

Township of Delaware

Community Forestry Management Plan 2018-2022



Mayor and Committee

Sam Thompson, *Mayor*
Joseph Vocke, *Deputy Mayor*

Susan Lockwood

Alan Johnson

Charles Herman

Shade Tree Commission Members

Bob Hornby, *Chair*

Jay Trstensky, Superintendent of DPW, Alternate Member

Larry Coffey

Kevin LaVoie

A.R. Willey

Caroline Suesserman

Kathy Klink

Susan Lockwood

Cathy Pouria

Tony Szwed

Prepared By:

The Delaware Township Shade Tree Commission

This plan was prepared in accordance with the New Jersey Shade Tree and Community Forestry Assistance Act, P.L. 1996, Chapter 135

I. MUNICIPAL/COUNTY INFORMATION FORM

Municipality Township of Delaware

County Hunterdon

Address PO Box 500
Sergeantsville, NJ 08557

Contact Name and Title Bob Hornby, STC Chairman

Phone # 609-397-3240, Twp. Offices; personal contact 908-528-3046

Fax # and E-mail 609-397-4893 ShadeTreeDT@gmail.com

Organization Name Delaware Township Shade Tree Commission

Mayor's Signature _____

Date of Management Plan Submission Sam Thompson, Mayor, December 10, 2018

Time Period Covered in Management Plan January 1, 2018 - December 31, 2022

Community Stewardship Incentive Program (CSIP) Practices Identified in Management Plan

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

***Certification:
Official Use Only***

The above-named municipality 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 the standards set forth by the State and the NJ Community Forestry Council and is approved for the period covered.

Signed _____
State Forester

Approved Date _____

II. Introduction

This is the FOURTH, 5-year Community Forestry Management Plan as prepared by the Shade Tree Commission (STC) of Delaware Township, Hunterdon County (2018-2022). This fourth plan is the result of a rejuvenation of the STC following several years of low activity and changeover in membership. Although many of the previous goals were not achieved, we believe they are still worth pursuing.

The purpose, mission, goals, and objectives for managing the Township's tree resources in this rural township are reminiscent of former plans. The emphasis for this Township remains the basic elements of tree planting, tree maintenance, and the safety of the community forest along streets, parks, municipal complexes, and school property. Emerald Ash Borer damage has stretched the already thin Public Works budget dedicated to trees. New information in this plan is the result of listening to previous and current Commission members about lessons learned over the course of the third plan.

Approval of this plan by the State Forester, upon favorable recommendation from the Community Forestry Council, will provide continued liability protection to the Township under the New Jersey Shade Tree and Community Forestry Act (NJSTCFA) and will render the Township eligible to apply for grants from the New Jersey Forest Service (NJFS) to help implement this plan.

Mission Statement:

To ensure the health, safety, and sustainability of Delaware Township's community forest and shade trees for the economic, aesthetic, and environmental benefits provided to residents and visitors.

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Goals and Objectives:

GOALS - Goals are statements of desired conditions which may or may not be existing or achieved.

OBJECTIVES – Objectives are statements of actions to be taken in pursuit of maintaining or achieving Goals.

Goal#1:

Continue the Shade Tree Commission (STC) as a knowledgeable, respected, proactive, and community based organization to advise and assist the Delaware Township Committee (DTC) and Department of Public Works (DPW)

Objectives:

- Hold agenda driven meetings of the STC on a minimum bimonthly basis with broad member and public attendance.
- Fill STC positions as vacancies occur.
- Ensure participation and active communication with the DPW staff.
- Offer training and information for public works employees in tree safety assessment and tree care maintenance/safety.
- Ensure participation and active communication with the DTC
- Encourage communication and informational flow to residents via the Township website.
- Maintain membership in the NJ Shade Tree Federation and attend annual meetings.
- Prepare and submit annual reports to the NJ Forest Service Community Forestry Program.

Goal #2:

Maintain and ensure public safety in relation to the Township's trees.

Objectives:

- Use a New Jersey Licensed Tree Expert (LTE) during emergency events as outlined in the Township's Emergency Management Plan.
- Encourage the use of the STC as a liaison to utility and communication providers to apprise the companies regarding expectations for tree care and standards.
- Create and maintain a priority listing of trees to be removed or pruned based upon information from the DPW, STC members, and homeowner reports aided by systematic search and assessment by an LTE for trees creating a safety concern,

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- including trees in the public right-of-way (R.O.W.) as well as those on private property having the potential to impact the R.O.W.
- Utilize the DPW Township tree maintenance/safety plan based upon systematic search and assessment; forward the results and recommendations to the Mayor and DTC for action.
 - Continue to inform homeowners regarding identification of tree hazards, proper tree care techniques (mulching, pruning and elevation) and personal safety when cutting and pruning trees.
 - Encourage the use of New Jersey Licensed Tree Experts by the Township and homeowners for tree maintenance and care work.
 - Consider registration by tree companies as a pre-requisite to working in the Township, including utility and communication contractors.
 - Make annual safety inspections of trees in Dilts Park and school property.
 - Schedule at least one public works employee to attend a training session on hazard tree assessment/treatment; and encourage employees to attend a chainsaw safety and proper chainsaw technique training.

Goal #3:

Continue tree planting and replacement, especially considering emerald ash borer damage as specifically addressed in Goal #4

Objectives:

- Assess condition/need for replacement of trees in public areas.
- Replace trees as needed
- Improve developmental structure of recently planted trees by pruning to one central stem and elevation of lower branches.
- Encourage the DPW to cooperate in proper tree care as the DPW is the primary source of labor in the township.
- Encourage the DPW to provide input for areas of focus because they have the best familiarity with the Township roads.
- Heavy, wet spring and fall snow is a primary damage on the Township tree inventory; develop annual tree planting plans with a focus on restorations of storm damage, focusing on population centers in the village of Sergeantsville, and the hamlets of Rosemont and Locktown, and Dilt's Park.

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Goal #4:

Prepare and develop an appropriate plan for loss of trees due to the emerald ash borer (EAB) infestation.

Objectives:

- Continue to provide educational presentations to the public on emerald ash borer, including;
 - Paul Kurtz, NJ Department of Agriculture entomologist
 - Tampke Tree service
 - Information from NJ Department of Agriculture, emeraldashborer.nj.gov
- Educate the public about proper disposal of wood – from burning for personal use to “do nothing” when in secluded areas
- Educate the public about replacement trees, especially the “Right Tree, Right Place” concept developed by the New Jersey Forest Service
- Educate the DPW, DTC, and the public on the options of treatment vs. removal.
- Work with the DPW to target hardest hit areas and stay up to date on where hazard trees exist.
- Work with the DPW about what can be done in-house in terms of tree removal
- Work with the DTC to budget for tree removal, treatment, and replacement.

Goal #5:

Stay active with the State’s Community Forestry Program.

Objectives:

- Maintain a minimum of two (2) CORE trained persons on the STC with a minimum of one (1) municipal employee and one (1) volunteer. Encourage the DPW Supervisor to be CORE trained.
- Encourage attendance at the NJ Shade Tree Federation meeting each fall.
- Accumulate 8 continuing education units (CEU’s) annually. A CEU = 1 hour tree training received by anyone in the Township. CEU’s are most easily obtained at the annual NJ Shade Tree Federation meeting held each fall. Eight CEU’s are required annually for continuation of State “approved” status.

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Goal#6:

Conserve and sustain natural vegetation, wooded areas, and shade trees which are integral to the Township's aesthetics and environmental values.

Objectives:

- Encourage STC involvement in site plan review and evolving site plan requirements.
- Be an active voice regarding species/cultivars for tree planting, adherence to the American Standards for Nursery Stock, and promotion of the New Jersey Board of Tree Experts' pruning standards via actions to include all of the above in local ordinances.
- Inspect planting stock by STC members during all phases of development.
- Support retention of the rural character of the Township by encouraging/providing information to owners of large lots to reforest open land.
- Encourage woodland owners to participate in the NJ Forest Services' Forest Stewardship Program.
- Emphasize the value of retaining and restoring woodland cover to regulate storm water flow rates.
- Determine the Township's existing tree cover percentage and establish no net loss policies.
- Continue vigilance concerning the practical application of science-based additions to any ordinance affecting trees or woodland stewardship.

Goal #7:

Advocate for the Township's trees.

Objectives:

- Inform and educate residents, elected officials, and others of the benefits, proper practices, and activities/programs related to the Township's trees.
- Explore funding opportunities such as:
 - Grants
 - Citizen Adopt-a-Tree
 - Businesses and individual donations.
 - 'Trusts'
- Continue the Township's annual proclamation and celebration of Arbor Day.

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- Conduct outreach to the Township School to develop educational tools about the benefit of trees.
- Seek cooperative efforts with the school board to plant more trees on school grounds.
- Utilize postings on the Township’s website and newsletter to inform residents on seedling availability, ordinances, Arbor Day programs, park outings, and other information relative to tree care and tree establishment, such as:
 - List native trees and shrubs suitable for planting in Delaware Township.
 - Identify insect and diseases with suggestions for actions to suppress.
 - Illustrate proper techniques for mulching, pruning and elevation.

Liability Statement:

Trees in Delaware Township 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 mature and require care, maintenance, and eventually replacement. Care and maintenance, in addition to planting “the right tree in the right place,” 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. Delaware Township works within a budget that may not be able to meet 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.

Delaware Township feels, 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 Township seeks to maintain its effective program for management and care of the trees. Through hazard assessment, the Public Works Department can enable corrective action by its employees, contracted professionals, the local utility, or the county prior to structural tree failure and other hazardous tree related conditions. It is acknowledged that not all hazardous conditions will be predicted, however, good maintenance and care will reduce the probability of tree failures. The Township also wants to increase homeowner and school

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children's awareness, appreciation, and knowledge of trees to enable them to contribute well-informed and meaningful efforts towards the health and sustainability of Delaware Township's trees.

Following this Community Forestry Management Plan will demonstrate that Delaware Township 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.

III. Community Overview

A. Overview

Delaware Township, Hunterdon County, in the Piedmont province of New Jersey, is a mosaic of agricultural fields and forests. Development has taken the form of single family homes on large lots, while the region retains a rural character. The Township covers 37 square miles and has 72 miles of roads. The historic village of Sergeantsville and the hamlets of Rosemont and Locktown represent the Township population centers and are the focus of this plan. The last wooden covered bridge in the State of New Jersey spans the Wickecheoke Creek in Delaware Township.

State Highway 29 borders the Delaware River and the southwestern portion of the Township, while Route 12 borders a small northern section of the Township. County Route 523 bisects the Township from southwest to northeast and serves as the main routes through the Township from the southwest and Pennsylvania to the northern population and business center of Flemington. Other county roadways include Rt. 579 which establishes the northeast border; Rt. 604 on a primarily east/west bisect of the township, passing through Rosemont and Sergeantsville; Rt. 605 on a rural southeast vector; and Rt. 519 beginning in Stockton and heading north. The remaining Township roads are narrow, usually having a 33-foot right-of-way. Forests and fields border most roads. Large lot single family homes, some built on former agricultural fields, have an impact on the visual character of the Township.

The Township's Master Plan repeatedly refers to the preservation of the rural character of the landscape and the retention of agriculture and forestry. Retention of wooded areas and agricultural areas is given top priority. As stated in the Master Plan, it is ironic that the desirable attributes of the Township are the very ones that lead to their decline as more people discover the Township and view it as a place they would like to live. In 1996, an open space tax referendum was passed by residents. Since that time, the Township has been very active in open space and farmland preservation efforts. Farmland preserved acreage in the Township as

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of March 10, 2018 is 5,140 acres, over 20% of the Township. Open space preservation efforts have resulted in 400 acres saved in the past 5-years.

The vegetation section of the master plan is noteworthy. It acknowledges the environmental value of woodlands and affirms its importance to the visual landscape and wildlife. The Master Plan defines significant woodlands and suggests strategies for retention. The Land Use Ordinance recognizes the importance of woodlands and requires replacement of trees removed due to development. The Master Plan supports the use of woodlands to produce forest products and encourages selective cutting. The Township's over-riding vision is one of retained open space and sustained agriculture and forests as well as other natural amenities. Delaware Township has an excellent Open Space and Recreation Master Plan, which sets forth a vision and plan for the preservation of the cultural landscape while complimenting an action oriented Master Plan.

The Master Plan makes many recommendations specific to shade trees in new developments, but does not address the need to manage and care for municipal trees. This plan will provide explicit guidance in caring for and maintaining municipal trees.

Travelling through the Township the following needs, opportunities, and assets become apparent:

- It is a beautiful township with ample natural resources, trees, and open space.
- Hurricanes and major storm events cause sporadic, serious damage to privately owned woodlands.
- Emerald ash borer has done damage and will continue to be the biggest danger to trees in the state and township and most likely will absorb the majority of spending.
- The Township has an effective hazard tree program. Some hazard trees persist; however, it is evident that work is done to remove hazards; especially those affected by recent storms.
- Trees planted in Sergeantsville need developmental pruning and elevation.
- Many large lot homes fronting on the roadways need trees to screen/buffer the visual impacts and to help restore the visual quality of the Township.
- Single family homesites carved out of old woodland patches on hillsides create visual interruption in the landscape.
- Additional tree planting is needed in the parks and around the school.

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- Some homeowners do not know how to prune small trees, mulch trees, or provide water in times of drought. Species selection could be better informed.
- The utility company has done an adequate job of pruning trees; however, they need to be reminded to follow acceptable pruning standards especially on specimen trees.
- Large specimen trees are scattered throughout the Township and in Dilts Farm Park and around Locktown Stone Church. These trees need pruning and maintenance.
- Some trees planted in the newest developments need early pruning – owners need to be informed of the proper techniques.
- Roadsides leading to the crossroad villages of Sergeantsville and Rosemont need more trees to create a “sense of arrival”.
- Other roadsides, while not interfering with shading agricultural fields, could be planted with shade trees.

B. Fifteen (15) Years of Progress

The implementation of the 1st, 2nd, and 3rd 5-year Community Forestry Management Plans has resulted in some significant accomplishments. The first and second plans were the best implemented with a certain degree of learning curve. The third plan coincided with a loss of leadership, a drift in focus, and a tightening township budget that reduced the available DPW workforce through attrition. Highlighted achievements include:

2002-2008, First 5 Year Plan:

- Upgraded the Shade Tree Advisory Committee to a Shade Tree Commission.
- Regularly held effective and efficient Shade Tree Commission meetings.
- Attended the New Jersey Shade Tree Federation meetings.
- CORE training requirements met on an annual basis.
- Obtained required 8 Continuing Education Units in most years.
- Township Department of Public Works personnel trained in hazardous tree ID, safety, and tree maintenance standards.
- Tree and lawn care tips column established in monthly Township newsletter.
- Held annual Arbor Day programs at Delaware Township School.
- Promoted local nurseries as sources of shade trees for planting by residents and home builders.

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- Shade Tree Commission reviewed all site plans and made recommendations to Township Planning Board.
- Developed and institutionalized hazardous tree form by Township Department of Public Works.
- Planted 109 trees – Spring 2002 – in Dilts Farm Park via NJFS grant.
- Planted 13 additional trees in Higgins Farm development.
- Hazardous trees removed and trimmed at Dilts Farm Park – 2002 – via NJFS grant.
- Received 2006 Cool Cities Tree Planting Grant for senior citizens building (to be constructed).
- Awarded CSIP grant for tree planting at Delaware Township School – completed Spring 2008. Planted ~30 trees.
- Completed removal of hazardous trees in Sergeantsville and replaced with “new” trees in cooperation with Hunterdon County personnel.
- County tree crews removed or pruned all hazardous trees along their rights-of-way within the Township.

2009-2013, Second 5 Year Plan:

Delaware Township used the Community Forestry Management Plan as a guide for program development and followed the timeline for the major plan elements. Problems and new issues were encountered with the very busy schedules of the volunteers and heavy DPW workload. The STC had dedicated, knowledgeable, and experienced members but sometimes struggled to find the time to meet or to work on time consuming projects. Year 2012 was highlighted by Superstorm Sandy with heavy damage across Delaware Township and unexpected demands on the Public Works Department that created a divide in priorities between the DPW and STC.

- Established of a strong partnership with the New Jersey Forest Service Community Forestry Program.
- Used the plan to help guide the Township’s shade tree program.
- Participated in training and informational opportunities at the New Jersey Shade Tree Federation meetings.

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- Applied for and received grants from the New Jersey Forest Service.

Circa 2014-2017, Third 5 Year Plan:

Changes in leadership at the Township Committee led to wholesale changes in membership of the Shade Tree Committee, and a decade of volunteering by a small group of residents led to burn out and changes in interest. Losses in the Department of Public Works through attrition, led to lower availability of Township workers for Shade Tree projects. After several years of limited meetings due to loss in membership and a lack of leadership, regular meetings were resumed in January of 2017 on the fourth Thursday of each month. Short term targets replaced the goals of the 5 Year Plan under pressure to return the STC to accredited status. Lack of knowledge by new members of the process led to some missteps, most importantly about the expiration of the CFMP. Budgetary constraints led to the decision to rewrite the CFMP in house. Lack of experience extended the writing process and resulted in the receipt of Recommended Amendments being suggested by the NJUCF and NJCFC. The second rewrite did not begin until mid-June of 2018 and with resubmission in December of 2018.

- The Commission took a renewed role in reviewing site plans and making recommendations for action(s) by the Planning Board.
- Township Tree Ordinances began to be reviewed and updated.
- The Hazardous Tree Program continued to be operated by the Department of Public Works (DPW) with new input from the Commission.
- An effort was made to better help the DPW move from a reactive tree management role to a proactive one. First steps were taken in the Township-owned Dilts Park; this included an in-the-field, on-site meeting of the Commission.
- A Hazardous Tree Survey of Township-owned Dilts Park was completed at the request of the Township Committee and submitted to the Township DPW.
- The increasing threat of emerald ash borer (EAB) became a major issue. Budgeting for increased tree removal spending by the DPW will be a major ongoing priority of the Commission.
- Annual Reports were submitted
- CFMP was rewritten twice.

IV. Community Forestry Program Administration

The Mayor and Township Committee are responsible for the management and care of the Township's shade trees and community forest. Elements of the Community Forestry Program are delegated by the Mayor to various departments, commissions and/or staff. The group most responsible for development and implementation of the Community Forestry Management Plan is the Delaware Township Shade Tree Commission.

Delaware Township Shade Tree Commission

Bob Hornby – Chair

Larry Coffey – Member, Class IV member of Planning Board

Tony Szwed – Member, representative of Environmental Commission

Susan Lockwood – Member, representative of Governing Body

Kevin Lavoie – Member, employee of Twp. Road Department

Caroline Suesserman, Member

AR Willey – Member, Township Arborist

Jay Trstensky – Alternate (DPW Superintendent)

Kathy Klink – Alternate #2

Cathy Pouria – Liaison to Board of Education

Les Alpaugh – Advisor, LTE

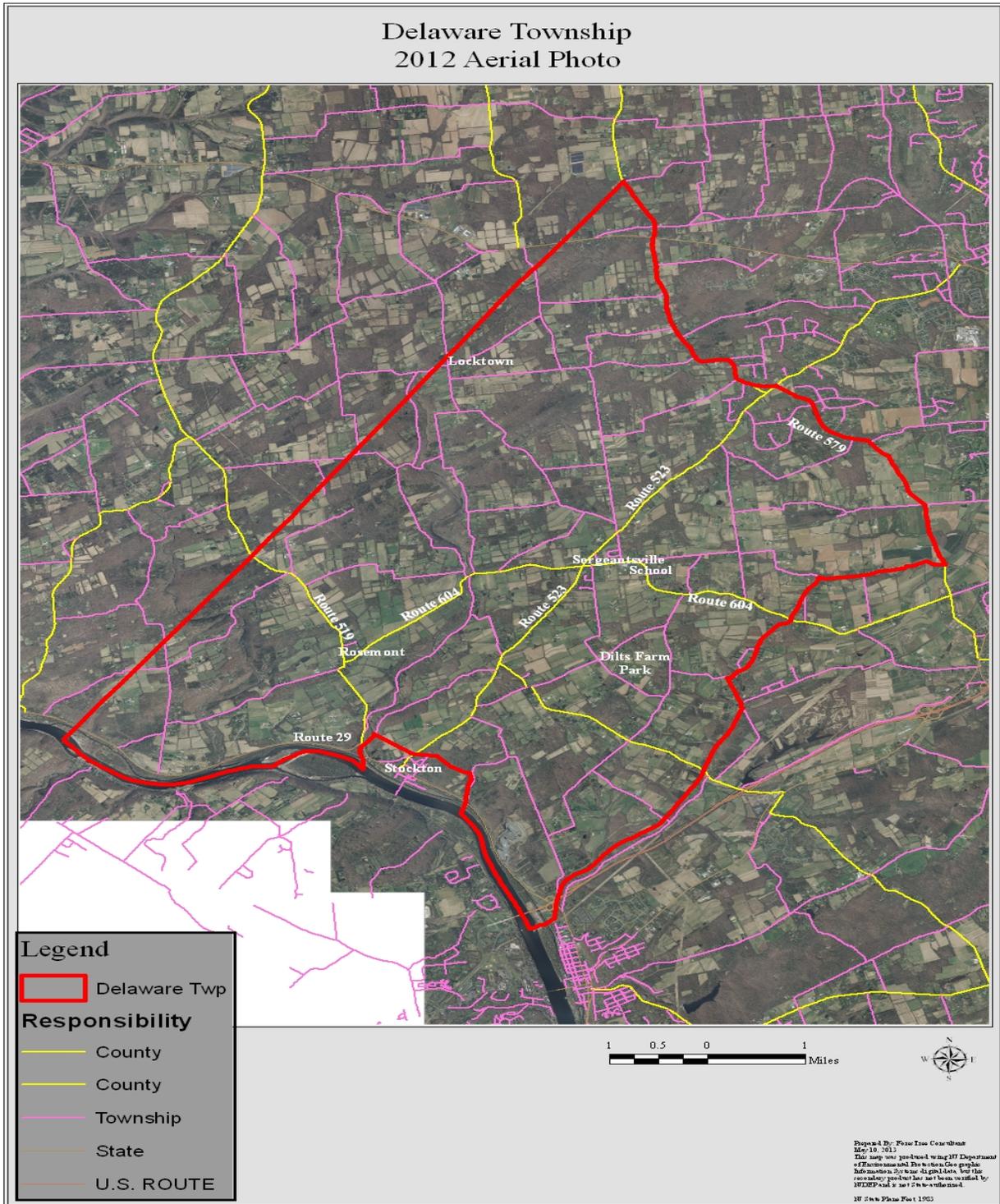
There is a working relationship between the STC and Department of Public Works. The Superintendent of DPW is an alternate member of the STC and is CORE trained. While the STC has no direct authority regarding direction of DPW work and vice-versa, projects "approved" by Township Committee become mutual pursuits with appropriate input and effort from both the DPW and STC. The Township Clerk and Chief Financial Officer stay informed of tree grants/projects and fulfill their responsibilities efficiently. The STC has representation from the Township Committee which helps to provide information to other township committees and facilitates site plan reviews and flow of information between the STC and Planning Board.

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There has been an attempt to streamline the Township process of response to resident requests or inquiry. The STC, the municipal clerk, or the Supervisor of Public Works receive citizen inquiries or requests regarding municipal trees. The STC and/or the Superintendent of DPW visits the site and makes a determination of need for corrective action. Consultation with the Township arborist, A.R. Willey, may occur when needed. The Superintendent of DPW addresses the problem using Department of Public Works employees and/or engages the private sector via contract with a local Licensed Tree Expert to remove or prune the subject tree or trees. The local utility is involved where any tree is tangled with the utility lines. The police and other road department employees continually survey roadsides for the presence of hazardous tree conditions. Work on trees during the winter month's accounts for much of the time spent by the Department of Public Works.

V. Community Map

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VI. Training Plan

Annual training is required by the State to retain “approved” status for the Township under the Act. Other training is pursued based upon Township needs and/or individual STC member interests and assessment. Training is usually limited by available time, interest, funding, and/or opportunities. Whatever the cost in time or money, the knowledge gained through training will improve program success.

Required Training:

CORE training is required by the New Jersey Shade Tree and Community Forestry Act for municipalities seeking approved status under the Act. The purpose of CORE training is to familiarize persons with the background of community forestry and the STC, the legal aspects of managing trees, recognition of hazardous tree conditions, state planning, and implementation assistance. To gain and retain Approved status a municipality must have at least two persons CORE trained; one volunteer and one municipal employee (ideally someone from public works responsible for trees).

Delaware Township has 7 CORE trained persons:

1. Bob Hornby – STC Chairman
2. Jay Trstensky – Municipal Employee – Superintendent of DPW
3. Kevin Lavoie – Municipal Employee
4. A.R. Willey – Township Arborist & STC Member
5. Kathy Klink - Resident
6. Cathy Pouria – Resident
7. G. Lester Alpaugh – Resident

It is the intent of the STC to maintain the greatest number of CORE trained persons possible. In addition to CORE training, there is a continuing education requirement of 8 Continuing Education Units (CEU’s) per year. Any individual can obtain these credits for the municipality and credits are not limited solely to those persons who are CORE trained. These

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credits can be most easily obtained by attending the Shade Tree Federation meeting in October each year.

Elective Training:

Several topics for elective training were mentioned in previous plans. Annual training elements are ongoing. Attendance at the annual meeting of the New Jersey Shade Tree Federation is a tremendous opportunity to keep abreast of known and emerging science and issues regarding shade trees.

During the next five-year period, Delaware Township will continue on-going work along its roadways and park as well as exploring several new projects. While we may not be able to attain all the goals laid out in this plan, they are a wish list. Due to previous experience of volunteer burn out, the STC is sensitive to overextending itself. Primary in the “new” project category is:

1. Focus on the Rosemont tree restoration and planting.
2. Township wide tree planting plans and recording locations using GPS equipment.
3. Refine the process of recording tree maintenance needs, locations, and priorities.

Given this focus it is important to designate the STC members and Township employees responsible for the tasks and to provide the necessary training. For example, courses are offered in hazard tree identification and classification, tree inventory systems, and GIS/GPS software and equipment. Training will be essential for the successful implementation of the planting site inventory and should be completed prior to any design or conversation about a final inventory and data storage system.

VII. Public Education, Awareness and Outreach

An important element of the Community Forestry Management Plan is a mechanism of how community involvement, volunteers, and the media will be used to implement the plan. STC membership is voluntary, although they are an element of the Superintendent of the DPW and the Public Works employee's regular employment. Therefore, the majority of planning and accomplishment is done by volunteers. The community is involved via participation in many of the programs listed in this section. The residents also have opportunity to comment on activities of the STC and are often present at meetings when decisions are made. The after-effects of major storms have created additional inquiries for information and services regarding damaged trees. The STC Chairman attempts to be active in responding to inquiries and supplying information to the public. Outreach has been extended to the local school, Environmental Commission, County Shade Tree Commission, County Road Department, the Open Space Committee, the Planning Board, and the Board of Adjustment.

The following elements are important to investigate and/or continue throughout the next planning period.

Tree City, USA:

Delaware Township has not achieved Tree City, USA status despite a long history of best intentions. It has invariably been shuffled to the proverbial bottom of the pile of priorities. It remains a desirable goal of the STC and given the optimistic attitude of the STC, it remains on the To-Do list. Tree City USA is a program created by the Arbor Day Foundation in cooperation with the NJ Forest Service to recognize municipalities of all sizes. The Tree City program is a national award given to small towns, townships, counties, and cities in recognition of outstanding stewardship in dealing with the community's tree resource. Application must be

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made through the NJ Forest Service to the Arbor Day Foundation. The rewards for Delaware Township for attaining Tree City status are:

- Signs for community entrances.
- A Tree City USA flag.
- A walnut-mounted plaque.
- Recognition of stewardship and the gratitude of future generations.

To achieve Tree City USA status there are requirements and standards that must be met by the Township. These are:

- A Tree Board or Department.
- A Community Tree Ordinance.
- A Community Forestry Budget with at least \$2 per capita devoted to trees.
- An Arbor Day observation proclamation.

Arbor Day:

Arbor Day has been celebrated for many years in Delaware Township. Through the school, public works department, recreation commission, and STC, the Township ensures an annual Arbor Day celebration is held for years to come. This celebration is held not only to fulfill one of the requirements for Tree City, USA status, but also to increase awareness of the value of trees and to garner support for the Township's tree related programs. This ceremony is an ideal time and place to recognize the efforts of Township volunteers. Planting and maintaining trees at the local school and Dilts Farm Park are included in the ceremonies. The school, recreation commission, and STC continue developing new programs for this event. Arbor Day is the last Friday in April and planning for this event usually begins in January.

Newsletter:

The Township sends a newsletter to all residents quarterly. The STC has re-established a contribution to the newsletter, creating a "tree tips" section written by a rotating group of interested parties. Technical information concerning trees and the basics of plant/species

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selection, mulching, watering, pruning, small trees, site selection, and environmental benefits are included in the newsletter.

Homeowner Information:

In addition to the “tree tips” section of the newsletter, the STC provides information to homeowners to encourage them to “plant the right tree in the right place” with emphasis on the space between the house and the public R.O.W. The Master Plan stresses the overwhelming desire of residents to retain the rural character of the Township. Buffer, screens, and maintained hedgerows with trees help achieve this goal. With planting of native species well suited to the site and with proper maintenance, the goal of maintaining rural character can be achieved by informed residents. The STC has a collection of existing brochures which are made available to Township residents, including “The Right Tree, The Right Place”, published by the Arbor Day Foundation. Another source of information to publicize is the electronic “i-Tree” available via the internet.

Project Learning Tree (PLT):

The Delaware Township School acknowledges the importance of helping young students learn more about trees and the environment. One program helping to expand and influence young minds is Project Learning Tree. The PLT program is an international environmental education program that is crafted to meet state and national education standards. PLT provides the tools educators need to bring the environment into their classrooms and their students into the environment. The PreK-8 activity guide contains 96 multi-disciplinary activities, each activity is carefully designed for specific grade levels and learning objectives. Recently, the New Jersey Department of Education has aligned the PLT guide to the NJ Next Generation Science Standards (NGSS). The STC works cooperatively with the school administration to include aspects of the PLT program in the elementary school science curriculum.

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Big Trees:

One way to raise the awareness of youth about trees is to involve them in some way. The STC has a partnership with the public school to search for and produce a listing of Delaware Township's largest trees. Results of the search will be announced at annual Arbor Day events. This program remains a work in progress.

Free Trees for 2nd Graders Program:

The Delaware Township School participates in the New Jersey Forest Service's Free Trees for Schools' program. Awareness for tree care and nurturing is increased by involving school age children. Every year third grade students are given a native tree to bring home and plant.

Private Lands Stewardship:

There are many wooded tracts in the rural sections of the Township. The Master Plan, reveals that there were 687 properties and 17,185 acres with farmland assessment. While no specific numbers are stated in the Master Plan, it is reasonable to assume that many of these parcels are at least partially wooded. In 2017, the New Jersey Forest Service reported 103 active farms that are farmland assessed with forest management plans in Delaware Township. These owners have been made aware of the New Jersey Forest Service's Forest Stewardship Program. Forest stewardship implies consideration of all resource values on wooded tracts and directs efforts to non-commodity uses as well as commodity uses.

Local Nurseries and Tree Farms:

One strategy to avert development is the promotion of agricultural and land based businesses in the Township. This strategy is stressed in the Master Plan and the Farmland Preservation Supplement to the Open Space Plan. The STC continues to promote local businesses supplying nursery stock, firewood, lumber products, Christmas trees, and other associated land based products and services supportive of this strategy. The listing of local

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business continues to be made available at the municipal building and announced in the Township newsletter.

Utility/County/Township/State Dialogue:

County and State roads transect Delaware Township. Utility lines provide essential power to the Township's residents, and must be kept free from tree branches and limbs. The STC meets with utility companies periodically to help ensure proper pruning standards are followed, to provide a watchdog over utility pruning, and to point out historic or specimen trees that are of special interest to the STC.

VIII. Statement of Tree Budget

Delaware Township's budget for municipal trees is modest and cannot meet all foreseeable needs. During the past five-years, the STC has found ways to achieve hazard tree reduction and tree plantings in partnership with other entities. Improved standards and follow-up with developers, cooperation with Hunterdon County, and several grants from the NJ Forest Service have combined to extend the achievement of the STC beyond what is possible with only Township funds. During the next plan period similar initiatives will be pursued.

Delaware Township Annual Budget Summary

Administration: \$50,350

Based on the approximate salary (\$35,000) of one DPW employee plus an estimated \$5,000 in DPW overtime costs as has been typical of the last several years of DPW employee time allocation. Volunteer contributions typically run about 100 hours a year for our most active volunteer, 50 hours a year from the Commission Chair, and about 35 hours a year per commission member, totaling 360 hours at the NJ rate of \$28.69/hour or roughly \$10,350.

UCF Stewardship: \$56,000

Based on roughly \$6,000 in tree planting and related costs, \$6,000 in regular pruning work, \$40,000 in tree removals (40 trees at roughly \$1,000/tree), and \$4,000 in work specific to Emerald Ash Borer. Some tree removal will be a result of EAB, these breakouts are targets only.

Education and Outreach: \$670

Based on \$125 for annual Shade Tree Conference training for one municipal employee, \$250 training and education for 2 volunteers at the annual conference, \$200 in speaking fees for outreach events by the Shade Tree Commission, and \$95 for the annual Shade Tree Federation membership.

Total Budget: \$107,020

IX. Statement of Plan Implementation

This is the fourth five-year Community Forestry Management Plan for the Township of Delaware, Hunterdon County. The outcomes and experiences of the past 15-years have served to inform this newest iteration. There have been significant accomplishments and there are remaining challenges to be met. During the 2018-2022 period, the Township aims to continue its training, awareness, outreach, and educational activities as described in earlier sections of this plan. The STC has recruited a full, qualified membership while striving to preserve an institutional memory of lessons learned.

Most of this implementation section will focus on categories regarding:

- Tree Inventory and Assessment
- Tree Hazard Identification and Management
- Tree Planting
- Tree Maintenance and Care
- Other topics will include discussion of objectives listed in Section II as needed for clarity.

Tree Inventory and Assessment (I&A):

As outlined in the previous CFMP “Delaware Township does not have a tree inventory and probably does not need a completely comprehensive one. The Township does need an inventory of available planting spots and a better system of identifying and recording dangerous tree conditions. Mapping dangerous trees via GPS/GIS mapping and assigning some priority for removal or pruning could be helpful to the Superintendent of DPW. Eventually, it would be interesting and beneficial to maintain a record of all trees planted via GIS. Similarly, a GIS record of pruned trees and removals would demonstrate progress and quantity of work accomplished. The mapping may be beyond the Township’s current expertise and available equipment, but should be considered for the long-term.

Results from major storm events and pest infestations over the past 5 years have added emphasis to the need to know more about the condition of roadside and park trees and the importance of quantifying the amount of work necessary to assure public safety. Currently,

Delaware Township Community Forestry Management Plan

members of the STC and DPW employees can point to individual maintenance needs, but have no comprehensive list of tree maintenance/removal needs or any planned way to establish priority of work. This dilemma has several implications:

1. The Mayor and Township Committee do not have factual data defining the extent of risk or the amount of backlogged tree work facing the DPW.
2. The DPW remains in a reactive mode rather than becoming pro-active by following a plan of work focusing on the highest priorities for public safety.

It is the intention of the STC to work with the DPW to better assess the township trees on an ongoing basis. As a rural township we do not see a need for a comprehensive tree inventory but instead recommend ongoing “windshield assessments” by the DPW during their day. Some sort of GIS record of this assessment would be useful to pursue. Specific regions of Rosemont, Sergeantsville, Locktown, and Dilts Park could one day see focused, tree by tree inventory should grant money become available for the STC from the NJ Forest Service or other sources.

Tree Hazard Identification and Management:

Currently members of the DPW, STC, and police departments assess hazardous tree conditions on a continuous, albeit unofficial and unrecorded, basis. There is a need for systematic record keeping enabling the STC and DPW to efficiently plan work or to quantify need. As mentioned in the training section, DPW employees have attended hazard tree ID training and have the option to attend NJ Shade Tree Federation meetings. Delaware Township DPW is well-equipped, but does not have a bucket truck or trained climbers. Therefore, DPW crews are limited to ground work. Any work above six feet must be out-sourced, and needs to be budgeted in advance.

The County has completed an inventory of “priority” trees by identifying trees along County roads which are dead, defective, and/or in need of pruning. Trees along County roads in the Township are generally well-maintained by the County tree crew.

Utilities have the biggest impact on trees along Township roads as they prune to ensure their lines are free from interference from branches and limbs. The result of poor line maintenance can be unstable trees that pose a hazard and long-term maintenance issues for the municipality. Trees that have their central stem removed (topped) with limbs left below

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the wires growing out from the central stem towards the roadway are long-term hazards and maintenance problems for the Township. These limbs become heavier and longer with time and eventually create a hazard to the roadway. Constant reminders of proper technique and requests for compliance with best practice are needed when utilities are at work in the Township. The Township Arborist and DPW Supervisor should be given the authority and direction to communicate with utility representatives prior to and during tree work in the Township.

Tree Planting:

During the past fifteen years, Delaware Township has completed successful tree planting projects in Dilts Park and Sergeantsville. The project in Sergeantsville involved removing hazardous trees and planting new trees in cooperation with the County along its roads and at the local school with some help via a grant from the NJ Forest Service. Noteworthy is the placement of the new trees out from under the utility wires – many on private property. The outcome is exceptional and serves as an outstanding example of best practice.

During the next plan period, the best practices proven in Sergeantsville will be extended to Rosemont where hazardous trees have been recently identified. Upon their removal by the County, replacement trees will be planted. A tree planting project at Dilts park due to severe EAB damage should be initiated by the STC.

The STC plans to continue to monitor the planning, species selection, inspection of planting stock, and follow-up replacement for all new developments per existing ordinance throughout the Township.

Tree Maintenance and Care:

Inventory and assessment helps define the need for maintenance. Applied maintenance throughout a tree's lifetime will extend the life and utility of the community forest. During the first 10-years after planting, trees must be checked for single central stems and pruned as necessary. Elevation can begin in 5-6 years and should extend until the first 16 feet of trunk is

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clear. It is necessary to remember the 1/3 – 2/3 rule stating that at least 2/3 of the tree should remain in green with a maximum of 1/3 of the green removed at any one time. Crossing limbs, limbs with poor angle of attachment, and correct scaffolding according to species are all ongoing challenges to maintaining a tree. This early developmental pruning should be applied to the trees planted during the past ten years. No special equipment is needed other than a good pruning saw and some direction by the Township Arborist. The STC will develop the next steps/plan to ensure developmental pruning is continued during this 5-year plan.

It is best to identify and make pruning cuts when the limbs to be cut are small. As trees become larger it is possible to remove larger limbs. However, even large trees have limits. Recommendations are to remove limbs prior to their reaching 3-4 inches in diameter to help avoid creating a defect. Cutting 12 inch limbs from large trees is sometimes necessary but most assuredly will result in a defect over the next 10-20 years. It is hard to assign years of life added by proper pruning throughout a tree's life as a shade tree, but it is suggested that increases of 40-100 years are common. Achieving proper tree maintenance requires unusual vision and long-term dedication over generations. The adoption of this CFMP and the receipt of CSIP funding from the State will help.

Schedule of Work

Delaware Township Community Forestry Program 2018-2022

Ongoing Activities (annually):

1. Hold agenda driven STC meetings and designate liaisons
2. Continue established program elements:
 - a. Administer site plan reviews; review site plan requirements to suggest changes and improvements based on changing times and best management practices.
 - b. Plan and participate in Arbor Day celebration at local school; prepare proclamation in March.
 - c. Plan for and plant 10-20 trees per year.

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- d. Respond to resident requests for information and/or services.
 - e. Retain Licensed Tree Expert as part of the Township’s Emergency Management Plan and for contracted tree work.
 - f. Contribute and provide announcements to the Township website and newsletter – “tree tips”.
 - g. Observe and report hazardous trees to DPW.
 - h. Prepare grant requests as opportunities arise.
 - i. Prepare and submit annual reports to N.J. State Forest Service – Community Forestry Program.
 - j. Review CSIP categories and attend to comments as appropriate.
3. Maintain membership in the New Jersey Shade Tree Federation and attend annual meetings.
 4. Maintain at least two CORE trained persons (1 volunteer and 1 municipal employee), plus maintain the training requirement of at least eight continuing education units per year as prerequisites for “approved” status.
 5. Revisit tree ordinances to suggest changes and improvements based on changing times and best management practices.

Highlighted Specific Activity Schedule by Year

- ❖ **2018**
 - Complete Community Forestry Management Plan, 2018-2022
 - Assess EAB damage and advise DTC and DPW about immediate options
- ❖ **2019**
 - Assess and record tree maintenance needs from EAB infestation
 - Advise DPW and DTC on long term solutions to EAB damage
- ❖ **2020**
 - Implement plan to collect and record tree maintenance needs
 - Transmit data collected and recommendations to the Mayor and Township Committee
- ❖ **2021**
 - Conduct effectiveness critique of existing ordinances, site plan requirements, and STC policies.
- ❖ **2022**
 - CFMP 2023-2028 complete for mid-year review and adoption

X. Community Stewardship Incentive Program (CSIP)

Upon approval of this plan and completion of the core training requirements, Delaware Township will be qualified to apply for Community Stewardship Incentive Program (CSIP) grants to help offset the cost of implementing this plan. The following is an index of CSIP practices listed in this plan and summary of applicability. Additional or revised grants may become apparent as plan implementation progresses.

CSIP #1 – Training

Goal #2, page 4; Goal #4, page 5
Section VI – Training Section, pages 16-17

CSIP #2 – Community Forestry Ordinance Establishment

Section IX, subsection Ordinance and Site Plan Standards, page 26
Appendix #2 & #3: The two existing ordinances are included in the appendix.

CSIP #3 – Public Education and Awareness

Goal #6, page 6
Section VII – Public Education, Awareness, and Outreach, pages 18-22

CSIP #4 – Arbor Day

Goal #6, page 6
Section VII – Public Education, Awareness, and Outreach, pages 19

CSIP #5 – Tree Inventory

Goal #2, page 4
Section IX – Statement of Plan Implementation, pages 23-24
Schedule of Work, pages 27-28

CSIP #6 – Hazard Tree Assessment

Goal #2, page 4
Section IX – Statement of Plan Implementation, pages 24-25

CSIP #7 – Storm Damage Assessment

Goal #2 and #3, page 4
Section IX – Statement of Plan Implementation, pages 24-25
Storm Damage Assessment is mentioned as part of the Hazard Tree Management section. Windshield assessments are routinely made following storm events. The Inventory and Assessment will include further assessment of impacts from Hurricanes Irene and Sandy.

CSIP #8 – Tree Maintenance and Removals

Goal #4, page 4

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Section IX – Statement of Plan Implementation, pages 25-26

CSIP #9 – Insect and Disease Management

Goal #3, page 4; Goal #7, page 6

Continue to monitor emerald ash borer (EAB) infestation

CSIP #10 – Wildfire Protection

Wildfire is not addressed in this plan.

CSIP #11 – Tree Planting

Goal #3, page 4

Section III – Community Overview, pages 8-10

Section IX – Statement of Plan Implementation, pages 25

Ongoing Activities, page 27

CSIP # 12 – Tree Recycling

There is no official tree recycling program in Delaware Township. Residents generally make rabbit habitat piles in this rural Township.

CSIP #13 – Sidewalk Maintenance Program

There are very few sidewalks in Delaware Township. No problems were noted.

CSIP #14 – Storm Water Management

Goal #5, page 5

The main objective is to retain current storm water flows.

CSIP #15 – Other

None.

XI. Appendix

1. Ordinance Establishing Shade Tree Commission
2. Landscaping Regulations
3. Open Space Documents

Appendix #1: Ordinance Establishing Shade Tree Commission

2-17 SHADE TREE COMMISSION

2-17.1 Established. There is hereby established a shade tree commission pursuant to N.J.S.A. 40:64-1 *et seq.* to regulate, plant, care for and control all shade and ornamental trees and shrubbery upon and in the streets, highways, public places, parks, and parkways of the township except State highways unless the Department of Transportation shall assent thereto and except county highways, parks and parkways, unless the Hunterdon County Shade Tree Commission shall assent thereto.

2-17.2 Title. The commission shall be known as "The Shade Tree Commission of the Township of Delaware."

2-17.3 Members. The commission shall consist of seven members and two alternates appointed by the governing body and one liaison appointed by the Delaware Township Board of Education. All of the members of the commission, including alternates and liaison, shall be residents of the township and shall serve without compensation. The commission shall be comprised of the following persons:

- a. One (1) member shall be a Class IV member of the Planning Board of the Township of Delaware;
- b. One (1) member shall be a regular member of the Environmental Commission of the Township of Delaware;
- c. One (1) member shall be a member of the Governing Body of the Township of Delaware;
- d. One (1) member shall be an employee of the Delaware Township Road Department;
- e. Three (3) members shall be citizens of the Township of Delaware;
- f. Alternate No. 1 shall be a regular member of the Recreation Commission;
- g. Alternate No. 2 shall be a citizen of the Township of Delaware;
- h. One (1) liaison member shall be a non-voting member with advisory capacity only and shall be a duly elected member of the Delaware Township Board of Education.

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2-17.4 First commission; initial and subsequent terms of office; vacancies.

The first commissioners shall be appointed within sixty days after the effective date of this ordinance and their terms of office shall begin on the day of their appointment. They shall initially be appointed to staggered terms for the respective periods of one, two, three, four, and five years, beginning on January 1 next succeeding such appointment. Two members shall initially have a four-year term. Two members shall initially have a five-year term. Lots shall be drawn at the organizational meeting of the commission to determine initial term lengths. All subsequent appointments, except to fill vacancies, shall be for the full term of five years, to take effect on January 1.

The alternates shall be designated at the time of appointment as "Alternate No. 1" and "Alternate No. 2." The Alternates shall serve during the absence or disqualification of any regular member. The term of the alternates shall be two years beginning on January 1 of the year of appointment. The term of the first alternates appointed pursuant to this section shall begin on the day of their appointments. The initial term for Alternate No. 1 shall expire on the first December next ensuing after the date of his or her appointment. The initial term for Alternate No. 2 shall expire on the second December next ensuing after the date of her or her appointment. The alternates may participate in discussions of the proceedings but may not vote except in the absence or disqualification of a regular member. A vote shall not be delayed in order that a regular member may vote instead of an alternate member.

Any vacancy occurring by reason of the death, resignation or removal of any commissioner shall be filled for the unexpired term by the governing body.

2-17.5 Organization; salaries of officers and employees. The commission shall organize within thirty days after the appointment of its total membership for the remainder of the calendar year, and thereafter annually by election of one of its members as chairperson, and the appointment of a secretary, who need not be a member. The salary of the secretary, who may be compensated even if a member of the commission, shall be fixed by the governing body in the same manner as other municipal salaries are fixed.

2-17.6 Powers. The commission shall have all of the powers and rights and be subject to all of the duties, responsibilities and limitations set forth in N.J.S.A. 40:64-5 through N.J.S.A. 40:64-14, as said provisions may from time to time hereafter be amended, supplemented or renumbered.

2-17-7 Minutes; records; reports. The commission shall make, keep and preserve minutes and records of its meetings and activities. In addition, on or before January 15th of each year, the commission shall submit an annual report of the preceding year to the governing body detailing the moneys spent during the prior year, the type of work performed, the streets where such work has been performed, and the work that is expected to be performed in the coming year.

Delaware Township Community Forestry Management Plan

2-17.8 Annual appropriation; estimate; amount. By November 15 of each year, the commission shall certify to the governing body the estimated sum necessary for the proper conduct of its work during the ensuing fiscal year, which shall include the sums estimated to be expended for such of the following items as it is anticipated that expenditure will be made, namely:

- (a) Payment of wages and salaries of employees;
- (b) Expenses of commission members in discharging their official duties including expenses incident to attendance at professional meetings;
- (c) Purchase of trees and shrubbery; and
- (d) Purchase of necessary equipment and materials and the cost of services for the prudent promotion of the work.

The governing body shall annually appropriate such sum as it may deem necessary for said purposes.

2-17.9 No liability for death or injury. Nothing in this section shall be construed to make the commission or any member thereof, or any volunteer participating in any community forestry program provided for by section 4 of P.L. 1996, c. 135 (N.J.S.A. 13:1L-17.4), responsible for the death or injury of any person, or for an injury to any property or highway tree or shrub. Pursuant to N.J.S.A. 40:64-14, liability for any such death or injury shall be governed by the provisions of the New Jersey Tort Claims Act, N.J.S.A. 59:1-1 *et seq.*

Section 2. Effective Date. This Ordinance shall take effect immediately upon adoption and publication in accordance with the laws of the State of New Jersey.

ATTEST:

Susan D. Lockwood, Mayor

Judith A. Allen, RMC
Township Clerk
June 30, 2003
Published 7/10/03

PLEASE TAKE NOTICE that the above Ordinance was approved on first reading by the Delaware Township Committee at its Regular Meeting held on June 30, 2003. It will be considered on second reading for final adoption and will have a public hearing at a Regular Meeting beginning at 8:00 p.m. on **NEED DATE OF SECOND READING** –

Appendix #2: Landscaping Regulations

certified cost shall be treated as a credit against any assessment for that particular off-tract improvement, or portion thereof, and the developer shall be entitled to the return of all or a proportionate part of the cash previously deposited by the developer with the Municipal Clerk.

L. Installation of improvements by the applicant.

1. The municipality may, at its discretion and option, enter into a contract with the developer to provide for the installation and construction of the off-tract improvements by the developer, upon contribution by the municipality of the remaining unallocated portion of the cost of the off-tract improvement.

2. In the event the municipality chooses to contribute to the cost and expense of installation of off-tract improvements by the developer, the portion contributed by the municipality shall be subject to possible certification and assessment as a local improvement against benefiting property owners, if applicable.

11:7 LANDSCAPING REGULATIONS FOR ALL ZONES

11:7.1 Purpose. The purpose of these regulations is to promote the following goals:

- A. To enhance the aesthetic and environmental character of the site being developed.
- B. To integrate to the maximum extent practical the existing native vegetation within the development and to preserve the bio-diversity of the native plant communities and the wildlife which depend on them.
- C. To preserve or create contours and vegetation needed to maximize ground water discharge.
- D. To maintain the natural hydrological pattern of watercourses within the site.
- E. To preserve and emphasize in the landscape design all natural features on the site such as trees, brooks, hilltops, ridges, ravines and rock outcropping.
- F. To preserve to the extent possible existing healthy trees on the site.

11:7.2 Landscaped Areas. All disturbed areas of a site not used for agriculture or the construction of buildings, roads, accessways, parking or sidewalks shall be landscaped in accordance with these regulations.

11:7.3 Tree Planting and Landscaping Plan. All applicants for site plans and major subdivisions shall submit to the Planning Board for approval a tree planting and landscaping plan for the site to be developed prepared by a licensed landscape architect, a New Jersey certified tree expert or a New Jersey approved forester. The plan shall show on a contoured map:

Delaware Township Community Forestry Management Plan

A. The location of all areas that will not be developed or that cannot be developed by reason of Federal, State, County or municipal laws or regulations.

B. A delineation of all wooded portions of such areas indicating, in general terms, the species, composition, basal area and average diameter at breast height (dbh) of the trees within such wooded areas.

C. The locations of all areas to be developed (including the areas to be used for streets and building sites) and a count by species and size of all existing living trees within such areas having a diameter at breast height (measured 4.5 feet above ground level) of 6 inches or greater.

D. A count by species and size of all existing living trees having a diameter at breast height (measured 4.5 feet above ground level) of 6 inches or greater that are to be removed for whatever reason. The plan should show the present locations of the trees proposed to be removed.

E. All other natural features on the entire site such as watercourses, wetlands, hilltops, ridges, ravines, and rock outcroppings.

F. Proposed new vegetation to be planted in residential or commercial areas, common open spaces, parking areas, and the non-developable areas.

G. Planted and/or bermed buffer areas proposed to be installed to protect adjacent residences from noise, dust and/or traffic disturbances or to protect adjacent agricultural uses from the impacts of encroaching residential development.

H. The exact location within the entire site of all specimen trees, including their species, size (diameter at breast height) and approximate age. A specimen tree is one of unusual size (generally exceeding 30 inches dbh), age (100 years or older), rarity for this part of New Jersey or historical significance and that is of good health and vigor and free of hazardous defects.

I. The approximate proposed locations, size (dbh), botanical and common names of all street shade trees to be planted.

11:7.4 Protection of Existing Trees. During development, all existing trees that are proposed to remain must be protected from injury due to grade changes, altered drainage patterns, compaction, excavating, filling, or stockpiling of soil. As a minimum, no disturbance shall be permitted to occur within a circular area measuring 1.5 times the extent of the tree canopy around each such tree. Such area shall be protected by snow fencing or other similar means. No specimen tree, no matter where located on the site, shall be removed unless it can be demonstrated that such removal is required to protect the health, safety, and welfare of the public.

Delaware Township Community Forestry Management Plan

11:7.5 Replacement of Trees. Each tree removed, destroyed, or severely damaged within the developable areas during the site development shall be replaced according to the following formula:

Each removed tree having a dbh measurement as listed in this column:	To be replaced by the number of trees listed in this column:
dbh between 6 - 16 inches	1
16 - 18	3
18 - 21	4
21 - 24	5
24 - 27	6
27 - 30	7
30 - 33	8
33 - 36	9
36 - 40	10
Over 40	15

A. The replacement tree shall have a caliper of at least 2 and 1/2 inches as measured two inches above the root crown.

B. If trees have been removed by or at the request of the developer in anticipation of development, they are to be replaced on the same basis herein indicated.

C. If the site is not large enough to suitably contain the replacement trees, the applicant may request or be required to contribute an amount equal to the then current value of each unplanted tree to a fund established by the Township for environmental programs such as tree planting, tree maintenance or tree preservation on public lands or rights-of-way.

11:7.6 Additional Trees. If the site contains no trees or few trees, a sufficient number of trees shall be planted therein at such location as to promote the purposes of these landscaping regulations. In evaluating the number, types, and location of proposed trees and/or shrubs, the Planning Board may rely upon the advice of the Township Arborist who shall be guided by the purposes of these landscaping regulations.

11:7.7 Planting of Trees and Shrubs. All trees and shrubs to be planted on the site shall be obtained from a commercial nursery located within the Hardiness Zone of Delaware Township (unless otherwise approved by the Municipal Agency). The trees shall not be less than 2 1/2 inches in caliper measured two inches above the root crown and shall conform to American Standards for Nursery Stock ANSI 260-1-2990. A copy of the nursery receipts for the purchased nursery stock trees shall be provided to the Planning Board, the Township Arborist and the Municipal Engineer.

It is strongly recommended that the following invasive exotic species should not be planted:

Delaware Township Community Forestry Management Plan

Trees:

Norway maple	Sycamore maple	European alder
Osage orange	White mulberry	Amur cork
White poplar		

Shrubs and Small Trees:

Barberry	Amur privet	California privet
Amur honeysuckle	Tartarian honeysuckle	Mock orange
Multiflora rose	Rugosa rose	Euonymus spp.
Russian olive	Autumn olive	

Vines:

Porcelain berry	Oriental bittersweet	Kudzu
Japanese honeysuckle	Japanese wisteria	

11:7.8 Street Shade Trees. The developer shall install street shade trees as herein specified and remain responsible for their care, maintenance and health for a period of two growing seasons following their planting. The proposed maintenance schedule shall be approved by the Planning Board based upon the recommendations of the Township Arborist and/or as recommended in the New Jersey Tree Federation publication, Trees for New Jersey Streets, Third Edition.

The street shade trees shall be planted by or under the supervision of a New Jersey certified tree expert or nurseryman certified by the New Jersey Landscape and Nurseryman's Association. The street shade trees shall be located between the street right-of-way line and the cartway, i.e. the surfaced portion of the street right-of-way area, and no closer than 25 feet from any existing or proposed street light or street intersection. Under appropriate circumstances, such as the possible interference of the shade trees with overhead or underground utility lines, the Planning Board may require an alternate location for the shade trees between the street right-of-way and the applicable front setback line. The street shade trees shall be spaced 30 to 50 feet on center, as recommended for the particular species in the New Jersey Shade Tree Federation publication, Trees for New Jersey Streets, Third Edition.

The trees to be planted shall be non-grafted, single stem trees selected from the List of Recommended Street Shade Trees herein. The listed trees are recommended because they will (a) reduce the long-term maintenance cost to the Township; (b) provide the large shade tree characteristic of the old rural atmosphere intended to be fostered; (c) provide a continuous roadside system characterizing the community; and (d) enhance the native tree populations. This list is non-exclusive, but the use of non-native species or smaller native trees such as dogwood, will, in general, not be approved. It is recommended that several species of shade trees be planted. Determination of the exact final location of the street shade trees should be postponed until the streets and utilities have been installed. At that time, the Township Arborist may recommend such variations in spacing and location of the trees as the physical circumstances and types of trees dictate.

Delaware Township Community Forestry Management Plan

List of Recommended Street Shade Trees:

Acer rubrum (red maple)
Acer Saccharum (sugar maple)
Celtic occidentalis (hackberry)
Fagus sylvatica (beech)
Fraxinus americana (white ash)
Fraxinus pennsylvanica (green ash)
Ginko biloba (male only) (Maidenhair tree)
Gleditsia triacanthos (honeylocust)
Liquidambar styraciflua (sweetgum)
Liriodendron tulipifera (tulip poplar)
Nyssa sylvatica (black tupelo)
Platanus acerifolia (London plane tree)
Quercus acutissima (Sawtooth oak)
Quercus rubra (red oak)
Quercus coccinea (scarlet oak)
Quercus imbricaria (shingle oak)
Quercus phellos (willow oak)
Quercus palustris (pin oak)
Quercus velutina (black oak)
Quercus shumardi (Shumard oak)
Sophora japonica (scholar tree)
Tilia americana (American linden)
Tilia cordata (littleleaf linden)
Tilia tomentosa (silver linden)
Zelkova serrata (Zelkova tree)

11:7.9 Natural Features. Natural features such as brooks, wetlands, hilltops, ridges, ravines and rock outcroppings shall be preserved in their natural state, to the extent possible, in the landscape design.

11:7.10 Top Soil Protection. Topsoil that shall be removed in the course of regrading a subdivision shall not be used as fill. At least six (6) inches of topsoil shall be left on the ground and shall be stabilized by seeding or planting. Excess topsoil may be removed from the site to another location within the Township only with the written approval of the Municipal Engineer.

11:7.11 Additional Landscaping Regulations for Commercial and Industrial Zones.

A. A minimum landscaped area five (5) feet wide shall be provided along all property lines including public streets.

B. In all zones where a commercial or industrial development zone line abuts a residential zone, a twenty five (25) foot landscaped buffer must be established and maintained.

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C. All buffers and landscaped areas shall be protected from adjacent parking areas by curbs, or concrete, metal or wood bumpers at least six (6) inches in height and securely anchored into the ground.

D. Service areas, parking areas, transformer compounds, and other strictly utilitarian improvements shall be screened as fully as practicable. In general, it is intended that possible objectionable or unsightly features within a given development shall be screened from passing traffic or abutting residential properties.

E. In the case of a repetition of building designs, care shall be exercised to avoid monotony in the planning design by introducing sufficient variety in the planting layout to create interest and aesthetic appeal. However, excess variety should be avoided.

F. All new street trees and on-site deciduous shade trees shall be not less than 2 1/2 inches in caliper, measured two inches above the root crown, at time of planting. Where existing trees are not present or have not been preserved, a reasonable number of trees, as determined by the Municipal Agency, with a caliper of not less than 2 1/2 inches, measured two inches above the root crown, shall be planted on the site.

G. An appropriate amount of evergreen plant material to be determined by the Municipal Agency shall be included on the site. Evergreen trees shall be not less than six (6) feet in height at time of planting.

H. Areas required for buffers shall not be cleared or graded prior to development approval.

I. Off-street parking or loading shall not be permitted in any buffer area.

J. A minimum of fifteen (15) percent of the entire site shall be devoted to landscaped areas in addition to all required buffers. In calculating landscaped areas, the areas of plazas, open or enclosed pedestrian shopping malls, sitting areas, pools and fountains shall be included. Landscaped areas within and between parking areas shall also be included.

11:8 OFF-STREET PARKING AND LOADING REGULATIONS

11:8.1 General Regulations. Off-street parking, unloading and service requirements of this Section shall apply and govern in all zones within the Township of Delaware unless superseded by the Residential Site Improvement Standards (N.J.A.C. 5:21-1 et seq.). Except as provided in this Section, no application of a building permit shall be approved unless there is included with the plan for such building, improvement or use, a plot plan showing the required space reserved for off-street parking, unloading and service purposes. A Certificate of Occupancy shall not be issued unless the required off-street parking, unloading and service facilities have been provided in accordance with the approved plan. All driveways shall be designed and constructed in accordance with the Driveway Ordinance of Delaware Township.

Appendix #3

Township Open Space Information



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PRESERVATION
statistics

**Farmland Preservation by municipality
May 1985 to Fiscal Year 2017**

TOP 25 Towns in Farmland Preservation Acreage

	Town	County	Acres	Farms
#1	Upper Pittsgrove	Salem	10,378	91
#2	Upper Freehold	Monmouth	9,960	101
#3	Mannington	Salem	6,835	53
#4	Pilesgrove	Salem	5,740	44
#5	Wantage	Sussex	5,206	38
#6	Delaware	Hunterdon	4,925	70
#7	Springfield	Burlington	4,888	45
#8	Hopewell	Cumberland	4,878	51
#9	Washington Township	Morris	4,828	72
#10	Upper Deerfield	Cumberland	4,749	52
#11	Chesterfield	Burlington	4,670	34
#12	East Amwell	Hunterdon	4,542	54
#13	North Hanover	Burlington	4,090	37
#14	Alloway	Salem	3,857	33
#15	Readington	Hunterdon	3,853	52
#16	Pittsgrove	Salem	3,608	40
#17	Mansfield	Burlington	3,336	25
#18	South Harrison	Gloucester	3,206	36
#19	Elk	Gloucester	2,975	30
#20	Greenwich	Cumberland	2,938	24
#21	Franklin Township	Warren	2,924	32
#22	Quinton	Salem	2,921	19
#23	Plumsted	Ocean	2,888	37
#24	Pohatcong	Warren	2,859	30
#25	Southampton	Burlington	2,768	25

top 25 towns by acreage preserved

Does not include farmland preserved by transfer of development rights or by other donation program without State payment



garden state
preservation trust

PRESERVATION
statistics

Farmland Preservation by municipality
May 1985 to Fiscal Year 2017

TOP 26 Towns in Farms Preserved

	Town	County	Farms	Acres
#1	Upper Freehold	Monmouth	101	9,960
#2	Upper Pittsgrove	Salem	91	10,378
#3	Washington Township	Morris	72	4,828
#4	Delaware	Hunterdon	70	4,925
#5	East Amwell	Hunterdon	54	4,542
#6	Mannington	Salem	53	6,835
#7	Upper Deerfield	Cumberland	52	4,749
#8	Readington	Hunterdon	52	3,853
#9	Hopewell	Cumberland	51	4,878
#10	Springfield	Burlington	45	4,888
#11	Pilesgrove	Salem	44	5,740
#12	Pittsgrove	Salem	40	3,608
#13	Wantage	Sussex	38	5,206
#14	Alexandria	Hunterdon	38	2,589
#15	North Hanover	Burlington	37	4,090
#16	Plumsted	Ocean	37	2,888
#17	South Harrison	Gloucester	36	3,206
#18	Hopewell Township	Mercer	36	2,456
#19	Hillsborough	Somerset	35	2,684
#20	Woolwich	Gloucester	35	2,104
#21	Franklin	Gloucester	35	1,970
#22	Chesterfield	Burlington	34	4,670
#23	Alloway	Salem	33	3,857
#24	Franklin Township	Warren	32	2,924
#25	Elk	Gloucester	30	2,975
#26	Pohatcong	Warren	30	2,859

top 26 towns by farms preserved

Does **not** include farmland preserved by transfer of development rights or by other donation program without State payment