



COMMUNITY FORESTRY MANAGEMENT PLAN

**TOWNSHIP OF MIDDLE
CAPE MAY COUNTY
NEW JERSEY**

2017-2021



**PREPARED FOR: THE TOWNSHIP OF MIDDLE
33 MECHANIC STREET
CAPE MAY COURT HOUSE, NJ 08210**

**PREPARED BY: THE LOMAX CONSULTING GROUP, LLC
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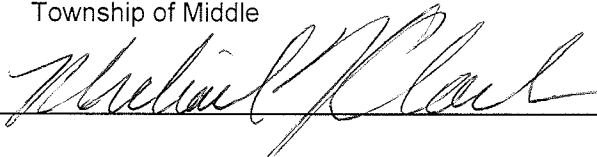
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Community Forestry Management Plan

1. Municipal/County Information Form (*Attachment A*)

Municipality: Township of Middle
County: Cape May County
Address: 33 Mechanic Street, Cape May Court House, NJ 08210
Contact Name and Title: Elizabeth Terenik, Business Administrator
Phone #: (609) 465-8732
Email: eterenik@middletownship.com
Organization Name: Township of Middle

Mayor's Signature:



Date of Management Plan Submission: August 18, 2017

Time Period Covered In Management Plan: 2017 - 2021

- | | |
|--|---|
| Community Stewardship Incentive Program (CSIP) Practices Identified in Management Plan | <input type="checkbox"/> CSIP #1 Training |
| | <input type="checkbox"/> CSIP #2 Community Forestry Ordinance Establishment |
| | <input type="checkbox"/> CSIP #3 Public Education and Awareness |
| | <input type="checkbox"/> CSIP #4 Arbor Day |
| | <input type="checkbox"/> CSIP #5 Tree Inventory |
| | <input type="checkbox"/> CSIP #6 Hazard Tree Assessment |
| | <input type="checkbox"/> CSIP #7 Storm Damage Assessment |
| | <input type="checkbox"/> CSIP #8 Tree Maintenance and Removals |
| | <input type="checkbox"/> CSIP #9 Insect and Disease Management |
| | <input type="checkbox"/> CSIP #10 Wildfire Protection |
| | <input type="checkbox"/> CSIP #11 Tree Planting |
| | <input type="checkbox"/> CSIP #12 Tree Recycling |
| | <input type="checkbox"/> CSIP #13 Sidewalk Maintenance Program |
| | <input type="checkbox"/> CSIP #14 Storm Water Management |
| | <input type="checkbox"/> CSIP #15 Other |

Official Use Only Certification

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 N.J. Forest Service has concluded that this plan meets the standards set forth by the State and the N.J. Community Forestry Council and is approved for the period covered.
Signed:

State Forester:

Approved Date:

2. INTRODUCTION

A. Background

The Community Forestry Management Plan (CFMP or Plan) for the Township of Middle was initially created to establish programs that recognize the unique nature of its tree resources and to plan future programs that will continue to protect and enhance these resources. Middle Township's previous CFMP was approved in 2010 and effective until 2015 when an updated CFMP was required. The Plan presented herein provides a review of work accomplished by the Township during the previous five years, as well as an update to the Plan for the current five-year schedule of activities (2017 to 2021) consistent with the Township's goals and objectives.

The Township established goals and objectives compatible with the forestry planning process vision to protect, preserve, and enhance forest and tree resources for the benefit of its residents and visitors in addition to the wildlife that rely on them. The Plan presented herein recognizes the accomplishments of the Township and its partners in furthering community forestry endeavors. Examples of the Township's efforts to document and steward its natural resources include: preparation of a Natural Resources Inventory; preparation of the Conservation Plan Element Update to the Township's Master Plan, establishment of the Middle Township Shade Tree Commission, formation of the Middle Township Green Team to support and implement the Township's Sustainable Jersey initiatives, setting a Tree Canopy Goal for the Township, and annual Arbor Day commemoration. The Township has also recently received a No Net Loss Grant to plant new trees within the Township.

This Plan recognizes that the Township, which includes a variety of ecosystems, experiences a unique set of opportunities and challenges. The Township primarily consists of rural, forested mainland, but also includes vast areas of coastal and freshwater wetlands, residential neighborhoods, and centers of urbanized commercial activity. This diversity of ecosystems present in the Township requires a unique approach to natural resource management whereby each can thrive and provide public benefits when managed properly. The Township is also focused on a plan of action to maintain and respond to public safety concerns and natural threats, including wildfires, insect infestations and pathogens. With a robust inventory of recreation areas, pocket parks and public lands, the Township proposes to identify and manage hazardous trees along streetscapes and in public open space areas where necessary. Accordingly, the Township leadership and

administration, with the support of the community, are committed to the maintenance and enhancement of its forestry resources.

The Township expresses, through this Plan, its intention to protect and enhance the tree resources, while at the same time engaging in efforts to avoid accidents caused by these resources, thereby obtaining liability protection for damage and/or injury caused by trees.

B. Mission Statement

The mission of the Township CFMP is to protect, enhance and sustain the variety of forest resources within the Township that help to improve the quality of life for the residents, visitors and wildlife that inhabit this unique community.

The approach to fulfill this mission entails engaging the community through education and outreach programs while concurrently enlisting support and guidance from the Mayor and Township Committee, Planning Board, Department of Public Works, Shade Tree Commission, Parks and Recreation Department, Green Team and their community forestry and landscape consultants. This community effort will ensure that the overarching values expressed by the community include appropriate management and improvement of the open space, active recreational areas and the streetscapes of the developed residential and commercial areas. While enhancing the tree resources, the Township is committed to promoting the safety and welfare of its citizens by inventorying the extent and condition of its tree resources and by maintaining them, while still recognizing the limits of its resources.

C. Goals and Objectives

GOAL 1

Review and adopt the Subsequent CFMP

Objectives:

- A. Review the Township organizational structure for management of tree/forest resources.
- B. Prepare the draft CFMP with input from the Township's Administration, Planning Board, Public Works Department, Parks and Recreation Department, Shade Tree Commission, Environmental Commission, and Green Team.
- C. Present the CFMP to the Township, its reviewing organizations/agencies and the public for adoption.
- D. Review and revise the CFMP to facilitate appropriate portions of the Township Ordinances consistent with the adopted CFMP.

- E. Provide training to the Planning Board, Public Works Department, Parks and Recreation Department, Shade Tree Commission, Environmental Commission, and Green Team staff/members, concerning the scope and provisions of the CFMP to facilitate implementation.

GOAL 2

Inventory and Assessment of the Community Forest Resources within the Township

Objectives:

- A. Establish a base map of the Township for inventorying existing trees and tracking landscape/streetscape improvements on public property.
- B. Conduct a preliminary inventory of the naturally occurring forest areas and active recreational park and streetscape tree resources on public property within the Township.
- C. Prepare an inventory of trees on public property, including along Township rights-of-ways that may be hazardous and/or storm-distressed and prepare a list of priority trees requiring maintenance by the Public Works Department and/or Parks and Recreation Department.
- D. Inventory the invasive trees/damaging vines threatening the integrity of the natural areas within the Township

GOAL 3

Develop a Plan for Tree Resource Enhancement within the Township

Objectives:

- A. Identify areas within the Township streetscapes that could benefit from the planting of selected tree species.
- B. Identify areas within the Township parks and properties that could be enhanced by the planting of selected tree species.
- C. Develop lists of tree species and other vegetation suitable for planting in the Township's streetscapes in order to minimize water requirements and minimize insect and disease damage, while sustaining pollinators and appropriate wildlife and enhancing the aesthetics of the Township, including view sheds.
- D. Establish and train Township staff regarding an annual pruning program that enhances and strengthens trees while reducing the frequency of emergency situations associated with storm damage and utility failures.
- E. Develop a checklist for identifying tree-related problems and points of contact within the Township to resolve them. Train responsible personnel accordingly.

- F. Continue removing and mitigating hazard trees through the use of the Township's existing Public Works Department and Parks and Recreation Department resources. Update hazard tree inventory.
- G. Replace hazard tree removals, where feasible, by planting trees in suitable locations.
- H. Standardize enforcement of existing tree protection ordinances. Alert residents to ordinance requirements and methods to report violations.
- I. Leverage No Net Loss grant funding through the NJ Department of Environmental Protection, Division of Parks and Forestry to reforest portions of the Township.

GOAL 4

Develop Outreach Initiatives that Encourage Public Awareness and Support of Community Forestry Programs.

Objectives:

- A. Develop information with the assistance of the Mayor, Township Committee and Administration, as well as Public Information Officer, Planning Board, Department of Public Works, Parks and Recreation Department, Shade Tree Commission, Green Team, and Environmental Commission staff/members for dissemination to the public concerning the value of trees in the Township, existing tree resource protections (i.e., ordinances/guidance documents/CFMP) and appropriate notification procedures for reporting violations.
- B. Identify Township resources available for the dissemination of information to the public.
- C. Incorporate Community Forestry messages in community communications (e.g. website and newsletters), Township resources, public relations news releases and events. Develop an inventory and schedule of outreach communications and events, including Arbor Day, and engaging speakers and authors who present programs on tree-related topics.
- D. Promote the Commemorative Tree Planting Program in the Township. Develop a brochure describing the program, possible planting locations, suggested tree species, and costs. Included in this objective is the dissemination of this brochure through Township resources.
- E. Continue to host an Arbor Day event in the Township (in cooperation with other Township stakeholders).
- F. Put an insert in all tax bills and sewer bills instructing residents how to report problem trees.
- G. Establish a link from the Township's web site for addressing tree care issues.

GOAL 5

Develop a Plan for Sustaining Forestry Resources in the Township

Objectives:

- A. Develop a process with the Mayor and the Committee for allocation of Township resources to obtain funding from within the Township, as well as from other sources, to implement the CFMP.
- B. Develop a plan to train Township staff/personnel regarding the importance of maintaining and caring for tree resources and responding to inquiries or reports from the public concerning tree-related issues.
- C. Coordinate with the Township Planning Board to incorporate elements of the CFMP into the next Master Plan Re-examination.
- D. Operate and manage a Commemorative Tree Planting Program.

GOAL 6

Provide Educational Opportunities in Support of the CFMP.

Objectives:

- A. Expand the number of Township personnel and volunteers who have attended CORE and advanced training required by the Community Forestry Act.
- B. Develop information guiding the use of suitable trees and shrubs to be used in the community to minimize water requirements and to minimize insect and disease damage while sustaining pollinators and appropriate wildlife.
- C. Develop a school enrichment program, in connection with the Township School Board and the Parks and Recreation Department and Public Works Department, Green Team, Planning Board, Shade Tree Commission, Environmental Commission, which provides insight and experiences associated with the value of trees, forested habitats in the community and Arbor Day activities.

GOAL 7

Develop a natural tree destruction response plan addressing tree damage

Objectives:

- A. Identify risks to the community trees and the associated potential for damage resulting from tree failure on Township property.
- B. Develop a plan, in consultation with Township emergency management personnel, to respond to tree damage episodes. This plan will include the required Township personnel and equipment, public safety protocols and outline the clean-up and disposal of tree

debris. Public Works Department and Parks and Recreation personnel and/or specialized group of volunteers will be trained to treat tree damage episodes safely.

D. Liability Statement

Although street and public open space 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 insure that community trees not only contribute to the aesthetic, environmental and economic vitality of the area, but also reduce the potential hazards to public safety. The community must work within a reasonable budget that may not be able to meet each and every need of our community forest immediately, especially due to the size of the Township and the large number of trees present in the Township. Therefore, it is the intent of this Plan to focus available resources to the greatest need and work step-by-step towards healthy trees in streetscapes and public open spaces with commensurate reduced risk to public safety.

The Township feels by taking logical steps outlined in the CFMP that the Township will garner public support for Plan implementation and demonstrate the long-term benefits to the environment and public safety.

The Township also wants to become more pro-active in the management and care of its trees. Through inventory and hazard assessment, the Township will position the Shade Tree Commission and Green Team to coordinate with the Department of Public Works and Parks and Recreation Department to take corrective action prior to structural tree failure and other hazardous tree-related conditions. It is acknowledged that not all hazardous conditions can be predicted. Good maintenance and care will reduce the probability, but unexpected events may still occur.

Following this Plan will demonstrate that the Township is devoting reasonable levels of resources in a planned manner to mitigate the number of tree-related incidents/accidents, thereby reducing its exposure to liabilities and increasing public safety.

3. Community Overview - Past, Present and Future...

A. Introduction

The Township initiated the development of this Plan as part of community-wide planning initiatives to address public safety and concerns and engage in proactive stewardship of its natural resources. The Township engaged in the preliminary stages of the Plan development to reflect its long-term objectives. The Shade Tree Commission convened to outline and identify goals and objectives specific to the needs of the community. In recent years, the Township has made continued efforts in the management of these resources on an as needed basis albeit without the benefit of a management plan. This Plan was prepared to update the mission and goals for tree resource management and to define objectives and an organizational structure to support this effort. The Township continues its interest in tree resources by updating its Master Plan, passing new/amended ordinances, planting trees and shrubs around new public buildings and by supporting the forestry/landscaping efforts of community partners in the Township of Middle.

B. Environmental Context

The Township is located in the outer coastal plain region in the central portion of Cape May County. It is bordered to the east by the Atlantic Ocean and estuarine back bays adjacent to the coastal communities of the Borough of Avalon, Borough of Stone Harbor, City of North Wildwood, Borough of West Wildwood, and the Borough of Wildwood. It is bordered to the north by the Township of Dennis. To the west of the Township is the Delaware River and Bay. The municipality encompasses approximately 44,800 acres, of which over 50 percent (26,807 acres) is freshwater or coastal wetlands and an additional 16 percent (8,880 acres) is open water area, as illustrated in **FIGURE 1 (APPENDIX A)**. Much of the area of the Township, approximately 22,506 acres, is federal, state, county, municipal and not-for-profit preserved open space, which is 50.2% of the total area of the Township. Preserved open space areas include Beaver Swamp Wildlife Management Area, Dennis Creek Wildlife Management Area, Cape May National Wildlife Refuge, Cape May County Park and Zoo, and Cape May County Park South.

Middle Township is situated in the Atlantic Outer Coastal Plain and is generally level. The soils of this region were formed from unconsolidated deposits of sediment and particles, resulting in a large variability of sediments throughout the Township. This variability in soil types also helps to

establish the diverse ecosystems throughout the Township.

The Land Cover Map of the Township illustrates the distribution of urban (developed) areas and open space/natural areas (**FIGURE 2 – APPENDIX A**). The majority of the land area is classified as wetlands or forest land cover. Development in the Township has been focused into centers of community activity to help preserve natural resources. Existing designated centers include the Cape May Court House Town Center and Rio Grande-Whitesboro-Burleigh Town Center. Designated Villages located in the Township include Del Haven, Green Creek, Swainton and Goshen. Residential and commercial development is focus along the major roadways through the Township, which include the Garden State Parkway, U. S. Route 9, and State Routes 47. Currently existing forested areas, including forested wetlands, are depicted on the Middle Township Forestry Base Map (**FIGURE 3**). Forested areas include naturally occurring forests, much of which is preserved and protected from future development.

C. History

Middle Township was formed as a precinct on April 2, 1723 and was one of the original 104 New Jersey Townships incorporated with the passage of the Township Act by the New Jersey Legislature on February 21, 1798. The Township originally included what is known today as Avalon, Stone Harbor, and the Wildwoods, all of which have been incorporated in their own right. The Township Act established town meetings by which to govern the Township but was replaced in 1899 by a revision to the Township Act which concentrated all municipal legislative powers into the hands of a township committee which still exists today. The municipality is governed by a three-member Township Committee which is elected by voters. At the annual reorganization meeting the Committee then selects one of its members to serve as Mayor and another as Deputy Mayor.

The Township was originally home to Lenni Lenape indigenous tribes. In the early 1700s settlers first came to the eastern portion of the Township as whalers and later moved from the barrier islands to the mainland as permanent residents. This area made its notoriety in the shipbuilding and lumbering industries and flourished during the 19th century. Significant farming operations continued in the Township through the late 20th century, some still exist today.

The Township includes the communities of Cape May Court House, Rio Grande, Whitesboro, Burleigh, Swainton, Green Creek, Del Haven and Goshen. These communities are currently proposed by the Township in the Master Plan to all be designated as centers in the SDRP through the Plan Endorsement process. The purpose of the Plan Endorsement process is to

achieve consistency among municipal, county, regional and State agency plans and with the State Plan, and to facilitate the implementation of these plans (N.J.A.C. 5:85-7.1(b)).

The Township's latest Master Plan was passed in 2003, which was reexamined and the Land Use Plan updated in 2010. The updated Master Plan contained goals and policy objectives, updated land use, housing, circulation, utility service, community facilities, recreation, historic preservation, conservation, economic, and recycling plans. Goal 3 of the Master Plan is to "Encourage the conservation of the area's natural resource", which would include the forest resources that are found throughout the Township. A Natural Resources Inventory was conducted in November 2007, revised in May 2010, and then adopted in July 2010. This detailed natural resource inventory includes mapping and description of the natural areas in the Township and helps to make informed decisions concerning land use in the Township and refinement of zoning regulations and land use ordinances. The Township established a Green Team in 2011 in an effort to lessen the environmental impact of Township operations, energy conservation, protection of natural resources, smart growth principals of development, and community education. The Green Team consists of all the members of the Middle Township Environmental Commission. In 2013, Middle Township completed a Recreation and Open Space Plan that identified important resources, including natural areas, that serve a critical role in recreation activities. The plan also surveyed Township residents to gauge interest and define pathways for future recreational and open space enhancements.

In 2014 Middle Township received a \$382,500 No Net Loss grant through the NJ Department of Environmental Protection, Division of Parks and Forestry. The grant provides for the purchase, planting, protection, care and management of 1,275 trees. Trees were proposed to be planted on properties owned by Middle Township, Cape May County, and the Middle Township Board of Education throughout the municipality. Planting sites include parks, schools, public facilities, and along municipal streets (**FIGURE 4**). The grant was made available due to the reconstruction of the Garden State Parkway interchanges 9, 10 and 11 which required to removal of 26.03 acres of forest. A total of 19.78 acres were to be reforested at the Parkway project site, leaving 6.25 acres that was still required to be reforested. To meet No Net Loss requirements, funding was made available through the No Net Loss program by the NJ Turnpike Authority for the replanting requirement to be met by a Middle Township reforestation project. A comprehensive planting plan, consisting of 24 locations, was developed and is presently being implemented. Planting was bifurcated into two seasons (spring 2017 and spring 2018) based on nursery stock availability and planting site readiness. The first phase of planting was completed, and later

inspected/accepted by the No Net Loss staff in June 2017.

The Township contains large expanses of natural forested areas with development focused in villages and towns. Though the Township is mostly rural, the diverse environments of forest, wetlands, farmland, and beaches present a unique opportunity for residents to enjoy a variety of natural resources. The Township endeavors to maintain, enhance, and preserve these natural resources to the benefit of the public and the environment. Continued efforts have been made by the Township to update their Master Plan and develop new programs to help protect and maintain the natural resources located in the Township, including this Plan to recognize the essential qualities and benefits of a healthy, robust community forest.

D. Culture

The community is mainly rural residential development and wide expanses of natural areas. As of the census of 2010, there were 18,911 people, 7,256 households and 4,937 families residing in the Township. However, the population within the Township can increase to over 60,000 during the summer. The Township leadership and administration, with the support of the community, are committed to the maintenance and enhancement of its natural resources, as seen by the authorization of the Shade Tree Commission, Township Natural Resources Inventory, Green Team, and previous CFMPs. Residents of the community are largely receptive to environmental stewardship, with several avenues to become involved in creating a more sustainable Township including the Environmental Commission, Shade Tree Commission, Green Team, and volunteer activities.

E. Community Values

Public policy and its associated planning documents reflect the values of this community. Accordingly, the Township's Master Plan Re-Examination, dated May 2010, in conjunction with the November 2007 Natural Resources Inventory (revised May 2010) and July 2010 Land Use Plan Update, state that they seek to "Preserve the unique natural resources and habitat that are an integral aspect of the Township's quality of life". This CFMP will further expand on that goal and the previous 2010 CFMP to provide a focused effort for the management of forest and tree resources in the Township. Several planning initiatives were developed to help manage and preserve natural resources within the Township, including the formation of the Middle Township Green Team to support and implement the Township's Sustainable Jersey initiatives and setting a Tree Canopy Goal for the Township,

Tree resources of the Township were inventoried in the November 2007 Natural Resources Inventory, which was revised May 2010, for purposes of identifying the types and locations of the various plant communities throughout the Township to help better prepare zoning and land use regulations or ordinances. The variety of tree communities present in the Township include shrub thicket and limited dune woodland communities of the barrier islands; southern coastal plain mixed oak forest, dry oak-pine forest, and pine-oak forest communities typical of uplands areas; and pitch pine lowland forest, pine barren shrub swamp/shrub thicket, outer coastal hardwood swamp, and coastal plain Atlantic white cedar swamp communities that are typical of wetland areas. Preliminary distribution of forest resources are shown on the newly established Forestry Base Map for the municipality (**FIGURE 3 – APPENDIX A**).

The 2011 Conservation Plan Update has established goals and objectives for managing vegetation in the Township. These goals and objectives include, “To sustain and increase the extent of vegetative cover with appropriate species, to control and eradicate invasive and exotic non-native plant species, to encourage property owners to plant and maintain trees, and to reduce wildfire hazards.” The Conservation Plan also includes recommended strategies to achieve these goals and objectives which include protecting naturally vegetated areas with open space preservation, encourage businesses and residents to use native vegetation in landscaping, fire safety education, consider development of a Community Wildfire Protection Plan, and work with other entities to implement a Watershed-based Invasive Exotic Plant Control Plan to address invasive species in the region.

The Shade Tree Commission has also evaluated the tree resources in the Township with focus on the percentage of tree cover. It was estimated that the current tree cover located in the Township is approximately 30%. Therefore, the Commission has set a Tree Canopy Goal of 35% to increase the amount of tree cover in the Township. Additional tree cover will function as a natural was to conserve energy, improve air quality, reduce noise pollution, provide protection from high winds, stormwater runoff and soil erosion, provide habitat for wildlife, increase property values and enhance the visual and aesthetic qualities of the community.

While the existing Township planning documents provide objectives for natural resource protection and management, this CFMP will bring a pointed focus to the tree resources of the Township. Subsequent to the approval of this Plan, it is anticipated that Plan will be integrated into relevant sections of Township Ordinances as they are created, modified and updated in the future.

F. Community Forestry Program Progress Summary

The Township's initial Community Forestry Management Plan (CFMP) was well-received and actively implemented by the community, which has already helped to improve the management of forest resources in the Township. CFMP implementation was a cooperative effort between the Public Works and Recreation Departments, Green Team, Mayor and Committee, as well as community partners. The initial CFMP benefited the Township by increasing community awareness of tree resources, improving public safety considerations with respect to hazard tree awareness, and fostering the planting of trees. This progress will be continued and expanded through this subsequent 5-year CFMP.

As evidenced by the previously submitted Annual Accomplishment Reports prepared by the Township, goals/objectives achieved during the previous 5-year plan included educating the public about forest resources in the Township, providing opportunities to sponsor tree planting on Township properties, providing trees to the public on Earth Day, and celebrating trees with annual Arbor Day activities. Specific activities for public education conducted during this period included a Green Team booth during Arbor Day and Township events to hand-out seedlings and provide information concerning species selections, planting techniques and maintenance. Training of Public Works employees was conducted, including CORE training and advanced sessions, for which CEUs were obtained, on tree maintenance to reduce potential tree hazards, pruning, and proper planting. The Township's Annual Arbor Day Celebrations throughout the 5-year period disseminated information and heightened educational awareness on the value of trees in the community, as well as providing more than 2,500 seedlings to school children through partnerships with local businesses. Commemorative tree plantings were conducted in the Township at recreational sites. Examples of the Township's efforts to invest resources in tree-related activities and initiatives include preparation of a Natural Resources Inventory; preparation of the Conservation Plan Element Update to the Township's Master Plan, establishment of the Middle Township Shade Tree Commission, formation of the Middle Township Green Team to support and implement the Township's Sustainable Jersey initiatives, setting a Tree Canopy Goal for the Township, and annual Arbor Day commemoration.

Challenges that emerged during the initial plan included potential for conflicts between trees and utilities, large trees planted where there is inadequate area to grow, and the need for a comprehensive Community Education Program. No specific problems were encountered during program implementation for the Goals/Objectives of the initial CFMP. The State's No Net Loss program provided the Township with an opportunity to enhance tree resource, especially those

lost during the recent Garden State Parkway construction project.

Overall, the initial CFMP has allowed the Township and its residents to better realize and appreciate the importance of trees and how best to manage them. This subsequent 5-year CFMP will help to expand on the progress already made to preserve and improve the Township's tree resources.

4. Community Forestry Program Administration

Three principal groups within the Township are committed to overseeing the management of the municipal tree resources, as illustrated in the Organizational Chart. The Shade Tree Commission and Green team are responsible for the planning and education, while the Department of Public Works is responsible for tree inventory, assessment, maintenance and care of municipal trees. Any maintenance requests beyond the capability or expertise of the Department of Public Works are contracted to professional landscapers or certified tree experts on an “as needed” basis. Community outreach for issues pertaining to tree resources, events, activities and Township initiatives is coordinated through the Shade Tree Commission and Green Team.

The membership of the current Middle Township Shade Tree Commission and Green Team includes:

Shade Tree Commission

Connie Barry
Cheryl Grier
Michelle Cotton
James Collins
Tom Clark
Barbara Collins
Teri McInnis

Green Team

Vilma Pombo
Rachel Shepard
Jeffrey Schafer
Betsy Haskins
Larissa Smith
Josh Nemeth
Jim Amenhauser
James Collins
Dawn Stimmel

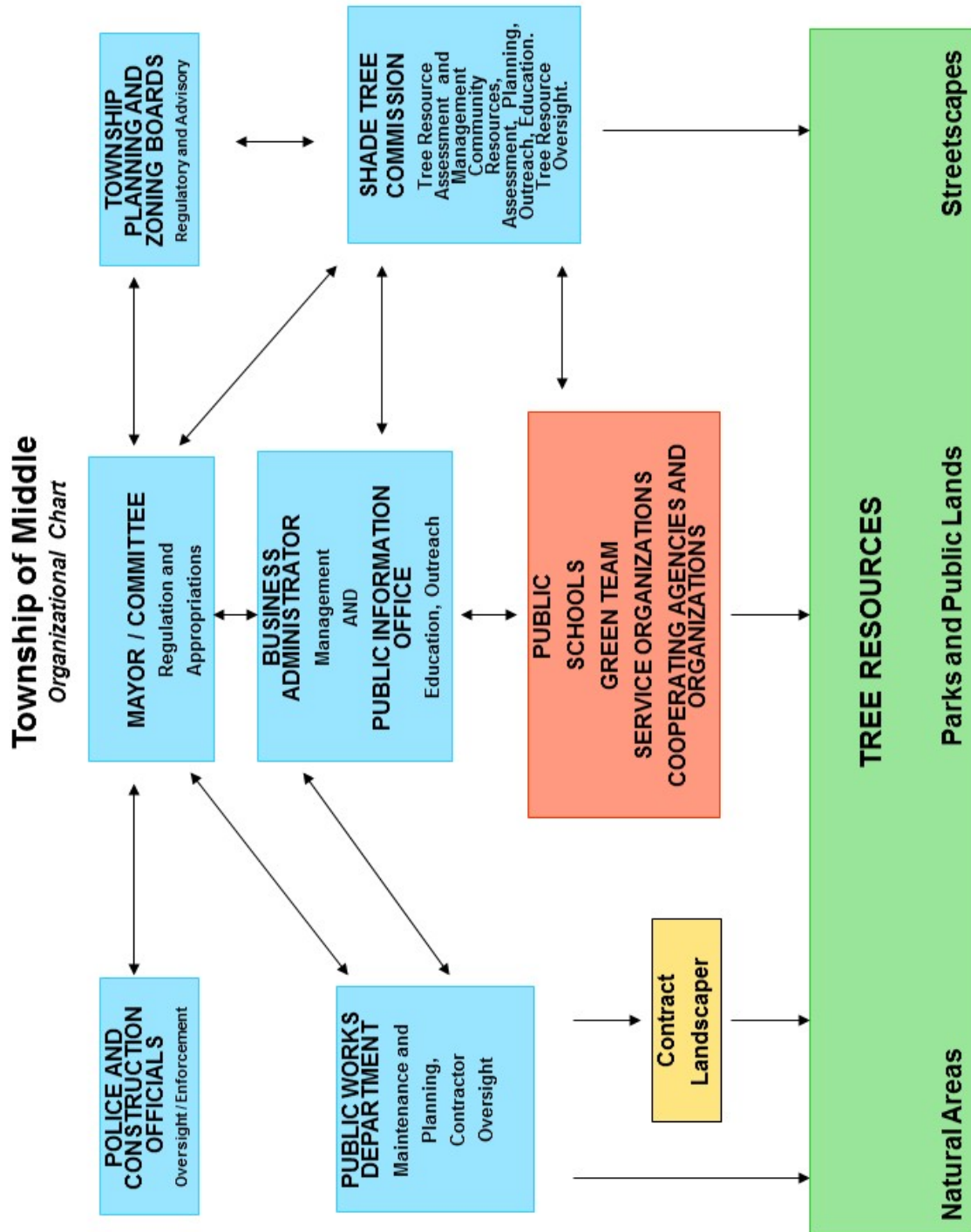
The staff of the Middle Township Department of Public Works is fully integrated into community forestry activities with James Collins, Manager of Parks and Grounds, serving as the Primary Point of Contact.

Township of Middle Department of Public Works
400 West Mechanic Street
Cape May Court House, NJ 08210
(609) 465-8745
jcollins@middletownship.com

The continuity and flow of the Township administration and organization is imperative to the

success of the community tree resources. The Township Organizational Chart is presented on the following page. The Mayor and Committee receive input from the Public Works Department, Shade Tree Commission, Green Team, Planning Board and the public. This input provides a vision for the future of the community. As part of this planning effort working relationships are being forged with various departments and community groups within the Township, each performing its individual duties to ensure a healthy, sustainable population of trees. Requests for Municipal tree services are addressed through one of two processes: (1) Township tree service and maintenance requests or (2) new plantings on Township properties. The Public Works Department ultimately carries out the maintenance and service requests on Township property and may use outside contractors, as appropriate. New plantings typically follow the protocol illustrated on the Organizational Chart to ensure that the new plantings are consistent with the vision of the Township and to ensure that adequate comment has been provided by the Public Works Department, Shade Tree Commission and the public. After consensus has been reached by the advisory groups, the Superintendent of Public Works implements the tree management and planting through the Public Works Department, contracted professionals or volunteer organizations, as appropriate. Tree-related activities conducted by the Public Works Department or contracted professionals include: installation of trees, storm clean-up response, brush and leaf removal/disposal, hazard tree response/removal, supervision of utility/tree conflict issues/solutions, inspection and trimming of sight triangles, and parks/facilities/grounds maintenance and improvements.

Additionally, no person or entity (with the exception of public utilities and Township contractors for limited activities) shall engage in landscaping practices of any kind on public land.



5. Community Map

The Township Forestry Base Map for the Plan is presented in **APPENDIX A, FIGURE 3**. The base map is provided as a 2010 color BING aerial at a scale of 1" = 7,000' such that important community features can be clearly identified. The base map labels the major Township roadways and identify select landmarks for user reference. Additionally, this base map contains important tree resource information as part of this initial forestry assessment of the Township. Forest Areas and Forested Wetlands Areas are preliminarily delineated, as well as existing preserved Open Space areas. Also included in the Plan are the locations of the NNL Proposed Planting Sites located on **FIGURE 4**. These sites were selected based on the availability of planting areas and benefits to the public to receive the 1,275 trees planted as a result of the NNL grant received by the Township in 2013.

Given the rural nature of the Township, natural areas with tree resources are far more common than street tree or landscaped plantings. Additional plantings on public lands are primarily located as landscaping around public buildings. However, the Township does include many large public naturally forest areas. These public natural areas include municipal and county parks, preserved open space and wildlife management areas, including the Beaver Swamp Wildlife Management Area, Dennis Creek Wildlife Management Area, Cape May National Wildlife Refuge, and The Nature Conservancy protected lands.

6. Training Plan

CORE employee training serves as the basis for implementing the CFMP. The State recommends that at least one employee of the Public Works Department (municipal employee) and one member of the Shade Tree Commission (volunteer) receive this training. In addition, The Lomax Consulting Group has obtained CORE and relevant advanced training for multiple employees to assist the Township in development and implementation of its CFMP. The Township has secured CORE training for James Collins and Barbara Collins in past years to meet the requirements set in the previous CFMP. It is expected that the Township will secure further CORE training employees and volunteers in 2017. Further, the Township is dedicated to expanding the number of trained staff and diversity of training programs as part of the CFMP as outlined in the Goals section of this Plan. The Township intends to allocate funds in its Tree Budget to accomplish this training.

The training proposed by the Township includes the following:

1. Expanding the number of Township staff and volunteers that are CORE trained and participation in skills training through Continuing Education Programs. The objective is to increase the number of trained staff and volunteers while increasing the depth of knowledge and experience of this working group.
2. Training focused on members of the Public Works Department and Shade Tree Commission regarding their roles and responsibilities, understanding the CFMP and Township policies relating to tree resources management.
3. Training the Public Works Department employees and the Shade Tree Commission members to identify and report tree hazards, in addition to the process through which the problems are resolved.
4. Training of the Public Works Department employees in advanced tree pruning techniques.

7. Public Education/Awareness/Outreach

The Township is engaged in tree and vegetation resource management through its Mayor, Committee and Administration, as well as Green Team and Shade Tree Commission and affiliated organizations. Community outreach for issues pertaining to tree resources, events, activities and Township initiatives is coordinated through the Green Team and Shade Tree Commission. The venues through which the community anticipates conducting public outreach and education are listed below.

Programs

- *Educational Information at Community Facilities*
- *Commemorative Tree Planting Programs*

Media Communications

- *News Releases*
- *Township Facebook Page*

Outreach to Groups

- *Township Website*
- *Township Mailings*

Through the use of existing resources, the Green Team and Shade Tree Commission will develop a network of distribution outlets for dissemination of important information specific to the value of trees, forestry-related programs and events, existing tree resource protections (e.g., guidance documents, CFMP), as well as procedures for reporting violations. The Middle Township School District was also identified as another important channel for distribution of information to the public. Other community partners anticipated to assist in the outreach of the Shade Tree Commission include the Green Team and Tree City USA. It is anticipated that the CFMP will be posted to the Township's website for easy access and reference by the public.

The Township, in coordination with the school district, will continue to host annual Arbor Day activities, which provides outreach opportunities to engage the public in community forestry efforts and communicate the Township's efforts to protect and enhance its tree resources. Additionally, as part of this Plan, the Shade Tree Commission, has set as an objective, the continuation and encouragement of the Commemorative Tree Program. Through this program,

an opportunity is created for citizens and groups to honor and remember individuals through the enhancement of public lands and streetscapes with tree plantings.

The aforementioned community partners, outlets, events and Township website will serve to carry the mission and message of the Shade Tree Commission, Green Team and the CFMP. Media communication opportunities through the issuance of new releases and mailings will also be utilized to promote events and programs in support of tree resource enhancement and management.

8. Statement of Tree Budget

The Township is distinct from many municipalities in that its tree programs need special training and experience to enhance and protect its tree resources because of the coastal environmental conditions. In order for the Township to act as steward of the landscape, the allocation of resources is important. The 2017 Tree Budget includes Township plantings and public funds associated with this project.

TOWNSHIP ESTIMATED TREE BUDGET 2017

Public Worked Personnel Salaries/Wages	\$75,000
Education and Training CORE Training, CEU Participation, etc.	\$350
Tree Planting Plants and Materials	\$8,500
Tree Maintenance Materials & Equipment	\$10,000
Equipment Rental	\$0
Shade Tree Commission Volunteer Time (16 hours @ \$21.79/hour)	\$349
Partner Organization(s) Volunteer Time (208 hours @ \$21.79/hour)	\$4,532
Consultant Fees (CFMP Preparation)	\$2,000

TOTAL: \$100,731

9. Statement of Plan Implementation

The following Statement of Plan Implementation addresses the specific actions proposed to carry out the Township CFMP's goals and objectives, as identified in Section 2, and establishes a yearly Implementation Timeline.

A. Background

The CFMP addresses tree-related opportunities and considerations within the Township, while concurrently coordinating the actions within the Township, of its volunteers and interested state and federal agencies. The Plan has been approved by the Township, after receiving public input, and the implementation strategy is presented below along with the timeline for each action.

B. Yearly Implementation Timeline

The following yearly implementation timeline defines the planned actions (Tasks) to achieve the goals and objectives discussed in Section 2 (pages 3 to 7).

Year 1, 2017

1. Review the Township organizational structure for management of tree/forest resources.
2. Prepare the draft CFMP with input from the Township's Administration, Planning Board, Public Works Department, Parks and Recreation Department, Shade Tree Commission, Environmental Commission and Green Team.
3. Present the CFMP to the Township, its reviewing organizations/agencies and the public for adoption.
4. Review and revise the CFMP to facilitate appropriate portions of the Township Ordinances consistent with the adopted CFMP.
5. Provide training to the Planning Board, Public Works Department, Parks and Recreation Department, Shade Tree Commission, Environmental Commission, and Green Team staff/members, concerning the scope and provisions of the CFMP to facilitate implementation.
6. Establish a base map of the Township for inventorying existing trees and tracking landscape/streetscape improvements on public property.
7. Identify areas within the Township streetscapes that could benefit from the planting of selected tree species.
8. Identify areas within the Township parks and properties that could be enhanced by the

- planting of selected tree species.
9. Develop information with the assistance of the Mayor, Township Committee and Administration, as well as Public Information Officer, Planning Board, Department of Public Works, Parks and Recreation Department, Shade Tree Commission, Green Team, and Environmental Commission staff/members for dissemination to the public concerning the value of trees in the Township, existing tree resource protections (i.e., ordinances/guidance documents/CFMP/VMP) and appropriate notification procedures for reporting violations.
 10. Identify Township resources available for the dissemination of information to the public.
 11. Continue to host an Arbor Day event in the Township (in cooperation with other Township stakeholders).
 12. Operate and manage a Commemorative Tree Planting Program.
 13. Expand the number of Township personnel and volunteers who have attended CORE and advanced training required by the Community Forestry Act.
 14. Develop a school enrichment program, in connection with the Township School Board and the Parks and Recreation Department and Public Works Department, Green Team, Planning Board, the Shade Tree Commission, Environmental Commission which provides insight and experiences associated with the value of trees, forested habitats in the community and Arbor Day activities.
 15. Identify risks to the community trees and the associated potential for damage resulting from tree failure on Township property.
 16. Develop a budget for the next year's program and seek supplementary funding sources.
 17. Prepare and submit the Annual Report to the NJDEP Community Forestry Program.

Year 2, 2018

1. Provide training to the Planning Board, Public Works Department, Parks and Recreation Department, Shade Tree Commission, Environmental Commission, and Green Team staff/members, concerning the scope and provisions of the CFMP to facilitate implementation.
2. Conduct a preliminary inventory of the naturally occurring forest areas and active recreational park and streetscape tree resources on public property within the Township.
3. Prepare an inventory of trees on public property, including along Township rights-of-ways that may be hazardous and/or storm-distressed and prepare a list of priority trees requiring maintenance by the Public Works Department and/or Parks and Recreation Department.
4. Inventory the invasive trees/damaging vines threatening the integrity of the natural areas

- within the Township
5. Identify areas within the Township streetscapes that could benefit from the planting of selected tree species.
 6. Identify areas within the Township parks and properties that could be enhanced by the planting of selected tree species.
 7. Develop lists of tree species and other vegetation suitable for planting in the Township's streetscapes in order to minimize water requirements and minimize insect and disease damage, while sustaining pollinators and appropriate wildlife and enhancing the aesthetics of the Township, including view sheds.
 8. Establish and train Township staff regarding an annual pruning program that enhances and strengthens trees while reducing the frequency of emergency situations associated with storm damage and utility failures.
 9. Develop a checklist for identifying tree-related problems and points of contact within the Township to resolve them. Train responsible personnel accordingly.
 10. Continue removing and mitigating hazard trees through the use of the Township's existing Public Works Department and Parks and Recreation Department resources. Update hazard tree inventory.
 11. Replace hazard tree removals, where feasible, by planting trees in suitable locations.
 12. Standardize enforcement of existing tree protection ordinances. Alert residents to ordinance requirements and methods to report violations.
 13. Leverage No Net Loss grant funding through the NJ Department of Environmental Protection, Division of Parks and Forestry to reforest portions of the Township.
 14. Develop information with the assistance of the Mayor, Township Committee and Administration, as well as Public Information Officer, Planning Board, Department of Public Works, Parks and Recreation Department, Shade Tree Commission, Green Team, and Environmental Commission staff/members for dissemination to the public concerning the value of trees in the Township, existing tree resource protections (i.e., ordinances/guidance documents/CFMP/VMP) and appropriate notification procedures for reporting violations.
 15. Incorporate Community Forestry messages in community communications (e.g. website and newsletters), Township resources, public relations news releases and events. Develop an inventory and schedule of outreach communications and events, including Arbor Day, and engaging speakers and authors who present programs on tree-related topics.
 16. Promote the Commemorative Tree Planting Program in the Township. Develop a

- brochure describing the program, possible planting locations, suggested tree species, and costs. Included in this objective is the dissemination of this brochure through Township resources.
17. Continue to host an Arbor Day event in the Township (in cooperation with other Township stakeholders).
 18. Put an insert in all tax bills and sewer bills instructing residents how to report problem trees.
 19. Establish a link from the Township's web site for addressing tree care issues.
 20. Develop a process with the Mayor and the Committee for allocation of Township resources to obtain funding from within the Township, as well as from other sources, to implement the CFMP.
 21. Develop a plan to train Township staff/personnel regarding the importance of maintaining and caring for tree resources and responding to inquiries or reports from the public concerning tree-related issues.
 22. Coordinate with the Township Planning Board to incorporate elements of the CFMP into the next Master Plan Re-examination.
 23. Operate and manage a Commemorative Tree Planting Program.
 24. Expand the number of Township personnel and volunteers who have attended CORE and advanced training required by the Community Forestry Act.
 25. Develop information guiding the use of suitable trees and shrubs to be used in the community to minimize water requirements and to minimize insect and disease damage while sustaining pollinators and appropriate wildlife.
 26. Identify risks to the community trees and the associated potential for damage resulting from tree failure on Township property.
 27. Develop a plan, in consultation with Township emergency management personnel, to respond to tree damage episodes. This plan will include the required Township personnel and equipment, public safety protocols and outline the clean-up and disposal of tree debris. Public Works Department and Parks and Recreation personnel and/or specialized group of volunteers will be trained to treat tree damage episodes safely.
 28. Develop a budget for the next year's program and seek supplementary funding sources.
 29. Prepare and submit the Annual Report to the NJDEP Community Forestry Program.

Year 3, 2019

1. Provide training to the Planning Board, Public Works Department, Parks and Recreation Department, Shade Tree Commission, Environmental Commission, and Green Team

- staff/members, concerning the scope and provisions of the CFMP to facilitate implementation.
2. Prepare an inventory of trees on public property, including along Township rights-of-ways that may be hazardous and/or storm-distressed and prepare a list of priority trees requiring maintenance by the Public Works Department and/or Parks and Recreation Department.
 3. Inventory the invasive trees/damaging vines threatening the integrity of the natural areas within the Township
 4. Develop lists of tree species and other vegetation suitable for planting in the Township's streetscapes in order to minimize water requirements and minimize insect and disease damage, while sustaining pollinators and appropriate wildlife and enhancing the aesthetics of the Township, including view sheds.
 5. Establish and train Township staff regarding an annual pruning program that enhances and strengthens trees while reducing the frequency of emergency situations associated with storm damage and utility failures.
 6. Continue removing and mitigating hazard trees through the use of the Township's existing Public Works Department and Parks and Recreation Department resources. Update hazard tree inventory.
 7. Replace hazard tree removals, where feasible, by planting trees in suitable locations.
 8. Develop information with the assistance of the Mayor, Township Committee and Administration, as well as Public Information Officer, Planning Board, Department of Public Works, Parks and Recreation Department, Shade Tree Commission, Green Team, and Environmental Commission staff/members for dissemination to the public concerning the value of trees in the Township, existing tree resource protections (i.e., ordinances/guidance documents/CFMP/VMP) and appropriate notification procedures for reporting violations.
 9. Incorporate Community Forestry messages in community communications (e.g. website and newsletters), Township resources, public relations news releases and events. Develop an inventory and schedule of outreach communications and events, including Arbor Day, and engaging speakers and authors who present programs on tree-related topics.
 10. Promote the Commemorative Tree Planting Program in the Township. Develop a brochure describing the program, possible planting locations, suggested tree species, and costs. Included in this objective is the dissemination of this brochure through Township resources.

11. Continue to host an Arbor Day event in the Township (in cooperation with other Township stakeholders).
12. Apply for “Tree City USA” designation to help support tourism, eco-tourism and public goodwill.
13. Put an insert in all tax bills and sewer bills instructing residents how to report problem trees.
14. Operate and manage a Commemorative Tree Planting Program.
15. Expand the number of Township personnel and volunteers who have attended CORE and advanced training required by the Community Forestry Act.
16. Develop information guiding the use of suitable trees and shrubs to be used in the community to minimize water requirements and to minimize insect and disease damage while sustaining pollinators and appropriate wildlife.
17. Identify risks to the community trees and the associated potential for damage resulting from tree failure on Township property.
18. Develop a plan, in consultation with Township emergency management personnel, to respond to tree damage episodes. This plan will include the required Township personnel and equipment, public safety protocols and outline the clean-up and disposal of tree debris. Public Works Department and Parks and Recreation personnel and/or specialized group of volunteers will be trained to treat tree damage episodes safely.
19. Develop a budget for the next year’s program and seek supplementary funding sources.
20. Prepare and submit the Annual Report to the NJDEP Community Forestry Program.

Year 4, 2020

1. Provide training to the Planning Board, Public Works Department, Parks and Recreation Department, Shade Tree Commission, Environmental Commission, and Green Team staff/members, concerning the scope and provisions of the CFMP to facilitate implementation.
2. Prepare an inventory of trees on public property, including along Township rights-of-ways that may be hazardous and/or storm-distressed and prepare a list of priority trees requiring maintenance by the Public Works Department and/or Parks and Recreation Department.
3. Inventory the invasive trees/damaging vines threatening the integrity of the natural areas within the Township
4. Establish and train Township staff regarding an annual pruning program that enhances and strengthens trees while reducing the frequency of emergency situations associated

- with storm damage and utility failures.
5. Continue removing and mitigating hazard trees through the use of the Township's existing Public Works Department and Parks and Recreation Department resources. Update hazard tree inventory.
 6. Replace hazard tree removals, where feasible, by planting trees in suitable locations.
 7. Develop information with the assistance of the Mayor, Township Committee and Administration, as well as Public Information Officer, Planning Board, Department of Public Works, Parks and Recreation Department, Shade Tree Commission, Green Team, and Environmental Commission staff/members for dissemination to the public concerning the value of trees in the Township, existing tree resource protections (i.e., ordinances/guidance documents/CFMP/VMP) and appropriate notification procedures for reporting violations.
 8. Incorporate Community Forestry messages in community communications (e.g. website and newsletters), Township resources, public relations news releases and events. Develop an inventory and schedule of outreach communications and events, including Arbor Day, and engaging speakers and authors who present programs on tree-related topics.
 9. Promote the Commemorative Tree Planting Program in the Township. Develop a brochure describing the program, possible planting locations, suggested tree species, and costs. Included in this objective is the dissemination of this brochure through Township resources.
 10. Continue to host an Arbor Day event in the Township (in cooperation with other Township stakeholders).
 11. Put an insert in all tax bills and sewer bills instructing residents how to report problem trees.
 12. Operate and manage a Commemorative Tree Planting Program.
 13. Expand the number of Township personnel and volunteers who have attended CORE and advanced training required by the Community Forestry Act.
 14. Identify risks to the community trees and the associated potential for damage resulting from tree failure on Township property.
 15. Develop a budget for the next year's program and seek supplementary funding sources.
 16. Prepare and submit the Annual Report to the NJDEP Community Forestry Program.

Year 5, 2021

1. Provide training to the Planning Board, Public Works Department, Parks and Recreation

- Department, Shade Tree Commission, Environmental Commission, and Green Team staff/members, concerning the scope and provisions of the CFMP to facilitate implementation.
2. Prepare an inventory of trees on public property, including along Township rights-of-ways that may be hazardous and/or storm-distressed and prepare a list of priority trees requiring maintenance by the Public Works Department and/or Parks and Recreation Department.
 3. Inventory the invasive trees/damaging vines threatening the integrity of the natural areas within the Township
 4. Establish and train Township staff regarding an annual pruning program that enhances and strengthens trees while reducing the frequency of emergency situations associated with storm damage and utility failures.
 5. Continue removing and mitigating hazard trees through the use of the Township's existing Public Works Department and Parks and Recreation Department resources. Update hazard tree inventory.
 6. Replace hazard tree removals, where feasible, by planting trees in suitable locations.
 7. Develop information with the assistance of the Mayor, Township Committee and Administration, as well as Public Information Officer, Planning Board, Department of Public Works, Parks and Recreation Department, Shade Tree Commission, Green Team, and Environmental Commission staff/members for dissemination to the public concerning the value of trees in the Township, existing tree resource protections (i.e., ordinances/guidance documents/CFMP/VMP) and appropriate notification procedures for reporting violations.
 8. Incorporate Community Forestry messages in community communications (e.g. website and newsletters), Township resources, public relations news releases and events. Develop an inventory and schedule of outreach communications and events, including Arbor Day, and engaging speakers and authors who present programs on tree-related topics.
 9. Promote the Commemorative Tree Planting Program in the Township. Develop a brochure describing the program, possible planting locations, suggested tree species, and costs. Included in this objective is the dissemination of this brochure through Township resources.
 10. Continue to host an Arbor Day event in the Township (in cooperation with other Township stakeholders).
 11. Put an insert in all tax bills and sewer bills instructing residents how to report problem

- trees.
12. Operate and manage a Commemorative Tree Planting Program.
 13. Expand the number of Township personnel and volunteers who have attended CORE and advanced training required by the Community Forestry Act.
 14. Identify risks to the community trees and the associated potential for damage resulting from tree failure on Township property.
 15. Develop a budget for the next year's program and seek supplementary funding sources.
 16. Prepare for the 5-year required update to the CFMP.

C. Summary

1. A Tree Inventory and Assessment has been initiated in the form of a preliminary survey of the distribution of trees within the Township. This survey provides a general location of natural forest areas. Additionally, the survey established the preliminary location of street tree plantings of a significant density. These densities correspond to locations within residential neighborhoods of the Township. This information is useful in tailoring future programs and planting efforts in the Township. It is expected that throughout the term of this Plan, Years 1-5 will include an on-going inventory and updated assessment of locations within the Township, including streetscapes, public parks and natural areas, which require forestry management and/or enhancement. During Year 2 the initial tree inventory database will be established and tested to supplement the planting location assessment completed as part of the No Net Loss planting project.

2. As part of the initial tree resource survey, attention was paid to Hazard Tree Identification and Management. The preliminary survey of trees in the Township indicated that there are potential hazard trees within the streetscapes that will need to be specifically identified and addressed in the near term. Dead and dying trees and tree growth into utility lines occurrences will need to be catalogued and reported. It is expected that throughout the term of this Plan, Years 1-5 will identify and monitor tree species within the Township that need to be addressed. During Year 2 the initial tree inventory database will be established and tested. Additionally, Year 2 will include an inventory of hazard trees and a prioritization for maintenance and/or removal. The complete tree hazard identification will be completed during Years 3, 4 and 5. Continued training of Township staff and volunteers during all five years of the Plan is intended to increase awareness and improve reporting of hazard trees.

3. Tree Planting efforts are anticipated to focus on priority areas identified as part of the Tree

Inventory and Assessment and Hazard Tree Identification efforts identified above, as well as completion of the No Net Loss project plantings described herein. Enhancement of streetscapes and planting of appropriate trees and shrubs in public open spaces, as well as on private property, will be accomplished through a number of programs and outreach efforts. A Commemorative Tree program is currently in place and through this program, an opportunity for citizens and groups to honor and remember individuals through the enhancement of public lands and streetscapes with tree plantings is available. In addition, Middle Township received a \$382,500 No Net Loss grant through the NJDEP, Division of Parks and Forestry. The grant provided for the purchase, planting, protection, care and management of 1,275 trees. Tree planting is presently underway on properties owned by Middle Township, Cape May County, and the Middle Township Board of Education throughout the municipality. Proposed planting sites include parks, schools, public facilities, and along municipal streets (**FIGURE 4**).

4. Tree Maintenance and Care of the Township's forestry resources is presently provided through the Department of Public Works. Greater awareness community-wide will be facilitated through the communication network identified in Year 1. Further, in Years 2-5, information will be developed to concerning the value of trees, existing resource protections and the appropriate notification procedures for reporting violations specific to trees. Plans are anticipated to be developed in Years 2 and 3. These include the coordination of planting, care and management of the Township tree resources utilizing the Department of Public Works. Tree maintenance associated with the No Net Loss project is the responsibility of the project contractor, D&R Landscaping, for the first two years after planting and then maintenance is the responsibility of the property owner, Township, Board of Education or County, as applicable.

Central to all four basic elements of the Plan are the education, outreach and continued training of Township staff and volunteers. The Township will continue to face challenges from environmental conditions and funding of the tree enhancement and protection programs. The Community Forestry Management Plan, as proposed, will address these challenges. The environmental ethics of the Township and its residents is a critical strength; however, tightening budgets are anticipated to require that the Township seek supplementary funds to aid in the implementation of the Plan, such as Community Stewardship Incentive Programs grants.

10. Community Stewardship Incentive Program

In recognition of completed CORE Training and successful implementation of the Initial CFMP, and in anticipation of the approval of this Subsequent CFMP, the Township anticipates that it will be eligible to apply for Community Stewardship Incentive Program (CSIP) grants helpful in implementing this Management Plan. The 15 CSIP practices are addressed below in terms of their location in the CFMP along with a brief summary of the goals and objectives relating to each practice. Implementation of specific CSIPs is dependent upon adequate funding.

CSIP #1 Training

Training is one of the foundation components of the CFMP update, as identified in Sections 2, C. “Goals and Objectives,” pages 3 through 7. Training of the Shade Tree Commission and Township personnel is proposed to efficiently: (a) implement the CFMP through the review, adoption and integration of the Plan into Township activities, policies and programs (Goal 1, A-D); (b) provide training to the Shade Tree Commission (Goal 1, E); (c) develop and seek support to train Township personnel in caring for municipal tree resources and in responding to inquiries or reports from the public concerning tree-related issues (Goal 5, B); (d) incorporate coordinating Township tree planting, care and management in the CFMP in addition to a training component (Goal 5, B) and (e) expand training, both CORE and advanced training, for Township personnel and volunteers, in addition to contracted landscapers (Goal 6, A).

The specific components of the Yearly Implementation Timeline (Section 9, B) include:

2017 – Tasks – 5, 13

2018– Tasks – 1, 8, 9, 21, 24, 27

2019 Tasks – 1, 5, 15, 18

2020 – Tasks – 1, 4, 13

2021 – Tasks – 1, 4, 13

In summary, training will be accomplished in the Township through the Tree Inventory and Assessment component of the Plan that will be conducted by qualified individuals. The Tree Hazard Identification and Management aspects of the Plan will be implemented through the above-mentioned training of Township personnel and volunteers. The Tree Maintenance and Care component of the Plan will be accomplished through the training of the Township personnel using established standards. The Tree Planting training portion of the Plan will include selection and planting of trees and shrubs that are appropriate to the growing conditions and Township tree

planting goals. Finally, efforts will be made to engage more Township personnel and volunteers to attend state-wide training programs to comply with the CFMP requirements.

CSIP #2 Community Forestry Ordinance Establishment

The Township has established a base of municipal ordinances for zoning and land use purposes, and is in the process of developing ordinances specific to the management of its community tree and other natural resources. It is anticipated that through the development and implementation of this plan that the governing body may consider the need for such ordinances along with incorporating appropriate elements of the CFMP into the Township Master Plan (Goal 1, D-E, Goal 3, H, Goal 4, A and Goal 5, C).

Township Committee adoption of the CFMP (Goal 1, Objectives A-C) in consultation with Township Departments, programs and the public is a key element to establishing forestry policy in the municipality. Included in its approval is the authorization of the Green Team along with the Department of Public Works to oversee the Township's tree resources based upon review of the Township organizational management for tree resources. The intent of the Township is to utilize the immediately available institutions to aid in the implementation of the Plan. The Township will evaluate the role of these groups and determine how their roles and responsibilities should be evolved over the life of the Plan.

The specific components of the Yearly Implementation Timeline Section 9, B include:

2017 – Tasks – 4, 5, 9

2018 – Tasks – 1, 12, 14, 22

2019 Tasks – 1, 8

2020 – Tasks – 1, 7

2021 – Tasks – 1, 7

In summary, the Township proposes incorporation of appropriate components of the CFMP into their Ordinances and Master Plan. As such, the City will establish the regulatory, management and oversight framework to protect its tree resources.

CSIP #3 Public Education and Awareness

The education and outreach components are foundation elements of this Plan. Community education is incorporated within many of the Plan Goals and Objectives. The public will be informed of the value of their tree resources and how the Township intends to protect, preserve

and enhance these resources. Through the Plan review and adoption, Township officials, personnel and the public will be made aware of the Township 's tree resources and the provisions of the Plan (Goal 1, B-C and E and Goal 4, A-H).

Community events, programs at the school and volunteer activities will be utilized as opportunities to inform and educate the public of the Plan (Goal 4, A-H). Educational/outreach will be directed toward school children, residents, visitors and professional landscapers working within the Township (Goal 5, B) using the Township website and communications (Goal 4, A, C, D and E) associated with activities such as the Commemorative Tree and Arbor Day programs.

The specific components of the Yearly Implementation Timeline Section 9, B include:

2017 – Tasks – 2, 3, 9, 10, 11, 12, 14

2018 – Tasks – 1, 7, 14, 15, 16, 17, 18, 19, 21, 25

2019 Tasks – 1, 4, 8, 9, 10, 11, 16

2020 – Tasks – 1, 7, 8, 9, 10, 11

2021 – Tasks – 1, 7, 8, 9, 10, 11

In summary, the Public Education and Awareness Program provides insights and experiences concerning the value, protection and care of its trees to the residents and the large visitor population. A diversity of venues and materials, as well as various outreach channels, are included in the Plan.

CSIP #4 Arbor Day

Celebration of Arbor Day typically occurs within the Township school. With the heightened awareness of tree resources and a renewed interest by the Township with the CFMP, it is anticipated that a variety of outreach and educational activities will be evaluated for expanding Arbor Day recognition as resources are available.

The specific component of the Yearly Implementation Timeline Section 9, B includes:

2017 – Tasks – 11

2018 – Tasks – 15, 17

2019 Tasks – 9, 11, 12

2020 – Tasks – 8, 10

2021 – Tasks – 8, 10

In summary, the Township will explore the utilization of the national focus on trees during the celebration of Arbor Day to provide a venue to consider tree value, protection and care. Associated with this effort will be the Commemorative Tree Planting and Tree City USA programs.

CSIP #5 Tree Inventory

The Township has positioned itself to conduct a meaningful Tree Inventory. The principal focus of Goal 2 (A-D) is to inventory the community tree resources. A preliminary inventory of naturally occurring forests and park/streetscape tree resources clearly indicates the need for a tree inventory database system and a standardized mapping system.

The specific components of the Yearly Implementation Timeline Section 9, B include:

2017 – Tasks – 6, 7, 8, 15

2018 – Tasks – 2, 3, 4, 5, 6, 9, 10, 26

2019 Tasks – 2, 3, 6, 17, 18

2020 – Tasks – 2, 3, 5, 14

2021 – Tasks – 2, 3, 5, 14

The Tree Inventory is the critical component of the Plan to assess and manage the tree resources of the Township. In order that the tree resources are accurately monitored and that a program/system is in place to identify the tree hazards, to program tree maintenance and care, and to improve the tree planting plan, a database system and mapping is essential. The Plan incorporates the development of this system and mapping.

CSIP #6 Hazard Tree Assessment

The inventory database and mapping will aid in the tree hazard assessment that will be methodically conducted. The focus of this assessment is to identify hazardous trees occurring in close proximity to “targets” or areas of risk, in addition to invasive trees (Goal 2, C, D). In the interim, the organizational structure within the Township, principally through the Offices of the Mayor and Department of Public Works, in addition to the Shade Tree Commission, will report hazardous tree conditions to the Superintendent of Public Works. This Department will take corrective actions to address the hazardous tree conditions (Goal 3, D-G).

The specific components of the Yearly Implementation Timeline Section 9, B include:

2017 – Tasks – 15

2018 – Tasks – 3, 4, 8, 9, 10, 11, 26

2019 Tasks – 2, 3, 6, 7, 17

2020 – Tasks – 2, 3, 5, 6, 14

2021 – Tasks – 2, 3, 6, 14

In summary, the Township recognizes its responsibility of assessing hazardous trees or stands of trees and taking corrective actions in a timely manner by training Township personnel. The organizational structure for reporting and addressing tree problems is an important part of the Plan – the existing process will be reviewed and revised as need.

CSIP #7 Storm Damage Assessment

The storm damage assessment is treated concurrently with CSIP# 5 and #6. The tree inventory provides the database and mapping to monitor the tree resources (Goal 2, A-C). The adoption of the Plan, including the Township organizational structure and Shade Tree Commission supported by the Department of Public Works, has positioned the Township to respond to storm damage. The inventory and assessments described above function as a pre-storm assessment. Because of the intensity of the coastal storms and exposure of the Township, all Township tree resources are at risk. The Department of Public Works is experienced in addressing these challenges, and intends to continue with planning updates and training (Goal 5, B and Goal 7, A-B). The Plan provides the opportunity to evaluate the policies and procedures used by the Township (Goal 1, E and Goal 7, B).

The specific components of the Yearly Implementation Timeline Section 9, B include:

2017 – Tasks – 5, 15

2018– Tasks – 1, 3, 8, 9, 21, 26, 27

2019 Tasks – 1, 2, 5, 17, 18

2020 – Tasks – 1, 2, 4, 14

2021 – Tasks – 1, 2, 4, 14

The Township, exposed to severe coastal storms, especially along the barrier island backbay and Delaware Bay coastlines has evolved a strategic approach to protecting the community from storm damage to the maximum extent possible. The adoption and adequate implementation for funding of this Plan provides the Township with the opportunity to factor trees into the storm damage assessment, especially in terms of the tree inventory, tree hazard identification and tree management and care.

CSIP #8 Tree Maintenance and Removals

Tree maintenance and removal is an important component of the Plan to project the need for additional Township programs and services to routinely care for the trees in the community. As the streetscape and park trees are enhanced, the maintenance program will require evaluation and refinement. The development of this Plan will address these on-going needs (Goal 2, C, Goal 3, D, F, Goal 5, B and Goal 6, B).

The specific component of the Yearly Implementation Timeline Section 9, B includes:

2017 – Tasks – 6, 11

2018 – Tasks – 2, 3, 4, 8, 10, 11, 21, 27

2019 Tasks – 2, 3, 5, 6, 7, 18

2020 – Tasks – 2, 3, 4, 5, 6

2021 – Tasks – 2, 3, 4, 5, 6

Recognizing the value of trees in the Township, their maintenance and care is essential to protect this investment for the residents, visitors and inhabitants of this natural feature. The Tree Inventory and Assessment in the Plan provides the database system and maps to organize, prioritize and monitor the maintenance and care of the tree resources.

CSIP #9 Insect and Disease Management

To protect the tree resources in the Inventory, the Township will initiate a program that entails the replacement of damaged and diseased trees with adapted species. The Shade Tree Commission and Department of Public Works are expected, through training and networking, to remain current regarding emerging tree insect and disease issues. The continued training and tree hazard assessment (Goal 1, E, Goal 2, C, Goal 3, C, D, F, Goal 4, A, Goal 5, B and Goal 6, B) will aid in early detection of pests and disease. Only properly trained and state-certified pesticide applicators will be contracted to control pests and disease.

The specific components of the Yearly Implementation Timeline Section 9, B include:

2017 – Tasks – 5, 15

2018 – Tasks – 1, 3, 7, 8, 10, 25, 26

2019 Tasks – 1, 2, 4, 5, 6, 16, 17

2020 – Tasks – 1, 2, 4, 5, 14

2021 – Tasks – 1, 2, 4, 5, 14

It is recognized that the Township must be proactive in addressing insects and diseases that impact the community's tree resources by focusing attention on tree inventory and hazardous tree assessment along with the need for additional training.

CSIP #10 Wildfire Protection

The Township recognized the potential risks associated with wildfire in its public open spaces containing concentration of woody vegetation. Wildfires can result from an accidental occurrence such as a discarded cigarette or naturally from lightning. Wildfires can result from utility failures associated electrical lines. In either case, the fire, fueled by excessive tinder often associated with invasive species or dead/dying vegetation, can spread to and destroy the forest ecosystem, other sensitive habitats and residences or obscure visibility. The Department of Public Works will respond to these issues in coordination with the Police and Emergency Management Departments (Goal 2, A-D, Goal 3, D-F, Goal 5, B, Goal 6, B and Goal 7, A-B).

The specific components of the Yearly Implementation Timeline Section 9, B include:

2017 – Tasks – 6, 9, 15

2018 – Tasks – 2, 3, 4, 8, 9, 10, 14, 21, 25, 26, 27

2019 Tasks – 2, 3, 5, 6, 8, 16, 17, 18

2020 – Tasks – 2, 3, 4, 5, 7, 14

2021 – Tasks – 2, 3, 4, 5, 7, 14

The presence of combustible material with the stands of woody vegetation and high exposure to anthropogenic sources of fire warrants continuing efforts to address wildfire fire issues. An assessment by the Township's Emergency Management Coordinator will determine whether it is warranted to consult with the N. J. Forest Fire Service for wildfire planning, preparedness, emergency operation and rehabilitation.

CSIP #11 Tree Planting

The planting of trees in the Township has been almost as important as preserving the natural stands of trees and planted streetscapes. The Township has continued to enhance the tree resources of the community through its planting efforts (Goal 2, A-D). The number of trees in the streetscapes focuses attention on the need to plant appropriate trees in the community. The NNL Reforestation Grant received by the Township has resulted in the addition of 1,275 trees throughout the Township (Goal 3, I). This proposed project will help to increase forest resources in public places such as parks, schools, public buildings, and municipal right-of-ways

(Goal 3, A-C). The Plan also includes the development of strategies to encourage the community to contribute trees through the Tree Resource Enhancement, in addition to the Commemorative Tree and Annual Tree Sale programs (Goal 4, D, E and Goal 5, D).

The specific components of the Yearly Implementation Timeline Section 9, B include:

2017 – Tasks – 7, 8, 11, 12, 14, 5

2018 – Tasks – 5, 6, 7, 11, 13, 16, 17, 23

2019 Tasks – 4, 7, 10, 11, 14, 16

2020 – Tasks – 6, 9, 10, 12

2021 – Tasks – 6, 9, 10, 12

Tree planting is another foundation element to enhancing the tree resources of the Township. The Tree Inventory and Assessment is important to the tree planting component of the Plan because it focuses limited resources on where and which trees should be planted. The environment, which varies in growing condition throughout the Township, necessitates careful plant selection.

CSIP #12 Tree Recycling

The tree resources of the Township, at present, does or does not warrant its own tree recycling program. The Township will continue to utilize the Cape May County Municipal Utilities Authority's program to recycle trees to mulch. As such, no components of the Plan focus specifically on recycling at this time. The priority during this planning period is to establish strong tree resources in the Township.

CSIP #13 Sidewalk Maintenance Program

Sidewalks require regular inspection and maintenance to ensure safe pedestrian access through the Township. Sidewalk inspections shall be included in tree inventory efforts (Goal 2, C, D) utilizing criteria to be established (e.g. sidewalk heaving and breaking, overhanging trees and trees growing into power lines, etc.). Further, the CFMP provides for opportunities for the public to report concerning conditions (Goal 3, E, F and Goal 4, A, C).

The specific components of the Yearly Implementation Timeline Section 9, B include:

2017 – Tasks – 15

2018 – Tasks – 3, 4, 7, 9, 10, 14, 15, 25, 26, 27

2019 Tasks – 2, 3, 4, 6, 8, 9, 16, 17

2020 – Tasks – 2, 3, 5, 7, 8, 14

2021 – Tasks – 2, 3, 5, 7, 8, 14

These Plan criteria will be developed early in the Plan implementation process, provided funding is available.

CSIP #14 Storm Water Management

The stormwater management is important especially surrounding highly developed commercial areas and coastal areas along the Delaware Bay coastline. After significant storm events, an inventory of trees in public areas will be conducted (Goal 2, D).

The specific components of the Yearly Implementation Timeline Section 9, B include:

2017 – Tasks – 7, 8, 14

2018 – Tasks – 5, 6, 7, 9, 13, 15, 21, 25, 27

2019 Tasks – 4, 9, 16, 18

2020 – Tasks – 8

2021 – Tasks – 8

CSIP #15 Other

None.

11. Selected References

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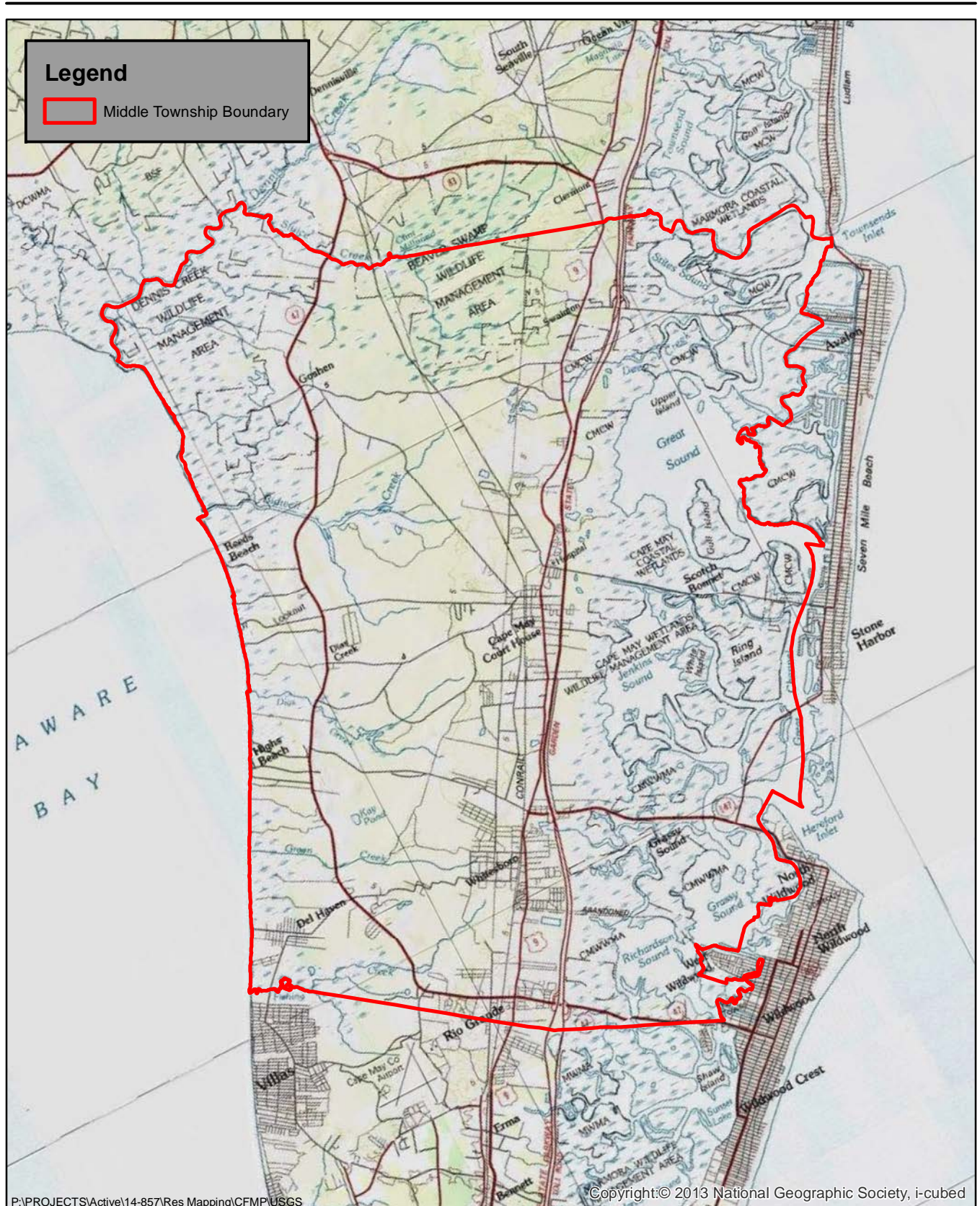
United States Census Bureau. 2010. Census Data for Township of Middle, NJ

United States Department of Interior, Geological Survey. 2014. Topographic Quad Maps. Washington D.C.

APPENDIX A

Figures

- FIGURE 1: Township of Middle USGS Topographic Map**
- FIGURE 2: Township of Middle Aerial Overview with Land Cover Overlay**
- FIGURE 3: Township of Middle Forestry Base Map**
- FIGURE 4: Township of Middle NNL Reforestation Project Proposed Planting Sites**



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FIGURE 1: USGS 7.5 MINUTE TOPOGRAPHIC MAP OF MIDDLE TOWNSHIP QUADS #171-178

SOURCE: GIS DATA PROVIDED BY THE NJDEP & US DEPT OF THE INTERIOR GEOLOGICAL SURVEY

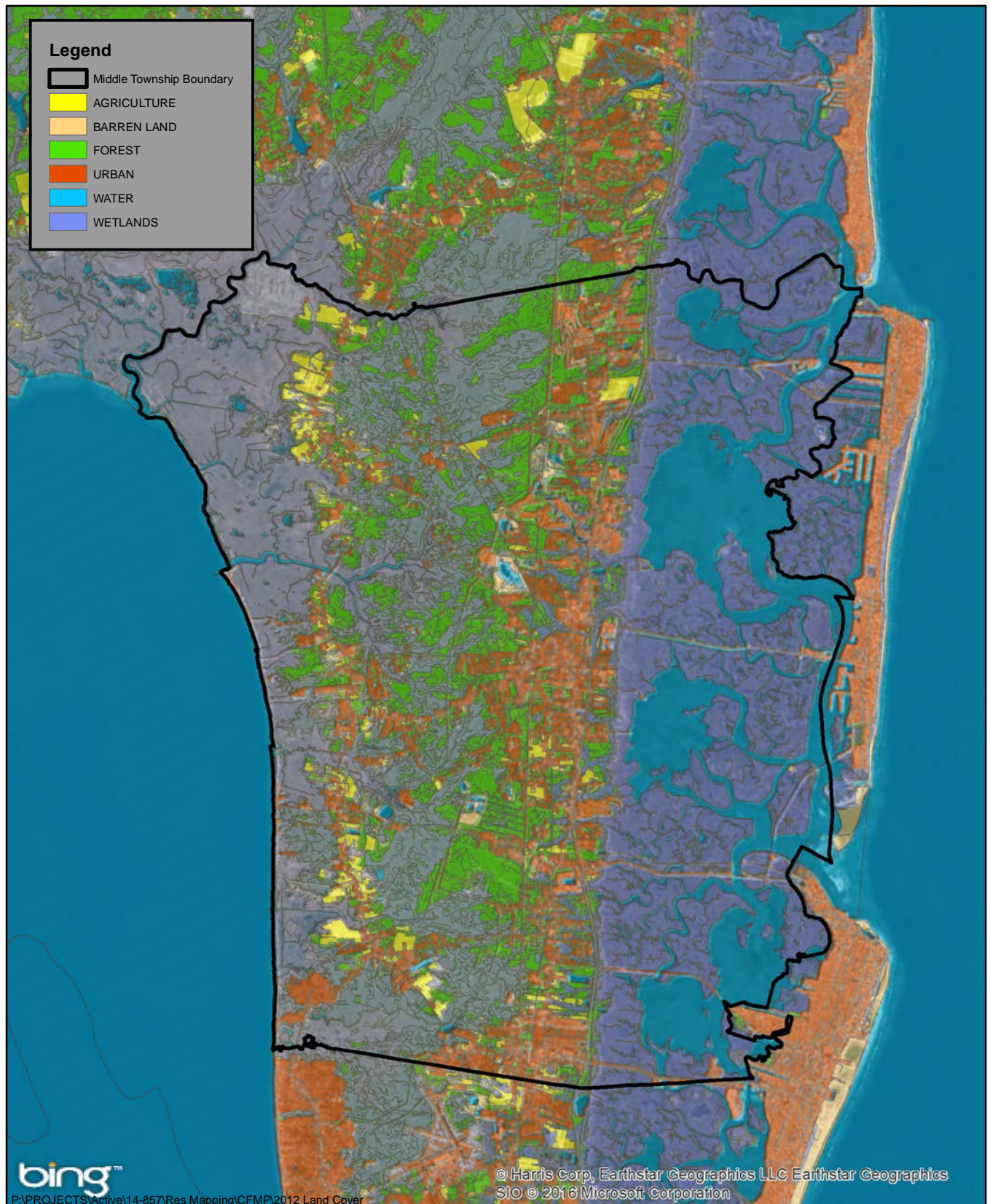


DATE:
1-21-16

DRAWN BY:
ACB

1 inch = 10,000 feet







Legend

- Middle Township Boundary
- AGRICULTURE
- BARREN LAND
- FOREST
- URBAN
- WATER
- WETLANDS

bing™

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<p>FIGURE 2: BING AERIAL OVERVIEW OF MIDDLE TOWNSHIP WITH 2012 LAND COVER MAPPING</p> <p>SOURCE: GIS DATA PROVIDED BY THE NJDEP AT http://njgin.nj.gov/ & THE CAPE MAY COUNTY PLANNING DEPARTMENT</p>		<p>DATE: 1-21-16</p>	<p>DRAWN BY: ACB</p>	
<p>1 inch = 10,000 feet</p>				

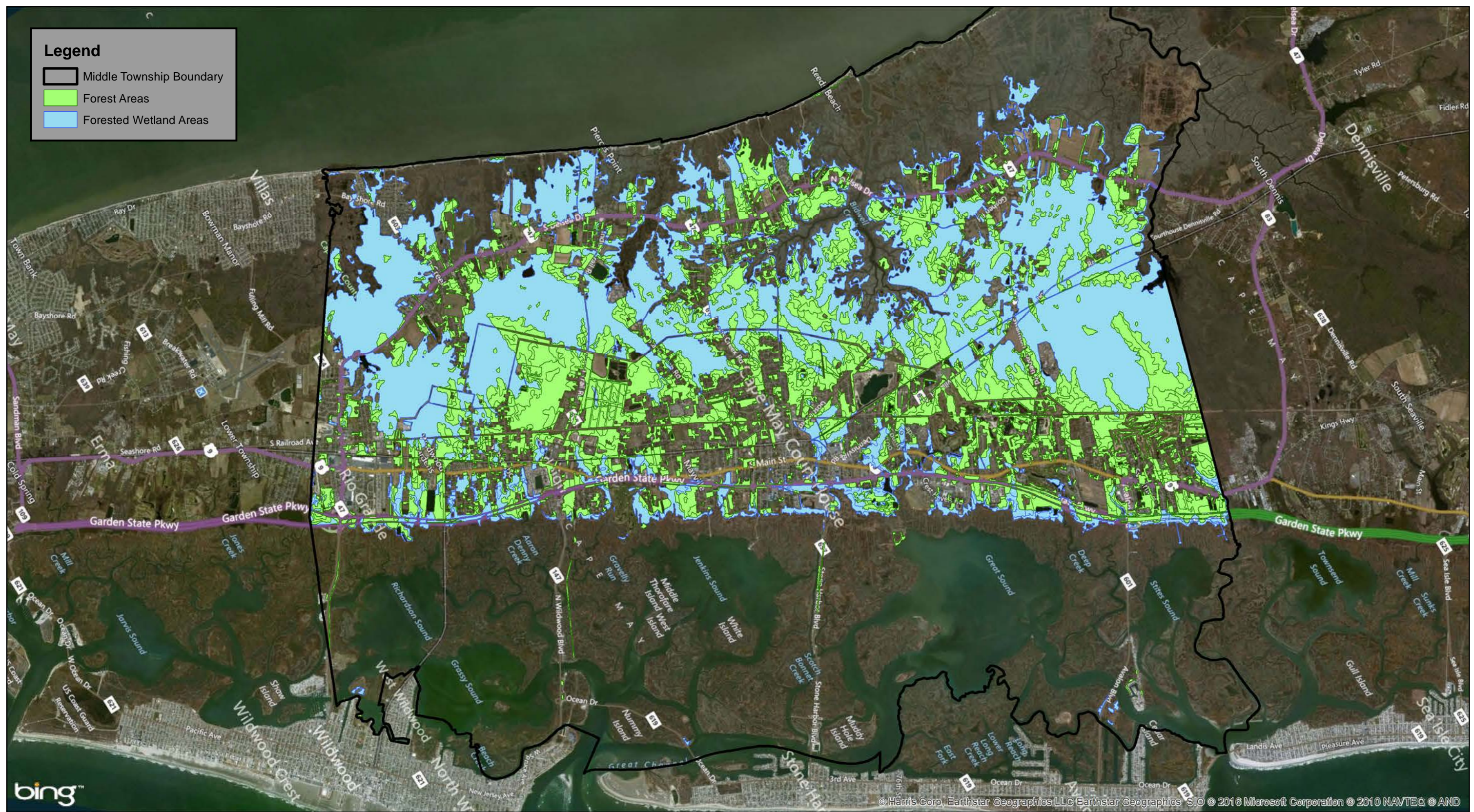


FIGURE 3: MIDDLE TOWNSHIP FORESTRY BASE MAP WITH FOREST AND FORESTED WETLAND AREAS

SOURCE: GIS DATA PROVIDED BY BING, THE NJDEP AT <http://njgin.nj.gov/> & THE CAPE MAY COUNTY PLANNING DEPARTMENT

DATE: 2-4-16	DRAWN BY: ACB		
1 inch = 6,000 feet			

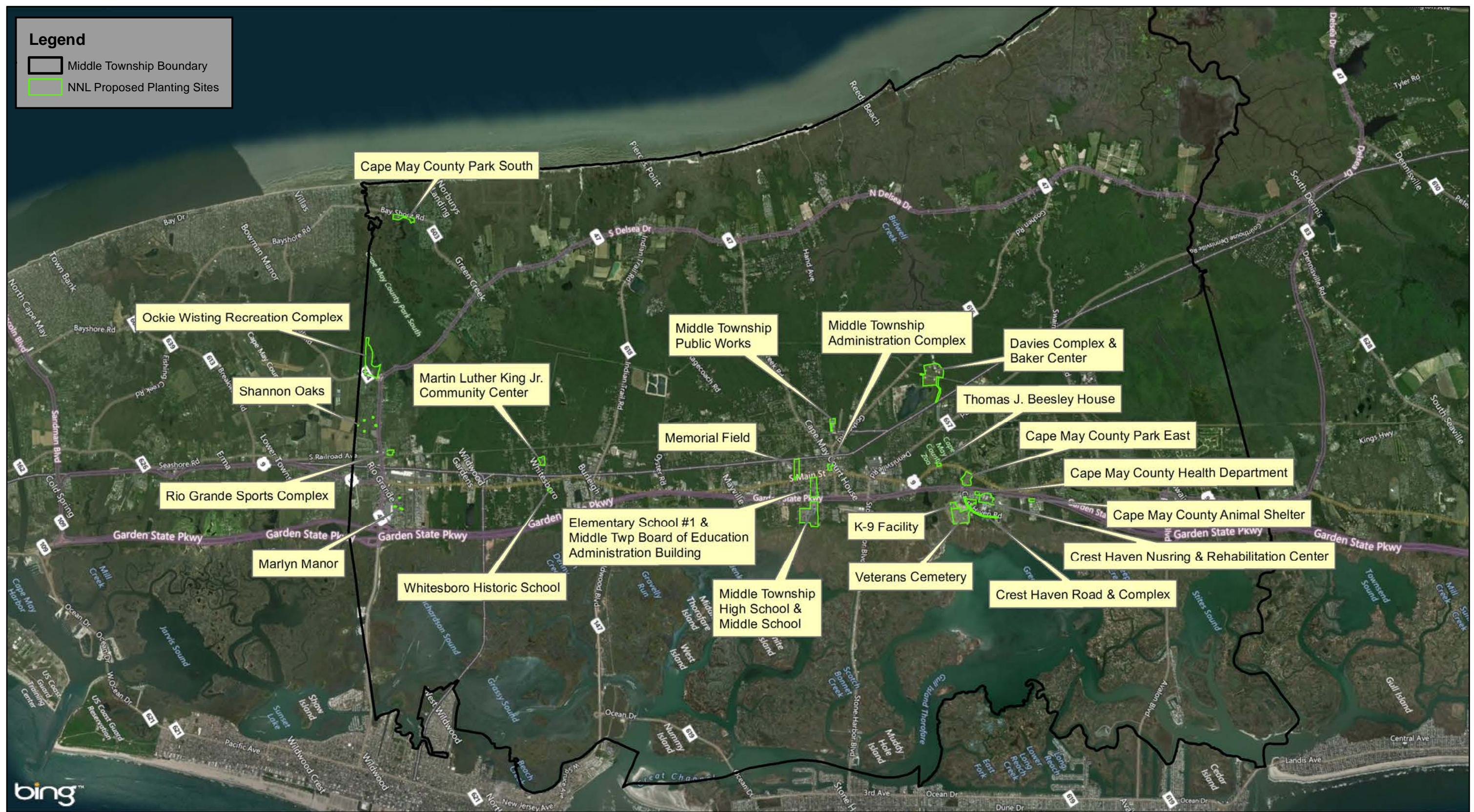


FIGURE 4: MIDDLE TOWNSHIP BING MAPS AERIAL OVERVIEW WITH NNL REFORESTATION PROJECT PROPOSED PLANTING SITES
 SOURCE: GIS DATA PROVIDED BY BING, THE NJDEP AT <http://njgin.nj.gov/> & THE CAPE MAY COUNTY PLANNING DEPARTMENT

DATE: 5-30-17	DRAWN BY: ACB		
1 inch = 6,000 feet			