



TOWNSHIP OF CRANFORD

FOURTH 5 YEAR

COMMUNITY FORESTRY MANAGEMENT PLAN

JANUARY 2020

Mayor Patrick Giblin

Deputy-Mayor Kathleen Miller Prunty

Commissioner Mary O'Connor

Commissioner Thomas H. Hannen, Jr.

Commissioner Jean-Albert Maisonneuve

Jamie Cryan, Township Administrator

Ryan J Cooper, Township Attorney

Maser Engineering

Erik Hastrup, Acting Public Works Superintendent

Nelson Dittmar, Chairman, Environmental Commission

January 2020

through

December 2024

This document was prepared with the aid of a

Green Communities Grant from the

New Jersey Department of Environmental Protection

Prepared by

John D. Linson, Forestry Consultant

NJ Licensed Tree Expert #198

Community Forestry Management Plan, Fourth 5 years

Municipal/County Information Form

Municipality: Township of Cranford
County: Union
Address: 8 Springfield Avenue
Cranford, NJ 07015-2199
Contact Name and Title: Erik Hastrup, Acting Public Works Superintendent
Phone #: 908-709-7217 Fax #: 908-931-0590 Email: e_hastrup@cranfordnj.org
Organization Name: Township of Cranford Department of Public Works
Mayor's Signature: _____

Mayor Patrick Giblin

I certify that this Community Forestry Management Plan was
Developed specifically and exclusively for our Municipality/County.

Date of Management Plan Submission: _____

Time Period Covered in Management Plan: 2020-2024

The following Community Stewardship Incentive Program (CSIP) practices identified in our
Management Plan:

- CSIP # 1 Training
- CSIP # 2 Community Forestry Ordinance Establishment
- CSIP # 3 Public Education and Awareness
- CSIP # 4 Arbor Day Activities
- CSIP # 5 Tree Inventory
- CSIP # 6 Tree Hazard Assessment Plan
- CSIP # 7 Storm Damage Assessments
- CSIP # 8 Tree Maintenance and Removal
- CSIP # 9 Insect & Disease Management
- CSIP # 10 Wild Fire Protection
- CSIP # 11 Tree Planting
- CSIP # 12 Tree Recycling
- CSIP # 13 Sidewalk Maintenance Program
- CSIP #14 Storm Water Management
- 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 review, the NJ Forestry Service has concluded that the plan meets the standards set for the by the State and the NJ Community Forestry Council and is approved for the period covered.
Signed _____

State Forester

Approved date

Section 2 - Introduction

A. Mission Statement

Recognizing the enhancing value of the street and park trees to the quality of life in the Township of Cranford, it is the Township’s mission to promote a sustainable and productive community forest.

B. Goals

In recognizing the highly developed land use status within the Township and it’s surrounding municipalities of Springfield, Kenilworth, Roselle Park, Linden, Clark, Westfield, Garwood, and Winfield, it is the goal and objective of the Township of Cranford to take a proactive approach in the management of its tree-lined streets and parkland. It is the firm belief of the Township that by taking logical steps as outlined in the Community Forestry Management Plan and by providing reasonable levels of resources to accomplish them, the possibility of natural-disaster, structural tree failure or other tree-related hazards can be minimized, thereby reducing the Township’s exposure to liabilities, increasing public safety and enhancing the quality of life for its residents.

C. Objectives

The Cranford Township Community Forestry Management Plan will enable the Department of Public Works to set attainable goals within the present budgetary constraints in meeting present and future tree maintenance needs. This management plan will evaluate Cranford’s Shade Tree assets and liabilities and chart a course setting short and long term objectives to adhere to the following primary areas:

Tree Inventory/Assessment

<u>GOALS</u>	<u>OBJECTIVES</u>
A. To maintain a current street tree database	<ol style="list-style-type: none"> 1. Delete all trees that have been removed on an annual basis. 2. Add all new trees on an annual basis. 3. Update maintenance needs and priorities.
B. Periodically conduct new inventory approximately every 10 years.	<ol style="list-style-type: none"> 1. Explore funding opportunities in 2025 for new inventory. 2. Proceed with new inventory project in 2026 if funding permits.

Tree Hazard Identifications and Management

<u>GOALS</u>	<u>OBJECTIVES</u>
A. To promptly remove dead and diseased trees.	<ol style="list-style-type: none"> 1. Conduct an annual hazard tree inspection during late summer/early fall. 2. Remove all dead or diseased trees within nine months of identifying. 3. Budget to contract-out large tree removals.
B. To continue to monitor and address Hazardous sidewalk situations.	<ol style="list-style-type: none"> 1. Maintain communications with the Engineering Department. 2. Adequately fund a sidewalk maintenance budget.

	<ol style="list-style-type: none"> 3. Maintain system as pro-active. 4. Continue implementing a ten-year cycle inspection/correction program. 5. Explore alternative grant and funding options. 6. Conduct a walking survey of township sidewalks using summer interns or as an Eagle Scout Program.
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Tree Planting Goal

<u>GOALS</u>	<u>OBJECTIVES</u>
A. Continue "no net tree loss" planting program.	<ol style="list-style-type: none"> 1. Identify potential planting sites. 2. Expand communication with residents regarding availability and benefits of street trees. 3. Maintain tree planting line-item budget. 4. Explore alternative grant and funding options.
B. Continue using appropriate species diversity in tree replacement program.	<ol style="list-style-type: none"> 1. Explore availability, positive aspects, and negative aspects of new plant material. 2. Attend a seminar applicable to selection of plant material based on soil conditions and planting the right tree in the right place. 3. Network with other municipalities on species used, successes, and disappointments. 4. Utilize root barriers in high-water-table neighborhoods. 5. Avoid planting Norway or Red Maples, Pears, Pin Oaks, or Zelkovas until each species is well below 10% of the tree population.

Tree Maintenance and Care Goal

<u>GOALS</u>	<u>OBJECTIVES</u>
A. Continue to prune high maintenance trees on routine maintenance schedule plan.	<ol style="list-style-type: none"> 1. Maintain a tree pruning line item for outside contracted services. 2. Maintain a ten-year pruning cycle for high maintenance trees. 3. Prune all trees identified for pruning during the windshield survey within nine months. 4. Maintain a systematic tree elevation program with DPW labor. 5. Explore alternative grant and funding options.
B. Stay current with service requests.	<ol style="list-style-type: none"> 1. Contract out routine street pruning, if necessary, based on DPW workload. 2. Explore alternative contractual options. 3. Explore alternative grant and funding options. 4. Explore additional interlocal service/mutual aid agreements.
C. Prune approximately 600 trees per year.	<ol style="list-style-type: none"> 1. Maintain a 10-year pruning schedule. 2. Explore alternative grant and funding options.

	<ol style="list-style-type: none"> 3. Explore supplemental alternatives such as budget transfers and surpluses. 4. Request additional funding in operating expense budget to hire outside contractors to prune trees.
D. Stay current with service request.	<ol style="list-style-type: none"> 1. Request funding for contracting out routine street pruning and other time-consuming duties. 2. Explore alternative grants and funding. 3. Explore supplemental alternatives. 4. Prioritize existing workload. 5. Proactively elevate trees prior to all road reconstruction projects.

Other Elements

GOALS	OBJECTIVES
A. Encourage additional training and continuing education attendance for Public Works employees and volunteers.	<ol style="list-style-type: none"> 1. Maintain Core Training requirements of NJ Community Forestry Council. 2. Explore additional training possibilities for CEU credits.
B. Strengthen existing tree protection ordinances.	<ol style="list-style-type: none"> 1. Review existing ordinances from other municipalities for relevance. 2. Network with other municipalities. 3. Review the protection ordinance as necessary. 4. Incorporate recommendations for Master Plan Re-examination recommendations into planning process.
C. Explore the need for a Tree Preservation Ordinance for trees on private property.	<ol style="list-style-type: none"> 1. Examine ordinances from other towns. 2. Speak with representatives from other towns. 3. Meet with Town Committee Liaison in regard to possibility of introducing new ordinance.
D. Continue to utilize the Township Website to disseminate tree related information.	<ol style="list-style-type: none"> 1. Examine news releases and websites of other municipalities. 2. Seek input of the Environmental Commission. 3. Organize existing information into a readable format. 4. Contact webmaster to make appointment to go over material.
E. Continue communication with the Environmental Commission in the review of landscape plans and proposed tree removal on site plans submitted to the Planning and Zoning Boards.	<ol style="list-style-type: none"> 1. Request copies of memorandums submitted to Planning and Zoning Boards by the Environmental Commission. 2. Request copies of Planning and Zoning Board Resolutions affecting trees and landscaping.

D. Liability Statement

The Township of Cranford recognizes its responsibility and liabilities it has in promoting safe streets, sidewalks, parkland and public right of way. Toward this end, it has made a conscientious effort to promptly remove all dead, dying, diseased, and potentially hazardous trees. All Public Works employees are encouraged to report hazardous conditions to their supervisors. This has resulted in a reduction in the need for emergency response.

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

We feel, by taking logical steps outlined in the plan, we will garner public support for plan implementation and demonstrate the long-term benefits to the environment and public safety.

We also want to become more proactive in the management and care of our trees. Through inventory and hazard assessment, we will position our Public Works Department to take corrective action prior to structural tree failure and other hazardous tree related conditions. It is acknowledged that not all hazardous conditions will be predicted, but it’s much like trying to predict which tooth might break next. Good maintenance and care will reduce the probability, but unexpected events will still occur.

Following this plan will demonstrate that the Township of Cranford is devoting reasonable levels of resources in a planned manner to reduce the number of tree related accidents and thereby reduce its exposure to liabilities and increase public safety.

Section 3 - Community Overview – Past History of Cranford

Situated in the geographic center of New Jersey's youngest county, Union, the Township of Cranford is bisected by the meandering Rahway River. The original Native American inhabitants called the area Wawahakewany or "place where eggs are found". Indeed, Cranford owes its existence to the river, for it was the feature which drew the first settlers here in the early 18th century. European settlers built mills along the river to grind grain and saw timber. The farm community became known as "Crane's Mills" due to the location of the two Crane family mills opposite one another near the river junction of today's Springfield and North Union Avenues. A low water crossing place on the river was known as "Crane's Ford" and it is from this spot that the modern township takes its name. The last remaining mill on the Rahway River is at 347 Lincoln Avenue East in Cranford. The Williams-Droescher Mill is the longest continuously occupied industrial building in the state of New Jersey.

Cranford or Crane's Mills, as it was known then, served as headquarters for several Continental Army Generals during the fierce winter of 1779-80. Crane's Mills was the center of an arc of 2,000 front line troops stretching from Newark to Perth Amboy. Many of these troops quartered in Crane's Mills. Their purpose was to provide an "early warning" front line of defense for Washington's army at Morristown.

For many years after the revolution, the Crane's Mills area remained a farming community. Hardwood forest predominated west of the river and farmland was under cultivation east of the river, an area known as "Williams Farms". The community was also known for raising sheep and apple growing, producing potent applejack known as "Jersey Lightning". Part of the village of Westfield since 1794, in the early 19th century the area became known as "Crane Town". From about 1849-1869, the town was called "Craneville". Tradition has it that the name was scrawled by school children in chalk on the side of the railroad depot and it stuck.

An influx of New Yorkers and Brooklynites seeking summer homes after the Civil War changed the area forever and led to the development of its suburban character. Real estate speculators bought up many of the farms and divided them into housing lots. This increase and change in the composition of the local population brought another name change in 1869. "Craneville" was thought to be too rural by the sophisticated newcomers. Various names were suggested and finally "Cranford" won out over "Riverdale" by a narrow margin. Soon after, the descendants of the Crane family, Josiah Sr. and Josiah Jr., led a movement to separate from Westfield. They successfully petitioned the state legislature, and in 1871 the Township of Cranford was officially established. Not long after the incorporation of the Township, its founders made an offer of money and land to the legislature to move the state capital from the banks of the Delaware River in Trenton to the banks of the Rahway River in Cranford. Their bid was rejected.

Today, the 22,625 (2010 census) inhabitants of the Township's 4.79 square miles are living in a community that looks to its past to see its future. A vigorous program of downtown renewal, including the state's first Special Improvement District, draws upon the Victorian past for its architectural features. There are 72 miles of municipal roads within the township. There are 6,154 families residing in the township and 8,816 housing units.

A comparison of Species Percentages between the 1999 and 2016 Tree Inventories:

<u>Species</u>	<u>1999</u>	<u>2016</u>
Norway Maple	16%	11%
Red Maple	14.6%	14%
Sweet Gum	6.1%	4%
Flowering Pear	5.9%	9%
Cherry	5.5%	7%
London Plane and Sycamore	4.1%	6%
Honey Locust	2.4%	4%
Pin Oak	About 12%	12%
Zelkova	3.9%	10%
Ash	2.6%	4%

Tree Species to Avoid:

From this analysis, it is recommended that for at least this next management period, no further Maples, Pears, Pin Oaks, or Zelkovas be planted, as each of these species either approaches or exceeds 10% of the entire tree population.

Ash Trees should also not be planted due to Emerald Ash Borer and Ash Yellows Problems.

Flowering Plum is also not recommended due to Black Knot disease.

Recommended Tree Species to Plant:

Trees for New Jersey Streets published by the New Jersey Shade Tree Federation should be the standard for determining appropriate tree species to plant.

The major accomplishments over the course of Cranford's Community Forestry Management Plans are as follows:

<u>Year</u>	<u>Trees Planted</u>	<u>Trees Removed</u>	<u>Trees Pruned</u>	<u>Square feet of Sidewalk Replaced</u>	<u>Root Control (Linear Feet)</u>
2000	160	107	202		
2001	175	92	135		
2002	188	60	162		
2003	180	86	167	9,000	
2004	195	79	151		
2005	173	81	165		
2006	220	90	172	5,180	
2007	145	137	394	4,864	
2008	157	131	432	6,944	
2009	157	120	461	5,600	
2010	135	174	510	4,800	
2011	0	214	420	3,800	
2012	43	300	120	2,500	

2013	120	150	225	4,000	
2014	45	160	62	2,640	4,387
2015	47	152	52	2,364	2,016
2016	50	143	72	2,215	6,837
2017	42	137	82	2,140	5,016
2018	48	157	95	2,200	5,016
2019	24	85	150	2,253	8,166
Totals	2,304	2,655			

Approximately 2,000 square feet of uplifted sidewalk is repaired annually using in-house labor. In 2003, a Capital Budget item of \$35,000.00 was approved for 9,000 square feet of sidewalk improvements. It presently is around \$40,000.

The Township uses Dukes VapoRooter to treat approximately 2,000-8,000 linear feet of sanitary sewer trunk line annually. The treatment does penetrate partially up residential sewer laterals. This process greatly reduces the intrusion of the roots into the sanitary system and consequently the possibility of sewerage stoppage.

During this last management period, functions of the Shade Tree Advisory Board were combined with the Environmental Commission by the Township Administration. A goal for this Management Period will be to change the enabling ordinance of the Environmental Commission to fulfill this function.

The Shade Tree Advisory Board was first formed in 1993 by Ordinance 215 which now will require amending.

The responsibilities of the Environmental Commission now include providing advice and suggestions for regulating and protecting shade trees located in township right-of-way and on all township owned property including parks, recreation fields, administrative properties, etc. The day to day shade tree operations, however, are overseen by the Department of Public Works. The Township conducts an annual Arbor Day celebration in conjunction with the Cranford Board of Education. Each year, students take part in the Arbor Day program by reading poetry, performing in a play, singing or playing musical instruments all centered on the importance of promoting tree planting. At the conclusion of each ceremony, the students join Township officials in planting a shade tree.

In recognition of the various activities of the Department of Public Works, and the former Shade Tree Advisory Board, and the Environmental Commission and of the dedication of the governing body, Cranford has been named as a **Tree City USA** community since 1990 by the National Arbor Day Foundation headquartered in Lincoln, Nebraska.

Cranford Township is fortunate to be part of Union County Rutgers Agricultural Extension Service which provides a "Master Tree Stewardship Program". County Agent, Jim Nichanadowicz takes great pride in teaching 4th grade students the value of trees in the environment.

In the past, Cranford has participated in a program sponsored by "Trees N.J." for a fifth-grade poster contest. This encourages the public to request and donate trees as memorial plantings on public property.

The Environmental Commission has distributed brochures regarding the benefits of tree planting following the recent major storms and maintains a website www.mygreencranford.org.

Specific Challenges Encountered Over the Last Management Period:

- Flooding is a perpetual issue in Cranford. Hurricane Irene and Super Storm Sandy took a heavy toll on the Township which necessitated the deferment of tree maintenance.
- Major financial constraints due to costs of natural disaster and retirements.
- There have been four different Township Administrators over the last four years.
- Both the Superintendent and Assistant Superintendent of Public Works retired just prior to Hurricane Sandy.
- The in-house Engineering Department, which oversees Public Works and Shade Tree Division, was eliminated and turned over to a part-time consulting firm.
- Cranford's pride and joy, "Old Peppy", the largest Black Gum (*Nyssa sylvatica*) in the State of New Jersey, and sustained severe damage in Hurricane Irene. Indecision over restorative maintenance and subsequent deterioration have led to the disappointing conclusion that it be removed.

Cranford's Master Plan was prepared by T&M Associates of Middletown, NJ and adopted on September 30, 2009.

Cranford's Community Forestry Management Plan is consistent with its 2009 Master Plan and 2019 Reexamination Report in that it embraces the following principles, goals, objectives and development policy:

- Maintain and increase open space, including through State, County, Municipal or other public purchase of property and through zoning regulations.
- Implement sensible land use development policies so as to avoid adversely impacting Cranford's high-quality school district.
- Improve pedestrian, recreational, and automobile safety.
- Work to preserve small town character and historical architecture.
- Encourage environmentally-friendly practices and principles.

The Master Plan

Specifically recommends:

- Creating attractive gateways at the principal entrances to the Township through upgraded land uses, streetscape improvements, and signage.
- Providing buffer zones between commercial and residential areas.
- Encouraging sustainable development practices.
- Adapting and practicing environmentally responsible policies.
- Aggressive acquisition of open space.
- Maintaining Tree City, USA status.

- Preserving existing trees to improve air quality, reduce erosion, and to preserve community character.
- Maintaining and enhancing the appearance of all Township-owned properties.

The Master Plan also provided the following insightful information:

- There are 381.4 acres of land dedicated to recreation and open space (12.35% of the total land within Township).
- According to the Master Plan, Cranford has a shortfall of open space and parklands which is based on NPRA standards of 10.5 acres of parkland per 1,000 people in the population. Cranford has a population of over 22,000 people.
- The Master Plan on Page CO-21 & CO-22 makes specific recommendations for the Township revision of the Tree Preservations Ordinance (Chapter 136).

These recommendations require careful scrutiny by the Environmental Commission.

The September 18, 2019 Reexamination Report, prepared by Maser Consulting, reemphasized all of these goals, but also raised the bar by highlighting several never before discussed areas as well as emphasizing unfulfilled goals.

The Cranford Township Reexamination Subcommittee was represented by residents, businesses, and Township Officials. Residents were encouraged to participate in a Community Forum and to provide feedback through a questionnaire.

The report devoted considerable attention in strategic planning in the downtown area where increased effort in the replacement and maintenance of street trees was needed.

On pages 49 and 50, the 2009 Plan recommended that a number of changes be made in the Tree Presentation review on Land Use Applications pertaining to:

- Assessing tree health and conditions.
- Preserving existing woodlands.
- Locating trees by species and diameters of 8" or greater and Dogwoods 2" or greater.
- Number of trees to be removed.
- Identifying and protecting trees to be preserved.
- A review of replacement tree requirements.
- Requiring the preparation of landscape plans by Certified Landscape Architects.

The reexamination plan also recommended the need to provide transitional buffer zones where commercial areas border residential areas (Page 62).

A **Conservation Goal** in the Reexamination Report is to "Preserve existing trees to improve air quality, reduce erosion, and to preserve community character".

Under **Community Facilities and Utilities** (Page 64), the Report encourages "the preservation of historic buildings and landmarks that are significant to Cranford's past". Although Cranford's Historical

Pepperidge Tree (*Nyssa sylvatica*), fondly referred as "Old Peppy", was removed in 2015, there are many other large, specimen trees throughout the Township that could be identified as "Landmark Trees".

A goal for the future would be to initiate a Landmark Tree Certification Program.

The Recreation and Open Space Element on page 65 called for increased park, open space, recreational facilities as well as preserving and increasing pedestrian and bicycle public usage.

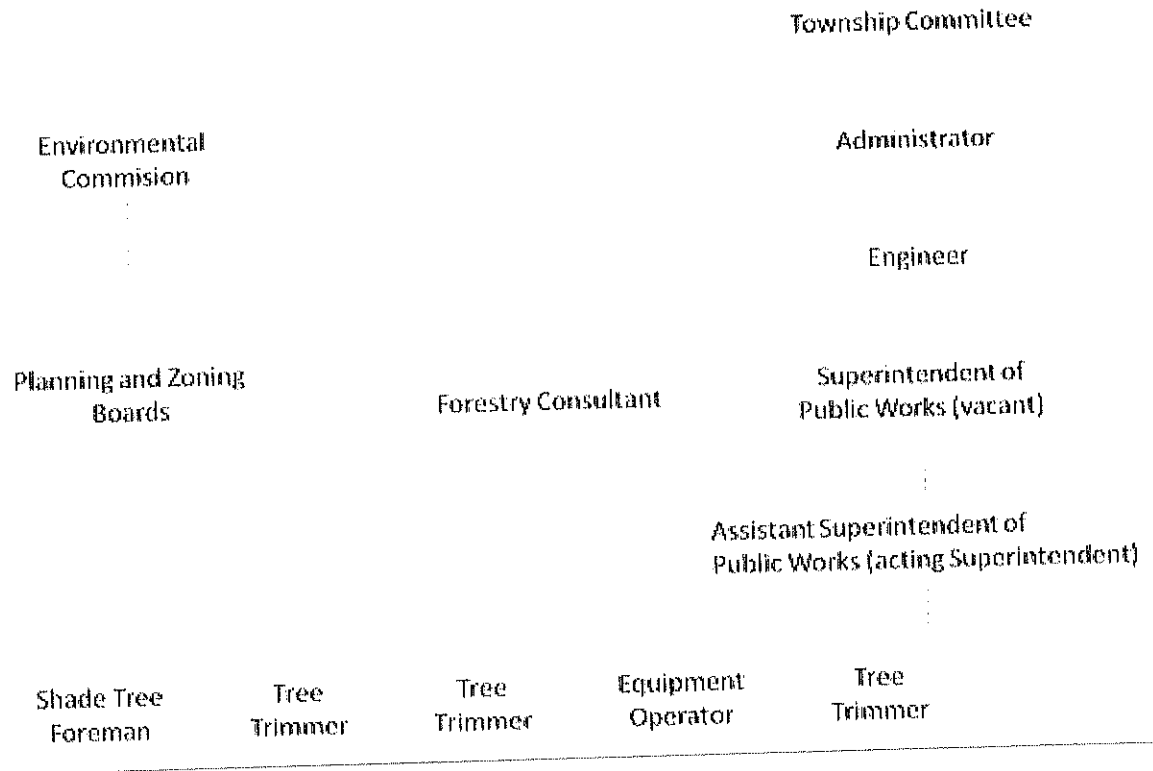
So, tree maintenance comes into play here.

Under **Community Identity**, creating attractive "Gateways" enhance the Township's character and appeal as well as maintain the appearance of all Township owned properties (page 66). Trees can play an important role in enhancing these areas.

Subsequent to Hurricane Irene in 2011 and Superstorm Sandy in 2012, the New Jersey Department of Environmental Protection now requires all municipalities to prepare for natural disasters by designating **Temporary Debris Management Areas (TDMA)** for the storage of storm related debris. Cranford's TDMA was approved on 6/17/2019. It is located at 210 Birchwood Avenue. It is permitted to store: vegetative (no processing), construction and demolition, bulky solid waste, e-waste, and white goods.

Section 4

Community Forestry Administration



The Township Committee appoints members to the Environmental Commission and reviews and approves the Public Works Budget.

The Administrator attends to personnel matters and assures that all Public Works functions run smoothly.

The Public Works Department is directly responsible for the maintenance of Cranford's street trees and directly expends funding and devotes resources to do so.

Requests for service are received by the Public Works Department. Most requests are inspected within a few days. Most jobs are performed in-house with minimal assistance from outside contractors with the exception of large removals necessitating tree cranes.

The Department of Public Works is up to date with its requests for service and the computerized work order system (SDL Spatial Logic) is working well.

The Land Conservancy of New Jersey updates the Tree Inventory annually by deleting trees removed and adding new trees planted.

The Environmental Commission makes policy decisions, but has nothing to do with the day to day tree maintenance operation. It has five volunteer members from the public, a liaison to the Township Committee, with the Superintendent and Assistant Superintendent of Public Works also serving as representatives to the Commission. The Commission meets at least eight (8) times per year.

The Department of Public Works relies on the Environmental Commission in making controversial policy decisions on tree removal, nuisance trees, and tree preservation.

The Environmental Commission is responsible for celebrating Arbor Day and periodically writes news releases relating to street trees. The Commission is voluntary and does not have its own budget.

The Environmental Commission reviews all zoning and Planning Board applications and inspects proposed project locations, solicits assistance from an urban forestry consultant as needed, and makes recommendations back to the respective entities to the preservation of trees and replacement landscaping.

Section 5 - Community Map

No significant changes since last submittal.

Section 6 - Training Plan

The Township has budgeted for the mandatory requirements of the New Jersey Forestry Council for acquiring annual Continuing Education Units. In fact, Cranford usually exceeds these requirements every year. However, there have been significant staffing changes over the last few years due to retirements. The Township has a new Superintendent of Public Works, Erik Hastings, who needs to be Core Trained. Most members of the Environmental Commission have not been Core Trained; however, Marya "Tina" Helmstetter is Core trained and has hours filed with the state.

The actual tree crew is composed as follows:

- Frank Miniscalchi, Tree Trimmer – 22 years' experience
- Rich Marquardt, Tree Trimmer – 7 years' experience
- Brian Veglatte, Laborer – 7 years' experience
- Joseph Faraone, Laborer – 1-year experience
- Anthony Freire, Equipment Operation – 2 years' experience
- Vacancy, Acting Foreman

With an aging crew, Cranford strategically must plan for the eventual retirement of its older staff and actively train younger public works personnel in Hazardous Tree Identification, Integrated Pest Management, Climbing and Rigging, Tree Planting, Certification in Line Clearance Pruning, etc.

Specific Training Needs for the next Five Years

- Yearly Aerial Bucket rescue training and certification. American Red Cross requirements and completion of Adult CPR/AED and First Aid Basics.
- Attend Union County Tree Worker Safety Training Program which covers a half day of electrical safety training and a half day of Aerial lift bucket truck safety training with a representative from PSE&G and Altec Industries presenting the training.
- Send younger Department of Public Works representatives to attend the State sponsored Large Tree Climbing and Rigging Course.
- Send younger Department of Public Works to attend the "Arboriculture I, Basic Tree Climbing" course.
- Two (2) members of the tree crew have attended the required core training session.
- Continuing Education Unit (CEU) credits will continue to be accrued as training sessions are offered by the New Jersey Forestry Service. Funding is provided for this purpose on an annual basis.
- Eventually all Department of Public Works Shade Tree employees to attend the State sponsored "Hazardous Tree Identification" course.
- Continue sending at least one (1) representative to the New Jersey Shade Tree Federation Convention in October each year of which Cranford is a member.
- Consider sending two (2) staff members for ACRT Line Clearance Certification which is sponsored by Downes Tree Service, usually in January. Contact Mary at 973-238-9800 to get on sign up list.

Section 7 - Public Education/Awareness/Outreach

The Township of Cranford has been recognized as a Tree City USA since 1990. The Township has utilized its annual Arbor Day Celebration as a forum to reinforce the importance of shade trees in the daily lives of its residents and with its public schools.

Arbor Day provides a unique opportunity for the Township to promote the unique benefit trees add to the quality of life in Cranford. The Township looks forward to enhancing future Arbor Day programs with items such as:

- Memorial tree planting programs
- Guest speakers
- Additional tube seedling distribution
- Theme poster contest such as that being organized by the National Arbor Day Foundation

A goal for 2020-2024 is to further utilize the Township website to promote its urban forestry program and to encourage residents to accept site appropriate replacement trees.

The Public Works Department notifies individual residents by letter prior to removing Township trees or planting of replacement trees. Residents also receive notice to please water and care for the replacement trees adjacent to their property.

Occasionally tree-related news releases are issued in the Suburban News, Cranford Patch, and our town website Cranfordnj.org.

The Township does have a website: www.Cranfordnj.org.

There are plans to utilize the website for tree-related purposes in the future. A short-term goal is to post the Township Tree Policies on the website. This will be accomplished by the Environmental Commission by contacting the Township webmaster. There is a need to expand our standard operating policies to encompass tree related sidewalk maintenance and sewer lateral issues.

A computerized constituent response form requesting tree related services is available on the Township website and is administered through the Clerk's office.

The local cable television station, TV-35, also presents an opportunity to expand public relations to the community.

The Cranford Public Library has a display case at the entrance. The Environmental Commission has, in the past, presented month-long displays educating and exposing the public to the importance of trees.

Another venue used for dispensing tree information is the Cranford Township News, which is published annually.

Tree City, U.S.A. Bulletin #42 Selling Others on Tree Programs offers helpful information on community outreach and should be referred to.

Section 8 - Statement of the Tree Budget

All Environmental Commission members serve in that capacity as appointed volunteers and it meets approximately 10 times a year.

The Township’s Department of Public Works Shade Tree Crew, consists of a 4-5 full-time employees and has ample equipment and training to provide such basic tree services as brush pick up, branch elevation, tree removal, and pruning. All other services are provided through contractual arrangements.

The following is a summary of the Township of Cranford Shade Tree Budget over our Community Forestry Management Period including salaries and wages, maintenance repair, and uniforms.

<u>Year</u>	<u>Budget</u>	<u>Year</u>	<u>Budget</u>
2004	\$232,926.00	2012	\$265,000.00
2005	\$233,297.00	2013	\$266,997.20
2006	\$261,086.00	2014	\$256,180.75
2007	\$265,881.00	2015	\$261,408.93
2008	\$268,984.00	2016	\$266,743.80
2009	\$263,984.00	2017	\$272,187.50
2010	\$259,000.00	2018	\$277,742.00
2011	\$264,000.00	2019	\$297,527.00

Note: The Operational Budget is pretty much a flat figure which has not increased over the years. Aside from emergency allocations during storms, \$44,000 is what is budgeted for tree maintenance. Although sub-categories include professional department, outside professional contracts, maintenance and repair, miscellaneous, no specific amounts and assigned to these categories.

Volunteers

10 members meeting 10 times per year for 1.5 hours = 150 hours x \$25.43/hour = \$3,815.

Grants Received

- 2001 CSIP Grant of \$1,500 to contractually prune 75 London Plane Trees on 5 streets
- 2002 CSIP Grant of \$9,000 used to plant 180 street trees
- 2004 Green Communities Grant of \$2,000 to write the 2nd Community Forestry Management Plan
- 2013 Green Communities Grant of \$3,000 to write the 3rd Community Forestry Management Plan
- 2019 Green Communities Grant of \$3,000 to write the 4th Community Forestry Management Plan

Cranford participates in the Greening Union County Grant Program which reimburses the Township 50% of its Annual Tree Planting Program.

Cranford maintains an annual Capital Budget Sidewalk Improvement Program to correct situations where root conflicts from Township trees have uplifted sidewalks and driving aprons.

The following is a listing of Township Equipment regularly used in the DPW tree maintenance program:

- 2017 Ford F250
- 1997 International 55' Built Truck with Forestry Body
- 1996 Bandit Chipper 250 XD + 2018 Bandit
- 1999 Vermeer Stump Grinder
- Small walk behind stump machine
- 2000 Ford 30' buckets
- 2018 Brush Bandit, new brush chipper with winch \$55,000
- 2019 New 55' Bucket Truck ordered for \$235,000
- 2018 John Deere 544
- 2016 John Deere 544
- 2016 John Deere Skid Steer 324E with grapple

Statement of Tree Budget

13.		CFMP Budget (this should be what your estimated budget for this reporting year is in your CFMP)	Reporting Year Actual (this should be the expenditures for the year)
Administration	Municipal Salaries	\$250,654.00	
	Volunteer Contributions (Rate can be found at www.independentsector.org)	\$3,815.00	
Subtotal		\$297,469.00	
UCF Stewardship	Planting	\$3,000.00	
	Pruning		
	Removal	\$40,000.00	
	Other (Duke's VapoRooter)	\$15,000.00	
Subtotal		\$58,000.00	
Total		\$297,527.00	

Standard 3 For your Tree City USA Application Budget:

(enter the totals provided here into your Tree City USA Online Applications: <https://www.arborday.org/programs/treecityusa>)

Tree Planting and Initial Care	\$3,000
Tree Maintenance	\$40,000
Removals	

Section 9 - Statement of Plan Implementation

The Township of Cranford has been pro-active in the area of its community forest for many years. The Township conducted a tree inventory in 1999 and again in 2019. Early on it adopted a Community Forestry Management Plan conforming with standards set forth by the State and the NJ Community Forestry Council.

Cranford is fully developed, nevertheless, over the course of the past five-year management plan, policy changes were necessary while at the same time regular tree maintenance services have been maintained.

It is our belief that by being pro-active over the past three management plan cycles the Township minimized the effect of recent storms in the community by promptly removing dead, diseased, and dying trees identified by annual hazard tree inspections, by removing trees of marginal value in capital budget road reconstruction projects, and by replacing trees under overhead wires with compact species.

2020-2024 Implementation Strategy

A. Tree Assessment and Inventory

A complete street tree inventory was first conducted in 1999 by the Environmental Commission through an ANJEC Grant. This inventory was intended to serve Cranford's needs for a 10-year period provided that it was updated. As it became outdated, Cranford relied heavily on an Annual Windshield Tree Survey to manage its street trees.

The Township received a \$10,000 CSIP Grant in 2015 to conduct a new tree inventory. The i-Tree Inventory was conducted in 2016 by The Land Conservancy of New Jersey with the Township kicking in another \$10,000 to complete the survey in 51 days over a 13-week period. 72 miles of streets were inventoried. The Inventory comprises 16 major species and totaling 5,915 trees.

Constructive use of the inventory will help ensure adequate funding and management for the foreseeable future. An annual hazardous tree survey is conducted by the Department of Public Works. The results of the survey are used to record trees designed for removal and trees recommended for pruning.

Implementation Strategy Goals

1. Continue to update the existing tree inventory annually with removals, new trees, and changes in maintenance needs.
2. Prepare and submit the Management Plan Annual Accomplishment Report.
3. Conduct the annual Hazardous Tree Windshield Survey and follow up on identified needs.
4. Apply for a CSIP Grant to fund a new inventory in approximately 7 years.
5. Contact The Land Conservancy of New Jersey, 19 Boonton Avenue, Boonton, NJ 07005, 973-541-1010 in regard to having them conduct an i-Tree Street Tree Inventory update annually.

B. Hazardous Tree Identification and Management-Narrative

In taking a proactive position on removing potentially hazardous trees, the Township has reduced its emergency response frequency, resulting in lower overtime. The Township is capable of providing most emergency and storm response with in-house labor. An annual Windshield Tree Survey of all trees growing within the public right-of-way and a hazardous tree assessment of trees growing on public property is an invaluable tool in identifying trees in need of removal, maintenance, or replacement.

The Township of Cranford has developed Tree Removal criteria (see addendum) for justification of its proactive removal program. Public opinion on the one hand wishes to preserve or prolong as many trees as possible, yet safety issues necessitate that trees be removed. Most tree removals are conducted in-house. A private tree crane is brought in periodically to assist the Public Works Department with large tree removals. Public Service Electric and Gas Tree Division is also brought in for electrical hazards. Cranford is fairly current with its tree removal responsibilities. Assuming a 1-3% annual mortality, based on a tree population of 5,915 trees, Cranford Township will remove 60-180 trees per year. The Public Works Department is well equipped and adequately staffed to provide in-house tree removal.

Root problems involve sewer lateral backups, surface roots, or sidewalk tripping hazards. Since most of Cranford's homes were constructed over 50 years ago, most of the sewer laterals are constructed of leaky Orangeburg clay pipe. Tree roots will not invade a tight sewer lateral system such as PVC or cast iron. Residents who have experienced sewer backups frequently insist on the Township removing perfectly healthy street trees.

Residents experiencing root-related sewer backups must document the fact that a licensed plumber retrieved roots from the sewer lateral and present physical evidence to the Superintendent. At the time, the sanitary sewer lateral connection is examined by looking up the line with a television camera. If roots are observed and the problem cannot be appropriately addressed through herbicidal treatment, the Department will remove the tree.

Cranford typically spends \$15,000.00 per year for Dukes VapoRooter to chemically treat sanitary sewer mains. Since this herbicide treatment process does slightly backflow into private sewer laterals, root intrusion into residential sewer laterals is kept to a minimum.

The following is a sample of Cranford's Sewer Line Treatment Programs:

2008	3,152 linear feet of sanitary sewer line
2009	3,850 linear feet of sanitary sewer line
2010	4,350 linear feet of sanitary sewer line
2011	4,350 linear feet of sanitary sewer line
2012	4,500 linear feet of sanitary sewer line
2013	N/A
2014	4,387 linear feet of sanitary sewer line
2015	2,016 linear feet of sanitary sewer line
2016	6,837 linear feet of sanitary sewer line
2017	5,016 linear feet of sanitary sewer line
2018	5,016 linear feet of sanitary sewer line
2019	8,166 linear feet of sanitary sewer line

Surface root problems in lawn areas are handled in-house. Residents are encouraged to plant ground cover in the general vicinity of tree trunks or to cover roots with additional top soil and re-seed. Large exposed roots presenting tripping hazards are shaved down or ground out by the DPW stump grinder.

Cranford claims responsibility for the repair and/or replacement of sidewalk slabs uplifted by roots from township trees. The Township has historically removed uplifted sidewalk slabs or curbs and driveway aprons and ground down offending tree roots, and replaced the concrete as needed. This program has been a little more active in Community Development areas where significant funding is available. Occasionally, entire trees must be removed.

The following basically summarizes Cranford's sidewalk policy:

1. Identify sidewalks that have been uplifted more than three-quarters of an inch.
2. Determine whether a Township shade tree is believed to be responsible for the sidewalk lifting.
3. Determine the course of action to abate the situation. Typical solutions include:
 - a. Remove the offending slab or slabs – shave the offending roots – pour a new slab or slabs.
 - b. If the existing slab is in good condition, raise the offending slab – shave the offending roots – reset the existing slab in stone dust.
 - c. Plank the existing sidewalk over the offending roots (this method is frequently used with bluestone slabs).
 - d. Remove the offending slab or slabs – offset the replacement sidewalk to avoid the offending roots to minimize damage to the trees.
 - e. Remove the tree and replace the sidewalk per Township specifications.

Note: The 2019 Windshield Tree Survey identified 76 trees in need of removal and 22 uplifted sidewalk needing attention.

Permanent Objective

- To proactively identify and promptly address hazardous trees and hazardous tree conditions.

Existing Goals and Programs to be Continued

(Every Year Goals)

- Maintain present staffing and budgeting.
- Provide emergency response training and hazard tree identification training to all applicable employees conduct an annual Windshield Tree Survey of all trees within public right-of-way.
- Continue to budget for Dukes VapoRooter to control the spread of tree roots in sewer mains.
- Promote the use of Root-X and other aquatic herbicides to control the spread of tree roots in sewer laterals.
- Assist property owners in managing surface roots.
- Annually budget for contractual replacement of uplifted sidewalks.

- Maintain an annual hazardous tree survey of all parks, public properties and Board of Education facilities.
- Conduct an annual assessment of at least 1/10th of township sidewalks and take appropriate action.
- Budget for the purchase of a small maneuverable stump grinder to shave down surface roots and roots uplifting sidewalks.
- Conduct a hazardous sidewalk survey. This might be accomplished as an Eagle Scout Project or with summer interns.
- Send at least one member or a Department of Public Works employee to the Hazardous Tree Identification Course held at Rutgers.

C. Tree Planting

Cranford has a no-net-loss planting goal, meaning that our goal is to plant the same or more trees than we remove. An ongoing problem for Department of Public Works is that many of the residents living on property with an identified space for a new tree planting will not accept a new tree. This has created an extensive list of potential planting sites, but sites of little actual value. Up to this point, the Township has not imposed it's right on the property owners to plant new trees within right-of-way against their will. Cranford's diversity goal is that no species should exceed 10% of the entire street tree population. We will have to wait for the results of our next inventory project to see if we are making progress toward our goal.

Although the statistics show that there is a planting deficiency, the 2019 Windshield Tree Survey identified only 117 conspicuous tree planting vacancies.

Permanent Goal

- To maintain a fully stocked Urban Forest.

Existing Programs and Goals to be Continued

(Every Year Goals)

- Maintain existing tree planting budget.
- Explore alternative grant and funding options.
- Celebrate Arbor Day and maintain Tree City USA status.
- Continue participation in the Greening Union County Tree Planting Program.

New Long-Term Goals

- Publicize and promote Township tree planting and removal policy and promote the right tree/right place to encourage property owner's acceptance of a replacement tree.
- Do not plant Ash or Thunder Cloud Plum due to insect and disease problems.
- Accelerate Flowering Pear replacement in the downtown areas.
- Do not plant Zelkovas, Norway or Red Maples, or Oaks until these species fall below 10% of the total tree population.

D. Tree Maintenance and Care

The Public Works Department is contemplating revising its present computerized service request log in and tracking system. All requests for services are recorded in the computer and remain there until they are inspected. Upon inspection and recommendation for a course of action, the Public Works secretary enters the data back into the computer which then becomes a prioritized work order by category, i.e. Class II, III, or IV pruning, tree removal, request for planting, stump removal, tree surgery, cabling, etc. The computer program also recognizes street names and assigns the work to be designated management zone to further organize scheduled work and minimize travel time. A monthly report of completed work orders is submitted to the Engineering Department for updating of the tree inventory. It is hoped that eventually our customer service data base can be directly integrated into the tree inventory.

It is the continued desire to create a 10-year preventative pruning cycle on all trees within the public right-of-way or on public property. In-house crews rarely have the opportunity of performing preventive maintenance. A scheduled pruning program will increase public safety, minimize the need for emergency response and increase the health and vigor of the entire tree population. Recent storms have greatly set us back in this area.

Historically, the Public Works Department has only been able to prune its most hazardous trees due to time constraints. Rarely is there time to prune trees on bike path or in parks. Knowing that we have a population of 5,915 trees to be pruned on a 10-year cycle, we should be pruning at least 600 trees per year (presently over a 500 tree deficit). Assuming that the average cost to prune a tree is \$100.00, we need to budget a minimum of \$50,000.00 per year to begin to implement such a program. This is an impossible figure in consideration of present budget constraints.

The 2019 Windshield Tree Survey identified the following maintenance issues:

- 76 tree removals
- 33 raised sidewalks
- 29 stump removals
- 37 class II pruning locations
- 24 class III pruning locations
- 85 class IV pruning locations

This is an improvement over the 2013 Windshield Tree Survey.

Recent storms with accompanying power outages indelibly remind us of the ongoing conflict between trees and overhead wires. The following summarizes the Township's policy on emergency and storm response:

- Annually a windshield survey is conducted on Township right-of-way to identify trees in need of pruning and removal. This has been done in Cranford for over 10 years. By pro-actively addressing these issues with in-house staff and outside contractors we have minimized storm-related tree failure and reduced overtime.

- Another significant step the Township has taken in **reducing tree-related power outages** is the selection and utilization of compact tree replacement species for locations beneath overhead wires. This has been on-going for approximately 20 years. Proactive tree replacement occurs during the Township's road reconstruction projects by removing and replacing over-mature trees with compact trees beneath overhead wires.
- The major contributing factor in the recent power outages actually came from **privately owned trees** – not from Township trees. In the past, where required, the Township has put private tree owners on notice to remove potentially hazardous trees as we become aware of them. In the future, we may increase this noticing procedure.
- To enable any tree to be deemed "hazardous" there must be both a tree defect and a potential "target". Tree defects include crown dieback, excessive deadwood, lean undermining, internal decay, decline due to insects, drought stress, lightning strikes, storm damage, grade changes or construction injury. Any structure, vehicle, person, or personal property within striking distance of a tree is a potential "target". There is always a risk when a tree is within striking distance of a "target", however, we attempt to manage these risks by regular inspection and follow-up with remedial action.
- Private tree owners should have their trees inspected regularly by a New Jersey Licensed Tree Expert or International Society of Arboriculture Certified Arborist. Only full-service tree companies employing NJ Licensed Tree Experts or ISA Certified Arborists should be used when preserving and maintaining trees. Other companies specializing in tree removal services are usually more cost effective when it has been determined that a tree removal is necessary. Generally speaking, all trees require some form of maintenance at least once within a 7-10-year period. Tree removal and maintenance is usually 10-20% less expensive during the winter months (December through March) when tree companies are usually less busy.

Permanent Objective

- Provide prompt and reliable response to all service requests for tree maintenance.

Existing Programs and Goals to be Continued

(Every Year Goals)

- Continue progress in working toward a 10-year preventative pruning cycle.

New Long-Term Goals

- Request a minimum annual budget of capable of contractually pruning 500 trees.
- Apply for CSIP funding to supplement municipal efforts.
- Monitor major water systems and de-sag as necessary in anticipation of the next storm.

2020-2024 Time Line

Existing Programs to be continued:

- Maintain i-tree inventory annually to be deleting trees removed and adding trees planted.
- Conduct an annual windshield tree survey of public right-of-way.
- Maintain Dukes VapoRooter treatment program of Sanitary Sewers.
- Repair and replace sidewalk uplifted by township tree roots as necessary.
- Continue tree replacement program.
- Attempt to prune as many trees in-house annually as possible with a 10-year cycles as a goal.
- Provide appropriate tree related training for DPW staff and Environmental Commission members.
- Accrue at least 8 CEUs by two individuals per year.
- File an Annual Accomplishment Report.
- Observe Arbor Day and Maintain Tree City, USA status.
- Remove all trees within 6 months of designation by in-house or contractual means and prune all trees noted for pruning in the Windshield Tree Survey within one year of designation.

New Programs to be implemented:

2020:

- Update Township Website on Tree Related information and emerging insect and disease problems.
- Revise Township Ordinances to recognize dissolution of Shade Tree Committee and enhanced duties of Environmental Commission.
- Distribute 2020-2024 Community Forestry Management Plan to Township Planner and Engineering Consultant.
- Provide an orientation session with the Environmental Commission to explain their enhanced duties.
- Increase tree planting budget to provide for the contractual replacement of at least 60 trees per year (\$9,000 with Greening Union County Match).
- Develop Tree Planting Specifications and consider contractual planting rather than planting in-house.
- Avoid planting species that presently exceed 10% of the entire tree planting population, i.e. Pear, Maple, Zelkova, and Oak and avoid planting problematic species such as Ash and Flowering Plum (Black knot)
- Apply for applicable CSIP Grants.
- Have at least one member of the Environmental Commission receive Core Training.
- Monitor tree population for emerging insect and disease problems.
- Keep an eye on major drainage systems and de-sag as necessary.

2021:

- Maintain existing programs.
- Publish at least one tree related news release.
- Provide adequate budgeting to contract out a significant amount of tree pruning (at least 100 trees/year = \$30,000).
- Provide adequate budgeting to contractually plant at least 60 trees per year (\$9,000).
- Conduct a sidewalk safety survey using volunteers or Eagle Scout candidates.
- Apply for Applicable CSIP Grants.
- Provide Hazardous Tree Identification Training for one employee and one Environmental Commission member.

2022:

- Maintain existing programs.
- Pursue unfulfilled goals.
- Apply for applicable CSIP Grants.
- Review equipment needs and propose capital budget replacements as needed.
- Consider instituting a Tree Protection Ordinance.
- Publish at least one tree related news release.

2023:

- Maintain existing programs.
- Pursue unfulfilled goals.
- Publish at least one tree related news release.

2024:

- Apply for a Green Communities Grant to rewrite the Community Forestry Management Plan.
- Maintain existing programs.
- Publish at least one tree related news release.

Section 10 - Community Stewardship Incentive Program (5 years)

CSIP #1 Training

See Section 6 for more details on training needs, page 16. Currently this is funded from the operational budget.

CSIP #2 Community Forestry Ordinance Establishment

Cranford currently does not regulate the removal of trees on private property except when land development is involved. It is unlikely that Cranford would pursue CSIP funding in this area as Legal Consulting is addressed through the operational budget.

CSIP #3 Public Education and Awareness

See Section 7 for more details on this subject, page 17.

CSIP #4 Arbor Day Activities

This area is covered by both the Environmental Commission and the DPW. *See Section 7 for more information on Cranford's current Arbor Day celebration, page 17.*

CSIP #5 Tree Inventory

Cranford's original tree inventory was conducted in 1999 and redone in 2019. A CSIP grant application to re-inventory Cranford's urban forest will be applied for in 2028.

CSIP #6 Tree Hazard Assessment Plan

The goal of this plan is to have at least one member of Cranford's Environmental Commission or Department of Public Works attend the Hazardous Tree Identification course offered at Rutgers University each year. Members of the Commission as well as members of Cranford's Department of Public Works would benefit from the knowledge provided in that course. Application of the knowledge gained would make Cranford safer and less susceptible to storm damage. Training in this area is covered in the DPW Budget. *See Section 6 for more details, page 16.*

CSIP #7 Storm Damage Assessments

Even during the 2011 snow storm and Hurricane Sandy, Cranford has been fortunate to have avoided the extent of tree damage sustained by surrounding municipalities. The existing Emergency and Storm response is taken care of by Cranford's in-house labor or assigned to an outside contractor on an emergency (no bid) basis. This is budgeted for in the DPW Budget.

CSIP #8 Tree Maintenance and Removals

Street tree maintenance continues to be the biggest challenge for Cranford especially in the light of the recent storms. A CSIP grant intended to provide alternate funding to supplement the annual tree maintenance expenditure would be appreciated. *See Section 9 on page 24.*

CSIP #9 Insect and Disease Management

Integrated Pest Management education for the Environmental Commission employees is funded by the DPW Operational Budget. With Emerald Ash Borer and Bacterial leaf Scorch and Spotted Lantern Fly at our door-step, what next?

CSIP #10 Wildfire Protection

Sources of wildfire in Cranford would be along Interstate the Garden State Parkway, Township Parkland, or along railroad lines. Cranford has an excellent fire department that has this area adequately covered.

CSIP #11 Tree Planting

There are many locations for new street tree planting in Cranford, due to storm damage and natural attrition over the past few years. This is an area where a CSIP Grant would be applied for. *See discussion on page 23.*

CSIP #12 Tree Recycling

The Cranford Department of Public Works recycles woodchips from its in-house pruning and removal programs. It has a TDMA and has utilized FEMA funding for the disposal of wood waste in catastrophic storms. Not likely to need CSIP funding in this area.

CSIP #13 Sidewalk Maintenance Program

Cranford has a sidewalk repair program in place funded in the DPW Capital Budget.

CSIP #14 Storm Water Management

CSIP funding could possibly be used by Cranford's Department of Public Works to improve the Township's leaf collection and catch basin cleaning equipment and de-snagging of water ways.

CSIP #15 Other

CSIP funding could be utilized to hire a grants person to explore regionalization of services or alternate maintenance funding sources.

ADDENDUM SUMMARY

1. The following policies of the Township of Cranford are included for reference:
 - a. TREE REMOVAL POLICY
 - b. TREE PLANTING AND MAINTENANCE POLICY
 - c. NUISANCE TREE POLICY
2. Tree ordinance, Chapter 215 (To be Amended)
3. Environmental Commission, Chapter 6, Part 4, Article VII (To be Amended)
4. Resolution NO. 96-158, Integrated Pest Management
5. Copy of the International Society of Arboriculture (ISA) Individual Tree Risk Assessment Flow Chart
6. Copy of Township of Cranford Fall 2019 Tree Windshield Survey prioritizing the Identified Tree Maintenance. *See attachment.*
7. Summary of Cranford's Street Tree Inventory

Township of Cranford
Tree Removal Policy

The following criteria are used in making the tree removal determinations:

1. The tree is dead.
2. 20-30% of the tree crown has declined and it is aesthetically unattractive.
3. The tree has structural deficiencies.
4. The tree has been repeatedly cut back by Power and Light line clearance crew, rendering it unattractive.
5. Sidewalk, driveway apron, or curbing improvements necessitate the removal of an excessive number of roots, thus making the tree unstable or bringing about its premature demise.
6. The presence of the tree in some way compromises Public health safety or general welfare.

A notification letter is sent out to each resident adjacent to a tree designated for removal informing them that the tree will be removed over the next few months and that they should call the Department of Public Works if they are interested in having a replacement tree installed.

The actual number of trees marked for removal fluctuates from year to year, but usually is between 1-2% of the total tree population. The presence of environmental stress such as a severe winter or drought or an insect or disease infestation can significantly increase tree mortality.

The Cranford Environmental Commission recognizes A Photographic Guide to the Evaluation of Hazard Trees in Urban Area published the International Society of Arboriculture as its official standard for identifying structural deficiencies in street trees.

Township of Cranford

Tree Planting and Maintaining Policy

Cranford has adopted the following policy pertaining to:

- A. Tree Planting:
1. That where possible, tree removals will be replaced.
 2. That it is recognized that promoting species diversity is a control for epidemics of insects and disease and that monoculture planting be avoided.
 3. That such plant site constraints as planting belt width, overhead and underground utilities, sidewalks, curbs soil and moisture conditions, setbacks, traffic visibility, spatial arrangement, signage, awnings, etc., be considered in all planting selections and that the following standards be followed:
 - a. No planting within 35' of a stop sign
 - b. No planting within 25' of an intersection
 - c. No planting within 50' of another tree
 - d. No planting within 10' of an underground utility.
 - e. No planting within 12' of a driveway apron or utility pole.
 - f. Aggressive species exceeding 25' in height at maturity shall not be planted under above ground utilities.
 - g. Trees for New Jersey Streets published by N.J. Shade Tree Federation shall be the standard for determining species suitability for planting belt widths.
 4. That wherever possible, replacement species shall be selected to maintain the existing character of the neighborhood.
 5. That all plantings conform to The American Association of Nurserymen's Planting Standards.
 6. That wherever possible consideration be given to residents' preference in the species selection and planting location of replacement trees.
 7. That property owners wishing to plant a street tree in municipal right-of-way at their own expense, must obtain prior written permission from the Tree Advisory Board and comply with the above standards.
- B. Tree Maintenance:
1. That residents be provided with watering instructions for new plantings during the first year.
 2. That life-threatening insect and disease problems be controlled as necessary.
 3. That biological or non-toxic pest control is used wherever possible.
 4. That residential, commercial, and municipal historic and specimen trees be preserved wherever possible.
 5. That an inventory of Township street trees be maintained for management purposes.
 6. That work is scheduled by priority.
 - a. **Top Priority** shall include the following:
 - i. The removal of potentially dangerous dead dying, diseased, or structurally weak trees or topping out some to make them safe.
 - ii. The removal of large, dangerous, broken, and/or hanging branches.

- iii. The removal of low branches, which create a visibility, traffic, or pedestrian hazard.
 - iv. The removal of hazardous root conditions.
 - b. **Medium Priority** shall include the following:
 - i. The pruning and removal of deadwood conditions.
 - ii. Spraying for insect and disease problems.
 - iii. The removal of sticks and stumps.
 - iv. The pruning of branches interfering with streetlights, above ground utilities, structures, etc...
 - c. **Low Priority** shall include the following:
 - i. Pruning for aesthetic reasons.
 - ii. Non-safety related tree removals, pruning and stump removals, etc...
7. That when a resident specifically request a replacement tree and the only possible planting location is the exact location of the previously removed tree, the stump shall be ground out of the maximum possible depth, that all the resulting woodchips be removed and that the resulting hole be filled with topsoil prior to attempting to plant the replacement tree.

Township of Cranford

Nuisance Tree Policy

Trees are part of the infrastructure of our public right-of-way. Similar to asphalt paving, curbing, or storm or sanitation lines, they have associated maintenance costs and ultimately a useful life span.

Unlike other items of infrastructure, trees are alive. Sometimes, interference can occur between trees and other infrastructure components, especially if these components have structural or design deficiencies.

Subsequent to frost heaving, tree roots will displace sidewalk slabs and curbing. Tree roots will intrude leaking sewer laterals. Frequently, the low oxygen levels in high water tables or compacted soils force tree roots to grow at or near the soil surface. In such situations, trees could be considered a nuisance.

Upon receiving written authorization from the Cranford Environmental Commission, the owner may proceed with the tree removal pursuant to the following conditions:

1. The property owner will be responsible for the full cost of tree, stump, and debris removal.
2. The Township of Cranford is to be held harmless from any damage that could possibly be sustained by the tree removal.
3. Tree removal must be conducted by a fully insured Tree Removal Contractor. Certification of Insurance must be attached to a Hold Harmless Statement.
4. The Tree Removal Contractor shall comply with all state A.N.S.I. line clearance standards.
5. The Tree Removal Contractor shall notify the Cranford Police Department prior to the temporary closing of any Township street required for the safe removal of a Township tree.
6. The property owner shall compensate the township for the current market value of a replacement tree. The species, size, and location shall be determined by the Engineering Department.



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Township of Cranford, NJ - Archive 2012-11-20

Chapter 215. TREES

[HISTORY: Adopted by the Township Committee of the Township of Cranford 4-26-1988 as Ord. No. 88-17. Amendments noted where applicable.]

GENERAL REFERENCES

Land development — See Ch. 136.

§ 215-1. Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

PARK TREES

Trees or shrubs in township public parks or other open spaces having individual names and all areas owned by the township or to which the public has free access as a park.

STREET TREE

Trees and shrubs on land lying within rights-of-way or easement lines on either side of all streets, avenues or easements.

§ 215-2. Tree Advisory Board established; membership; purpose.

[Amended 10-5-1993 by Ord. No. 93-59]

A. There is hereby created and established a Tree Advisory Board of the Township of Cranford, which shall consist of seven members. One member shall be the Director of Recreation and Parks. Six members shall be citizens and residents of the township appointed by the Mayor, two of whom shall also be members of the Horticultural Committee and one of whom shall be an employee of the township in the Public Works Department.

B. The purpose of the Tree Advisory Board is to provide advice and suggestions for regulations for the protection of trees and shrubbery upon public lands, easements and rights-of-way in the Township of Cranford and, upon request of the owner, upon private property.

§ 215-3. Terms of office of Board members.

The term of office of the seven members to be appointed by the Mayor will be three years. In the event that a vacancy shall occur during the term of any member, this successor shall be appointed for the unexpired portion of the term. The appointment of members to the Tree Advisory Board shall initially be as follows: two members for one-year terms, two members for two-year terms and three members for three-year terms. Thereafter, appointments will be for three-year terms and terms shall expire on December 31.

§ 215-4. Compensation of Board members.

Members of the Board shall serve without compensation.

§ 215-5. Duties and responsibilities of Board.

[Amended 10-5-1993 by Ord. No. 93-59] It shall be the responsibility of the Board to study, investigate and develop and/or update annually and administer a written plan for the care, preservation, pruning, removal or disposition of trees in parks, along streets and other public areas. Such plan shall be updated and presented annually to the Township Committee and, upon its acceptance and approval, shall constitute the Official Comprehensive Tree Plan for the Township Committee. It shall consider, investigate, make findings and report recommendations upon any special matter or question coming within the scope of its work. The Board shall review requests for removal of township trees and provide its recommendations to the Director of Public Works. Upon request of the owner, the Board may provide advice regarding care, removal, trimming or other questions regarding trees on private property.

§ 215-6. Operation of Board.

The Board shall choose its own officers, make its own rules and regulations and keep a journal of its proceedings. A majority of the members shall be a quorum for the transaction of business.

§ 215-7. Spacing and location.

The spacing and location of street trees will be in accordance with the Land Development Ordinance. *Editor's Note: See Ch. 136, Land Development.*

§ 215-8. Distance from street corners and fireplugs.

No street tree shall be planted closer than 25 feet to any street corner, measured from the point of the nearest intersecting curb or curbline. No street tree shall be planted closer than 10 feet to any fireplug.

§ 215-9. Planting near sidewalks.

The Tree Advisory Board will encourage planting of new trees on private property four to five feet away from the sidewalk to prevent damage to the sidewalk.

§ 215-10. Public tree care.

- A. The township shall have the right to plant, prune, maintain and remove trees, plants and shrubs within all public lands, easements and rights-of-way as may be necessary to ensure public safety or to preserve or enhance the symmetry and beauty of such public grounds.
- B. No person shall be allowed to damage, cut, carve, abuse or harm any public tree or injure the bark.
- C. The Township Tree Advisory Board may recommend the removal of any tree or part thereof which is in an unsafe condition or which, by reason of its nature, is injurious to sewers, electric power lines, gaslines, waterlines or other public improvements or is affected with any injurious fungus, insect or other pest. This section does not prohibit the planting of street trees by adjacent property owners, provided that the selection and location of said trees has received approval from the Township Engineer and is in accordance with §§ 215-7 through 215-9 of this chapter and are applicable to the Land Development Ordinance. *Editor's Note: See Ch. 136, Land Development.*

§ 215-11. Tree topping.

It shall be unlawful as a normal practice for any person, firm or township department to top any street tree, park tree or other tree on public property. "Topping" is defined as the severe cutting back of limbs to stubs larger than three-inches in diameter within the tree's crown to such a degree so as to remove the normal canopy and disfigure the trees. Trees severely damaged by storms or other causes or certain trees under utility wires or other obstructions where other pruning practices are impractical are exempted from this chapter.

§ 215-12. Pruning; corner clearance.

Every owner of any tree or shrub overhanging any street or right-of-way within the township shall prune the branches so that such branches shall not obstruct the light from any street lamp or obstruct the view of any street intersection and so that there shall be a clear space of eight feet above the surface of the street or sidewalk. Said owners shall remove all dead, diseased or dangerous trees or broken or decayed limbs which constitute a menace to the safety of the public. Any public utility or its agents may, upon receiving (written) permission from the Tree Advisory Board/Engineering Department at least 72 hours prior to the start of work, prune or remove trees for line clearance of utility wires in nonemergency situations pursuant to a line-clearance program.

§ 215-13. Public utilities may perform emergency work.

Any public utility or its agents may undertake emergency tree work to restore electrical service or spotwork to prevent interruption of electrical, telephone, telegraph, cable television or other wire service. In such an event, the utility will notify the Tree Advisory

Board/Engineering Department of said work within three business days of its beginning.

§ 215-14. Removal of stumps.

All stumps of street and park trees shall be removed below the surface of the ground.

§ 215-15. Excavation permit required.

No person shall do any excavating within four feet of any street or park tree on public property without a permit.

§ 215-16. Arborist's license; fees.

It shall be unlawful for any person or firm to engage in the business or occupation of pruning, treating or removing street or park trees within the township without first applying for and procuring a license. The license fee shall be \$25 annually in advance; provided, however, that no license shall be required of any public service company or township contractor or employee doing such work in the pursuit of their public service endeavors. Before any license shall be issued, each applicant shall first file evidence of possession of liability insurance in the minimum amounts of \$50,000 for bodily injury and \$100,000 property damage, indemnifying the township or any person injured or damaged resulting from the pursuit of such endeavors as herein described.

§ 215-17. Review of Board's actions.

The Township Committee shall have the right to review the conduct, acts and decisions of the Township Tree Advisory Board. Any person may appeal from any ruling or order of the Township Tree Advisory Board to the Township Committee, who may hear the matter and make final decision.

§ 215-18. Trees of historic value; endangered species; trees unique to township.

The Tree Advisory Board shall have the responsibility to locate trees of historic value, endangered species and those unique to Cranford. An inventory of public trees will be developed of same and posted in the Engineering Department. Property owners shall be encouraged to nominate trees to be included in the list, and, with consent of any owners, the Tree Advisory Board may designate such trees by marker or device.

Environmental Commission

Mission Statement

The Environmental Commission has the power to study and make recommendations concerning open space preservation, water resources management, air pollution control, solid waste management, noise control, soil and landscape protection, environmental appearance, marine resources, and protection of flora and fauna.

Additional information regarding the powers and duties of the Environmental Commission is available by accessing of the Code of the Township of Cranford (Chapter 6).

About the Cranford Environmental Commission

- The Cranford Environmental Commission is a statutory board of seven regular Cranford resident members. One regular member is designated as the Chair. One of the regular members is also a Planning Board member. The Environmental Commission will study and make recommendations concerning open space preservation, water resources management, noise control, soil and landscape protection, environmental appearance, marine resources and protection of flora and fauna. The Commission's charge is to promote the conservation, protection, development, or use of all Cranford's natural and water resources. By:
- Planning local conservation programs and informing and recommending these programs to the public and the Township Committee;
- Implementing conservation programs authorized by the Township Committee;
- Compiling an index of all public and privately-owned open spaces and recommend their uses to the Planning Board.
- Making recommendations on all development plans before the Planning Board as they affect Cranford's natural and water resources and environment with a focus on conserving and protecting the use of Cranford's natural and water resources and maintaining or enhancing the environment;
- Recommending plans and programs to the Planning Board for inclusion in the Master Plan;
- Advertising, preparing, and distributing materials necessary to implement the Commission's activities;
- Coordinating community conservation matters and as the Township liaison for conservation needs with regional, state, and federal agencies;
- Acquiring real and personal property to administer, maintain, improve, limit future use of, or conserve and properly utilize open spaces and other land or water areas in the Township; and
- Producing an annual report of Commission activities.

Environmental Commission Members

Name	Title
Nelson Dittmar	Chairperson
Dave Coughlin	
Steve Jandoli	
Gwen D'Amico	
Carol Berns	
Donald Jones	
Ronald Margulis	
Zach McCue	
Daniel J. Aschenbach	
Michael Bond	
Ann Darby	
Frank Klapinski	
William King	
Ed O'Malley	
Patricia Pavlak	
Ana Pinto	
David Pringle	
Lawrence Russo	
Mary Sudiak	
Mary O'Connor	Commissioner
Matthew Lubin	Fire Prevention Official
Monika Koscova-Jencik, REHS, MPH, CMR	Health Officer Sanitarian
Kathleen Murray	Representative to Planning Board
Maser	Township Engineer
Richard Gorski	Associate Committee Member

Chapter 6. Administration of Government

Part 4. Commissions, Authorities, and Agencies

Article VII. Environmental Commission

[Added 5-26-1970 by Ord. No. 70-9]

6-17. Establishment.

The Township of Cranford Environmental Commission is hereby established pursuant to Chapter 245 of the Laws of 1968 (N.J.S.A. 40:56A-1 TO 40:56A-5).

6-18. Composition; terms.

- A. The Commission shall consist of seven members appointed by the Township Committee, one of whom shall also be a member of the Planning Board, and all of whom shall be residents of the Township of Cranford.
- B. The members shall serve without compensation except as hereinafter provided.
- C. The Township Committee shall designate one of the members to serve as Chairperson and presiding officer of the Commission.
- D. The terms of office of the first Commissioners shall be for one, two, or three years, to be designated by the Township Committee in making their appointments, and their successors shall be appointed for terms of three years and until the appointment and qualification of their successors. The first members of the Commission shall be appointed for the following terms:
 - a. Two members of the term expiring December 31, 1971.
 - b. Two members of the term expiring December 31, 1972.
 - c. Two members of the term expiring December 31, 1973.
- E. The Township Committee may remove any member of the Commission for cause, on written charges served upon the member and after a hearing thereon at which the member shall be entitled to be heard in person or by counsel.
- F. A vacancy on the Commission occurring otherwise than by expiration of term shall be filled for the unexpired term in the same manner as an original appointment.

6-19. Powers of Commissioners.

Said Commission shall have the following powers:

- A. To promote the conservation and development of all the natural resources of the Township of Cranford, including the Rahway River.
- B. To plan, inform and recommend, to the Township Committee and to the public, local conservation programs.
- C. To implement conservation programs as authorized by the Township Committee.
- D. To compile and keep an index of all open areas, publicly or privately owned, including open marshlands, swamps, and other wetlands.

- E. To conduct research into the possible use of the open areas of the Township of Cranford.
- F. To recommend to the Planning Board plans and programs for inclusion in a municipal master plan and the development and use of such areas.
- G. To advertise, prepare, print and distribute books, maps, charts, plans and pamphlets which, in its judgment, it deems necessary for its purposes.
- H. To act as the coordinating agency of the community on conservation matters and a liaison between local conservation needs and regional, state and federal agencies ministering to those in need.

6-20. Acquisition of property.

The Environmental Commission may, subject to the approval of the Township Committee, acquire property, both real and personal, in the name of the Township by gift, purchase, grant, bequest, devise or lease for any of its purposes and shall administer the same for such purposes subject to the terms of the conveyance or gift. Such an acquisition may be to acquire the fee or any lesser interest, development right, easement (including conservation easement), covenant or other contractual right (including a conveyance on conditions or with limitations or reversions) as may be necessary to acquire, maintain, improve, limit the future use or otherwise conserve and properly utilize open spaces and other land and water areas in the Township.

6-21. Records and annual report.

Said Commission shall keep recorder of its meetings and activities and shall make an annual report on or before the first day of February and submit the same to the Township Committee of the Township of Cranford, which report shall be comprehensive and detailed, covering operations, receipts, disbursements and expenditures for the full year.

6-22. Appropriations.

The Township Committee of the Township of Cranford may appropriate funds for the expenses incurred by the Environmental Commission. Any salaries for appointed clerks or other employees of the Environmental Commission shall be fixed and determined by the Township.

TOWNSHIP OF CRANFORD
CRANFORD, NEW JERSEY

R E S O L U T I O N

No. 96-158

WHEREAS, it is the desire of the Governing Body of the Township of Cranford to promote matters which benefit citizen's health, welfare, comfort and safety; and

WHEREAS, Integrated Pest Management is the coordinated use of pest and environmental information and all available pest control methods (sanitation, mechanical, biological and chemical) to prevent unacceptable levels of pest damage by the most economical means with the least possible hazard to people, property and the environment; and


WHEREAS, Integrated Pest Management has been investigated by the Cranford Environmental Commission and they recommend the proposed Integrated Pest Management Policy; and

WHEREAS, the Township of Cranford does maintain public properties at which pest management issues are an ongoing concern;

NOW, THEREFORE, BE IT RESOLVED that the Governing Body of the Township of Cranford do hereby adopt the Policy of Integrated Pest Management as the pest control strategy to be employed in the maintenance of its facilities; and

BE IT FURTHER RESOLVED, that the Governing Body of the Township of Cranford encourages all its citizens to make every effort to participate in this endeavor on their own property.

Certified to be a true copy of a Resolution
Adopted by the Township Committee of the
Township of Cranford at a Meeting held
May 14, 1996.


Rosalie Hallenbrecht
Deputy Township Clerk

Dated: 4/17/02

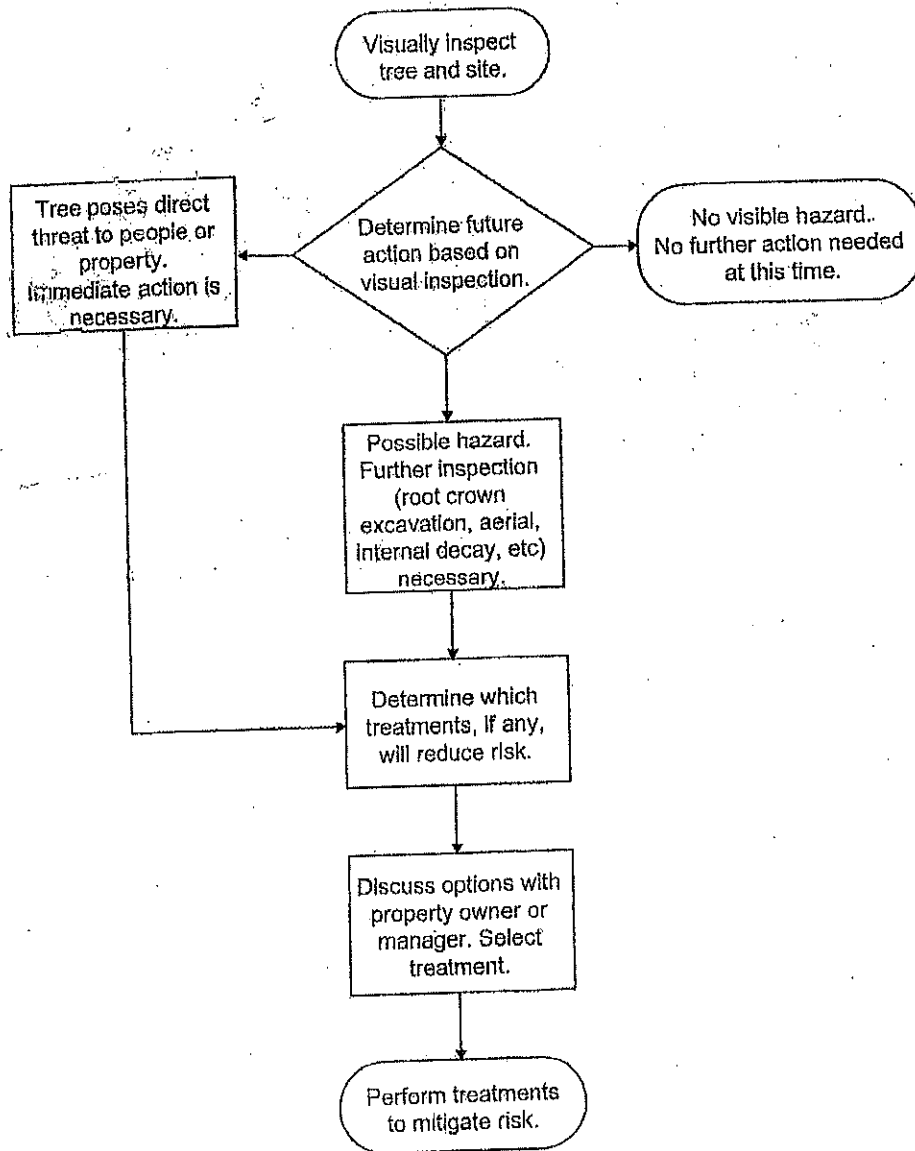
INTEGRATED PEST MANAGEMENT POLICY

1. What is Integrated Pest Management (IPM):
IPM is the coordinated use of pest and environmental information with available pest control methods (sanitation, mechanical, biological, chemical) to prevent unacceptable levels of pest damage by the most economical means with the least possible hazard to people, property, and the environment. When it is deemed necessary to use chemical means to control a pest problem, the least hazardous material will be used.
2. Definitions
Pest: Pests are (a) any insect, rodent, nematode, fungus, weed, or (b) any other form of terrestrial or aquatic plant or animal life which interfere with the purposes of the site.
3. Purpose:
Strategies for managing pest population will be influenced by whether the pest species poses a threat to people, property, or the environment.

Pests will be managed to:
 - Prevent loss of facility structure and property.
 - Prevent outbreaks of the pest from spreading to other facilities or other plant or animal populations outside the site.
 - Conserve threatened, endangered, or unique plant or animal specimens or communities.
 - Prevent a human health hazard as defined by the Health Officer or to protect against a significant threat to employees and public safety.
4. Procedure:
 - A. Facility Surveys
 - B. Mechanical modifications to minimize pest problems
 - C. Monitoring
 - D. Decision-making on acceptable levels of pest activity
 - E. Control Strategies
 1. Physical Controls
 2. Biological Controls
 3. Chemical Controls
 - F. Record Keeping – track occurrence of pest problems, effectiveness of control strategies, and amount of pesticide use.
5. Implementation Strategies:
 - A. Review of Pest Control Contracts
 - B. Current practices evaluation
 - C. Education programs for staff
 - D. Policy Development



Individual Tree Risk Assessment Flow Chart



Adapted from Matheny and Clark, 2007

Spring/Summer
Windshield Tree Survey
Of
Cranford Township
2019

Prepared by
John D. Linson
NJ Licensed Tree Expert #198
International Society of Arboriculture Approved Arborist NJ-0806A
The Shade Tree Department, LLC
PO Box 6089
West Orange, NJ 07052
973-766-2143
theshadetreedepartment@live.com

Type	Quantity	i-tree
Class II Prune (C2P)	37	669
Class III Prune (C3P)	24	
Class IV Branch Elevation (C4P)	85	
Tree Removal	76	12
Stump Removal	29	115
Sidewalk Issues	33	793
Private Property Issues	16	
Open Space and Parks Clean Up	15	
Special Notes for DPW	8	
Tree Guy Removal	10	
Tree Planting Locations	117	

Class II Prune

ADDRESS	DIAMETER/SPECIES	COMMENTS
35 Elizabeth Avenue	48" Pin Oak	C2P
725 Linden Place	30" Linden	Crown reduction pruning by 25%, C2P
100 Birchwood Avenue on Bloomingdale Avenue	36" Pin Oak	C2P
268 Bloomingdale Avenue	30" Pin Oak	Cut back over roof, C2P
Albany Avenue at Bloomingdale Avenue School	36" Red Oak	C2P
17 Roselle Avenue	38" Pin Oak	Walking sticks, C2P
37 Roselle Avenue	33" Sweet Gum	C2P
5 Bloomingdale Avenue	26" Red Maple	Cut back over extended branches, C2P
30 Wordsworth Terrace on North Union Avenue	36" Pin Oak	C2P
8 Oak Lane	28" Pin Oak	C2P
10 Oak Lane	33" Pin Oak	C2P
112 Herning Avenue	36" White Oak	Position 1, C2P
112 Herning Avenue	36" Red Oak	Position 2, C2P
44 Brookdale Place	31" White Oak	C2P
Sailer Street	34" Pin Oak	Dead end, C2P
16(?) Wade Avenue on corner of Sailer Street	30" Red Maple	C2P
29 Adams Avenue on Sailer Street	60" Pin Oak	C2P
1 Arlington Road on Cranford Avenue	24" Pin Oak	Red house, position 1, C2P
1 Arlington Road on Cranford Avenue	30" Pin Oak	Red house, position 2, C2P
20 Locust Avenue	33" Pin Oak	Crown reduction pruning, deadwood, C2P
16 Wade Avenue	26" Red Maple	Crown reduction pruning, especially on house side, C2P
34 Ann Street	35" Willow Oak	Cut back over-extended branches from over the house. Remove obvious deadwood. Tree is healthy. Minor decline following sidewalk replacement, C2P
499 Casino Avenue	30" Red Oak	C2P
123 South Union Avenue on William Street (white fence)	33" Red Maple	Position 1, C2P
123 South Union Avenue on William Street (white fence)	33" Red Maple	Position 2, C2P
221 Stoughton Avenue	Multi-stem Black Gum	ASAP, street is blocked, C2P
2 Quine Street	(2) 30" Pin Oak	C2P
230 Cristiani Street	33" Pin Oak	C2P
230 Cristiani Street	26" Pin Oak	C2P
230 Cristiani Street	32" Pin Oak	C2P

706 Hory Street	Multi-stem Redbud	C2P
High Street at First Baptist Church	44" Pin Oak	C2P
Corner of Moen Avenue and Commerce Drive	(4) 22" Pin Oak	C2P

Class III Safety Prune

ADDRESS	DIAMETER/SPECIES	COMMENTS
105 Orange Avenue	22" Norway Maple	C3P
536 Union Avenue	24" Oak	C3P
Opposite 18 Windsor Place	18"x16" Silver Maple	C3P
Windsor Place	Several Maples	On school property, C3P
202 Arbor Street	14" Zelkova	C3P
Oak Lane at bend	(2) large Oaks, 32" and 36"	Green fence, C3P
8 Brookdale Road	20" Norway Maple	Hangover, C3P
108 Bloomingdale Avenue on Sailer Street	26" Red Maple	C3P
2 Van Buren Avenue	36" Pin Oak	C3P
16 West Holly Street	30" Pin Oak	C3P
14 West Holly Street	33" Pin Oak	C3P
230 Cristiani Street	(3) Pin Oak: 32", 30", 33"	Safety prune, crown reduction pruning over roof, C3P
Prospect Avenue and Riverside Drive at one-way sign	16"x16" Horse Chestnut	C3P
29 Arlington Road	Multi-stem Silver Maple	C3P
11 Madison Avenue	21" Silver Maple	C3P
Red House on Cranford Avenue and Arlington Avenue	30" Linden	C3P
53 Morse Street	18" London Plane	C3P
201 Thomas Street	30" London Plane	C3P
202 Thomas Street	30" London Plane	C3P
455 Ludlow Avenue on Dermody Street	17"x18" Wild Cherry	C3P
25 Munsee Drive	19" Norway Maple	C3P

Class IV Branch Elevation

ADDRESS	DIAMETER/SPECIES	COMMENTS
219 Orange Avenue	3" Honey Locust	Position 2, C4P
43 Hemlock Circle	6" Ginkgo	Position 1, C4P
43 Hemlock Circle	8" Cherry	Position 2, C4P
41 Hemlock Circle	7" Ginkgo	C4P
95 Cranford Avenue	10" Red Maple	C4P
203 Pawnee Road	12" Linden	C4P
119 Alden Street on Holly Street	12" Hornbeam	C4P
118 Alden Street on Holly Street	8" Plum	C4P
35 Central Avenue	5" Red Maple	C4P
13 Hampton Street	5" Red Maple	C4P
717 Willow Street	7" Plum	C4P
9 Indian Spring Road	18" Linden	C4P
117 Hampton Road	22" Linden	Position 1, trunk suckers, C4P
117 Hampton Road	22" Linden	Position 2, trunk suckers, C4P
25 Hamilton Avenue	12" Zelkova	C4P
111 Forest Avenue	18" Norway Maple	C4P
316 North Union Avenue	8" Linden	Position 1, C4P
316 North Union Avenue	8" Linden	Position 2, C4P
305 Prospect Avenue	12" Katsura	C4P
209 Prospect Avenue	6" London Plane	C4P
514 Claremont Place	9" Katsura	C4P
15 Henley Avenue	8" Hackberry	C4P
17 Henley Avenue	8" Hackberry	C4P
104 Oak Lane on Dunham Avenue	6" Hornbeam	Position 2, C4P
209 Locust Drive	10" Cherry	C4P
210 Locust Drive	6" Cherry	C4P
325 Casino Avenue	7" Cherry	C4P
English Village on Casino Avenue	Several trees	C4P
96 Riverside Drive on Casino Avenue	3" Cherry	C4P
510 Riverside Drive on Richmond Avenue	11" Linden	C4P
40 Craig Place	8" Yellow Poplar	C4P
27 Craig Place	32" Red Maple	C4P
317 Casino Avenue on Maple Avenue	10" Linden	C4P
44 Normandie Place	5" Elm	C4P
505 Central Avenue	7" Redbud	C4P
503 Central Avenue	6" Redbud	C4P
22 Grove Street	16" Cherry	C4P
106 Retford Avenue	12" Linden	C4P
110 Retford Avenue	11" Yellow Poplar	C4P

215 Retford Avenue	36" London Place	C4P
369 South Union Avenue	4" Parrotia	C4P
367 South Union Avenue	5" Pear	C4P
21 Hillcrest Avenue	5" Linden	C4P
154 Hillcrest Avenue	10" Maple	C4P
156 Hillcrest Avenue	8" Linden	C4P
158 Hillcrest Avenue	8" Maple	C4P
126 Burnside Avenue	10" Hornbeam	C4P
124 Burnside Avenue	10" Hornbeam	C4P
50 Burnside Avenue	8" Pear	C4P
122 Roosevelt Avenue	7" Pear	C4P
121 Hillcrest Avenue on James Avenue	3" Pear	Position 1, C4P
121 Hillcrest Avenue on James Avenue	6" Pear	Position 2, C4P
16 New Street	8" Hornbeam	C4P
12 New Street	8" Hornbeam	C4P
10 William Street on Dorchester Avenue	12" Linden	C4P
Thomas Street at Masonic Lodge	2" Linden	C4P or replace/remove
8 Thomas Street	(2) 30" Linden	C4P, trunk sucker
148 Severin Court	4" Honey Locust	C4P
123 Severin Court	36" London Plane	C4P, trunk sucker
121 Severin Court	33" London Plane	C4P
111 Severin Court	33" London Plane	C4P
43 Hollywood Avenue	10" Hornbeam	C4P
32 Hollywood Avenue	5" Pear	C4P
36 Hollywood Avenue	6" Pear	C4P
314 High Street	5" Linden	C4P
Opposite 218 High Street	5" Hackberry	C4P
211 High Street	26" London Plane	Position 1, C4P, trunk sucker
Next to 112 High Street	6" Hackberry	C4P
1 Broad Street on Lincoln Avenue	5" Lilac	C4P, ASAP
30 Stratford Avenue	10" Linden	C4P
400 Elm Street on Stratford	17" Elm	C4P
509 Elm Street	6" Honey Locust	C4P
407 Elm Street	6" Cherry	C4P
Pine Street	5" Redbud	C4P
191 North LeHigh Avenue	Multi-stem Linden	C4P
Vacant Lot on Grant	Pear Trees	C4P
204 Hillside	9" Cherry	C4P
218 Hillside	9" Cherry	C4P
249 Hillside	12" Elm	C4P
1 Yarmouth Road	13" Linden	C4P

2 Mohawk	17" Red Maple	C4P, ASAP, visibility trunk suckers
2 Pershing Avenue	8" Katsura	C4P
18 Pershing Avenue	3" Pear	C4P
17 Pershing Avenue	7" Pin Oak	C4P
14 Pershing Avenue	17" Cherry	C4P

Tree Removal

ADDRESS	DIAMETER/SPECIES	COMMENTS
210 Linden Place	32" Walnut	Remove
306 Linden Place	25" Linden	Remove
719 Orange Avenue	48" Pin Oak	Remove
100 Birchwood Avenue on Bloomingdale	24" Beech	Remove
Opposite 201 Watchung Avenue	14" Wild Cherry	Dead, remove
125 Bloomingdale Avenue	40" Black Oak	Remove
17 Bloomingdale Avenue	16" Red Maple	Position 2, remove
306 Elizabeth Avenue on Bloomingdale Avenue	30" Red Maple	Remove
Lot between 215 Cranford Avenue and 225 Cranford Avenue	19" Red Maple	Remove
239 Cranford Avenue	3" Maple	Remove and replace, buck rubbed
235 Cranford Avenue	2" Linden	Position 1, remove and replace
433 Union Avenue	20" Red Maple	Remove
4 Tuxedo Place	30" Sweet Gum	Remove
5 Tuxedo Place	26" Red Maple	Remove, single phase
304 Manor Avenue	16" Sweet Gum	Remove
308 Manor Avenue	19" Zelkova	Remove
33 Wordsworth Terrace		Remove and replace on lawn, no wires
Opposite 16 Windsor Place	17" Silver Maple	Remove
Opposite 16 Windsor Place	14" Silver Maple	Remove
224 Arbor Street	16" Norway Maple	Remove
Ridge Street dead end at bike path	26" Pin Oak	Dead, remove
602 Riverside Drive	14" Norway Maple	Remove
Opposite 620 Riverside Drive	21" and 13" Pin Oak	Remove
Opposite 650 Riverside Drive at Bike Root	14" Norway Maple	Remove
112 Bloomingdale Avenue on Sailer Street	33" Red Maple	Remove
108 Bloomingdale Avenue on Sailer Street	33"x24" Silver Maple	Remove
7 Adams Avenue	30" Red Maple	Remove, single phase primary
Van Buren (dead end in park)	9"x12"x16" Silver Maple	Remove
15 Forest Avenue	40" Red Maple	Remove
114 Pawnee Road on Chippaun Way	20" Red Maple	Remove
24 Seneca Road	18"x18" Wild Cherry	Remove
102 Pawnee Road	24" Ash	Remove
472 Brookside Avenue	48" Pin Oak	Remove, single phase primary, pole # 61482
10 Fiske Terrace	18" Red Maple	Position 2, excessive lean 15%, remove

4 Tuxedo Place	38" Sweet Gum	Root decay, recent curb replacement, pocket cavity at 30', remove
135 Dermody Street on Ludlow Avenue	18" Norway Maple	Dead, remove
5 Hillside Place	Crepe Myrtle	Dead
77 Spruce Street	22"x24"x30" Sweet Gum	Remove, single phase primary, pole #62595
3 Hampton Road	23" Linden	Serious lean, remove, pole #61604
St. Michael School at Miln Street	2" Pear	Position 3, dead
125 Nomahegan Road	20" Norway Maple	Remove
On County Park Road, behind #10-#8 Nomahegan Road/Court	18" Norway Spruce	Dead
25 Hamilton Avenue	Rose of Sharon	Dead, remove
102 Arlington Road on Hamilton Avenue	17" Elm	Dead, remove
Riverside Park	40" Pin Oak	Remove
2 Sutton Place on Orange Avenue	8" Ash	Remove
321 Casino Avenue	2" Maple	Dead, remove
English Village on Casino Avenue	15" Red Maple	Remove
On Edgar Avenue corner of Venetia Avenue (Grey House)	19" Red Maple	Remove
20 Elmora Avenue	4" Cherry	Dead, remove
8 Franklin Avenue on Clinton Place	25" Elm	Remove
33 Grove Street	2" Maple	Remove
359 Retford Avenue	4" Hornbeam	Remove
226 South Union Avenue	2" tree	Dead, remove
100 Burnside Avenue	4" Ash	Remove
80 Benjamin Street	12" Norway Maple	Remove
33 Johnson Avenue	36" Pin Oak	Stick, remove
10 Williams Street	12" Norway Maple	Remove
Park or School Property on Denman Road	Twin Ash tree	In parking lot, remove
30 Fairfield on Delaware Street	(2) small Dogwood	Dead, remove
304 Stoughton Avenue	30" Pin Oak	Stick, remove
109 Makatom Drive	17" Zelkova	Remove
4 Burchfield Avenue	24" London Plane	By driveway, remove
135 Dermody Street on Ludlow Avenue	17" Norway Maple	Remove
400 Lincoln Park East	13" Linden	Along river, next to pole #62022, remove
127 North Lehigh Avenue	3" Cherry	Remove
28 Munsee Drive	15" Ash	Remove
19 Munsee Drive	Clump Magnolia	Remove
29 Cranford Terrace	7" Cherry	Remove
31 Wall Street	2" Redbud	Remove

38 Blake Avenue	33" Pin Oak	Stick, remove
15 Pershing Avenue	19" Norway Maple	Remove
41 MacArthur Street	17" Norway Maple	Remove
16 MacArthur Street	20" Norway Maple	Remove

Stump Removal

ADDRESS	COMMENTS
43 Elizabeth Avenue	Stump
411 Orange Avenue	Large stump
417 Manor Avenue	Stump
209 Pawnee Road	Stump
609 Orchard Street	Stump
217 Beech Street	Stump
2 Ramsgate Road	Stump
4 Ramsgate Road	Stump
520 Claremont Place	Stump
701 Orange Avenue on Locust Drive	Stump
411 Orange Avenue	Stump
Opposite 8 Elmora Avenue	Stump
315 Retford Avenue	Stump
223 South Union Avenue	Stump
103 Hillcrest Avenue	Stump
85 Burnside Avenue	Stump
1 Marsh Street	Stump
109 Hillcrest Avenue	Stump
Denman Road at Park	Several stumps
10 Concord Street	Stump
25 Carolina Street	Stump
217 Beech Street	Stump
6 Makatom Drive	Stump
615 Hory Street	Stump
607 High Street	Stump
400 Lincoln Park East	Stump
400 Lincoln Avenue	Stump
122 North Lehigh Avenue on Edgebrook	Stump
12 Mendell Avenue	Stump

Sidewalk Issues

ADDRESS	DIAMETER/SPECIES	COMMENTS
35 Elizabeth Avenue	48" Pin Oak	Sidewalk
Albany Avenue at Bloomingdale Avenue School	36" Red Oak	Sidewalk (blacktop) issue
312 Elizabeth Avenue	36" Pin Oak	Bad sidewalk on Cranford Avenue
308 Manor Avenue	19" Zelkova	Bad sidewalk
8 Columbia Avenue		Sidewalk problem
601 Orange Avenue on Columbia Avenue		Sidewalk problem
209 Richard Street		Sidewalk
12 Hamilton Avenue	26" Pin Oak	Sidewalk, saw cut 3 slabs, plank it up over the roots, reuse existing slabs
111 Forest Avenue	18" Norway Maple	Sidewalk raised
25 Madison Avenue		Sidewalk
Red House on Cranford Avenue and Arlington Road		Sidewalk on Cranford Avenue
301 Claremont Place		Sidewalk
315 Prospect Avenue on Maple		2 sidewalks
118 Retford Avenue		Sidewalk
120 Retford Avenue		Sidewalk
123 Retford Avenue		Sidewalk
207 Retford Avenue		Sidewalk
220 Retford Avenue		Sidewalk
312 Retford Avenue		Sidewalk
217 South Union Avenue		Sidewalk
92 Burnside Avenue		Sidewalk
14 James Avenue		Sidewalk
115 Burnside Avenue on James Avenue		Sidewalk
16 New Street		Sidewalk
Georgia Street on Fairfield		Sidewalk
211 High Street	30" London Plane	Position 2, sidewalk
115 High Street		Sidewalk
163 North Lehigh Avenue		Sidewalk
400 Elm Street on Stratford	17" Elm	Sidewalk
Elm Street on Broad Street		Sidewalk
8 Hawthorn Street		New sidewalk around White Oak – need to saw cut 4 false expansion joints
40 Hawthorn Street		Sidewalk
191 North Lehigh Avenue		Sidewalk

Private Property Issues

ADDRESS	DIAMETER/SPECIES	COMMENTS
6 Elizabeth Avenue	Twin Pin Oak	Deadwood over street
218 Linden Place	Pin Oak	Deadwood over street and sidewalk
712 Orange Avenue	36" Pin Oak	Deadwood over sidewalk and street
255 Bloomingdale Avenue		4 dead trees on front yard
228 Cranford Avenue	(3) Norway Maple	Safety prune or remove
44 Union Avenue (Yellow House) on Garden Street	34" Pin Oak	Deadwood over street
101 Orange Avenue on Riverside Drive	Crabapple	Dead
12 Shawnee Road		Brush encroaching on road
24 Shawnee Road	36" Oak	Deadwood over road
200 Hampton Street	Juniper Maple	Dead, notice to remove
608 Brookside Place and Arnet Place	Ilex bush	Traffic visibility
Private House on Pacific Avenue, opposite park	30" Norway Maple	
Greenwood Road	14" Spruce	Dead, front lawn
1 James Avenue	24" Norway Maple	Notice to remove
65 Lawn Terrace	Magnolia	Elevate for sidewalk
12 Cayuga Road	30" Silver Maple	Safety prune

Open Space and Parks Clean Up

Location	Comments
Both sides of driveway going into Pool at 1025 Orange Avenue	Clean up road frontage of dead and fallen trees
Lambert Street and Adams Street Park	Safety pruning around north side of park
Riverside Park at Riverside Avenue and North Union Avenue (opposite apartments)	32" Pin Oak – remove 21" Norway Maple – remove 24" Ash – remove 24" Ash – remove 30" Sycamore – safety prune 32" Sycamore – safety prune 32" Ash – remove NOTE: many other trees need pruning
Next to 2 Hayes Street	24" Red Maple Control poison ivy and English ivy growing in tree
Arnold's Pest Control Island	Needs work
Mendell Avenue and Crane Parkway	Remove dead trees in woods
Orange Avenue and Pacific	Stump removal Safety prune all trees along the road Remove one dead tree in woods
Opposite Verizon and 1018 Orange Avenue at pool property	Clean up road frontage of dead and fallen trees
Opposite Hemlock Circle	Clean up road frontage of dead and fallen trees
Birchwood next to Conservation Center	Elevate branch level Clean up road frontage
Cranford Avenue next to Conservation Center	Clean up dead and fallen trees
Cranford Avenue next to Health Center	Clean up dead and fallen trees
Roselle Avenue dead end	Cut back branches encroaching on street
Cranford Avenue past #238 to dead end	Remove large Wild Cherry Clean up road frontage (2) 16" Wild Cherry – remove
Next to #251 Cranford Avenue	16" Wild Cherry – remove

Special Notes for DPW

- Plant only compact trees under wires
 - No more Zelkova
 - No more Elm
 - Less Pears
- 208 Orange Ave.
 - Fill in hole with topsoil whose stump was removed and re-seed
- 713 Orange Ave.
- Consider using root barriers
- Use more compact species
- Begin selective removal of Ash trees all over town
- 10 Fiske Terr. Position 1. 18"x18" sweet gum. Install a cable.
- Downtown area – cut back trees from buildings

Tree Guy Removal

502 Linden Place
713 Orange Avenue
2 Carol Court
1 Roselle Avenue
261 Bloomingdale Avenue
405 Union Avenue
412 Union Avenue
8 Wordsworth Terrace
105 Oak Lane
106 Oak Lane

Tree Planting Locations

ADDRESS	DIAMETER/SPECIES	COMMENTS
300 Linden Place	36" belt width	With wires
910 Orange Avenue	36" belt width	With wires
912 Orange Avenue	36" belt width	With wires
19 Hemlock Circle	30" belt width	With wires
15 Hemlock Circle	30" belt width	With wires
11 Hemlock Circle	30" belt width	With wires
10 Hemlock Circle	30" belt width	No wires
9 Hemlock Circle	30" belt width	With wires
281 Bloomingdale Avenue	On lawn	No wires
283 Bloomingdale Avenue	On lawn	No wires
285 Bloomingdale Avenue	On lawn	No wires
287 Bloomingdale Avenue	On lawn	No wires
289 Bloomingdale Avenue	On lawn	No wires
303 Bloomingdale Avenue	On lawn	No wires
307 Bloomingdale Avenue	On lawn	No wires
311 Bloomingdale Avenue	On lawn	No wires
239 Cranford Avenue	30" belt width	With wires, deer protection needed
235 Cranford Avenue	30" belt width	With wires
20 Wordsworth Terrace	Plant on lawn	With wires
33 Wordsworth Terrace	On lawn	No wires
16 Sutton Place	On lawn	No wires
226 Arbor Street	36" belt width	With wires
16 Brookdale Road	(2) on lawn	No wires
616 Riverside Drive	On lawn	With wires
18 Adams Avenue	36" belt width	No wires
38 Rutgers Road	Plant on lawn	No wires
40 Rutgers Road	Plant on lawn	With wires
43 West Holly Street	Plant (2) 36" belt width	No wires
6 Heathermeade Place	Plant on lawn	With wires
8 Heathermeade Place	Plant on lawn	With wires
7 Heathermeade Place	Plant on lawn	No wires
5 Heathermeade Place	Plant on lawn	No wires
1046 Coolidge Street	Plant on lawn	With wires
43 Park Avenue	Plant on lawn	No wires
41 Park Avenue	Plant on lawn	No wires
35 Park Avenue	Plant on lawn	No wires
32 Park Avenue	Plant on lawn	With wires
28 Park Avenue	Plant on lawn	With wires
27 Park Avenue	Plant on lawn	No wires
29 Cornell Road	Plant on lawn	No wires
2 Cornell Road	Plant on lawn	No wires
4 Cornell Road	Plant on lawn	No wires
11 Beech Street	Plant 72" belt width	No wires

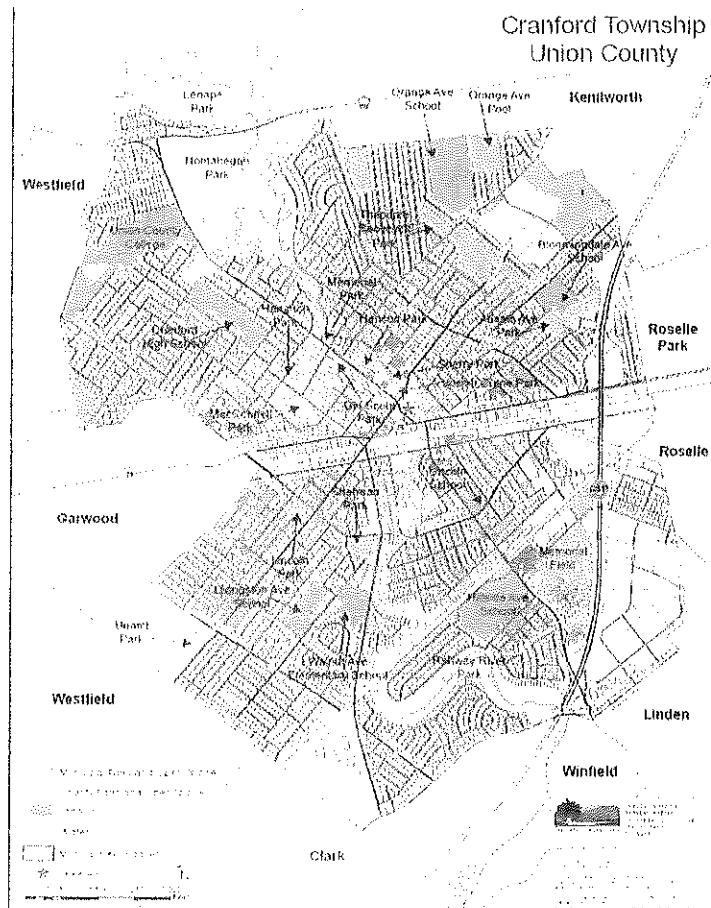
44 Spruce Street	48" belt width	With wires
59 Spruce Street	On lawn	No wires
65 Spruce Street	On lawn	No wires
67 Spruce Street	On lawn	No wires
14 Brown Terrace	Plant on lawn	With wires
16 Brown Terrace	Plant on lawn	With wires
18 Brown Terrace	Plant on lawn	With wires
33 Harvard Road	Plant on lawn	No wires
4 Harvard Road	Plant on lawn	No wires
107 Spring Garden Road	Plant on lawn	With wires
21 John Street	48" belt width	With wires
25 John Street	48" belt width	With wires
27 John Street	48" belt width	With wires
29 John Street	48" belt width	With wires
400 Claremont Place	Plant on lawn	With wires
402 Claremont Place	Plant on lawn	With wires
19 Franklin Avenue on Henley Avenue	Plant (2) on lawn	No wires
188 Locust Drive	Plant 30" belt width	With wires
103 Elmora Avenue	Plant on lawn	No wires
105 Elmora Avenue	Plant on lawn	No wires
110 Elmora Avenue	Plant on lawn	With wires
108 Elmora Avenue	Plant on lawn	With wires
106 Elmora Avenue	Plant on lawn	With wires
11 Grove Street	Plant 48" belt width	With wires
36 Grove Street	Plant 48" belt width	No wires
306 Retford Avenue	36" belt width	No wires
308 Retford Avenue	36" belt width	No wires
348 Retford Avenue	30" belt width	No wires
39 Roger Avenue	Plant on lawn	With wires
40 Hillcrest Avenue	48" belt width	With wires
102 Hillcrest Avenue	48" belt width	With wires
85 Benjamin Street	30" belt width	No wires
88 Benjamin Street	30" belt width	With wires
123 Roosevelt Avenue	36" belt width	No wires
112 Roosevelt Avenue	36" belt width	With wires
84 James Avenue	Plant on lawn	No wires
155 Denman Road	48" belt width	With wires
331 Dorchester Avenue	Plant on lawn	No wires
527 Lexington Avenue	Plant on lawn	With wires
13 Clark Street	Plant on lawn	No wires
11 Clark Street	Plant on lawn	No wires
104 Thomas Street	Plant 120" belt width	With wires
108 Thomas Street	Plant 120" belt width	With wires
110 Thomas Street	Plant 120" belt width	With wires
6 Hollywood Avenue	Plant 60" belt width	No wires

16 Hollywood Avenue	Plant 60" belt width	No wires
39 Hollywood Avenue	Plant 36" belt width	With wires
8 Woodside Avenue	Plant (2) on lawn	With wires
21 Woodside Avenue	Plant on lawn	No wires
16 Woodside Avenue	Plant on lawn	With wires
101 Thomas Street on Cummings Street	Plant 48" belt width	No wires
12 Meeker Avenue	Plant 30" belt width	With wires
14 Meeker Avenue	Plant 30" belt width	With wires
128 Dietz Street	Plant on lawn	No wires
507 High Street	Plant 50" belt width	No wires
505 High Street	Plant 50" belt width	No wires
8 Stratford	Plant 36" belt width	No wires
6 Stratford	Plant 36" belt width	No wires
501 Elm Street	Plant 36" belt width	No wires
25 Mansion Street on Pine Street	Plant (2) 36" belt width	No wires
113 Pine Street	Plant 36" belt width	No wires
12 McClellan	Plant on lawn	With wires
51 Wall Street	Plant on lawn	With wires
2 Mohawk Drive	Plant on lawn	With wires
120 Mohawk Drive	Plant on lawn	No wires
122 Mohawk Drive	Plant on lawn	With wires
11 Osage	Plant on lawn	With wires
12 Oneida Place	Plant on lawn	With wires
29 Algonquin Drive	Plant on lawn	With wires



Street Tree Inventory Cranford Township





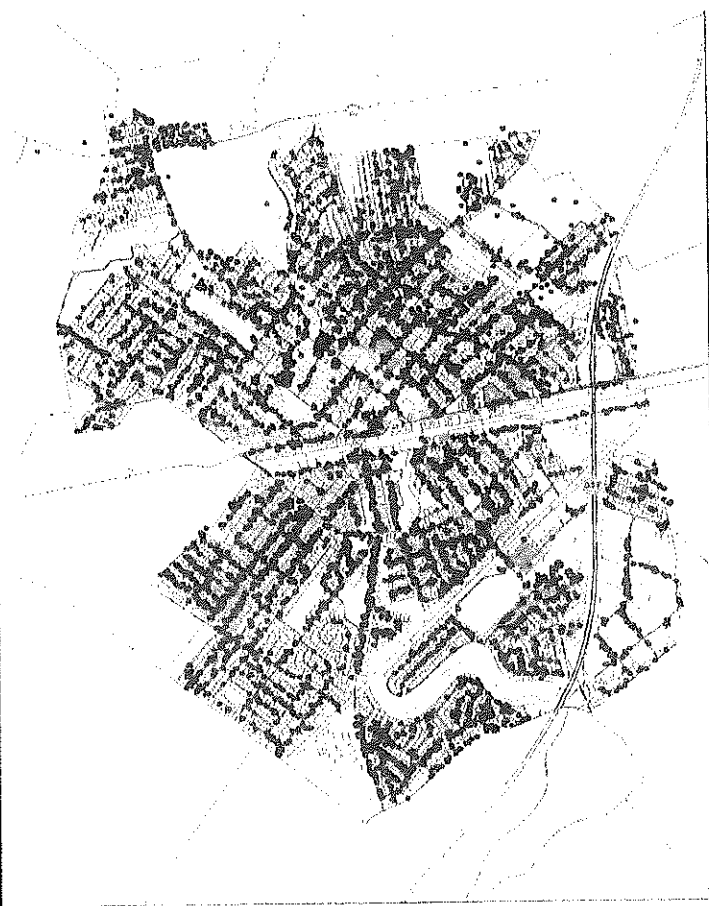
Field Survey

51 days over 13
weeks

Survey Guidelines:

- Within planting strip
- 3 feet off the sidewalk
- 10 feet off the curb of the road

Map of surveyed trees

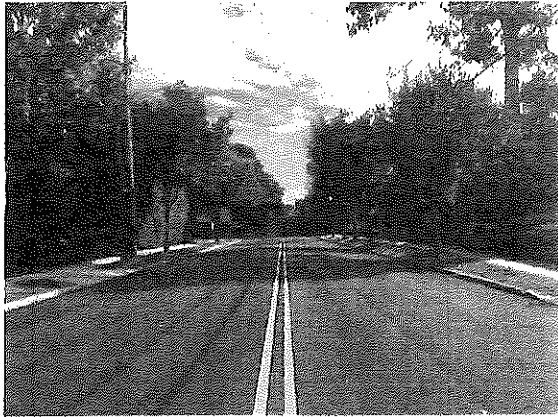




Doering Way



Bloomingdale Ave



North Union Ave



South Union Ave

Trees Surveyed

Total Surveyed: 6,072
72 miles of streets surveyed

Municipal Streets: 5,020

County Streets: 530

State Streets: 76

Parks: 289

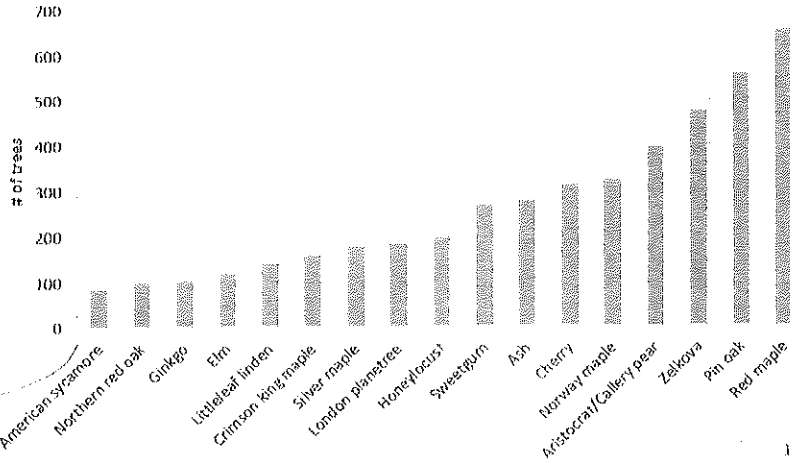
Total Existing Trees: 5,915

Locations of former trees: 57

Stumps: 100

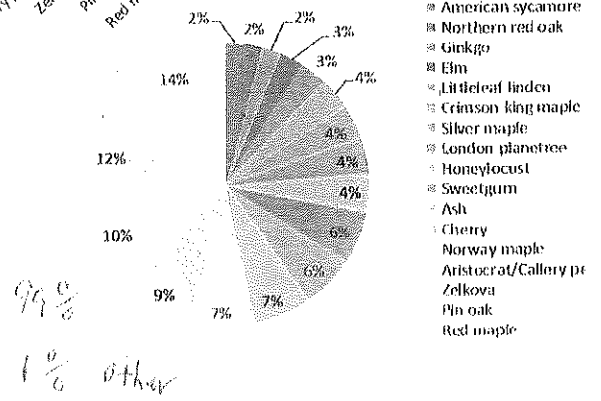
Major Tree Species in Cranford Twp.

Major tree species in Cranford Twp.



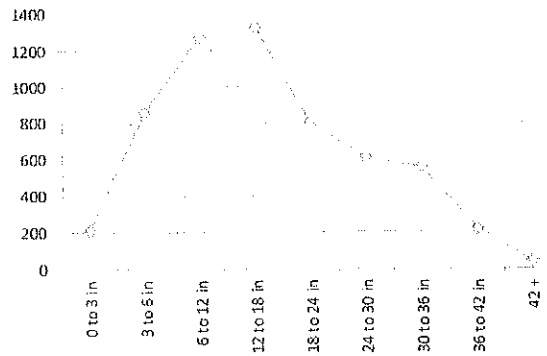
Note: Municipal, County, and State roads, Township Parks

Major tree species



Size Classes (DBH)

Diameter at Breast Height (DBH)		
DBH	# of Trees	% of Trees
0 to 3 in	215	3.63%
3 to 6 in	856	14.47%
6 to 12 in	1,279	21.62%
12 to 18 in	1,332	22.52%
18 to 24 in	803	13.58%
24 to 30 in	607	10.26%
30 to 36 in	559	9.45%
36 to 42 in	219	3.70%
42 + in	45	0.76%
Total:	5,915	100%



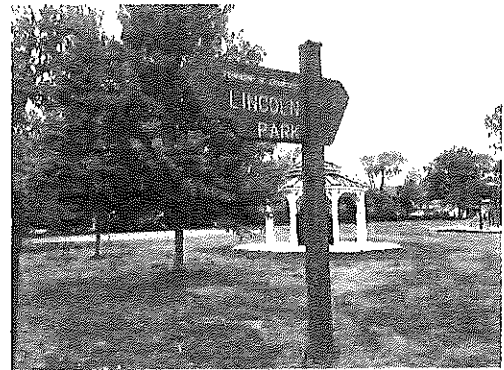
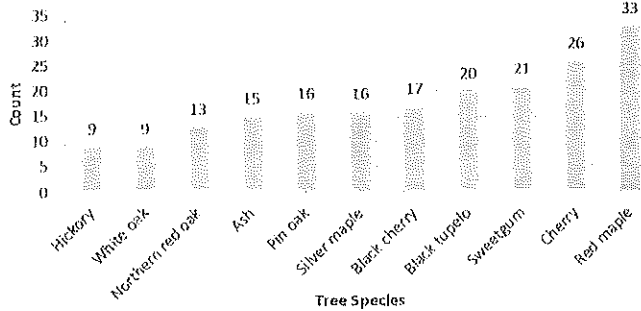
Parks surveyed:

- Adams Avenue Park
- Buchanan Park
- Crane's Park
- Girl Scout Park
- Hampton Park
- Johnson Park

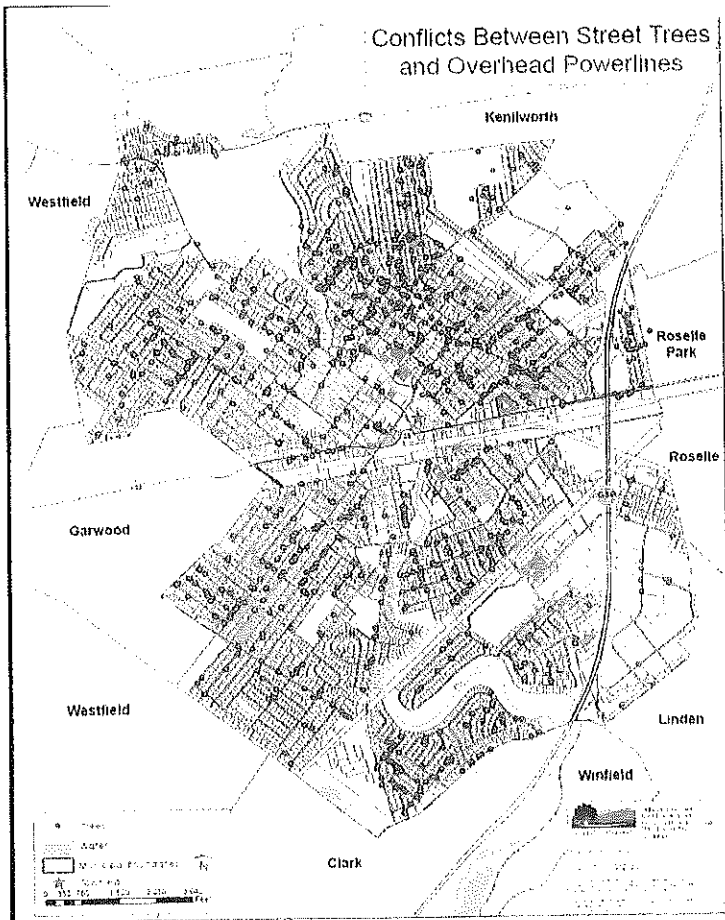


- Lincoln Park
- Mayors Park
- Memorial Park
- Roosevelt Park
- Sherman Park

Major Tree Species in Municipal Parks



Conflicts Between Street Trees and Overhead Powerlines

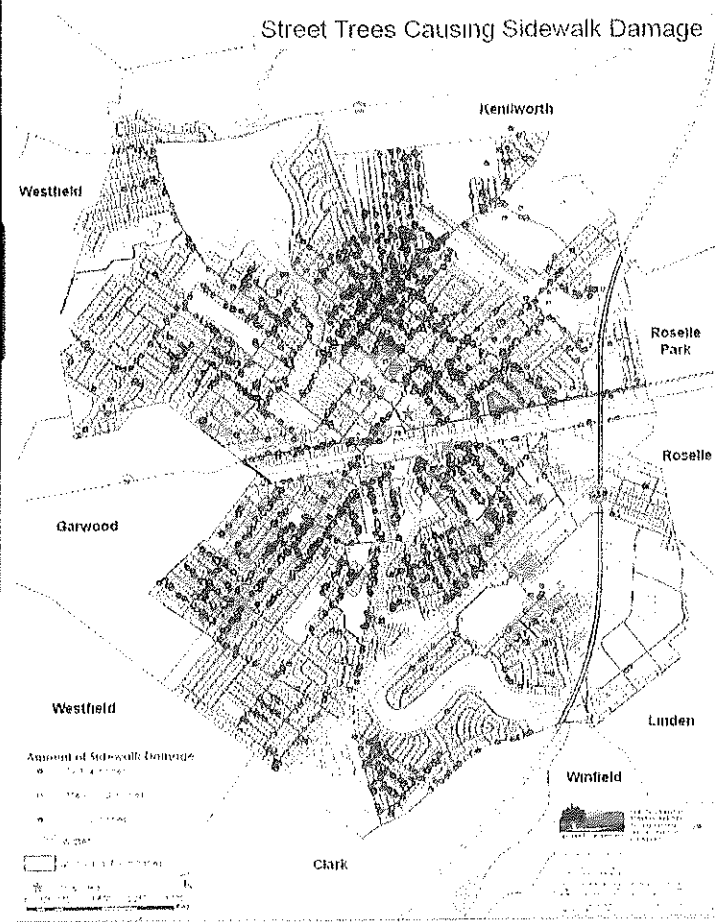


Wire Conflict		
Conflict	Number of Trees	Percent of Trees
No power lines	3257	55.06%
Present and no potential conflict	1,592	26.91%
Present and conflicting	1,066	18.02%
Total:	5,915	100%

No lines: Trees where power lines aren't present

Present and no potential conflict: Power lines are present but they are not touching the tree of the tree has been pruned to avoid the lines

Present and conflicting: Lines are present and running through the tree or if there is potential for conflict in the next few years



Sidewalk Damage		
Sidewalk Heave	Number of Trees	Percent of Trees
No damage	3,582	60.56%
0 - 3/4 inches	1,540	26.04%
> 1 1/2 inches	258	4.36%
Total:	5,915	100%

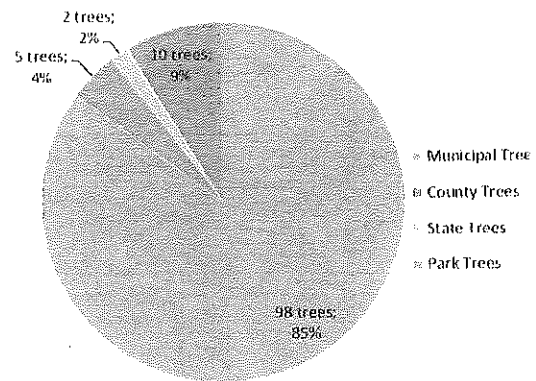
* 0-3/4 inches of damage: a crack in the sidewalk to 3/4 inches of damage

Maintenance Recommendations

Tree maintenance Recommendations	
Small Tree Routine	4,834
Small Tree Immediate	9
Large Tree Routine	1,069
Large Tree Immediate	3
Total:	5,915

Maintenance Task	
Crown reduction/ thinning	49
Crown raising	12
Crown cleaning	669
Stake/train	10
Treat pest/disease	7
Remove	115
Total:	879

Trees Recommended for Removal





THANK YOU!

Barbara Heskins Davis, PP, AICP

bhdavis@tlc-nj.org

(973) 541-1010, x 33



