Community Forestry Management Plan

Township of Howell Monmouth County, NJ





Howell Township Shade Tree Commission 4567 Route 9 North P.O. Box 580 Howell, N.J. 07731



Community Forestry Management Plan Municipal Information Form

Township of Howell Monmouth County

Address: 251 Preventorium Road, PO Box 580, Howell, NJ 07731										
Contact name and title: Glenn Cantor, Shade Tree Commission Phone Number: (908) 596-0805 E-mail: glenncan@optonline.net										
						Organization Name: Howell Township Shade Tree Commission				
						Mayor's Signature I certify that this Community Forestry Management was developed specifically and exclusively for our municipality.				
Date of Management Plan Submission: December, 2016 Time period covered in Management Plan: 2017-2021										
					Check off the Community Stewardship Inc plan.	centive Program (CSIP) practices identified in the management				
 ☑ # 1 Training ☑ # 3 Public Education and Awareness ☑ # 5 Tree Inventory ☑ # 7 Storm Damage Assessment ☑ # 9 Insect and Disease Management ☑ # 11 Tree Planting ☑ # 13 Sidewalk Maintenance Program □ # 15 Other 	☑ # 2 Community Forestry Ordinance Establishment ☑ # 4 Arbor Day ☑ # 6 Hazard Tree Assessment ☑ # 8 Tree Maintenance and Removals ☑ # 10 Wildfire Protection ☑ # 12 Tree Recycling ☑ # 14 Storm Water Management									
Official Use only	Certification									
The state of the s	formal application to the New Jersey Forest Service. I am pleased I Forest Service has concluded that this plan meets standards set									

forth by the State and the NJ Community Forestry Council and is approved for the period covered.

State Forester_____ Approved Date_____

The Township of Howell

Community Forestry Management Plan 2017-2021

December 2016

prepared by

Howell Township Shade Tree Commission

and

Kevin L. Scibilia
New Jersey Certified Tree Expert # 279

EXECUTIVE SUMMARY

In 2013, soon after adoption of the 2012-2016 Community Forestry Management Plan, Howell Township was struck by Superstorm Sandy and winter storm Athena, unprecedented weather events with major urban forestry impacts. The massive cleanup that followed diverted funds and attention from the stated plan. In spite of this setback, progress has been made in a few areas and those items that were delayed will be targeted in the upcoming plan.

During a special Shade Tree Commission meeting in early January 2014, Howell hired a Certified Tree Expert for special hazardous tree inventory and assessment in public areas of the Township. The hazardous tree inventory was included in the 2012 - 2016 Community Forestry Management Plan (CFMP). The inventory revealed over 500 trees were damaged or destroyed by the two storms. The Howell Township Shade Tree Commission, in concert with the Howell Department of Public Works, has been consistently planting replacement canopy and aesthetic trees as necessary.

Howell Township is also participating in the five year New Jersey Tree Recovery Campaign, which is contributing toward increasing tree canopy in the Township, as per goals to meet Sustainable Jersey requirements. In 2014, the Township distributed 800 tree seedlings and 1,200 more in 2015. During 2016 the Township will again distribute 1,000 tree seedlings to Howell residents. As the Township works on its new five-year CFMP for 2017-2021, the tree recovery program and tree canopy goals will be a focus and included as new goal. Howell's new CFMP will be the fourth five-year plan issued by the Township and approved by the New Jersey Forest Service - Community Forestry Program.

Howell Township has acquired its 18th consecutive year of recognition as a Tree City USA. Each of the past 17 years members of the Shade Tree Commission, with the support of elected officials, volunteers and DPW staff, presented an Arbor Day program for all third graders (approximately 650-800 children) in Howell's public school system. Local Girl Scouts assisted by wrapping tree seedlings which were distributed to third grade students. The STC held informal discussions with the Girl Scouts on the value of planting trees. STC volunteers also distributed tube seedlings to patrons of the Howell Library at a combined celebration of Earth and Arbor Days. The Girl Scouts participation was formally recognized at a Howell Township Council workshop. DPW staff also delivered trees to several elementary and middle schools within the Howell Township.

Howell Township's Master Plan includes Conservation Plan elements recognizing that Howell Township has not reached build out, with many remaining undeveloped parcels. New development is anticipated in the form of scattered commercial and residential development and redevelopment of the Township's highway non-residential areas. With Howell Township population density increasing, conservation planning is critical to the long-term quality of life provided to its residents.

As development of the Township continues, conservation goals can be achieved via the Township woodland management ordinances designed to promote tree conservation. The clear cutting of sites to prepare a commercial and/or residential development has substantially adverse environmental impacts. To conserve its forests and trees, Township ordinances provide developers with incentives to conserve tree resources and mitigate their loss to development. Under the Township's tree ordinance, developers have been replacing tree canopy removed in kind, or providing the Township Shade Tree Fund up to \$35,000 per acre

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of tree cutting or a combination of both. These ordinances have proven to be effective in protecting and retaining trees, while the incentive assists in helping provide some limits on clear-cutting.

Under the ordinance, Township homeowners are required to notify the Township of any tree removed on an acre or greater of land. Although residents retain the right to remove a tree on their property for any reason, whether it is due to disease or a matter of personal preference, this policy requires permits, approvals, and fees and is mandatory.

Homeowners requesting a replacement street tree can contact the Township manager. Residents are typically granted permission to plant trees 5 feet or more from Township rights-of-way. In an austere economic environment, the Township has shifted community forestry to homeowners with a plan to remain clear of township setbacks. The Township is continuing to plant and forest recreational open fields and parks.

The purpose of the Shade Tree Commission is to provide advice and suggestions for regulations regarding the protection of trees and shrubbery upon public lands and easements within the Township of Howell and, upon request of the private property owner, the Commission may provide advice regarding care, removal, trimming or other questions regarding trees on private property.

In connection with its efforts to obtain certification by the Sustainable Jersey program, the Howell Green Team has enlisted the Shade Tree Commission to develop a community Tree Canopy goal. This goal was adopted on March 16, 2016. Howell Township had 50.1% canopy coverage in 2000. Given the heavy development pressure, it is likely that this will decrease in the future, especially if development occurs on woodland rather than farmland.

Not all canopy cover is of equal value. Contiguous forested area (with associated forest floor debris) is unsurpassed in storm water retention, ground water recharge, diversity of wildlife, and heat displacement among other values including recreation and aesthetics. Given this benefit of contiguous forest, the Shade Tree Commission is drafting a letter to the Planning Board to encourage clustered development that preserves not just open space but forested open space. It is far better to leave 10 acres of native woodland with the soils left intact than to plant trees that would be equal to 10 acres of canopy cover. This will aid the Planning Board's thinking and demonstrate the Shade Tree Commission's support for the concept.

Howell Township as a subset of Monmouth County that is projected to continue land use growth and experience decreased forested land between 2015 and 2025. The STC will continually assess forest canopy coverage and take practical steps to deal with the problem(s) that may arise. The STC's goal is to mitigate canopy loss from development and offset losses through grants, developer contributions and special programs. The STC will also work with the Monmouth County Shade Tree Commission to secure increased tree plantings on county properties in Howell Township.

Howell Shade Tree Commission December 2016

2. INTRODUCTION

A. MISSION STATEMENT

Howell Township strives to provide practical, reasonable community forestry in the more developed population centers of the Township. In the more rural areas, the emphasis will be on maintaining the native forest, habitat for wildlife, and preserving wetlands and waterways.

B. GOALS AND OBJECTIVES

Goal #1: Determine methods of reducing forest canopy loss and increasing forest canopy on public and private land.

Objectives:

- Use current canopy cover as baseline.
- Identify areas of currently forested lands as desirable to retain.
- Map areas of sparse tree cover that may be reforested.
- Work with Planning and Zoning Boards to encourage as much uninterrupted canopy coverage as practical in new developments.
- Work with private landholders to plant trees in open areas that aren't required to be devoid of trees.

Goal #2: Continue and expand training for Department of Public Works (DPW) and Shade Tree Personnel. Objectives:

• Continue on-site training for DPW on various tree related topics to reinforce topics previously covered.

Goal #3: Continue and expand public education and outreach Objectives:

- Link Howell Shade Tree web page to Monmouth County Shade Tree page.
- Utilize plant list for Monmouth County.
- Encourage native tree species
- Continue to present educational information to the public.
- Invite local tree professionals to speak on Arbor Day to a grade at the elementary, middle or high school for a half hour each year. Consider arborists, consultants, nursery owners, fruit growers, Christmas tree growers, foresters, timberland owners, among others.

Goal #4: Reduce tree/sidewalk conflicts Objectives:

- Continue to select trees appropriate to the planting locations.
- Institute a program of accelerated removal of London plane trees and other species in 30" planting strips that are heaving sidewalks.
- Continue planting trees inside the walk wherever practical.

C. LIABILITY STATEMENT

Although street trees are an asset to the community, it is inevitable that they mature and require maintenance and, eventually, replacement. Maintenance and replacement, in addition to planting "the right tree in the right place," can help insure that community trees not only contribute to the environmental and economic vitality of the area, but also reduce the potential hazards to public safety. Howell Township must work within a reasonable budget that may not be able to meet each and every need of the community forest immediately. Therefore, it is the intent of this plan to focus available resources to the greatest need and work incrementally toward a healthy forest with commensurate reduced risks to public safety.

We believe that following the logical steps outlined in this plan will meet with public support for plan implementation and yield long-term benefits to the environment and public safety.

Whereas no maintenance program can predict each tree failure before it occurs, the Township of Howell is taking reasonable care of a living and changing resource. By following this plan, Howell is demonstrating its commitment of reasonable levels of resources in a planned manner. This is expected to reduce exposure to liabilities and increase public safety by reducing significantly the occurrence of tree-related accidents.

3. COMMUNITY OVERVIEW

The Township of Howell is a residential and rural community in south central Monmouth County occupying approximately 61 square miles. Many of the approximately 51,000 residents (2010 census), are concentrated in three developments known as Ramtown, Adelphia and Candlewood. The remainder of the Township is comprised of low-density suburban housing, farmland, and forested land. The 770-acre Manasquan Reservoir lies more or less in the center of the Township. Surrounded by a five-mile perimeter trail, the reservoir is a focal point for recreation both on and off the water. Monmouth County Parks system manages the reservoir and the surrounding lands.

There are approximately 250 miles of roadway maintained by the Township. Although the following roads and defense station are not the responsibility of the township, they do present a more clear geographical picture. Interstate 195 running east-west approximately bisects the township. State Route 9 approximates the western edge as does State Route 34 the eastern edge. State Route 33 and Earle Naval Weapons Depot border the north part of the Township.

Howell Township completely encircles Farmingdale Township. Wall Township lies to the east of Howell. Colts Neck is to the north, Freehold and Jackson are to the west and Lakewood and Brick townships lie to the south.

The forest cover types of the Township vary from the oak-pine ecotype common in the pine barrens, to predominantly oak forests to forest stands displaying a mixture of hardwoods such as gums, red maple, beech and hickories in addition to the oaks. The oak-pine ecotype typical of the pine barrens is one that is highly vulnerable to wildfire. The most dangerous aspect of wildfire to persons and property is when the fire rises into the tops of the pine trees, known as a crown fire. If you have ever placed a bough of pine in a fire, you know how quickly the needles ignite and the speed at which they burn. In a forested environment, fire that enters the crowns of pine trees tends to travel very quickly and to produce tremendous amounts of heat. The combination of fast moving flames and very hot temperatures gives crown fires the potential to produce serious harm to life and property. A risk assessment of wildfire may be a prudent undertaking as part of the management plan.

The first part of a risk assessment could be as simple as contacting NJ Forest Fire Service to see what information they have available as far as cover types, fuel loads, and forest fire potential. A simple visual search of Google earth can give one a good approximation of which areas are heavily concentrated with pines. From there, one can determine which populated areas may require evacuation and routes set for that evacuation. In consultation with the Forest Fire Service, you can determine natural firebreaks and which existing infrastructure can be used to help contain the fire. For instance, the Manasquan Reservoir is a natural firebreak. How might you use that and surrounding roads as a fire line to slow or stop the progress of a fire?

A project such as this should not be costly. It can be undertaken by an interested Commission Member, or even as an honor's project for a high school student. Oversight by a consultant should only be a few hours. The benefit of this plan would be shared by the fire department, police, Department of Public Works and the Environmental Commission.

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A street tree inventory has been cited in previous Community Forestry Management Plans as a desirable goal. After driving through the main population concentrations, I believe that a preliminary step should be performed before an inventory. Determination of high concentrations of Township trees should be mapped, estimating the mileage of high concentrations. From this information, it can be better determined whether a hazard tree survey or a full inventory would be more appropriate or cost effective. An initial "windshield observation" of much of the Township would suggest that the number of trees within the Township right-of-way are far less than roadway mileage would lead one to believe.

Both the Candlewood and Adelphia developments are dominated by either condominium style landscapes or have trees planted on the houseward side of the walk. It should be determined if any of the trees within these communities are actually the responsibility of the Township by residing within the public right-of-way. Positioning trees on the "inside of the walk" instead of between the sidewalk and curb is desirable because it allows for less sidewalk root conflict. Roots that are not confined by the curb on one side tend to have less sidewalk heaving than those planted in open lawn inside the walk. The complication of trees planted inside the walk is who is responsible for them? This is an important management question that has to be addressed.

The Ramtown section of Howell has about 50% of the development with trees that are growing between the sidewalk and curb. The lawn extension between the sidewalk and curb is about 30 inches. Many of the trees growing in this area are London plane trees approximately 14 inches in Diameter at Breast Height. This is a classic case of the wrong tree in the wrong spot. As you can imagine, there is extensive sidewalk heaving next to these London plane trees. (Norway maple trees are doing similar although less extensive damage). The situation is going to get much worse as these trees continue to add diameter growth and expanded root flare. The practice of removing these trees and replanting inside the walk should be continued and, if possible, accelerated.

One idea that may be worth pursuing is to coordinate with the utility Jersey Central Power and Light, to remove those trees that are interfering with their electrical conductors. This is best done by finding when the utility is scheduled to prune the streets in question. Working with their foresters, you can have them remove the tops of the trees with the Department of Public Works removing the larger wood (trunks). If Howell Township agrees to plant new trees inside the walk with species that will not grow into the electrical conductors, the utility can look at this work as being a capital (one time) expense rather than regular maintenance. Because capital work is treated more favorably by the accountants, the utility is much more likely to agree to this type of cost sharing.

Howell has abundant open space from the forested buffer areas at the Earle Weapons Depot to the County Park surrounding the Manasquan Reservoir to the abundant farmlands and wetlands in the Township. Although much of the Township has an open, rural feel, it is important to understand that not all open space is equal when it comes to storm water abatement.

Forest soils provide the best absorption and least runoff from rainfall events. It is important to understand that it is the soils of the forest, not the trees, that provide this quality. If you take a wooded area and plant grass underneath, you have taken away the most effective "sponge" for absorbing rainfall and slowing overland flow. Programs to address storm water abatement in the Township should concentrate on protecting forest soils as the primary tool in preventing flooding. Certainly farmland preservation can help, but the emphasis should be placed on protecting the forest soils possibly through programs such as Green

Acres, transfer of development rights and clustered housing. Practically speaking, it is better to cluster houses in a development closer and to leave forested area set aside undisturbed than it is to increase the lot size for each house. Large lots most often have large lawns that lack the all-important forest soils. In addition to storm water abatement, clustered housing allows for larger forested areas that are better suited to most wildlife be it woodpeckers, turkey, bear, fox, squirrel, etc.

IMPLEMENTATION OF THE 2012-2016 COMMUNITY FORESTRY MANAGEMENT PLAN

Soon after adoption of the 2012-2016 CFMP, Howell was struck by Superstorm Sandy. The massive cleanup that followed diverted funds and attention from many of the stated plans. In spite of this setback, progress has been made in a few areas and those items that were delayed will be targeted in the upcoming plan.

Over the past five years, Howell Township has kept pace with the training needs to acquire the necessary Continuing Education Credits as required for the Community Forestry Management Plan. In addition, Howell has maintained two individuals with CORE accreditation. The Department of Public works continues to have employees obtain training in areas such as aerial safety, electrical safety and tree climbing.

The goal of public education and outreach has been met by continuing Arbor Day celebrations and school-related activities. Howell has maintained its Tree City USA status throughout the five years covered by the previous plan. The Howell Shade Tree Commission has maintained a web page on the Township website. Information relating to meeting times as well as technical information such as Gypsy moth suppression are provided.

The goal of inventory and assessment of street trees of the previous plan has stalled. In discussions with the Commission, the focus of this new plan will shift to tree canopy cover, as this will fit more precisely with multiple objectives utilizing tree canopy as a component. The new goal will focus on both public and private land with the objective of increasing overall canopy coverage. In the face of development pressure, this will most likely not occur. However, encouraging clustered development and retention of forest instead of vast open lawn can reduce the loss of canopy coverage in the face of development pressure.

Despite not having a formal inventory in place, it is well known that the Ramtown section of Howell has trees that have been planted in narrow strips and are heaving sidewalks. Efforts are underway to cooperate with the electric utility to remove trees under utilities that are heaving sidewalks. Such cooperation is helping the utility remove problem trees interfering with their conductors. The Township is removing trees that will only cause more damage in the future and is replacing them farther from the electrical conductors (on the house side of the sidewalk).

The policy of planting trees on the house side of the walkways has provided benefits in less sidewalk heaving, less pruning to clear the electrical conductors, and less pruning to maintain walkway and roadway clearance. Trees that are planted on the house side of the sidewalk have been determined to be the responsibility of the homeowner. As these trees mature, they will not require any maintenance by the Township but they can also not be managed by the Township either.

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Without an inventory, it is difficult to know if the newly planted species are a diverse mix or if a few species are being over-planted. An inventory can be made in existing developments to help determine the species that should comprise future plantings. (Although technically trees on the house side of the walk are not the responsibility of the Township, it is in the interest of the residents of the Township to have a diverse urban forest, whether on public or private property.)

The tree maintenance goal has been progressing with the DPW spearheading the maintenance program for township-owned trees. The upcoming CFMP is incorporating cooperation with the utility in removing trees under the electrical utilities. The Township continues to maintain a wood-waste recycling program where residents have access to firewood, and wood chips from tree maintenance operations. Hazardous trees are reported by residents or discovered by the DPW in their daily activities.

The Community Forestry Management Plan has provided the impetus to maintain focus on community involvement and awareness. In addition, the Tree City status and Arbor Day celebration in the schools are keeping the youth aware of the importance of trees. They will be the benefactors and stewards of decisions made in these Management Plans.

The shade tree ordinance was amended on November 6, 2016. Changes were made that eliminate a cost charged to the developer for perpetual maintenance of trees planted by a developer and further removes the requirement that the Township maintain shade trees planted by a developer. A copy of the amended ordinance is included as Attachment One.

4. ARBOR DAY ACTIVITIES

Arbor Day activities center around the schools, with several hundred students receiving a seedling tree to plant at home. Seedlings are obtained in bulk from the NJ Forest Resource Center, and wrapped, individually, by Girl Scout volunteers at Camp Sacajawea, which is located in Howell.

The Shade Tree Commission can investigate getting tree professionals to give a talk to the students on or around Arbor Day. People to contact may include foresters, nursery owners, Christmas tree growers, arborists, botanists, naturalists, sawyers and others.

The Shade Tree Commission participates in the annual Howell Day celebration in early summer. They display an assortment of tree seedlings, which are given out to people who visit their table, along with pamphlets and flyers about tree care. The Commission display tree themed posters and also sponsor free contests with prizes for guessing the correct number of acorns and seed pods in separate containers.

5. COMMUNITY FORESTRY PROGRAM ADMINISTRATION

ORGANIZATIONAL CHART FOR HOWELL TOWNSHIP

The Community Forestry Management Plan will be administered through the Township's Shade Tree Commission. This Commission will review the plan no less than annually to ascertain progress against stated goals and to consider adjustments. Municipal trees are cared for through the Shade Tree Commission, the Department of Public Works and contracted tree companies when necessary.

The utility company also prunes trees for the purpose of maintaining clearance to their conductors. Future efforts will concentrate on cooperating with the utility in striving to eliminate the need for directional pruning around the conductors. This can be accomplished by selected removals of trees that are causing problems for both the utility and the Township. Proper selection of tree species and placing them in locations that are inside the sidewalk (not directly under the conductors in the lawn extension) will also reduce the need for trees to be "shaped" around the conductors.

All municipal tree serviced requests are processed through the Department of Public Works. The administrative office receives requests and forwards them to the Township's Certified Arborist for Shade Tree
Commission

Department of
Public Works

Engineering
Department

DPW Work Crews

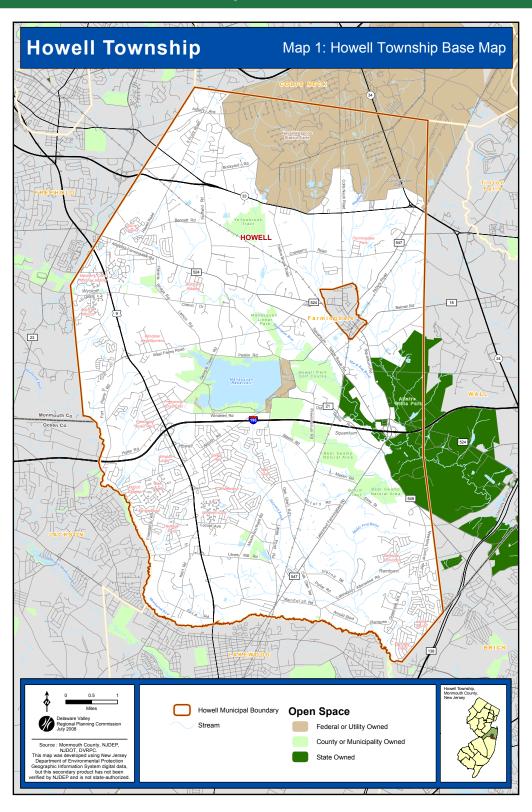
Tree Contractors

Tree Contractors

inspection. Work that can be completed with the and personnel on hand is accomplished by the DPW. Work that is beyond the capability of DPW is awarded to a competitive competent contractor.

Currently the Planning and Zoning Boards work in conjunction with the Shade Tree Commission on tree related matters. The increased emphasis on tree canopy coverage is communicated to the Planning and Zoning Boards so they may make adjustments during development that favor contiguous forested land instead of large grassed lots.

6. COMMUNITY MAP OF HOWELL TOWNSHIP, MONMOUTH COUNTY, NJ



7. TRAINING PLAN

For the initial CFMP, two individuals were CORE trained. In subsequent years, additional individuals were CORE trained. For the next five-year period, one objective is to encourage more members to become CORE trained and share responsibility in managing Commission responsibilities, as well as to serve as back up if one or more currently trained individuals is unable to perform their task.

At times it may be difficult to get a significant number of volunteers to attend Continuing Education Seminars and it is desirable to expand the training to more volunteers for much the same reasons as given for CORE Training. One option may be to have on-site training seminars that would be more cost effective for a group of individuals as well as more flexible in scheduling and topic selection. At least one consultant on the training list does provide on-site training. For a list of possible courses, visit www.state.nj.us/dep/parksandforests/forest/community/pdf files/recommended ceu courses.pdf. Possible recommended topics for Howell Township include tree identification, hazard tree identification, pruning, proper planting, and working around electrical hazards.

The Department of Public Works has it's own training program that deals with topics such as tree climbing techniques, aerial safety/rescue, electrical safety, and chainsaw safety. This training is offered to the employees as needed.

8. PUBLIC EDUCATION, AWARENESS AND OUTREACH

The Township of Howell continues to be recognized as a Tree City USA, since 1997. Meeting the requirements of the Arbor Day Foundation for Tree City USA is the responsibility of the Shade Tree Commission.

Each year at the Township's summer Howell Day celebration, the Commission maintains a booth that provides information to residents. They display an assortment of tree seedlings, which are given out to people who visit their table, along with pamphlets and flyers about tree care. They display tree themed posters and sponsor free contests with prizes for guessing the correct number of acorns and seed pods in separate containers.

Local Girl Scout volunteers at Camp Sacajawea in Howell wrap tree seedlings to be handed out to school children on Arbor Day.

To better utilize the Township's website, articles can be written for the quarterly e-Newsletter, the Howell Community Connection. These articles can be uploaded to the Shade Tree Commission web page to provide a shade tree "library" of useful tree information for residents. Articles may provide meeting dates and scheduled activities as well as contact information. Informational articles concerning some of the most common tree questions and links to sites describing common problems or diseases would be an excellent resource for homeowners. Topics may include how to compost leaves for the garden, how to fix a heaved sidewalk without damaging the tree, how trees and their roots grow, and many others.

The Commission will continue to present educational information to the public. They may want to provide guest speakers in the schools on or near Arbor Day (see Section 4 Arbor Day). Try to enlist the help of speakers from tree-related businesses.

9. TREE RECYCLING

The Township currently has some work performed by outside vendors who are responsible for disposing of wood waste. The work done by the Township itself offers woodchips and firewood to residents to use in their landscape and fireplaces.

For the upcoming plan period, we would like to find outlets for the wood waste that may have higher use than firewood or mulch. A search for local crafters or portable sawmill owners may provide a better outlet for material taken from the urban trees. Traditional sawmills typically are not interested in urban trees because of the high probability that foreign objects such as metal will ruin their very expensive saw. Band sawmills have much more affordable blades that, if ruined, do not pose a major financial burden. Some specialty trees such as persimmon or linden may be in demand by artists or crafters. It is difficult to know what is useful until you begin to investigate. Sometimes, the answers are surprising.

10. ORDINANCE ESTABLISHMENT

The Shade Tree Ordinance was amended on November 6, 2016. Changes were made that eliminate a cost charged to the developer for perpetual maintenance of trees planted by a developer and further removes the requirement that the Township maintain shade trees planted by a developer. A copy of the amended ordinance is included as Attachment One.

11. TREE CARE DISASTER PLAN

No formal Tree Care Disaster Plan currently exists for the Township of Howell. Located at the edge of the Pine Barrens, wildfire is a very real threat. There are portions of the Township that contain significant concentrations of pine cover. This cover type is conducive to fire reaching the crowns of the pine trees. These crown fires can be fast-moving and devastating. Fire in the northeastern part of the township where Naval Weapons Station Earle contains significant amounts of naval ordinance might also be a reason for concern. In addition, there are areas in the southern part of the Township at extreme risk for fuel hazard. The NJ Forest Service has a program, Firewise Communities (www.nj.gov/dep/parksandforests/fire/firewise.htm), which assesses the danger in a community and recommends steps that can be taken to mitigate the danger.

There are other disasters that could be looked at with an eye toward preparation. A good reference for managing tree disasters is "Storms Over the Urban Forest" at <a href="www.na.fs.fed.us/spfo/pubs/uf/sotuf/s

12. INSECT AND DISEASE MANAGEMENT

As in many forested communities, the best protection from insects and disease is a diverse population. It is recommended that no one species comprise more than 5% of the total street tree population. Many pests are specific to one or a limited number of species. By having a diverse population, the pest tends to move more slowly because it does not have an endless supply of closely spaced susceptible hosts. The overall damage will be limited to the favored species leaving the remainder of the population in tact. If this is only 5% of the population, that is much more tolerable than the total catastrophe encountered in the Midwest when Dutch Elm disease swept through the towns that had lined their streets predominantly with American elms. There are many other examples of pests devastating large homogenous tree populations, such as chestnut blight, emerald ash borer, and southern pine beetle among others.

Typically, there is little money or will to keep pests in check by the application of pesticides to public trees. State sponsored gypsy moth suppression is a notable exception. Rarely is it necessary to apply pesticides to street trees to maintain their health. Given the fact that pesticide application is not likely to occur it is all the more important to guard against pest outbreaks with a diverse population. This is not to say that one street cannot be planted to all of the same tree. Just don't plant multiple streets with the same species so they become a large component (greater than 5%) of the street tree population. Diversity will suppress major pest outbreaks and typically confine losses to a small proportion of the street tree population. No trees are immune from pest attacks. (See Foreward on page 2 regarding the use of native plants.)

Diversity also limits damage due to other causes. Bradford pear to tends to split when it becomes about 20 years old because of poor branch structure. Ginkgo is fairly resistant to pest attacks but some develop fruit when they become about twenty years of age. This fruit when it rots has a very offensive odor (some say rotten butter, others dog excrement, but almost all agree it stinks!). Imagine the problems with half your town planted to ginkgo if half of them began producing fruit! Finally, not all trees live to be the same age. Smaller stature trees tend to be shorter lived than larger stature trees. A mixture of small stature and large stature trees will stagger the time when they mature and die. Many towns in New Jersey planted large numbers of Norway maples in the middle of the last century. In 50 years, a large proportion of the trees died off leaving huge gaps in the street tree population and taxing the ability of towns to remove the large number of dead trees. We need to learn from these past mistakes and not allow situations to manifest themselves in the coming decades because of poor planning. We are dealing with a resource that is likely to outlive us. It deserves proper planning.

13. STATEMENT OF TREE BUDGET (2015)

Item	Expense			
Arbor Day celebration	\$1,172			
Volunteer Services:	25,704			
Shade Tree Commission members				
Girl Scouts & leaders Arban Daviers and Jones Arban Daviers				
Arbor Day speakersOther volunteers				
1020 hours @ \$25.20/hour				
1020 110013 @ \$25.20/11001				
Department of Public Works Tree Related Expenses				
Employee wages – tree crew staff	\$113,418			
Administrative staff	\$39,127			
Materials & supplies	\$2,500			
Tree waste disposal, including logs, brush, and leaves	\$14,400			
Wages for leaf/brush pickup and disposal for spring and fall	\$461,840			
Contracted Removal of Trees	\$6,750			
Shade Tree Commission Related Expenses				
Community Outreach	\$1,265			
Conferences	\$ 770			
Dues	\$ 190			
Tree City USA Supplies	\$ 660			
Total expenditures from all sources noted	\$667,796			

14. STATEMENT OF PLAN IMPLEMENTATION

2017

- Obtain core training for at least one additional individual (see Section 7).
- Remove trees in sections of town in cooperation with JCP&L to reduce sidewalk heaving and interference with electrical conductors.
- Investigate wildfire hazard potential by contacting NJ Forest Fire Service Firewise Communities program.
- Contact tree related volunteers to speak at school(s) on Arbor Day (see section 4).
- Write tree related article for one edition per year of Howell Community Connection.
- Invite NJ Shade Tree Federation representative to a Township Council working group meeting to share current reporting, weaknesses, opportunities and threats related to the impending incursion of emerald ash borer (EAB) within Monmouth County.
- Extend a working collaboration relationship with the Monmouth County Shade Tree Commission.
- Determine forested areas of importance for tree canopy cover.
- Determine open areas that can be reforested.
- Provide 8 CEU training credits to at least two shade tree personnel.
- File NJ Shade Tree and Community Forestry and Assistance Act Annual Accomplishment Report.

2018

- Provide a list of forested areas of importance to the Township Planning and Zoning Boards.
- Plan reforestation efforts of areas identified in 2017 lacking forest cover.
- Assess guest speaker program and continue Arbor Day speakers.
- Award a contract to survey and inventory ash trees. Provide estimated cost to remove trees over a planned period.
- Write tree related article for one edition of Howell Community Connection.
- Maintain copies of previous articles on website.
- If fire hazard potential warrants, develop plan with NJ Forest Fire Service for mitigation of effects of wildfire.
- Provide 8 CEU training credits to at least two shade tree personnel.
- File NJ Shade Tree and Community Forestry and Assistance Act Annual Accomplishment Report.

2019

- Continue reforestation of low canopy coverage areas.
- Continue Arbor Day Speaker program.
- Inspect street trees (windshield survey) for hazard trees.
- Expand s shade tree information on the Township website to include answers to common questions about trees, and suggestions from Firewise program.
- Write tree related article for one edition of Howell Community Connection.
- Maintain copies of previous articles on website.
- Provide 8 CEU training credits to at least two shade tree personnel.
- File NJ Shade Tree and Community Forestry and Assistance Act Annual Accomplishment Report.

2020

- Continue reforestation of low canopy coverage areas.
- Continue Arbor Day Speaker program.
- Expand shade tree information on the Township website to include answers to common questions about trees.
- Write tree related article for one edition of Howell Community Connection.
- Apply for CSIP grant for next five-year CFMP.
- Provide 8 CEU training credits to at least two shade tree personnel.
- File NJ Shade Tree and Community Forestry and Assistance Act Annual Accomplishment Report.

2021

- Continue reforestation of low canopy coverage areas.
- Continue Arbor Day Speaker program.
- Continue hazard tree inspection program.
- Expand shade tree information on the Township website to include answers to common questions about trees.
- Write tree related article for one edition of Howell Community Connection.
- Draft and submit next five-year CFMP.
- Make presentation to Mayor/Council on important tree matters.
- Provide 8 CEU training credits to at least two shade tree personnel.
- File NJ Shade Tree and Community Forestry and Assistance Act Annual Accomplishment Report.

15. COMMUNITY STEWARDSHIP INCENTIVE PROGRAM

1.	Training:		
	• Goal 2		
2.	Community Forestry Ordinance Establishment:		
	 Section 10		
3.	Public Education and Awareness:		
	 Goal 3		
4.	Arbor Day:		
	• Section 4		
5.	Tree Inventory:		
	 Section 3		
6.	Hazard Tree Assessment:		
	 Section 3		
7.	Storm Damage Assessment:		
	 Section 11		
8.	Tree Maintenance and Removals:		
	 Goal 4		

9.	. Insect and Disease Management:		
	•	Section 12	
10	10. Wildfire Protection:		
		Section 3 6 Section 14 18	
11. Tree Planting:			
	•	Section 36-9	
12. Tree Recycling:			
	•	Section 9	
13. Sidewalk Maintenance Program:			
	•	Goal 4	
14. Storm Water Management:			
	•	Section 37	
15. Other			

ATTACHMENT ONE

Amended Shade Tree Regulation, Township of Howell Chapter 2-43 (I)

Effective date: November 6, 2016

- I. Shade tree regulations.
- (1) No person shall plant any shade tree, ornamental tree or shrubbery within any public highway, park, parkway or municipally owned land except as specifically permitted by the Shade Tree Commission. In all other cases, such plantings shall be accomplished only by the Shade Tree Commission or by the Township Engineering, Planning and Land Use Development and Environmental Protection Department or the Public Works Department, as the Shade Tree Commission may direct.
- (2) No Township department, agency, bureau or developer shall plant any shade tree, ornamental tree or shrubbery within any public highway, park or parkway without first submitting for approval the plans for such planting to the Shade Tree Commission. The Shade Tree Commission may delegate such approval to the Township Engineering, Planning and Land Use Development and Environmental Protection Department or the Public Works Department. Upon the completion of a planting by a Township department, agency or bureau, such department, agency or bureau shall report such completion to the Shade Tree Commission, noting any deviations from the plan approved.
- (3) The developer is responsible for the installation of all street shade trees and landscaping in accordance with the approval plan by the Shade Tree Commission.

 [Amended 10-17-2016 by Ord. No. 0-16-19]
- (4) Performance and maintenance guarantees.
- (a) Prior to the recording of the final subdivision plats or as a condition of final site plan approval or as a condition to the issuance of a zoning permit in conjunction with Chapter 188, Land Use, Article VII, the applicant or developer of any tract of land or building site within the Township shall be required to post a performance guarantee in favor of the municipality in an amount not to exceed 120% of the cost of installation.
- (b) Provision for a maintenance guarantee to be posted with the governing body pursuant to Subsection I(3) above in an amount not to exceed 20% relative to the cost of the improvements which shall include landscaping and shade trees.
- (5) A certificate of occupancy shall not be issued until all the requirements of this section have been met and landscaping planted, unless it is not the proper season to plant the landscaping. This landscaping shall be completed during the first planting season after the initial certificate of occupancy.
- (6) Any tree, ornamental tree or shrub within the jurisdiction of the Shade Tree Commission planted by any person, developer, the Shade Tree Commission or the Township or any department, agency or bureau thereof shall be between 10 feet and 15 feet behind the curb and shall be in any event no more than 20 feet from the curb or sidewalk.
- (7) The Township Code Enforcement Officer and the Police Department are charged with the duty to enforce the regulations contained herein.

Howell Township Community Forestry Management Plan 2017 - 2021

(8) Violators of the regulations of the Shade Tree Commission, upon conviction thereof, shall be subject to a fine of not more than \$200. Each act contrary to the regulations of the Shade Tree Commission shall constitute a separate and distinct offense subject to the penalty provided herein.

[1] Editor's Note: Subsection 2-7.4, Paragraphs a through i, were previously codified as Subsections 2-25.1 through 2-25.9 of the Revised General Ordinances of the Township of Howell.