Community Forestry Management Plan
Municipal Information Form

Borough of Manasquan
County of Monmouth

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Organization Name: Manasquan 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: February 2015

Time period covered in Management Plan: 2015-2019

Check off the Community Stewardship Incentive Program (CSIP) practices identified in the management plan.

☑ #1 Training  ☑ #2 Ordinance Establishment
☑ #3 Public Education and Awareness  ☑ #4 Arbor Day Activities
☑ #5 Tree Inventory  ☑ #6 Hazard Tree Assessment
☑ #7 Storm Damage Assessment  ☑ #8 Tree Maintenance & Removals
☑ #9 Insect and Disease Mgt.  ☑ #10 Wildfire Protection
☑ #11 Tree Planting  ☑ #12 Tree Recycling
☑ #13 Sidewalk Maintenance  ☑ #14 Storm Water Management
☑ #15 Other

Official Use only  Certification

The above named community has made formal application to the New Jersey Forest Service. I am pleased to advise you that after our review, the NJ 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 Borough of Manasquan

Community Forestry Management Plan

February 2015

prepared by

Manasquan Shade Tree Commission
and
Kevin L. Scibilia
New Jersey Certified Tree Expert # 279
Manasquan Community Forestry Management Plan

Introduction

This is the first Community Forestry Management (CFMP) for Manasquan. As a seaside community, the challenges faced by Manasquan such as salt spray, sandy soils and high winds are very different from inland communities. However, the Borough still needs basic information on how to best manage their urban forest and tree resources.

Completion of an inventory will be a major focus for the CFMP. Information derived from the inventory will be the basis for species selection in future plantings, maintenance of street trees, addressing sidewalk-tree conflicts, and other planning essentials. The inventory can also add insight into performance of tree species that are under-represented in the tree population.

I look forward to working with the commission in the future to help them realize their objectives and continue to make Manasquan a truly pleasant place to live and visit.

Kevin L. Scibilia
NJ Certified Tree Expert #279
November 2014
2. INTRODUCTION

A. Mission Statement

The mission of the Shade Tree Commission is to enhance the quality of life in the Borough of Manasquan through the benefits of trees, while being mindful of public safety. Working with the Borough Administration and the Department of Public Works, we strive to plant and maintain healthy trees along our streets in the Borough right-of-way, and also within our parks and public spaces.

B. Goals and Objectives

Goal 1: Maintain the safety of the Borough’s shade trees on public property.

Objectives

- Continue pruning and removal program for street trees and park trees.
- Conduct a hazard tree survey to determine amount and location of hazard trees.
- Obtain training in hazard tree identification for DPW or STC.
- Pursue methods of dealing with heaved sidewalks.
- Do not plant trees in planting strips less than 4 feet in width.

Goal 2: Develop a training and awareness program for residents.

Objectives

- Continue to post informational articles on Shade Tree Commission web page possible subjects, salt tolerant trees, Emerald Ash Borer
- Accrue 8 CEUs annually for shade tree commission
- Train one commission member and one municipal employee in CORE
- Promote Residential Tree Program.
- Maintain Tree City USA status.
- Continue Arbor Day celebration.

Goal 3: Conduct a tree inventory and keep it current.

Objectives

- Plan and budget for full inventory; decide if it will be done by STC or contractor.
- Determine data to collect by asking questions that you want the inventory to answer.
- Seek funding for training of STC for data collection or to hire a contractor.
Goal 4: Maintain and increase the Borough’s tree canopy via tree planting.

Objectives
• Apply for CSIP and other funding available through NJ Forest Service Community Forestry
• Develop a list of salt tolerant trees and test which do well in Manasquan (completed as of this writing)

Goal 5: Investigate methods to alleviate or repair sidewalk heaving without damaging tree roots or removing the tree.

Objectives
• Plant smaller stature trees in planting strips less than 36 inches wide.
• Investigate planting inside the sidewalk where there are narrow planting strips (<3 feet).
• Investigate concrete grinding to remove tripping hazards 2” or less in height.

C. Liability Statement

Trees in the Borough of Manasquan are dominant in the landscape and create a pleasing environment for living, work, and play. Although street trees are an asset to the community, it is inevitable that they require care and maintenance as they mature. Eventually they will have to be replaced. Care and maintenance, in addition to planting the proper tree in the proper location can help ensure community trees not only contribute to the environmental and economic vitality of the area, but also reduce the potential hazards to public safety. The Borough 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 on the greatest need and outline a step-by-step action plan to achieve a healthy forest with commensurate reduced risks to public safety.

The Borough of Manasquan believes by taking the logical steps outlined in the plan, it will garner public support for plan implementation and demonstrate long-term benefits to the environment and public safety. The Borough also wants to become more proactive in the management and care of its trees. Through inventory and hazard assessment, the Borough will initiate corrective action by the Public Works Department, contracted professionals, or the county prior to structural tree failures. The Borough also wants to increase homeowner and school children’s awareness, appreciation and knowledge of trees to enable them to contribute well-informed and meaningful efforts toward the health and sustainability of the Borough’s trees.

Following this Community Forestry Management Plan will demonstrate that the Borough of Manasquan is devoting reasonable levels of resources in a planned manner to reduce the number of tree-related accidents, and thereby, reduce its exposure to liabilities and increase public safety.
3. COMMUNITY OVERVIEW

The Borough of Manasquan comprises 2.53 square miles (about half land area, half water) and is adjacent to the Atlantic Ocean at the southeastern tip of Monmouth County, New Jersey. Being a beach community, the population varies by season with approximately 5,800 year-round residents and up to 20,000 summer visitors.

Casual observation of the street trees and private trees shows stunting of tree growth as one approaches the ocean. Within three blocks of the ocean, there are essentially no trees. As one approaches the ocean, only certain trees will tolerate the harsh winds, salt spray, and sandy soils. Evidence of this is east of Sims Drive where Japanese black pine, red maple holly and celery pear tend to be performing best. Choice of suitable tree species to plant is more limited than in more inland communities. Nonetheless, Manasquan has a surprising diversity of species of public and private trees. I was very surprised to see multiple tulip poplar 30” in diameter at breast height within ½ mile of the ocean along Marcellus Street. These trees were approximately 90 feet tall and showed no evidence of storm damage. Arboricultural dogma says that tulip poplar grows best on deep loam soils and has a tendency toward storm damage. These trees obviously don’t fit the mold. Another interesting observation is at the corner of Pine and Warren streets along the railroad tracks where black gum, post oak and blackjack oak are growing in an unmanaged area. These species are recommended to be planted in the areas of environmental stress nearer the ocean.

A lack of a street tree inventory makes management of the resource very difficult. Casual observation indicates that London plane, callery pear, and red maple comprise a substantial portion of the street tree population. Diversity of the street tree population is a goal to reduce the impact of pests and also to help with managing the resource. (see following section on diversity). Many lawn extensions are less than 3 feet wide further adding to the stress of the trees. It is no surprise that sidewalk heaving has been problematic in the community. Trees may be planted inside the sidewalk, with permission of homeowners if it is politically feasible. This allows for more unobstructed rooting space and is expected to decrease sidewalk heaving.

Diversity

Most pests are specific to a particular type of tree or at least cause considerably more damage on one tree species verses another. Some examples are Emerald ash borer only affects species of ash trees. Bacterial leaf scorch, while affecting many different species, is most devastating on pin oak in New Jersey. Naturally, the more trees you have that are susceptible to that particular pest, the bigger your problem will be. History has shown us that monoculture or a lack of diversity is an invitation to disaster (Dutch Elm Disease, Chestnut blight are large scale disasters that rolled through populations where individuals of the same species formed effective monocultures).

A simple solution to the problem is to assure a diverse street tree population. This is not to say that one street cannot be planted to all the same tree. Just don’t plant multiple streets with the same species so they become a large component (greater than 5%) of the total 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.

Diversity also limits damage due to other causes. Bradford pear tends to split when it becomes about 20 years old because of poor branch structure. Ginkgo is fairly resistant to pest attacks, but female trees develop fruit when they become about twenty years of age. When this fruit rots, it has a very offensive odor (some say rotten butter, others, dog excrement, but 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 the resource 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 careful consideration.

Tree Inventory

Currently, Manasquan has neither a street tree inventory nor a hazard tree inventory. A full tree inventory would capture the hazard trees so a separate hazard tree inventory may not be required initially. It is recommended that inspection for hazard trees occurs every two years. With essentially one square mile of land area, a full inventory could be completed relatively quickly and provide substantially more information than just a hazard tree inventory. Information that would be of interest includes, species, diameter, location, amount of deadwood, planting strip width, presence of primary conductors insect or disease pressure, as well as others. This information would be useful in planning for diversity of the street tree population, locating trees that need maintenance or removal, determining the relative ages of groups of trees that comprise the street tree population. All this information can be used to predict maintenance and planting needs in the future and to better select plants that perform well in the salty environment near the ocean.

Street Tree Ordinance

Manasquan currently has a comprehensive street tree ordinance that is serving its needs. (See attachment 2)

Ash Trees and Emerald Ash Borer (EAB)

Surprisingly, there are a fair number of ash trees both public and private in Manasquan. One would not expect to see so many ash growing in the coastal plain. Exactly how many ash are present is unknown and that lack of information further reinforces the need for a street tree inventory. All species of ash are in peril of attack and death by the invasive Emerald Ash Borer that has now arrived in New Jersey. Plans for how to effectively manage this impending scenario are imperative.
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First, an actual count of ash trees in the Borough is needed. Only then can plans be made to deal with either the treatment or the death of ash trees as the infestation spreads out from Somerset County NJ where EAB was detected in May.

The Emerald Ash Borer is poised to create an insect disaster in New Jersey over the next few years. The insect population typically takes a few years to build to levels that will kill essentially all ash trees that are not treated with insecticides. Treating all the trees is neither financially practical nor desirable since the trees will be attacked and killed if treatment is discontinued.

Soils

Soils in the Borough can vary greatly from pure sand near the ocean to heavy clays farther inland. It helps to think of the Borough of comprising two distinct planting districts. Areas within five blocks of the ocean require trees that are drought tolerant, tolerant to salt spray, and perform well in windy conditions. Other areas of the Borough require trees that are tolerant of heavy, wet soils. It is common to see black gum, willow oak and red maple doing well in the natural areas. Many of these trees no doubt are native trees that grew naturally on the lands in the absence of development.

Sidewalks

Heaved sidewalks that pose a tripping hazard are a problem in the Borough. This is a common problem in communities and has several methods to address it. The most common and least desirable method of dealing with roots lifting sidewalks is to grind or cut roots and pour a new concrete slab. This process can kill the tree outright, or cause the tree to topple by physical loss of support or the introduction of decay fungi into the root system which reduces physical support in the near future. Another method of addressing the problem is to curve the sidewalk around the base of the tree avoiding most of the major support roots. This method can be better than just cutting roots close to the trunk but still has some damage to the root system. Some municipalities object to the sidewalk not being straight, especially if it must go off the right-of-way to pass the tree. If the sidewalk width must be narrowed when curving around the tree, it should be noted that the minimum width to comply with the Americans with Disabilities Act is 36 inches. Other considerations are discussed in:
In areas where the lifted edge of the concrete is less than 2 inches it is possible to use concrete grinding to eliminate the tripping hazard. Some municipalities have their own concrete grinding machine and it may be possible to barter services if the Borough is interested in trying this method.

Another method of dealing with heaved concrete slabs is to replace the slab with concrete pavers or bricks that can be laid to bridge over the top of roots. The appeal of pavers is that they can be sloped to go over surface roots much more easily than can concrete. The incline would be no more than that of a handicap ramp at a street corner. Maintenance of pavers could also entail picking out the offending pavers and either adjusting the stone dust base or cutting the paver to a thickness where it will be even.
Special considerations

Salt tolerance of a planted tree is a major consideration as one approaches the ocean. There are two aspects of salt tolerance to consider: salt spray deposited on leaves and salt deposits in the soil. Areas that experience saltwater flooding must consider salt tolerance in the soil as well as deposits on the leaves. Virginia Tech has a good list of trees and their relative tolerance to both conditions at http://pubs.ext.vt.edu/430/430-031/430-031.html. Some of the trees are nut-producing and would not be appropriate for street side planting. However, shagbark hickory in the park is likely not to have any nuts survive the appetite of squirrels who favor shagbark over all other hickories. Kentucky coffeetree would be an interesting addition but again the seed pod of female trees (males do not produce seed) could be a problem in street plantings. Male clones of Kentucky coffeetree would avoid this problem. Sweetgum is another tree that, because of its seed, would not be appropriate for street side planting unless the sterile “rotundoloba” variety is chosen.

Oaks typically are not considered to be poor street side plantings because of their seed. Missing from the list is overcup oak which I have personally seen covering in salt spray and no worse for it. Post oak, the small stature oak form the pine barrens, would also be a good candidate for the harsh environment closer to the ocean. Where evergreens are appropriate, one typically sees only Japanese Black pine. It may be interesting to try baldcypress in a low area near the ocean. Not only is it tolerant to salt spray but it tolerates soil salt as well. Perhaps Manasquan could apply for a CSIP grant to test three of several different species in difficult environments with the idea of sharing the results with other ocean side communities.

At this time, storm damage assessment is not a priority compared to the needs for an inventory and keeping pace with maintenance of the street tree population, especially addressing the need to identify hazard trees through an inventory and to address those trees identified as hazards.

Insect and disease management are expected to be addressed though species diversity. Once the inventory is completed, Manasquan can work to have no species comprise more than 5% of the street tree population. Most pests have a limited number of host species and a diverse population can limit the impact of pest outbreaks.

Tree recycling consists of making chips available to residents. Wildfire is not a consideration given the forest cover type in Manasquan. Likewise, there are few opportunities to address storm water management other than leaf pick up that is continuing.

Given the cover type and fragmentation of the tree resource in Manasquan, wildfire is not considered to be a significant concern for this community.

Stormwater management will not be a focus of this plan over the next five years.

There are no direct ties to Master Plan (November 2003) and only passing mention of it being “appropriate to protect and maintain trees” in the Open Space plan dated September 2003. The Manasquan Master Plan recognizes the “need for expansion of the Master plan to include
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historic preservation, recreation, community facilities, and conservation plan elements. These recommended elements have been the topic of discussion for the Planning Board and other Borough organizations for a number of years. However, according to MLUL, these elements are considered optional as deemed appropriate by the municipality. To date, Borough has only developed a comprehensive Open Space Plan dated September 2003.”

The Open Space Plan has brief mention of street trees on page 14 under Land Use:

“Manasquan has been able to maintain the same special seashore community atmosphere that attracted visitors here one hundred years ago. Protection of this sense of place is extremely important to the current residents of Manasquan. To that end, it is appropriate to work to protect and maintain the prevailing character and unique sense of place of the Borough, including diverse residential neighborhoods, historic features, scenic vistas, and landscapes, street trees, and hedgerows…”

It is hoped that with this first Forestry Management Plan, the Commission will be positioned to influence the content of the next Master Plan or Open space Plan to contain more information on both street trees and private trees within the Borough.

4. COMMUNITY FORESTRY PROGRAM ADMINISTRATION

The Mayor and Council are responsible for Manasquan’s trees and the decisions concerning investments in new trees, removals, policy including ordinances, and leaf pick up and maintenance. The Council is advised and assisted by the Shade Tree Commission, Borough administrative personnel and the Department of Public Works.

Commission Members

Edgar Hyer Member
Brian Mallin Chairman
John Ryan Member
Ray Shinn Member
Rita Coleman Member
Tom Lozinski Alternate
Frank Servido Alternate
Neil Paulsen Mayor’s designee
Public inquiries regarding trees typically arrive via email on the Shade Tree Website or by voice mail on the Borough’s telephone system. This system allows most tree inquiries to arrive directly to the Commission without having to go through the clerk or DPW. Occasionally the clerk will take a message and send an email to the Commission. Calls that come to the police are referred to the Clerks office. Each month on a rotating basis, one member of the Commission is the on call person responsible for checking the voice mail and email boxes for messages and investigating the inquiry.

Maintenance is completed by Department of Public Works with help from contracted tree experts and utility line clearance crews as required.
5. COMMUNITY MAP
See Attachment 1.

6. TRAINING PLAN

Training overview
Training needs for volunteers are varied for a relatively young commission. Some of this training can be attained through attending the New Jersey Shade Tree Federation meeting held annually in October. If the commission wants to complete a street tree inventory utilizing their members, some more rigorous instruction may be required in more difficult subject areas such as tree identification, or hazard tree evaluation. Courses are available on some of these topics through various instructors and educational venues. See http://www.state.nj.us/dep/parksandforests/forest/community/pdf_files/recommended_ceu_courses.pdf for a listing of some pertinent instruction. Employees of the Department of Public Works (DPW) may need professional arborist training to enhance their professional skills, as they may do much of the Borough’s routine pruning and removals.

A number of municipalities in New Jersey have utilized onsite seminar presentations to enhance the skills of their Shade Tree members and DPW workers. Feedback from these towns has cited the advantages of personalized field instruction and small group interaction, as well as Q&A sessions. This type of instruction is particularly helpful with tree identification by walking the streets and having live trees to identify and compare to one another. Other field presentations that benefit from onsite delivery include the following topics:

- Pruning small trees for structure and clearance
- Electrical Hazards identification of primary, secondary and phone/cable lines
- Planting balled and burlap and container planting demonstrations
- Hazard Tree Identification, common causes of hazard and recognition of signs

Core training and continuing education units (CEU's)
All current members of the Manasquan Shade Tree Commission are core trained. In addition, one municipal employee has been CORE trained.

There is interest in continuing education in pruning for structure, tree identification and hazard tree identification. Tree identification would take multiple sessions to present the material and would most likely span two or more years. On site field education is preferred and has begun with pruning as of November of 2014.
7. PUBLIC EDUCATION/AWARENESS/OUTREACH

Members of the Shade Tree Commission are interested in increasing public awareness beyond the current webpage and Arbor Day Celebration. Manasquan runs a Resident Tree Program that allows residents or businesses to purchase a tree that is planted for them for a reasonable cost. This is a full service program that provides an appropriate plant, delivered and properly planted in front of the residence.

Arbor Day could be further publicized in the schools with a guest speaker program around Arbor Day. The Shade Tree Commission can make contact with local people involved with trees or tree products. This could include landscapers, nurserymen, arborists, wood workers, naturalists, master gardeners, Christmas tree growers, etc. These experts can come in to talk to students in school. If this were combined with the third grade seedling tree program run by the NJ State Nursery, it would make a great impression on the children who are sure to tell their parents about it (as well as task them to find a place to plant the tree).

The Shade Tree Commission webpage can be expanded to contain an article of interest or links to articles that can be catalogued and searched as more articles accumulate. The existing posts on planting can be supplemented with the completed planting list with highly salt-tolerant trees in the “ocean zone” and somewhat salt-tolerant trees farther inland. An article on why diversity is important in the urban forest and some underutilized trees can be suggested. Two or three articles per year would keep people coming back to the page periodically to see what is new.

New plantings can also be an opportunity for public outreach and education. Asking the homeowner to “adopt” the newly planted tree and to water it for the first year could be supplemented with written instructions on proper care. Cautioning against string trimmers near the tree can be as beneficial as watering. A small sign/tag describing the tree and its characteristics placed on or in front of particularly prominent trees or dedicated trees attract attention and interest. They can also encourage people to plant more of those trees if they like the tree that they see.
8. STATEMENT OF TREE BUDGET

Estimated 2015 Budget for tree care

Department of Public Works/ Shade Tree Commission

- Removals $12,500
- Pruning $23,000
- Training $850
- Volunteer Time (144 hours X $25.91/hour) $3,731

Total Tree Budget $40,081
9. STATEMENT OF PLAN IMPLEMENTATION

2015
- Develop list of appropriate street trees for ocean-side community (completed 4/14).
- Determine type of tree inventory wanted and move to begin process (training or hire a consultant to complete the inventory).
- Apply for CSIP Grant for completing a street tree inventory.
- Train volunteers to prune newly planted trees for structure (complete 11/16)
- Maintain Tree City USA status
- Plan Arbor Day Event.
- Write an article of interest and post on web page/newspaper.
- Train two Shade Tree Commission Members in Continuing Education Credits.
- File NJ Shade Tree and Community Forestry and Assistance Act Annual Accomplishment Report

2016
- Maintain Tree City USA status
- Plan Arbor Day Event.
- Begin/finish street tree inventory of Manasquan.
- Continue to prune newly planted trees for structure.
- Continue to promote Residential Tree Planting Program
- Write an article of interest and post on web page/newspaper.
- Seek CSIP or other funding to evaluate salt tolerance of various trees.
- Try concrete grinding, and/or install pavers, and/or curve sidewalks to address heaving
- Continue the street tree inventory/hazard-tree inspection and maintenance program.
- Obtain training in, tree identification, or tree hazards for appropriate DPW staff or Shade Tree Commissioners.
- File NJ Shade Tree and Community Forestry and Assistance Act Annual Accomplishment Report

2017
- Continue addressing trees in hazard tree inventory/tree maintenance program
- Continue to prune newly planted trees for structure.
- Maintain Tree City USA status
- Plan Arbor Day Event arrange volunteer speakers to present tree topics.
- Investigate concrete grinding as method of alleviating heaved sidewalks
- Continue to train volunteers in tree identification.
- Continue to promote Residential Tree Planting Program
- Seek CSIP or other funding for planting salt-tolerant trees
- Write an article of interest and post on web page/newspaper.
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- Continue the hazard-tree inspection and maintenance program.
- DPW staff or Shade Tree Commissioners.
- File NJ Shade Tree and Community Forestry and Assistance Act Annual Accomplishment Report

2018
- Continue addressing trees in hazard tree inventory/tree maintenance program
- Maintain Tree City USA status
- Plan Arbor Day Event arrange volunteer speakers to present tree topics.
- Investigate planting inside walk as method of alleviating heaved sidewalks
- Continue to prune newly planted trees for structure.
- Continue to promote Residential Tree Planting Program
- Write an article of interest and post on web page/newspaper.
- Seek CSIP or other funding for tree planting
- Evaluate performance of salt-tolerant trees planted last year.
- Apply for CSIP grant for next Community Forestry Management Plan
- Continue the hazard-tree inspection and maintenance program.
- Continue training in, tree identification, or tree hazards for appropriate DPW staff or Shade Tree Commissioners.
- File NJ Shade Tree and Community Forestry and Assistance Act Annual Accomplishment Report

2019
- Continue addressing trees in hazard tree inventory/tree maintenance program
- Maintain Tree City USA status
- Plan Arbor Day Event arrange volunteer speakers to present tree topics.
- Place list of recommended trees, salt tolerance and planting width on web page.
- Continue to prune newly planted trees for structure.
- Continue to promote Residential Tree Planting Program
- Write an article of interest and post on web page/newspaper.
- Seek CSIP or other funding for tree planting
- Draft and submit next five-year Community Forestry Management Plan.
- Continue the hazard-tree inspection and maintenance program.
- Obtain training in tree maintenance DPW staff or Shade Tree Commissioners.
- File NJ Shade Tree and Community Forestry and Assistance Act Annual Accomplishment Report
- Train two Shade Tree Commission Members.
- Evaluate treatments of heaved sidewalks done in 2015, continue if satisfactory.
- File NJ Shade Tree and Community Forestry and Assistance Act Annual Accomplishment Report
DISCUSSION OF PLAN IMPLEMENTATION

Beginning in 2015, plans will be made for a complete street tree inventory and the Commission needs to evaluate costs for an in-house inventory versus a contracted inventory, as well as data to be collected. The timetable for completion will most likely be longer for an in-house inventory. Using a Certified Tree Expert to complete the inventory will most assuredly result in more accurate data and may give valuable insight that only inspection by one person can provide. For instance, an expert can better associate deviations from “normal” urban forestry conditions and apply those community-wide. Several volunteers are less likely to detect such aberrations and note them. As the full inventory is completed, new hazard trees should be addressed as they become known. In addition, maintenance and tree planting issues should be managed throughout the 5-year plan.

Throughout the 5-year plan, the Shade Tree Commission should continue to enhance their communications efforts and engage the community on various aspects of tree care. One tool that can be utilized more fully is the webpage, which should receive regular updates from the Commission. These updates can also be included in local print media, referencing the webpage for further information. Tree City USA status is another excellent way to attract interest and engage the local community. Of course, part of maintaining this status is an Arbor Day celebration, which further serves to enhance the local tree program.

Training in the early years of this plan is going to start with pruning small trees for structure and clearance to walks and roadways. Further training will be dependent on the inventory and whether it will be done in-house. If an in-house inventory is to be conducted, training will be heavily weighted toward tree identification, tree hazards, and the process of collecting data for the inventory (measuring DBH, identification of primary electric conductors vs. telephone lines, etc, as well as entering the data into computer software).

Additional training topics that may be of interest include:
- Tree Selection
- Proper Tree Pruning
- Tree Planting Techniques
- Soils
- Insect and Disease Identification
- Tree Biology
- Tree Identification
- Beneficial Insects / Biological Controls
- Municipal Tree Budgets
- Tree Inventories
- Tree Maintenance
- Storm / Emergency Tree Management Plans
- Tree / Sidewalk Conflicts
- Wood Recycling / Leaf Composting
- Public Relations / Community Involvement
There are many items that have to be done to lay the groundwork for a successful organization. Although not a stated objective, in this plan, it is the desire of the Shade Tree Commission to strengthen ties with the planning and zoning boards in the next five years, particularly as their accomplishments make them a more potent aspect of Borough government. Likewise, at the revision of the Master Plan and the Open Space Plan, ties to the Shade Tree Commission and the Community Forestry Management Plan are expected to strengthen.
10. COMMUNITY STEWARSHIP INCENTIVE PROGRAM

1) **Training** Page 10, Section 6; Pages 13-15, Section 9;

2) **Ordinance** Page 5, Section 3; Appendix 2

3) **Public Education and Awareness** Page 11, Section 7; Pages 13-14, Section 9

4) **Arbor Day Activities** Page 11, Section 7; Pages 13-14, Section 9

5) **Assessment/ Inventory** Page 5, Section 3; Page 13-14 Section 9

6) **Hazard Tree Assessment** Page 5, Section 3; Pages 13-14 Section 9

7) **Storm Damage Assessment** Page 7, Section 3

8) **Tree Maintenance** Page 2, Goal 1; Page 12, Section 8; Pages 13-14 Section 9

9) **Insect and Disease Management** Pages 4,5,7, Section 3

10 **Wildfire** Page 7, Section 3

11) **Tree Planting** Page 7, Section 3; Page 11, Section 7

12) **Tree Recycling** Page 7, Section 3

13) **Sidewalk Maintenance** Page 6 Section 3; Pages 13-14, Section 9

14) **Storm Water Management** Page 7, Section 3

15) **Other**
ATTACHMENT 1.
MAP OF MANASQUAN BOROUGH, NJ
CHAPTER 23 SHADE TREES

23-1 PROTECTION OF TREES.

23-1.1 Injuring, Destroying or Misusing Trees.

It shall be unlawful for any person without the written permit of the Shade Tree Commission,* to cut, break, climb or injure any tree or portion of tree planted or growing in any public highway within the Borough, or cause, authorize or procure any person to cut, break, climb or injure any such tree or any portion of any tree or plant planted or growing in any Borough park or parking strip within the Borough, or cause or authorize or procure any person to cut, break, climb or injure any such tree or plant or any portion of such tree or plant; or to injure, misuse or remove, or cause, authorize or procure any person to injure, misuse or remove any device set for the protection of any tree or plant in any public highway or Borough park. Any person, firm or corporation desiring for any lawful purpose to cut, prune or trim any tree in any public highway of the Borough may apply to the Shade Tree Commission, and if the judgment of the Commission, the desired cutting, pruning or trimming shall appear necessary and the proposed method and workmanship thereof is such as the Commission approves, the Shade Tree Commission may thereupon issue a written permit for such work. Any work done under such written permit shall be performed in strict accordance with the terms thereof. (1972 Code § 89-1)

23-1.2 Removal of Trees.

It shall be unlawful for any person, firm or corporation to kill or remove, or cause, authorize or procure the death or removal of any tree planted or growing in any public highway, or any tree or plant planted or growing in any Borough park within the Borough. Any person desiring for any lawful purpose to take down or remove any tree in any public highway of the Borough may apply to the Shade Tree Commission, and, if in the judgment of the Commission, the desired taking down or removal shall appear necessary, the Shade Tree Commission may issue a written permit therefor. Any work done under such written permit must be performed in strict accordance with the terms thereof. (1972 Code § 89-2)

23-1.3 Exposure to Gasoline or Chemicals.

It shall be unlawful for any person, firm or corporation owning or using or having control or charge of gasoline or other substance to allow such gasoline or other substance to come into contact with the soil surrounding the roots of any tree in any public highway or any tree or plant in any Borough park in such manner as may injure such tree or plant. (1972 Code § 89-3)
23-1.4 **Destroying Trees or Plants with Gasoline or Chemicals.**

It shall be unlawful for any person owning or using or having control or charge of gasoline or other substance deleterious to tree life to allow such gasoline or other substance to come in contact with the soil surrounding the roots of any tree in any public highway or any tree or plant in any Borough park in such manner as shall kill or destroy such tree or plant. (1972 Code § 89-4)

23-1.5 **Exposure to Oil, Liquid Dye.**

It shall be unlawful for any person to cause, authorize or procure any brine, water, oil, liquid dye or other substance deleterious to tree life to lie, leak, pour, flow or drip on or into the soil about the base of any tree in any public highway or Borough park or onto a sidewalk, road or pavement therein at a point whence such substance may be lying on or be flowing, dripping or seeping into such soil, or in any other manner whatsoever injure such tree, or cause or procure such lying, leaking, flowing, dripping, seeping or injuring. (1972 Code § 89-5)

23-1.6 **Stone, Cement Obstructing Free Access of Air and Water.**

It shall be unlawful for any person, except with the written permit of the Shade Tree Commission, to place or maintain upon the ground in any public highway or Borough park any stone, cement or other material or substance in such manner as may obstruct the free access of air and water to the roots of any tree in such highway or park. Unless otherwise provided for in such written permit as above provided for, there must be maintained about the base of the trunk of each shade tree in the public highways and Borough parks at least six (6) square feet of open ground for a tree of three (3) inches in diameter, and for every two (2) inches increase of such diameter there must be at least one (1) square foot of open ground. (1972 Code § 89-6)

23-1.7 **Interfering with Employees, Agents of Shade Tree Commission.**

It shall be unlawful for any person to interfere or cause or authorize or procure any interference with the Shade Tree Commission or any of its employees, agents or servants while they are engaged in and about the planting, cultivating, mulching, pruning, spraying or removing of any tree in any public highway or Borough park or in the removing of any device attached to the tree or in such removing of stone, cement, sidewalk or other material or substance as may be necessary for the protection and care of any such trees in accordance with the requirements set forth in subsection 23-1.6 as to the area of open ground to be maintained about the base of the truck of each shade tree in the public highways and Borough parks. (1972 Code § 89-7)

23-1.8 **Electrical Wires Injuring Trees or Plants.**

It shall be unlawful for any person to cause, authorize or procure a wire or other conductor charged with electricity to come into contact with any tree in a public highway or with any tree or plant in a Borough park in such manner as may injure or abrade such tree or plant. (1972 Code § 89-8)

23-1.9 **Electrical Wires Destroying Trees or Plants.**

It shall be unlawful for any person to cause or authorize or procure a wire or other conductor charged with electricity to come into contact with any tree in a public highway or any tree or
plant in a Borough park in such manner as shall destroy or kill such tree or plant. (1972 Code § 89-9)

23-1.10 Attaching Ropes, Wires.
   It shall be unlawful for any person to attach or keep attached to any tree in any public highway or Borough park or to any guard or stake intended for the protection of such tree, any rope, wire, sign or any device whatsoever. (1972 Code § 89-10)

23-1.11 Planting Restrictions.
   It shall be unlawful for any person to plant or set out any shade tree or cause or authorize or procure any person to plant or set out any shade tree in or on any part of any public highway or Borough park without first obtaining from the Shade Tree Commission a written permit so to do or without complying in all respects with the conditions set forth in such written permit. (1972 Code § 89-12)

23-1.12 Removal or Construction of Buildings: Protection of Trees.
   During the erection, repair, alteration or removal of any building or structure within the Borough, it shall be unlawful for the person in charge of such erection, repair, alteration or removal to leave any street tree in the vicinity of such building or structure without such good and sufficient guards or protection as shall prevent injury to such tree arising out of or by reason of said erection, repair, alteration or removal. (1972 Code § 89-13)

23-2 REMOVAL OF TREES ON PRIVATE PROPERTY; MUNICIPAL TREE ESCROW FUND.

23-2.1 Purpose.
   The purpose of this section is to control and regulate the indiscriminate or excessive removal, clear cutting and destruction of trees on privately owned property, encourage the planting of new trees and control, regulate and prevent conditions which cause increased surface drainage, sedimentation and soil erosion adversely impacting the value of real estate and the public health, safety and welfare of the community. The regulations contained in this section are designed to limit such adverse impact while not interfering with the right of a property owner to appropriately remove trees in accordance with the regulations contained in this ordinance. (Ord. No. 1927-04 § 1)

23-2.2 Definitions.
   As used in this section, the following terms shall have the meanings indicated:
   Caliper shall mean standard measure of tree size for trees to be newly planted. Measurement is taken six (6) inches above the ground for trees four (4) inches in diameter or less and twelve (12) inches above the ground for trees greater than four (4) inches in diameter.
   Diameter at breast height shall mean the diameter of a tree measured fifty-four (54) inches (forestry method) above the ground level on the uphill side for existing trees. Diameter at breast height may appear as the abbreviation "DBH".
Emergency removal shall mean a removal which is necessitated by an event, whether natural or man-made, which requires the immediate removal of a regulated tree because it has been determined that such tree presents an immediate public safety hazard. This determination shall be made by the Code Enforcement Officer or his/her designee.

Regulated tree shall mean a tree, other than a diseased or hazardous tree, located in an area covered under subsections 23-2.3 and 23-2.4 of this section.

Removal shall mean any activity that results in cutting down completely or substantially eliminating a living regulated tree.

Replacement tree shall mean a tree that is nursery grade quality, balled and burlapped, not less than two and one half (2 1/2) to three (3) inch caliper with a durable label designating its genus, species and variety.

Tree shall mean any self-supporting woody plant which reaches a typical mature height of twelve (12) feet or more at maturity and has a typical DBH of four (4) inches or greater. (Ord. No. 1927-04 § 2)

23-2.3 Applicability of Regulations.

The terms and provisions of this section shall apply to vacant lots, lots where the principal structure has been demolished and lots on which the foundation to an existing building or structure is being increased by more than five hundred (500) square feet. Trees removed from a property within six (6) months prior to an application for a construction permit for a new or replacement principal structure shall be subject to the provisions of this section. Nothing contained in this section is intended to restrict a property owner's rights to remove trees on real property where no construction permit for a new or replacement principal structure is sought. (Ord. No. 1927-04 § 3)

23-2.4 Removal of Trees Unlawful; Exceptions.

Unless an exemption is established by this section, it shall be unlawful for any person to remove or cause to be removed any tree regulated under subsection 23-2.3 above, with the trunk diameter in excess of six (6) inches DBH and located a distance greater than fifteen (15) feet from the area of new construction. In the event a tree is removed as a result of new construction and having been located within the area of disturbance, the property owner or applicant shall comply with subsection 23-2.5 of this section unless otherwise approved by the Zoning Officer or Planning Board in conjunction with a land development application. Diseased or hazardous trees may be removed at the property owner or applicant's expense from any location if the condition of the tree is documented by a qualified tree expert. (Ord. No. 1927-04 § 4)

23-2.5 Replacement of Tree; Contribution to Municipal Tree Escrow Fund in Lieu of Replacement.

In the event of the removal of a regulated tree, the property owner or applicant shall be required to either replace the tree or make a contribution to the Municipal Tree Escrow Fund. The formula for replacing trees is as follows: one replacement tree of not less than two and one-half (2 1/2) to three (3) inch caliper must be planted for each tree removed with a DBH of six (6) to eighteen (18) inches and two (2) replacement trees of not less than two and one-half (2 1/2) to three (3) inch caliper must be planted for each tree removed exceeding eighteen (18) inches.
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DBH. A replacement tree must comply with the definition in subsection 23-2.2 above. (Ord. No. 1927-04 § 5)

23-2.6 Tree Information Required on Land Development Applications.
All trees with a DBH of six (6) inches or more shall be shown on the plot plan as submitted with a land development application. The application shall list all trees to be removed. Each tree to be removed shall be identified by size and species and the reason for the proposed removal shall be detailed.

On land development applications for properties having an area greater than four thousand five hundred (4,500) square feet, if there are no existing shade or ornamental trees in the front yard of the property, the Planning Board shall require the property owner or applicant to provide a shade tree or ornamental tree, or contribute to the Municipal Tree Escrow Fund. (Ord. No. 1927-04, § 6)

23-2.7 Planting Requirements.
All required trees shall be planted on the site from which the trees were removed. In the event such plantings cannot take place as a result of practical physical difficulties or undue hardship related to the conditions of the property, as determined by the Code Enforcement Officer or Shade Tree Commission or, in the event of a land development application, by the Planning Board, the property owner or applicant, upon approval of the Shade Tree Commission, may either plant the replacement tree(s) on municipal property in accordance with the requirements of the Shade Tree Commission, or contribute the sum of two hundred fifty ($250.00) dollars for each required replacement tree to the Municipal Tree Escrow Fund. (Ord. No. 1927-04 § 7)

23-2.8 Municipal Tree Escrow Fund.
A Municipal Tree Escrow Fund is established for the administration and promotion of environmental enhancement programs such as tree planting, tree preservation, landscaping or other related projects on or within municipally owned properties or facilities. A separate account shall be established to administer this fund. Appropriations from the tree escrow account shall be approved by the Mayor and Council and shall be used for municipal purposes through the recommendations of the Shade Tree Commission. (Ord. No. 1927-04 § 8)

*Editor's Note: See Section 2-33, Shade Tree Commission.

CHAPTER 23 SHADE TREES
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