



H. Gaffin  
*Consulting Arborist*

e-mail – hgaffin@comcast.net Web Site – www.gaffintree.com

---

## Hemlock Hedge Appraisal

Prepared for:  
Mr. Jack Shea  
221 Conant Road  
Hooterville, MA

Prepared by:  
Howard Gaffin  
MCA #1468  
BCMA # NE-0363B  
RCA #458

Sept. 27, 2011

## Table of Contents

Table of Contents .....	1
Summary .....	2
Introduction.....	2
Background .....	2
Assignment.....	2
Limitations.....	2
Purpose and Use .....	2
Observations .....	2
Discussion .....	3
Conclusion .....	4
Recommendations.....	4
Cost of Cure .....	5
Site Map.....	7
Photo 1 – Hemlock hedge .....	8
Photo 2 – Roots .....	9
Photo 3 – Tree # 8 .....	10
Photo 4 - Foliage .....	11
Assessment Worksheet .....	12
Assumptions and Limiting Conditions .....	14
Certificate of Performance .....	15

## Summary

I was contracted to provide an appraisal for the loss of a row of hemlock trees allegedly due to flooding. The appraised value for tree loss is \$22,623.00.

## Introduction

### Background

In August of 2011, attorney Jim Jones contacted me in regards to a tree related case concerning his client, Mr. Jack Shea. A row of eastern hemlock (*Tsuga canadensis*) trees located on the property were either dead or in serious decline, allegedly as a result of actions performed by the owners of the neighboring property. I met with Mr. Shea on September 5, 2011 on his property to view the site and discuss the situation.

### Assignment

After viewing the site and discussions with Mr. Shea, it was agreed that I would:

- 1 - Assess the site and the pre-construction condition of the trees.
- 2 – Provide a written appraisal for a valuation of the trees in pre-construction condition.

### Limitations

Although some photographs are available, I did not personally view these trees before injury. Condition ratings will be partially based on other hemlocks existing on the site.

### Purpose and Use

This report is to provide a reasonable value for the loss of benefits provided by trees that are in serious decline between two properties. It may be used to help settle any legal disputes over this matter.

## Observations

I arrived at the site on September 5, at 10:00 am. The eight trees in question are located along the southern property line (see site map, pg.7 and photo #1, pg.8). The site is sloped downward from the west. The majority of the trees sit in a low laying area. They have an average height of 23 feet, and range from 7 to 9 inch dbh (diameter at breast height).

All the trees are planted on a raised berm, approximately two feet in height. Tree number 8, located furthest to the west, appears to be in good health. Numbers 2 and 4 are dead,

and the remaining five are in varying states of decline. A 4-foot high retaining wall is located 7 feet from the base of the trees.

Inspection of the root zone revealed exposed roots all along the berm with evidence of erosion (photo #2, pg.9). Root anchorage still appears good, with minimal numbers of kinked or girdling roots observed. Some roots appear to have mechanical damage. The bark and trunks appear sound. No cavities, cracks, or unusual formations were noted. Branch attachments and distribution are good. No visible wounding was noted. Trees numbered 1 and 6 are composed of two stems arising from the trunk.

Except for tree number 8, there is little to no vigor evident in the current twigs and shoots of the remaining live trees. Tip dieback is evident throughout the crowns. The buds appear small and dry. Needles are yellowish, stunted, and falling from the tree. Although some hemlock woolly adelgid was present, there is little other evidence of insect or disease issues.

Tree number 8 (photo #3, pg.10) exhibits average vigor. Root anchorage is good, with less erosion evident than the other trees. The trunk splits into 2 leaders at approximately 10 feet. No cavities, wounding, or unusual features were noted along the trunk.

Branching is somewhat sparse. Foliage is of normal size and good color (photo #4, pg.11).

## Discussion

Eastern hemlock is a handsome evergreen that is well suited for screening effect. It is adaptable to pruning, and will perform well in sun or partially shaded areas, provided the proper soil conditions exist. Hemlocks prefer, moist, well-drained soil, high in organic matter. They do not tolerate drought or excessively high temperatures. Heavy clay or saturated soils with poor drainage are unsuitable.

Acknowledging the wet site, the trees were installed on a berm approximately 2 feet above the existing grade. While not an ideal situation, these trees appear to have performed well, providing screening, wildlife habitat, shade, and aesthetic appeal for many years.

The first consideration in the appraisal process is to determine the best method to use for the situation at hand. I have chosen the "Cost of Cure" method as put forth in the Guide for Plant Appraisal 9<sup>th</sup> Edition (Copyright 2000, International Society of Arboriculture). This method is used to return the property to a reasonable approximation of its' original condition. The previous or intended use of the property is used to determine what level of restoration is reasonable.

Though trees the size of the existing ones may be obtainable, it would not be realistic to consider them for replacement. The existing trees, growing as a group, have a much different form than a freestanding tree. Trees are available from a nursery within 100 miles that are 14 to 16 feet in height and approximately 10 feet wide. Trees this size would be well suited for this situation.

The "Cost of Cure" method involves three parts. The first determines the cost of debris removal and site preparation.

The second part involves plant replacement cost. This includes the purchase and installation of the plant material. It is important to note that this cost is adjusted by the condition of the plants being replaced. The premise being that new trees of quality stock with good characteristics to fit the site and intended use are rated at 100 percent.

For the purposes of this report, the condition rating will be based on the pre-construction state of these trees. Using the Assessment Worksheet (pgs.12 and 13), I arrived at a condition rating of 78%. Observations made of the injured trees, along with other hemlocks on the site, most notably tree number 8, were used to arrive at this rating.

Images provided by Mr. Shea, were also considered.

The third part of the Cost of Cure method involves plant establishment costs. This may include watering, mulching, fertilizing and pruning for a number of years until the plant is established on the site.

## **Conclusion**

After assessing all the information available to me, I have determined the appraised value for the hemlock hedge on the Shea property to be \$22,623.00 (see “Cost of Cure” formulations on pgs.5 and 6).

## **Recommendations**

- Plant trees above grade, using quality fill soil with good drainage qualities, high in organic matter.
- Spread composted wood chips to a depth of 4” throughout the planting area.
- Careful attention should be paid to grading for proper drainage away from the planting site.
- Install a soaker hose system for easy and efficient watering.
- Trees will likely need to be guyed for 2 to 3 years.
- A qualified professional should be contracted to plant the trees in accordance with ANSI 300 standards for tree planting.

## Cost of Cure

### A – Debris Removal, Site Preparation

Site Preparation	
Remove seven hemlock trees	
Two men, truck and chipper - 3 hours @ \$150.00	450.00
Remove existing stumps, grade area	
Mini-excavator and truck with operator and laborer – 4 hours @ \$150.00	600.00
Stump disposal fee	75.00
<b>Total</b>	<b>\$1,125.00</b>

### B – Plant Replacement Cost

Damaged Vegetation			
1	2	3	4
#	Species	Size	Plant Condition (%)
1 through 7 (photo #1, pg. 8)	Eastern Hemlock (tsuga canadensis)	7” –10” dbh	78 *

Replacement Vegetation								
5	6	7	8	9	10	11	12	13
Replacement Species	Size	#	Plant cost	Total Plant Cost	Adjusted Plant Cost	Actual Cost To Install	Actual Replacement Cost	Appraised Cost
				(7 x 8)	(4 x 9)	**	(9 + 11)	(10 + 11)
Eastern Hemlock (tsuga canadensis)	14- 16’	7	1,040	7,280	5,678	14,560	21,840	20,238
<b>Total</b>								<b>\$20,238.00</b>

\* Condition rating is based on perceived condition of the trees pre-construction as well as observed conditions of other hemlocks on site.

\*\* Includes costs for transportation, labor, mulch, fill, guying, and soaker type irrigation hose. Trees should be planted approximately 2 feet above existing grade.

**C – Plant Establishment Cost**

<b>Plant Establishment Cost</b>		
<b>Year</b>	<b>Maintenance</b>	<b>Cost</b>
1	Eight visits to site from May thru October, with bi-monthly visits in July and August. Monitor soil for adequate moisture levels, adjust watering schedule as needed. Adjust guy wires and prune out any dead wood as needed. Check for insect and disease problems. Be sure plants are well watered before entering dormancy. \$90.00 per visit x 8	\$720.00
2	Four visits to site beginning in mid to late June. Monitor soil for adequate moisture levels, adjust watering schedule as needed. Check for insect and disease problems. Adjust guy wires and prune out any dead wood as needed. Consider guy wire removal. Be sure plants are well watered before entering dormancy. \$90.00 per visit x 4	\$360.00
3	Visit site in early spring before bud break. Prune out any dead or diseased limbs. Prune trees to maintain strong central leader and conical shape. Consider guy wire removal. \$90.00 per hour x 2	\$180.00
<b>Total</b>		<b>\$1260.00</b>

**Cost of Cure**

	<b>A</b>	<b>\$1,125.00</b>
	<b>+ B</b>	<b>\$20,238.00</b>
	<b>+ C</b>	<b>\$1,260.00</b>
<b>Total</b>		<b>\$22,623.00</b>

## Site Map



*An overhead view of the Shea residence and the neighboring property. The hemlock trees in question are circled in blue (Image from Google Maps)*



## Photo 1 – Hemlock hedge



*The view from the Shea property*

## Photo 2 – Roots



*The trees were planted on a raised bed to adjust for existing wet conditions. Root anchorage is still good, but exposure of large and fine roots indicates ongoing erosion.*



**Photo 3 – Tree # 8**



*Hemlock number eight as viewed from Mr. Sheas'. This tree sits on higher ground and likely exemplifies the pre-construction state of the other trees. The branching is somewhat sparse, but is normal for shady conditions.*



## Photo 4 - Foliage



*Foliage of tree number 8 appears of normal size and color.*

## Assessment Worksheet

## Assessment Worksheet

Date: 9/5/11 Time: 10:15

Name: \_\_\_\_\_

Site Address: 221 CONANT ST MA

Phone: \_\_\_\_\_

Tree species: HEMLOCK HEDGE Diameter: 7-10" H: 23' W: 26' (AVERAGES)

## Condition Guide

## Roots

Root anchorage - ROOTS EXPOSED, SIGNS OF EROSIONCollar/flare soundness ✓Mechanical injury SOME INJURY ON TREES IN CENTER, SOUTH SIDEGirdled/kinked roots TREE #3 - GIRDLING ROOTCompaction/waterlogged soil LOW LAYING AREA, TREES PLANTED ON BERMPresence of insects or disease -Mushrooms/conks -

<u>3</u>	<u>3</u>	<u>6</u>
Structure	Health	Subtotal
(1-4)	(1-4)	(2-8)

Trunk TREES #1 AND 6 HAVE 2 TRUNKS WITH INCLUDED BARKSound bark and wood ✓Cavities -Mechanical/fire injury -Cracks/fissures -Swollen/sunken areas -Insects or disease -Conks -

<u>3</u>	<u>4</u>	<u>7</u>
Structure	Health	Subtotal
(1-4)	(1-4)	(2-8)

**Scaffold Branches**

Strong attachments ✓  
 Smaller diameter than where attached to trunk ✓  
 Vertical branch distribution - SOME CROSSING LIMBS  
 Free of included bark ✓  
 Free of decay and cavities ✓  
 Well pruned NO PRUNING EVIDENT  
 Well proportioned/proper taper ✓  
 Wound closure ✓  
 Deadwood  
 Insects/disease

<u>3</u>	<u>3</u>	<u>6</u>
Structure +	Health =	Subtotal
(1-4)	(1-4)	(2-8)

**Small branches and twigs \* - TREE # 8 ONLY**

Vigor of current shoots FAIR TO GOOD  
 Uniform canopy FAIRLY UNIFORM, SOMEWHAT THIN  
 Appearance of buds FAIR TO GOOD  
 Insects/disease SOME EVIDENCE OF HWA  
 Weak/dead twigs

<u>3</u>
Health Subtotal
(1-4)

**Foliage and/or buds \* - TREE # 8 ONLY**

Size of foliage/buds FAIR  
 Coloration of foliage GOOD  
 Nutrient status ?  
 Herbicide, chemical, pollution injury -  
 Wilted or dead leaves  
 Dry buds -  
 Insects or disease -

<u>3</u>
Health Subtotal
(1-4)

**Total subtotal points**

<u>25</u>
(8-32)

Divide subtotal by 32, and multiply by 100  
 To obtain "Condition Rating"

<u>78</u>
(25-100)

## Assumptions and Limiting Conditions

**1** Any legal description provided to the consultant / appraiser is assumed to be correct. Any titles and ownership to any property are assumed to be good and marketable. No responsibility is assumed for matters of legal character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

**2** It is assumed that any property is not in violation of any applicable codes, ordinances, statutes, or other government regulations.

**3** Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant / appraiser can neither guarantee nor be responsible for accuracy of information provided by others.

**4** The consultant / appraiser shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

**5** Loss or alteration of any part of this report invalidates the entire report.

**6** Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior written or verbal consent of the consultant / appraiser.

**7** Neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of the consultant / appraiser--particularly as to value conclusions, identity of the consultant / appraiser, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant / appraiser as stated in his qualification.

## Certificate of Performance

I, Howard Gaffin, certify that:

I have personally inspected the tree(s) on the property referred to in this report and have stated my findings accurately. The extent of the evaluation and/or appraisal is in the attached report.

I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no bias with respect to the parties involved.

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and facts.

My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

My analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.

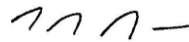
No one provided significant professional assistance to the consultant, except as indicated within the report.

I further certify that I hold the following credentials:

- Registered Consulting Arborist #458
- Board Certified Master Arborist #NE-0363B
- Massachusetts Arborist Association Certified Arborist#1468

I have been involved with the practice of arboriculture for over 30 years.

Signed



Date

9/27/2011