**2015 – 2019**

**COMMUNITY FORESTRY MANAGEMENT PLAN**

**Raritan Township**

**Hunterdon County**

**New Jersey**

**Mayor and Township Committee**



Craig O’Brien, Mayor

Karen Gilbert, Deputy Mayor Michael Mangin Richard Chen

Lou Reiner

**Township Administrator**

Jerry Giaimis

**Department of Public Works**

Don Hutchins, Superintendent

**Planning Department**

Jamie Sunyak, Director

**Environmental Commission**

Raymond Simonds, Chairperson

Michelle Cavalchire, Vice Chairperson

Amy Greene Kathy Hale Lynda Olsen Jane Gilbert Michael Ehasz

Lou Reiner, Township Liaison

**Plan Prepared by**

Farr Forestry Services

6 Ricker Road Newfoundland, NJ 07435 [farrforest@yahoo.com](mailto:farrforest@yahoo.com)



973-208-8165

**TABLE OF CONTENTS**

**1. MUNICIPAL INFORMATION**

MUNICIPAL INFORMATION FORM…………………………………………………………. 4

**2. INTRODUCTION**

SCOPE…………………………………………………………………………………………… 5

MISSION STATEMENT………………………………………………………………………... 5

DEFINITIONS…………………………………………………………………………………... 5

OVERALL PROGRAM GOALS……………………………………………………………….. 6

HAZARDS AND LIBABILITY………………………………………………………………… 10

**3. COMMUNITY OVERVIEW**

FIVE YEARS OF PROGRESS…….…………..…………………………………………………. 10

RARITAN TOWNSHIP OVERVIEW…………………………………………………………... 11

**4. PROGRAM ADMINISTRATION**

RELATION TO THE MASTER PLAN……………………………………………………….... 13

RELATION TO THE NATURAL RESOURCE INVENTORY..…………………………….... 15

SHADE TREE PROGRAM ADMINISTRATION…………………………………………….. 16

**5. MAPS**

TOWNSHIP STREET MAP…………………………………………………………………….. 20

**6. TRAINING PLAN**

TRAINING AND PROFESSIONAL DEVELOPMENT ……….……………………………… 22

**7. PUBLIC EDUCATION, AWARENESS AND OUTREACH**

PUBLIC EDUCATION, AWARENESS AND OUTREACH GOALS…………………………. 24

**8. ANNUAL BUDGET AND RESOURCES**

OVERVIEW…………………………………………………………………………………….. 26

**9. STATEMENT OF PLAN IMPLEMENTATION**

TREE INVENTORY AND ASSESSMENT GOALS AND OBJECTIVES.……………………. 30

HAZARD MANAGEMENT GOALS AND OBJECTIVES…………………………………….. 32

TREE PLANTING GOALS AND OBJECTIVES…………………………………………….. 33

MAINTENANCE AND REMOVAL GOALS AND OBJECTIVES...………………………… 36

**10. COMMUNITY STEWARDSHIP INCENTIVE PROGRAMS**

COMMUNITY STEWARDSHIP INCENTIVE PROGRAM FUNDING…………………….. 39

**COMMUNITY FORESTRY ORDINANCE ESTABLISHMENT**

ORDINANCE REVIEW AND ADOPTION……………………………………………………. 39

**ARBOR DAY**

ARBOR DAY GOALS AND OBJECTIVES…………………………………………………… 40

**STORM DAMAGE ASSESSMENT**

STORM DAMAGE ASSESSMENT GOALS AND OBJECTIVES……………………………. 41

|  |  |
| --- | --- |
| **INSECT AND DISEASE MANAGEMENT**  INSECT AND DISEASE MANAGEMENT GOALS AND OBJECTIVES…………………... | 43 |
| **WILDFIRE PROTECTION**  WILDFIRE PROTECTION GOALS AND OBJECTIVES……………………………………. | 44 |
| **TREE RECYCLING**  RECYCLING GOALS AND OBJECTIVES..…………………………………………………. | 44 |
| **SIDEWALK MAINTENANCE**  SIDEWALK MAINTENANCE GOALS AND OBJECTIVES……………………………….. | 45 |
| **STORMWATER MANAGEMENT**  STORMWATER MANAGEMENT GOALS AND OBJECTIVES…………………………… | 46 |
| **OTHER GOALS**  OTHER GOALS AND OBJECTIVES………………………………………………………… | 46 |
| **PLAN PREPARATION AND EVALUATION**  PLAN PREPARATION………………………………………………………………………... | 47 |

**1. Municipal Inf ormation Form**

Municipality Raritan Township

County Hunterdon County

Address One Municipal Drive

Flemington, NJ 08822-1799

Contact Name and Title Raymond Simonds, Environmental Commission Chairperson

Phone Number 908-806-6100

E-mail [tsimo123@comcast.net](mailto:tsimo123@comcast.net)

Organization Name Raritan Township Environmental Commission

Mayor’s Signature

I certify that this Community Forestry Management Plan was developed specifically and exclusively for our municipality.

Date of Management

Plan Submission December 2015

Time Period Covered

In Management Plan 2015-2019

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

***Official Use Only***

***Certification***

The above named municipality/county 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 Committee and is approved for the period covered.

Signed

State Forester Approval Date

**2. Introduction**

***Scope***

The following outlines the programs, policies and procedures by which shade tree resources within

Raritan Township will be managed during the period January 2015 – December 2019.

The objectives in this second five-year plan address street trees, park trees, and trees on other public lands. Future plans will build on the successes of this plan and follow up on goals not attained during this planning period.

***Mission Statement***

The mission of the Raritan Township Community Forest Committee (RTCFC) is to maintain and improve the community forest resources in the Township of Raritan, Hunterdon County. The RTCFC will provide information on the value of a healthy community forest as well as implement a community forestry plan to expand community pride, enhance community identity and improve the quality of life for Raritan Township residents by creating and maintaining a healthy, sustainable and safe community forest resource.

***Definitions***

*Community Forest* – forest resources owned and managed by a public entity. In Raritan Township, this includes trees and forests on municipal properties such as the municipal buildings and facilities, parks and open space owned in part or in whole by the township.

*Community Forestry –* Community Forest Planning and Management can be described as the planning, design and management of vegetation on public land in and around communities to maximize their environmental, social, visual, and economic contributions to the well-being of the community.

*No Net Loss –* Refers to the *NJ No Net Loss Reforestation Act*. Funding is collected by the New Jersey Forest Service Community Forestry Program from State projects that result in tree clearing activities for us in planting replacement trees. These funds may be accessed by municipalities and counties for tree planting on public lands.

*Forest Stewardship Plan –* A Forest Stewardship Plan should be developed for all municipally-owned forest lands. Forest Stewardship Plans would contain recommendations to meet the goals of the Township for these forested lands. Topics to be addressed include forest health, aesthetics, wildlife, soil

and water quality protection, recreation, invasive species, timber management and current forest conditions. A Forest Stewardship Plan would require a search of the Natural Heritage Database for the potential presence of these species. Community Stewardship Incentive Program (CSIP) funding may be used to develop a Forest Stewardship Plan.

***Goals and Actions***

The New Jersey Community Forestry Council identified fifteen Community Stewardship Incentive Program (CSIP) practices that together compromise a complete and comprehensive community forestry program. Below are the goals that the Raritan Township Community Forestry Plan will work toward and the actions that we will implement to help meet these goals.

**Goal 1:** Raritan Township will continue to implement a Community Forestry Program.

**Objective 1a:** Raritan Township will refine if necessary the structure for oversight of the Community

Forestry Committee and the interaction with the public and municipal employees.

**Actions:**

 Establish the Raritan Township Community Forest Committee, a subcommittee within the

Environmental Commission.

 Designate the roles and function of the Raritan Township Community Forest Committee

(RTCFC).

 Pass a Raritan Township Committee resolution forming the RTCFC and designation of membership by the Environmental Commission.

 Review and recommend the third Community Forestry Management Plan to the Raritan

Township Committee in 2019. [(http://www.state.nj.us/dep/parksandforests/forest/community/pdf\_files/new\_jersey\_community\_forestr](http://www.state.nj.us/dep/parksandforests/forest/community/pdf_files/new_jersey_community_forestr) y\_program.pdf).

**Objective 1b:** Raritan Township will strengthen protection of the community forest through the municipal regulatory structure.

**Actions:**

 Continue to monitor enforcement of the Raritan Township tree ordinance.

 Address the importance of the community forest in the township’s Master Plan and Natural

Resource Inventory.

 Establish a budget and tracking for Shade Tree-related projects. The budget for the Shade Tree related projects should be maintained at current levels with slight yearly increases when feasible. Volunteer hours should be tracked closely as their number and hours will increase over time with the implementation of this plan. Accounting of staff time dedicated to tree-related issues should be monitored to provide a more accurate accounting of expenses related to trees through the year.

 Collect data concerning the operations costs of the Township leaf recycling operations.

**Goal 2: Raritan Township residents will be aware of the value provided by the community forest. Objective 2a:** By 2019, 30% of Raritan Township residents will be aware of the value of the Township’s forest resources and Township.

**Actions:**

 Apply for recognition as a Tree City USA by the end of this planning period

[(http://www.arborday.org/programs/treeCityUSA/index.cfm](http://www.arborday.org/programs/treeCityUSA/index.cfm)).

 Provide articles to be published in the Raritan Township website and the Environmental

Commission Facebook page.

 Participate in community events to promote best practices for residential tree management.

 Coordinate the Largest Tree in Raritan program to help to raise awareness of trees within the community.

 Submit articles for inclusion in local and regional newspapers. Submit two articles annually to the print media to promote proper planting techniques, the benefits of trees and the Shade Tree Program or about forest health risks such as Gypsy Moth, Emerald Ash Borer and other risks. Resident will be informed about the Emerald Ash Borer infestation and options for treatment or removal of such trees.

 Encourage implementation of Project Learning Tree in the local schoo[ls (http://www.plt.or](http://www.plt.org/)g/).

 Continue the annual Arbor Day Celebration.

 Maintain and increase interest and active support for Raritan’s Shade Tree Program.

 Encourage public assistance in implementing various programs, protecting public trees, and beautifying the Township.

 Encourage the planting, protection and care of trees on private property for the benefit of the entire community.

 Educate all citizens in the importance of environmental stewardship

 Promote activities to improve forest health on township preserved lands.

 Sponsor a table at community forums to disseminate information about the successes of the program.

 Continue implementing all existing programs, policies and procedures in a manner that improves and maintains the Shade Tree Program’s visibility and maximizes the number of people and groups that are reached.

 Continually review all existing public relations programs and materials and update them, as necessary. Education materials and programs will be handled though the Environmental Commission.

**Objective 2b:** Through 2019, Raritan Township will continue to ensure that employees and volunteers involved in forestry activities will receive education, have sufficient knowledge to make effective management decisions, and fulfill the approval requirements of the New Jersey Shade Tree and Community Forestry Assistance Act.

**Actions:**

 Review training needs and upcoming training opportunities. Ensure that the Township will accumulate the necessary continuing education credits as required by the New Jersey Shade Tree

and Community Forestry Assistance Act Training Skills and Accreditation Program by the end of each year in order to maintain accreditation.

 Provide training in Community Forestry care to fulfill the approval requirements of the New

Jersey Shade Tree and Community Forestry Assistance Act.

 Provide CORE Community Forestry Training to a minimum of one township employee in the

Department of Public Works and one volunteer from the community.

 Provide other training as required to maintain certification or as specified by the township committee.

 Train at least one member of the Environmental Commission and/or at least one member of the Township Committee or employee in urban forest management and planning via a general program such as the Urban Forestry Short-Course offered by the Cook College Office of Continuing and Professional Education, or the Consulting Forester based upon budget availability.

 Train the Superintendent of the Department of Public Works or other key employee to further advance his or her abilities to recognize and evaluate tree hazards using the latest information and techniques. This will be accomplished via attendance at a professional course or seminar in which at least one full day is dedicated to tree hazards and which is taught by a recognized expert, based upon budget availability.

 Ensure continuity in the overall level of knowledge and expertise within the Shade Tree Program as individuals leave the program and new ones join.

**Goal 3:** Raritan Township will improve the maintenance, stewardship and protection of the community forest. Ensure that all tree planting, inspection and maintenance activities are planned and completed in accordance with the latest scientific knowledge and current industry standards in order to improve the health and safety of the community forest.

**Objective 3a:** Provide accurate baseline information on which sound shade tree management plans and decisions can be made.

**Actions:**

 Apply for CSIP funding to prepare an inventory of the community forest with a particular focus on the location forests and streetscapes dominated by Ash trees within the Township locating individual trees where possible.

 Integrate the findings into other management activities (e.g. adjust species selection to improve diversity, address maintenance needs, etc.).

 Monitor and evaluate progress toward the impact of management activities on the tree population and the overall goals of the Shade Tree Program.

**Objective 3b:** Manage the Township’s existing public tree population to improve and maintain species and age diversity, improve aesthetic appeal, seasonal variation and physical benefits to adjacent properties and the Township overall.

**Actions:**

 Establish a long-term goal for optimum species composition, native versus non-native or

maximum percentages by species.

 Establish intermediate goals for altering species composition by the end of 2015 and 2019, such as eliminating the planting of Norway Maples and Callery Pears and reducing the numbers of these trees within the Township.

**Objective 4a:** Develop and implement a hazard tree management program.

**Actions:**

 Apply for funding to conduct a hazard tree survey of the Township.

 Complete a formal hazard tree survey if funding is available.

 Implement a hazard tree program and protocol for removal of such trees

 Continue to address hazard abatement needs as they are identified.

**Objective 4b:** Improve or establish proactive maintenance programs.

**Actions:**

 Establish a community forest maintenance program to address forest and individual tree health

 Maintain trees to allow for clear view of traffic signals, signs and street lights.

 Reduce conflict with utilities both above and below ground through proper tree selection for given sites.

 Work to plant the proper trees in the proper location to prevent future conflicts with utilities.

**Objective 4c:** Improve the existing tree population.

**Actions:**

 Designate focus areas where plantings will be focused within the Township.

 Prioritize all existing vacant planting sites identified by the tree inventory or via the

Environmental Commission and institutional knowledge within the Township.

 Utilize CSIP or No Net Loss Funds to fund plantings if they become available moving forward.

**Objective 4d:** Stewardship

**Actions:**

 Develop a strategy or plan to deal with the impending Emerald Ash Borer infestation. Determine if certain trees will be treated, develop a removal strategy and utilize CSIP or other funding to offset the cost of dealing with this invasive insect and preventing loss of life or property from hazard trees created by the infestation.

 Work with PSE&G and JCP&L on the maintenance of the power line right-of-way to assure that they remove the vegetation via mechanical means.

 Partner with other organizations to develop and support stewardship initiatives for community

forest resources.

 Develop stewardship plans on publically owned lands throughout the Township utilizing CSIP funding. Plans will include discussions of forest health, sustainable management, invasive species, deer management, native plant regeneration, water quality and recreation.

 Partner with other organizations to improve invasive species control, accessibility, aesthetic and recreational opportunities for community forests.

 Prioritize community forest initiatives.

***HAZARDS AND LIABILITY***

As is the case with all municipal assets, trees require maintenance and it is inevitable that potentially hazardous conditions will emerge. Nevertheless, a complete, comprehensive and proactive shade tree program striving to prevent, anticipate and correct such problems will maximize the benefits of trees to the community while minimizing the threat to public safety and exposure to liability. All elements of this Community Forestry Management Plan are designed to optimize the balance between tree benefits and risks.

Raritan Township acknowledges that not all hazardous conditions can be or will be predicted. It must work within a limited budget and may not be able to meet every need immediately. The intent of this Plan is to direct available resources toward the greatest needs and to systematically develop and maintain a healthy shade tree resource with a commensurate reduction in any threats to public safety.

Public safety will be a primary consideration in the development and implementation of all shade tree plans and programs. This Plan provides a means of identifying and abating existing tree hazards on a prioritized basis. Further, it provides a means of reducing the potential for future hazards and liability through responsible planting and preventive maintenance.

**3. Community Overview**

***Five Years of Progress***

The annual reports from the last five years are attached as an addendum to this plan. Below please find the highlights from these reports.

**2011**

Municipal employees participated in chain saw safety training.

Arbor Day was celebrated and oak tree was planted at the J.P. Case Middle School. Tree tube seedlings were distributed at Earth Day and Arbor Day celebrations. DPW expended $60,000 conducting various tree maintenance projects.

**2012**

An application for No Net Loss Reforestation Act funding was applied for.

Any hazard trees identified were removed by DPW crews.

Tree trimming was completed throughout the year by DPW workers.

Arbor Day was celebrated and oak tree was planted at the J.P. Case Middle School. Tree tube seedlings were distributed at Earth Day and Arbor Day celebrations.

**2013**

Arbor Day was celebrated and oak tree was planted at the J.P. Case Middle School.

Educational brochures were distributed at an Earth Day Festival. Annual CEU requirements were attained.

Any hazard trees identified were removed by DPW crews.

Tree trimming was completed throughout the year by DPW workers.

**2014**

Arbor Day was celebrated and oak tree was planted at the J.P. Case Middle School.

Tree tube seedlings were distributed at Earth Day and Arbor Day celebrations. One volunteer completed CORE training.

Invasive species removal was conducted with Hunterdon Land Trust from the area of Walnut Brook.

204 trees were planted under the No Net Loss Program in Blackwell Park and Walnut Brook Preserve.

***Raritan Township History and Demographics***

The Township of Raritan contains 38.6 square miles and is currently inhabited by 19,809 persons according to the 2000 U.S. Census. The Borough of Flemington, which contains a population of 4,200 persons, consists of 1.1 square miles and is totally surrounded by the Township of Raritan.

There has been a slowdown in the overall growth of the population of the Township since 2000. The current estimate is for the total population of the Township to increase to 22,159 by 2015. This is due mainly to a major shift in the policy of the Township. During the past decade farmland and open space preservation have been actively pursued within the Township.

This preservation has left little vacant land available for residential development and has caused a decrease in the growth rate of the Township. Furthermore, the past development patterns of high and medium density development have given way to low density and rural single family development trends. In 1998 and 2001 the Township increased lot sizes in significant portions of the township to 5 and 6 acre lots, further decreasing development pressures. Over the past 6 years, since the 2001 Master Plan revisions, commercial and industrial development has increased.

The chart located on the following page gives an overview of the demographics of Raritan Township. The table below is from US Census data published on the internet in 2008:

|  |  |  |
| --- | --- | --- |
| **Social Characteristics -** | **Estimate Percent** | **U.S.** |
| Average [household si](javascript:openGlossary('glossary_h.html#household'))ze | 2.79 | 2.60 |
| Average family size | 3.28 | 3.19 |
| Population 25 years and over | 15,520 |  |
| High school graduate or higher | (X) 94.5% | 84.0% |
| Bachelor’s degree or higher | (X) 54.9% | 27.0% |
| Foreign born | 2,321 10.0% | 12.5% |
| Speak a language other than |  |  |
| English at home (population 5 | 2,564 11.8% | 19.5% |
| years and over) |  |  |
| Household population | 22,159 |  |
| **Economic Characteristics** | **Estimate Percent** | **U.S.** |
| Mean travel time to work in minutes | 33.8 | 25.1 |
| Median household [income](javascript:openGlossary('glossary_i.html#income')) | 109,477 | 50,007 |
| Median family income | 126,633 | 60,374 |
| Per capita income | 45,702 | 26,178 |
| Families below poverty level | (X) 1.7% | 9.8% |
| Individuals below poverty level | (X) 4.2% | 13.3% |
| **Housing Characteristics** | **Estimate Percent** | **U.S.** |
| Total housing units | 8,173 |  |
| Occupied housing units | 7,929 97.0 | 88.4% |
| Owner-occupied housing units | 7,059 89.0 | 67.3% |
| Renter-occupied housing units | 870 11.0 | 32.7% |
| Vacant housing units | 244 3.0 | 11.6% |
| Owner-occupied homes | 7,059 |  |
| Median value (dollars) | 459,600 (X) | 181,800 |
| **ACS Demographic Estimates -** | **Estimate Percent** | **U.S.** |
| Total population | 23,198 |  |
| Male | 10,990 47.4 | 49.2% |
| Female | 12,208 52.6 | 50.8% |
| [Median age (](javascript:openGlossary('glossary_m.html#median_age'))years) | 39.8 (X) | 36.4 |
| Under 5 years | 1,507 6.5 | 6.9% |
| 18 years and over | 16,823 72.5 | 75.3% |
| 65 years and over | 2,552 11.0 | 12.5% |

Raritan Township is bordered on the east by Readington Township and Hillsborough Township, on the west by Delaware Township, on the north by Franklin Township and Clinton Township and on the south by East Amwell Township. Flemington Borough is a “donut hole” in the center of Raritan Township.

**4. COMMUNITY FORESTRY PROGRAM ADMINISTRATION**

***Raritan’s Shade Tree Program***

Raritan Township and its residents have reaped the benefits of forest cover throughout the township. This forest cover can be found in the Green Infrastructure map found at the end of this plan.

The Township has an excellent foundation on which to build a successful community forestry program with funding and a dedicated group of volunteers and Township employees. The Township looks forward to continuing in this direction with the support of residents and elected officials.

The Township’s current tree resource is a mixture of traditional forest and older neighborhoods where forest cover is dominated by native species. Newer developments and agricultural lands tend to have very low forest cover and may serve as future planting areas should funding become available. Some of the new developments have non-native trees planted as street trees.

The Township obtained funding through the No Net Loss Program due to road expansion on Route 202 through the Township and planted 204 trees at two locations in the Township. The DPW continues to maintain these trees.

***Relation to the Township’s Master Plan***

Implementation of this Community Forestry Management Plan will directly or indirectly help satisfy several goals and objectives of the Township’s 2008 Master Plan, given that much of the development in Raritan is on former agricultural land. Raritan’s forests are arguably the most critical landscape component for maintaining property values, water quality and quality of life for all residents. Ideally, this Community Forestry Management Plan will be adopted as an addendum to the 2008 Master Plan.

The following sections of the 2008 Master Plan align with the goals of the Community Forest

Management Plan:

Protocol.

**Page 6 Conservation Issues (1st, 3rd and 4th Bullets)**

Community forests and individual trees would be crucial to three of the stated goals including:

 “Preserve open space to aid in the protection of water resources.

 Preserve open space to protect existing aquifer recharge and wellhead protection areas.

 Preserve open space to protect environmental and cultural resources.”

Native trees and forests are the single most effective land use toward protecting the resources above. Well placed trees can also provide local moderation of temperatures and reduce heating and cooling costs.

The Township will support continued acquisition of forested lands for open space.

**Page 7 Farmland 2nd Bullet**

 “Provide protection of existing farming operations from encroaching development.”

Tree plantings can be utilized to provide a buffer between potentially conflicting land uses, not only agricultural and residential but also commercial and residential.

**Page 7 Recreation 1st and 2nd Bullets**

 “Provide for connection between recreational areas.

 Provide adequate active and passive recreation to the community.”

Trees and forests can play crucial roles in passive and active recreational pursuits.

**Page 7 Open Space 2nd and 4th Bullets**

 “Protect environmental resources.

 Provide linkages to existing open space.”

**Page 41 Conservation Element 1st, 3rd and 4th Bullet**

 “Preserve open space to aid in the protection of water resources.

 Preserve open space to protect existing aquifer recharge and wellhead protection areas.

 Preserve open space to protect environmental and cultural resources.”

 The Township will support continued acquisition of forested lands for open space.

**Page 41 Watershed Protection**

Forests are the best land use for stream corridor buffers for the protection of water quality, wildlife habitat and flood abatement.

**Page 42 Wetlands**

This section notes that vegetation clearing is limited in these areas. Vegetation management in these areas may provide beneficial habitat to some threatened and endangered species. Invasive species should be removed from these areas.

**Page 42 Farming**

This section mentions reforestation of areas that were formerly farmed and are to be developed. Trees should be planted on farms that were developed as an attempt to remediate the ecosystem services lost due to impervious cover. On the other hand grasslands and early successional habitat are critical to

numerous species of wildlife. Technical assistance and possibly funding for restoration of native grasses on these preserved farm properties should be considered.

**Page 43 Steep Slopes**

As much forest cover as possible should be retained on steep slope areas as they provide the best protection to soils in these areas.

**Page 43 Sustainable Development**

Trees and forests can play a fundamental role in improving:

 water conservation,

 stormwater management

 reducing utility bills

A well written ordinance can provide excellent protection of trees and forests on sites being developed which would otherwise be damaged or killed during construction activities.

**Page 46 Watershed Protection Recommendations 2nd Bullet**

Acquire conservation easements from property owners and require implementation of forest management plans that have a primary objective of clean and abundant water.

**Page 47 Watershed Protection Recommendations 11th Bullet Wooded Areas**

This section notes that mapping and an inventory of wooded areas is to be conducted as well as the preparation of woodland protection ordinance. A well written ordinance can conserve forest areas while allowing for active management. If forest management plans on privately owned land were required to be Forest Stewardship Plans practices concerning water quality and quantity would be addressed specifically as required by a Forest Stewardship Plan requirements and new Flood Hazard Control Act regulations.

**Page 88 Traffic Calming**

Trees planted in irregular areas adjacent to roads have been used to reduce speeds in downtown and shopping districts.

***Relation to the Natural Resource Inventory***

There are numerous ties between healthy, well managed community forest and the goals and objectives discussed within the Natural Resource Inventory. A few specific areas are discussed below:

**Page 16 Preservation of Woodlands**

Well managed and healthy forests will provide positive benefits toward the following issues including Preservation of Environmentally Sensitive Areas, Preservation of Rural Character, Diversity of Residential Environments and Consistency with the State Plan.

**Page 36 Surface Water**

Healthy forests provide the best mechanism for protecting surface water resources and restoration of forested riparian areas will provide numerous benefits to water bodies throughout the Township.

**Page 55 Goals and Management Recommendations**

Native forests can provide assistance in attaining nearly all the goals and management recommendations in section 4.2 of the Inventory.

**Program Administration**

***Shade Tree Program, Structure and Responsibilities***

The Superintendent of the Department of Public Works (DPW) is primarily responsible for the management of public trees in Raritan Township. The DPW has a limited number of staff and funding for tree work at this time.

The DPW Superintendent operates under the Township Administrator and in cooperation with various other bodies, as follows.

Mayor and

Committee

Environmental

Commission

Township

Administrator

Planning Board

Superintendent or the Department of Public Works

Private

Contractors

DPW Tree Crew staff

Public Utilities

Residents

**1. Mayor and Committee**

a) The Mayor and Committee are responsible for appointing members to the Environmental

Commission and Planning Board.

b) The Mayor and Committee have ultimate authority over the policies, procedures, and programs of the Shade Tree Program and are responsible for approving its budget via the Department of Public Works.

**2. Township Administrator**

a) Under the direction of the Mayor and Committee, the Township Administrator supervises the daily operations of the Township’s various Departments and serves as its Chief Administrative Officer.

b) In addition, the Township Administrator is responsible for:

 Administering personnel regulations.

 Serves as the Chief Financial Officer and develops the municipal budget.

 Performing various other administrative duties and completing special projects in connection with the Mayor and Committee.

**3. Environmental Commission and Open Space Committee**

a) The Environmental Commission has seven regular members and two alternates who are appointed by the Mayor and Committee.

b) The Open Space Committee has five members and two alternates who are appointed by the

Mayor and Committee.

c) The Environmental Commission and Open Space Committee are not empowered boards per state Statue 40: 641 – 14.

d) The Environmental Commission will be responsible for:

 Advising the Township Committee and the Superintendent of the Department of Public

Works as to future plans for the planting, pruning, removal, and care of trees and shrubs in Township rights-of-way and on public lands.

 Assisting in the development and implementation of solutions for problems and issues relating to public trees.

 Reviewing plans before the Planning Board and making recommendations for planting

and species selection.

**4. Planning Board**

a) The Planning Board is responsible for implementing and enforcing various elements of the Township Code and Master Plan that relate to the planting and preservation of public and private trees, landscaping and buffers. These issues are forwarded to the Environmental Commission for review.

b) The Planning Board consults with and receives advice from the Township’s Landscape

Architect related to the landscape requirements for new development.

**5. Other Township Departments and Boards**

a) Other Departments and Boards participate in the Shade Tree Program to the extent that they implement Township policies, procedures and ordinances that are directly or indirectly related to shade trees. For example:

 The Code Enforcement Officer within the Building Department is responsible for ensuring that property owners respect the rights of others and that they maintain their properly in accordance with minimum standards, Township ordinances and community character.

 Various other Departments and Boards notify the Department of Public Works and the Environmental Commission of plans and projects as they relate to shade trees and seek their input.

 All Departments notify the Department of Public Works of tree related hazards for emergency response (e.g. Police Department notifies Director of a downed tree for emergency service, etc.)

**6. Property Owners**

a) Private property owners are indirectly involved in the Shade Tree Programs to the extent that they:

 Notify the Township of tree service requests (see procedures below).

 Are asked to be stewards of new public tree plantings adjacent to their properties.

 Are encouraged to plant and properly maintain trees and landscaping on private property.

 Abide by the Township’s Tree Ordinance.

**7. Community Volunteers**

a) Community volunteers occasionally assist in completing certain projects and tasks relating to the Shade Tree Program, including planting and education and outreach programs. A dedicated and knowledgeable group of volunteers will be critical to meeting the goals of this plan due to the limited staff in the Township.

**8. Superintendent or the Department of Public Works**

a) The Superintendent of the Department of Public Works manages the daily operations of the Shade Tree Program. The Environmental and Open Space Committees, and Township Landscape Architect can provide assistance where necessary particularly with planting projects and education and outreach programs.

b) Specifically, the Superintendent is responsible for:

 Planting, maintaining and removing public trees.

 Enforcing elements of the Township Code that regulate and control the planting and protection of public trees.

 Serving notice to property owners for the removal of trees that are deemed necessary to reduce risks posed by dangers to public health or to public property.

 Inspecting trees on public property and determining maintenance requirements.

 Managing the Department of Public Works, which completes various maintenance tasks as well as tree removals.

 Coordinating and supervising outside contractors hired to complete tree maintenance and other tasks.

**9. Department of Public Works Staff**

a) The Department of Public Works Staff is responsible for:

 Completing tree maintenance and related tasks under the direction and supervision of the

Superintendent of the Department of Public Works.

 Providing emergency response service, when appropriate.

 Following all current and accepted arboricultural standards and practices and abiding by all current safety standards relating to tree care operations.

 Reporting any tree-related hazards or other problems immediately to the Superintendent or the Department of Public Works.

**10. Tree Maintenance/Removal Contractors**

a) Private tree maintenance contractors are routinely hired to assist with removal and maintenance work and provide emergency service.

b) Contractors are, within the terms of their agreement, responsible for:

 Completing all work to the specifications of and under the supervision of the

Superintendent of the Department of Public Works in an efficient and safe manner.

 Following all current and accepted arboricultural standards and practices and abiding by all current and applicable safety standards relating to tree care operations.

 Reporting any tree-related hazards or other problems immediately to the Township.

**11. Public Utilities**

a) The role of public utilities in the Shade Tree Program is primarily to minimize conflicts between trees and their facilities, particularly PSE&G and JCP&L.

b) While working on or around Township trees, public utilities report to the Superintendent of the

Department of Public Works and are responsible for:

 Abiding by all applicable ordinances.

 Keeping the Township informed as to their work plans and schedules.

 Exercising reasonable diligence in the installation and maintenance of its facilities to avoid damage to public and private trees.

 Not removing any tree without prior approval of the Township or its owner.

 Following all current and accepted arboricultural standards and practices.

 Assisting the Department of Public Works or Township contractors in completing tree removal and maintenance work around their facilities, where necessary.

 Maintaining the power line right-of-way through the township.

**12. County of Hunterdon**

a) The County of Hunterdon occasionally assists the Township with tree projects.

**13. Other Community Groups which may be involved:**

a) Environmental groups at the township schools such as JP Chase Middle School and

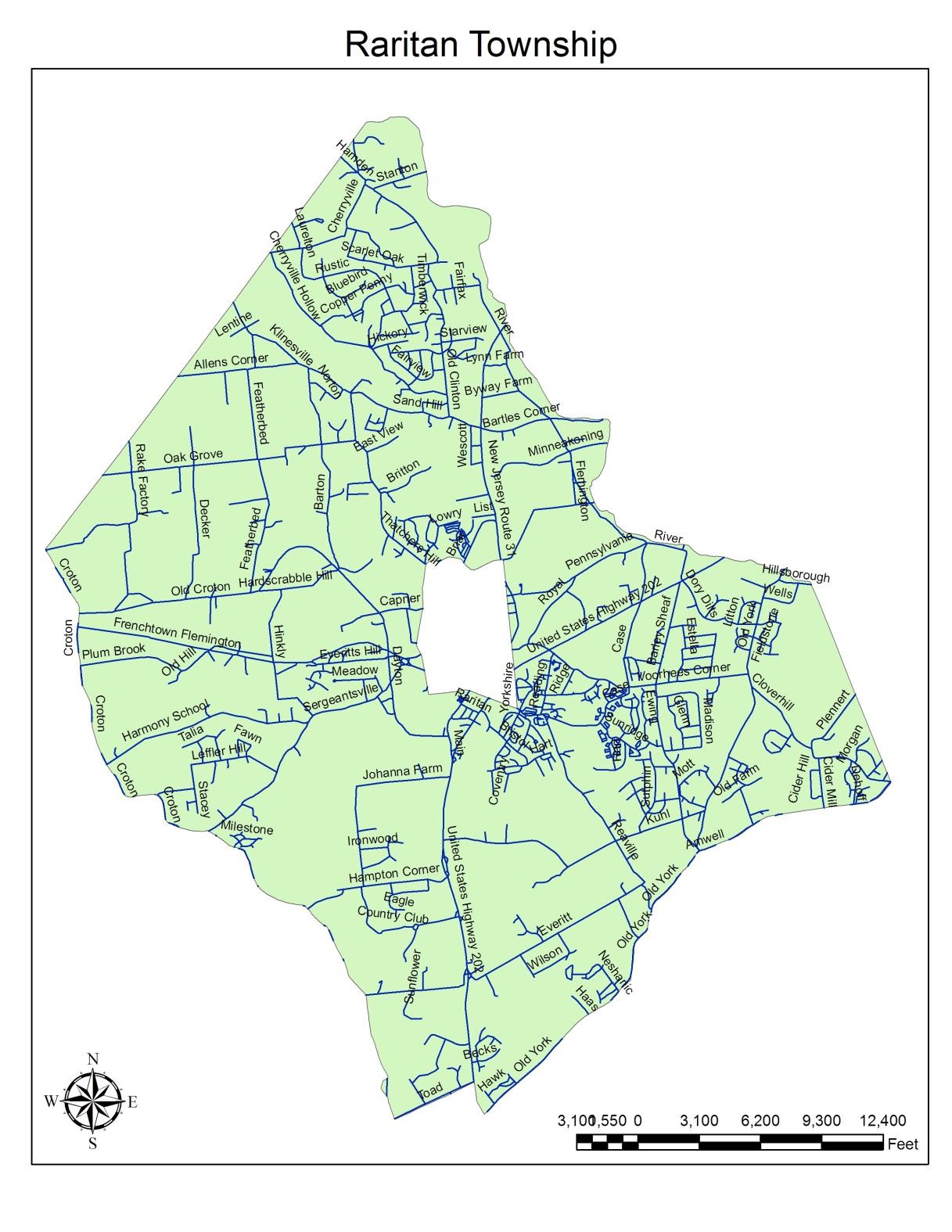
Hunterdon Central Regional High School. b) 4-H Club

c) Boy Scouts

d) Girl Scouts

e) Other Non-Profit groups working in the community.

**5. COMMUNITY MAP**



21

**6. TRAINING PLAN**

**TRAINING AND PROFESSIONAL DEVELOPMENT CSIP #1**

Raritan Township recognizes that a continuous, comprehensive training program is necessary for individuals at all levels of the Shade Tree Program to ensure effective shade tree management over the long term.

***Existing Programs, Policies and Procedures***

**1. Training Provision:**

a) The Township will continue to provide training and professional development opportunities relating to arboriculture and urban forestry for volunteers.

b) Employees of the Department of Public Works are provided with ongoing safety and related

training.

c) The Department of Public Works provides “cross-training” by rotating its employees between various crews so that they can master a variety of skills. As a result, all of the Department of Public Works employees are interchangeable and can lend a capable hand to the tree crew when extra assistance is needed.

d) There is no line item in the Township budget to provide continuing education to the Department of Public Works in relation to tree management issues. However, the objectives listed below will require a minor increase in training budgets. The Township’s ability to meet these objectives may depend upon the availability of external sources of funding including CSIP.

**2. Licenses, Certifications and Recent Training:**

a) Members of the Environmental Commission and Township employees do not currently hold licenses or certifications directly related to arboriculture and urban forestry and are not required to.

b) The current Superintendent of the Department of Public Works is knowledgeable and capable in all aspects of shade tree management, tree evaluation, and tree maintenance techniques.

**3. New Jersey Community Forestry’s Training Skills and Accreditation Program:**

a) At the time this plan was prepared, several Township employees and/or volunteers had satisfied the CORE training requirements of the New Jersey Shade Tree and Community Forestry Assistance Act Training Skills and Accreditation Program. The Township will continue to

send more volunteers and employees to CORE training to provide consistency over time within the program. At least one employee and one volunteer will maintain CORE training

throughout in the implementation of this plan.

***Current Training Needs***

The Township has identified the following areas in which training is currently needed or desired:

1. New Jersey Shade Tree and Community Forestry Assistance Act CORE Training for at least one additional volunteer and at least one additional Township employee. More if funding is available or paid by the attendee.

2. General urban forestry training (legal issues, community forestry planning, etc.), for members of the

Environmental Commission.

3. Planning site analysis and species selection for Environmental Commission members and the

Superintendent or the Department of Public Works. (Based upon available funding).

4. Advanced level tree hazard identification and assessment for Department of Public Works

Employees. Based upon available funding.

***2015 – 2019 Actions***

The Township will attain CORE training for at least one additional employee and one additional volunteer. It may be possible to apply for funding through Community Stewardship Incentive Program (CSIP) 1 to offset the costs of educational programs.

Annual training requirements may be met by coordinating training programs with the Consulting Forester or with neighboring communities which will reduce costs to the Township. Members of the Environmental Commission may already attend meetings that would qualify for Continuing Education Units for compliance with the New Jersey Shade Tree and Community Forestry Assistance Act Training Skills and Accreditation Program.

**1. Ongoing Training Programs**

a) 2015-2019

 Begin implementing training and professional development programs, policies and procedures based on need in order to maintain accreditation.

 Strive to maximize the number of individuals, both employees and volunteers, who increase their level of expertise.

**2. N.J. Community Forestry’s Training Skills and Accreditation Program**

January – March, Annually

 Review training needs and upcoming training opportunities. Ensure that the Township will accumulate the necessary continuing education credits as required by the New Jersey Shade Tree and Community Forestry Assistance Act Training Skills and Accreditation Program by the end

of each year.

January 2015 – December 2019

 Obtain CORE training for at least one additional Township employee, if funding permits.

January 2015 – December 2019

 Obtain CORE training for at least one additional Program volunteer if funding permits.

**Annual General Urban Forest Management Training**

January 2015 – December 2019

 Train at least one member of the Environmental Commission and/or at least one member of the Township Council or employee in urban forest management and planning via a general program such as the Urban Forestry Short-Course offered by the Cook College Office of Continuing and Professional Education, or the Consulting Forester based upon budget availability. The Township is required to attain 8 continuing education units per year.

***Contractors and Public Utilities***

Contractors working for the Township and utility contractors working in or around Township trees must have sufficient training and knowledge to ensure that all treatments are completed to applicable American National Standards Institute (ANSI) and Occupational Safety and Health Administration (OSHA) standards and practices and performed in a safe manner. They must also possess all appropriate certifications.

Evidence of training and appropriate certifications must be provided to the Superintendent of the

Department of Public Works prior to commencing work.

**7. PUBLIC EDUCATION/AWARENESS/OUTREACH**

**PUBLIC EDUCATION, AWARENESS AND OUTREACH CSIP #3**

An efficient and proactive Shade Tree Program will enjoy strong Township and citizen support. However, ongoing public education, awareness and outreach programs are necessary to ensure continued success over the long term. Specifically, such programs will: increase the awareness of residents of the importance of the Community Forest, encourage public participation in tree planting

projects and long term care of trees, create public support for the program and promote the understand of township residents concerning the importance of environmental stewardship.

***Existing Programs, Policies and Procedures***

1. Arbor Day

a) Formal Arbor Day celebrations taken took place annually since the development of the first

Community Forestry Plan.

b) Programs will be conducted in cooperation with the Environmental Commission.

Such programs shall include a formal Mayoral proclamation and ceremonial tree

Plantings.

2. Tree City USA and Other Awards

a) Raritan has not participated in the Tree City USA program, but will work towards gaining recognition by the National Arbor Day Foundation during this planning period.

3. Media and the Raritan Tree Replacement Program.

a) The Township’s internet we[b site (www.raritan-township.com)](http://www.raritan-township.com) will be routinely used to post announcements relating to the Shade Tree Program, such as the *Raritan Tree Replacement Program* and other educational efforts regarding tree issues*.*

b) The *Raritan Tree Replacement Program* will also be announced via the Township Calendar or Newsletter.

4. Property Owner Relations

a) The Township will use the Township web site, form letters and handouts to facilitate communications with property owners, such as a letter providing instructions for sidewalk maintenance, the maintenance and protection of newly planted street trees or news concerning Emerald Ash Borer or Gypsy Moth spray programs.

***2015 – 2019 Actions***

1. Ongoing Public Education, Awareness and Outreach Programs a) 2015 – 2019

 Sponsor a table at community forums to disseminate information about the successes of the program.

 Continue implementing all existing programs, policies and procedures in a manner that improves and maintains the Shade Tree Program’s visibility and maximizes the number of people and groups that are reached.

 Continually review all existing public relations programs and materials and update them, as necessary. Education materials and programs will be handled though the Environmental Commission.

 Submit two articles annually to the print media to promote the benefits of trees and the Shade Tree Program or about forest health risks such as Gypsy Moth, Emerald Ash Borer and other risks.

 The Township should coordinate a Largest Tree in Raritan Contest which would help to raise

awareness of trees within the community.

 Apply for Tree City USA designation by 2017.

**8. STATEMENT OF TREE BUDGET ANNUAL BUDGET AND RESOURCES**

***Overview***

The following is a summary of the resources available to Raritan’s Shade Tree Program, on average, in

each of the past three years.

Completion of some objectives contained in this Plan will require resources that the Township may not be able to meet internally. The Township’s ability to satisfy these objectives may depend on obtaining additional funding through external sources and grant programs. The figures below are based upon estimated time spent on tree related issues, as no employee is assigned full time to tree work.

***Employee Salaries and Wages***

Township Administrator

Superintendent of the Department of Public Works

DPW personnel

Clerical assistance

**Subtotal** (estimated total prorated by percent of time

dedicated to the Shade Tree Program) $18,000.00

|  |  |
| --- | --- |
| ***Operations***  Contracted services |  |
| Training  Materials and supplies  Consulting  Other miscellaneous expenses |
| **Subtotal** (estimated) | $ 8,000.00 |

Seven chain saws/power pole pruners $ 884

|  |  |
| --- | --- |
| ***Township Equipment***  Chip truck |  |
| Two chippers | $ 5,198 |
| Backhoes/Wheel Loaders | $11,985 |
| Seven Leaf Vacuums  Fourteen 5-7 cu.yd dump trucks  Five 2-3 cu.yd dump trucks  Nine Pick-up trucks | $24,746  $ 62,728 |
| **Subtotal** (maintenance, repairs, etc.) | $105,541.00 |

***Tree Planting***

There is currently no tree planting program. The planting program will become an integral part of the

Shade Tree Program.

|  |  |
| --- | --- |
| **Subtotal**  ***Waste Recycling*** | $ 0.00 |
| Leaf and wood disposal and composting Township facilities and equipment for storing, Processing and distributing recycled tree waste |  |
| **Subtotal** | $ 0.00 |
| ***Volunteer Services*** |  |
| Environmental Commission and Open Space Committees members  Other volunteers |  |
| **Subtotal** (100 hours per year @ $20.55) | $ 2,055.00 |

**TOTALS**

**Township Resources $ 131,541.00**

**Value of Volunteer Contributions $ 2,055.00**

**Estimated total spent on tree resources $ 133,591.00**

**9. STATEMENT OF PLAN IMPLEMENTATION**

The biggest issue the Township will have to deal with during this planning period is the imminent threat posed by the Emerald Ash Borer which has been found in Mercer, Somerset and Bergen Counties. It is not a matter of if but when the Emerald Ash Borer will reach Raritan Township. When it does the town must be aware and prepared to deal with dying ash trees and the potential hazards that they will create.

The Township will have to locate the ash trees, prioritize which trees to protect and determine whether trees will be removed proactively before the Emerald Ash Borer reaches the township or deal with the consequences once it reaches the Township. The Township will have to prepare for the additional budget costs depending upon the number of Ash trees located within the Township. The Township should apply for CSIP funding in order to inventory, develop a plan to remove or treat specimen trees.

**2015**

 Attain at least 8 continuing education units to maintain certification.

 Commemorate Arbor Day with a tree planting and Mayoral Proclamation.

 Work to track all tree related expenses.

 Submit two tree related articles for publication.

 Monitor and maintain trees planted under the No Net Loss Reforestation Act to assure required survival rate.

**2016**

 Apply for CSIP funding to complete a tree inventory mainly focusing on ash inventory and develop an action plan. Funding should be included for treatment or tree removal.

 Conduct a windshield survey to prioritize hazard trees for removal during the next 12 months.

 Attain at least 8 continuing education units to maintain certification.

 Commemorate Arbor Day with a tree planting and Mayoral Proclamation.

 Submit two tree related articles for publication.

**2017**

 Complete the Ash survey if funding was received.

 Finalize Ash report and develop a strategy to deal with the Emerald Ash Borer.

 Attain at least 8 continuing education units to maintain certification.

 Commemorate Arbor Day with a tree planting and Mayoral Proclamation.

 Map municipal conservation easements if any exists, conduct a baseline study and monitor annually.

 Apply for a CSIP grant to develop a Forest Stewardship Plan on Municipally owned land. Also include funding for invasive species removal and developing a deer management strategy.

 Apply for CSIP to conduct a hazard tree survey.

 Conduct a windshield survey to prioritize hazard trees for removal during the next 12 months.

 Submit two tree related articles for publication.

 Obtain CORE training for one more volunteer and one more municipal employee.

 Implement the deer management strategy on public lands.

**2018**

 Apply for a Green Communities grant to complete the third five year plan.

 Attain at least 8 continuing education units to maintain certification.

 Commemorate Arbor Day with a tree planting and Mayoral Proclamation.

 Conduct a windshield survey to prioritize hazard trees for removal during the next 12 months.

 Complete the Forest Stewardship Plan.

 Submit two tree related articles for publication.

 Monitor conservation easements.

**2019**

 Complete the third five year Community Forestry Plan submit by mid-year.

 Attain at least 8 continuing education units to maintain certification.

 Conduct a windshield survey to prioritize hazard trees for removal during the next 12 months.

 Commemorate Arbor Day with a tree planting and Mayoral Proclamation.

 Submit two tree related articles for publication.

 Monitor conservation easements.

**TREE INVENTORY CSIP #5**

***Inventory Goals***

The Township does not currently have an inventory of its street trees. The Township will investigate collecting such data so that it can be used as an effective shade tree management tool. By completing a forest inventory the Township will have data which will provide a snapshot of the tree resource that exists during the inventory.

***Existing Programs, Policies and Procedures***

1. Tree Inventory

a) The Township does not have a current inventory of all street trees. The Township would benefit by having such information, which could be stored is a computerized database where all trees would have a designated number and can past maintenance and possible safety issues can be recorded.

2. Current Tree Assessment

a) Through a limited survey of street trees as part of this plan, the following has been

determined about Raritan’s existing tree population:

- Trees within the older developments are dominated by large native tree species and good canopy cover.

- Newer developments tend to have much less canopy coverage as well as a higher percentage of non-native trees.

***2015 – 2019 Actions***

The Township should apply for a grant through the Community Stewardship Incentives Program (CSIP)

5 in order to complete a forest inventory. This inventory will provide the basis for future planning efforts and goal setting.

Appropriate uses may include:

 Periodically producing data summaries from which short and long-term management decisions can be made and their impact can be evaluated.

 Aiding Township employees responsible for receiving calls for service requests and answering property owner inquiries regarding the trees adjacent to their property and the status of work scheduled.

 Storing, prioritizing and scheduling tree service requests.

 Scheduling systematic maintenance and inspection programs (e.g. annual rotation pruning and hazard inspections).

 Producing daily work orders for the DPW tree crew.

 Producing work lists for tree planting and pruning bids.

 Maintaining records of maintenance treatments and inspections.

1. Shade Tree Inventory. These objectives will only be met via access to grant funding from outside the Township budget, possibly through the New Jersey Forest Service Community Stewardship Incentive Program (CSIP).

a) January – December 2016

 Identify needs and desires for implementing a tree inventory to improve the efficiency and effectiveness of the Shade Tree Program.

b) January - February 2017

 Investigate alternate means of storing the tree inventory data, including commercially available software specifically designed for municipal tree inventories. Such systems allow the inventory to be more effectively used to develop and evaluate long-term management activities. Further, they allow the inventory to be used to improve the efficiency of daily maintenance activities, simplify record keeping, and allow continuous updating as trees are planted and removed.

2. Street Tree Inventory Report a) April – June 2018

 Produce a variety of charts and reports that summarize the current state of the street tree population. This report will serve as a baseline to which future reports can be compared and the impact of management activities can be evaluated.

 Begin integrating the findings into other management activities (e.g. adjust species selection to improve diversity, address maintenance needs, etc.).

**HAZARD TREE ASSESSMENT CSIP #6**

***Hazard Management Goals***

While the benefits of shade trees to Raritan are obvious, the Township recognizes that they also present risks and the potential for liability.

The sole purpose of the Tree Hazard Management element of this Plan is to ensure public safety. The Township is committed to improving safety and reducing liability through comprehensive and pro-active shade tree management. Public safety shall be the primary consideration in all decision-making an activities at all levels of the Shade Tree Program.

***Existing Programs, Policies and Procedures***

1. Tree Hazard Identification

a) The Township currently lacks a program for routinely and systematically inspecting all public trees specifically for the purpose of identifying hazardous conditions.

b) However, hazardous conditions are currently identified promptly by:

 Calls and letters from adjacent property owners.

 Observations by Department of Public Works and other Township employees during the course of their daily routines.

2. Tree Hazard Abatement

a) The Director of the Department of Public Works responds immediately to inspect potentially hazardous trees brought to their attention.

b) Work needed to correct potentially hazardous conditions is prioritized and scheduled for completion by the Department of Public Works staff or outside contractor based on the degree of hazard.

c) Occasionally, the Department of Public Works operates cooperatively with the Hunterdon County

Road Department or local utility companies to reduce hazards from trees.

3. Tree Hazard Record-Keeping

a) Records of work completed are currently maintained via existing Department of Public Works logs.

***2015 – 2019 Actions***

The goals for during this planning period for the hazard tree program are to develop a formal hazard tree survey. This would be implemented by applying for a hazard tree survey grant utilizing Community Stewardship Incentive Program (CSIP) 6. At the completion of the hazard tree survey and plan, the Township will have a priority list of trees that represent a hazard to residents. Hazard trees can be prioritized for removal and over time as funding permits to improve the overall safety and health of the community forest.

1. Ongoing Tree Hazard Management Programs

The Township will remove hazard trees under its current protocols until a Hazard Tree Planning Grant is applied for and received.

a) September 2017

 Apply for funding to conduct a hazard tree survey of the Township.

b) May – October 2018

 Conduct a formal hazard tree survey if funding is available.

 Continue to address hazard abatement needs as they are identified.

c) October 2019

 Complete the hazard tree survey for submission to the New Jersey Forest Service for review and approval.

**TREE PLANTING CSIP#11**

***Planting Goals***

The maintenance programs outlined in this Plan are designed to maximize the service life of individual trees. However, their decline and death is inevitable. This planting program is designed to continually replace the Township’s aging public trees to perpetuate the resource at a level that is sufficient to benefit the community. Tree planting has not kept pace with tree removals creating a tree deficit. Without proper planning and funding this deficit will increase as the Emerald Ash Borer arrives in the Township.

At the same time, the stability of the tree population will be improved by manipulating and optimizing its species composition and age distribution via careful species selection and consistent planting from year to year. Further, responsible species selection, placement and planting techniques will help reduce future conflicts between trees and sidewalks and utility lines.

Specifically, the goals of the tree planting program are to:

1. Achieve and perpetuate the public tree population at maximum practical stocking (the total number of trees that the Township can effectively manage in accordance with all elements of this Plan, given available resources.)

2. Improve and maintain species diversity to help insulate the tree population from catastrophic losses to species-specific insects and diseases.

3. Improve and maintain age diversity so that the number off trees requiring removal and replacement due to advanced age is consistent from year to year.

4. Minimize conflicts between trees and sidewalks, buildings, utilities and other public and private fixtures.

5. Minimize future maintenance needs and costs.

6. Improve aesthetic appeal, seasonal variation and physical benefits to adjacent properties and the

Township overall.

7. Utilize CSIP or No Net Loss Funds to fund plantings if they become available.

***No Net Loss***

No Net Loss Reforestation Act funding was the driving force behind completion of the first Community Forestry Plan. The Township completed the planting associated with the No Net Loss funding. The Township planted 204 trees via the No Net Loss Funding in 2014. Walnut Brook received 56 trees while Blackwell Park received 148 trees. Should this funding became available again in the future the Township should take advantage of this funding source for tree planting on public lands.

***Existing Programs, Policies and Procedures***

1. Planting Jurisdiction

a) In the future, based upon available funding the Township will plant and maintains trees on:

 Townships rights-of-way

 Parks, schools and other Township properties

2. Planting vs. Removal Ratio:

a) The Township has not planted trees for some time with the exception of the Arbor Day celebration and the No Net Loss Project. It is expected that planting will increase over time utilizing CSIP funding.

b) The Township has begun to remove trees which are determined to be hazardous. The only other trees currently removed are those felled during storm events. With the Emerald Ash Borer imminent many more trees will require replacement.

3. Planting Site Identification

a) Planting sites will be identified by the Environmental Commission in cooperation with Department of Public Works inspections and property owner requests. These “Focus Areas” will be used to concentrate plantings to provide a strong visual presence of planting activities within the community.

4. Tree Placement

a) Street trees are not typically replaced at this time due to budget constraints. b) Tree placement and spacing will be determined:

 By the Superintendent of the Department of Public Works and/or the Environmental

Commission.

5. Species Selection

a) Species are selected:

 By the Superintendent of the Department of Public Works with the advice and advisement of the Environmental Commission.

 Based on past performance of plantings.

 Based on their suitability to the existing growing conditions at each site.

 Native species shall be planted.

 Nursery trees grown within 100 miles of the Township.

6. Tree Installation

a) All trees are supplied by private vendors and are installed by DPW staff, contractors or volunteers.

***2015 – 2019 Actions***

The Township will work to increase the number of trees planted annually. During the early planning period, No Net Loss funding will be utilized to maintain trees planted in 2014 and replant if the required survival rates are not attained. Vacant planting sites will be compiled by the Environmental Commission, utilizing institutional knowledge and refined further during the Forest Inventory (if

funding is received to conduct a street tree inventory).

1. Ongoing Tree Planting Programs a) 2015-2019

 Funding for additional tree planting on public lands shall be investigated and if available grant applications will be prepared.

2. Designate Focus areas where planting will be focused within the Township. a) September – December 2015

 Map and designate focus areas where future plantings will be concentrated.

3. Vacant Planting Site Identification a) January - March 2016

 Prioritize all existing vacant planting sites identified by the tree inventory or via the

Environmental Commission and institutional knowledge within the Township.

 Contact landowners to determine if they want a replacement tree.

 Begin incorporating the resulting lists into existing planting programs and schedules.

4. Species Composition Adjustment a) July – December 2016

 Establish a long-term goal for optimum species composition, native versus non-native or maximum percentages by species.

 Establish intermediate goals for altering species composition by the end of 2015 and 2019, such as elimination of the planting of Norway maples and Callery pears being planted within the Township particularly in any new developments.

b) January – June 2017

 Begin planting the mix of species necessary to achieve the intermediate goals and to maintain progress toward the long-term species composition goal while reducing the impact of Ash tree loss to Emerald Ash Borer. In new developments, it should be mandated in the tree ordinance that species diversity be mandated as part of approval of a landscape or development plan that native trees be planted.

5. Funding

a) The Township of Raritan was in a unique position due to the funding provided by the No Net

Forest Loss Act, which was utilized for planting efforts during the first planning period.

b) During this second planning period the Township will research grants and alternative funding sources for future tree plantings. This may include CSIP, tree sponsors or trees dedicated to loved ones or any funding which may become available to deal with the Emerald Ash Borer.

6. Tree Farm

a) The Environmental Commission in cooperation with the DPW will be created so that smaller less expensive trees can be purchased and allowed to mature prior to planting out in the community. This area can be used to store large caliper trees prior to planting.

7. Post-Planting Care

a) New street trees will be watered and fertilized by the adjacent property owner or the Township depending on the planting site. A letter containing detailed instruction for maintaining and protecting the trees is provided in each owner at planting time, for trees planted on private property.

b) Trunk wrap and stakes are removed one week after planting.

c) Proper mulching will be installed as depicted in the appendices.

**TREE MAINTENANCE AND REMOVALS CSIP#8**

***Maintenance Goals***

The Township recognizes that proactive, systematic tree maintenance improves tree condition and appearance, extends their service life, and reduces hazards more systematically than a haphazard “crisis” approach. By recognizing the tree resource as “green infrastructure”, this will increase the awareness

throughout the Township that trees, like other infrastructure required consistent maintenance over the life expectancy of the trees.

Some maintenance needs are addressed before trees are planted by selecting species and disease- resistant cultivars that are suited to the area in which they will be planted to minimize stress, insect and disease infestations and unnatural pruning needs. Developmental pruning early in the tree’s life will minimize future pruning needs and the development of structural defects. Continued maintenance as trees mature will help extend their service life, increase their benefits relative to costs, and reduce their hazard potential.

Specifically, the goals of the tree maintenance program are to:

1. Improve and maintain the health and physical condition of the tree population.

2. Maximize the service life of existing trees.

3. Maximize the cost-efficiency of tree maintenance activities.

4. Maintain public safety.

5. Optimize the benefits that trees provide to the community relative to the cost of maintaining them.

***Existing Programs, Policies and Procedures***

1. In-House Crews

a) The Township does not have a dedicated tree crew which works within the Department of Public

Works but the term is used below.

b) Equipment available for use to the DPW are:

 crew members who rotate from other DPW crews

 (1) chip truck

 (2) chippers

 (7) leaf vacuums

 (5) backhoes and wheel loaders

 Various chainsaws, pruners and other small tools c) The DPW Tree Crew completes:

 Nearly all tree removal work

 Limited tree pruning work as time permits

 Some stump removal. The Township does not own as stump grinder at this time.

 All cleanup of debris generated by storms within the Township which is hauled to the DPW

yard.

2. Private Contractors

a) Private tree maintenance firms are occasionally hired to complete pruning, limited specialty treatments and removal of large trees and at risk trees.

3. Inter-Local and Mutual Assistance Agreements

a) The Township currently has informal agreements with neighboring municipalities for the sharing of equipment and personnel for tree maintenance in emergency situations.

4. Systematic Maintenance Programs a) Annual Tree Trimming Program:

 In the past, the DPW routinely pruned and trimmed trees throughout the Township.

 If funding were located during this planning period, a bucket truck could be purchased, employees retrained and the trimming and pruning program could be reinvigorated.

5. Work Identification, Prioritization, Scheduling and Record-Keeping

a) All other work is identified on an as-needed basis via service requests and observations by the Superintendent of the Department of Public Works, DPW, other Township employees and residents.

6. Tree Removal

a) It is the Township’s policy to not remove public trees unless they are dead or hazardous or there is some other valid reason, subject to the approval of the Superintendent of the Department of Public Works.

b) In recent years, the Township has removed two to three trees per year.

7. Plant Health Care

a) Insect and disease controls and other specialty treatments are completed on a limited, as-needed basis on high value trees.

8. Sidewalk Maintenance

a) Adjacent property owners are responsible for maintaining public sidewalks.

b) All species selection and planting placement is designed to minimize future conflicts between trees and sidewalks. There are a limited number of sidewalks with the Township.

9. Funding

a) The DPW operating budget covers the cost of tree maintenance work completed by its crews and contractors. There is not a separate line item at this time for tree related projects.

***2015 – 2019 Actions***

Narrative regarding actions listed earlier

1. Ongoing Tree Maintenance Programs a) 2015-2019

 Continue implementing existing tree maintenance programs, policies and procedures on a regular basis.

 Tracking tree related expenditures including contracted work and time and materials related to tree work.

2. Work Order Form

a) January 2016 – June 2017

 Prepare and begin using a standard work order form to use for all tree inspections, service requests, and maintenance and hazard abatement work in conjunction with the computerized tree inventory. This form will be designed to:

-Simplify and reduce the time needed to keep property owners updated. Ideally, a carbonless or tear-off portion describing the findings of an inspection or the work completed can be left with the property owner to reduce the need for follow-up phone calls.

-Facilitate record keeping. Completed work orders will be returned to the Township so that they can be reconciled and a record of the work or the inspection can be maintained, and the data can be continuously updated as trees are planted and removed or changes in size or condition are noted.

3. Pruning program

a) If funding was found a systematic pruning program should be implemented. Given this fiscal constraints of the time this is unlikely to occur in this planning period.

**10. COMMUNITY STEWARDSHIP INCENTIVE PROGRAM (CSIP)**

**TRAINING PLAN CSIP#1**

Training is discussed in Section 6 beginning on page 22.

**COMMUNITY FORESTRY ORDINANCE ESTABLISHMENT CSIP#2**

***SHADE TREE ORDINANCES & POLICIES***

Raritan Township does not have a Shade Tree Ordinance at this time. The Township will work with the Forester to review sample ordinances and work with the Township Committee to adopt an ordinance during this planning period. The Township is in the process of developing a Tree Ordinance and may be able to use the sample ordinance being prepared by the State of New Jersey Forest Service if this document is released in time.

The New Jersey Highlands Council is developing a

***Existing Programs, Policies and Procedures***

Raritan’s Shade Tree Program does not currently have formal, written policies, beyond what is dictated by the applicable ordinances. However, the Program does operate in accordance with several unwritten policies, as indicated in the following sections.

**Tree Service Request Procedures**

Requests for the removal or other treatment of public trees are primarily received from adjacent property owners and occasionally from other Township Departments or other residents. All service requests are addressed in the following manner:

1. All service requests are received by or forwarded to the Superintendent of the Department of

Public Works.

2. For pruning requests:

b) Due to staffing constraints pruning is not conducted by the Township at this time.

3. For tree removal requests:

a) The tree is inspected by the Superintendent of the Department of Public Works (or his designee) to determine the validity of the request.

b) If removal is justified and the tree is a Township tree a DPW work order for removal is generated.

c) If removal is not justified, the requester is notified and, if necessary, a DPW work order for other corrective work is generated.

d) The appropriate work is completed by the DPW (or contractor) on a priority basis. e) A tree deemed not to be a Township tree is the responsibility of the landowner.

4. Emergency service requests are responded to immediately by the DPW, County of Hunterdon or an outside contractor, as appropriate. All others are completed in order of priority and/or as time permits.

**PUBLIC EDUCATION AND AWARENESS CSIP#3**

Public Education, Outreach and Awareness are discussed above in Section 7, starting on page number

24.

**ARBOR DAY ACTIVITIES CSIP #4**

Arbor Day activities have occurred every year since the first Community Forestry Plan was developed and adopted. This will continue moving forward. The Township may wish to apply for CSIP funding to maintain and enhance the tradition.

Arbor Day

a) Programs will be conducted in cooperation with the Environmental Commission.

Such programs shall include a formal Mayoral proclamation and ceremonial tree plantings.

c) An Arbor Day has taken took place annually since the development of the first Community

Forestry Plan.

**TREE INVENTORY CSIP #5**

Tree inventory goals are discussed in section 9 on page 30 above

**HAZARD TREE ASSESSMENT CSIP #6**

Hazard tree assessment goals are discussed in section 9 on page 32.

**STORM DAMAGE ASSESSMENT CSIP#7**

Tree-related emergencies are almost exclusively the result of structural failure during severe weather events. The Township is prepared to respond promptly to such emergencies so that electrical service, communications and transportation can be restored with minimal disruption for residents. Other possible sources of widespread tree loss include insect and disease outbreaks and are less likely to cause mass losses due to the implementation of this plan.

The frequency and severity of tree-related emergencies and widespread tree loss are minimized through well designed planting, maintenance and hazard tree management programs already being implemented by the Township.

***Existing Programs, Policies and Procedures***

1. Tree Emergency and Disaster Threats

a) Severe weather leading to mass loss and structural failures are the primary disaster threat to

Township trees.

b) Structural failures pose a serious threat to electric service, communications, travel and public health. Downed trees may hamper the Township’s ability to provide critical services during an emergency or disaster.

2. Existing Emergency and Disaster Plans

a) The Township has an emergency response team and operations plans in place. Mutual aid agreements are in place to provide support for large scale emergency situations.

b) The Township does not have a plan which specifically deals with large scale tree replacement after such events beyond the initial response efforts.

3. Emergency Response

a) The DPW in cooperation with public utilities and contractors are responsible for immediately clearing trees and debris from open roadways and those that hamper the restoration of electrical service and communications.

b) DPW staff is on call 24 hours a day to respond to tree related emergencies.

c) Arrangements have been made with private contractors to provide support in emergency situations when this assistance is necessary.

***2015 – 2019 Actions***

Tree disaster situations will continue to work cooperatively with utilities, Hunterdon County and private contractors as is currently occurring.

1. On-going Programs a) 2015-2019

 Continue to implement the programs above and review them on a regular basis.

 Reduce the risks of mass tree failure by continuing to implement and expanding sound and responsible planting, preventative maintenance, hazard identification and remediation programs as laid out in this plan.

**TREE MAINTENANCE AND REMOVAL CSIP #8**

Tree maintenance and removal goals and objectives are discussed above in section 9, page 36.

**INSECT AND DISEASE MANAGEMENT CSIP #9**

The Emerald Ash Borer has been discovered in New Jersey in Somerset, Mercer and Bergen County. It is just a matter of when not if the Emerald Ash Borer will begin to affect Ash trees within the Township. The Township should apply for CSIP funding to develop an Ash management plan which will locate the Ash trees within the Township, develop a strategy for systematic removal of the trees or develop a treatment policy for high profile Ash trees. This may be a major draw on the municipal budget depending on the number of Ash trees noted in the Ash management plan.

Other insect and disease issues that are looming include the Gypsy Moth which is currently in a low population cycle, and Bacterial Leaf Scorch which studies are showing is found not only on the streetscape but also in the forest settings. The Department of Public Works, Environmental Commission and Consulting Forester will continue to stay up to date on current conditions and potential forest health issues which may affect the community forest. This will be a reactive process.

**2015-2019 OBJECTIVES**

**Goal:** Develop an Ash Management plan and a monitoring program to deal with this impending problem.

**Objectives:**

 Conduct continuous monitoring of Ash tree health and prioritize the removal and protection of selected trees within the community.

**Goal:** Maintain community forest health to provide as many environmental services and positive community benefits as possible for Raritan Township.

**Objectives:**

 Conduct continuous periodic monitoring of forest health issues throughout the Township.

 Create awareness among the public of forest health issues and the importance of trees to the community in order to increase appreciation for the community forest cover and create municipal pride and ownership.

 Should a major forest health issues be identified, CSIP funding may be applied for to reduce the

financial impact on the Township.

**WILDFIRE PROTECTION CSIP #10**

Wildfire is not a significant threat in Raritan Township. The oak forests of the past may have been maintained by clear cutting or forest fire but it is currently a reduced risk in this Township. With areas in the Township with steep slopes and thin soils, fire could nonetheless become a hazard during dry conditions. If Raritan Township is interested it should pursue becoming a Firewise Community if funding is available from the New Jersey Forest Fire Service and the CSIP program.

**Goal:** Raritan Township should discuss the merits of becoming a Firewise Community.

**Objective:**

 Determine if forest fire is enough of a threat to apply for Firewise funding and become a

Firewise Community.

 Raise awareness of the potential for damage from wildfire within the township.

 Raise awareness of potential benefits of prescribed burning for invasive species control and forest regeneration.

**TREE PLANTING CSIP #11**

Tree planting goals and objectives are discussed above in section 9, page number 33.

**TREE RECYCLING CSIP#12**

***Recycling Goals***

Raritan’s Shade Tree Program generates large volumes of vegetative wastes. The Township recognizes the cost savings and benefits associated with properly recycling these materials and using the resulting products for beneficial use.

A comprehensive tree waste recycling program will:

1. Minimize the cost of tree related wastes to the Township.

2. Produce beneficial recycled products for use on Township and residential properties.

***Existing Programs, Policies and Procedures***

1. Recycling facilities

a) The Township recycling center is used to store, process and distribute a limited amount of these recycled products.

2. Material Processing, Use and Distribution a) Leaves

 The Township conducts multiple leaf pick-ups in the Fall utilizing municipally owned leaf vacuums.

 Approximately 1,000 cubic yards of materials are collected up by the Township and made available for use by residents as well as on Township owned property.

b) Wood Chips

 Much of the wood debris is chipped at this time. If wood is chipped, it is collected in a dump truck or dumpster and utilized shortly afterwards.

 These wood chips are utilized by residents and used on Township property as mulch. c) Bulk wood

 Brush and branches can be dropped off by residents from April through December.

***2015 – 2019 Actions***

Tree waste recycling will continue without change. If a grant can be attained for a pilot project, it may be possible to utilize logs as timber if a saw mill can be located to become a partner.

1. Tree waste recycling programs will continue as they have in the past. Some thought will occur as to

how to utilized woody debris and materials.

2. Bulk wood utilization will be reviewed for possible use in traditional forest products. Wood can also be processed into usable timber through a cooperative agreement with a saw mill for use by the

Township as part of a pilot study if funding is available.

**SIDEWALK MAINTENANCE PROGRAM CSIP #13**

Tree sidewalk conflicts are a major concern for Raritan’s tree program.

1. Sidewalk maintenance

a) Adjacent property owners are responsible for maintaining public sidewalks.

b) All root pruning necessary to permit sidewalk repair is completed by the DPW or by the property owners contractor under supervision of the Superintendent of Public Works to minimize unnecessary damage and uprooting hazards.

c) All species selection and planting placement is designed to minimize future conflicts between trees and sidewalks.

**2015 - 2016 Objectives**

1. Sidewalk maintenance policies will continue as they have in the past.

2. If any substantial work is required for sidewalks particularly in redevelopment areas, CSIP funding should be applied for to offset cost to the Township.

**STORMWATER MANAGEMENT CSIP #14**

The Township has a Storm Water Management Plan backed by a Storm Water Management Ordinance. It is also referenced in the Township Master Plan. It may be possible to develop a grant for CSIP funding. There is a limited mention of trees and their positive impact controlling storm water.

**2015 - 2019 Objective**

1. Utilize trees and the community forest as a storm water management tool.

**OTHER CSIP #15**

**Forest Stewardship Planning on Preserved Land**

The objective is to become a steward and guardian for township owned and conservation easement properties. Raritan Township will utilize CSIP funding to complete Forest Stewardship Plans on municipally owned and managed land where easements are held. These Forest Stewardship Plans will include identification and classification of the resources found on the parcel, baseline studies of preserved land and easements, management recommendations for controlling invasive species, forest and wildlife management recommendations, trail development, signage of owned properties and encouraging recreational use of the properties. Under these plans property boundaries should be clearly marked and delineated. Other goals may include but are not limited to maintenance and protection of scenic vistas, rare plant communities and water quality.

**Invasive Species Control**

Raritan Township will consider the possibility of also applying for CSIP funding to facilitate the removal of invasive species from public land and to provide education to residents about removing invasive species on their properties and avoiding planting them.

**Easement Monitoring**

The Raritan Township holds conservation easements on private properties. These easements should be monitored to assure the easements are being honored. A baseline study should be followed up with annual inspections to assure that the easement language is being fulfilled.

**2015 - 2019 Objectives**

1. Coordinate invasive species removal projects along with deer management projects jointly with other

government and non-profit entities.

2. Establish a Forest Stewardship Plan for municipally owned properties. Include preservation, passive and active recreation and silviculture management. A CSIP grant to engage a Forester should be obtained to complete this task.

3. Establishment of a database of properties and easement locations, GIS mapped baseline studies of easement properties, problems and opportunities utilizing CSIP funds if received.

4. Communicate with easement holders about the inspection process once all the easements have been located and mapped.

5. Inspection should be conducted by the Consulting Forester of all town owned and conservation easement properties for resource inventories, baseline studies, boundary markings and problems (i.e. unauthorized uses, forest health issues). These inspections will be conducted annually.

6. Identify potential projects and obtain grants via CSIP or other funding entities to complete them for invasive species removal, trail development, blowdown recovery, permitted recreational uses and signs laid out within the Forest Stewardship Plans.

**PLAN PREPARATION AND EVALUATION**

***Plan Preparation and Evaluation Goals***

The Township recognizes the benefits of this Community Forestry Management Plan to the long term success of its Shade Tree Program. The Township is committed to developing and implementing consecutive five-year plans and remaining in compliance with the New Jersey Shade Tree and Community Forestry Assistance Act. This plan is the initial plan being completed by the Raritan Township.

***Existing Programs, Policies and Procedures***

***Plan Preparation***

Preparation of this five-year plan was a cooperative effort of the Department of Public Works, the Environmental and Open Space Committees and their Consulting Forester. This plan is being funded through the No Net Loss Forest Act through the New Jersey Forest Service’s Community Forestry Program.

***2015 – 2019 Actions***

Narrative regarding actions listed earlier

1) Annual Program Evaluation

a) Every December the DPW, Environmental and Open Space Committees and the Consulting Forester will evaluate the success of the past year’s activities and accomplishments relative to the goals and objective laid out in this plan.

b) Programs will be adjusted as necessary based upon this evaluation.

c) Prepare and submit the Annual Accomplishment Report to the New Jersey Forest Service in accordance with the requirements of the New Jersey Shade Tree and Community Forestry Assistance Act.

2) Five Year Evaluation

a) The achievement of goals and objective will be evaluated for completion to date as laid out in this plan.

b) New objectives and adjustments to existing policies will be made and changed if necessary for the 2015-2019 management planning period by August 2019.

c) A new plan shall be written and submitted for approval to the New Jersey Community Forestry

Committee by January 1st, 2020.