DRAFT
BOROUGH OF ROOSEVELT
33 N. Rochdale Ave, Roosevelt Borough, NJ 08555

COUNCIL REGULAR MEETING AGENDA
DECEMBER 4, 2023 @ 7:00 P.M.

TIME IN _____

Adequate notice of this meeting, as required by Chapter 231, P.L. 1975, has been provided by a public notice on January 6, 2023 which was posted on the Bulletin Board Roosevelt Post Office and in the Borough Hall. The notice was published in The Times and Asbury Park Press.

ROLL CALL

Councilmember Robert Atwood
Councilmember Louis Esakoff
Councilmember Michael Hamilton
Councilmember Constance Herrstrom
Councilmember Steven Macher
Councilmember Joseph Trammell
Mayor Peggy Malkin

MAYOR'S REPORT:

PUBLIC COMMENT: (Agenda items only)

PRESENTATION:

1. Matt Wagner, Millstone Township Fire Department
2. Gracie & Harrigan Consulting Foresters, Inc. - 2023 Forest Inventory Assessment

CORRESPONDENCE:

1. Monmouth County General Election, November 7, 2023 Statement of Determination.
2. Letter received, dated November 21, 2023, from Roberts Engineering Group, LLC regarding the NJDOT grant award funding through the Municipal Aid Program for the Improvements to Lake Drive and Spruce Lane in the amount of $183,337.00.
3. Letter received, dated November 29, 2023, from Roberts Engineering Group, LLC regarding cost for a Preliminary Assessment Site Investigation for the Amphitheater Rehabilitation.

CONSENT AGENDA RESOLUTIONS:

Resolution 23-120	Payment of Bills for December 4, 2023
Resolution 23-121	Resolution Authorizing the Award of a Non-Fair and Open Contract for Water Utility Operator Professional Services to H2O Services, LLC, 18 West Manor Way, Robbinsville, New Jersey 08691
Resolution 23-122	Resolution Authorizing the Award of a Non-Fair and Open Contract for Wastewater Utility Operator Professional Services to Lyons Environmental Services, LLC, 1105 Green Grove Road, Suite #2, Neptune, New Jersey 07753

REPORTS OF COMMITTEE CHAIRS:

Councilmember Atwood	Envi, Health & Safety
Councilmember Esakoff	Administration

Councilmember Hamilton	Finance
Councilmember Herrstrom	Community Dev/Code
Councilmember Macher	Public Works
Councilmember Trammell	Utilities

REPORTS OF BOROUGH OFFICIALS:

UNFINISHED BUSINESS:

1. Monmouth County Special Citizens Area Transportation System (SCAT)

NEW BUSINESS:

1. Discussion regarding Improvements to Lake Drive and Spruce Lane
2. Discussion regarding Preliminary Assessment Site Investigation

PUBLIC COMMENT (Any item)

M/Malkin opens the public comment at _____
M/Malkin closes the public comment at _____

CLOSED SESSION:

Resolution 23-xxx Providing for a Private Executive Meeting that Excludes the Public

Time In: _____ Time Out: _____

ADJOURNMENT

TIME OUT: _____

Providing Forest
Management Services
For Over 40 Years.

Gracie & Harrigan
Consulting Foresters, Inc.
210 Main Street PO Box 492 Gladstone, NJ 07934
T. 908.781.6711

Heather J. Gracie-Petty, CF
Christina L. Harrigan, CF
Steven W. Kallesser, CF
Alexander Kelchner, CF

2023 Forest Inventory Assessment
for

Borough of Roosevelt

c/o Borough of Roosevelt Environmental Commission

33 North Rochdale Avenue
P.O. Box 218
Roosevelt, New Jersey 08666

Prepared: November 20, 2023

WOODLAND ACREAGE: ~175 ACRES

BOROUGH OF ROOSEVELT
MONMOUTH COUNTY
New Jersey

TABLE OF CONTENTS

APPENDIX

BACKGROUND

Gracie and Harrigan Consulting Foresters, Inc. were retained by the Borough of Roosevelt to aid in the development of the new Community Forestry Management Plan. The original 5-year CFMP was developed in 2017 with the assistance of Consulting Forester, Ron Farr, of Farr Forestry Services. In total, the Borough supports approximately 175 acres of forest land spread throughout the community. Much of the forest evolved from vacant farmland in the mid 1930's through 1940's with the establishment of the community.

The following includes an inventory assessment of the forest to serve as a baseline for future stewardship. A total of 48 inventory point samples were taken to help develop a full assessment for both trees and understory vegetation, including both native and non-native vegetation. The data was generated utilizing the US Forest Service NED-3 program. Highlights of information include species composition, tree diameter and age distribution, forest stocking, basal area, relative density, wood volumes and other relative information. A total of 5 forest stands (cover types) were compiled, with data sets and narratives provided for each. A Plot Center Point Map, Forest Stand Map and Forest Cover Type Map can be found within the Appendix of this report.

Additionally, forest understory information was complied to help rank the quantities of both native and non-native plants, with plant frequencies being ranked in order from high to low. Understory plant lists are provided with in the Appendix of this report. Both overstory and understory information about each forest stand will help to prioritize and guide future stewardship practices.

Recommendations for future management of the Borough's forest shall include the reduction of non-native and invasive plants, hazardous tree reduction along trails, roadways and structures, tree planting and forest stand improvement to weed and thin the forest of lower quality, declining, diseased and overstocked trees. Healthier forests enhance sustainability and resiliency, better sequester carbon, and improve watershed value for the community and the region. Wildlife viewing, recreation, educational opportunities and aesthetic values are high priorities for the community. Although the harvest of forest products may take on a secondary roll, forest manipulation through the harvest of trees can work to achieve the above values and considerations.

FOREST INVENTORY PROCEDURE

The point samples taken in each stand has resulted in data sets for each mapping unit. The first page of data is essentially a summary of specific data totals on the subsequent pages. Shown are the stand number, the date of field data collection, and the acreage of the stand. Next listed is the number of trees per acre. Basal area is the amount of square feet of ground per acre covered by the stems of growing trees. By itself, basal area is not particularly useful from a practical standpoint, but it is the figure from which most other data is derived, and so it is important. Next shown are relative density (which is a measure of stand stocking, described later) and canopy closure. Under forest stand characteristics, there is a very brief description of the nature of the stand, including approximations for stand age and site index.

The next page is a stand species list, showing the common name of the tree species and the abbreviations used on later pages. Since understory information is not entered into NED-3, nothing is listed under understory species. The next page is a listing of the total number of trees in the stand broken up by diameter class, and then again by species. It should be noted that trees less than 3.0 inches in diameter were not entered into the NED-3 program.

The following pages list further important information in terms of individual tree species. It begins with species composition information, displayed in terms of basal area, as a percentage of basal area, and lastly in terms of trees per acre. Next, several different measures of average diameter are displayed. It is important to note that when the text of this plan references average diameter, it is referring to the quadratic mean diameter. Relative density is shown next. Relative density is measured as a percentage of the average maximum stocking expected in undisturbed stands of similar size and species of

trees. It is related closely to stand stocking, further described below. Lastly, wood volumes in terms of board footage and cordwood of standing trees are listed.

A good idea of a stand's condition can be seen by the study of the stocking guide which has been specifically developed for this part of the country. The dot indicated on the guide shows the position of the stand in relation to generally suggested ideals. If the dot falls above the "A" line, the stand is overstocked. There are too many trees growing too closely together to utilize the site optimally. If the dot falls below the "B" line, it is the opposite, and regarded as understocked. In stands short of maturity, it is often suggested that good site utilization involves the careful manipulation of the dot up and down between the "A" and "B" lines over a period of years, thinning as the dot approaches the "A" line. The difference between the location of the dot and a parallel location on the "B" line is the amount of basal area which can safely be removed in a thinning. Referring to the original data allows one to decide in which diameter classes, and in which species that thinning might best occur. The data is necessary to help with future management decisions.

FOREST DESCRIPTION AND FINDINGS

At the conclusion of the forest reconnaissance and inventory, it was determined the total woodland consists of approximately 175 acres, and is represented by 5 forest stands, or vegetation types, that are similar based on species composition, age categories, soil characteristics, past management and management potential. Much of the forest is in the 80 to 90 year age grouping, having grown up during the early years of community development. The following includes a general description and analysis of each mapping unit. A Woodland Vegetation Map shown found in the Appendix has been prepared to illustrate the location of each stand as well as other property features. Stands are labeled numerically and can be referenced to the descriptions on the following pages. Additional reference can be made to Stand Data Analyses in the Appendix of this report.

STAND #	COVER TYPE
1	Maturing Sweet Gum-Red Oak-Red Maple
1A	Swampland
2	Maturing Sweet Gum-Red Oak-Red Maple
3	Maturing Sweet Gum-Eastern Red Cedar-Cherry
4	Maturing Sweet Gum-Eastern Red Cedar

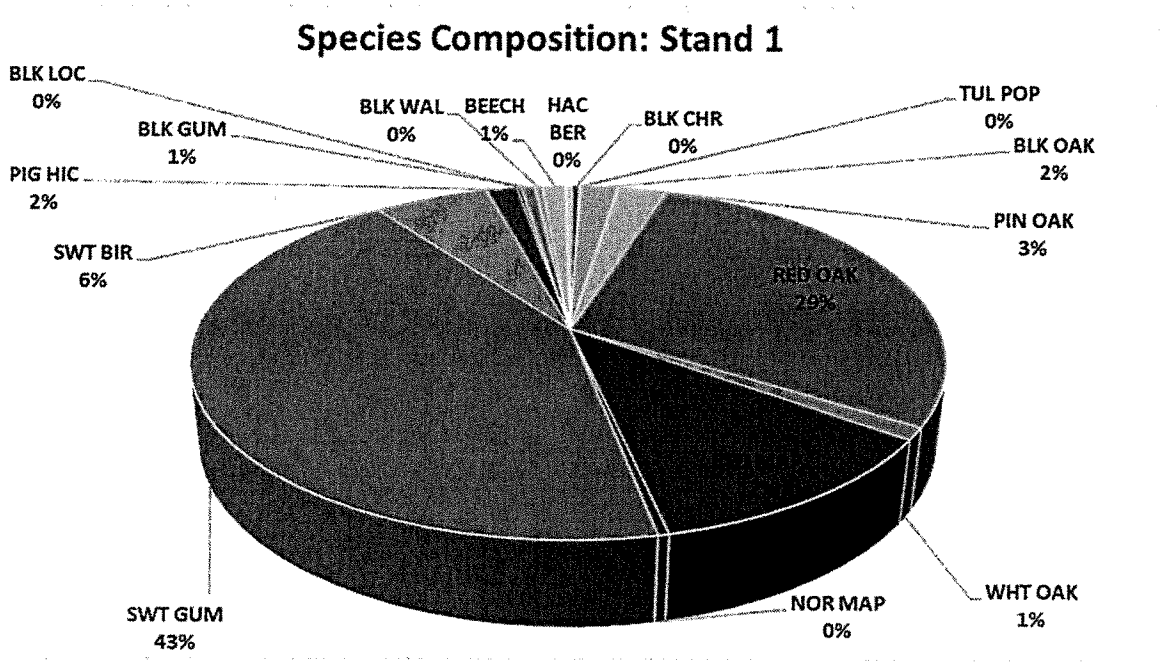
STAND ONE:

This maturing forest is dominated by sweetgum, northern red oak, and red maple. Other inventoried species include black birch, pin oak, black oak, pignut hickory, American beech, white oak, black gum, black cherry, Norway maple, hackberry, black locust, black walnut and tulip poplar. The understory is composed of a light to moderate layer of the following species:

Native	White oak	Sweet cherry
Eastern red cedar	American beech	Pitch pine
Red maple	Flowering dogwood	Black gum
Pignut hickory	Black oak	Black birch

Black locust	Blackhaw viburnum	Smartweed
highbush blueberry	Arrowwood viburnum	Sweetpepper bush
running blackberry	Sensitive fern	Foxgrape
Virginia creeper	Hay scented fern	Grasses
Virginia stickweed	Cinnamon fern	Pennsylvania sedge
Poison ivy	Green brier	Mosses
Wintergreen	Hydropiper	Spicebush
Club moss	Wood aster	
Partridge berry	Jack-in-the-pulpit	
Non-native/Invasive	Japanese honeysuckle	Japanese stiltgrass
Norway maple	Privet	Common reed
Japanese zelkova	Linden viburnum	Garlic mustard
Autum olive	Myrtle	Multiflora rose
Burning bush	Oriental bittersweet	Japanese barberry

The various seedlings found within the stand are sweetgum, white pine, red oak, black oak, white oak, swamp white oak, maples ash and saplings of sassafras, pin oak, American holly and Japanese zelkova. This stand is located on sandy loam Freehold series soils.



(When the data in the pie-chart displays 0 it means that the value is less than 1, but not equal to zero)

Data generated from the inventory shows an average of 366 stems and 165 square feet of basal area per acre. Plotting this information on the ***Upland Central Hardwood Stocking Guide*** reveals that this stand is overstocked, at above 110%. Relative density is

116%. The diameter distribution of trees, measured at a height of 4.5 feet above the forest floor, ranges from 4 to 40 inches. The average diameter is 9.1 inches. The estimated site index is 75 to 85 for sweetgum. Tree heights are approximately 100 feet tall, in places. This stand is estimated to be between 70-90+ years old. Trees yield an average volume of 9,269 board-feet to the acre, and 35 cords to the acre, and are of moderate to high quality and condition. The growth rate is estimated to be 185 board-feet/acre/year and 0.70 cords/acre/year.

STAND ONE-A:

This stand is comprised of open wetland/forested wetland/scrub-shrub habitat. The overstory consists of red maple, willow and boxelder. The understory is composed of a moderate layer of cattails, highbush blueberry, blackhaw viburnum, arrowwood viburnum, spice bush, cinnamon fern and royal fern. Beavers have impeded portions of this area and will increase future flooding of the site. This stand is located on 0 to 3 percent slopes of frequently flooded Humaquepts soils.

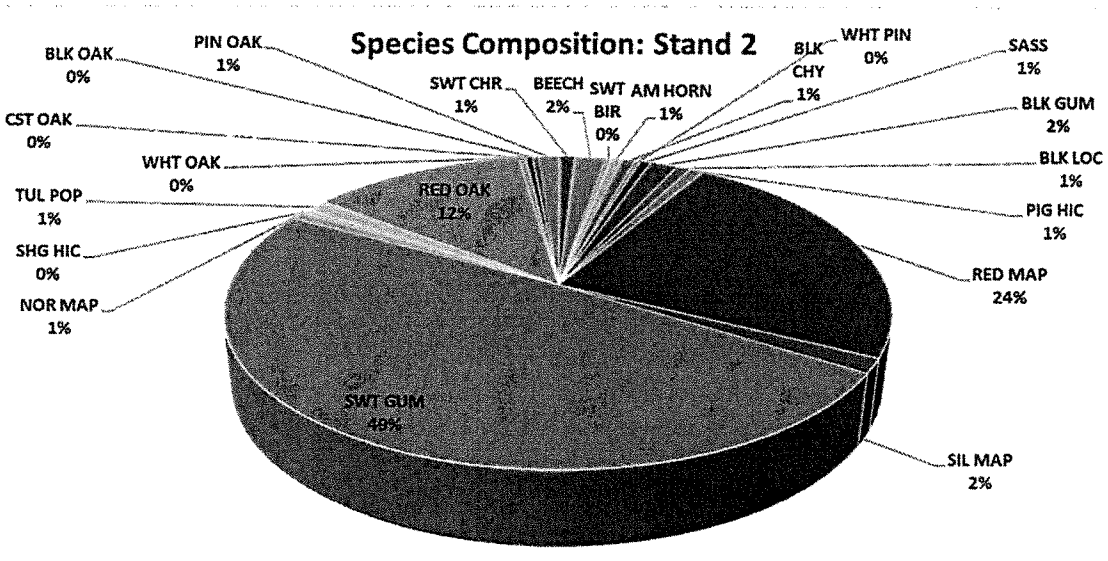
STAND TWO:

This maturing forest is dominated by sweetgum, red maple and northern red oak. Other inventoried species include tulip poplar, silver maple, blackgum, American beech, black cherry, sweet cherry, black locust, pin oak, Norway maple, pignut hickory, Eastern white pine, American hornbeam, black birch, shagbark hickory, chestnut oak, black oak and white oak. The understory is composed of a moderate to dense layer of the following species:

Native
Umbrella magnolia
Ohio buckeye
Black cherry
Sweet cherry
Haircap moss
Green brier
Grasses
Arrowwood viburnum
Skunk cabbage
Cinnamon fern
Sensitive fern
Hay scented fern
Smartweed
Hydopiper
Jewelweed
Asters
Spicebush
Wild raspberry
Pennsylvania sedge
Sweetpepper bush
Chives
Virginia creeper
Pokeweed
Fox grape
Wild geranium

Non-Native/Invasive
Pachysandra
Bamboo
African violets
Jetbead
Bush honeysuckle
Autum olive
Multiflora rose
Japanese honeysuckle
Creeping blackberry
Poison ivy
Burning bush
Garlic mustard
Japanese stiltgrass
Linden viburnum
Japanese angelica tree
Myrtle
Privet
Japanese honeysuckle
English ivy

Saplings within the stands are black locust, hophornbeam, sweetgum, beech, tulip poplar, and seedlings of red maple, oaks, black gum, American beech, sassafras, American holly and white ash. This stand is located on sandy loam Freehold series soils.



(When the data in the pie-chart displays 0 it means that the value is less than 1, but not equal to zero)

Data generated from the inventory shows an average of 163 stems and 149 square feet of basal area per acre. Plotting this information on the ***Upland Central Hardwood***

Stocking Guide reveals that this stand is overstocked, above 110%. Relative density is 88%. The diameter distribution of trees, measured at a height of 4.5 feet above the forest floor, ranges from 4 to 38 inches. The average diameter is 12.9 inches. The estimated site index is 75 to 85 for sweetgum. Tree heights range up to approximately 95 feet tall. This stand is estimated to be between 70-90+ years old. Trees yield an average volume of 10,254 board-feet and 39 cords to the acre. Trees in this stand are of moderate to high quality and condition. The growth rate is estimated to be 205 board-feet/acre/year and 0.78 cords/acre/year.

STAND THREE:

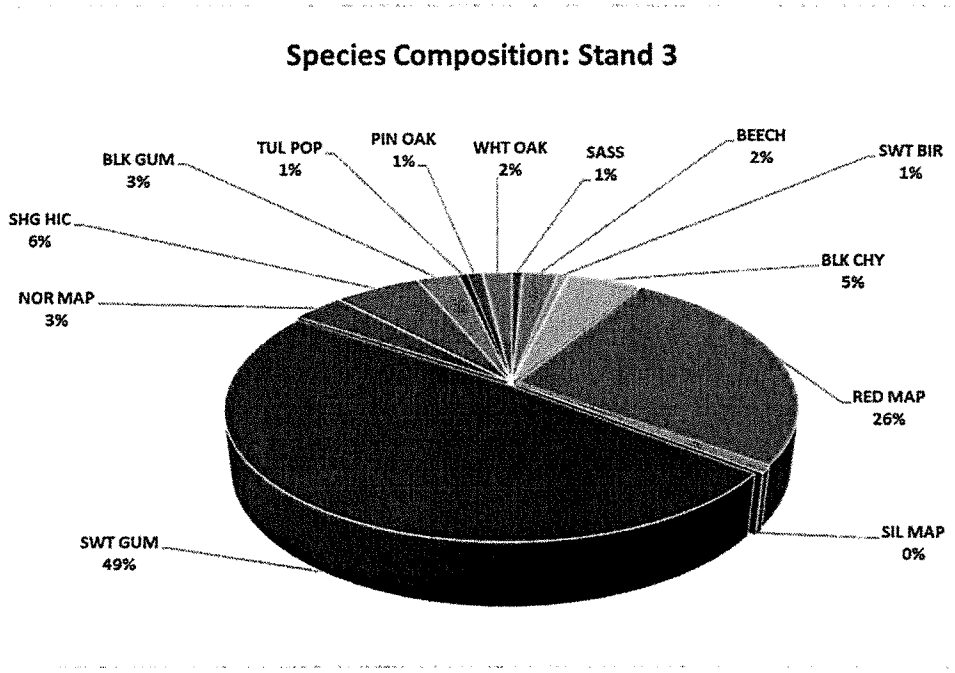
This forest stand is dominated by maturing sweetgum, eastern red cedar and black cherry. Other inventoried species include black birch, pin oak, black oak, pignut hickory, American beech, white oak, blackgum, Norway maple, hackberry, black locust, black walnut and tulip poplar. The understory is composed of a moderate to dense layer of the following species:

Native	Black locust	Hay scented fern
Eastern red cedar	Sassafras	Cinnamon fern
Cedar	Pin oak	Green brier
Crab apple	American holly	Hydropiper
Red maple	highbush blueberry	Wood aster
Pignut hickory	running blackberry	Jack-in-the-pulpit
White oak	Virginia creeper	Smartweed
American beech	Virginia stickweed	Sweetpepper bush
Flowering dogwood	Poison ivy	Foxgrape
Black oak	Wintergreen	Grasses
Sweet cherry	Club moss	Pennsylvania sedge
Pitch pine	Partridge berry	Mosses
Black gum	Blackhaw viburnum	Spicebush
Black birch	Arrowwood viburnum	Sensitive fern

Non-native/Invasive	Norway maple	Japanese zelkova

Autum olive	Oriental bittersweet	Callery pear
Burning bush	Japanese stiltgrass	
Japanese honeysuckle	Common reed	
Privet	Garlic mustard	
Linden viburnum	Multiflora rose	
Myrtle	Japanese barberry	

The various seedlings found within the stand are sweetgum, white pine, red oak, black oak, white oak, swamp white oak, maples, and white ash. This stand is located on sandy loam of Freehold and Holmdel series soils.



(When the data in the pie-chart displays 0 it means that the value is less than 1, but not equal to zero)

Data generated from the inventory shows an average of 186 stems and 133 square feet of basal area per acre. Plotting this information on the ***Upland Central Hardwood Stocking Guide*** reveals that this stand is overstocked, at 110%. The relative density is 77%. The diameter distribution of trees, measured at a height of 4.5 feet above the forest floor, ranges from 4 to 38 inches. The average diameter is 11.5 inches. The estimated site index is 60 for sweetgum. Tree heights range up to approximately 90 feet tall. This stand is estimated to be between 65-70 years old. Trees yield an average volume of 7,783 board-

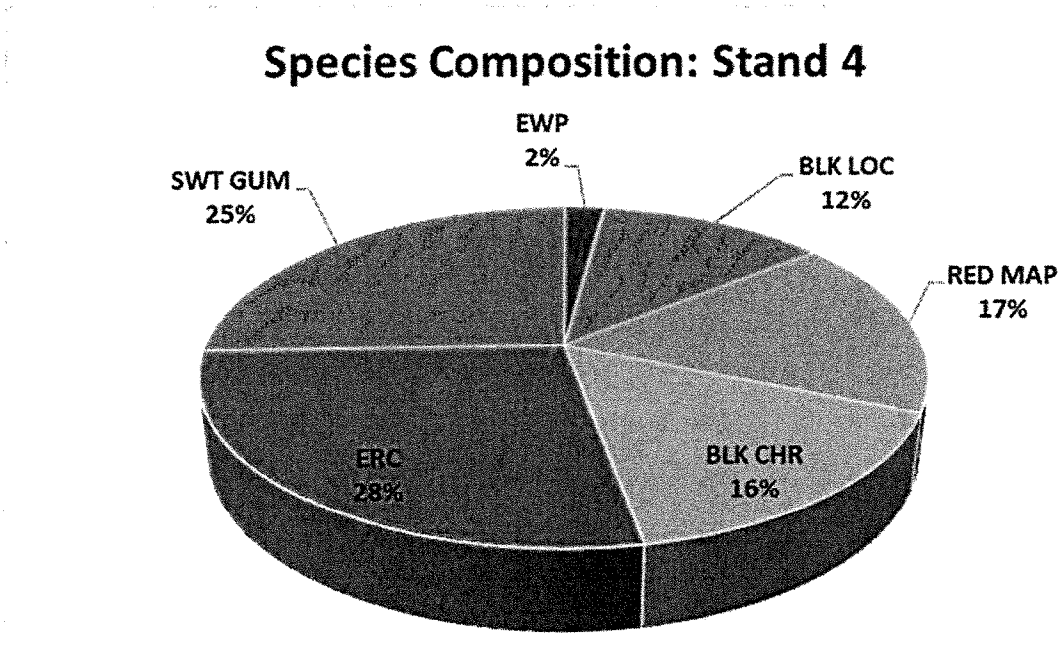
feet to the acre, and 34 cords to the acre, and trees are of moderate quality and condition. The growth rate is estimated to be and 156 board-feet/acre/year and 0.68 cords/acre/year.

STAND FOUR:

This maturing forest is dominated by sweetgum and eastern red cedar, with lesser amounts of black cherry. Other inventoried species include red maple, black locust and Eastern white pine. The understory is composed of a dense to very dense layer of the following species:

Native	Sassafras	Black walnut
Creeping blackberry	American beech	Black cherry
Green brier	Boxelder	Wild strawberry
Poison ivy	Sycamore	Virgina creeper
Spice bush	White pine	Pokeweed
Black locust		
Non-native/invasive	Japanese honeysuckle	Mugwort
Autumn olive	Callery pear	Garlic mustard
Multiflora rose	Mile-a-minute	Oriental bittersweet

This stand is located on sandy loam of Freehold and Collington series soils.



Data generated from the inventory shows an average of 133 stems and 90 square feet of basal area per acre. Plotting this information on the ***Upland Central Hardwood Stocking Guide*** reveals that this stand is at a moderate level of fully stocked, at above 75%. Relative density is 52%. The diameter distribution of trees, measured at a height of 4.5 feet above the forest floor, ranges from 8 to 20 inches. The average diameter is 11.1 inches. The estimated site index is 60 for sweetgum. Tree heights range up to approximately 70 feet tall. This stand is estimated to be 40 to 45 years old. Trees yield an average volume of 2,366 board-feet to the acre, and 20 cords to the acre. Trees in this stand are of low to moderate quality and condition, and the growth rate is estimated to be 47 board-feet/acre/year and 0.40 cords/acre/year.

FOREST STEWARDSHIP RECOMMENDATIONS

Over the term of this Community Forestry Management Plan a variety of stewardship activities are recommended to help improve the overall quality, health and condition of the forest. Highlights of management recommendations include the removal of many of the invasive plans that have readily colonized many portions of the forest. In addition, other areas of management can work toward the removal of hazard trees of high risk that may interfere with trails, roadways and structures, forest stand improvement activities to thin and weed the forest of low quality, inferior trees and trees that are overstocked. Tree planting may also be considered to reforest some of the more open areas of the forest, and to add further diversity and structure of the forest. Highlights of these activities are summarized in the following paragraphs.

Exotic Invasive Plant Control

During the last 25+ years, non-native plant species have begun to dominate the forest landscape. This problem is of major growing concern and has been influenced by the increased population growth of white- tailed deer, which have altered the composition of the forest understory. Preferred food sources of deer include more native plant species versus non-native plant species that have less nutritional value. Left unchecked, these plants will dominate woodland areas and abandoned fields, and outcompete more desirable native species such as spicebush, viburnums, laurels, lowbush blueberry, witch hazel, hardwood seedlings, and native grasses, and other herbaceous plants. Invasive plants can be controlled through removal of the plant (including root systems), repeated mowing to weaken plants, and/or selective use of herbicides. A multifaceted approach is usually the most effective. All forest stands can benefit form future plant control especially with Autumn olive, burning bush and Linden viburnum.

Hazardous Tree Removal

Over the years of this program, trees along trails, roadways and structures should be monitored for safety and potential damage to property. Any trees posing a treat should be harvested or trimmed of overhanging dead limbs. The borough should continue to monitor trails at least once annually.

Native Tree and Shrub Planting

Natural regeneration of trees has been observed throughout the property. However, some areas of the forest have become overgrown with invasive plants and vines which can inhibit regeneration of new trees and native plants. Additionally, deer can damage and interfere with new growth through browsing and buck antler rub. As areas are cleared of invasive brush, the opportunity is afforded to plant new growing stock, especially in areas where sufficient sunlight can channel through to the understory. Adding more trees to the forest can enhance canopy structure and diversity, and also improve forest growth as trees become overmature and are lost due to mortality.

Forest Stand Improvement

Forest stand improvement works to thin moderately high to overstocked stands to help release essential growth needs, including sunlight, growing space, water and nutrients to higher quality and higher resource valued trees. This program works to improve the growth of higher quality trees through the judicious thinning of dead, dying, deformed, inferior, and diseased trees, and trees spaced too closely together. Reductions in tree stocking will continue to increase the available sunlight, water and nutrients to higher quality and more desirable trees that are now in a highly stocked condition. Additional sunlight reaching through to the understory can enhance conditions for new and existing young growth. Stands 1 and 2 should be considered for future forest stand improvement

projects at a rate of 5 acres every 2 to 3 years. Harvested trees can be utilized as firewood and other wood products.

Forest stand improvement is similar to the weeding and thinning of a garden, only on a larger and more extensive scale. Vines that are interfering with the growth of higher quality trees should be controlled by cutting, while other vines should be left for wildlife purposes. As part of this program, a diversity of tree species, cavity trees and downed logs will also be maintained to encourage wildlife.

Access Improvement

Access throughout the woodland varies from poor to very good. Access should be maintained and improved over the term of this program. Improved access will benefit recreational enjoyment and improve the ability to steward the forest.

Conclusion

All of the above activities will aid to improve the health and quality of the Borough's forestlands. Healthier forests lead to better carbon sequestration, are more sustainable and resilient, and enhance watershed, wildlife and recreational values. Gracie and Harrigan Consulting Foresters, Inc. can continue to work with the Borough on the prioritization and implementation of stewardship activities. The Borough may also wish to seek out grant monies to assist with the implementation of these activities.

APPENDIX

Maps

a. Plot Center Point Map -Page 17
b. Forest Stand Map -Page 18
c. Cover Type Map – Page 19

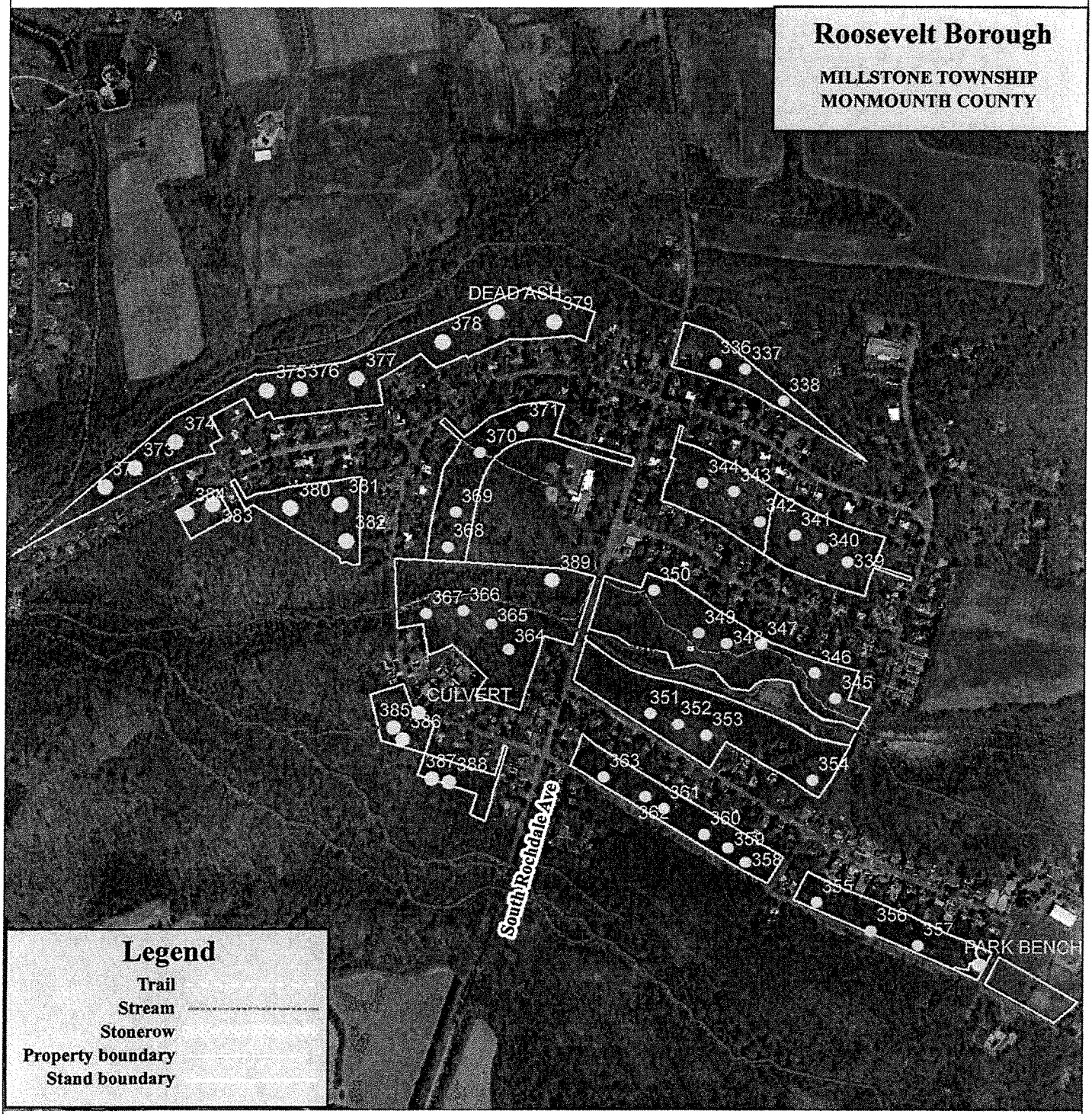
Native and Non-Native Plant Listings and Rankings

a. Native Plants Listing and Rank -Page 20
b. Non-Native Plant Listing and Rank – Page 21

Forest Inventory Data Sets & Stocking Guides

a. Stand One
b. Stand Two
c. Stand Three
d. Stand Four

PLOT CENTER POINT MAP 2023



Legend

- Trail
- Stream
- Stonerow
- Property boundary
- Stand boundary

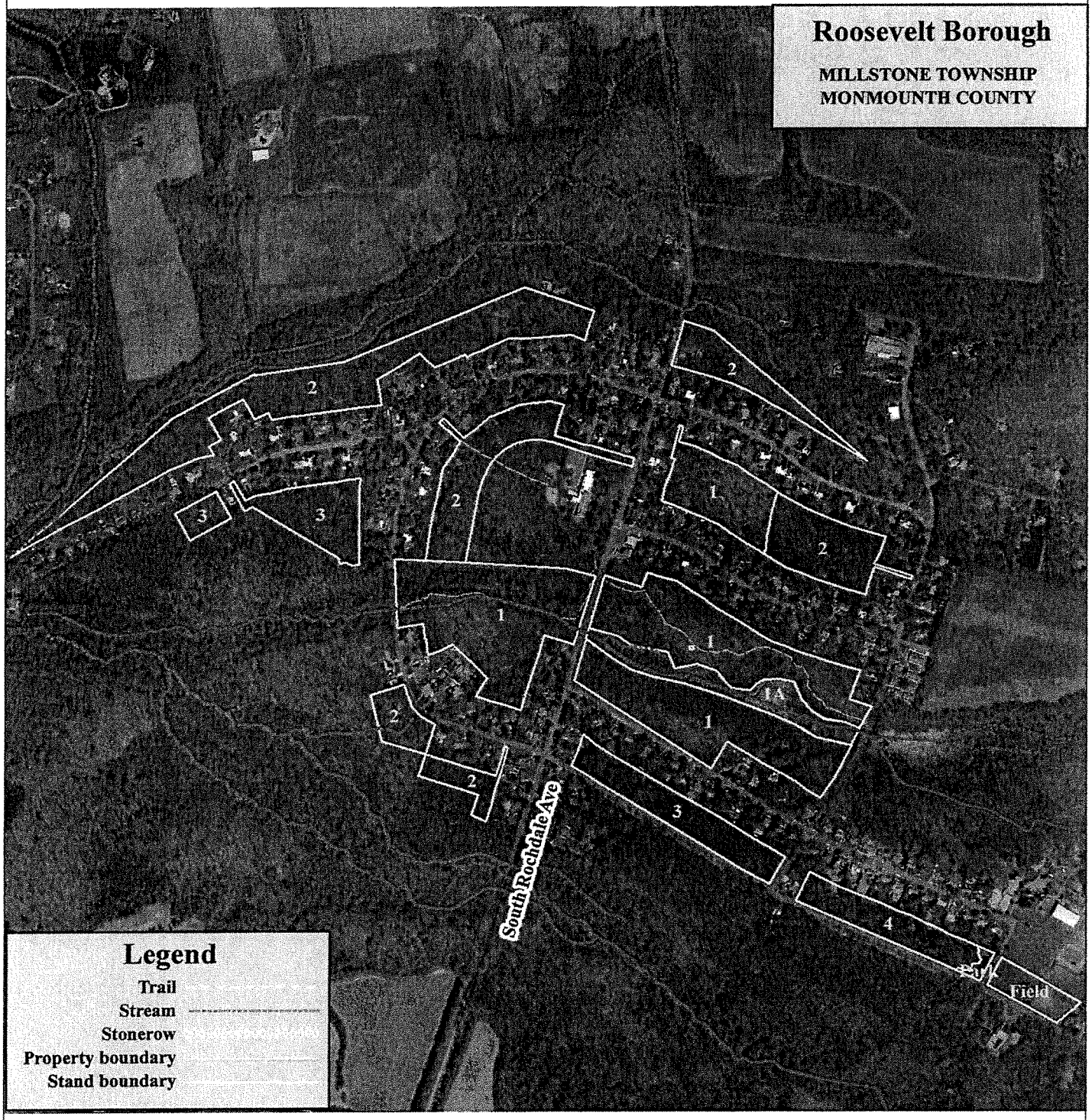
Property location: 33 North Rochdale Ave

This map was developed using NJDEP GIS digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.

1 inch = 875 feet

FOREST LAND VEGETATION MAP 2023

FOREST STAND MAP



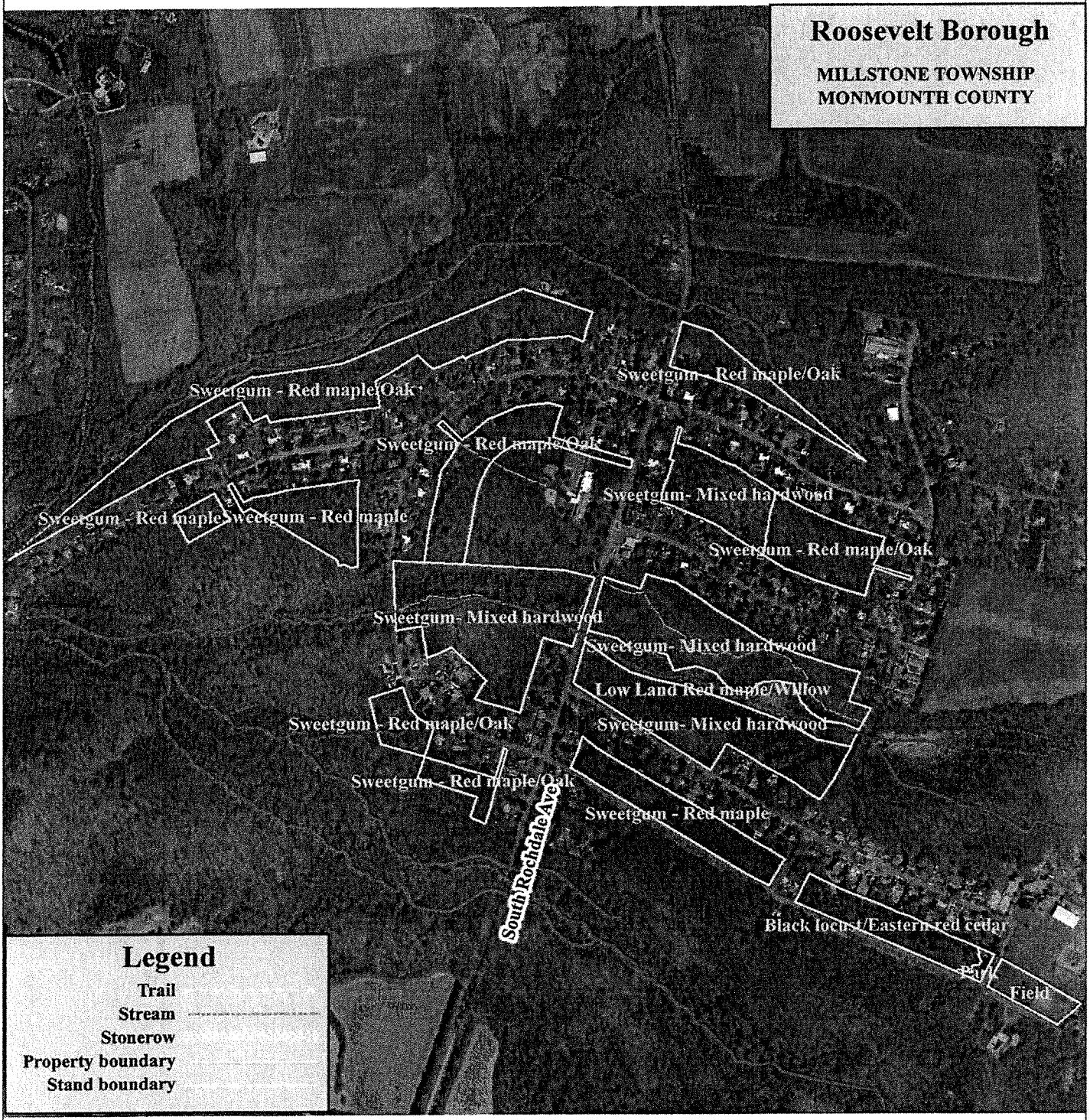
Property location: 33 North Rochdale Ave

This map was developed using NJDEP GIS digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.

1 inch = 875 feet

FOREST LAND VEGETATION MAP 2023

COVER TYPE MAP



Property location: 33 North Rochdale Ave

This map was developed using NJDEP GIS digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.

1 inch = 875 feet

Plants Present in Roosevelt Borough

Ranked from highest to lowest abundance.

High

- Spicebush *(Lindera benzoin)*
- Pennsylvania sedge *(Carex pensylvanica Lam.)*
- Hay scented fern *(Dennstaedtia punctilobula)*
- Sweet pepperbush *(Clethra alnifolia)*
- Creeping blackberry *(Rubus ursinus)*
- Green brier *(Smilax rotundifolia)*
- Grasses *(Poaceae)*

Medium

- Blackhaw virburnium *(Viburnum prunifolium)*
- Highbush blueberry *(Vaccinium corymbosum)*
- Virgina creeper *(Parthenocissus quinquefolia)*
- Poison Ivy *(Toxicodendron radicans)*
- Club moss *(Lycopodiopsida)*
- Arrowwood viburnum *(Viburnum dentatum)*
- Cinnamon fern *(Osmundastrum cinnamomeum)*
- Smartweed *(Polygonum pensylvanicum)*
- Hydropiper *(Persicaria hydropiper)*
- Grasses *(Poaceae)*
- Haircap moss *(Polytrichum commune)*
- Raspberry *(Ruhus idaeus)*
- Blackberry *(Rubus fruticosus L.)*
- Chives *(Allium canadense)*
- Asters *(Aster)*
- Partridge berry *(Mitchella repens)*

Low

- Coral berry *(Symphoricarpos orbiculatus)*
- Skunk cabbage *(Symplocarpus foetidus)*
- Virginia stickweed *(Hackelia virginiana)*
- Jack-in-the-pulpit *(Arisaema triphyllum)*
- Woodsorrel *(Oxalis stricta)*
- Wild strawberry *(Fragaria vesca)*
- Sensitive fern *(Onoclea sensibilis)*
- Fox grape *(Vitis labrusca)*
- Poke weed *(Phytolacca americana)*

Invasive Plants Present in Roosevelt Borough
(Ranked from highest to lowest abundance)

High

- Burning Bush *(Euonymus alatus)*
- Autum olive *(Elaeagnus umbellate)*
- Linden viburnium *(Viburnum dilatatum)*

Medium

- Japanese honeysuckle *(Lonicera japonica)*
- Japanese barberry *(Berberis thunbergia)*
- English ivy *(Hedera helixL)*
- Multiflora rose *(Rosa multiflora)*
- Stiltgrass *(Microstegium vimineum)*
- Jetbead *(Rhodotypos scandens)*
- Amur honey suckle *(Lonicera maackii)*
- Privet *(Ligustrum)*
- Garlic mustard *(Alliaria petiolate)*
- Mugwort *(Artemisia vulgaris)*
- Japanese wineberry *(Rubus phoenicolasius)*
- Japanese wisteria *(Wisteria floribunda)*

Low

- Callery pear (*Pyrus calleryana*)
- Mile-a-minute (*Persicaria perfoliate*)
- Pachysandra *(Pachysandra terminals)*
- Bamboo *(Bambusoideae)*
- Japanese angelica-tree *(Aralia elata)*
- Jetbead *(Rhodotypos scandens)*
- Norway maple *(Acer platanoides)*

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 07:49

Identification Data

stand 1, Inventory, 2023

Identification and Location

Variable	Value
Stand Name	stand 1
Date Inventory was Taken	10/24/2023

Site Measures

Variable	Value
Stand Area (ac.)	1.0
Plot Cluster Count (count)	1
Canopy Closure (%)	100
Trees Per Unit Area (stems/ac.)	366.11
Number of Plot Size Classes (count)	1
Basal Area (sq.ft./ac.)	164.8
Relative Density (%)	116
Shrub layer cover (% cover)	0.0
Ground layer cover (% cover)	0.0

Stand Characteristics

Variable	Value
Land Cover Type	Mixed Coniferous/Broadleaf forest
Forest Type	mesic mixed pine-hardwoods
Site Index Species	sweetgum
Site Index	60
Size Class	small sawtimber
Year of Origin (year)	1925

Features

Variable	Value

Percent Area Riparian (% cover)	0.0
Percent Area Wetland (% cover)	0.0
Streams	absent
Percent Open Plots (% plots)	0
Contains a Wetland	absent
Contains a Riparian	absent
Old Growth	no
Rare Plant Species Present	absent
Exotic Plant Species Present	present

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 07:50

Species List

stand 1, Inventory, 2023

Species	Latin	Overstory	Understory	Transect
red maple	Acer rubrum	X		
sweet birch	Betula lenta	X		
American beech	Fagus grandifolia	X		
sweetgum	Liquidambar styraciflua	X		
tuliptree	Liriodendron tulipifera	X		
blackgum	Nyssa sylvatica	X		
white oak	Quercus alba	X		
northern red oak	Quercus rubra	X		
black oak	Quercus velutina	X		
white ash	Fraxinus americana	X		
Norway maple	Acer platanoides	X		
black cherry	Prunus serotina	X		
black walnut	Juglans nigra	X		
black locust	Robinia pseudoacacia	X		
pin oak	Quercus palustris	X		
hackberry	Celtis	X		
pignut hickory	Carya glabra	X		
Counts		17	0	0

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 10:26

User defined vegetation tables

stand 1, Inventory, 2023

Species common name X Dbh Table for Stems/area (stems/ac.)

Description: The cell values are 'Stems Per Unit Area' (stems per acre). Display 2 places after the decimal point. The values come from overstory observations (alive and dead, Crop, AGS and UGS) and understory observations (alive and dead, Crop, AGS and UGS). The table rows are 'DBH', sorted in ascending order. The row footings are row sum. The table columns are 'Species (Common Name)', sorted by the sum of the cell values (largest to smallest). The column footings are column sum.

dbh	sweetgum	northern red oak	red maple	sweet birch	pignut hickory	black oak	American beech	blackgum	pin oak	Norway maple	white oak	black cherry	white ash	hackberry	black locust	black walnut	tuliptree	row sum
<1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.0-3.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.0-5.0	5.96	0.00	11.92	0.00	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.84
5.0-7.0	94.17	109.43	7.95	2.65	0.00	5.30	2.65	2.65	0.00	2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	227.44
7.0-9.0	1.49	1.49	7.45	2.98	0.00	0.00	0.00	0.00	0.00	0.00	1.49	1.49	0.00	0.00	0.00	0.00	0.00	16.39
9.0-11.0	6.67	0.95	5.72	1.91	0.00	0.00	0.95	0.95	0.95	0.00	0.00	0.00	0.00	0.95	0.00	0.00	0.00	19.07
11.0-13.0	8.61	1.99	3.97	3.97	0.00	0.00	0.66	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00	19.86
13.0-15.0	12.16	1.46	3.89	3.41	0.49	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.89
15.0-17.0	8.19	2.23	1.49	0.37	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.37	0.37	0.00	0.37	0.00	0.00	14.15
17.0-19.0	4.71	1.47	0.29	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	0.00	7.65
19.0-21.0	6.20	0.95	0.48	0.00	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.10
21.0-23.0	3.35	1.97	0.39	0.00	0.20	0.20	0.00	0.00	0.39	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	6.70
23.0-25.0	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
25.0-27.0	0.14	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
27.0-29.0	0.00	0.24	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
29.0-31.0	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
31.0-33.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.09
33.0-35.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35.0-37.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37.0-39.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07
column sum	151.98	122.87	43.69	15.87	6.88	5.85	4.26	3.60	2.74	2.65	2.35	1.86	0.96	0.95	0.37	0.09	0.07	367.07

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 07:51

Timber Tables

stand 1, Inventory, 2023

Only observations that are greater than or equal to 1.0, and whose species growth form is "Tree" are used. Dead observations are not included when calculating values in this report.

There are no tree observations in any of the understory plots. Understory tables, and combined tables can not be generated.

Composition

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	northern red oak (*Quercus rubra*)	red maple (*Acer rubrum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	black oak (*Quercus velutina*)	pignut hickory (*Carya glabra*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	blackgum (*Nyssa sylvatica*)	black cherry (*Prunus serotina*)	Norway maple (*Acer platanoides*)	hackberry (*Celtis*)	black locust (*Robinia pseudoacacia*)	black walnut (*Juglans nigra*)	tuliptree (*Liriodendron tulipifera*)
Basal area (sq.ft./ac.)	164.8	81.1	35.9	20.8	10.9	3.6	2.6	2.1	1.6	1.6	1.0	1.0	0.5	0.5	0.5	0.5	0.5
Percent of stand basal area (%)	100.0	49.2	21.8	12.6	6.6	2.2	1.6	1.3	0.9	0.9	0.6	0.6	0.3	0.3	0.3	0.3	0.3
Stems/area (stems/ac.)	366.1	152.0	122.9	43.7	15.9	2.7	5.9	6.9	4.3	2.3	3.6	1.9	2.6	1.0	0.4	0.1	0.1

Diameters

Merchantable Medial DBH and Merchantable Quadratic DBH only include observations where DBH is greater than 5.5 inches

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	northern red oak (*Quercus rubra*)	red maple (*Acer rubrum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	black oak (*Quercus velutina*)	pignut hickory (*Carya glabra*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	blackgum (*Nyssa sylvatica*)	black cherry (*Prunus serotina*)	Norway maple (*Acer platanoides*)	hackberry (*Celtis*)	black locust (*Robinia pseudoacacia*)	black walnut (*Juglans nigra*)	tuliptree (*Liriodendron tulipifera*)
Medial DBH (in.)	14.1	14.9	13.3	12.6	12.6	17.7	16.4	15.0	9.3	14.0	8.0	12.0	6.0	10.0	16.0	32.0	38.0
Merchantable Medial DBH (in.)	16.1	16.8	19.0	13.0	12.6	17.7	16.4	18.7	9.3	14.0	8.0	12.0	6.0	10.0	16.0	32.0	38.0
Quadratic Mean DBH (in.)	9.1	9.9	7.3	9.3	11.2	15.6	9.0	7.4	8.2	11.0	7.3	10.1	6.0	10.0	16.0	32.0	38.0

Merchantable Quadratic DBH (in.)	13.1	15.1	15.6	10.7	11.2	15.6	9.0	17.6	8.2	11.0	7.3	10.1	6.0	10.0	16.0	32.0	38.0
Mean DBH (in.)	7.8	8.4	6.2	8.4	10.8	14.9	7.6	5.8	7.8	10.3	7.1	9.6	6.0	10.0	16.0	32.0	38.0

Structure

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	northern red oak (*Quercus rubra*)	red maple (*Acer rubrum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	black oak (*Quercus velutina*)	pignut hickory (*Carya glabra*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	blackgum (*Nyssa sylvatica*)	black cherry (*Prunus serotina*)	Norway maple (*Acer platanoides*)	hackberry (*Celtis*)	black locust (*Robinia pseudoacacia*)	black walnut (*Juglans nigra*)	tuliptree (*Liriodendron tulipifera*)
Q Factor	1.24	1.14	1.16	1.24	1.16	1.11	1.20	1.21	1.26	1.15	1.29	1.19	0.00	0.00	0.00	0.00	0.00

Calculations used one inch dbh size classes.

Relative Density

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	northern red oak (*Quercus rubra*)	red maple (*Acer rubrum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	black oak (*Quercus velutina*)	pignut hickory (*Carya glabra*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	blackgum (*Nyssa sylvatica*)	black cherry (*Prunus serotina*)	Norway maple (*Acer platanoides*)	hackberry (*Celtis*)	black locust (*Robinia pseudoacacia*)	black walnut (*Juglans nigra*)	tuliptree (*Liriodendron tulipifera*)
Relative density (%/ac.)	116.4	50.0	33.4	13.6	6.8	2.9	2.2	1.8	1.3	1.3	0.8	0.5	0.4	0.4	0.3	0.5	0.1
Percent of stand (%)	100.0	43.0	28.7	11.7	5.8	2.5	1.9	1.6	1.2	1.1	0.7	0.4	0.4	0.3	0.2	0.4	0.1

Volumes

The boardfoot volumes were calculated using the 'Scrivani-Wiant' equation with the 'International 1/4 inch' log rule.

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	northern red oak (*Quercus rubra*)	red maple (*Acer rubrum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	black oak (*Quercus velutina*)	pignut hickory (*Carya glabra*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	blackgum (*Nyssa sylvatica*)	black cherry (*Prunus serotina*)	Norway maple (*Acer platanoides*)	hackberry (*Celtis*)	black locust (*Robinia pseudoacacia*)	black walnut (*Juglans nigra*)	tuliptree (*Liriodendron tulipifera*)
Gross sawtimber volume (bd.ft./ac.)	9,269	5,744	2,123	217	413	116	195	154	0	93	0	0	0	0	53	74	87
Net sawtimber volume (bd.ft./ac.)	9,269	5,744	2,123	217	413	116	195	154	0	93	0	0	0	0	53	74	87

Gross pulpwood volume (cords/ac.)	26	12	3	6	2	1	0	0	0	0	0	0	0	0	0	0	0
Net pulpwood volume (cords/ac.)	21	9	3	4	2	1	0	0	0	0	0	0	0	0	0	0	0
Gross total volume (cords/ac.)	44	23	7	6	3	1	1	1	0	0	0	0	0	0	0	0	0
Net total volume (cords/ac.)	35	18	6	5	2	1	1	0	0	0	0	0	0	0	0	0	0

Values

Overstory only

	All species	**sweetgum (*Liquidambar styraciflua*)**	**northern red oak (*Quercus rubra*)**	**red maple (*Acer rubrum*)**	**sweet birch (*Betula lenta*)**	**pin oak (*Quercus palustris*)**	**black oak (*Quercus velutina*)**	**pignut hickory (*Carya glabra*)**	**American beech (*Fagus grandifolia*)**	**white oak (*Quercus alba*)**	**blackgum (*Nyssa sylvatica*)**	**black cherry (*Prunus serotina*)**	**Norway maple (*Acer platanoides*)**	**hackberry (*Celtis*)**	**black locust (*Robinia pseudoacacia*)**	**black walnut (*Juglans nigra*)**	**tuliptree (*Liriodendron tulipifera*)**
Sawlog value ($/ac.)	770.71	68.93	636.96	16.24	4.96	1.40	5.86	1.85	0.00	27.79	0.00	0.00	0.00	0.00	0.63	0.89	5.21
Pulpwood value ($/ac.)	19.37	12.60	4.07	0.40	1.11	0.21	0.26	0.27	0.00	0.21	0.00	0.00	0.00	0.00	0.09	0.09	0.07
Timber value ($/ac.)	790.08	81.53	641.02	16.64	6.07	1.60	6.12	2.12	0.00	28.00	0.00	0.00	0.00	0.00	0.72	0.98	5.28

Biomass

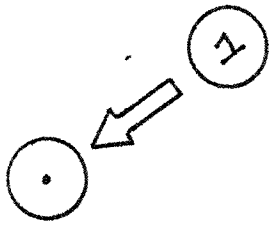
Overstory only

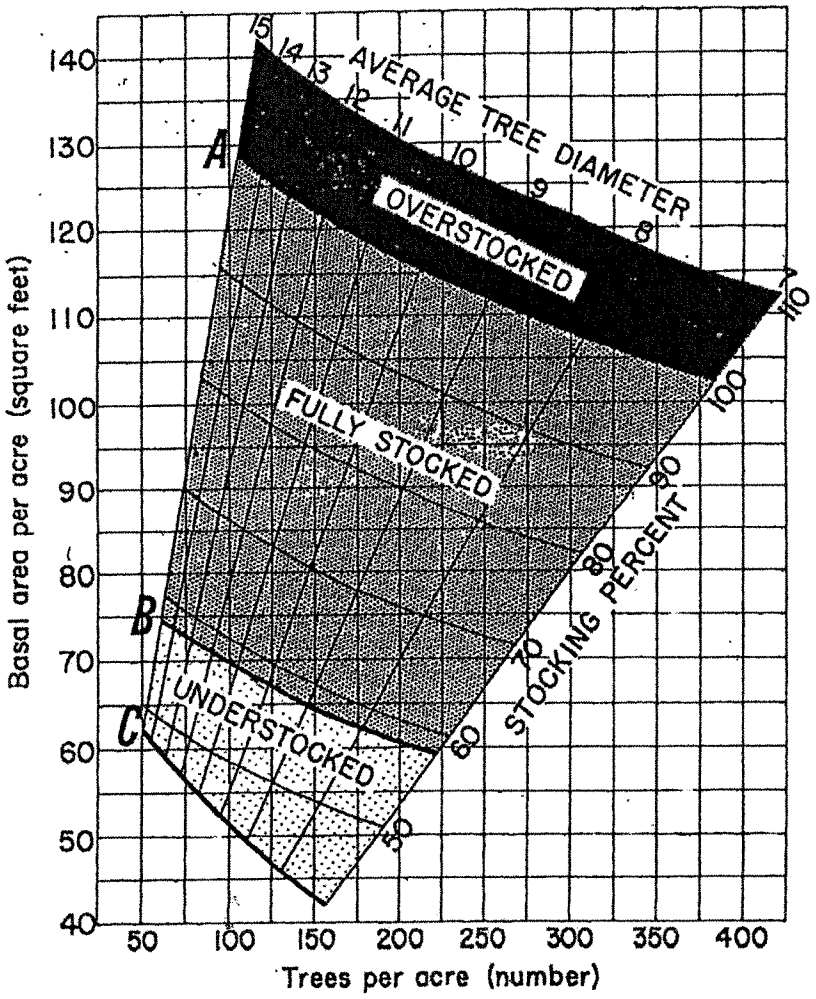
	All species	**sweetgum (*Liquidambar styraciflua*)**	**northern red oak (*Quercus rubra*)**	**red maple (*Acer rubrum*)**	**sweet birch (*Betula lenta*)**	**pin oak (*Quercus palustris*)**	**black oak (*Quercus velutina*)**	**pignut hickory (*Carya glabra*)**	**American beech (*Fagus grandifolia*)**	**white oak (*Quercus alba*)**	**blackgum (*Nyssa sylvatica*)**	**black cherry (*Prunus serotina*)**	**Norway maple (*Acer platanoides*)**	**hackberry (*Celtis*)**	**black locust (*Robinia pseudoacacia*)**	**black walnut (*Juglans nigra*)**	**tuliptree (*Liriodendron tulipifera*)**
Foliage biomass (tons/ac.)	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stem biomass (tons/ac.)	69	32	17	8	5	2	1	1	1	1	0	0	0	0	0	0	0
Branch biomass (tons/ac.)	26	11	7	3	2	1	0	0	0	0	0	0	0	0	0	0	0

Bark biomass (tons/ac.)	14	6	3	2	1	0	0	0	0	0	0	0	0	0	0	0	(
Aboveground biomass (tons/ac.)	111	50	27	14	7	3	2	2	1	1	0	1	0	0	0	0	-
Root biomass (tons/ac.)	21	9	5	3	1	1	0	0	0	0	0	0	0	0	0	0	(
Total biomass (tons/ac.)	132	60	33	17	9	4	3	2	1	1	1	1	0	0	0	1	-

UPLAND CENTRAL HARDWOOD

STOCKING GUIDE





File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 07:55

Identification Data

stand 2, Inventory, 2023

Identification and Location

Variable	Value
Stand Name	stand 2
Date Inventory was Taken	10/24/2023

Site Measures

Variable	Value
Stand Area (ac.)	1.0
Plot Cluster Count (count)	1
Canopy Closure (%)	88
Trees Per Unit Area (stems/ac.)	162.70
Number of Plot Size Classes (count)	1
Basal Area (sq.ft./ac.)	148.5
Relative Density (%)	88
Shrub layer cover (% cover)	0.0
Ground layer cover (% cover)	0.0

Stand Characteristics

Variable	Value
Land Cover Type	Mixed Coniferous/Broadleaf forest
Forest Type	mesic mixed pine-hardwoods
Site Index Species	sweetgum
Site Index	60
Size Class	large sawtimber
Year of Origin (year)	1916

Features

Variable	Value

Percent Area Riparian (% cover)	0.0
Percent Area Wetland (% cover)	0.0
Streams	absent
Percent Open Plots (% plots)	0
Contains a Wetland	absent
Contains a Riparian	absent
Old Growth	no
Rare Plant Species Present	absent
Exotic Plant Species Present	present

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 07:56

Species List

stand 2, Inventory, 2023

Species	Latin	Overstory	Understory	Transect
red maple	Acer rubrum	X		
sweet birch	Betula lenta	X		
American beech	Fagus grandifolia	X		
sweetgum	Liquidambar styraciflua	X		
tuliptree	Liriodendron tulipifera	X		
blackgum	Nyssa sylvatica	X		
white oak	Quercus alba	X		
chestnut oak	Quercus montana	X		
northern red oak	Quercus rubra	X		
black oak	Quercus velutina	X		
sassafras	Sassafras albidum	X		
white ash	Fraxinus americana	X		
Norway maple	Acer platanoides	X		
black cherry	Prunus serotina	X		
sweet cherry	Prunus avium	X		
black locust	Robinia pseudoacacia	X		
silver maple	Acer saccharinum	X		
pin oak	Quercus palustris	X		
shagbark hickory	Carya ovata	X		
eastern white pine	Pinus strobus	X		
pignut hickory	Carya glabra	X		
bigtooth aspen	Populus grandidentata	X		
American hornbeam	Carpinus caroliniana	X		
Counts		23	0	0

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 10:52

User defined vegetation tables

stand 2, Inventory, 2023

Species common name X Dbh Table for Stems/area (stems/ac.)

Description: The cell values are 'Stems Per Unit Area' (stems per acre). Display 2 places after the decimal point. The values come from overstory observations (alive and dead, Crop, AGS and UGS) and understory observations (alive and dead, Crop, AGS and UGS). The table rows are 'DBH', sorted in ascending order. The row footings are row sum. The table columns are 'Species (Common Name)', sorted by the sum of the cell values (largest to smallest). The column footings are column sum.

dbh	red maple	sweetgum	blackgum	northern red oak	American beech	American hornbeam	Norway maple	black cherry	sweet cherry	tuliptree	sassafras	silver maple	black locust	pignut hickory	white ash	sweet birch	shagbark hickory	e w p
<1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.0-3.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3.0-5.0	20.63	0.00	5.16	0.00	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5.0-7.0	11.46	0.00	0.00	0.00	0.00	0.00	2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7.0-9.0	7.73	6.45	1.29	0.00	0.00	0.00	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9.0-11.0	10.73	4.95	0.00	0.83	0.00	0.00	0.00	0.00	0.83	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00	
11.0-13.0	3.44	6.30	0.57	0.57	1.72	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.57	0.57	
13.0-15.0	5.47	5.89	0.42	1.26	0.00	0.00	0.00	0.84	0.42	0.42	0.00	0.00	0.42	0.00	0.00	0.00	0.00	
15.0-17.0	3.87	9.35	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.32	0.00	0.32	0.00	0.00	
17.0-19.0	1.78	9.42	0.00	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.00	
19.0-21.0	0.83	4.74	0.00	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
21.0-23.0	0.17	4.60	0.00	0.51	0.00	0.00	0.00	0.17	0.17	0.17	0.00	0.17	0.00	0.00	0.17	0.00	0.00	
23.0-25.0	0.14	3.01	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.29	0.00	0.14	0.00	0.00	0.00	
25.0-27.0	0.00	0.85	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.00	0.12	0.00	0.00	
27.0-29.0	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	
29.0-31.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
31.0-33.0	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
33.0-35.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
35.0-37.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
column sum	66.25	55.57	7.44	7.15	6.88	5.16	3.58	1.59	1.42	1.35	1.08	1.01	1.00	0.72	0.61	0.57	0.57	

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 07:56

Timber Tables

stand 2, Inventory, 2023

Only observations that are greater than or equal to 1.0, and whose species growth form is "Tree" are used. Dead observations are not included when calculating values in this report.

There are no tree observations in any of the understory plots. Understory tables, and combined tables can not be generated.

Composition

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	red maple (*Acer rubrum*)	northern red oak (*Quercus rubra*)	tuliptree (*Liriodendron tulipifera*)	silver maple (*Acer saccharinum*)	blackgum (*Nyssa sylvatica*)	American beech (*Fagus grandifolia*)	black cherry (*Prunus serotina*)	sweet cherry (*Prunus avium*)	black locust (*Robinia pseudoacacia*)	pin oak (*Quercus palustris*)	Norway maple (*Acer platanoides*)	sassafras (*Sassafras albidum*)	pignut hickory (*Carya glabra*)	eastern white pine (*Pinus strobus*)	American hornbeam (*Carpinus caroliniana*)	sweet birch (*Betula lenta*)	shagbark hickory (*Carya ovata*)	chestnut oak (*Quercus montana*)	black oak (*Quercus velutina*)	white oak (*Quercus alba*)
Basal area (sq.ft./ac.)	148.5	81.0	32.4	12.6	4.1	2.7	1.8	1.8	1.8	1.4	1.4	1.4	0.9	0.9	0.9	0.9	0.5	0.5	0.5	0.5	0.5	0.5
Percent of stand basal area (%)	100.0	54.5	21.8	8.5	2.7	1.8	1.2	1.2	1.2	0.9	0.9	0.9	0.6	0.6	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3
Stems/area (stems/ac.)	162.7	55.6	66.2	6.8	1.3	1.0	7.4	6.9	1.6	1.4	1.0	0.5	3.6	1.1	0.7	0.5	5.2	0.6	0.6	0.4	0.1	0.1

Diameters

Merchantable Medial DBH and Merchantable Quadratic DBH only include observations where DBH is greater than 5.5 inches

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	red maple (*Acer rubrum*)	northern red oak (*Quercus rubra*)	tuliptree (*Liriodendron tulipifera*)	silver maple (*Acer saccharinum*)	blackgum (*Nyssa sylvatica*)	American beech (*Fagus grandifolia*)	black cherry (*Prunus serotina*)	sweet cherry (*Prunus avium*)	black locust (*Robinia pseudoacacia*)	pin oak (*Quercus palustris*)	Norway maple (*Acer platanoides*)	sassafras (*Sassafras albidum*)	pignut hickory (*Carya glabra*)	eastern white pine (*Pinus strobus*)	American hornbeam (*Carpinus caroliniana*)	sweet birch (*Betula lenta*)	shagbark hickory (*Carya ovata*)	chestnut oak (*Quercus montana*)	black oak (*Quercus velutina*)	white oak (*Quercus alba*)
Medial DBH (in.)	17.3	18.3	12.8	20.9	26.4	23.3	9.5	10.0	15.5	15.3	16.0	22.7	7.0	14.0	18.0	20.0	4.0	12.0	12.0	14.0	24.0	34.0
Merchantable Medial DBH (in.)	17.6	18.3	13.3	20.9	26.4	23.3	11.3	12.0	15.5	15.3	16.0	22.7	7.0	14.0	18.0	20.0	0.0	12.0	12.0	14.0	24.0	34.0
Quadratic Mean DBH (in.)	12.9	16.3	9.5	18.4	23.5	22.2	6.7	6.9	14.4	13.2	15.7	21.6	6.8	12.4	15.2	17.4	4.0	12.0	12.0	14.0	24.0	34.0
Merchantable Quadratic DBH (in.)	14.5	16.3	11.1	18.4	23.5	22.2	10.4	12.0	14.4	13.2	15.7	21.6	6.8	12.4	15.2	17.4	0.0	12.0	12.0	14.0	24.0	34.0
Mean DBH (in.)	11.4	15.6	8.4	17.6	22.4	21.8	5.9	6.0	14.1	12.6	15.7	21.3	6.7	11.9	14.4	16.7	4.0	12.0	12.0	14.0	24.0	34.0

Structure

Overstory only

	All species	sweetgum (*Liquidambar*	red maple	northern red oak	tuliptree (*Liriodendron*	silver maple (*Acer*	blackgum (*Nyssa*	American beech	black cherry	sweet cherry	black locust (*Robinia*	pin oak (*Quercus*	Norway maple (*Acer*	sassafras (*Sassafras*	pignut hickory	eastern white	American hornbeam	sweet birch	shagbark hickory	chestnut oak	black oak	white oak

		styraciflua)	(Acer rubrum)	(Quercus rubra)	tulipifera)	saccharinum)	sylvatica)	(Fagus grandifolia)	(Prunus serotina)	(Prunus avium)	pseudoacacia)	palustris)	platanoides)	albidum)	(Carya glabra)	pine (Pinus strobus)	(Carpinus caroliniana)	(Betula lenta)	(Carya ovata)	(Quercus montana)	(Quercus velutina)	(Quercus alba)
Q Factor	1.20	1.08	1.27	1.09	1.08	1.09	1.28	1.15	1.15	1.14	1.13	1.09	1.33	1.16	1.12	1.11	0.00	0.00	0.00	0.00	0.00	0.00

Calculations used one inch dbh size classes.

Relative Density

Overstory only

	All species	sweetgum (Liquidambar styraciflua)	red maple (Acer rubrum)	northern red oak (Quercus rubra)	tuliptree (Liriodendron tulipifera)	silver maple (Acer saccharinum)	blackgum (Nyssa sylvatica)	American beech (Fagus grandifolia)	black cherry (Prunus serotina)	sweet cherry (Prunus avium)	black locust (Robinia pseudoacacia)	pin oak (Quercus palustris)	Norway maple (Acer platanoides)	sassafras (Sassafras albidum)	pignut hickory (Carya glabra)	eastern white pine (Pinus strobus)	American hornbeam (Carpinus caroliniana)	sweet birch (Betula lenta)	shagbark hickory (Carya ovata)	chestnut oak (Quercus montana)	black oak (Quercus velutina)	white oak (Quercus alba)
Relative density (%/ac.)	87.8	43.0	20.9	10.8	1.2	1.3	1.4	1.6	0.7	0.8	0.7	1.0	0.7	0.5	0.7	0.3	0.5	0.3	0.4	0.4	0.3	0.3
Percent of stand (%)	100.0	49.0	23.8	12.3	1.3	1.5	1.6	1.8	0.8	0.9	0.8	1.2	0.8	0.6	0.8	0.3	0.6	0.3	0.4	0.4	0.4	0.4

Volumes

The boardfoot volumes were calculated using the 'Scrivani-Wiant' equation with the 'International 1/4 inch' log rule.

Overstory only

	All species	sweetgum (Liquidambar styraciflua)	red maple (Acer rubrum)	northern red oak (Quercus rubra)	tuliptree (Liriodendron tulipifera)	silver maple (Acer saccharinum)	blackgum (Nyssa sylvatica)	American beech (Fagus grandifolia)	black cherry (Prunus serotina)	sweet cherry (Prunus avium)	black locust (Robinia pseudoacacia)	pin oak (Quercus palustris)	Norway maple (Acer platanoides)	sassafras (Sassafras albidum)	pignut hickory (Carya glabra)	eastern white pine (Pinus strobus)	American hornbeam (Carpinus caroliniana)	sweet birch (Betula lenta)	shagbark hickory (Carya ovata)	chestnut oak (Quercus montana)	black oak (Quercus velutina)	white oak (Quercus alba)
Gross sawtimber volume (bd.ft./ac.)	10,254	7,295	320	1,361	528	60	0	0	87	0	95	119	0	0	83	116	0	0	32	40	58	61
Net sawtimber volume (bd.ft./ac.)	10,254	7,295	320	1,361	528	60	0	0	87	0	95	119	0	0	83	116	0	0	32	40	58	61
Gross pulpwood volume (cords/ac.)	29	14	9	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net pulpwood volume (cords/ac.)	23	11	7	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gross total volume (cords/ac.)	49	28	9	4	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Net total volume (cords/ac.)	39	22	8	4	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Values

Overstory only

	All species	sweetgum (Liquidambar styraciflua)	red maple (Acer rubrum)	northern red oak (Quercus rubra)	tuliptree (Liriodendron tulipifera)	silver maple (Acer saccharinum)	blackgum (Nyssa sylvatica)	American beech (Fagus grandifolia)	black cherry (Prunus serotina)	sweet cherry (Prunus avium)	black locust (Robinia pseudoacacia)	pin oak (Quercus palustris)	Norway maple (Acer platanoides)	sassafras (Sassafras albidum)	pignut hickory (Carya glabra)	eastern white pine	American hornbeam (Carpinus caroliniana)	sweet birch (Betula lenta)	shagbark hickory (Carya ovata)	chestnut oak (Quercus montana)	black oak (Quercus velutina)	white oak (Quercus alba)

																(*Pinus strobus*)						
Sawlog value ($/ac.)	613.91	87.54	23.97	408.43	31.66	0.71	0.00	0.00	34.97	0.00	1.14	1.43	0.00	0.00	1.00	1.39	0.00	0.00	0.38	1.19	1.73	18.36
Pulpwood value ($/ac.)	18.54	13.88	0.61	2.37	0.46	0.08	0.00	0.00	0.19	0.00	0.16	0.17	0.00	0.00	0.16	0.13	0.00	0.00	0.08	0.09	0.08	0.08
Timber value ($/ac.)	632.44	101.41	24.58	410.80	32.13	0.80	0.00	0.00	35.16	0.00	1.30	1.60	0.00	0.00	1.16	1.52	0.00	0.00	0.47	1.29	1.80	18.44

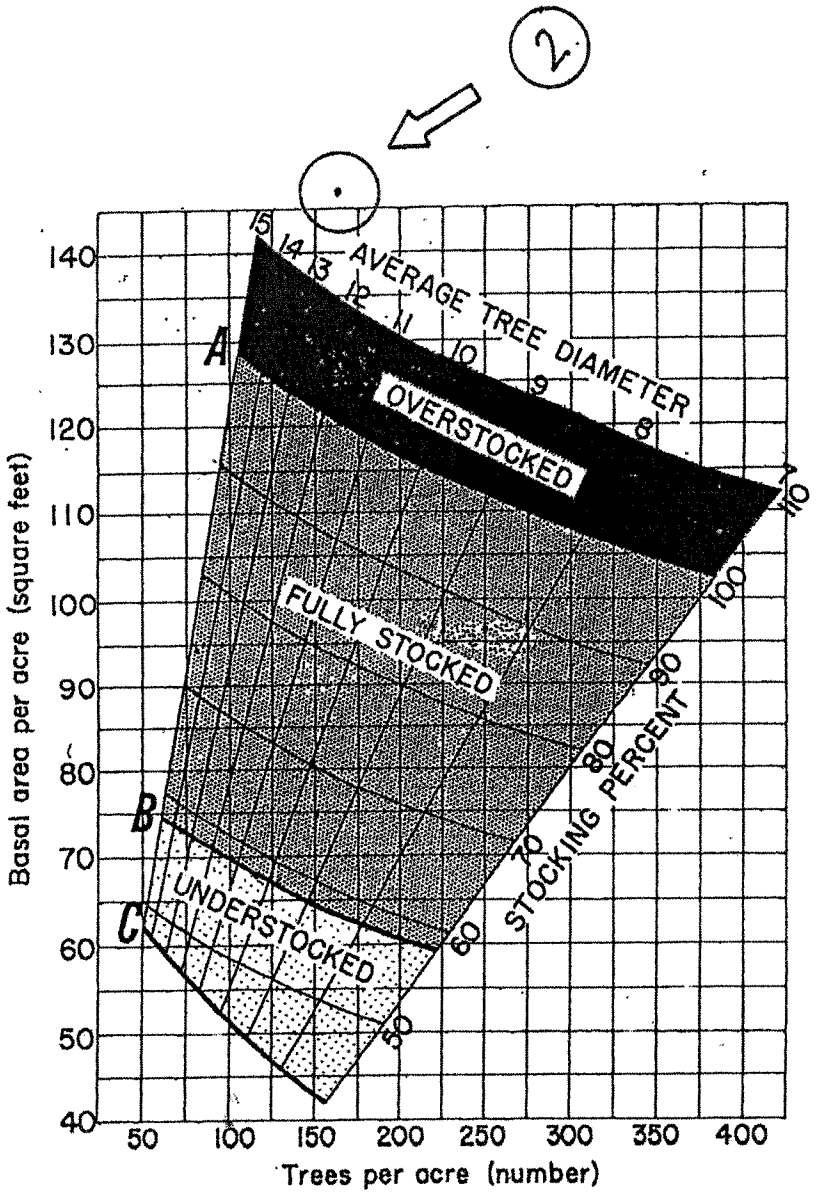
Biomass

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	red maple (*Acer rubrum*)	northern red oak (*Quercus rubra*)	tuliptree (*Liriodendron tulipifera*)	silver maple (*Acer saccharinum*)	blackgum (*Nyssa sylvatica*)	American beech (*Fagus grandifolia*)	black cherry (*Prunus serotina*)	sweet cherry (*Prunus avium*)	black locust (*Robinia pseudoacacia*)	pin oak (*Quercus palustris*)	Norway maple (*Acer platanoides*)	sassafras (*Sassafras albidum*)	pignut hickory (*Carya glabra*)	eastern white pine (*Pinus strobus*)	American hornbeam (*Carpinus caroliniana*)	sweet birch (*Betula lenta*)	shagbark hickory (*Carya ovata*)	chestnut oak (*Quercus montana*)	black oak (*Quercus velutina*)	white oak (*Quercus alba*)
Foliage biomass (tons/ac.)	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stem biomass (tons/ac.)	68	37	13	8	2	2	1	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0
Branch biomass (tons/ac.)	22	11	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bark biomass (tons/ac.)	14	7	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aboveground biomass (tons/ac.)	106	56	22	12	3	2	1	1	1	0	1	1	0	1	1	1	0	0	0	0	0	1
Root biomass (tons/ac.)	20	11	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total biomass (tons/ac.)	125	67	26	14	4	3	1	1	1	0	1	2	0	1	1	1	0	0	0	0	1	1

UPLAND CENTRAL HARDWOOD

STOCKING GUIDE



File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 07:59

Identification Data

stand 3, Inventory, 2023

Identification and Location

Variable	Value
Stand Name	stand 3
Date Inventory was Taken	10/25/2023

Site Measures

Variable	Value
Stand Area (ac.)	1.0
Plot Cluster Count (count)	1
Canopy Closure (%)	77
Trees Per Unit Area (stems/ac.)	185.50
Number of Plot Size Classes (count)	1
Basal Area (sq.ft./ac.)	133.0
Relative Density (%)	77
Shrub layer cover (% cover)	0.0
Ground layer cover (% cover)	0.0

Stand Characteristics

Variable	Value
Land Cover Type	Mixed Coniferous/Broadleaf forest
Forest Type	mesic mixed pine-hardwoods
Site Index Species	sweetgum
Site Index	60
Size Class	small sawtimber
Year of Origin (year)	1919

Features

Variable	Value

Percent Area Riparian (% cover)	0.0
Percent Area Wetland (% cover)	0.0
Streams	absent
Percent Open Plots (% plots)	0
Contains a Wetland	absent
Contains a Riparian	absent
Old Growth	no
Rare Plant Species Present	absent
Exotic Plant Species Present	present

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 08:01

Species List

stand 3, Inventory, 2023

Species	Latin	Overstory	Understory	Transect
red maple	Acer rubrum	X		
sweet birch	Betula lenta	X		
American beech	Fagus grandifolia	X		
sweetgum	Liquidambar styraciflua	X		
tuliptree	Liriodendron tulipifera	X		
blackgum	Nyssa sylvatica	X		
white oak	Quercus alba	X		
sassafras	Sassafras albidum	X		
Norway maple	Acer platanoides	X		
black cherry	Prunus serotina	X		
silver maple	Acer saccharinum	X		
pin oak	Quercus palustris	X		
shagbark hickory	Carya ovata	X		
Counts		13	0	0

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 11:48

User defined vegetation tables

stand 3, Inventory, 2023

Species common name X Dbh Table for Stems/area (stems/ac.)

Description: The cell values are 'Stems Per Unit Area' (stems per acre). Display 2 places after the decimal point. The values come from overstory observations (alive and dead, Crop, AGS and UGS) and understory observations (alive and dead, Crop, AGS and UGS). The table rows are 'DBH', sorted in ascending order. The row footings are row sum. The table columns are 'Species (Common Name)', sorted by the sum of the cell values (largest to smallest). The column footings are column sum.

dbh	red maple	sweetgum	blackgum	shagbark hickory	American beech	black cherry	Norway maple	sassafras	white oak	sweet birch	tuliptree	pin oak	silver maple	row sum
<1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.0-3.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.0-5.0	22.92	0.00	22.92	11.46	11.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.75
5.0-7.0	5.09	5.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.19
7.0-9.0	14.32	0.00	0.00	2.86	0.00	0.00	5.73	0.00	0.00	0.00	0.00	0.00	0.00	22.92
9.0-11.0	5.50	1.83	0.00	0.00	0.00	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.17
11.0-13.0	2.55	8.91	0.00	0.00	0.00	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.28
13.0-15.0	4.68	11.23	0.00	0.00	0.94	0.94	1.87	0.94	0.00	0.00	0.00	0.00	0.00	20.58
15.0-17.0	4.30	6.45	0.00	1.43	0.00	0.72	0.00	0.00	0.00	0.72	0.00	0.00	0.00	13.61
17.0-19.0	1.70	7.92	0.00	0.57	0.00	0.57	0.00	0.00	0.57	0.00	0.00	0.00	0.00	11.32
19.0-21.0	0.46	4.13	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.04
21.0-23.0	0.76	3.03	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.17
23.0-25.0	0.32	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.91
25.0-27.0	0.00	0.81	0.00	0.00	0.00	0.27	0.00	0.00	0.27	0.00	0.00	0.27	0.00	1.63
27.0-29.0	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
29.0-31.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31.0-33.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18
33.0-35.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
35.0-37.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
column sum	62.82	51.23	22.92	16.32	12.39	8.98	7.60	0.94	0.84	0.72	0.30	0.27	0.18	185.50

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 08:01

Timber Tables

stand 3, Inventory, 2023

Only observations that are greater than or equal to 1.0, and whose species growth form is "Tree" are used. Dead observations are not included when calculating values in this report.

There are no tree observations in any of the understory plots. Understory tables, and combined tables can not be generated.

Composition

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	red maple (*Acer rubrum*)	black cherry (*Prunus serotina*)	shagbark hickory (*Carya ovata*)	Norway maple (*Acer platanoides*)	blackgum (*Nyssa sylvatica*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	tuliptree (*Liriodendron tulipifera*)	sassafras (*Sassafras albidum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	silver maple (*Acer saccharinum*)
Basal area (sq.ft./ac.)	133.0	70.0	32.0	10.0	5.0	4.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
Percent of stand basal area (%)	100.0	52.6	24.1	7.5	3.8	3.0	1.5	1.5	1.5	1.5	0.8	0.8	0.8	0.8
Stems/area (stems/ac.)	185.5	51.2	62.8	9.0	16.3	7.6	22.9	12.4	0.8	0.3	0.9	0.7	0.3	0.2

Diameters

Merchantable Medial DBH and Merchantable Quadratic DBH only include observations where DBH is greater than 5.5 inches

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	red maple (*Acer rubrum*)	black cherry (*Prunus serotina*)	shagbark hickory (*Carya ovata*)	Norway maple (*Acer platanoides*)	blackgum (*Nyssa sylvatica*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	tuliptree (*Liriodendron tulipifera*)	sassafras (*Sassafras albidum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	silver maple (*Acer saccharinum*)
Medial DBH (in.)	16.4	17.8	13.9	16.2	12.4	11.0	4.0	9.0	22.0	35.0	14.0	16.0	26.0	32.0
Merchantable Medial DBH (in.)	17.0	17.8	14.5	16.2	14.5	11.0	0.0	14.0	22.0	35.0	14.0	16.0	26.0	32.0
Quadratic Mean DBH (in.)	11.5	15.8	9.7	14.3	7.5	9.8	4.0	5.4	20.9	35.0	14.0	16.0	26.0	32.0
Merchantable Quadratic DBH (in.)	14.1	15.8	11.7	14.3	12.3	9.8	0.0	14.0	20.9	35.0	14.0	16.0	26.0	32.0
Mean DBH (in.)	9.8	15.1	8.4	13.8	6.2	9.5	4.0	4.8	20.6	34.9	14.0	16.0	26.0	32.0

Structure

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	red maple (*Acer rubrum*)	black cherry (*Prunus serotina*)	shagbark hickory (*Carya ovata*)	Norway maple (*Acer platanoides*)	blackgum (*Nyssa sylvatica*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	tuliptree (*Liriodendron tulipifera*)	sassafras (*Sassafras albidum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	silver maple (*Acer saccharinum*)
Q Factor	1.20	1.12	1.20	1.16	1.20	1.21	0.00	1.28	1.10	1.06	0.00	0.00	0.00	0.00

Calculations used one inch dbh size classes.

Relative Density

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	red maple (*Acer rubrum*)	black cherry (*Prunus serotina*)	shagbark hickory (*Carya ovata*)	Norway maple (*Acer platanoides*)	blackgum (*Nyssa sylvatica*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	tuliptree (*Liriodendron tulipifera*)	sassafras (*Sassafras albidum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	silver maple (*Acer saccharinum*)

Relative density (%/ac.)	77.1	37.6	20.2	3.8	4.5	2.7	2.2	1.9	1.5	0.5	0.6	0.5	0.7	0.4
Percent of stand (%)	100.0	48.8	26.2	4.9	5.8	3.5	2.8	2.4	2.0	0.6	0.7	0.7	1.0	0.6

Volumes

The boardfoot volumes were calculated using the 'Scrivani-Wiant' equation with the 'International 1/4 inch' log rule.

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	red maple (*Acer rubrum*)	black cherry (*Prunus serotina*)	shagbark hickory (*Carya ovata*)	Norway maple (*Acer platanoides*)	blackgum (*Nyssa sylvatica*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	tuliptree (*Liriodendron tulipifera*)	sassafras (*Sassafras albidum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	silver maple (*Acer saccharinum*)
Gross sawtimber volume (bd.ft./ac.)	7,783	6,568	103	273	279	0	0	0	98	326	0	0	136	0
Net sawtimber volume (bd.ft./ac.)	7,783	6,568	103	273	279	0	0	0	98	326	0	0	136	0
Gross pulpwood volume (cords/ac.)	27	11	9	3	1	1	0	0	1	0	0	0	0	0
Net pulpwood volume (cords/ac.)	22	9	7	2	1	1	0	0	0	0	0	0	0	0
Gross total volume (cords/ac.)	42	24	9	3	1	1	0	0	1	1	0	0	0	0
Net total volume (cords/ac.)	34	19	8	3	1	1	0	0	1	1	0	0	0	0

Values

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	red maple (*Acer rubrum*)	black cherry (*Prunus serotina*)	shagbark hickory (*Carya ovata*)	Norway maple (*Acer platanoides*)	blackgum (*Nyssa sylvatica*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	tuliptree (*Liriodendron tulipifera*)	sassafras (*Sassafras albidum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	silver maple (*Acer saccharinum*)
Sawlog value ($/ac.)	249.74	78.81	7.73	109.36	3.35	0.00	0.00	0.00	29.29	19.56	0.00	0.00	1.63	0.00
Pulpwood value ($/ac.)	15.34	13.60	0.19	0.38	0.52	0.00	0.00	0.00	0.20	0.26	0.00	0.00	0.19	0.00
Timber value ($/ac.)	265.08	92.42	7.93	109.73	3.87	0.00	0.00	0.00	29.49	19.82	0.00	0.00	1.82	0.00

Biomass

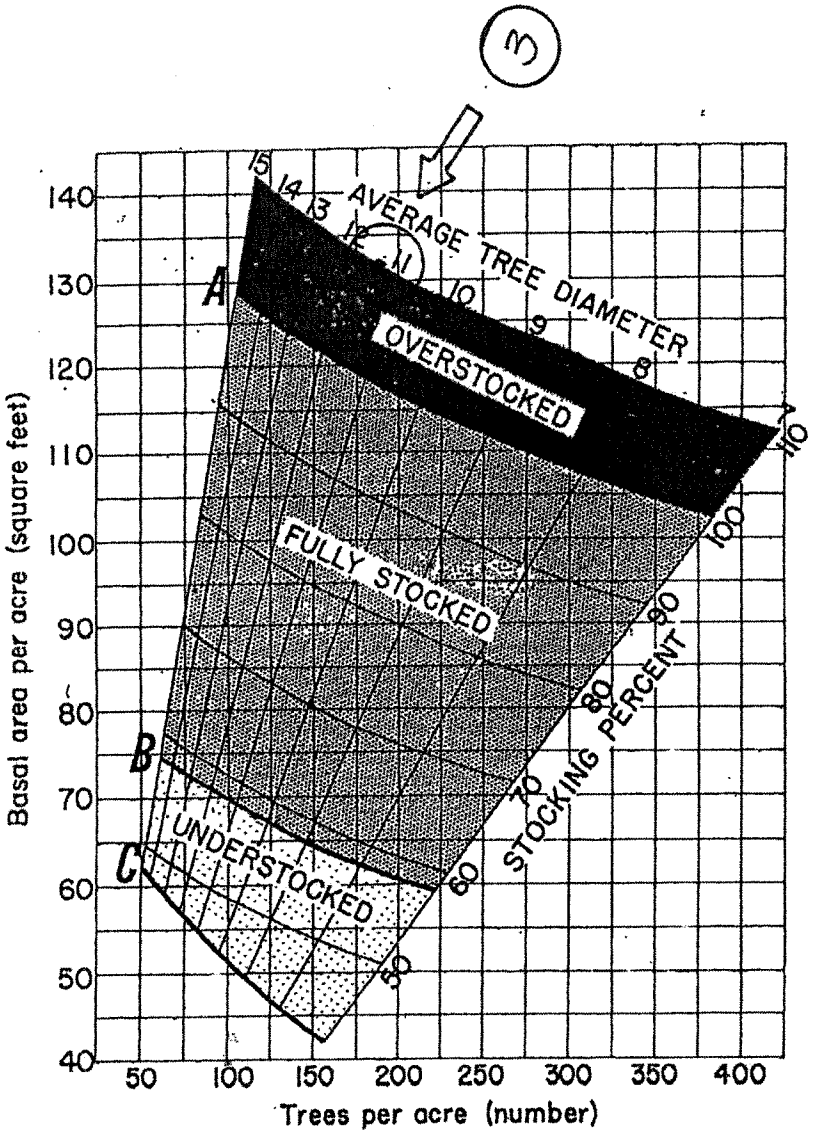
Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	red maple (*Acer rubrum*)	black cherry (*Prunus serotina*)	shagbark hickory (*Carya ovata*)	Norway maple (*Acer platanoides*)	blackgum (*Nyssa sylvatica*)	American beech (*Fagus grandifolia*)	white oak (*Quercus alba*)	tuliptree (*Liriodendron tulipifera*)	sassafras (*Sassafras albidum*)	sweet birch (*Betula lenta*)	pin oak (*Quercus palustris*)	silver maple (*Acer saccharinum*)
Foliage biomass (tons/ac.)	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Stem biomass (tons/ac.)	57	31	14	4	2	0	0	1	1	1	0	0	1	1
Branch biomass (tons/ac.)	19	10	5	1	1	0	0	0	0	0	0	0	0	0

Bark biomass (tons/ac.)	11	6	3	1	0	0	0	0	0	0	0	0	0	0
Aboveground biomass (tons/ac.)	90	48	22	7	4	0	1	1	2	2	1	1	1	1
Root biomass (tons/ac.)	17	9	4	1	1	0	0	0	0	0	0	0	0	0
Total biomass (tons/ac.)	106	57	26	8	4	0	1	2	2	2	1	1	1	1

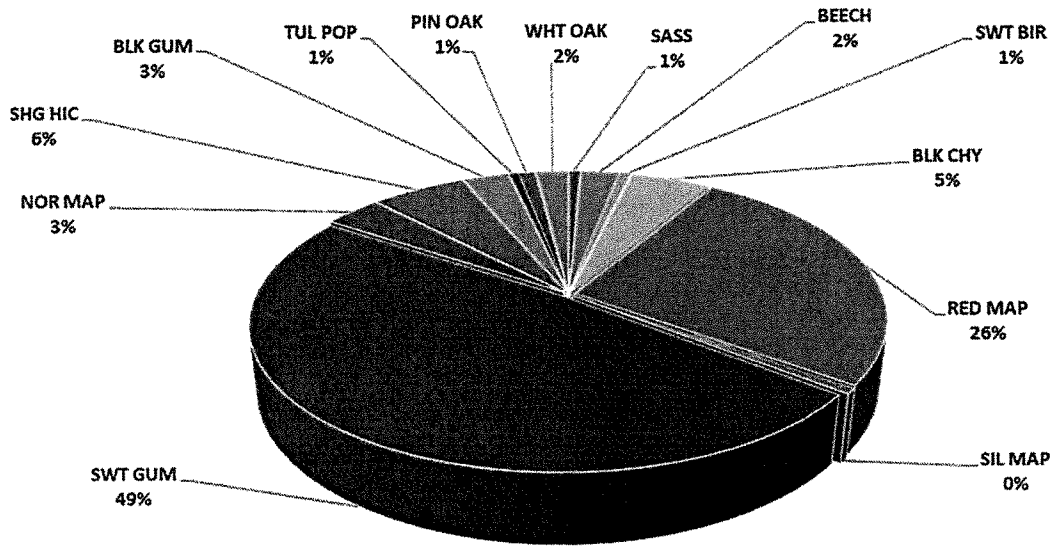
UPLAND CENTRAL HARDWOOD

STOCKING GUIDE



STAND THREE:

This maturing forest dominated by sweetgum, northern red oak, and red maple. Other inventoried species include sweet birch, pin oak, black oak, pignut hickory, American beech, white oak, blackgum, black cherry, Norway maple, hackberry, black locust, black walnut and tulip poplar. The understory is composed of a moderate to dense layer of Eastern red cedar, red maple pignut hickory white oak, beech, flowering dogwood, black oak, sweet cherry, pitch pine, blackgum, black birch, Norway maple black locust, cedar, crab apple, callery pear, Japanese zelkova, sassafras, pin oak, American holly Autum olive, highbush blueberry, running blackberry, Virginia creeper, Virginia stickweed, poison ivy, wintergreen, club moss, partridge berry burning bush, Japanese honeysuckle, black haw viburnum, arrowwood viburnum, sensitive fern, hay scented fern, cinnamon fern, green brier, hydropiper, wood aster, jack-in-the-pulpit, privet, smartweed, linden viburnum, myrtle, oriental bittersweet, Japanese stiltgrass, sweetpepper bush, foxgrape, grasses, Pennsylvania sedge, common reed, garlic mustard, moss, multiflora rose, Japanese barberry, and spicebush. The various seedlings found within the stand are sweetgum, white pine, red oak, black oak, white oak, swamp white oak, maples, and white ash. This stand is located on sandy loam of Freehold and Holmdel series soils.



(When the data in the pie-chart displays 0 it means that the value is less than 1, but not equal to zero)

Data generated from the inventory shows an average of 186 stems and 133 square feet of basal area per acre. Plotting this information on the ***Upland Central Hardwood Stocking Guide*** reveals that this stand is at a high level of overstocked stocking, at 110%. Relative density is 77%. The diameter distribution of trees, measured at a height of 4.5 feet above the forest floor, ranges from 4 to 38inches. The average diameter is 11.5 inches. The estimated site index is 60 for sweetgum. Tree heights are approximately 90 feet tall, in places. This stand is estimated to be between 66-70 years old. Trees yield an average volume of 7,783 board-feet to the acre, and 34 cords to the acre. Trees in this stand are of moderate quality and condition. The growth rate is estimated to be 0.68 cords/acre/year and 156 board-feet/acre/year.

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 08:03

Identification Data

stand 4, Inventory, 2023

Identification and Location

Variable	Value
Stand Name	stand 4
Date Inventory was Taken	10/24/2023

Site Measures

Variable	Value
Stand Area (ac.)	1.0
Plot Cluster Count (count)	1
Canopy Closure (%)	52
Trees Per Unit Area (stems/ac.)	133.28
Number of Plot Size Classes (count)	1
Basal Area (sq.ft./ac.)	89.9
Relative Density (%)	52
Shrub layer cover (% cover)	0.0
Ground layer cover (% cover)	0.0

Stand Characteristics

Variable	Value
Land Cover Type	Forested wetland
Forest Type	bay-swamp pocosin
Site Index Species	sweetgum
Site Index	60
Size Class	small sawtimber
Year of Origin (year)	1950

Features

Variable	Value

Percent Area Riparian (% cover)	0.0
Percent Area Wetland (% cover)	0.0
Streams	absent
Percent Open Plots (% plots)	0
Contains a Wetland	absent
Contains a Riparian	absent
Old Growth	no
Rare Plant Species Present	absent
Exotic Plant Species Present	absent

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 08:04

Species List

stand 4, Inventory, 2023

Species	Latin	Overstory	Understory	Transect
red maple	Acer rubrum	X		
sweetgum	Liquidambar styraciflua	X		
black cherry	Prunus serotina	X		
eastern redcedar	Juniperus virginiana	X		
black locust	Robinia pseudoacacia	X		
eastern white pine	Pinus strobus	X		
Counts		6	0	0

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 11:48

User defined vegetation tables

stand 4, Inventory, 2023

Species common name X Dbh Table for Stems/area (stems/ac.)

Description: The cell values are 'Stems Per Unit Area' (stems per acre). Display 2 places after the decimal point. The values come from overstory observations (alive and dead, Crop, AGS and UGS) and understory observations (alive and dead, Crop, AGS and UGS). The table rows are 'DBH', sorted in ascending order. The row footings are row sum. The table columns are 'Species (Common Name)', sorted by the sum of the cell values (largest to smallest). The column footings are column sum.

dbh	eastern redcedar	red maple	black cherry	sweetgum	black locust	eastern white pine	row sum
<1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.0-3.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.0-5.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.0-7.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7.0-9.0	28.62	19.08	0.00	0.00	0.00	0.00	47.70
9.0-11.0	18.32	0.00	6.11	0.00	6.11	0.00	30.53
11.0-13.0	0.00	4.24	8.48	4.24	8.48	0.00	25.44
13.0-15.0	0.00	0.00	6.23	12.46	0.00	0.00	18.69
15.0-17.0	0.00	2.38	2.38	2.38	0.00	0.00	7.15
17.0-19.0	0.00	0.00	0.00	1.88	0.00	1.88	3.77
column sum	46.94	25.70	23.20	20.97	14.59	1.88	133.28

File name: Z:\Monmouth\Roosevelt Borough\data.NED3
File version: 3.30.1
Last saved: 11/3/2023
Report generated: 11/06/2023 08:04

Timber Tables

stand 4, Inventory, 2023

Only observations that are greater than or equal to 1.0, and whose species growth form is "Tree" are used. Dead observations are not included when calculating values in this report.

There are no tree observations in any of the understory plots. Understory tables, and combined tables can not be generated.

Composition

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	eastern redcedar (*Juniperus virginiana*)	black cherry (*Prunus serotina*)	red maple (*Acer rubrum*)	black locust (*Robinia pseudoacacia*)	eastern white pine (*Pinus strobus*)
Basal area (sq.ft./ac.)	89.9	23.3	20.0	20.0	13.3	10.0	3.3
Percent of stand basal area (%)	100.0	25.9	22.2	22.2	14.8	11.1	3.7
Stems/area (stems/ac.)	133.3	21.0	46.9	23.2	25.7	14.6	1.9

Diameters

Merchantable Medial DBH and Merchantable Quadratic DBH only include observations where DBH is greater than 5.5 inches

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	eastern redcedar (*Juniperus virginiana*)	black cherry (*Prunus serotina*)	red maple (*Acer rubrum*)	black locust (*Robinia pseudoacacia*)	eastern white pine (*Pinus strobus*)
Medial DBH (in.)	12.2	14.6	9.0	13.0	11.0	11.3	18.0
Merchantable Medial DBH (in.)	12.2	14.6	9.0	13.0	11.0	11.3	18.0
Quadratic Mean DBH (in.)	11.1	14.3	8.8	12.6	9.7	11.2	18.0
Merchantable Quadratic DBH	11.1	14.3	8.8	12.6	9.7	11.2	18.0

(in.)							
Mean DBH (in.)	10.8	14.2	8.8	12.4	9.4	11.2	18.0

Structure

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	eastern redcedar (*Juniperus virginiana*)	black cherry (*Prunus serotina*)	red maple (*Acer rubrum*)	black locust (*Robinia pseudoacacia*)	eastern white pine (*Pinus strobus*)
Q Factor	1.28	1.23	1.25	1.17	1.30	0.85	0.00

Calculations used one inch dbh size classes.

Relative Density

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	eastern redcedar (*Juniperus virginiana*)	black cherry (*Prunus serotina*)	red maple (*Acer rubrum*)	black locust (*Robinia pseudoacacia*)	eastern white pine (*Pinus strobus*)
Relative density (%/ac.)	52.4	13.3	14.4	8.3	8.9	6.4	1.1
Percent of stand (%)	100.0	25.4	27.5	15.8	17.0	12.1	2.1

Volumes

The boardfoot volumes were calculated using the 'Scrivani-Wiant' equation with the 'International 1/4 inch' log rule.

Overstory only

	All species	sweetgum (*Liquidambar styraciflua*)	eastern redcedar (*Juniperus virginiana*)	black cherry (*Prunus serotina*)	red maple (*Acer rubrum*)	black locust (*Robinia pseudoacacia*)	eastern white pine (*Pinus strobus*)
Gross sawtimber volume (bd.ft./ac.)	2,366	1,682	0	0	0	266	418
Net sawtimber volume (bd.ft./ac.)	2,366	1,682	0	0	0	266	418
Gross pulpwood volume (cords/ac.)	20	4	3	6	4	2	0

Net pulpwood volume (cords/ac.)	16	3	3	5	3	2	0
Gross total volume (cords/ac.)	25	8	3	6	4	3	1
Net total volume (cords/ac.)	20	6	3	5	3	2	1

Values

Overstory only

	All species	**sweetgum (*Liquidambar styraciflua*)**	**eastern redcedar (*Juniperus virginiana*)**	**black cherry (*Prunus serotina*)**	**red maple (*Acer rubrum*)**	**black locust (*Robinia pseudoacacia*)**	**eastern white pine (*Pinus strobus*)**
Sawlog value ($/ac.)	28.39	20.18	0.00	0.00	0.00	3.19	5.02
Pulpwood value ($/ac.)	4.90	3.86	0.00	0.00	0.00	0.58	0.46
Timber value ($/ac.)	33.29	24.04	0.00	0.00	0.00	3.77	5.48

Biomass

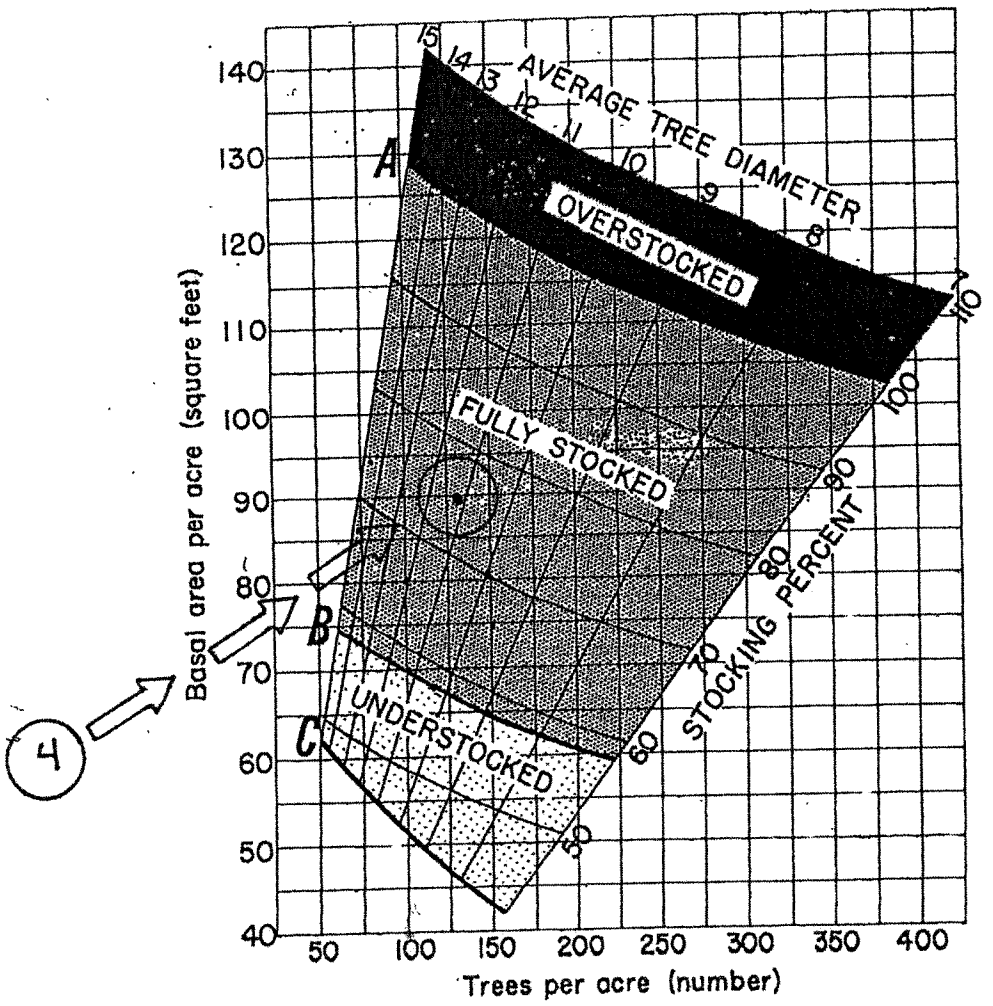
Overstory only

	All species	**sweetgum (*Liquidambar styraciflua*)**	**eastern redcedar (*Juniperus virginiana*)**	**black cherry (*Prunus serotina*)**	**red maple (*Acer rubrum*)**	**black locust (*Robinia pseudoacacia*)**	**eastern white pine (*Pinus strobus*)**
Foliage biomass (tons/ac.)	1	0	0	0	0	0	0
Stem biomass (tons/ac.)	31	9	5	7	5	3	1
Branch biomass (tons/ac.)	11	3	1	3	2	1	0
Bark biomass (tons/ac.)	6	2	1	1	1	1	0
Aboveground biomass (tons/ac.)	50	15	8	12	9	6	2
Root biomass	10	3	2	2	2	1	0

(tons/ac.)							
Total biomass (tons/ac.)	60	17	9	14	10	7	2

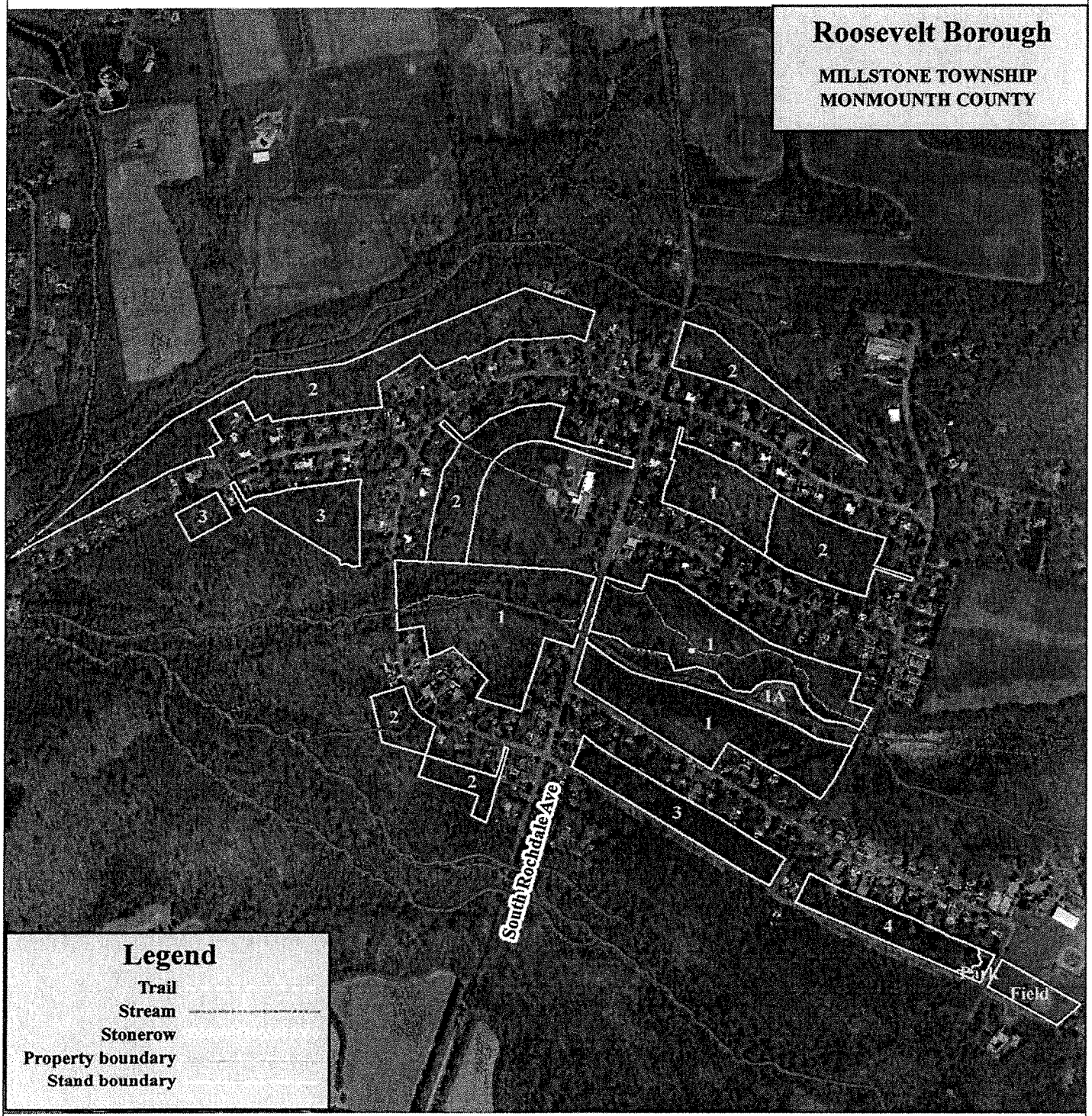
UPLAND CENTRAL HARDWOOD

STOCKING GUIDE



FOREST LAND VEGETATION MAP 2023

FOREST STAND MAP



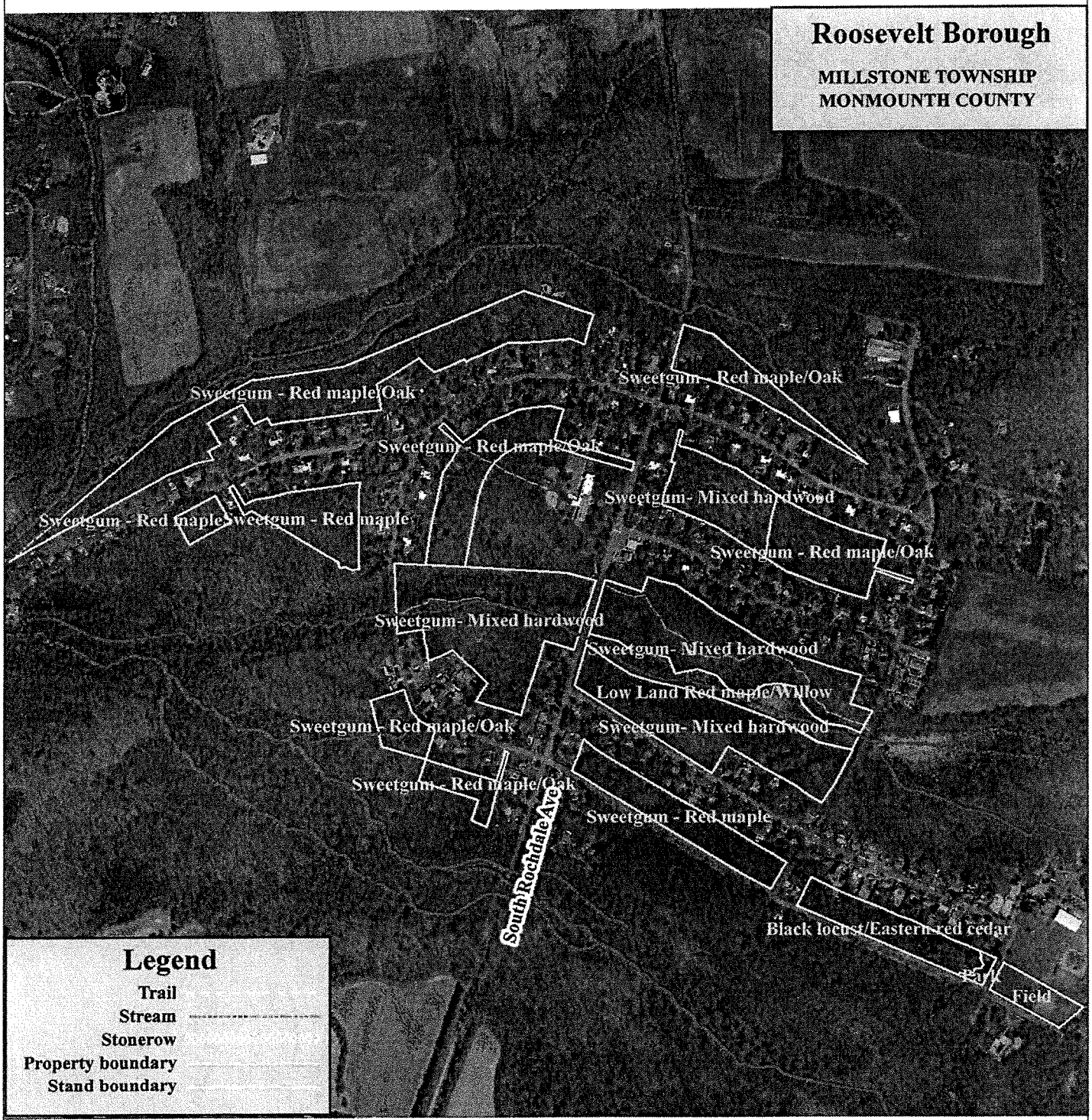
Property location: 33 North Rochdale Ave

This map was developed using NJDEP GIS digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.

1 inch = 875 feet

FOREST LAND VEGETATION MAP 2023

COVER TYPE MAP

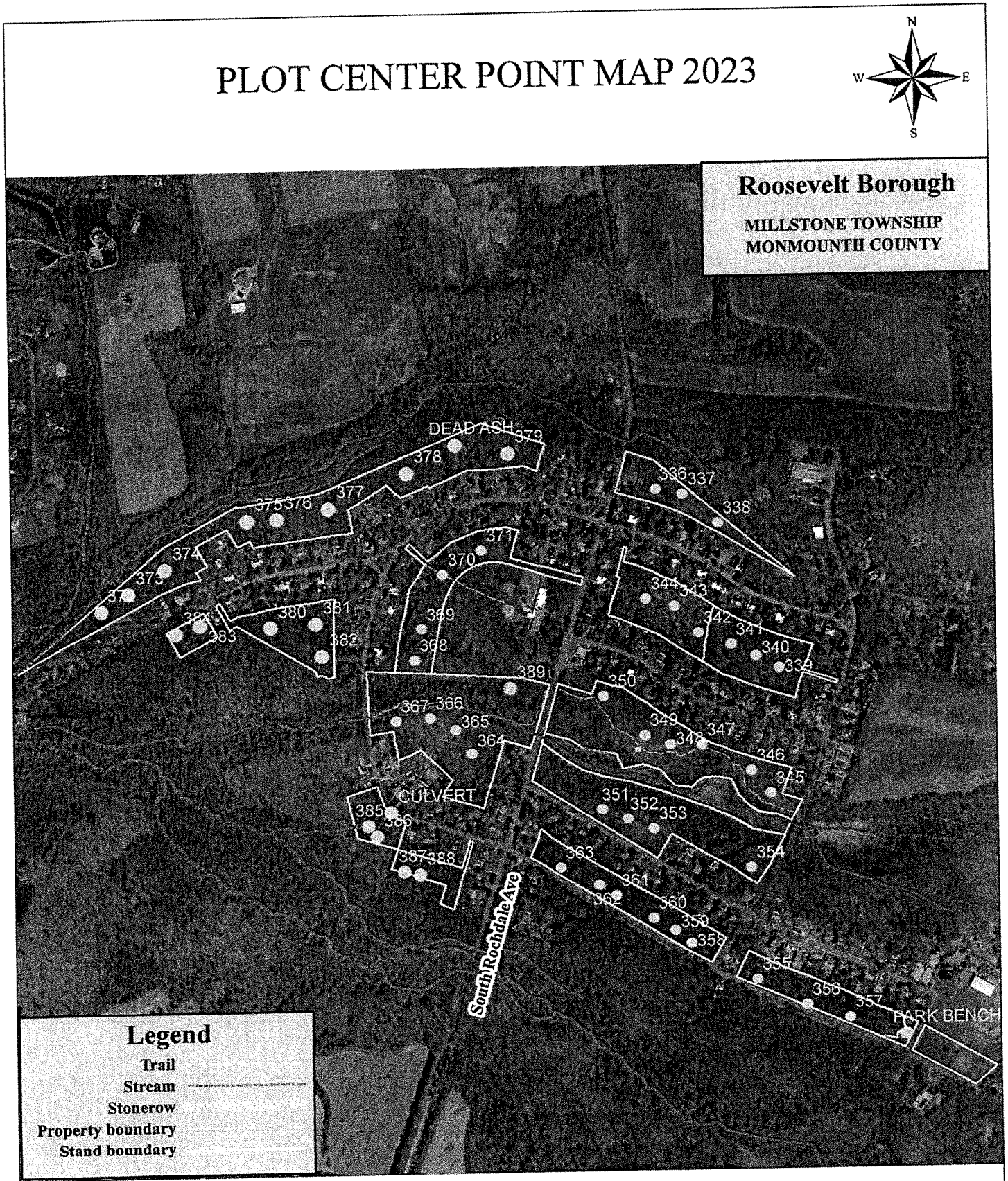


Property location: 33 North Rochdale Ave

This map was developed using NJDEP GIS digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.

1 inch = 875 feet

PLOT CENTER POINT MAP 2023



Property location: 33 North Rochdale Ave

This map was developed using NJDEP GIS digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.

1 inch = 875 feet

MONMOUTH COUNTY
GENERAL ELECTION, NOVEMBER 7, 2023

Statement of Determination

This STATEMENT of the determination of the Board of County Canvassers, relative to the election held in the County of Monmouth on the Seventh day of November, two thousand and twenty-three, for the election of:

1. Roosevelt Mayor – Full Term
2. Roosevelt Members of the Borough Council – Full Term

The said board does determine that at said election the following person(s) listed were duly elected.

I DO HEREBY CERTIFY that the foregoing is a true, full and correct statement of the determination of the Board of Canvassers therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand this twenty-second day of November, two thousand and twenty-three.

_____ Chair, Board of County Canvassers

Attest: _____
Clerk, Board of County Canvassers

ROOSEVELT BOROUGH

MAYOR – Full Term – Vote for One

Peggy Malkin	(D) Monmouth County Democrats

BOROUGH COUNCIL – Full Term – Vote for Two

Louis Esakoff	(D) Monmouth County Democrats
Joseph Trammell	(D) Monmouth County Democrats

RUMSON BOROUGH

MAYOR – Full Term – Vote for One

Joseph K. Hemphill	(R) Monmouth County Republican Organization

BOROUGH COUNCIL – Full Term – Vote for Two

Gary Casazza	(R) Monmouth County Republican Organization
Linda J. Smith	(R) Monmouth County Republican Organization

SEA BRIGHT BOROUGH

MAYOR-Full Term-Vote for One

Brian P. Kelly	(R) Monmouth County Republican Organization

BOROUGH COUNCIL – Full Term – Vote for Two

Marc A. Leckstein	(D) Monmouth County Democrats
John M. Lamia, Jr.	(R) Monmouth County Republican Organization

SEA GIRT BOROUGH

MAYOR-Full Term-Vote for One

Donald E. Fetzer	(R) Monmouth County Republican Organization

BOROUGH COUNCIL – Full Term – Vote for Two

Diane R. Anthony	(R) Monmouth County Republican Organization
Hilary DiFeo	(R) Monmouth County Republican Organization

SHREWSBURY BOROUGH

BOROUGH COUNCIL – Full Term – Vote for Two

Brendan Gilmartin	(R) Monmouth County Republican Organization
James "Jim" Daly	(R) Monmouth County Republican Organization

SHREWSBURY TOWNSHIP

TOWNSHIP COMMITTEE – Full Term – Vote for One

Lester J. Jennings	(D) Monmouth County Democrats

Roberts
ENGINEERING GROUP LLC
Women Business Enterprise Certified

1670 Whitehorse-Hamilton Square Rd.
Hamilton, New Jersey 08690
609-586-1141 fax 609-586-1143
www.RobertsEngineeringGroup.com

November 21, 2023

Mayor and Council
Borough of Roosevelt
P.O. Box 128
33 North Rochdale Avenue
Roosevelt, New Jersey 08555

Re: Improvements to Lake Drive and Spruce Lane
Municipal Aid Fiscal Year 2024
Borough of Roosevelt, Monmouth County, New Jersey
Our File No.: R4603

Dear Mayor and Council:

Enclosed with this letter, please find a copy of a letter received from the NJDOT dated November 1, 2023 notifying the Borough that it has been awarded funding through the Municipal Aid Program for the improvements to Lake Drive and Spruce Lane in the amount of $183,337.00.

You may recall that the Engineer's Estimate for this work was approximately $934,750.00. The awarded allotment is $751,413.00 less than the estimated construction cost.

The proposed improvements will include tree removal, inlet repair, new curb where none currently exist, milling and paving with base repairs as necessary, and the replacement of inlet castings, deteriorated curb, sidewalk, manhole castings, signage, speed humps, and pavement markings.

We do not anticipate any water improvements under this project. We will review with the Sewer Operator for any required sanitary sewer improvements on Lake Drive and Spruce Lane, and will follow up under separate cover with the proposed cost.

The anticipated costs for survey, design, permitting, bidding, and construction administration/inspection are as follows:

Survey, Design, Permitting, and Bidding =	$40,000.00
Construction Administration and Inspection =	$55,000.00
TOTAL =	$95,000.00

Please review the above figures and advise as to how the Council would like to move forward. Should you have any questions, please feel free to contact me.

Very truly yours,

Carmela Roberts, P.E., C.M.E.
Borough Engineer

cc: Kathleen Hart, RMC, CMR, Borough Clerk
George Lang, Borough CFO
Ana Debevec, Borough Treasurer
Cameron Corini, PE, CME, Roberts Engineering Group, LLC
Kelly Pham, EIT, Roberts Engineering Group, LLC

State of New Jersey
DEPARTMENT OF TRANSPORTATION
P.O. Box 600
Trenton, New Jersey 08625-0600

PHILIP D. MURPHY
Governor

TAHESHA L. WAY
Lt. Governor

DIANE GUTIERREZ-SCACCETTI
Commissioner

November 1, 2023

The Honorable Peggy Malkin
Mayor, Roosevelt Borough
33 North Rochdale Avenue
Roosevelt Borough, New Jersey 08555

Dear Mayor Malkin,

I am pleased to inform you that Roosevelt Borough has been selected to receive funding from the New Jersey Department of Transportation's (NJDOT) Fiscal Year 2024 Municipal Aid Program for LA-2024 MA Roosevelt Borough Improvements to Lake Drive and Spruce Lane 13 in the amount of $183,337.00.

NJDOT's Municipal Aid Program is a very competitive program. This year the Department received 600 applications requesting more than $384 million. There is $161.25 million available in funds for this program from the Transportation Trust Fund (TTF) supported by the State gas tax.

As part of the Department's Commitment to Communities, NJDOT provides statewide assistance for local governments for improvements to and preservation of the local transportation network. This network makes up about 90 percent of New Jersey's roadways. The successful completion of your project will help achieve this goal and provide your constituents and everyone that uses local roads a transportation system that provides the mobility they deserve.

Should you have any questions regarding your grant, please contact the NJDOT Local Aid District Office in your area.

District 1 - Mt. Arlington – 973-810-9120 District 3 - Trenton – 609-963-2020
District 2 - Newark - 862-350-5730 District 4 - Cherry Hill - 856-414-8414

Again, thank you for your support of this program and good luck with your project.

Sincerely,

Diane Gutierrez-Scaccetti
Commissioner

cc: Municipal Clerk; Municipal Engineer

Roberts
ENGINEERING GROUP LLC
Women Business Enterprise Certified

1670 Whitehorse-Hamilton Square Rd.
Hamilton, New Jersey 08690
609-586-1141 fax 609-586-1143
www.RobertsEngineeringGroup.com

November 29, 2023

Mayor and Council
Borough of Roosevelt
33 North Rochdale Avenue
P.O. Box 128
Roosevelt, New Jersey 08555

Re: Preliminary Assessment/Site Investigation for
Amphitheater Rehabilitation
Borough of Roosevelt, Monmouth County, New Jersey
Our File No.: R4504

Dear Mayor and Council:

As you know, the Borough has received funding through Monmouth County for rehabilitation of the Roosevelt Amphitheater located on North Rochdale Avenue adjacent to the Roosevelt Elementary School.

In order to comply with the grant requirements, Monmouth County has requested the Borough prepare and submit a Preliminary Assessment/Site Investigation (PASI) of the project site in accordance with NJDEP Requirements as outlined in N.J.A.C. 7:26E-3, attached. A PASI is essentially an environmental review of a specified site to determine whether any contaminated or potentially contaminated areas exist within the area of investigation.

As such, the PASI evaluation requires:

1. A review of record documents from the time the site was naturally vegetated to present.
2. Inquiries of current and former employees as may be relevant to the site.
3. An evaluation of site specific operational and environmental information.
4. A site inspection to verify findings.

Upon completion of the above, a Preliminary Assessment Report will be prepared in accordance with N.J.A.C. 7:26E-3.2.

The evaluation and report are based solely on limited site investigation and a review of available documentation. If during this work it is found that a contamination may be present, soil and groundwater sampling and testing may be required in accordance with N.J.A.C. 7:26E-3.4 and N.J.A.C. 7:26E-3.5. If it is found that sampling and testing is required, a fee for the additional work will be provided.

The property was farmland prior to becoming the Roosevelt Public School. It is unlikely that the project area has any known contaminants and will likely not require soil or groundwater sampling/testing.

We are prepared to complete the PASI evaluation and Preliminary Assessment Report for a fee not to exceed $5,500.00.

Should you wish to discuss this further, please feel free to contact me.

Very truly yours,

Carmela Roberts, P.E., C.M.E.
Borough Engineer

cc: Kathleen Hart, RMC, CMR, Borough Clerk
Ana Debevec, Borough Treasurer
Cameron Corini, P.E., C.M.E., Roberts Engineering Group, LLC
Kelly Pham, E.I.T., Roberts Engineering Group, LLC

NOTE: THIS IS A COURTESY COPY OF THIS RULE. ALL OF THE DEPARTMENT'S RULES ARE COMPILED IN TITLE 7 OF THE NEW JERSEY ADMINISTRATIVE CODE.

SUBCHAPTER 3. PRELIMINARY ASSESSMENT AND SITE INVESTIGATION

7:26E-3.1 Preliminary assessment

(a) The purpose of a preliminary assessment is to determine whether contaminants are or were present at a site or have migrated or are migrating from a site, and thus whether additional remediation is necessary at a site due to the presence of any potentially contaminated areas of concern.

(b) The person responsible for conducting the remediation shall conduct a preliminary assessment when that person:

1. Is required to submit a completed Industrial Site Recovery Act General Information Notice to the Department pursuant to the Industrial Site Recovery Act, N.J.S.A. 13:1K-6 et seq., and its implementing rules at N.J.A.C. 7:26B;

2. Wants a final remediation document for the entire site;

3. Is remediating a site or portion of a site for use as a child care center, or for use as a public school, private school or charter school;

4. Is conducting an evaluation of a child care center pursuant to Department of Community of Affairs Act, N.J.S.A. 52:27D-130.4, and the Manual of Requirements for Child Care Centers, N.J.A.C. 10:122-5.2(i), as part of the license application or renewal for the child care center; or

5. Is ordered to do so by a court or the Department.

(c) The person responsible for conducting the remediation who is subject to (b) above, shall conduct a preliminary assessment, which shall include, at a minimum, the results of research conducted on the following topics:

1. A diligent search from the time the site was naturally vegetated to the present, including an investigation of all documents that are reasonably likely to contain information related to the site, which documents are in a person's possession, custody or control, or in the possession, custody or control of any other person from whom the person conducting the search has a legal right to obtain such documents;

2. Inquiries of current and former employees and agents whose duties include or included any responsibility for hazardous substances, hazardous wastes, or pollutants, and any other current and former employees or agents who may have knowledge or documents relevant to the inquiry;

3. An evaluation of site specific operational and environmental information, both current and historic collected pursuant to (c)1 and 2 above; and

4. A site inspection to verify the above findings.

(d) If a potentially contaminated area of concern is identified during the preliminary assessment, the person responsible for conducting the remediation who is subject to (b) above shall conduct a site investigation pursuant to N.J.A.C. 7:26E-3.3 through 3.14.

(e) If no potentially contaminated area of concern is identified during the preliminary assessment, no further remediation is required; except that the person responsible for conducting the remediation who is subject to (b) above, shall submit to the Department a preliminary assessment report pursuant to N.J.A.C. 7:26E-3.2, with a form found on the Department's website at www.nj.gov/dep/srp/srra/forms if:

1. The person responsible for conducting the remediation is required to submit a Industrial Site Recovery Act General Information Notice pursuant to the Industrial Site Recovery Act, N.J.S.A. 13:1K-6 et seq., and its implementing rules at N.J.A.C. 7:26B. The person responsible for conducting the remediation shall submit the preliminary assessment report and form within 90 days after the General Information Notice is required to be submitted to the Department; or

2. The provisions at (b)2 through 5 above apply.

7:26E-3.2 Preliminary assessment report

(a) The person responsible for conducting the remediation to whom N.J.A.C. 7:26E-3.1(b) applies shall prepare a preliminary assessment report that includes:

1. A discussion of all the information identified and evaluated pursuant to N.J.A.C. 7:26E-3.1(c);

2. Scaled site plans detailing lot and block numbers, property and leasehold boundaries, current and historic structures, areas where fill has been brought on site, paved and unpaved areas, vegetated and unvegetated areas, all areas of concern and active and inactive wells;

3. Scaled historical site plans and facility as-built construction drawings, if available;

4. A summary of the data and information reviewed, which shall be compiled and presented by area of concern;

5. An evaluation to determine if there is an order of magnitude difference between the concentration of any contaminant in any area of concern and any remediation standard applicable at the time of comparison to the area of concern if there is a prior final remediation document for the area of concern. If there is an order of magnitude difference, then the person responsible for conducting the remediation shall evaluate the protectiveness of any existing engineering or institutional controls on the area of concern and otherwise

determine whether additional remediation may be required at the area of concern to ensure the area of concern remains protective of the public health, safety and the environment; and

6. A recommendation for each area of concern identified at the site, supported by a written rationale, that either:

i. Additional remediation is necessary because:

(1) The area of concern is potentially contaminated; or

(2) There is an order of magnitude change in an applicable remediation standard and the prior remediation is no longer protective of the public health and safety and the environment because it is not in compliance with the standard applicable at the time of the comparison; or

ii. Additional remediation is not necessary because the area of concern is not suspected to contain contaminants at concentrations above any applicable remediation standard or criterion.

7:26E-3.3 Site investigation

(a) The purpose of a site investigation is to determine if additional remediation is necessary because contaminants are present at the site or area of concern, or because contaminants have emanated or are emanating from the site or area of concern, above any applicable remediation standard or criterion.

(b) The person responsible for conducting the remediation shall conduct a site investigation when:

1. Any potentially contaminated area of concern is identified during a preliminary assessment required pursuant to N.J.A.C. 7:26E-3.1;

2. The person responsible for conducting the remediation is an owner or operator of an underground storage tank system that is required to conduct a site investigation pursuant to the Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10A-21 et seq., and the Underground Storage Tanks rules, N.J.A.C. 7:14B; or

3. A person is ordered to conduct a site investigation by a court or the Department.

(c) The person responsible for conducting the remediation to whom N.J.A.C. 7:26E-3.3(b) applies shall conduct a site investigation in accordance with this section and N.J.A.C. 7:26E-3.4 through 3.14, as applicable.

(d) The person responsible for conducting the remediation who is subject to (b) above shall:

1. Compare all site data with all remediation standards and criteria;

2. Identify as contaminated areas of concern those areas where site data demonstrate that contaminant concentrations exceed any remediation standard or criterion; and

3. Determine if any immediate environmental concern exists.

7:26E-3.4 Site investigation - soil

(a) The person responsible for conducting the remediation who is subject to N.J.A.C. 7:26E-3.3(b) shall conduct a site investigation of soil by sampling the soil in each potentially contaminated area of concern that includes soil to determine if any contaminants are present above any soil remediation standard, and shall:

1. Collect a sufficient number of soil samples to evaluate for the presence of soil contamination, biasing soil sampling to the suspected location of greatest contamination, both horizontally and vertically;

2. Use appropriate sample collection methods, but composite soil sampling shall not be used for site investigation sample collection; and

3. Use appropriate analytical methods.

(b) If the concentration of any contaminant in the soil exceeds any soil remediation standard, then the person responsible for conducting the remediation shall conduct a remedial investigation of the soil pursuant to N.J.A.C. 7:26E-4.2.

7:26E-3.5 Site investigation - ground water

(a) The person responsible for conducting the remediation who is subject to N.J.A.C. 7:26E-3.3(b) shall evaluate all potentially contaminated areas of concern to determine if there is the potential that ground water has been contaminated. At an area of concern where there is a potential that ground water has been contaminated, the person responsible for conducting the remediation shall conduct ground water sampling as follows:

1. Collect a sufficient number of ground water samples to evaluate for the presence of ground water contamination, biasing ground water sampling to the suspected locations of greatest contamination, both horizontally and vertically;

2. Use appropriate sampling methods; and

3. Use appropriate analytical methods.

BOROUGH OF ROOSEVELT
COUNTY OF MONMOUTH
STATE OF NEW JERSEY

RESOLUTION NO. 23-120
MEETING DATE: 12-04-2023

PAYMENT OF BILLS FOR DECEMBER 4, 2023

C/_____ offered the following resolution and moved its adoption, which was second by **C/_____.**

WHEREAS, the attached list of bills have been submitted to the Council for payment approval; and

WHEREAS, the Chief Financial Officer has certified the availability of funds for the payment of bills.

NOW, THEREFORE, BE IT RESOLVED that the bills on the attached bill list be paid.

ROLL CALL:

AYES:

NAYS:

ABSTAIN:

ABSENT:

CERTIFICATION

I HEREBY CERTIFY the foregoing to be a true copy of a resolution adopted by the Borough Council at a meeting held on December 4, 2023

_____
Kathleen Hart
Borough Clerk

12.4-23 BILL LIST

P.O. Type: All
Range: First to Last
Format: Condensed
Vendors: All
Rcvd Batch Id Range: First to Last

Include Non-Budgeted: Y

Open: N Paid: N Void: N
Rcvd: Y Held: Y Aprv: N
Bid: Y State: Y Other: Y Exempt: Y

Vendor # / PO #	Name / PO Date	Description	Status	Amount	Void Amount	Contract	PO Type
BOARD005	**BOARD OF FIRE COMMISSIONERS OF**						
23-00610	11/27/23	2023 FIRE/BLS SERVICES:4/Q/23	Open	33,198.25	0.00		
BOROU005	**BOROUGH OF HIGHTSTOWN**						
23-00606	11/21/23	LANDFILL TIPPING FEES:OCT 2023	Open	4,259.88	0.00		
CANNI005	**CANNIZZARO, SALVATORE**						
23-00621	11/30/23	TAX COLL-REIMB:INK CARTS	Open	72.48	0.00		
DEBEV005	**DEBEVEC, ANA**						
23-00622	11/30/23	TRAVEL EXPENSE 1/4-6/28/23	Open	201.34	0.00		
JCPL0005	**JCP & L**						
23-00605	11/21/23	OCT 2023 ELECTRIC SERVICE	Open	982.65	0.00		
MCMAS005	**MCMASTER-CARR SUPPLY COMPANY**						
23-00579	11/01/23	SELF-LOCKING DOOR HANDLE	Open	236.99	0.00		
MERRI005	**MERRITT, MICHAEL**						
23-00623	11/30/23	REIMB:SIGN MAKING KIT	Open	85.29	0.00		
PEGER005	**PEGER, KYLE d/b/a**						
23-00181	04/05/23	PUBLIC LAND MAINTENANCE:2023	Open	2,683.00	0.00		B
PETTY005	**PETTY CASH**						
23-00612	11/29/23	REIMBURSE PETTY CASH	Open	20.04	0.00		
23-00614	11/29/23	REIMBURSE PETTY CASH	Open	60.00	0.00		
23-00620	11/30/23	REIMBURSE PETTY CASH	Open	45.26	0.00		
				125.30			
ROOSE005	**ROOSEVELT BOARD OF EDUCATION**						
23-00609	11/27/23	DEC 2023 SCHOOL TAXES	Open	159,052.00	0.00		
THEHO010	**THE HOME DEPOT**						
23-00573	10/31/23	ENVIRONMENTAL COMM-TRAIL SUPPL	Open	562.66	0.00		
23-00611	11/28/23	HOLIDAY WREATH FOR BORO HALL	Open	39.98	0.00		
23-00613	11/29/23	LIGHT FIXTURES + MISC SUPPLIES	Open	259.94	0.00		
				862.58			
TOWNS005	**TOWNSHIP OF MILLSTONE**						
22-00596	10/19/22	2022 RECYCLING COORDINATOR	Open	200.00	0.00		
TREEW005	**TREE WISE MEN, LLC**						
23-00571	10/30/23	REMOVE TREES/BRANCHES AT WTP	Open	2,000.00	0.00		
VERIZ015	**VERIZON**						
23-00604	11/20/23	PHONE/INTERNET-NOV 2023	Open	700.00	0.00		

Vendor # / PO #	Name / PO Date	Description	Status	Amount	Void Amount	Contract	PO Type
VUOLL005	VUOLLE, ERIC						
23-00607	11/27/23	REIMB:VIDEO TRANSCRIPTION	Open	40.25	0.00		
WRNEU005	W.R. NEUMANN COMPANY, INC.						
23-00006	01/12/23	WATER-2023 SODIUM HYPOCHLORITE	Open	584.35	0.00		B
WEBHA005	WEB HAULING & DISTRIBUTION,INC						
23-00596	11/14/23	PUMP LAKE DR PUMP PIT 10/26/23	Open	274.40	0.00		

Total Purchase Orders: 21 Total P.O. Line Items: 0 Total List Amount: 205,558.76 Total Void Amount: 0.00

Totals by Year-Fund Fund Description Fund	Budget Rcvd	Budget Held	Budget Total	Revenue Total	G/L Total	Total
3-01	202,238.95	0.00	202,238.95	0.00	0.00	202,238.95
3-09	3,119.81	0.00	3,119.81	0.00	0.00	3,119.81
Year Total:	205,358.76	0.00	205,358.76	0.00	0.00	205,358.76
G-02	200.00	0.00	200.00	0.00	0.00	200.00
Total Of All Funds:	205,558.76	0.00	205,558.76	0.00	0.00	205,558.76

Monmouth County
Board of County Commissioners

DIVISION OF TRANSPORTATION
KATHLEEN LODATO
DIRECTOR
e-mail address
Kathleen.lodato@co.monmouth.nj.us

TRANSPORTATION LIASON
COMMISSIONER DIRECTOR
THOMAS A. ARNONE
e-mail address
Thomas.arnone@co.monmouth.nj.us

Dear Administrator,

November 8, 2023

Please find enclosed a copy of the Transportation agreement for the period of January 1, 2024 – December 31, 202. This agreement provides Municipal sponsored food shopping transportation for the senior and disabled population of your town.

As Director I would like to inform you that I am able to offer you the same service that your residents have become accustomed to while stabilizing the cost for yet another year, there will be no increase in the transportation rate that you are currently paying, that price will remain stable for one more year, the length of this agreement.

With the ban on plastic bags, we were able to supply the residents that use this service with 1 insulated large bag, and we have informed then that there is a 2 bag limit when using this service, we also informed the clients that making the bags very heavy can cause injury to the drivers and also to themselves. I am hopeful that your Municipality supports our efforts in providing safe and reliable service to our residents.

I look forward to a long working relationship with you and if I can be of any further assistance, please do not hesitate to call me. Please have the agreement placed on your agenda as soon as possible so that it can be voted on and signed, I would like all signed agreements returned no later than December 28, 2023. If you cannot have your signed agreement back by December 28, 2023, it is very important that you call my office so that your transportation service is not interrupted.

Kathleen Lodato, Director

Kathleen Lodato

Monmouth County Division of Transportation

THIS AGREEMENT entered into **January 1, 2024** by and between the COUNTY OF MONMOUTH (hereinafter referred to as the COUNTY) and **BOROUGH OF ROOSEVELT** here inafter referred to as the MUNICIPALITY/AGENCY).

WHEREAS, the Monmouth County Board of County Commissioners has established the Special Citizens Area Transportation System (hereinafter referred to as SCAT); and

WHEREAS, the MUNICIPALITY has requested that the COUNTY provide service to eligible residents; and

WHEREAS, it is necessary to set forth the responsibilities of both parties in this agreement.

NOW, THEREFORE, in consideration of the mutual covenants and conditions herein contained and for other good and valuable considerations, it is mutually agreed between the parties as follows: Services to be provided under this Agreement will include transportation to and from local food markets. Destinations and pick-up sites will be determined at the discretion of the SCAT coordinator. Ridership on SCAT vehicles shall include those persons 60 years of age and older, in accordance with the rules and regulations set forth in Title III of the Older Americans Act of 1965, as amended in 1978. Service will be provided without regard to disability, in compliance with the provisions of Section 504 of the Rehabilitation Act of 1973. Ridership will also be extended to disabled persons under 60 years of age as vehicle space and time is available. "Disabled" is defined, as per Title 17 of the New Jersey Administrative Code, as a person who may be classified as having a physical impairment which manifests itself in one or more of the following ways: non-ambulatory, semi-ambulatory, visually impaired, deaf or hearing impaired, having faulty coordination, or having reduced mobility, flexibility, coordination or perceptiveness due to age, physical or mental conditions.

1. Vehicles used to provide services under this agreement will be owned, operated, insured and maintained by the COUNTY. All vehicle drivers will have current Operator's and Commercial Driver's License (CDL).

2. Vehicles shall be housed at the COUNTY garage, Freehold Township, or at location agreed to by the parties concerned. The SCAT coordinator will attempt to schedule maintenance work at a time which will afford the least interruption to the normally established service schedules. The provision of auxiliary transportation in the event of major maintenance or accident will be at the discretion of the coordinator of the SCAT Program or his/her designee.

3. Service will be provided for either a half or a full day as specified in Appendix A to this agreement. The COUNTY reserves the right to re-schedule the days of services based upon the availability of vehicles. The days of operation may be re-scheduled by the SCAT coordinator as needed.

4. Additional days of extended service may be provided under this agreement with authorization of the MUNICIPALITY contingent upon the availability of drivers and vehicles and approval of the SCAT coordinator. The MUNICIPALITY will be charged at the rate of a full day of service, plus $.18 per mile, door to door.

5. The SCAT coordinator may establish routes which would serve two or more MUNICIPALITIES on a given day as long as the existing level of service in the MUNICIPALITY is maintained or improved.

6. A local coordinator will be supplied by the contracting party, either municipal or private, to aid the SCAT coordinator in daily operations.

7. The MUNICIPALITY will be billed on a quarterly basis for services provided at the per diem rate as set forth in Appendix A. The SCAT coordinator will detail the dates as to when services were provided during the quarter. The MUNICIPALITY will make payments within 30 days of the billing date, providing that the billing is in conformity with this agreement. Such payment shall be made by check, and be made payable to the Treasurer, County of Monmouth.

8. Provision of service by the COUNTY under this agreement is conditional upon continued availability of funding through Title III of the Older Americans Act.
9. This contract will be in effect from **January 1, 2024** to **December 31, 2024** or until a subsequent contract is executed.
10. Tolls and other over-the –road parking charges incurred by the vehicle in normal operation of the vehicle will be borne by the MUNICIPALITY which requires the vehicle to traverse toll roads or incur parking or other over-the-road costs provided that the vehicle driver furnishes a receipt substantiating such out-of-pocket cost the MUNICIPALITY. A copy of such receipts and record of payment by the MUNICIPALITY shall be furnished to the SCAT coordinator within seven (7) days after use of the vehicle by either the MUNICIPALITY or contracting parties.
11. The COUNTY reserves the right to alter this agreement or to increase the per diem rate for vehicle operation based on increased costs subject to forty-five (45) days' notice.
12. Either party may terminate this agreement upon sixty (60) days written notice to the other party. Notice shall be sent by certified mail return receipt requested to the Monmouth County Board of County Commissioners in the case of the County and the Municipal Clerk in the case of the municipality.

IN WITNESS WHEREOF, the parties hereto have caused those present to be signed by their respective authorized officers and their respective corporate seals to be hereunto affixed the day and year first above mentioned.

ATTEST:

COUNTY OF MONMOUTH
(seal)

BY:_____
Tamara Brown, Clerk
Board of County Commissioners

BY:_____
THOMAS A. ARNONE
DIRECTOR, Monmouth County Board of County Commissioners

ATTEST:

MUNICIPALITY
(seal)

BY:_____
Municipal Clerk

BY:_____
Mayor

APPENDIX A

MUNICIPALITY:

BOROUGH OF ROOSEVELT

Days of Service Per Week:

FULL DAYS _____.

HALF DAYS 1 HALF DAY.

Charges:

RATE* FULL DAY _____.

RATE* HALF DAY $155.00.

*Rate is based on average daily passengers.