



February 2014 Sustainability Hero Leonard Berkowitz Leader, Berkeley Heights Green Team

When Leonard Berkowitz moved from Brooklyn to Berkeley Heights to raise his family in Union County New Jersey his outlook became considerably more green, thanks in part, to his surroundings. The Watchung Reservation and Passaic Valley Park are in Berkeley Township with hiking trails, horseback riding trails, a large lake (Lake Surprise) and the Deserted Village of Feltsville.

Leonard has three sons and seven grandchildren to keep him busy. But, when he retired from a job as a chemical engineer, he felt it was time to give back to the community that had been so good to him. He has served as a member, chairman and co-chairman of the Berkeley Heights Environmental Commission for 13 years and as the leader of the green team for five years. He continues to serve in these roles today.



Leonard's passion for the environment has been passed to his sons as they also serve on various boards, or support organizations that advocate for biking, greenways and land preservation and the family jointly supports numerous green causes including the New Jersey Conservation Foundation, the Trust for Public Land and the Nature Conservancy.

Leonard said that the best birthday present he ever received was the new bike that his children recently gave him for his 70th birthday. With a love for the outdoors, Leonard has also completed five marathons including the New York and Philadelphia marathon. He was a member of the Amazing Feet Runners' Club.

Sustainable Jersey Silver-Certified

In 2009, when Sustainable Jersey was launched, Leonard welcomed the challenge that the certification program provided because it served to focus the environmental efforts in town. Berkeley Heights was certified in 2009 with 160 points, and in 2011 at the more difficult silver-level with 375 points. The Berkeley Heights Green Team includes Environmental Commission representatives, two members of the Town Council, the Township administrator, a representative from the Board of Education, the League of Women Voters and a group of master gardeners.

Under Leonard's leadership, the environmental commission/green team organized energy audits of municipal buildings which led the township administration to install energy-efficient lighting. The group also developed benchmarks for developing a municipal carbon footprint and installed signs to discourage idling in identified problem areas. The environmental commission/green team has also

inventoried land conservation easements and sent letters to homeowners to remind them of their obligations to preserve easements; developed a policy list for energy-saving behaviors for the township's policy manual; created a vision statement and long-term plan for environmental protection, and performed a study that quantified the economic benefit of tree canopy to the township. You can read the [Berkeley Heights Township Certification Report](#) to see all of the important work they have accomplished.

Leadership Approach

As the green team lead, Leonard said he is in charge of setting the roadmap. He reviews the long list of Sustainable Jersey actions and develops the priorities for the group. Then he asks for volunteers to manage certain projects or actions. He says the key to getting the work done is the certification deadline. Having a cutoff date helps people that are busy with work, family life and other commitments, to set a schedule in advance for getting the projects done.

Trees are Worth Millions to Berkeley Heights

Some towns are reluctant to expand tree programs due to budget and staffing issues. But the Berkeley Heights Green Team helped focus the town on the financial benefits of trees beyond their inherent beauty. One of the most overlooked benefits is a tree's ability to reduce the volume of water runoff following a storm. This means less investment in expensive infrastructure and – importantly – cleaner water when the runoff reaches rivers and lakes.

With the help of a \$10,000 Sustainable Jersey Small Grant, the Berkeley Heights Green Team evaluated the overall tree coverage in the township and determined its value. The tree canopy was shown to cover almost 57 percent of the community with a value of \$30 million.

The most dramatic benefit of the trees was the way they reduce runoff from rainstorms and help control flooding. For example, in a major storm, trees would absorb 30 percent of the water that might otherwise run off. Part of this water is held up by the leaves and part absorbed by the soil underneath.

Annually, street trees in Berkeley Heights:

- Intercept 7.7 million gallons of total rainfall, valued at \$61,400.
- Save over 300 megawatts of electricity, valued at \$178,000
- Sequester or avoid about 1.9 million pounds of CO₂, valued at \$5,600
- Improve air quality through deposition or avoidance of 7,190 lbs of gases, valued at \$38,000
- Provide aesthetic and other value of \$123,000.

The tree canopy also absorbs 125 tons/year of pollutants such as ozone, particulates, nitrogen oxides and sulfur dioxide as well as removing numerous organic and metallic pollutants that would otherwise get into the rivers and streams. Another benefit is the removal of carbon dioxide, a greenhouse gas, from the atmosphere. The trees in town offset the annual emissions of 500 cars.

In 2010, Berkeley Township started a computerized Municipal Tree Inventory within the Township right-of-way. At the same time, the Environmental Commission set a local goal to maintain the local tree canopy, or tree cover, at a minimum of 40 percent. (See the suite of Sustainable Jersey Tree and Woodlands Management [Actions](#) for more information on what your town can do.)

To start this assessment and inventory, the Environmental Commission and the Township applied to the NJ Department of Environmental Protection, Division of Parks and Forestry, for a Business Stimulus

Grant. In order to do a complete assessment within budget, the Berkeley Heights Green Team enlisted the help of volunteers, using a few thousand hours of volunteer time. The township was divided into five sections. Teams of two to three volunteers covered each section. Volunteers learned about tree inventory and tree hazard assessments from Steve Chisholm, a certified tree expert and leading arboriculture educator.

The volunteers walked the streets and recorded data on tree species, structural damage to tree trunks, cavities, percent of dead wood, condition of wood and leaves, wire conflict, GPS coordinates, pests and diseases. The data was entered into hand-held computers and then uploaded to a desktop computer.

Using [i-Tree](#), the township ranked the tree hazards and made recommendations for maintenance. *(The i-Tree suite of software tools was developed to help users — regardless of community size or technical capacity — identify and manage the structure, function, and value of urban tree populations. Learn more about the free [i-Tree](#) software).* This information was passed on to the tree inspector. The Township now has a database to carry out hazardous tree management, to plant additional trees and to demonstrate concretely the benefits of its tree canopy. After three years, over 90 percent of the town has been inventoried, the diversity of the tree species has been established, and the most hazardous trees have started to be removed.

Berkeley Heights also has an active tree planting program. For example, during 2011, 20 caliper trees were planted primarily in parks and school grounds, over 200 seedlings were distributed to fourth graders as part of the Arbor Day celebration, and over 150 silky dogwoods and willow oak saplings were planted in Passaic River Park, in cooperation with Union County personnel and local volunteers.

Green Team Enhances Municipality

Presentations were made on the benefits of trees to the Township Council, the Board of Adjustment, the Planning Board as well as the Union County Shade Tree Commission, Union County Master Gardeners, the NJ League of Municipalities and others. By completing sustainability actions that saved the township money, and by securing grant money for green projects, the green team is now viewed more as a profit center rather than a drain on the township resources. The green team is highly regarded by the community and township administrators. Their current challenge, which has stimulated much enthusiasm and interest in the community, is to organize and fund a community garden.

Leonard's advice for new green teams is to reach out to all of the local community organizations to get their membership involved in the green team. It is important to show the different ways that sustainability actions touch on the group's interests. Leveraging community interest by working with other membership groups such as the Rotary Club, the YMCA, the Master Gardeners, schools and local environmental organizations has contributed to the success of the Berkeley Heights Green Team.