APPENDIX I

SITE EVALUATION

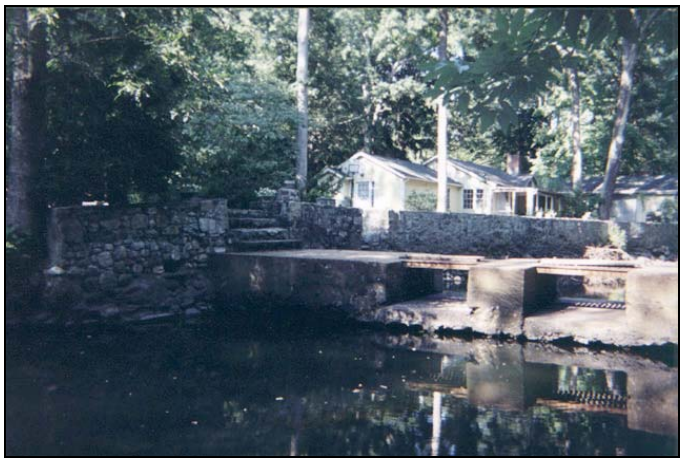
TABLE OF CONTENTS

1. Dams along the Mill River, Stamford Connecticut

Number	Name	Fish Passage	River Mile
1	Main Street Dam	NO	0.72
2	General Electric, 260 Long Ridge Road	YES	4.88
3	Arden Lane 1	NO	5.22
4	Arden Lane 2	NO	5.25
5	Maltbie Avenue	YES	5.29
6	Hunting Lane	YES	5.49
7	Merritt Parkway	NO	6.05
8	North Stamford Reservoir Dam	NO	8.13

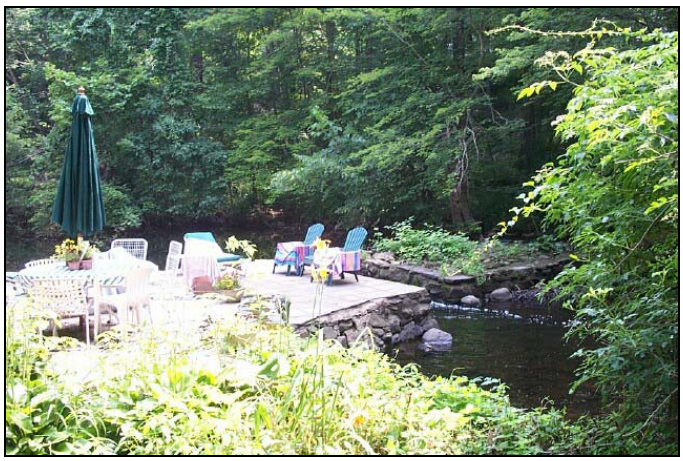
Dam 1: Main Street Dam, river mile 0.72. The 9.3-foot dam prevents fish passage.

Dam 2: General Electric, 260 Long Ridge Road, river mile 4.88. This dam has a notch in the center allowing fish passage.



Dam 3: North of Arden Lane, river mile 5.22. Base of dam blocks fish passage.

Dam 4: North of Arden Lane, river mile 5.25. Similar to Dam 3 in structure. Base of dam blocks fish passage.



Dam 5: Maltbie Avenue, river mile 5.29. This dam has a side channel on the far side (east side) which allows fish passage. A weir forms a pool behind it. There is a spillway about two feet wide behind the blue deck chairs, with a drop of 2 – 3 feet.

Dam 6: Hunting Lane, river mile 5.49. This dam is similar in structure to Dam 5, with a side channel allowing fish passage.

Dam 7: Merritt Parkway, river mile 6.05. This dam does not currently allow fish passage, but there is a gate in the center of the dam that could easily be opened to restore fish passage.

Dam 8: North Stamford Dam, river mile 8.13. No fish passage.

Potential Riparian Buffer Development Site Evaluation Form

Date:_____ Photo #s:_____ Site I.D. #: _____

Ownership (if known): ☐ public ☐ private Describe:_____

Town:_____ Subsection:_____ Evaluator(s): _____

Size of Site (square ft): ☐ 0-5,000 ☐ 5-10,000 ☐ 10-20,000 ☐ 20-43,560 ☐ > 1 acre

☐ variable (describe):_____

Describe Buffer Location/Setting/Surrounding Land Use:

_____

_____

_____

Describe Buffer Topography/Gradient:

_____

_____

Describe Existing Cover Types in and Adjacent to Buffer Site:

_____

_____

Rate the Condition of the Adjacent In-stream Habitat:

☐ very natural/good habitat quality ☐ moderately natural/moderate habitat quality

☐ degraded/altered/low habitat quality

Site Diagram (Sketch):

BUFFER FUNCTIONAL CONSIDERATIONS (continued)

Ecological - Wildlife Habitat

y=1, n=0	Indicators that the Opportunity for Restoration Exists	Notes
	Exotic and/or invasive plant species are present and significantly impact biological functions such as plant and wildlife habitat (*e.g.*, one or two barberry bushes would not receive a "1", but an expanding patch of knotweed or purple loosestrife would).	
	Buffer is adjacent to naturally vegetated habitat such as forest, wetland, or abandoned field. There is opportunity to improve the overall habitat matrix of the surrounding area by planting trees and other native vegetation in the buffer site to extend or connect existing forested corridors, or enlarge interior habitat patches, or enhance habitat juxtapositions (such as re-planting forest adjacent to a vernal pool or riparian wetland).	
	Contiguous in-stream habitat is relatively high quality. Features such as important fish habitat and/or river-dependent wildlife habitat, or natural stream conditions are present.	
	Buffer is degraded by human activity in a way that negatively impacts wildlife habitat and can be corrected (e.g., trash dumping, poorly vegetated condition due to fill material or sterile soil conditions, abandoned or unnecessary impervious surface present)	
	Wildlife Habitat Subtotal (sum of above) = X_{wh}	
	Normalized Wildlife Habitat Score: $X_{wh}/4$	

BUFFER FUNCTIONAL CONSIDERATIONS (continued)

Education and Aesthetics (Summary)

y=1, n=0	Indicators that the Opportunity for Restoration Exists	Notes
	Site is visually accessible (e.g., conspicuous for a large number of people).	
	Site is physically accessible or potentially accessible to the public by foot, bike, or car (e.g., paths, nearby roads, and nearby parking).	
	Site is within 1 mile of a school or densely populated area.	
	The adjacent in-stream habitat is relatively natural (e.g., not channelized or highly degraded visually) and there is opportunity to view wildlife, native plant communities and other characteristics of a naturally functioning stream corridor.	
	Education/Aesthetics Subtotal (sum of above) = A (Education/Aesthetics Total)	
	Normalized Education/Aesthetics Score: A/4	

BUFFER FUNCTIONAL CONSIDERATIONS - SUMMARY

	Ecological and Education/Aesthetics Total (E + S) = T	
	Normalized Ecological and Education/Aesthetics Score = T/15	

COST CONSIDERATIONS

Potential Buffer Development Components

X	Components, mark (X) all that apply, add any not listed	Notes
	Installation of native buffer plantings (including trees, groundcover seeding, etc.)	
	Removal/eradication of exotic/invasive species	
	Soil amendments (e.g., addition of topsoil)	
	Soil removal (e.g., fill removal)	
	Bank stabilization - biostabilization (such as wattles, cuttings, and minor soil work/erosion control fabric)	
	Bank stabilization - structural (e.g., planted gabions, cribs)	
	Soil stabilization/erosion control during construction (e.g., silt fence, mulching and seeding)	
	Minor grading to enhance infiltration, storage, floodplain functions, or habitat	
	Major grading to enhance infiltration, storage, floodplain functions, or habitat	
	Impervious surface removal (specify whether structure, asphalt, etc.)	
	Remove/modify concentrated runoff (ditch, paved swale, etc.)	
	Construct stormwater management measure (e.g., settling basin/biofilter basin, level spreader, velocity dissipater, etc.)	
	Construct access (e.g., for people as well as equipment during development) if none exists	
	Trash removal (e.g., old cars, tires, etc.)	

Pebble Count								Pebble Count			
Site				Date				Date			
Crew				Reach				Reach			
Inches	Particle	Millimeter		Particle Count	#	Item %	% Cum	Particle Count	#	Item %	% Cum
	Silt/Clay	< .062	S/C								
	Very Fine	.062 - .125	SANDS								
	Fine	.125 – 25									
	Medium	.25 – 50									
	Course	.50 – 1.0									
.04 - .08	Vry Course	1.0 – 2.0									
.08 -.16	Very Fine	2.0 – 4.0	GRAVELS								
.16 - .22	Fine	4.0 – 5.7									
.22 - .31	Fine	5.7 – 8.0									
.31 - .44	Medium	8.0 – 11.3									
.44 - .63	Medium	11.3 – 16.0									
.63 - .89	Course	16.0 – 22.6									
.89 – 1.26	Course	22.6 – 32.0									
1.26 – 1.77	Vry Course	32.0 – 45.0									
1.77 – 2.5	Vry Course	45.0 – 64.0									
2.5 – 3.5	Small	64.0 – 90.0	COBL								
3.5 - 5.0	Small	90 – 128									
5.0 – 7.1	Large	128 – 180									
7.1 – 10.1	Large	180 – 256									
10.1 – 14.3	Small	256 – 362	BLDR								
14.3 – 20	Small	362 – 512									
20 – 40	Medium	512 – 1024									
40 - 80	Lrg-Vry-Lrg	1024 – 2048									
	Bedrock										

Cross-section morphology

Location	Pool	Run	Riffle

Field Sketch

Left Bank

Right Bank

Banks

LEFT	Angle (deg.)	Veg. Cover (%) &type	Material Composition
Lower			
Middle			
Upper			

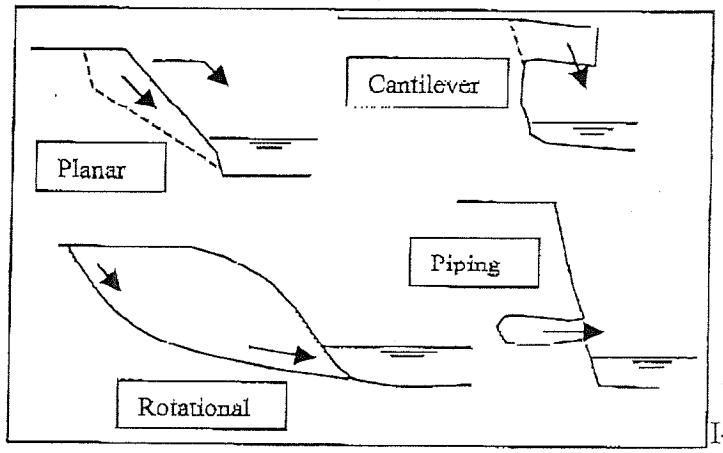
Right	Angle (deg.)	Veg. Cover (%) &type	Material Composition
Lower			
Middle			
Upper			

Left Bank failure?		Type			
		Planar	Cantilever	Rotational	Piping

Right Bank failure?		Type			
		Planar	Cantilever	Rotational	Piping

State of Bed

Armouring		Pebble count done	
Substrate pebble count done			



Photographs

Number	Description

Potential Projects Identified During Field Investigations

Site Location	Current Conditions	Potential Restoration Action	Restoration Rating
1	Abandoned cement blocks and gate structures directly underneath Pulaski Street Bridge. Structures block fish passage at lower tides.	Remove portions of the fish blockage to restore fish passage at low tide.	5
2	Tidal flat dominated by *Phragmites* sp. Area lies directly in front of City owned property.	Tidal wetland creation and enhancement. Restore area to a tidal wetland through regrading and planting of desired vegetation. Invasive removal.	5
3	Riparian area dominated by Box Elder, Bittersweet, and Poison Ivy. Low shrubs providing little shade and habitat value. Located on Private land	Riparian Enhancement through planting of desirable riparian species. Regrade lower portion to include a tidal wetland area. Manage or remove any exotic species.	3
4	Stormwater runoff point discharge from Interstate I-95. Side slopes are denuded of vegetation and have erosion potential.	Bank stabilization through planting and bioengineering enhancement. Stormwater runoff treatment through wetland creation for treatment. Trail system to connect greenway along river corridor.	3
5	Stormwater runoff from point discharge. Large pipe and rip-rap entering river adjacent to State Street bridge.	Stormwater treatment. Trail system to connect greenway along river corridor.	3
6	Tidal flat dominated by *Phragmites* sp. Area lies directly in front of City owned property.	Tidal wetland creation and enhancement. Restore area to a tidal wetland through regrading and planting of desired vegetation. Invasive removal.	3
7	Riparian corridor on west bank of Mill River located within a City owned Park. Vegetation is composed of Norway Maple, Silver Maple, Box Elder, Mulberry, and Green Ash.	Riparian enhancement through planting of desirable riparian species. Consider developing overlooks and trail system through out park.	3
8	Riparian area dominated by Box Elder, Japanese Knotweed, and Poison Ivy. Low shrubs providing little shade and habitat value. Located on Private land	Riparian Enhancement through planting of desirable riparian species. Regrade lower portion to include a tidal wetland area. Manage or remove any exotic species.	3
9	Empty lot located on the east bank of the river downstream of the Main St bridge. Area is dominated by invasive exotics. Provides little shading or habitat value.	Riparian Enhancement through planting of desirable riparian species. Regrade lower portion to include a wetland area. Manage or remove any exotic species. Trail system to connect greenway along river corridor.	6
10	Floodplain located on the east bank of the river just downstream of the Main St bridge. Area is dominated by invasive exotics. Provides little shading or habitat value.	Riparian Enhancement through planting of desirable riparian species. Regrade lower portion to include a wetland area. Manage or remove any exotic species. Trail system to connect greenway along river corridor.	7
11	Retaining wall located on west bank of river directly adjacent to Mill Pond Road. Has numerous stormwater discharge pipe. Constriction made by road and wall does not allow a walkway for foot and bike traffic.	Structural reinforcement and stabilization. Vegetation planting at base of wall. Incorporate a sidewalk for pedestrian and bike traffic to connect park system.	7
12	Main Street dam forming the Mill Pond. Dam is failing and needs structural reinforcement. Collects trash and causes sedimentation behind dam within the Mill Pond.	Remove Main Street dam and create a geomorphologically correct river channel which includes a number of pool and riffle sequences.	7
13	Mill Pond located in downtown Stamford. Currently a trap for sediment and trash. Vertical cement walls provide little habitat value. Large population of Canada Geese and Mute Swans.	Restore a geomorphically correct river channel. Remove cement walls and create floodplain that incorporates a trail/boardwalk system as well as overlooks and educational facilities. Maintain as many Cherry Trees as possible within Mill Pond Park.	7

Site Location	Current Conditions	Proposed Restoration Action	Restoration Rating
14	Current location of a Goodwill Store directly north of the Broad Street bridge and on the east bank of the river. Site has a paved parking lot directly up to the edge of the river bank. In stream habitat is poor due to sedimentation and water fowl population.	Remove building and parking lot. Create a stormwater wetland and natural teaching area Include boardwalk and educational facilities. Wetland will provide treatment for stormwater inputs as well as providing a urban wildland for wildlife.	6
15	Open area approximately 0.13 acres in size located on the east bank of the river adjacent to the University of Connecticut's parking lot.	Create a stormwater wetland or swale to treat run off from the UC parking lot. Could be utilized as a natural teaching laboratory.	6
16	Stormwater discharge pipe capturing runoff from Elementary school. Pipe is locate on the west bank of the river and discharges directly into river.	Stormwater treatment by incorporating riparian and wetland vegetation. Riparian Enhancement through planting of desirable riparian species. Regrade lower portion to include a wetland area. Manage or remove any exotic species. Trail system to connect greenway along river corridor.	5
17	Parking lot located on the Wright Technical School property. School is located on the west bank of the river and just south of Scalzi Park. Parking lot is adjacent to the river and near a pedestrian bridge joining the Park with the east side of the river.	Create a stormwater wetland and natural teaching area to treat run off from the school grounds. Riparian enhancement through planting of desirable riparian species. Manage or removal of exotic species. Trail system to connect greenway along river corridor.	8
18	Riparian corridor on west bank of Mill River located between Wright Technical School and Mill River. Vegetation is composed of primarily of Japanese Knotweed, an invasive exotic. Provides little shading or habitat value.	Riparian Enhancement through planting of desirable riparian species. Manage or remove any exotic species.	8
19	Floodplain located on the west bank of the river within Scalzi Park. Currently has vegetation dominated by Silky Dogwood, Cottonwood, and Oaks.	Riparian Enhancement through planting of desirable riparian species. Manage or remove any exotic species.	8
20	Floodplain located on the east bank of the river within Scalzi Park. Currently has vegetation dominated by Cottonwood, Ailanthus and Purple Loosestrife.	Riparian Enhancement through planting of desirable riparian species. Manage or remove any exotic species.	8

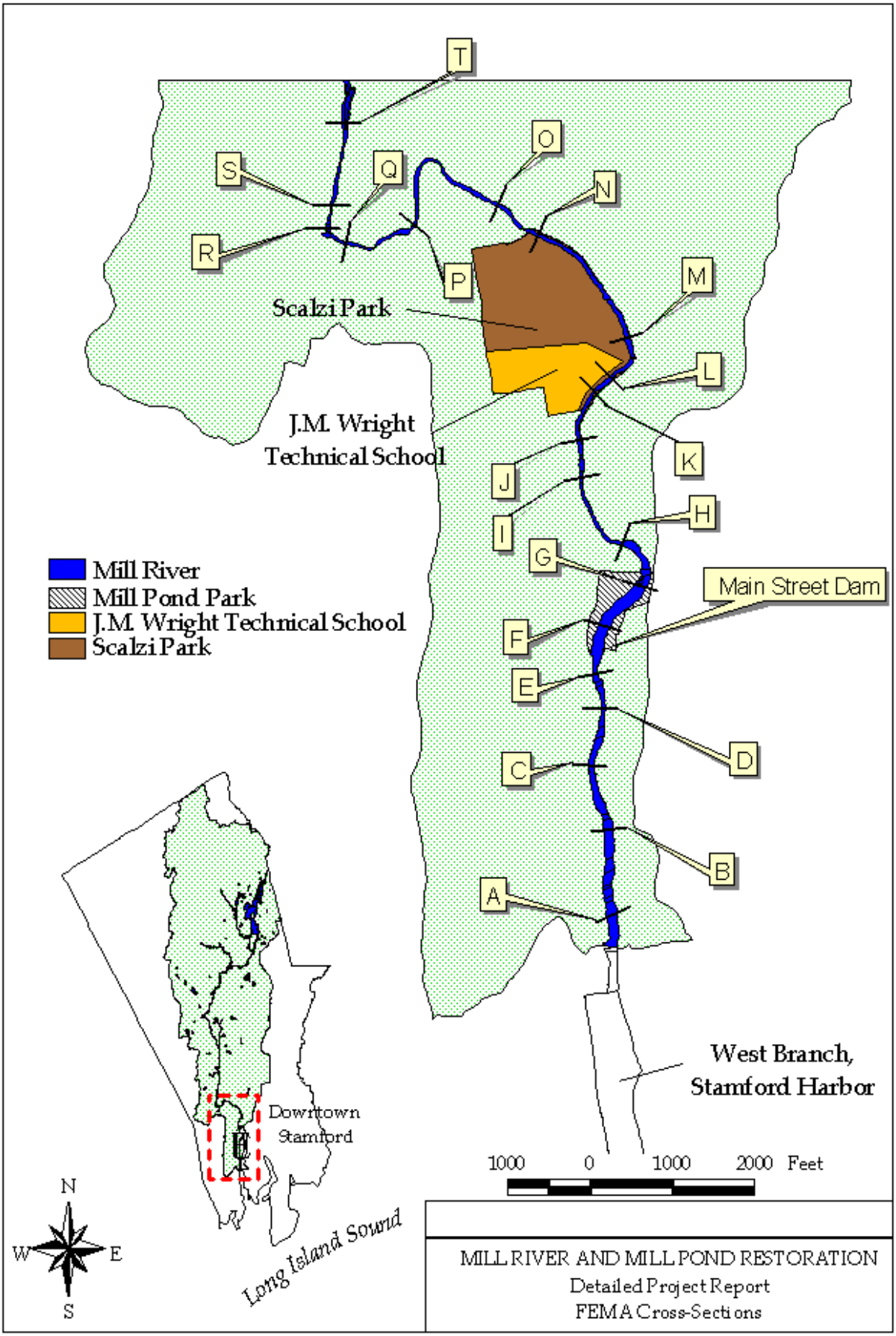
3. Potential Restoration Development Worksheet

FEMA Cross-section	A	B	C	D	E	F	G	H	I
General Information									
Distance from Long Island Sound (ft)	735	1720	2545	3585	4190	4840	5300	6425	6720
Streambed Elevation (ft)	-8.5	0.5	0	4	4	6.8	9.8	8.2	12.5
Regulatory Water Surface Elevation (ft)	12.1	12.3	14	15.3	16.8	20.3	20.8	22.8	24.6
In-stream Habitat	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Good
Habitat Assessment									
Presence of invasive or exotic plant community	1	1	1	1	1	1	1	1	0
Opportunity to improve surrounding habitat	0	0	0	1	1	1	1	1	0
Contiguous in-stream habitat is relatively high quality	0	0	0	0	1			0	1
Buffer is degraded by human activity	1	1	0	1	1	1	1	1	0
Habitat Assessment Subtotal (HA) =	2	2	1	3	4	3	3	3	1
Education & Aesthetics Considerations									
Site is visually accessible	1	0	0	1	1	1	1	1	1
Site is physically accessible	1	0	1	1	1	1	1	1	1
Site is within 1 mile of school or densely populated area	1	1	1	1	1	1	1	1	1
The adjacent in-stream habitat is relatively natural	0	0	0	0	0			0	1
Education & Aesthetics Subtotal (EA) =	3	1	2	3	3	3	3	3	4
TOTAL POTENTIAL RESTORATION SCORE (HA+EA)=	**5**	**3**	**3**	**6**	**7**	**6**	**6**	**6**	**5**
Potential Restoration Actions									
Installation of native plants	x	x	x	x	x	x	x	x	
Removal/eradication of exotic/invasive species	x	x	x	x	x	x	x		
Soil amendments					x	x	x		
Soil removal						x	x		
Bank stabilization - biostabilization	x	x	x	x	x	x	x		
Bank stabilization - structural					x				
Soil stabilization/erosion control during construction	x	x	x		x	x	x		
Minor grading to control hydraulics					x				
Major grading to control hydraulics						x	x		
Impervious surface removal						x	x		
Remove/modify concentrated runoff									
Construct stormwater management measure									
Construct access if none exists		x			x				
Trash removal	x	x	x	x	x				

Notes: 1 represents opportunity and 0 represents no opportunity

Potential Restoration Development Worksheet

FEMA Cross-section	J	K	L	M	N	O	P	Q	R	S
General Information										
Distance from Long Island Sound (ft)	7600	8300	8800	9850	10300	12200	1300	13400	13595	15100
Streambed Elevation (ft)	3.1	14	14	15.6	18.3	19.5	23	26	27.7	29.8
Regulatory Water Surface Elevation (ft)	28.1	29.4	30.2	30.2	31.6	36.7	37.9	39.2	.9.9	44.2
In-stream Habitat	Good	Good	Good	Moderate	Moderate	Good	Moderate	Good	Good	Good
Habitat Assessment										
Presence of invasive or exotic plant community	1	1	1	1	0	0	0	0	0	0
Opportunity to improve surrounding habitat	0	1	1	1	0	0	0	0	0	0
Contiguous in-stream habitat is relatively high quality	1	1	1	1	1	1	1	1	1	1
Buffer is degraded by human activity	0	1	1	1	0	0	0	0	0	0
Habitat Assessment Subtotal (HA) =	2	4	4	4	1	1	1	1	1	1
Education & Aesthetics Considerations										
Site is visually accessible	1	1	1	1	0	0	0	0	0	0
Site is physically accessible	1	1	1	1	1	0	1	1	0	0
Site is within 1 mile of school or densely populated area	1	1	1	1	1	1	1	1	1	1
The adjacent in-stream habitat is relatively natural	1	1	1	1	1	0	0	1	1	0
Education & Aesthetics Subtotal (EA) =	4	4	4	4	3	1	2	3	2	1
TOTAL POTENTIAL RESTORATION SCORE (HA+EA)=	**6**	**8**	**8**	**8**	**4**	**2**	**3**	**4**	**3**	**2**
Potential Restoration Actions										
Installation of native plants	x	x	x	x	x					
Removal/eradication of exotic/invasive species	x	x	x	x	x					
Soil amendments										
Soil removal										
Bank stabilization - biostabilization			x	x						
Bank stabilization - structural										
Soil stabilization/erosion control during construction			x	x						
Minor grading to control hydraulics										
Major grading to control hydraulics										
Impervious surface removal		x								
Remove/modify concentrated runoff										
Construct stormwater management measure		x								
Construct access if none exists										
Trash removal		x	x	x						



FEMA Cross-Section locations within the Project Area.

NUMBERED CIRCLES INDICATE TREES INCLUDED IN SURVEY.

THE BIOENGINEERING GROUP, INC.

18 COMMERCIAL ST.
SALEM, MA 01970
978-740-0096 (P)
978-740-0097 (F)
www.bioengineering.com

EXISTING TREE LOCATIONS AT MILL POND PARK STAMFORD, CONNECTICUT

GRAPHIC SCALE
50 0 100 200
SCALE IN FEET

NORTH

DRAWING NO.

Tree Survey, Mill Pond Park

tree #	bank	species	common name	position	site characteristics	aesthetic value
1	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	mediocre
2	L	*Cladrastus kentukea*	yellow wood	single row	meadow	good
3	L	*Quercus palustris*	pin oak	isolated	meadow	remarkable
4	L	*Cladrastus kentukea*	yellow wood	single row	meadow	good
5	L	*Acer saccharinum*	maple	isolated	meadow	remarkable
6	L	*Cladrastus kentukea*	yellow wood	single row	meadow	poor
7	L	*Cladrastus kentukea*	yellow wood	single row	asphalt, impermeable soil	mediocre
8	L	*Gleditsia thriachantos*		single row	meadow	mediocre
9	L	*Cladrastus kentukea*	yellow wood	single row	meadow	mediocre
10	L	missing tree - removed				
11	L	*Cladrastus kentukea*	yellow wood	single row	meadow, asphalt	mediocre
12	L	*Crataegus laevigata*	crimson cloud English hawthorne	single row	meadow	good
13	L	*Cladrastus kentukea*	yellow wood	double row	flower bed, asphalt	poor
14	L	*Cladrastus kentukea*	yellow wood	single row	meadow, asphalt	mediocre
15	L	not surveyed				
16	L	*Cladrastus kentukea*	yellow wood	single row	meadow	good
17	L	*Cladrastus kentukea*	yellow wood	single row	meadow	mediocre
18	L	*Crataegus laevigata*	crimson cloud English hawthorne	single row	meadow	mediocre
19	L	*Cladrastus kentukea*	yellow wood	single row	meadow	good
20	L	*Cladrastus kentukea*	yellow wood	single row	meadow	good
21	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	good
22	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	mediocre
23	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	mediocre
24	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	mediocre
25	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	very poor
26	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	mediocre
27	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	good
28	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	poor
29	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	good
30	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	mediocre
31	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	mediocre
32	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	poor
33	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	good
34	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	good
35	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	good
36	L	*Prunus serrulata*	kwanzan oriental cherry	isolated	meadow	good
37	L	*Ailanthus altissima*	tree-of-heaven	isolated	meadow	mediocre
38	L	*Salix*	willow	isolated	meadow	mediocre
39	L	not surveyed				
40	L	not surveyed				
41	L	not surveyed				
42	L	not surveyed				
43	R	*Morus*	mulberry	wooded area	meadow	poor
44	R	*Prunus serrulata*	kwanzan oriental cherry	wooded area	meadow	mediocre

tree #	bank	species	common name	position	site characteristics	aesthetic value
45	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
46	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
47	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
48	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
49	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
50	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
51	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
52	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
53	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
54	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	very poor
55	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
56	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
57	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
58	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
59	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
60	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
61	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
62	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
63	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
64	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
65	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
66	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
67	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
68	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
69	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
70	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
71	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
72	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
73	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
74	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	remarkable
75	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	remarkable
76	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
77	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	very poor
78	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
79	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
80	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
81	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
82	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
83	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	remarkable
84	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
85	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
86	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
87	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre

tree #	bank	species	common name	position	site characteristics	aesthetic value
88	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
89	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
90	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
91	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
92	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
93	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
94	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
95	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
96	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
97	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
98	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
99	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
100	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
101	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	poor
102	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
103	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	good
104	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre
105	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	very poor
106	R	*Prunus serrulata*	kwanzan oriental cherry	double row	meadow	mediocre

Tree Survey, Mill Pond Park

tree #	growth limitations 1	growth limitations 2	vegetative status	estimated height in meters	D.B.H in inches	circumference in feet	age in years	tree #
1	sidewalk	asphalt path	intermediate	4< >8	1.24	3.9	30< >60	1
2	manufactured object	sidewalk, asphalt path	insufficient	4< >8	11.4	3	60< >100	2
3	asphalt path		excellent	8< >15	31.2	8.2	60< >100	3
4	sidewalk	asphalt path	satisfactory	4< >8	11.03	2.93	60< >100	4
5	proximity to other trees		intermediate	15< >30	34.8	9.1	60< >100	5
6	asphalt path		deteriorated	4< >8	22.5	5.9	30< >60	6
7	sidewalk		intermediate	4< >8	30	7.8	30< >60	7
8	asphalt path		insufficient	4< >8	25.2	6.6	30< >60	8
9	asphalt path		intermediate	4< >8	19.56	5.1	60< >100	9
10								10
11	asphalt path		intermediate	8< >15	16.16	4.38	60< >100	11
12	asphalt path		insufficient	4< >8	11.1	2.9	30< >60	12
13	asphalt path		deteriorated	8< >15	46.8	12.3	60< >100	13
14	manufactured object	asphalt path	intermediate	8< >15	33.96	8.9	60< >100	14
15								15
16	asphalt path		intermediate	8< >15	4.775	1.506	60< >100	16
17	asphalt path		intermediate	4< >8	16.85	4.4	30< >60	17
18	sidewalk	asphalt path	insufficient	4< >8	14.8	3.9	30< >60	18
19	asphalt path		satisfactory	4< >8	14.825	3.9	60< >100	19
20	asphalt path	road	satisfactory	8< >15	17.16	4.5	60< >100	20
21			intermediate	4< >8	12.675	3.35	30< >60	21
22	proximity to other trees		intermediate	4< >8	6	22.9	30< >60	22
23	proximity to other trees		intermediate	4< >8	5.1	19.3	30< >60	23
24	proximity to other trees		intermediate	4< >8	18.1	4.8	30< >60	24
25	proximity to other trees		insufficient	4< >8	14.1	3.7	30< >60	25
26	proximity to other trees		intermediate	4< >8	17.5	4.71	30< >60	26
27	proximity to other trees		satisfactory	4< >8	23.9	6.2	30< >60	27
28	proximity to other trees		insufficient	4< >8	21.1	5.5	30< >60	28
29	proximity to other trees		satisfactory	4< >8	22	5.9	30< >60	29
30	proximity to other trees		insufficient	4< >8	23.5	6.15	30< >60	30
31	proximity to other trees		intermediate	4< >8	19.2	5	30< >60	31
32	proximity to other trees		deteriorated	4< >8	23.2	6.1	30< >60	32
33	proximity to other trees		intermediate	4< >8	20.6	5.4	30< >60	33
34	manufactured object		satisfactory	4< >8	29.8	7.8	30< >60	34
35	manufactured object		satisfactory	4< >8	28.3	7.4	30< >60	35
36			intermediate	4< >8	25.11	6.6	30< >60	36
37	manufactured object		intermediate	8< >15	8	0.6		37
38			intermediate	8< >15	12	1		38
39								39
40								40
41								41
42								42
43	proximity to other trees		intermediate	4< >8	4.5	6.5	10< >30	43
44	proximity to other trees		intermediate	4< >8	3.03	0.79	10< >30	44

tree #	growth limitations 1	growth limitations 2	vegetative status	estimated height in meters	D.B.H in inches	circumference in feet	age in years	tree #
45	proximity to other trees		intermediate	4< >8	14.56	3.81	30< >60	**45**
46	proximity to other trees		satisfactory	4< >8	25.59	6.69	30< >60	**46**
47	proximity to other trees		deteriorated	4< >8	11.41	2.98	30< >60	**47**
48			intermediate	4< >8	26.8	7	30< >60	**48**
49			intermediate	4< >8	15.35	4.01	30< >60	**49**
50	proximity to other trees		intermediate	4< >8	19.29	5.05	30< >60	**50**
51			satisfactory	4< >8	30.2	7.9	30< >60	**51**
52			insufficient	4< >8	19.29	5.05	30< >60	**52**
53			satisfactory	4< >8	34.9	9.1	30< >60	**53**
54			insufficient	4< >8	7.48	1.95	30< >60	**54**
55			intermediate	4< >8	13.77	3.6	30< >60	**55**
56			intermediate	4< >8	20.47	5.35	30< >60	**56**
57			deteriorated	4< >8	10.23	2.67	30< >60	**57**
58			insufficient	4< >8	26.7	7	30< >60	**58**
59			deteriorated	4< >8	9.84	2.57	30< >60	**59**
60			insufficient	4< >8	13.77	3.6	30< >60	**60**
61			intermediate	4< >8	22.83	5.97	30< >60	**61**
62			deteriorated	4< >8	13.77	3.6	30< >60	**62**
63			deteriorated	4< >8	11.02	2.88	30< >60	**63**
64			intermediate	4< >8	12.59	3.29	30< >60	**64**
65			intermediate	4< >8	14.17	3.7	30< >60	**65**
66			insufficient	4< >8	25.9	6.8	30< >60	**66**
67			intermediate	4< >8	21.65	5.66	30< >60	**67**
68			deteriorated	4< >8	8.26	2.16	30< >60	**68**
69			intermediate	4< >8	14.56	3.81	30< >60	**69**
70			satisfactory	4< >8	6.29	1.64	30< >60	**70**
71			intermediate	4< >8	14.96	3.91	30< >60	**71**
72			satisfactory	4< >8	9.84	2.57	30< >60	**72**
73			intermediate	4< >8	11.81	3.09	30< >60	**73**
74			excellent	< 4	3.14	0.82	30< >60	**74**
75			excellent	< 4	2.75	0.71	30< >60	**75**
76			insufficient	4< >8	13.77	3.6	30< >60	**76**
77			deteriorated	< 4	9.05	2.36	30< >60	**77**
78			insufficient	4< >8	11.41	2.98	30< >60	**78**
79			satisfactory	4< >8	12.2	3.19	30< >60	**79**
80			intermediate	< 4	6.29	1.63	30< >60	**80**
81			deteriorated	< 4	8.66	2.26	30< >60	**81**
82			intermediate	4< >8	30.8	8.1	30< >60	**82**
83			satisfactory	4< >8	12	3.14	30< >60	**83**
84			insufficient	< 4	10.62	2.78	30< >60	**84**
85			intermediate	4< >8	21.25	5.56	30< >60	**85**
86			intermediate	4< >8	24.4	6.4	30< >60	**86**
87			intermediate	4< >8	11.02	2.88	30< >60	**87**

tree #	growth limitations 1	growth limitations 2	vegetative status	estimated height in meters	D.B.H in inches	circumference in feet	age in years	tree #
88			intermediate	< 4	6.69	1.75	30< >60	**88**
89			intermediate	15< >30	11.02	2.88	30< >60	**89**
90			intermediate	4< >8	10.23	2.67	30< >60	**90**
91			intermediate	4< >8	11.02	2.88	30< >60	**91**
92			satisfactory	4< >8	32.1	8.2	30< >60	**92**
93			intermediate	4< >8	14.96	3.91	30< >60	**93**
94			intermediate	4< >8	12	3.14	30< >60	**94**
95			intermediate	< 4	11.02	2.88	30< >60	**95**
96			insufficient	4< >8	11.41	2.98	30< >60	**96**
97			deteriorated	< 4	5.51	1.44	30< >60	**97**
98			satisfactory	4< >8	20.86	5.46	30< >60	**98**
99			satisfactory	4< >8	11.02	2.88	30< >60	**99**
100			intermediate	< 4	7.48	1.95	30< >60	**100**
101			deteriorated	4< >8	9.84	2.57	30< >60	**101**
102			satisfactory	4< >8	12	3.14	30< >60	**102**
103			satisfactory	4< >8	18.89	4.94	30< >60	**103**
104			intermediate	4< >8	10.23	2.67	30< >60	**104**
105			insufficient	15< >30	7.87	2.06	30< >60	**105**
106			intermediate	4< >8	10.23	2.67	30< >60	**106**

collar					
1	2	3	4	5	tree #
enlarged	bark necrosis	shoots	cracks in bark		1
enlarged	bark necrosis	peeled emerging roots	cracks in bark		2
linear					3
injuries	ingrown bark	emerging roots	peeled emerging roots	other	4
enlarged	injuries	peeled emerging roots	cracks in bark		5
enlarged	decay	injuries	ingrown bark	peeled emerging roots	6
enlarged	ingrown bark	peeled emerging roots	cracks in bark		7
injuries	ingrown bark	bark necrosis			8
enlarged	depression	ingrown bark	peeled emerging roots	cracks in bark	9
					10
enlarged	depression	injuries	ingrown bark	peeled emerging roots	11
decay	barrel effect	injuries	bark necrosis	cracks in bark	12
enlarged	injuries	peeled emerging roots	bacterial tumors		13
enlarged	injuries	ingrown bark	peeled emerging roots		14
					15
enlarged	decay	injuries	ingrown bark	peeled emerging roots	16
injuries	peeled emerging roots	other			17
enlarged	decay	injuries	ingrown bark	cracks in bark	18
enlarged	injuries	ingrown bark	peeled emerging roots		19
enlarged	injuries	peeled emerging roots	cracks in bark		20
injuries	cracks in bark				21
enlarged	peeled emerging roots				22
enlarged	injuries	ingrown bark	peeled emerging roots	soil mounding/ stump lifting	23
injuries	peeled emerging roots				24
enlarged	ingrown bark	peeled emerging roots	bacterial tumors		25
injuries	ingrown bark	peeled emerging roots			26
enlarged	peeled emerging roots	shoots			27
enlarged	decay	injuries	ingrown bark	peeled emerging roots	28
decay	injuries	peeled emerging roots	cracks in bark	soil mounding/ stump lifting	29
injuries	bark necrosis	peeled emerging roots	cracks in bark		30
injuries					31
injuries					32
injuries	peeled emerging roots	soil mounding/ stump lifting			33
enlarged	bark necrosis	peeled emerging roots			34
					35
brackets, conks, corpoforus	decay	enlarged	depressions	peeled emerging roots	36
					37
					38
					39
					40
					41
					42
enlarged					43
ingrown bark					44

collar					
1	2	3	4	5	tree #
enlarged	injuries				45
enlarged	injuries	ingrown bark	peeled emerging roots		46
enlarged	decay	injuries	ingrown bark	peeled emerging roots	47
enlarged	decay	peeled emerging roots			48
enlarged	decay	injuries	ingrown bark		49
brackets, conks, corpoforus	peeled emerging roots	cracks in bark			50
enlarged	cracks in bark				51
enlarged	bark necrosis	peeled emerging roots			52
enlarged	decay	peeled emerging roots	strangling roots		53
enlarged	decay	injuries	ingrown bark	peeled emerging roots	54
enlarged	peeled emerging roots				55
peeled emerging roots					56
enlarged	injuries	ingrown bark	peeled emerging roots		57
brackets, conks, corpoforus	enlarged	barrel effect			58
					59
barrel effect	peeled emerging roots				60
injuries	ingrown bark	bark necrosis	peeled emerging roots	cracks in bark	61
peeled emerging roots					62
ingrown bark					63
injuries	ingrown bark	peeled emerging roots	cracks in bark		64
barrel effect	peeled emerging roots	cracks in bark			65
injuries	ingrown bark	bark necrosis	peeled emerging roots		66
enlarged	decay	emerging roots	peeled emerging roots	cracks in bark	67
enlarged	injuries	ingrown bark	bark necrosis	peeled emerging roots	68
barrel effect	injuries	ingrown bark	peeled emerging roots		69
injuries					70
peeled emerging roots	cracks in bark				71
peeled emerging roots					72
injuries	ingrown bark	peeled emerging roots	other		73
					74
					75
injuries	emerging roots				76
peeled emerging roots					77
decay	injuries	peeled emerging roots	cracks in bark	soil mounding/ stump lifting	78
					79
injuries	peeled emerging roots				80
injuries	ingrown bark	peeled emerging roots	cracks in bark		81
injuries					82
enlarged					83
injuries					84
depression	barrel effect				85
bark necrosis	peeled emerging roots				86
peeled emerging roots					87

collar					
1	2	3	4	5	tree #
peeled emerging roots					88
peeled emerging roots					89
peeled emerging roots					90
peeled emerging roots					91
peeled emerging roots					92
decay	peeled emerging roots	soil mounding/ stump lifting	bacterial tumors		93
injuries	peeled emerging roots				94
peeled emerging roots		soil mounding/ stump lifting			95
injuries	peeled emerging roots	bacterial tumors	other		96
injuries					97
enlarged	injuries	ingrown bark	peeled emerging roots		98
injuries	peeled emerging roots				99
peeled emerging roots					100
decay	injuries	ingrown bark	peeled emerging roots		101
peeled emerging roots					102
peeled emerging roots					103
peeled emerging roots					104
injuries					105
peeled emerging roots					106

trunk					tree #
1	2	3	4	5	
dead wood and/ or decay	decay on wounds	exudates	injuries	torsion	1
dead wood and/ or decay	cankers	injuries	bacterial flux	policormic	2
					3
injuries	policormic				4
dead wood and/ or decay	decay on wounds	cavities in crown	wood borers		5
dead wood and/ or decay	cankers	arch-shaped	cavities in trunk	bacterial flux	6
decay on wounds	cavities in trunk	flares/ ribs	injuries	policormic	7
dead wood and/ or decay	arch-shaped	flares/ ribs	policormic	sabre-shaped	8
cavities in trunk	exudates	injuries	bacterial flux	policormic	9
					10
arch-shaped	decay on wounds	cavities in trunk	policormic	torsion	11
decay on wounds	cavities in trunk	bacterial flux	sinuous	torsion	12
dead wood and/ or decay	cavities in crown	cavities in trunk	policormic	sabre-shaped	13
arch-shaped	decay on wounds	bacterial flux	policormic	sabre-shaped	14
					15
injuries	bacterial flux	policormic	bacterial tumors	exudates	16
cavities in trunk	exudates	injuries	bacterial flux	policormic	17
cavities in trunk	injuries	policormic			18
cavities in trunk	policormic				19
dead wood and/ or decay	cavities in trunk	policormic			20
decay on wounds	cavities in trunk	exudates	policormic		21
cavities in trunk	policormic	sinuous	torsion		22
cavities in trunk	flares/ ribs	policormic	torsion		23
cavities in trunk	policormic				24
cavities in crown	policormic				25
decay on wounds	flares/ ribs	policormic	torsion	bacterial tumors	26
cavities in crown	policormic	torsion			27
cankers	cavities in trunk	injuries	policormic	torsion	28
decay on wounds	policormic	torsion			29
extended bark necrosis	cavities in trunk	cavities in crown	policormic	torsion	30
cavities in trunk	sinuous	torsion			31
decay on wounds	cavities in crown	cavities in trunk	injuries	bacterial flux	32
dead wood and/ or decay	cankers	decay on wounds	policormic	other	33
cavities in trunk	injuries	bacterial flux	policormic		34
policormic					35
flares/ ribs	policormic				36
					37
					38
					39
					40
					41
					42
policormic	sabre-shaped	sinuous	torsion		43
policormic	torsion				44

trunk					
1	2	3	4	5	tree #
decay on wounds	injuries				45
decay on wounds	flares/ ribs	policormic	sinuous	torsion	46
arch-shaped	cankers	decay on wounds	injuries	policormic	47
decay on wounds	flares/ ribs	policormic			48
cavities in trunk	flares/ ribs	injuries	bacterial flux		49
injuries	policormic	sabre-shaped	sinuous		50
injuries	other				51
cavities in crown	injuries				52
brackets, conks, corpoforus	decay on wounds	bacterial flux	policormic	torsion	53
extended bark necrosis	cavities in trunk	decay on wounds			54
decay on wounds					55
injuries	policormic				56
injuries	policormic				57
brackets, conks, corpoforus	injuries				58
policormic	sinuous	torsion			59
decay on wounds	cavities in trunk	policormic			60
dead wood and/ or decay	decay on wounds	exudates	injuries	policormic	61
brackets, conks, corpoforus	decay on wounds	cankers	cavities in trunk	policormic	62
cavities in trunk					63
exudates	injuries	policormic	bacterial tumors		64
cavities in trunk	flares/ ribs	policormic			65
dead wood and/ or decay	cankers	decay on wounds	policormic	torsion	66
dead wood and/ or decay	cavities in trunk				67
brackets, conks, corpoforus	decay on wounds	injuries	policormic	other	68
decay on wounds	depressions	barrel effect	injuries	policormic	69
policormic	torsion				70
cavities in trunk	injuries				71
cavities in trunk					72
injuries	policormic				73
					74
					75
decay on wounds	cavities in crown	cavities in trunk	barrel effect	policormic	76
arch-shaped	decay on wounds	injuries	sinuous	torsion	77
dead wood and/ or decay	policormic	sinuous	torsion	other	78
					79
injuries	sinuous				80
injuries	other				81
cavities in trunk	flares/ ribs	policormic			82
barrel effect					83
arch-shaped	decay on wounds	cavities in trunk			84
cavities in trunk	policormic				85
policormic					86
injuries					87

trunk					
1	2	3	4	5	tree #
injuries					88
					89
cavities in trunk					90
					91
cavities in trunk					92
policormic	bacterial tumors				93
cavities in trunk	injuries	other			94
					95
cavities in crown	cavities in trunk	injuries			96
cavities in crown	cavities in trunk				97
cavities in trunk					98
torsion					99
					100
					101
cavities in trunk					102
cavities in crown	cavities in trunk	injuries	policormic		103
injuries					104
injuries					105
injuries					106

canopy					tree #
1	2	3	4	5	
structural asymmetry	hanging or dead branches	decay on wounds	lightly unbalanced	dry tips	1
structural asymmetry	decay at branch connection	decay on large branches	injured branches	dead stumps	2
connected/ anastomosys					3
connected/ anastomosys	brackets/ corpoforus at branch connection	hanging or dead branches	weak or compromised branches	brackets/ corpoforus branches	4
hanging or dead branches	decay on wounds	dead stumps			5
hanging or dead branches	brackets/ corpoforus at branch connection	weak or compromised branches	brackets/ corpoforus branches	phytophagy	6
structural asymmetry	decay on large branches	ingrown bark	injured branches	dead stumps	7
connected/ anastomosys	structural asymmetry	hanging or dead branches	ingrown bark	heavily unbalanced	8
connected/ anastomosys	brackets/ corpoforus at branch connection	hanging or dead branches	decay at branch connection	decay on large branches	9
					10
hanging or dead branches	brackets/ corpoforus branches	decay on wounds	ingrown bark	dead stumps	11
structural asymmetry	decay at branch connection	decay on large branches	decay on wounds		12
structural asymmetry	weak or compromised branches	decay at branch connection	decay on large branches	hanging or dead branches	13
structural asymmetry	weak or compromised branches	decay at branch connection	decay on large branches	heavily unbalanced	14
					15
structural asymmetry	brackets/ corpoforus at branch connection	decay on large branches	injured branches	lightly unbalanced	16
connected/ anastomosys	structural asymmetry	hanging or dead branches	dead stumps	dry tips	17
cankers	decay on large branches	injured branches	heavily unbalanced		18
hanging or dead branches	decay on large branches	dead stumps			19
injured branches	dry tips				20
structural asymmetry	hanging or dead branches	decay on large branches	dead stumps		21
decay on large branches	hanging or dead branches				22
connected/ anastomosys	weak or compromised branches	dead stumps			23
hanging or dead branches	injured branches	dead stumps			24
cankers	decay on large branches	dead stumps	hanging or dead branches		25
hanging or dead branches	cankers	decay on large branches	decay on wounds	dead stumps	26
connected/ anastomosys	structural asymmetry	decay at branch connection	injured branches		27
connected/ anastomosys	structural asymmetry	hanging or dead branches	decay on wounds		28
structural asymmetry	hanging or dead branches	decay on large branches	injured branches	hanging or dead branches	29
decay	brackets/ corpoforus branches	decay on wounds	dead stumps	hanging or dead branches	30
decay at branch connection	decay on large branches	decay on wounds	injured branches	dry tips	31
connected/ anastomosys	weak or compromised branches	structural asymmetry	decay on wounds	hanging or dead branches	32
cankers	hanging or dead branches				33
decay at branch connection	decay on large branches	decay on wounds	hanging or dead branches	dry tips	34
injured branches	dead stumps				35
decay on large branches	brackets/ corpoforus at branch connection	hanging or dead branches			36
connected/ anastomosys					37
connected/ anastomosys					38
					39
					40
					41
					42
					43
connected/ anastomosys	structural asymmetry				44

canopy					tree #
1	2	3	4	5	
dead stumps	hanging or dead branches				45
connected/ anastomosys	structural asymmetry	hanging or dead branches	dry tips		46
connected/ anastomosys	weak or compromised branches	structural asymmetry	hanging or dead branches	decay on large branches	47
decay at branch connection	decay on large branches	decay on wounds	dead stumps	dry tips	48
structural asymmetry	ingrown bark				49
decay on large branches	decay on wounds				50
structural asymmetry	decay at branch connection	decay on large branches	decay on wounds		51
decay at branch connection	decay on large branches	decay on wounds	dry tips		52
connected/ anastomosys	weak or compromised branches	hanging or dead branches	ingrown bark	hanging or dead branches	53
lightly unbalanced					54
dead stumps	dry tips				55
decay at branch connection	decay on wounds				56
structural asymmetry	weak or compromised branches	hanging or dead branches	decay at branch connection	hanging or dead branches	57
brackets/corpoforus at branches	brackets/corpoforus at branch connection	dead stumps	lightly unbalanced		58
structural asymmetry	hanging or dead branches	ingrown bark	injured branches	hanging or dead branches	59
structural asymmetry	hanging or dead branches	dead stumps	hanging or dead branches	dry tips	60
decay	decay at branch connection	decay on wounds	injured branches	dry tips	61
structural asymmetry	weak or compromised branches	hanging or dead branches	decay on large branches		62
connected/ anastomosys	structural asymmetry	weak or compromised branches	hanging or dead branches	hanging or dead branches	63
brackets/ corpoforus branches	phytophagy	dead stumps			64
hanging or dead branches	brackets/ corpoforus at branch connection	brackets/ corpoforus branches	ingrown bark	injured branches	65
weak or compromised branches	hanging or dead branches	decay on wounds	injured branches	dead stumps	66
weak or compromised branches	hanging or dead branches	decay on wounds	ingrown bark		67
connected/ anastomosys	structural asymmetry	cankers	decay	dead stumps	68
structural asymmetry	decay on wounds	dead stumps			69
					70
weak or compromised branches	hanging or dead branches	dead stumps	hanging or dead branches	dry tips	71
decay	ingrown bark	injured branches	phytophagy		72
connected/ anastomosys	structural asymmetry	weak or compromised branches	hanging or dead branches	dry tips	73
					74
					75
weak or compromised branches	hanging or dead branches	dead stumps	hanging or dead branches		76
connected/ anastomosys	structural asymmetry	decay	heavily unbalanced		77
weak or compromised branches	dead stumps	hanging or dead branches			78
					79
					80
weak or compromised branches	hanging or dead branches	heavily unbalanced	hanging or dead branches	dry tips	81
decay	decay at branch connection	decay on large branches	decay on wounds	hanging or dead branches	82
hanging or dead branches	brackets/ corpoforus at branch connection	decay at branch connection	hanging or dead branches		83
structural asymmetry	hanging or dead branches				84
decay	decay at branch connection	decay on large branches	decay on wounds	ingrown bark	85
decay	decay at branch connection	decay on large branches	decay on wounds	dead stumps	86
dry tips					87

canopy					
1	2	3	4	5	tree #
					88
					89
decay					90
					91
decay	decay at branch connection	decay on large branches	decay on wounds		92
cankers	decay	decay at branch connection	decay on large branches	decay on wounds	93
decay on wounds	hanging or dead branches	dry tips			94
dry tips					95
connected/ anastomosys	structural asymmetry	decay	decay at branch connection	hanging or dead branches	96
decay	decay at branch connection	decay on large branches	decay on cuts	ingrown bark	97
					98
					99
					100
structural asymmetry	decay	decay at branch connection	decay on large branches	decay on wounds	101
decay	decay at branch connection				102
structural asymmetry	weak or compromised branches	hanging or dead branches	dead stumps	heavily unbalanced	103
structural asymmetry	decay on wounds				104
structural asymmetry					105
decay on cuts					106

problems and diseases (0=no, 1=yes)					total		risk assessment	
roots	fungus	insects	cavities	cracks-splits	per tree	imbalance	frequency (years)	tree #
0	0	0	0	1	**1**		1	**1**
0	1	0	0	1	**2**	light	1	**2**
0	0	0	0	0	**0**		3	**3**
0	0	0	0	0	**0**		1	**4**
0	0	1	1	0	**2**		1	**5**
0	1	1	1	1	**4**	light	1	**6**
0	1	0	1	0	**2**		1	**7**
0	0	0	0	0	**0**	severe	1	**8**
0	0	0	1	1	**2**	moderate	1	**9**
								10
0	0	0	1	1	**2**	light	1	**11**
1	1	0	1	0	**3**	light	1	**12**
0	0	0	1	1	**2**	severe	1	**13**
0	0	0	0	0	**0**	severe	1	**14**
								15
0	0	0	0	1	**1**	moderate	1	**16**
0	0	0	1	1	**2**	light	1	**17**
0	0	0	1	1	**2**	severe	0	**18**
0	0	0	1	0	**1**	light	1	**19**
1	0	0	1	1	**3**		1	**20**
0	0	0	1	0	**1**		1	**21**
0	0	0	1	0	**1**		1	**22**
0	0	0	1	1	**2**		1	**23**
0	0	0	1	0	**1**		1	**24**
0	0	0	1	0	**1**	severe	0	**25**
0	0	0	0	1	**1**	light	1	**26**
0	0	0	1	0	**1**	light	1	**27**
0	0	0	1	0	**1**	light	1	**28**
0	0	0	0	0	**0**	light	1	**29**
0	1	0	1	0	**2**	light	1	**30**
0	0	0	1	0	**1**		1	**31**
0	0	0	1	1	**2**	severe	0	**32**
0	0	0	1	1	**2**	light	1	**33**
0	0	0	1	1	**2**	light	1	**34**
0	0	0	0	0	**0**		1	**35**
0	1	0	0	0	**1**		1	**36**
0	0	0	0	0	**0**		0	**37**
0	0	0	0	0	**0**		0	**38**
								39
								40
								41
								42
0	0	0	0	0	**0**	light	2	**43**
0	0	0	0	0	**0**	light	1	**44**

problems and diseases (0=no, 1=yes)					total		risk assessment	
roots	fungus	insects	cavities	cracks-splits	per tree	imbalance	frequency (years)	tree #
0	0	0	0	0	**0**	light	1	**45**
0	0	0	0	0	**0**	light	1	**46**
0	0	0	0	0	**0**	light	0	**47**
0	0	0	0	0	**0**		1	**48**
0	0	0	0	0	**0**		1	**49**
0	1	0	0	0	**1**		1	**50**
0	0	0	0	1	**1**		1	**51**
1	0	0	0	0	**1**		1	**52**
1	1	0	0	1	**3**		1	**53**
1	0	0	0	0	**1**	light	1	**54**
1	0	0	0	0	**1**		1	**55**
1	0	0	0	0	**1**		1	**56**
1	0	0	0	0	**1**	severe	0	**57**
1	1	0	0	0	**2**	light	1	**58**
0	0	0	0	0	**0**		1	**59**
1	0	0	0	0	**1**	light	1	**60**
1	0	0	0	0	**1**		1	**61**
1	1	0	1	0	**2**	light	1	**62**
0	0	1	1	0	**2**	severe	0	**63**
1	0	1	0	0	**2**	light	1	**64**
1	0	0	1	0	**2**	light	1	**65**
1	0	0	0	0	**1**		1	**66**
1	0	0	1	0	**2**		1	**67**
1	1	0	0	1	**3**	light	0	**68**
1	0	0	0	0	**1**		1	**69**
0	0	0	0	0	**0**	light	1	**70**
1	0	0	1	0	**2**		1	**71**
1	0	1	1	0	**3**		1	**72**
1	0	0	1	0	**2**		1	**73**
0	0	0	0	0	**0**		1	**74**
0	0	0	0	0	**0**		1	**75**
1	0	0	1	0	**2**		1	**76**
1	0	0	0	0	**1**	severe	0	**77**
1	0	0	0	1	**2**	light	1	**78**
0	0	0	0	0	**0**		1	**79**
1	0	0	0	0	**1**		1	**80**
1	0	0	0	1	**2**	severe	0	**81**
0	0	0	1	0	**1**		1	**82**
0	1	0	0	0	**1**		1	**83**
0	0	0	1	0	**1**	light	1	**84**
0	0	0	1	0	**1**		1	**85**
1	0	0	0	0	**1**		1	**86**
1	0	0	0	0	**1**		1	**87**

problems and diseases (0=no, 1=yes)					total		risk assessment	
roots	fungus	insects	cavities	cracks-splits	per tree	imbalance	frequency (years)	tree #
1	0	0	0	0	**1**		1	**88**
1	0	0	0	0	**1**		1	**89**
1	0	0	1	0	**2**		1	**90**
1	0	0	0	0	**1**		1	**91**
1	0	0	1	0	**2**		1	**92**
1	1	0	0	0	**2**		1	**93**
1	0	0	1	1	**3**	light	1	**94**
1	0	0	0	0	**1**		1	**95**
1	0	0	1	0	**2**		1	**96**
1	0	0	1	0	**2**		1	**97**
1	0	0	1	0	**2**		1	**98**
1	0	0	0	0	**1**		1	**99**
1	0	0	0	0	**1**		1	**100**
1	0	0	0	0	**1**		1	**101**
1	0	0	1	0	**2**		1	**102**
1	0	0	1	0	**2**	severe	1	**103**
1	0	0	0	0	**1**		1	**104**
0	0	0	0	0	**0**		1	**105**
1	0	0	0	0	**1**		1	**106**

proposed actions			notes concerning tree mobility
1	2	3	
prune dry branches	remove dangerous branches	reduce crown	
prune dry branches	remove dangerous branches	reduce crown	
remove dangerous branches			
prune dry branches	other		
remove tree immediately			
prune dry branches	remove dangerous branches	reduce crown	can't be moved, trunk cavity, fungus
reduce crown	remove dangerous branches		
reduce crown	reduce crown		can't be moved, cavity and split
reduce crown			can't be moved, cavity and split
selection	reduce crown		only recover, can't be moved
prune dry branches	remove dangerous branches		can't be moved, cavity and split
remove dangerous branches			
remove dangerous branches	reduce crown		can't be moved, decay and fungus
resize canopy	remove dangerous branches		can't be moved, cavity and split
remove tree immediately			
remove dangerous branches			can't be moved, cavity
prune dry branches	remove dangerous branches		can't be moved, cavity and split
selection	remove dangerous branches		can't be moved, cavity
selection	remove dangerous branches		can't be moved, cavity
prune dry branches	remove dangerous branches		can't be moved, cavity and split
prune dry branches	remove dangerous branches		can't be moved, cavity
remove tree			
prune dry branches	remove dangerous branches	reduce crown	
remove dangerous branches	reduce crown		
remove dangerous branches	remove tree		
selection	reduce crown	reduce crown	can't be moved, decay at the collar
prune dry branches	remove dangerous branches		can't be moved, trunk cavity
prune dry branches	remove dangerous branches		can't be moved, cavity
remove tree immediately			
selection	remove dangerous branches		can't be moved, cavity and split
prune dry branches	remove dangerous branches	selection	can't be moved, cavity and split
prune dry branches			
prune dry branches	remove dangerous branches	selection	can't be moved, decay at the collar
remove tree			
remove tree			
selection	reduce crown		
selection	reduce crown		

proposed actions			notes concerning tree mobility
1	2	3	
prune dry branches	remove dangerous branches		
prune dry branches	resize canopy	reduce crown	
remove tree			
resize canopy	remove dangerous branches		can't be moved, decay at the collar
resize canopy	remove dangerous branches		can't be moved, decay at the collar and cavity
resize canopy	remove dangerous branches	reduce crown	can't be moved, fungus at the collar
prune dry branches	remove dangerous branches	reduce crown	
prune dry branches	remove dangerous branches	reduce crown	
resize canopy	remove dangerous branches	reduce crown	can't be moved, cavity and split
resize canopy	reduce crown		can't be moved, cavity and decay
prune dry branches	reduce crown		
prune dry branches	remove dangerous branches	reduce crown	
remove tree			
prune dry branches	remove dangerous branches	reduce crown	can't be moved, fungus at the collar
remove dangerous branches	reduce crown		
resize canopy	remove dangerous branches		can't be moved, trunk cavity
prune dry branches	selection	remove dangerous branches	
remove dangerous branches	reduce crown	prune dry branches	can't be moved, decay and cavity
remove tree			
prune dry branches	remove dangerous branches	reduce crown	
resize canopy	remove dangerous branches	reduce crown	can't be moved, cavity and fungus
prune dry branches	selection	remove dangerous branches	
prune dry branches	remove dangerous branches	reduce crown	can't be moved, decay and cavity
remove tree			
prune dry branches	remove dangerous branches	reduce crown	
selection	reduce crown		
prune dry branches	remove dangerous branches	reduce crown	can't be moved, cavities, damaged
prune dry branches	remove dangerous branches	reduce crown	can't be moved, cavities, damaged
prune dry branches	remove dangerous branches	reduce crown	
other			
other			
remove dangerous branches	reduce crown		can't be moved, trunk cavity
remove tree immediately			
resize canopy	remove dangerous branches		can't be moved, decay and split
resize canopy	reduce crown		
resize canopy	reduce crown		
remove tree			
selection	remove dangerous branches	reduce crown	can't be moved, cavity and decay
remove dangerous branches	reduce crown		
prune dry branches	remove dangerous branches		can't be moved, cavity and decay
prune dry branches	remove dangerous branches	reduce crown	can't be moved, cavity and decay
prune dry branches	remove dangerous branches	reduce crown	
prune dry branches	reduce crown		

proposed actions			notes concerning tree mobility
1	2	3	
prune dry branches	reduce crown		
resize canopy	remove dangerous branches	reduce crown	
resize canopy	remove dangerous branches	reduce crown	can't be moved, cavity and decay
resize canopy	reduce crown		
resize canopy	remove dangerous branches		can't be moved, cavity and decay
prune dry branches	remove dangerous branches		can't be moved, decay and fungus
remove dangerous branches	reduce crown		can't be moved, decay and split
resize canopy	remove dangerous branches	reduce crown	
prune dry branches	remove dangerous branches		can't be moved, decay and cavity
prune dry branches	remove dangerous branches	reduce crown	can't be moved, decay and cavity
resize canopy	remove dangerous branches	reduce crown	can't be moved, decay and cavity
prune dry branches	resize canopy		
resize canopy	remove dangerous branches	reduce crown	
resize canopy	reduce crown		can't be moved, decay
prune dry branches	resize canopy	remove dangerous branches	can't be moved, cavity and decay
prune dry branches	resize canopy	remove dangerous branches	can't be moved, cavity
resize canopy	remove dangerous branches		
prune dry branches	resize canopy	remove dangerous branches	
resize canopy			

Definition of Categories	
Tree number	number assigned to the tree on the Site Map
Bank	identifies which side of the Mill Pond the tree is located on (left (L) or right (R) as you face downstream)
Species	tree species
Common name	tree common name
Position	position of tree relative to nearby trees
Site characteristics	describes the ground cover at the site
Aesthetic value	describes the overall aesthetic value of the tree
Growth limitations	identifies external factors limiting the growth of the tree
Vegetative status	describes the general state of the tree (deteriorated, insufficient, intermediate, satisfactory, excellent)
Estimated Height in Meters	
D.B.H. in inches	Diameter at Breast Height
Circumference in feet	circumference at breast height
Age in years	estimated age
Collar	identifies problems on the tree collar (where the roots meet the trunk)
Trunk	identifies problems on the trunk
Canopy	identifies problems in the canopy
Problems and diseases	
roots	identifies problems and diseases associated with the roots (0 if no problems, 1 if problems exist)
fungus	identifies problems and diseases associated with fungus (0 if no problems, 1 if problems exist)
insects	identifies problems and diseases associated with insects (0 if no problems, 1 if problems exist)
cavities	identifies problems and diseases associated with cavities (0 if no problems, 1 if problems exist)
cracks - splits	identifies problems and diseases associated with the cracks or splits (0 if no problems, 1 if problems exist)
total	calculates the total number of problem areas for the tree
Imbalance	describes the degree of imbalance in the tree's structure
Risk assessment frequency (years)	recommends frequency for performing a risk assessment
Proposed actions	describes proposed remedial actions
Notes concerning tree mobility	notes whether or not the tree can be moved to accommodate restoration, and if not, why not