

THE SHADE TREE

A BI-MONTHLY BULLETIN DEVOTED TO NEW JERSEY'S SHADE TREES

Volume 99 — July — August 2026 – Issue 7 & 8

This Issue Presents...

Millburn Township Celebrates America's 250th Anniversary through
Community Tree Planting

In New Jersey, Benefits Bloom in Tiny Forests

New Jersey's Deer Dilemma

Trees Keep Absorbing Carbon Long after They Stop Growing

MILLBURN TOWNSHIP CELEBRATES AMERICA'S 250TH ANNIVERSARY THROUGH COMMUNITY TREE PLANTING

By Stacie Phelps, Township Forester, Millburn Township

When Millburn Township was selected as a recipient of the 2025 William J. Porter Community Tree Project Award, sponsored by the New Jersey Shade Tree Federation, the original plan was simple: plant trees in a storm water depression to replace ash that were removed. However, the project quickly evolved into something much more meaningful, a living tribute to the upcoming 250th anniversary of the United States.

Using the \$2,500 grant award, Millburn Township planted thirteen native and regionally appropriate trees in Taylor Park, with each tree representing one of the original thirteen American colonies. The project combined environmental stewardship, community engagement, and a celebration of American history in a way that will benefit residents for generations to come.

The township invited residents to Taylor Park to participate in a ceremonial tree planting event commemorating America's semiquincentennial. Township officials, members of the Millburn Shade Tree Advisory Board, and community members gathered to celebrate both the nation's founding and the importance of maintaining healthy urban forests.

Each of the thirteen trees was carefully selected to symbolize one of the original colonies: American Linden for Massachusetts, Sugar Maple for New Hampshire, Serviceberry for Rhode Island, Flowering Dogwood for Connecticut, Sycamore for New York, Tulip Poplar for Pennsylvania, River Birch for Delaware, American Hornbeam for Maryland, Carolina Silverbell for Virginia, Swamp White Oak for North Carolina, Hackberry for South Carolina, Horse Chestnut for Georgia, and an additional commemorative planting representing New Jersey. Together, these trees create a living connection between the nation's founding and the future of Millburn's urban forest.

BULLETIN OF THE NEW JERSEY SHADE TREE FEDERATION

Executive Director: Richard S. Wolowicz

Editor & Outreach Coordinator: Emily Farschon

Blake Hall, 93 Lipman Drive, New Brunswick, NJ 08903

Telephone: (732) 246-3210 Fax: (732) 640-5289

e-mail: trees@njstf.org

www.njstf.org

ISSN # 0037-3133

MILLBURN TOWNSHIP CELEBRATES AMERICA'S 250TH ANNIVERSARY THROUGH COMMUNITY TREE PLANTING

Continued from page 49

The planting also serves a critical environmental purpose. For decades, a stand of ash trees located near the intersection of Whittingham Terrace and Ridgewood Avenue played an important role in managing stormwater within an area prone to flooding. Despite years of treatment efforts, the trees ultimately succumbed to the devastating effects of the emerald ash borer (EAB). Following their removal in the fall of 2025, the township recognized an opportunity not only to restore the site but also to create a project that would educate and inspire the community.

The thirteen new trees were selected for their ability to thrive in the site's challenging conditions, including periodic flooding. Planted within the existing stormwater depression, the trees will help restore the area's natural stormwater management function, reduce flooding impacts, improve water quality, and strengthen the ecological resilience of Taylor Park.

Equally important was the decision to diversify the tree species being planted. The loss of the ash trees highlighted the risks associated with relying too heavily on a single species within the urban forest. By establishing a diverse planting, Millburn Township is building long-term resilience against future pests, diseases, and climate-related challenges.

The project was led by Township Forester and New Jersey Licensed Tree Expert Stacie Phelps and Shade Tree Supervisor and New Jersey Licensed Tree Expert Brick Reilly, in partnership with the Millburn Shade Tree Advisory Board. Installation was completed by the township's Shade Tree and Department of Public Works crews, allowing the entire grant award to be dedicated to the purchase of high-quality trees.

The William J. Porter Community Tree Project Award provided Millburn Township with an opportunity to transform a reforestation project into a lasting community landmark. Today, the thirteen trees stand as living symbols of the original colonies, a reminder of the nation's history, and a testament to the important role trees play in creating healthier, more resilient communities. To further expand the project's educational value, informational tags were installed

MILLBURN TOWNSHIP CELEBRATES AMERICA'S 250TH ANNIVERSARY THROUGH COMMUNITY TREE PLANTING

Continued from page 50

on each of the trees.

Millburn Township is grateful to the New Jersey Shade Tree Federation for its continued support of local urban forestry initiatives. The project demonstrates how strategic tree planting can address environmental challenges, engage residents, and create meaningful connections between community history and environmental stewardship.

Note: Talk to Millburn Township's Shade Tree Folks about their project at the NJ Shade Tree Federation's 101st Annual Conference on Thursday Oct 22! Visit our website to read our preliminary conference program. Register for the NJ Shade Tree Federation 101st Annual Conference by September 25: <https://njstf.org/annual-conference>

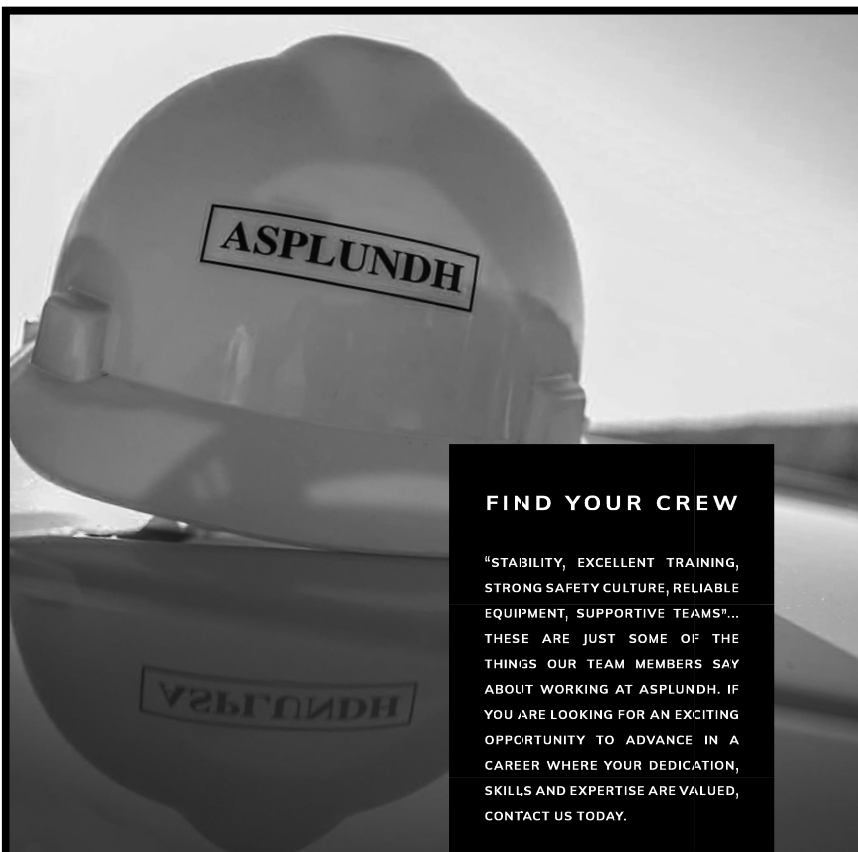
Does your community have an interesting project idea? Apply Today!

The William J. Porter Community Tree Project Award is intended to provide up-front funding for a small project to benefit the tree resource in your community. The application deadline is COB August 31st, 2026. Award details as follows:

- Up to \$2,500.00 per award depending on availability of funds.
- Project funds provided upfront upon receipt of the award (this is not a reimbursement grant!).
- Project funds can be awarded to a municipality or tree organization working within their municipality (organization must have capability to accept fund – no checks to individuals).
- Awardee must be a current member of the NJ Shade Tree Federation (forgot to renew? There's still time! Download a Renewal/Application Form from our website: www.njstf.org/membership)
- Five year moratorium for past award recipients.
- Award Recipient(s) will be notified in September and must be available to accept the award in person at the NJ Shade Tree Federation 101st Annual Conference, Oct 22 & 23, 2026, at the DoubleTree Cherry Hill, NJ
- Applications may be emailed to TREES@NJSTF.ORG

The William J. Porter Community Tree Project Award application deadline is COB August 31st, 2026





FIND YOUR CREW

"STABILITY, EXCELLENT TRAINING, STRONG SAFETY CULTURE, RELIABLE EQUIPMENT, SUPPORTIVE TEAMS"... THESE ARE JUST SOME OF THE THINGS OUR TEAM MEMBERS SAY ABOUT WORKING AT ASPLUNDH. IF YOU ARE LOOKING FOR AN EXCITING OPPORTUNITY TO ADVANCE IN A CAREER WHERE YOUR DEDICATION, SKILLS AND EXPERTISE ARE VALUED, CONTACT US TODAY.



ASPLUNDH
ASPLUNDH.COM 1.800.248.TREE

STRONG

Scan to
apply today!



Asplundh is an Equal Opportunity Employer

IN NEW JERSEY, BENEFITS BLOOM IN TINY FORESTS

By Sachi Kitajima Milkey, The New York Times, July 22, 2025

A nonprofit planted five “microforests” to tackle environmental problems in Elizabeth, N.J. Scientists say they’re making a big difference.

It’s a tiny space, no bigger than a couple shipping containers really. But standing there, the midsummer heat recedes. So does the roar of nearby airplanes and the fishy stench of the market next door.

In this thicket of elderberry plants shaded by honey locust trees, John Evangelista finds his respite.

“This is one of the only places in Elizabeth where you can stand in the middle of a forest,” said Mr. Evangelista. “I just love being in here.”

This 45 foot by 40 foot plot, tucked inside a small urban farm behind a library in the city of Elizabeth, N.J., was the state’s first “microforest.” It’s exactly what it sounds like: a miniature forest, packed with more than 260 native plants (and one anomaly, a Kentucky coffee tree).

The project was the brainchild of Mr. Evangelista, a farmer and executive director of Groundwork Elizabeth, a nonprofit that planted the forest in 2021 with support from the New Jersey Conservation Foundation. Over the past four years, with gardening help from a paid city youth program, the group has added four more microforests. Two are outside city-owned senior housing developments and one is in a cemetery. Yet another is growing at an elementary school in a nearby town.

For all these plots, the group employed a decades-old but recently trending technique known as the Miyawaki method, which crowds together native plants, encouraging them to grow rapidly as they compete for resources. Experts say this means outsized benefits like improving air quality, absorbing storm water and cooling down the surrounding area.

Elizabeth is an industrial hub that hosts both a major containership port and Newark International Airport and is intersected by the New Jersey Turnpike and Garden State Parkway. It sits in a county with some of the least amount of tree cover in the state as well as an elevated flood risk.

Within five years, “you’ll get the same oxygen production and carbon sequestration that a forest that’s 50 years or older is producing,” Mr. Evangelista said. “So you can make a huge impact quickly.”

In May, analysts at Earth Economics, a nonprofit, studied three of Elizabeth’s microforests and found that for each dollar invested, the public will gain on average \$10.90 in benefits like air quality and heat reduction. Thermal drone images show that the microforests can be 4 degrees Fahrenheit cooler than mature trees, and 50 degrees

IN NEW JERSEY, BENEFITS BLOOM IN TINY FORESTS

Continued from page 53

cooler than the asphalt in adjacent parking lots, which can reach 132 degrees in the summer.

Preliminary research has shown that even microforests, small as they may be, can provide a habitat for wildlife and pack away planet-warming carbon, too. Daniela Shebitz, a professor of environmental and sustainability science at nearby Kean University, has been working with Mr. Evangelista to monitor his projects.

“It’s one thing to say that these densely planted forests are going to be great at absorbing storm water, at sequestering carbon or providing biodiversity,” she said. “But it’s another thing to put the data behind it.”

A yet-to-be-published study by Dr. Shebitz and a former student of hers, Andres Ospina Parra, found that Elizabeth’s microforests have soil that is up to 50 times more permeable than it was before, helping the ground absorb storm water and allowing the roots access to more water and oxygen. Samples also show the microbial activity in the soil had nearly quadrupled, boosting nutrients for plants. All the planted species have grown at least twice as fast compared with stand alone plantings, while some, like the hackberry trees, have shot up seven times faster.

Doug Tallamy, an entomologist at the University of Delaware, said that research on microforests in the U.S. remains limited. When he first heard about the idea, he worried that the competition among plants would result in only a few trees surviving. But now, after seeing projects like Elizabeth’s succeed, he’s a believer.

“The downsides are few, and the potential benefits could be large.” Dr. Tallamy said. Because the forests start with small seedlings and require little maintenance after the first few years, he said, microforests are one of the cheapest options for boosting nature and biodiversity in cities.

But depending on the particulars of each project, Dr. Tallamy said, the first step of the Miyawaki method — thoroughly preparing the soil to mimic a healthy native forest — can get pricey. Particularly in industrial areas like Elizabeth, where the ground might be contaminated with pollutants, this step can make or break a project.

At O’Donnell Dempsey Senior Center, Mr. Evangelista and Dr. Shebitz ran an experiment, only fully treating and preparing one section of the soil, leaving another area entirely untouched. After three years, tulip and chokeberry trees on the treated side towered over their stubby counterparts planted in untreated soil.

Other benefits of the microforests are harder to quantify on a spreadsheet. “It smells better, it just makes me feel better,” said Jane Teran, a college student who works on Groundwork Elizabeth’s projects during summer break. To cure a headache or take a break from the heat, she said, she pops into the microforest.



The Fertilizer Company

**Promoting sustainable
arboriculture, plant, and
soil health since 1940.**

At Doggett, we understand the importance of creating a healthy forest floor in urban environments to maintain thriving landscapes. Our commitment lies in developing top-quality products specifically designed for tree care professionals, ensuring the best possible formulations for trees and soils.

To explore our comprehensive range of offerings, please visit our website.

(800) 448-1862 | [doggettcorp.com](https://www.doggettcorp.com)

IN NEW JERSEY, BENEFITS BLOOM IN TINY FORESTS

Continued from page 54

In recent years, Groundwork Elizabeth has been showcasing their project to other affiliated groups in other parts of the country. Last year, Groundwork Rhode Island installed its first microforest, in Providence, followed by another this spring. Groundwork Hudson Valley planted its first microforest, in Yonkers, N.Y., in April. Overall, some two dozen Miyawaki forest projects have popped up across the United States in the past five years. But thousands more exist internationally, with the oldest in Japan, where Akira Miyawaki invented the method in the 1970s.

“Imagine that the world starts waking up to the ability of these tiny, vacant lots to work as an ecological unit again,” Dr. Shebitz said. “If more and more people put these micro forests in, it can make a very large difference.”

Note: Groundwork Elizabeth’s John Evangelista is a 2026 conference panelist. Join us on Friday Oct 23 to hear NJ tiny forest project leaders speak about their work in an interactive panel. Visit our website to read our preliminary conference program. This is an in-person event. Conference sessions are not recorded. Join as a member to receive a 25% discount on conference registration.

Register for the NJ Shade Tree Federation 101st Annual Conference by September 25: <https://njstf.org/annual-conference>

NEW JERSEY’S DEER DILEMMA

By Alison Mitchell, New Jersey Conservation Foundation, September 5, 2025

Deer are pretty much everywhere in New Jersey. At first glance, their abundance might seem harmless, even welcome. But their numbers are fueling a complex and urgent ecological crisis that threatens our native forests and wildlife, as well as public health and safety.

In many places in New Jersey where deer populations are 10 times above healthy levels, the forests have tragically lost their natural diversity and vitality. This is not the fault of the animals themselves. They are responding to a landscape profoundly changed by human activity.

After unregulated commercial hunting was banned in New Jersey in the late 1800s, deer populations rebounded. Humans had already eliminated their largest natural predators. Agriculture and suburban development began to carve up forests, creating ideal habitat for deer which flourish at the edge of the woods. A greater abundance of food and lack of wild predators, coupled with limited hunting opportunities in populated areas and milder winters, led to a surge in deer numbers.

“It’s a perfect storm,” says Jay Kelly, a biology professor at Raritan Valley Community College, who for decades has been documenting the negative impacts on forests caused by overabundant deer.

NEW JERSEY'S DEER DILEMMA

Continued from page 56

Deer are a cherished part of New Jersey's landscape, and we are lucky to have them in our midst. But their numbers are way out of balance with the rest of our natural world. As a result, they are causing serious damage to the ecosystem. Woody native tree seedlings (such as oaks and hickories) and beautiful shrubs (like dogwoods) disappear under heavy browsing in the winter, and invasive species that aren't appealing to deer outcompete natives that try to regenerate.

"Deer populations have been far higher than forests can handle for almost 50 years now in New Jersey," Kelly explains. "They are decimating the landscape."

As a result, we are losing other cherished wild animals. With the loss of native vegetation, forest songbirds lose both shrubs as safe nesting sites and the native insect food supply that their nestlings depend upon. Amphibians that depend on the forest understory also begin to decline. Essential pollinators such as butterflies and moths struggle as their wild host plants vanish, adding to further ecosystem decline. In short, overabundant deer populations create a sad fate for countless other creatures.

Although the need for action is clear, addressing deer overpopulation can be controversial. Deer have walked this planet for millions of years and evoke deep affection and admiration. Yet, we have a responsibility to protect forests and other wildlife, and to ensure the long-term health of deer themselves. Due to overcrowded populations, more deer suffer when diseases like blue tongue emerge on the scene.

Beyond ecological damage, overabundant deer populations pose more direct risks to humans too. Deer-vehicle collisions cause thousands of injuries, with an estimated 25,000 vehicle collisions involving deer in New Jersey every year. These incidents also result in harm to the deer themselves, which are often left injured along roadsides. High deer populations contribute to the spread of Lyme and other tick-borne diseases. There are also significant impacts to agriculture, with 25 percent of New Jersey farmers surveyed reporting that they've abandoned a parcel of tillable land due to excessive damage from deer, and 36 percent saying they've stopped growing their preferred crops for the same reason.

We owe it to our forests, our communities, and future generations to address the problems we've created for New Jersey's wildlife and their habitats. But it's not easy to address the overpopulation of a wonderful animal, and we need to keep both compassion and a commitment to stewardship foremost in our thinking. Through collaboration among scientists, wildlife managers, and the public, we must find a way to reduce deer densities where they are out of balance and allow forests to heal and a diversity of plants and animals to flourish, honoring the dignity of all living things while restoring the health of our natural world.

TREES KEEP ABSORBING CARBON LONG AFTER THEY STOP GROWING

Columbia Climate School , July 9, 2026

Oak trees keep absorbing carbon dioxide long after their annual growth has ended, revealing that photosynthesis and wood production are not as closely linked as scientists once believed. The finding could reshape forecasts of how much carbon forests will be able to store in a warmer future.

Trees do not necessarily keep growing for as long as they keep photosynthesizing, according to a new study published in Science Advances. Researchers found that oak trees continue absorbing carbon dioxide well after their annual growth has ended, suggesting forests may store less carbon in wood than many climate models currently predict.

The discovery challenges a long standing assumption that higher rates of photosynthesis naturally lead to greater tree growth. If trees continue taking in carbon without turning much of it into new wood, less carbon may remain locked away over the long term.

Trees Keep Capturing Carbon After Growth Stops

Forests play a major role in slowing climate change because trees remove carbon dioxide (CO₂) from the atmosphere and store much of it in their trunks, branches, and roots. Scientists have generally expected that rising atmospheric CO₂ levels would





TIMMERMAN EQUIPMENT COMPANY

3554 Route 22 West

PO BOX 71

Whitehouse, NJ 08888

www.timmermanequipment.com

Proud Member and Sponsor of the
New Jersey Shade Tree Federation



WOOD CHIPPERS



FORESTRY TRUCKS



Tub & Horizontal GRINDERS



SALES PARTS SERVICE
(908) 534-4126 (908) 534-2320 FAX

TREES KEEP ABSORBING CARBON LONG AFTER THEY STOP GROWING

Continued from page 58

boost photosynthesis, leading to faster growth and increased long term carbon storage. The new findings suggest the relationship is more complicated. While trees may continue absorbing additional carbon, much of it does not necessarily become new wood. Instead, that carbon may be used to produce leaves, fuel short lived metabolic processes, or serve other functions, reducing the amount of carbon stored in forests compared with previous expectations.

The results could have important implications for climate forecasting. “Right now, most models assume that if you have photosynthesis, you have growth. We find that’s not the case,” says lead author Mukund Palat Rao, an ecoclimatologist at Lamont-Doherty Earth Observatory, which is part of the Columbia Climate School. “Just because there is more photosynthesis might not necessarily mean more tree growth in the future.”

Why Photosynthesis and Growth Are Different

During photosynthesis, plants use sunlight to convert CO₂ and water into sugars while releasing oxygen back into the atmosphere. The captured carbon remains inside the plant, but it is not all used to build wood.

Some of that carbon becomes woody tissue in the trunk, branches, and roots, where it can remain stored for decades, centuries, or even millennia. The rest supports the production of leaves and fruit, is temporarily stored as starch, or is converted into compounds released into the soil to nourish microbial communities, improve nutrient uptake, and help defend the tree against disease.

Because wood stores carbon for such long periods, understanding how much of the carbon captured through photosynthesis ultimately becomes woody biomass is critical for estimating how forests help slow climate change.

“Understanding how photosynthesis and growth are linked is very important from the perspective of understanding how forests will store carbon over long time scales,” says Rao.

Tracking Trees Across the United States

Scientists had previously suspected that carbon uptake and tree growth were not always synchronized, but there had been too few detailed observations to fully understand why.

TREES KEEP ABSORBING CARBON LONG AFTER THEY STOP GROWING

Continued from page 60

To investigate, Rao and his colleagues combined several sources of data. They analyzed satellite imagery capable of detecting photosynthesis at 137 oak forest sites across the eastern United States and California. They also used instruments that measured CO₂ levels in tree canopies every hour and sensors attached to tree trunks that tracked tiny changes in trunk size throughout the day. (Trees tend to expand at night as roots take up water, then shrink slightly in daytime as they transpire water, with the long-term trajectory adding up to growth.) The team also incorporated tree ring records and temperature data spanning 1950 through the present.

Together, these datasets provided daily measurements of photosynthesis, carbon uptake, and tree growth.

Trees Stop Growing Months Before Photosynthesis Ends

The researchers found a clear separation between growth and photosynthesis. At eastern U.S. sites, oak trees typically grew from May through July but continued photosynthesizing into October. About 36 percent of their annual carbon assimilation occurred after growth had already stopped in late summer.

California oaks showed a different seasonal schedule but the same overall pattern. Growth generally occurred between December and April, then slowed during mid summer and ended by August even though photosynthesis continued. Roughly 26 percent of the trees' yearly carbon uptake happened after growth had ceased.

According to Rao, the explanation is straightforward. Tree growth depends on internal water pressure, and that pressure drops quickly during hot, dry conditions.

"The moment you have dry and hot conditions, growth activity stops pretty instantly while photosynthesis seems to continue at a slightly decreased rate," says Rao.

What Happens to the Extra Carbon?

Some of the carbon captured after growth ends is saved to help fuel growth when the next growing season begins. The remainder is used to produce new roots and leaves or is oxidized to keep living cells functioning through the winter.

Researchers still do not know exactly how much of that carbon eventually becomes long term woody biomass versus how much returns to the atmosphere over shorter time periods. However, the findings suggest that projections of forests growing

TREES KEEP ABSORBING CARBON LONG AFTER THEY STOP GROWING

Continued from page 61

larger and storing substantially more carbon in a warmer, CO2 rich world may need to be reconsidered.

The team also found that the disconnect between photosynthesis and growth became even stronger during years when local weather swung between unusually wet and unusually dry conditions. Because climate change is expected to increase this kind of variability in many regions, the pattern could become more common in the future.

Rao and his colleagues are now investigating whether similar patterns occur in other tree species, forest ecosystems, and climates. He expects the degree of separation between photosynthesis and growth will vary across different forests, but says many questions remain unanswered.

“I don’t really have answers yet,” he says. “There are many questions still left to address.”

CALENDAR OF EVENTS 2026

August 31	NJSTF Community Tree Project Award Application Deadline
September 16	NJSTF Tree Talk Zoom– 7:00-8:30 pm
September 25	Conference Registration & Payment Deadline
October 22-23	NJ Shade Tree Federation 101st Annual Conference, DoubleTree Cherry Hill, NJ





At Aspen Tree Expert Co., Inc., we care about your trees as much as you do. We are fully licensed, insured, and proudly serve Monmouth, Ocean, Middlesex, Mercer, and Burlington counties.

Our Services:

- ✓ TREE PRUNING
- ✓ TREE REMOVAL
- ✓ STUMP GRINDING
- ✓ TREE EVALUATIONS
- ✓ COMMERCIAL SERVICES

Certified Experts:

- ✓ LICENSED AND INSURED
- ✓ FIRST AID AND CPR
- ✓ FLAGGER CERTIFIED
- ✓ LINE CLEARANCE QUALIFIED
- ✓ CHAINSAW AND CHIPPER SAFETY



*Your trusted partner for
all your tree care needs*

 **(732) 928-5747**

**671 Wright Debow Rd.
Jackson, NJ 08527**



 **aspen-tree.com**



**The New Jersey
Shade Tree Federation
Blake Hall
93 Lipman Drive
New Brunswick, N.J. 08901**

Non Profit Organization
U.S. POSTAGE
PAID
New Brunswick, NJ 08901
Permit 50520

RichView CONSULTING



Arboricultural & Forestry Services

www.RichViewConsulting.com

**Richard S. Wolowicz
Rich@RichViewConsulting.com**

*Serving Municipal, Utility, and
Private Clients*