated

into a larger after-school environmental education program at the Dunbar Association for students 10-13 years in age, taught by ASLF’s Kerin Beth Rosen. To learn about native plants and green infrastructure’s role in reducing pollution to the environment, the youth planted a wide variety of native trees and perennials selected by and purchased from the Phoenix Flower Farm. Older students from Cornell Cooperative Extension’s Earth Corp program, with previous experience planting rain gardens, guided and assisted the younger students in proper planting methods. The result of these efforts is a garden rich in its number and diversity of plants and trees which, with future monitoring, will indicate which plants do best in rain gardens in our geographically-unique ecosystems.

Many important lessons have, and will be, learned through the construction of this rain garden. It is our hope that it will inspire local citizens and their governments to build better and more rain gardens in the future. It is, however, only a jumping off point from which there is still much work to be done; it looks as if we are off to a good start.



DECONSTRUCTION is the disassembly of a building in the opposite order that it was originally constructed and is a strategy for removing unwanted structures, salvaging usable materials, and creating economic opportunities. There is currently in Syracuse a retail outlet for those salvaged materials- the reStore on Otisco Street sells donated building materials for reuse.

Building deconstruction is not a new idea; historically buildings were disassembled, moved and modified to serve new purposes. In recent years, building reuse has emerged as a field with tremendous potential for diverting reusable materials from the landfill and encouraging recycling and reuse. There are a few examples of building deconstruction currently being used as an alternative to demolition, with a

few completed such projects here in Syracuse.

The scale of this problem and the potential opportunity that abandoned buildings represent necessitates that a model be created that identifies and refines the best techniques of structure deconstruction so that operations can be efficiently performed and safely completed, while using both present and emerging technologies to reduce costs, find new uses for salvaged materials, and create standardized procedures for deconstruction processes.

Given that the city eventually becomes the owner of many unwanted structures, the task of deconstruction must be bid at a competitive rate. Once proficiency at this chore is established, we're confident that the city will reap numerous benefits in the form of job creation and training, material recycling and salvage, economic development, and support for community development. The decision to deconstruct a building becomes an opportunity to reinvest in our communities to create opportunity from what otherwise would be thrown away.



Above: Workers from Hope 4 Us Housing deconstruct a house on Syracuse's Near Westside.

ASLF COMPLETES FEASIBILITY ON ENVIRONMENTAL EDUCATION STRATEGY FOR HARBOR BROOK



Atlantic States Legal Foundation recently completed a feasibility study on the formation of an environmental education program for Harbor Brook. The study, funded by the Environmental Protection Agency, is part of ongoing efforts in the area to improve the Onondaga Lake Basin.

The report focused on the two aspects of the education program: the construction of a creek walk and the establishment of an outdoor classroom for schools bordering the brook. The proposed trail would extend from Bishop Ludden High School east to George Fowler High School, with the goal of eventually extending the path to connect with the trail circling Onondaga Lake. In addition to planning a layout for the trail, ASLF analyzed the potential social, economic, and environmental benefits of the creek walk, and surveyed the surrounding area for protected resources.

Atlantic States also looked at the possibility of constructing one or more shorter creek walks in particularly scenic portions of the brook. The portion of the brook running between Bishop Ludden and Westhill High School, the land just west of Rowland Street, and the section of the creek between Grand Avenue and South Wilbur Street were identified as being well-suited for a trail. Additional analysis was conducted on the Rowland Street Site, which possesses the potential to be converted into an inclusive park complete with several trails and interpretive materials.

The construction of a creek walk would be supplemented with the establishment of an outdoor classroom. Atlantic States worked with several teachers from Bishop Ludden High School, Westhill High School, Delaware Elementary, and George Fowler High School to evaluate the potential of such a classroom and develop curriculum that utilizes the brook's resources.

Although the study is only a preliminary analysis on the feasibility of implementing a creek walk and outdoor classroom, it found there to be significant interest in the continuation of the project. Not only would the project create a rare opportunity for city residents to experience the natural environment, but it would increase public knowledge and concern for the brook, therefore stimulating further cleanup and rehabilitation programs.

About the 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 worked 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. As a result of a 1998 U.S. Supreme Court decision, continued work under this program has become somewhat curtailed. However, 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 and energy providing technical assistance to groups and individuals with specific environmental concerns. We participate 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.

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