



VILLAGE OF RED HOOK FORESTRY MANAGEMENT PLAN

Prepared by the Red Hook Village Green Committee

**...dedicated to beautifying and ensuring the
ecological health of the Village of Red Hook...**

March 2004

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I. A BRIEF HISTORY

Before 2002

As in many communities across the country, the health of some of the old trees in the Village of Red Hook began to decline and scores of stately maple trees had to be removed. However, no trees were being planted to replace them. Residents were very concerned about the loss of this beautiful resource and a grassroots movement began.

Spring 2002

Growing out of this concern, a “tree committee” was formed. The Village Green committee dedicated itself to tree replacement and the planting of additional trees.

September 21, 2002

Planting began! With the support of dedicated volunteers and local businesses, eight trees were planted in the center of the village on this first day of autumn.

October 7, 2002

One of the first accomplishments was the formulation of a Tree Ordinance. The ordinance specifies general guidelines for tree replacement and maintenance, an annual budget, and an annual Arbor Day observance. The ordinance also defines the administration of the Village Green and empowers the committee to develop and implement a community forestry program.

April 2003

With the ordinance in place, the Village of Red Hook was recognized by the National Arbor Day Foundation as a Tree City USA. Tree City USA status allows the village to benefit from various kinds of assistance for its forestry program.

In addition to tree planting, the committee actively engaged in fundraising and other outreach efforts. Visit our website at <http://www.redhooknyvillage.org/villagegreen/> to see minutes of meetings, a donor listing, accomplishments, and much more.

September 2003

Planting continued (36 trees in less than two years), but as we learned more about the different aspects of a healthy community forest, we realized that *we needed a plan*. In September 2003, we asked the Cornell Community Forestry Outreach Program for help. Their team of professionals and students inventoried the street trees within the village, gathering many types of data for each tree. Results were tabulated in a database and given to the committee.

December 2003

The findings of the survey revealed, among other things, that our street trees had a replacement value of over \$2.5 million, almost half of the street trees are maple trees, the current stocking is approximately 60%, and many of these trees need immediate attention.

March 2004

Wanting to protect this valuable resource, we have developed a forestry management plan, based on these findings, that addresses the needs of the whole community forest – maintenance, preservation, and expansion.

II. STATE OF THE FOREST

The initial street tree inventory was conducted on September 13, 2003 by the Cornell Community Forestry Outreach team. This inventory serves as the benchmark in the planning process. For each tree, data was collected on location, species, size, diameter, height, site description, condition, and management needed. Possible planting sites were also listed. Following is a summary of the results.

SPECIES

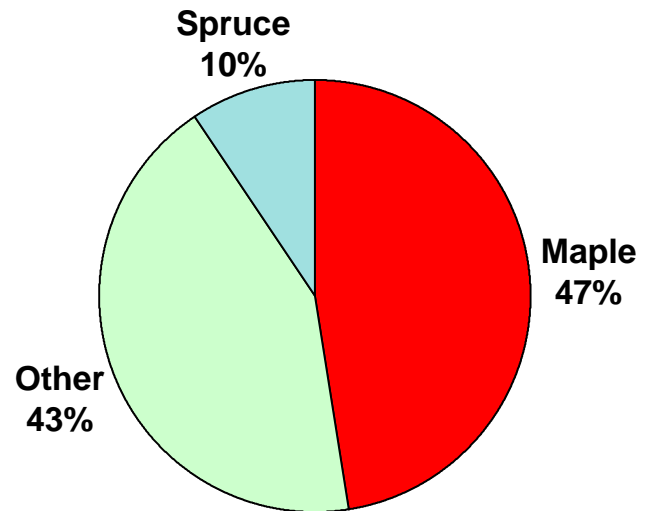


RED HOOK HAS ALMOST 700 STREET TREES.



ABOUT 47% ARE MAPLE TREES.

SPECIES DISTRIBUTION		
Species Name	Number of Trees	% of Total
Maple, Sugar	159	22.78%
Maple, Norway	111	15.90%
Spruce, Blue	38	5.44%
Maple, Silver	29	4.15%
Pear, Callery	27	3.87%
Spruce, Norway	20	2.87%
Honeylocust	20	2.87%
Maple, Red	19	2.72%
Hemlock, Eastern	16	2.29%
Linden, Littleleaf	14	2.01%
Pine, White	13	1.86%
Maple, Norway - Crimson King	13	1.86%
Cherry, Spp	13	1.86%
Basswood / Linden	11	1.58%
Yew, Spp.	9	1.29%
Fir, White	9	1.29%
Douglas Fir	9	1.29%
Pine, Spp.	8	1.15%
Oak, Red	8	1.15%
Crabapple, Spp.	8	1.15%
Walnut, Black	7	1.00%
Oak, Pin	7	1.00%
Ash, Spp.	7	1.00%
Other	123	17.62%



CONDITION

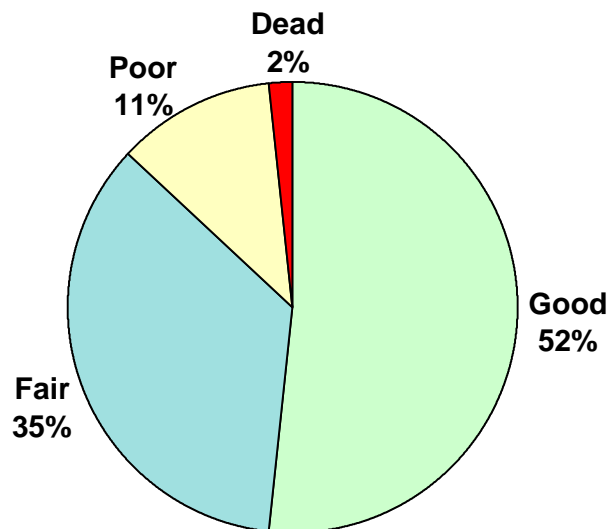
➔ **87% OF THE TREES ARE IN GOOD OR FAIR CONDITION.**

➔ **11% ARE IN POOR CONDITION.**

Note: Most dead trees have been removed since the inventory was conducted.

CONDITION DISTRIBUTION		
Condition	Number of Trees	% of Total
Good (>90% green)	355	51.60%
Fair (50-90% green)	244	35.47%
Poor (<50% green)	77	11.19%
Dead (0% green)	12	1.74%
Grand Total	688	100.00%

(Note: Small discrepancy in total number of trees is within acceptable limits.)

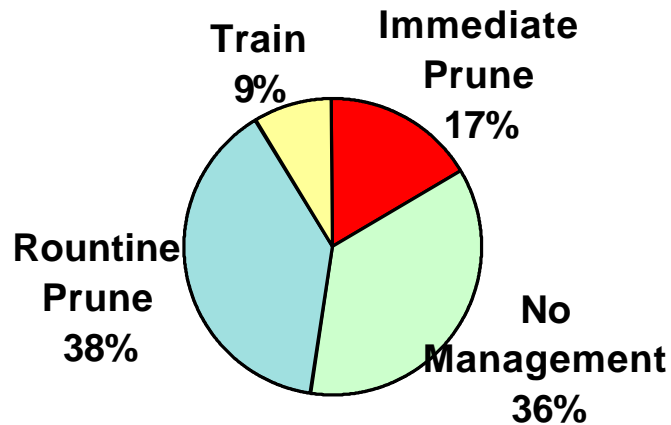


MANAGEMENT

- ➔ **36% OF RED HOOK'S TREES REQUIRE NO MANAGEMENT AT THIS TIME.**
- ➔ **47% REQUIRE MINIMAL ATTENTION.**
- ➔ **17%, OR 114 TREES, NEED IMMEDIATE ATTENTION.**

MANAGEMENT RECOMMENDATIONS		
Management	Data	
	Number of Trees	% of Total
Immediate Prune (>4" dead limbs)	114	16.67%
No Management	243	35.53%
Routine Prune (<4" dead limbs)	268	39.18%
Train (<25' tall)	59	8.63%
Grand Total	684	100.00%

(Note: Total number of trees does not include dead trees.)



PLANTING SITES



THERE ARE 469 AVAILABLE PLANTING SITES.

SPACES DISTRIBUTION		
	Data	
PlantingSite	Number of Sites	% of Total
N	764	61.96%
Y	469	38.04%
Grand Total	1233	100.00%

A planting site is:

- Minimum 4' x 4'
- 10' from either side of a driveway
- 20' from intersection
- 10' from fire hydrant

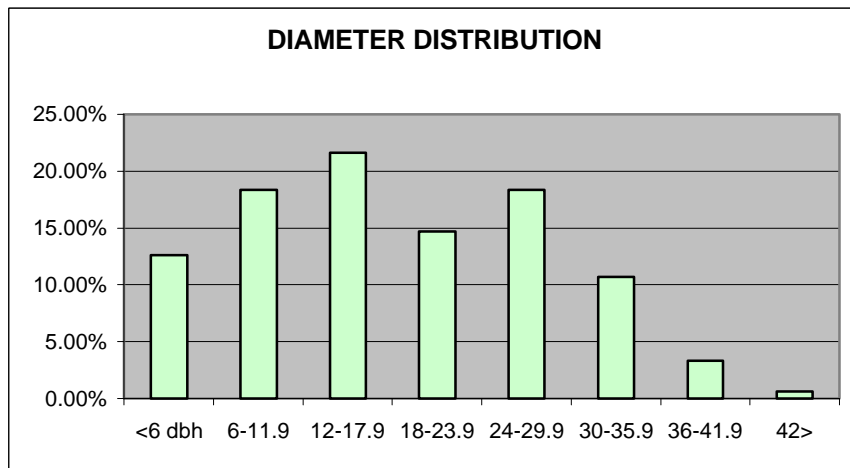
TREE SIZE



THE SIZE OF RED HOOK'S TREES INDICATE RECENT PLANTINGS.



THE NUMBER OF LARGE TREES IS DECREASING.



ECONOMIC BENEFITS

Following is the result of using the Urban Forest Effects Model (UFORE), developed by the Northeastern Research Station of the USDA Forest Service, on the survey data.



THE REPLACEMENT VALUE OF THE STREET TREES OF THE VILLAGE OF RED HOOK IS OVER \$2.5 MILLION.



OVER 20,000 POUNDS OF CARBON ARE SEQUESTERED PER YEAR.

ISA tree value= \$2,535,264.00

(International Society of Arboriculture replacement value, pro-rated for size and condition)

Carbon storage:	485,165 kg
Carbon sequestered:	10,023 kg/yr.
Total Pollution Removed:	211 kg/yr. = \$1,222 /yr.

III. FORESTRY MANAGEMENT PLAN

The Village Green Committee has been empowered to develop and implement the Forestry Management Plan. The committee works with the designated trustee liaison to the Village Board.

In accordance with the Village Green Committee's dedication to "*beautifying and ensuring the ecological health of the Village of Red Hook*", and based on the results of the inventory, the following Forestry Management Plan is presented.

GOALS

- Maintain and preserve a healthy community forest.
- Increase the community forest stocking.

GUIDELINES

- Use sound ecological practices.
- Consider the safety of the residents and concerns of the homeowner.
- Encourage collaboration among those involved in the community forest.
- Be fiscally responsible.

IMPLEMENTATION

The key elements to accomplishing the above goals are: (1) maintain the tree inventory database, (2) use the "*forestry management process*" to develop an annual work plan, (3) develop a budget, (4) perform maintenance tasks, (5) plant new trees, and (6) continue outreach.

1. Tree Inventory Database

The street tree inventory database will be used as a guide in the development of the annual work plan and budget. Data will be updated based on the following:

- **Annual inventory** - The village will be divided into five zones. Each year an inventory will be conducted of all street trees in one zone, so that all trees will have been examined every five years. Trained volunteers will conduct the survey.

- **Input** from residents, highway employees, utilities, and others
- **Maintenance and new plantings** as they occur

2. Forestry Management Process/Annual Work Plan

To ensure the overall health of the community forest, an annual work plan will be created by subjecting the database to the following “*forestry management process*”.

Step 1 Hire a qualified professional to assess trees marked “consult”, “poor”, or “fair”. Update the database with the resulting management recommendations.

Step 2 Remove trees marked “hazard” in accordance with the above recommendations.

Step 3 Prune trees marked “immediate prune”

Step 4 Plant replacement trees

Step 5 Prune trees marked “routine prune” or “train”

Step 6 Plant trees in new sites (stocking goal of 80%)

Note: Planting of **commemorative** trees will be ongoing, since there is no budgetary implication.

During those years in which maintenance needs produce budgetary constraints, efforts will be made to continue to increase the stocking.

3. Budget

In accordance with the Village Tree Ordinance, a minimum of two dollars (\$2.00) per capita will be allotted for forestry management. Based on the work plan, a budget proposal will be submitted annually to the Village Board.

4. Maintenance

With the annual work plan in place,

- **Qualified contractors** (arborists and tree services) will be hired to assess trees marked “consult”, “poor”, and “fair” and to perform large maintenance tasks. Bids will be requested and qualified contractors selected.
- **Highway department employees** will perform maintenance tasks that are appropriate for their level of expertise.

- **Trained citizen pruners** will perform small pruning tasks that can be done with “two feet on the ground.”

5. New Planting

Selecting trees:

- Species will be **appropriate** for the site (considering such factors as overhead wires, salt tolerance, size of planting site).
 - **Invasize** species will be avoided.
 - Species will promote a **diverse** tree population of no more than 10% of any one species.
 - **Bareroot trees** will be planted when possible for ease of planting by volunteers, fiscal savings,
 - New trees will have a **caliper** of 1.5” – 1.75”.
- **Planting** will be done by volunteers, working together with the highway department.
 - **Care** of newly planted trees in the village center will be performed by the highway department. Care of other newly planted trees will be performed by the homeowner whose property encompasses the right-of-way.
 - Prior to planting, **homeowners** will be asked to sign a pledge that commits them to caring for their new trees. They will be given a flyer describing the proper care of new trees.
 - There will be two plantings per year, one in spring and one in fall.

6. Outreach

- **Fundraising** will be done by the committee as necessary.
- **Arbor Day observances** will be held in accordance with the Village Tree Ordinance.
- **Collaboration** among all segments of the community will be fostered.
- **A working partnership** will be developed with local and regional utilities, agencies, and organizations to improve effectiveness and efficiency of community forestry operations.
- **Training and education** of village residents about the aspects of a healthy community forest will be ongoing, e.g., citizen pruner training and inventory training.
- A **commemorative tree program** will be maintained.
- The **website** will be maintained, including information such as the accomplishments of the committee, calendar, minutes, etc.