Open Space Acquisitions

Chester, Connecticut

Eastern Connecticut
Environmental Review Team Report

Eastern Connecticut Resource Conservation & Development Area Inc.

Open Space Acquisitions
Chester, Connecticut


Environmental Review Team Report

Prepared by the
Eastern Connecticut Environmental Review Team

Of the

Eastern Connecticut
Resource Conservation & Development Area, Inc.

For the

Conservation Commission
Chester, Connecticut

May 2008

Report #619

Acknowledgments

This report is an outgrowth of a request from the Chester Conservation Commission to the Eastern Conservation District (ECD) and the Eastern Connecticut Resource Conservation and Development Area (RC&D) Council for their consideration and approval. The request was approved and the measure reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The Eastern Connecticut Environmental Review Team Coordinator, Elaine Sych, would like to thank and gratefully acknowledge the following Team members whose professionalism and expertise were invaluable to the completion of this report.

The field review took place on Thursday, April 3, 2008.

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I would also like to thank Sandy Prisloe and Richard Holloway of the Chester Conservation Commission, John Bellows of the Chester Land Trust and Tom Marsh, First Selectman of Chester for their cooperation and assistance during this environmental review.

Prior to the review day, each Team member received a summary of the proposed project with location and aerial photos. During the field review Team members received additional information. Following the reviews, reports from each Team member were submitted to the ERT coordinator for compilation and editing into this final report.

This report represents the Team's findings. It is not meant to compete with private consultants by providing site plans or detailed solutions to development problems. The Team does not recommend what final action should be taken on a proposed project - all final decisions rest with the town and landowners. This report identifies the existing resource base and evaluates its significance to the proposed use, and also suggests considerations that should be of concern to the town. The results of this Team action are oriented toward the development of better environmental quality and the long term economics of land use.

The Eastern Connecticut RC&D Executive Council hopes you will find this report of value and assistance in reviewing these two potential land acquisitions.

If you require additional information please contact:

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Introduction

Introduction

The Chester Conservation Commission has requested Environmental Review Team (ERT) assistance in reviewing two parcels being considered for town purchase for open space.

The Otfinoski Parcel is 4.6 acres in size located on Parker's Point Road with frontage on the Connecticut River and the Valley Railroad. The parcel is undeveloped acreage in an R-2 zone adjacent to the Middlesex Yacht Club. Access is via an easement over a private roadway known as Myers Lane.

The Dona & Bonanomi Parcel is +23 acres located just to the south of the ferry dock on Ferry Road with 2200 feet of Connecticut River frontage. There is also access from Dock Road at the southern end of the property. It is not a buildable lot and has scenic easement restrictions granted to the State Department of Environmental Protection. (See Appendix for a copy of the grant.)

Objectives of the ERT Study

The town is considering the two properties as potential open space acquisitions. They requested a natural resource inventory of each site and an evaluation as to the suitability of each site for passive recreation, habitat preservation, public access and environmental education. The two sites are very different in terms of size, cost and natural resource characteristics. If acquired as open space the town's goals are to use the site(s) for passive recreation and very low impact active recreation such as walking and hiking, picnicking, and launching canoes and kayaks if appropriate locations exist. Each site would need to accessed by car and have locations for parking for three to four vehicles.

The ERT study will help guide the town's decision. Both sites appear to have advantages and disadvantages and the town requires solid information upon which to base a decision.

The ERT Process

Through the efforts of the Chester Conservation Commission this environmental review and report was prepared for the Town of Chester.

This report provides an information base and a series of recommendations and guidelines which cover the topics requested by the town. Team members were able to review maps, plans and supporting documentation provided by the town.

The review process consisted of four phases:

1. Inventory of the site's natural resources;
2. Assessment of these resources;

3. Identification of resource areas and review of plans; and
4. Presentation of education, management and land use guidelines.

The data collection phase involved both literature and field research. The field review was conducted Thursday, April 3, 2008. The emphasis of the field review was on the exchange of ideas, concerns and recommendations. Being on site allowed Team members to verify information and to identify other resources. Some Team members attended all the field reviews, while others attended only portions of the field/boat trips.

Once Team members had assimilated an adequate data base, they were able to analyze and interpret their findings. Individual Team members then prepared and submitted their reports to the ERT coordinator for compilation into this final ERT report.

Chester Potential Open Space Purchases Site Map

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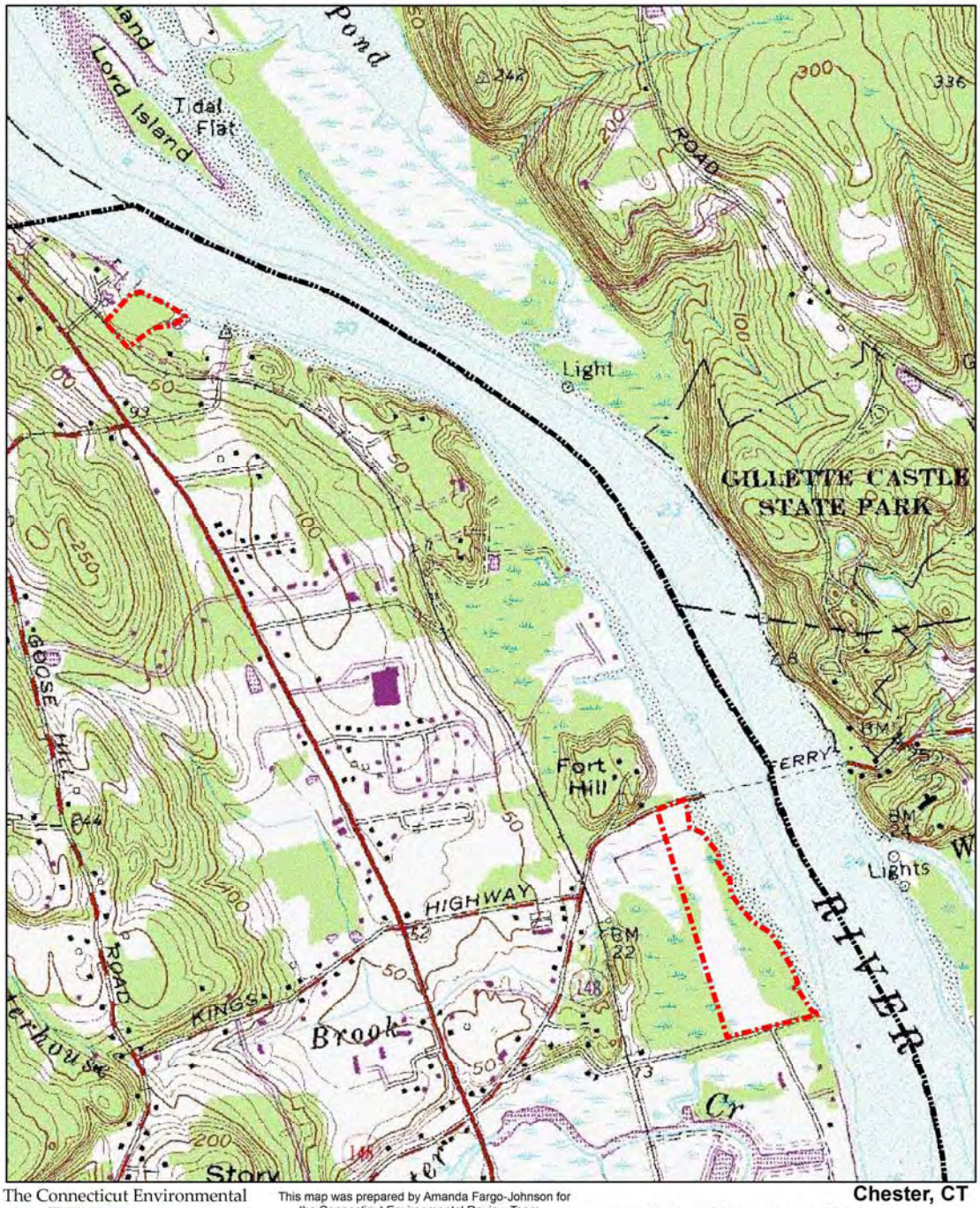

The Connecticut Environmental Review Team

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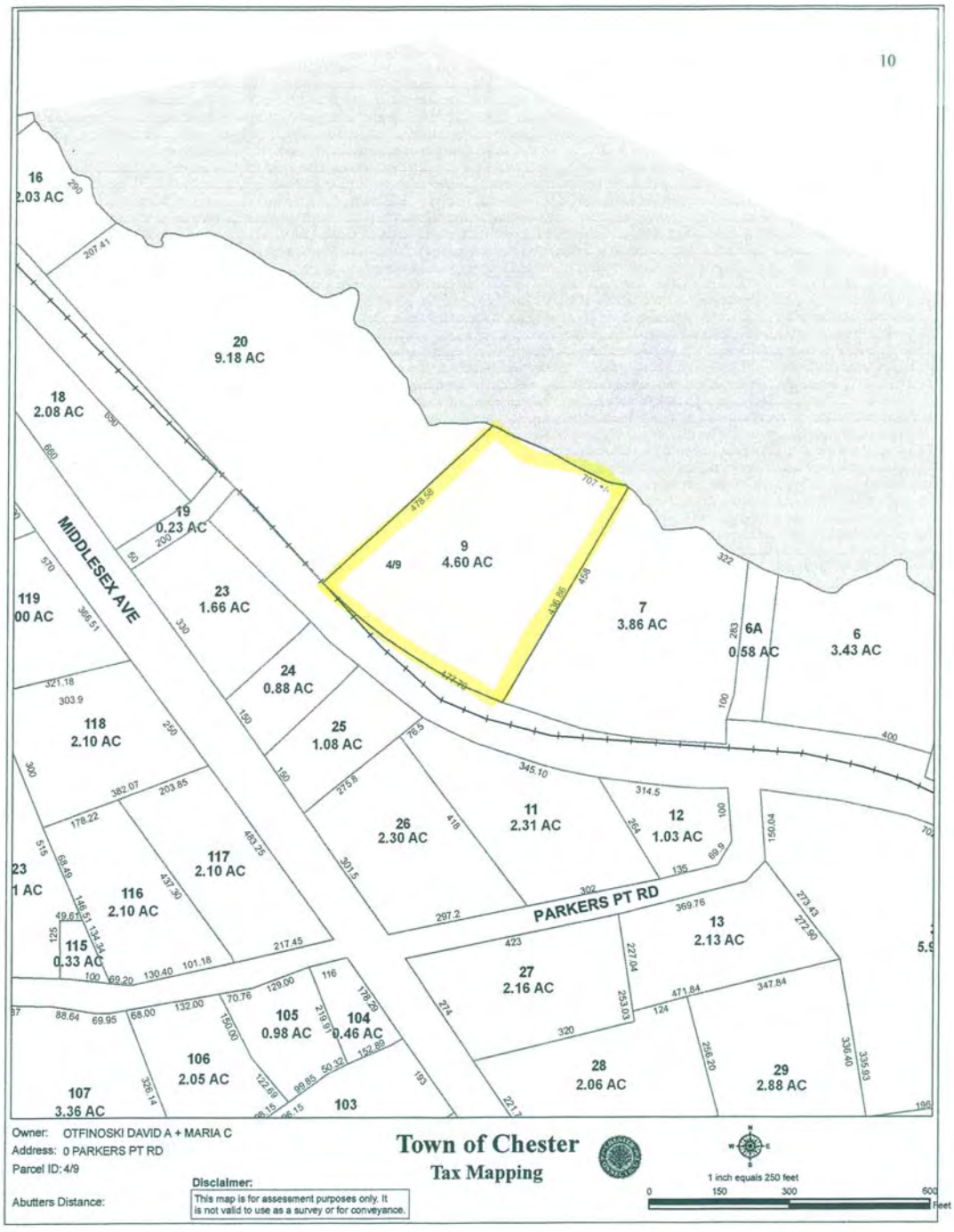
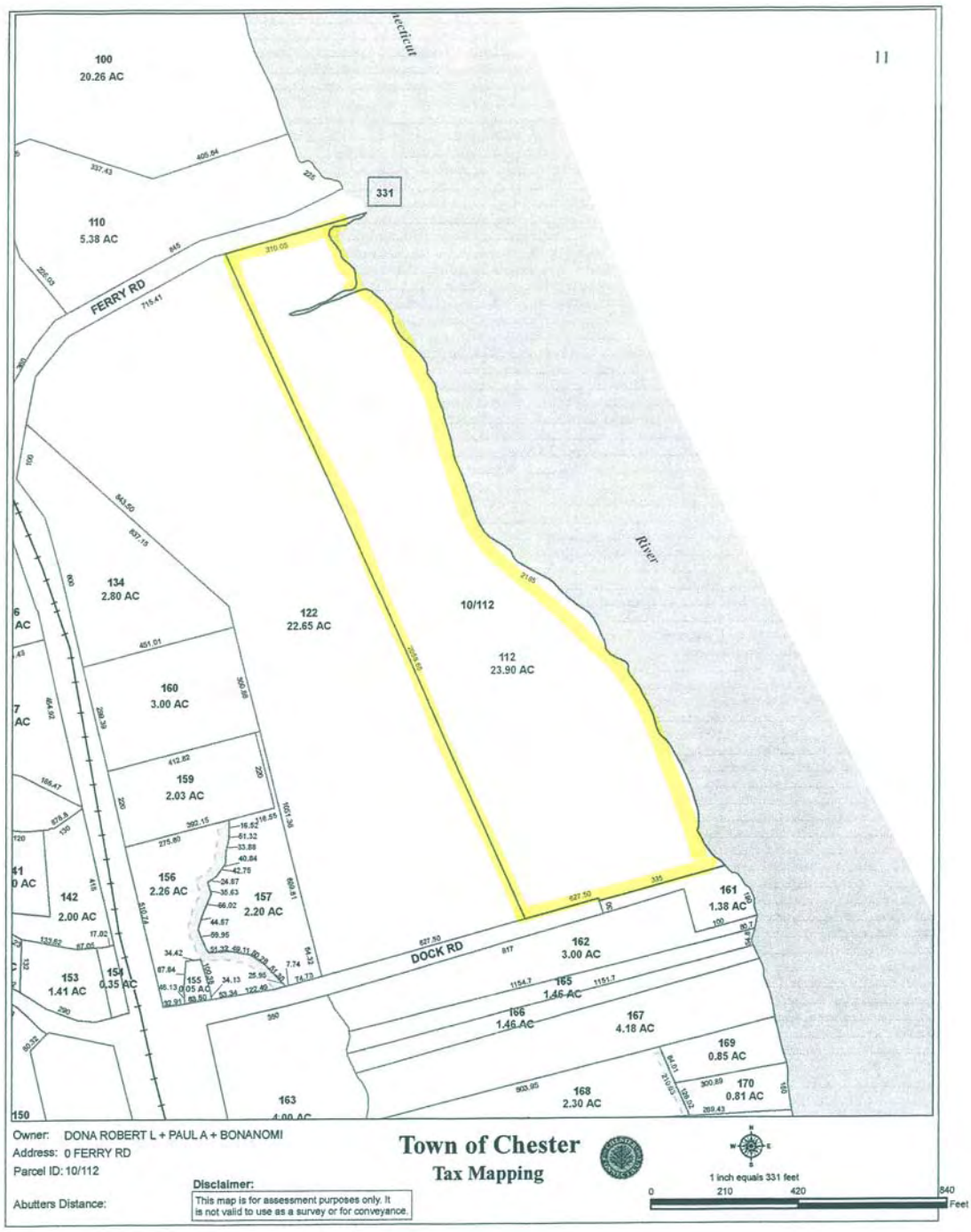
It contains no authoritative data.
May 2008.

Potential Open Space Property Locations

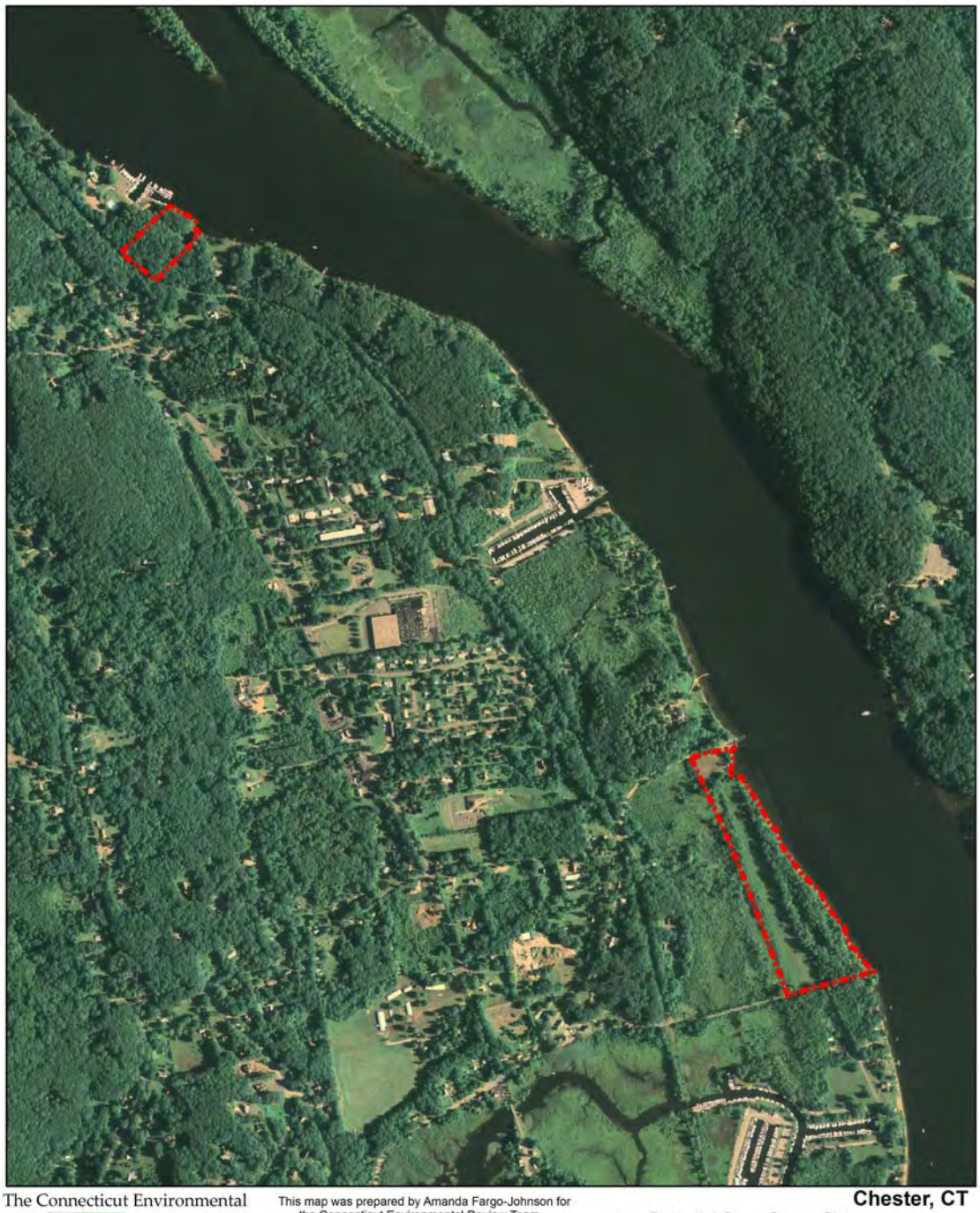
9


10
16
2.03 AC
20
9.18 AC
18
2.08 AC
19
0.23 AC
MIDDLESEX AVE
9
4.60 AC
4/9
7
3.86 AC
6A
0.58 AC
6
3.43 AC
23
1.66 AC
24
0.88 AC
25
1.08 AC
119
00 AC
118
2.10 AC
117
2.10 AC
116
2.10 AC
115
0.33 AC
26
2.30 AC
11
2.31 AC
12
1.03 AC
PARKERS PT RD
13
2.13 AC
27
2.16 AC
28
2.06 AC
29
2.88 AC
105
0.98 AC
104
0.46 AC
106
2.05 AC
107
3.36 AC
103
Owner: OTFINOSKI DAVID A + MARIA C
Address: 0 PARKERS PT RD
Parcel ID: 4/9
Abutters Distance:
Disclaimer:
This map is for assessment purposes only. It is not valid to use as a survey or for conveyance.
Town of Chester
Tax Mapping
1 inch equals 250 feet
0 150 300 600
Feet


100
20.26 AC
110
5.38 AC
331
FERRY RD
134
2.80 AC
122
22.65 AC
10/112
112
23.90 AC
River
160
3.00 AC
159
2.03 AC
156
2.26 AC
157
2.20 AC
142
2.00 AC
153
1.41 AC
154
0.35 AC
150
163
4.00 AC
DOCK RD
161
1.38 AC
162
3.00 AC
165
1.46 AC
166
1.46 AC
167
4.18 AC
168
2.30 AC
169
0.85 AC
170
0.81 AC
Owner: DONA ROBERT L + PAUL A + BONANOMI
Address: 0 FERRY RD
Parcel ID: 10/112
Abutters Distance:
Disclaimer:
This map is for assessment purposes only. It is not valid to use as a survey or for conveyance.
Town of Chester
Tax Mapping
1 inch equals 331 feet
0
210
420
840
Feet

Chester Potential Open Space Purchases

12



The Connecticut Environmental Review Team

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Chester, CT

Potential Open Space Sites

0 0.05 0.1 0.2 0.3 Miles

Otfinoski Parcel Map

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The Connecticut Environmental Review Team

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May 2008.

Chester, CT

Potential Open Space Sites

0 0.015 0.03 0.06 0.09 Miles

Dona & Bonanomi Parcel Map

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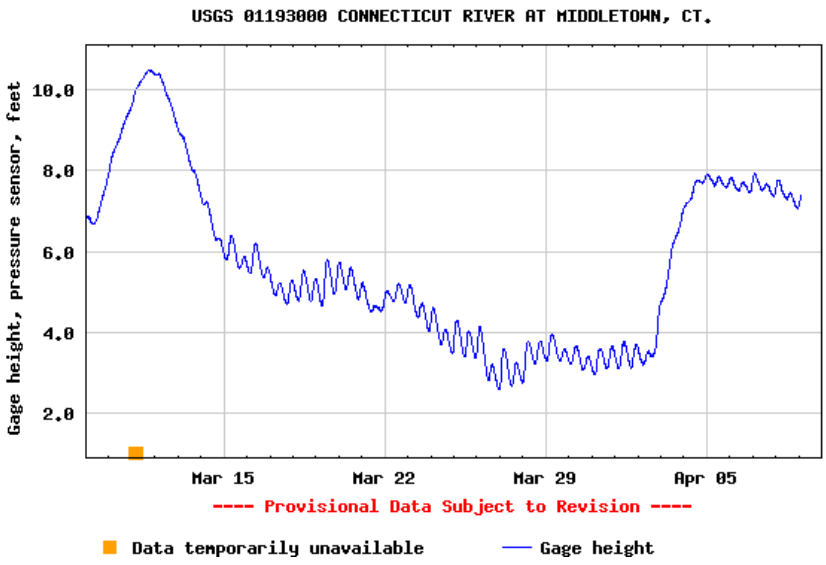
Topography and Geology

The Town of Chester's two potential open space parcels are both located along the Connecticut River and both have considerable area within the flood-zone. The northern parcel, referred to as the Otfinoski Parcel, slopes gently down to the river flood plain from an elevation of about 35' above mean sea level. The Dona and Bonanomi Parcel (henceforth abbreviated D&B) is a larger parcel and located farther south. It is nowhere greater than 10 feet above mean sea level. Its entire acreage is within the flood plain.

The river level during the ERT field review was normal for the time of year. However, the river hydrograph from Middletown (below) shows the river rose rapidly after the Team left and continued rising during the next day. It stopped rising just below flood



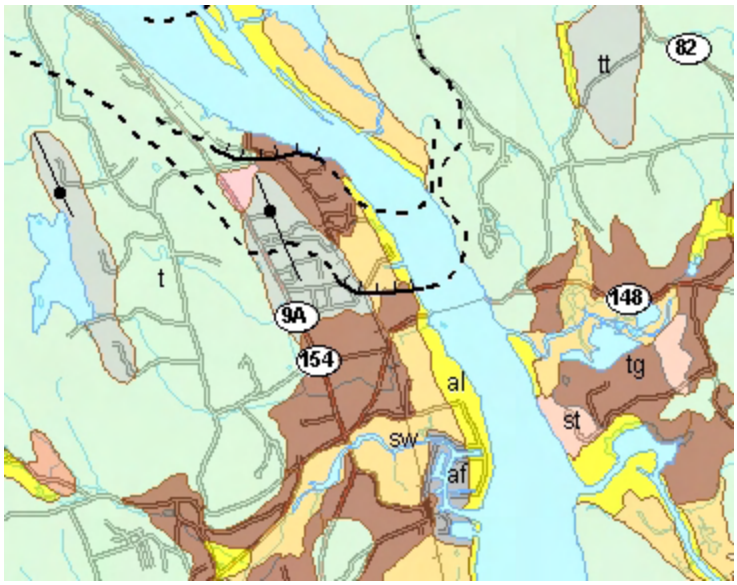
stage in Middletown. Although a 4 feet rise in water level in Middletown (about 15 miles upstream) does not translate to a 4 feet rise in Chester, these data do indicate that water levels may be expected to approach flood stage annually. Greater floods of course occur with less frequency. Great floods tend to recur with a frequency of 25-50 years. The floods of 1938 and 1955 were caused by hurricanes. Flooding in 1936 and 1984 were the result of heavy rainfall along with spring snowmelt. The D&B property likely will be submerged by even moderate floods.

Surficial Geology

(See map below, from Stone and others, 2005).

The valley of the Connecticut River is covered with glacial till deposited during the last Ice Age. Two drumlins are in the immediate area. At the end of the Ice Age glacial ice on the highlands melted first leaving remnant tongues of ice in the river valleys. The ice tongues were a mile or two in length and eventually melted away also. In many places sand and

gravel were deposited by melt-water streams up against the leftover tongues of ice. Interpreting the gravel deposits provides clues to the extent of the ice. Two separate ice margins are mapped just south of the Otfinsoki parcel. The sand and gravel deposits formed terraces with flat tops. Fort Hill is a terrace of sand and gravel deposited against the leftover ice.



Legend

t = glacial till
tt = thick glacial till
tg = terrace gravel deposited by glacial streams
st = modern stream terrace deposits
sw = swamps
al = modern alluvium, some as natural levees.
af = artificial fill

- Dashed lines and lines with tick marks on one side mark position of ice tongue margins.
- Rivers and lakes are shown in blue.

It was deposited at the end of the lobe of leftover ice. Modern alluvium and swamp deposits make up the reminder of the map.

Otfinoski Parcel

The Otfinoski parcel looks disturbed. The rear of the parcel is the rail bed of the Valley Rail Road. It has been elevated slightly and forms a steep slope from the rail-bed to the ground. An access drive was built across a wetland and watercourse (probably intermittent) along the rear of the property. Fill was brought in for that construction. Indeed, several tens of yards of fill is being stock-piled in the back of the property at the time of the Team's observation.

The river frontage has been built up with a stone bulkhead. Fill has been placed behind it to level the area. Although the bulkhead resists erosion of the river bank, it is not immune to the relentless work of the river currents. In some places small sink holes behind the bulkhead testify to the slow erosion still taking place despite the placement of the bulkhead. A natural levee or perhaps an old river terrace forms a slightly higher ridge along the river-side end of the property. Possibly there has been fill placed behind this ridge to level out what may have been a low swale. It is difficult to assess without borings. Perhaps, also, fill was added to the ridge top in the past. It stands 6-8 feet above the river which seems slightly high for a natural levee.

A small cove forms the southern boundary of the parcel. Its shores are protected with a bulkhead with fill behind. Considerable fill may have been placed to build up the ground level in this area. The cove itself may have been a source for part of the fill. The small intermittent stream enters the cove and should have transported sufficient sediment in its bed to fill in the cove. Thus, it seems that the cove has been dug or at least enlarged significantly.

The aerial photography flown in 1934 (see below) shows the cove, so its enlargement must have occurred prior to that time.

Trees on the property adjacent to the river are mature suggesting that the modifications to the parcel were done some time ago.

Rock armored bulkhead along the river front of Otfinoski parcel. Surface stands 3-4 feet above river level during the day of observation. Localized piping has occurred along some of the filled in areas resulting in small sink-holes (not shown). View looks upstream. Center picture shows that the ground surface drops off behind the levee. Area where logs are piled looks like a flood scour channel, suggesting that the levee surface is natural. Right hand picture shows cove along the south border of the parcel. It has been built up with a continuation of the rock-armored bulkhead. It stands only about 2 feet above the water level. Intermittent stream enters river at head of cove. The stream should have brought sufficient sediment to fill in the cove, suggesting that the cove has been artificially enlarged.

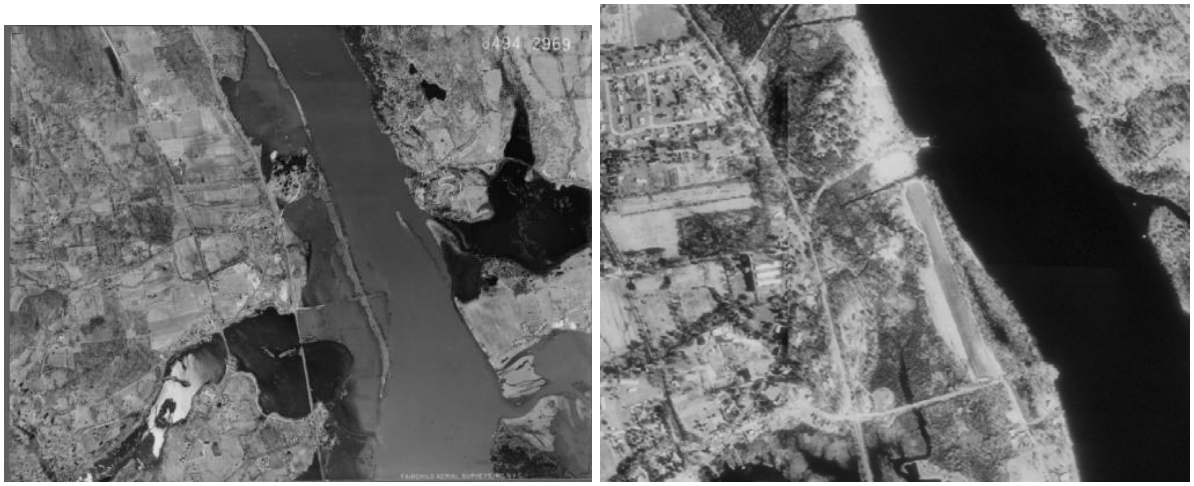
Aerial photograph flown in 1934 shows the cove (arrow) existed at that early date. Notice sand bars in the middle of the channel and large marshy lagoon-like back-waters behind the natural levee on the opposite side of the river. Today the back-water area is filled in with sediment and organic matter. Sand bars are not seen in modern photographs. They may have been dredged during river-channel enhancement. Alternatively, because so many old farms have reforested, sediment supply to the river has decreased. Perhaps the sand bars were starved for sediment and eroded.

Dona and Bonanomi Parcel

The D&B parcel stands at a lower elevation and is entirely within the flood zone. It consists of two natural levee ridges with an intervening swale that is swampy. The inner ridge is older and stands about 3 feet above the swamp level. The riverside levee is younger and stands only 1+ feet above the river level. Both are composed of fine and very-fine grained sand and are fairly well drained. Hay is harvested on the older levee. The younger levee is tree covered.

The 1934 aerial photography shows the older natural levee isolating a swampy backwater area behind (shoreward) it. A road clearly extends across the backwater area and was built into the river. Possibly it was used as dockage. More recent serial photography show a second natural levee has built to the tip of the old road and dockage, isolating a swampy swale between it the two levees. The backwater behind the old levee has filled in with sediment and vegetation.

Hay field (upper left) on D&B parcel slopes down toward the west (left) to a swamp. This is the back-side of a natural levee. The top of the levee forms a high area to the right that is about 3+ feet above river level. Bank of the river (upper right) at the south end of the D&B parcel is a younger natural levee that stands 1+ feet above river level. This levee was not emergent in the 1934 aerial photo (see below). Swale between two levees (lower left) is swampy. A road (lower right) was laid across back-water swamps and the older natural levee. It is shown on the 1934 aerial photograph (see below) as protruding into the river. The part illustrated here would have been the protruding part. Both sides of this road are swampy.



1934 aerial photograph on left, compared with 1990 photograph on right. Because the photographs were taken at different times their scales are different: the 1934 photograph shows a larger area. In the older photograph, Fort Hill, located just north of D&B parcel, is almost an island. It is connected to the mainland by a very short neck. Both north and south of Fort Hill, natural levees isolate marshy, lagoon like bodies of water behind them. A road, a portion of which is still in use today, is laid across the marshy area in the center of the photograph and protrudes out into the river, perhaps for use as a docking area. The 1990 photograph shows the marshy areas behind the natural levee had filled in with sediment and plant growth. Fort Hill is nonetheless identifiable on the north central portion of the photograph. The road on the south of the photograph is the same road laid across the marshy lagoon in the 1934 photograph. Note a second natural levee built to the end of the docking area, isolating a narrow marsh between the two levees. The modern day field is located on the crest and flank of the older levee. It is likely that silt or mud underlies the field.

Conservation District Review

The following are general comments and recommendations regarding the Town of Chester's request for a review of two potential open space properties, the Otfinoski parcel and the Dona/Bonanomi parcel. Both parcels have frontage on the Connecticut River and therefore offer the potential for shoreline access.

Information used in this report includes the USDA/NRCS official digital soil survey maps (http://websoilsurvey.nrcs.usda.gov/app/); the USDA/NRCS Soil Survey Division Official Soil Series Descriptions and Selected Soil Interpretations; and a site visit conducted on April 3, 2008.

This report is advisory in nature and is intended to assist the Town of Chester review and consider the two parcels for potential open space acquisition.

Current Site Conditions

The Otfinoski Parcel is 4.6 acres accessed from Parkers Point Road by a 1,000+ foot long private easement drive known as Myers Lane. The parcel is bounded to the south by the rail line, to the north by the Connecticut River, and to the east and west by private property. A town-owned paved boat launch is located at the end of Parkers Point Road in proximity to the parcel.

A stone seawall extends across the river frontage, and there is a small embayment of the river in the northeast corner of the parcel. Two areas of inland wetlands have been field delineated on the parcel (during a prior application for a residential structure, see site plans dated April 4, 2006 prepared by John R. Schroeder, AIA, LLC). The inland wetlands extend under Myers Lane and then drain northward across the parcel to the river embayment. Much of the parcel is well vegetated with trees and a shrub understory. The non-native invasive Asiatic bittersweet has established in the tree line along the stone seawall, and multiflora rose is well established in the wooded uplands and wetland areas. The northern portion of the parcel had been used as a seasonal residence (a house boat and a small shed were present in 2006 but have since been removed. This portion of the parcel had been previously cleared, and the widely spaced trees with a grass understory provide a park-like setting along the riverfront.

The northern half (riverfront) portion of the parcel lies within the 100-year and 500-year FEMA floodzones, with the 100-year flood elevation limit at approximately at elevation 11 (see Figure 1). Soils mapped on and adjacent to the parcel include Sudbury, Windsor, Woodbridge, Paxton and Montauk upland sandy loams and Walpole inland wetland sandy loam (see Table 1 and Figure 2). Upland soils on the parcel are identified as either prime (Sudbury) or statewide important (Windsor) farmland. None of the upland soil map units on the parcel are limited for recreational uses (paths, picnic areas, playgrounds, see Table 2).

The Dona/Bonanomi Parcel is 23 acres accessed from Ferry and Dock Roads. The northern portion of the parcel is accessed from Ferry Road adjacent to the seasonally used, state-

owned river ferry. This one acre portion of the parcel is separated from the remainder of the property by Waterhouse Brook, a perennial watercourse with a 496 acre local watershed. The remaining 22+ acres of the parcel extends from Waterhouse Brook south to Dock Road. Most of the northern portion and approximately 6 acres of the southern portion of the parcel are open fields maintained by mowing. The quality of hay produced in these fields is questionable as many stems of non-native invasive multiflora rose were observed in the larger southern field.

The entire parcel is within the 100-year FEMA floodzone (see Figure 1). The smaller field in the northern portion of the parcel has a sparse tree line along the Connecticut River on its eastern boundary and a large fresh water tidal marsh fed by Waterhouse Brook on the western boundary. There is access to the river from this portion of the parcel just downstream from the ferry landing as well as from Waterhouse Brook. The larger field in the southern portion of the parcel is bounded by floodplain forest to the east and the west, Waterhouse Brook to the north and Dock Road to the south. There is a fairly wide expanse of well vegetated and seasonally saturated (ponded water was observed during the field visit) floodplain forest between the field and the river. There is no obvious access to the river across this floodplain forest, which is widest at the southern end (approximate 250 feet) and narrowest at the northern end (approximately 50 feet). It is also possible that there are areas of inland wetlands within the floodplain forest although mapped soils are shown as alluvial and floodplain Pootatuck and Rippowam find sandy loam and Saco silt loam (see Table 1 and Figure 2). No inland wetland soils are shown on the official soils maps; however field investigation could possibly reveal pockets of poorly and very poorly drained soils within the floodplain forest and/or associated with the freshwater tidal marsh to the west of the parcel. Soils on the parcel are identified as either prime (Pootatuck) or statewide important (Rippowam) farmland, and they are somewhat to very limited for recreation (paths, picnic areas, playgrounds, see Table 2) by the depth to the saturation zone and seasonal flooding.

Considerations for Open Space Acquisition

Otfinoski Parcel

The Oftinoski parcel offers direct recreational access and views of the Connecticut River. Consideration should be given for how the property will be accessed, where/how many visitors could park, and how/who would manage the property. In particular;

1. The legal easement for the access drive known as Myers Lane should be reviewed to ensure that public access across the drive is allowed.
2. The town engineer should be consulted to determine whether upgrading the width or surface of the access drive will be required if it is to be used for public access.
3. There appears to be a good opportunity to provide a small number (3 or 4) parking spaces in the area that has been cleared and partially prepared for a residential septic system. Use of structured gravel or grass pavers to surface the parking area should be considered.
4. The feasibility of having the property accessed by foot or non-motorized vehicle only should be considered since visitors could park at the nearby Parkers Point boat launch.

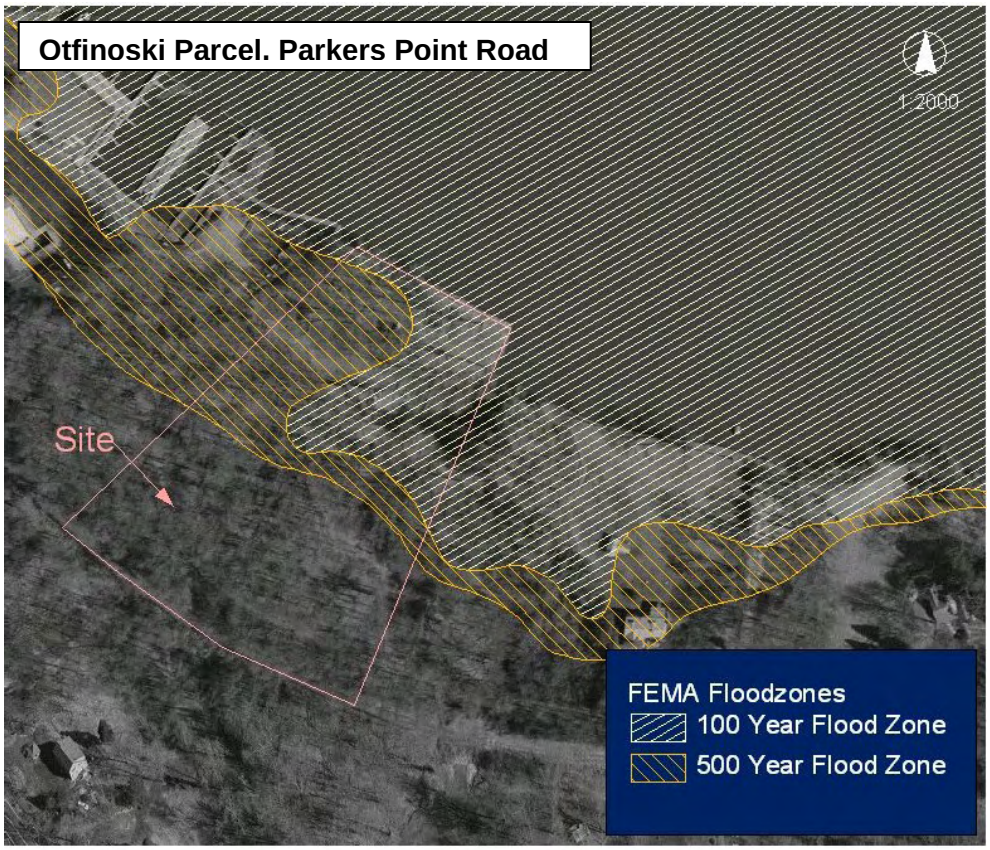
5. To improve the habitat value of the property a plan to remove and control non-native invasive species, in particular the Asiatic bittersweet along the shoreline and the multiflora rose in the upland and wetland woods, should be considered. The access drive provides a means for light equipment to be used to pull out some if not all of the rose. Establishment of native vegetation that will tolerate the light, moisture and soil conditions (see Table 3), and that will provide food and cover for native wildlife, should be considered.
6. A plan for how the use of parcel will be managed if it is open to the public should be developed including how trash, noise, and evening/night time use will be controlled. Consideration should be given to the placement of waste receptacles and for hours of use to be posted (e.g., sunrise to sunset).

Dona/Bonanomi Parcel

The Dona/Bonanomi Parcel offers limited access to the Connecticut River, and the location of the most convenient access, the northern portion on Ferry Road, is located in proximity to the seasonally active ferry landing. In addition, there is a scenic easement held by the state that restricts use of the property and to maintain the two open fields requires a commitment of time and resources. Consideration for where/how the river would be accessed, and requirements for local/state permits and permissions to create either a river access or viewshed should be given. In particular;

1. The northern portion of the parcel offers an area for visitor parking and has access to the river. Conflicts with traffic going to/coming from the adjacent ferry would need to be resolved prior to establishing river access in this location.
2. Parking areas should be surfaced with structured gravel or grass pavers.
3. Consideration could be given to whether constructing a footbridge across Waterhouse Brook to connect the two portions of the parcel for recreational access is possible.
4. The two fields should be maintained as open habitat by annual or more frequent mowing.
5. Re-establishment of native vegetation in portions of the mowed fields could be undertaken. Species should be selected that will tolerate the light, moisture and soil conditions (see Table 3) and that will provide food and cover for native birds and wildlife.
6. Clearing to provide access to the river across the floodplain forest should be avoided. If a foot trail to the river is to be established then a field soil survey to determine if inland wetlands are present should be conducted. Consideration could be given for using a boardwalk system through the woods that leads from the field to the river.

Figure 1. FEMA Floodzone Maps of the Potential Open Space Properties, Chester, CT



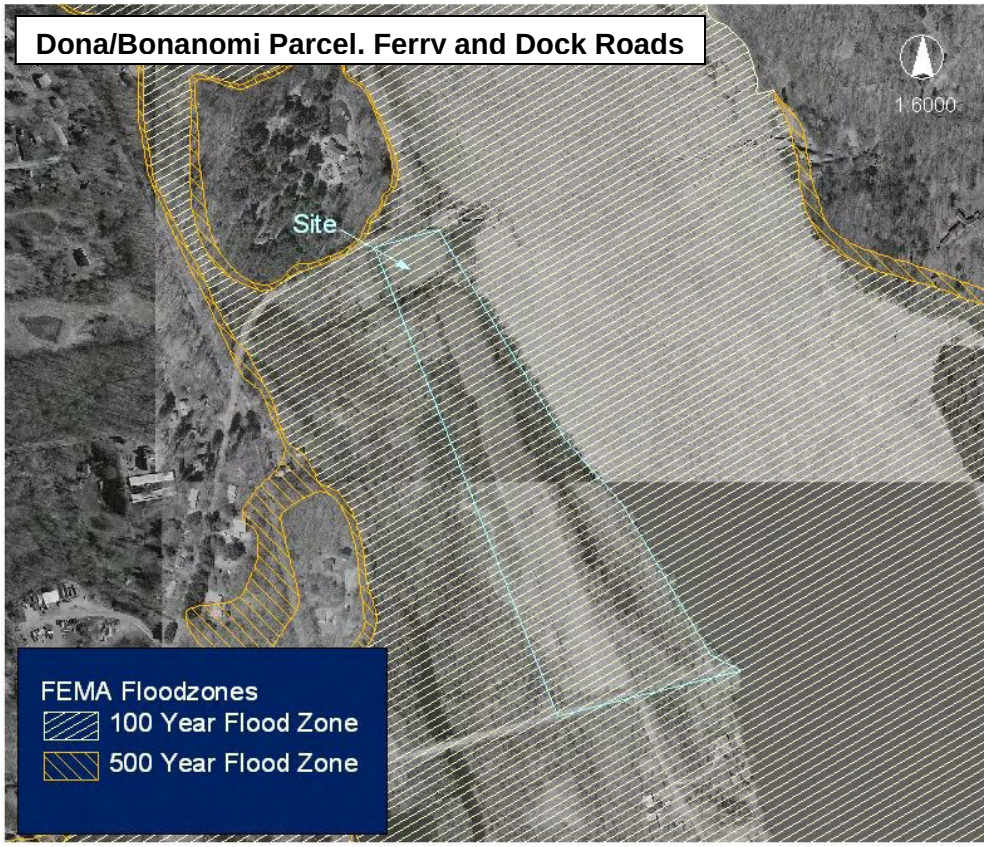
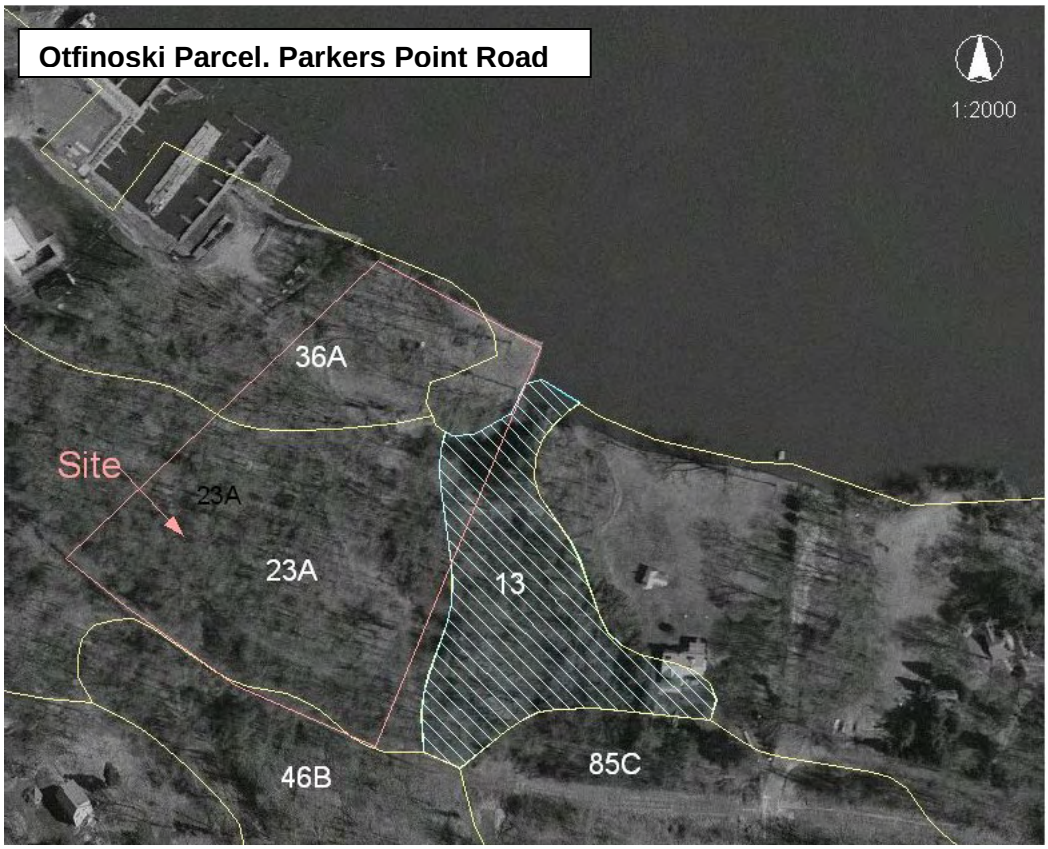
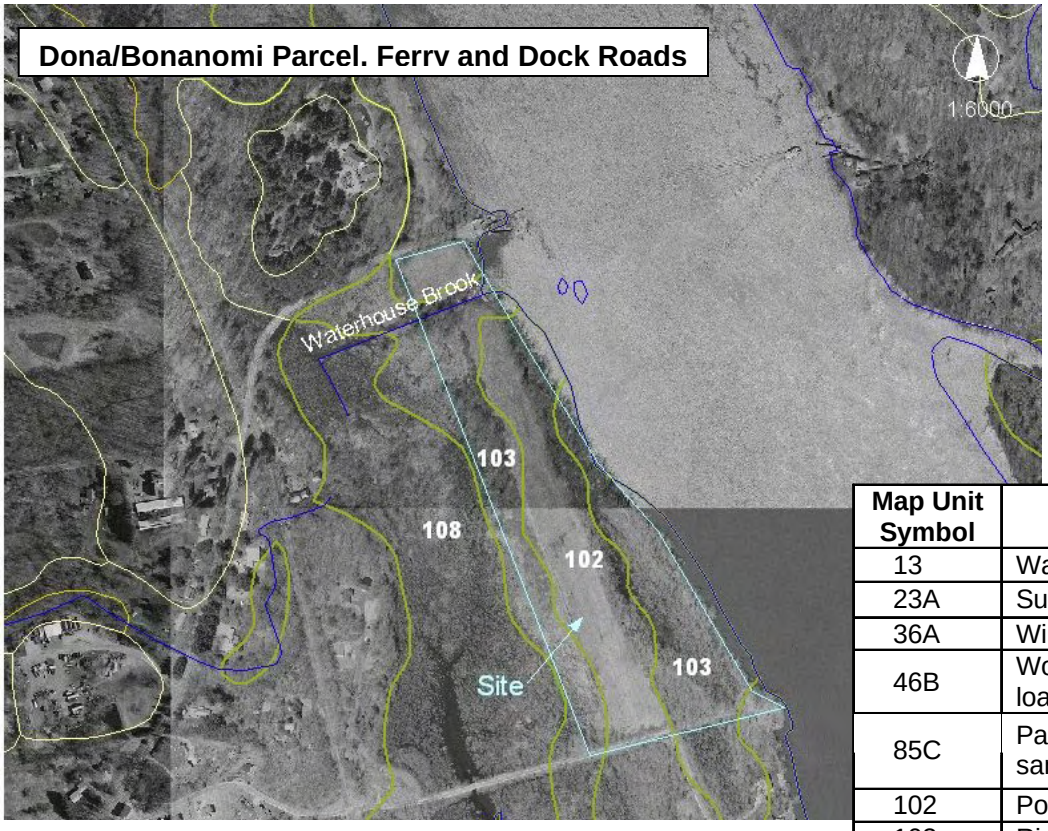


Figure 2. Soil Map Units on or Adjacent to Potential Open Space Properties, Chester, CT





Map Unit Symbol	Map Unit Name
13	Walpole sandy loam
23A	Sudbury sandy loam
36A	Windsor loamy sand
46B	Woodbridge fine sandy loam, very stony
85C	Paxton and Montauk fine sandy loams, very stony
102	Pootatuck fine sandy loam
103	Rippowam fine sandy loam
108	Saco silt loam

Table 1. Select Properties of Soils on or Adjacent to Potential Open Space Properties, Chester, CT*

Map Unit Symbol	Map Unit Name	Component Name(s)	Slope (%)	Hydrologic Group	Surface Runoff	Confining Layer	Flooding
13	Walpole sandy loam	Walpole	0-3	D	Very Low		
23A	Sudbury sandy loam	Sudbury	0-5	B	Very Low		
36A	Windsor loamy sand	Windsor	0-3	A	Very Low		
46B	Woodbridge fine sandy loam, very stony	Woodbridge	2-8	C	Low	Hardpan	
85C	Paxton and Montauk fine sandy loams, very stony	Paxton Montauk	8-15 8-15	C C	Medium Low	Hardpan Hardpan	
102	Pootatuck fine sandy loam	Pootatuck	0-3	B	Very Low		Brief, frequent
103	Rippowam fine sandy loam	Rippowam	0-3	D	Very Low		Brief, frequent
108	Saco silt loam	Saco	0-3	D	Low		Brief, frequent

Table 2. Select Interpretations of Soils on or Adjacent to Potential Open Space Properties, Chester, CT*

Map Unit Symbol	Map Unit Name	Component Name(s)	Farmland Classification	Limitations and Limiting Features		
				Paths & Trails	Picnic Areas	Playgrounds
13	Walpole sandy loam	Walpole	Statewide Important	Very[a]	Very[a]	Very[a]
23A	Sudbury sandy loam	Sudbury	Prime	Not	Somewhat[a]	Somewhat[ad]
36A	Windsor loamy sand	Windsor	Statewide Important	Not	Not	Not
46B	Woodbridge fine sandy loam, very stony	Woodbridge		Somewhat[b]	Somewhat[abc]	Somewhat[abcde]
85C	Paxton and Montauk fine sandy loams, very stony	Paxton		Somewhat[b]	Somewhat[abcd]	Somewhat[abcde]
		Montauk		Somewhat[b]	Somewhat[abcd]	Somewhat[abcde]
102	Pootatuck fine sandy loam	Pootatuck	Prime	Somewhat[f]	Somewhat[af]	Very[aef]
103	Rippowam fine sandy loam	Rippowam	Statewide Important	Very[af]	Very[af]	Very[aef]
108	Saco silt loam	Saco		Very[af]	Very[af]	Very[af]

[a] depth to saturation zone, [b] large stones, [c] depth to confining layer, [d] slope, [e] gravel content, [f] flooding

*Map units in grey rows are present on potential open space properties

Table 3. Windbreak and Environmental Plantings on Soils on or Adjacent to Potential Open Space Properties, Chester, CT

MAP UNIT		*Trees having predicted 20-year average height of. . .*				
Symbol	**Name**	**8 feet or less**	**>8 to 15 feet**	**>15 to 25 fee**	**>25 to 35 feet**	**>35 feet**
13	Walpole	Black chokeberry	Buttonbush	Coastal sweet pepperbush	Atlantic white cedar	Black willow
		Winterberry	Hazel alder	Speckled alder	Blackgum	Pin oak
		Inkberry	Highbush blueberry			Red maple
		Swamp azalea	Southern arrowwood			
			Spicebush			
23A	Sudbury	Lowbush blueberry	Chokecherry	Deerberry	Pignut hickory	Black cherry
		Mountain laurel	Smooth sumac	Sassafras	Pin cherry	Eastern white pine
					Staghorn sumac	Gray birch
						Northern red oak
						Quaking aspen
36A	Windsor	Huckleberry	Beach plum	Pitch pine	---	---
		Sweet fern	Northern bayberry			
46B	Woodbridge	Black raspberry	American witchhazel	American plum	Alternateleaf dogwood	Black cherry
		Mapleleaf viburnum	Beaked hazelnut	Blackhaw	American beech	Eastern white pine
		Partridgeberry	Sweet birch	Eastern hophornbeam	Bitternut hickory	Paper birch
				Redbud	Black oak	Sweetgum
					Flowering dogwood	
					Mountain maple	
					Striped maple	
					White oak	

*Map units in grey rows are present on potential open space properties

(continued) **Table 3.** Windbreak and Environmental Plantings on Soils on or Adjacent to Potential Open Space Properties, Chester, CT

MAP UNIT		*Trees having predicted 20-year average height of. . .*				
Symbol	**Name**	**8 feet or less**	**>8 to 15 feet**	**>15 to 25 fee**	**>25 to 35 feet**	**>35 feet**
85C	Paxton	Lowbush blueberry	Chokecherry	Deerberry	Pignut hickory	Black cherry
		Mountain laurel	Smooth sumac	Sassafras	Pin cherry	Eastern white pine
					Staghorn sumac	Gray birch
						Northern red oak
						Quaking aspen
85C	Montauk	Lowbush blueberry	Chokecherry	Deerberry	Pignut hickory	Black cherry
		Mountain laurel	Smooth sumac	Sassafras	Pin cherry	Eastern white pine
					Staghorn sumac	Gray birch
						Northern red oak
						Quaking aspen
102	Pootatuck	Huckleberry	Roundleaf dogwood	Chestnut oak	Scarlet oak	Eastern white pine
				Eastern redcedar		Gray birch
				Scrub oak		
103	Rippowam	Elderberry	Silky willow	Black ash	---	Boxelder
				Pussy willow		Green ash
				Swamp birch		River birch
108	Saco	Elderberry	Silky willow	Black ash	---	Boxelder
				Pussy willow		Green ash
				Swamp birch		River birch

*Map units in grey rows are present on potential open space properties

The Natural Diversity Data Base

The Natural Diversity Data Base (NDDB) Maps and Files regarding the two properties (Otfinoski and Dona & Bonanomi) have been reviewed.

Otfinoski Parcel

(4.6 acres located on Parker's Point Road with frontage on the Connecticut River and Valley Railroad):

According to our information, there are records for Federal Threatened and State Endangered bald eagle (*Haliaeetus leucocephalus*), Federal and State Endangered shortnose sturgeon (*Acipenser brevirostrum*), State Threatened Atlantic sturgeon (*Acipencer oxyrinchus*), tidewater mucket (*Leptodea ochracea*) and State Special Concern eastern pond mussel (*Ligumia nasuta*) in the vicinity of this project.

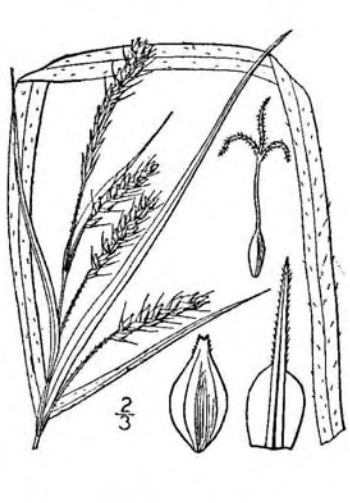
(Please see following DEP Fact Sheets for further information.)

Dona & Bonanomi Parcel

(+23 acres located just south of the ferry dock on Ferry Road with 2200 feet of Connecticut River frontage):

According to our information, there are records for the Federal and State Endangered shortnose sturgeon (*Acipenser brevirostrum*), State Endangered Davis' sedge (*Carex davisii)*, State Threatened Atlantic sturgeon (*Acipencer oxyrinchus*), State Special Concern smooth hedge-nettle (*Stachy tenufolia*) and a lymnaeid snail (*Stagnicola catascopium*) in the vicinity of this property. Please contact Ken Metzler (DEP-Wildlife; 860-424-3585) if you have questions regarding the two plant species.

Davis' Sedge



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 408.

USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 126.

Smooth Hedge Nettle

Lymnaeid Snail
Stagnicola catascopium

Review

The State Endangered bald eagle regularly uses the shoreline trees along the Connecticut River for perching and feeding from December to March. The Wildlife Division has not made an on-site inspection of the project area nor been provide with written detailed for a timetable of the work to be done. The Wildlife Division recommends that it would be best not to do work in the river from December 31 to March 1 to avoid affecting wintering eagles.

The State Threatened species Tidewater mucket and the state Species of Concern Eastern pond mussel and a lymnaeid snail have been negatively impacted by the loss of suitable habitat.

If work is to be done where mussels or snails are located then the Wildlife Division may recommend the following to avoid impacts to the mussel beds or snail areas:

- That no vegetation be removed from the river banks adjacent to the mussel and snail habitat since land clearing activities will affect them.
- There can be no erosion or siltation discharged into the river that can bury and kill these mussels and snails.
- There can be no polluted runoff such as chemicals or fertilizer discharged into the river, resulting from this project that can contaminate the water.

If you are planning to conduct work in any waterbodies, the Wildlife Division recommends that an invertebrate biologist familiar with the habitat requirements of these species conduct surveys. A report summarizing the results of such surveys should include habitat descriptions, invertebrate species list and statement/resume giving the biologists qualifications. The DEP doesn't maintain a list of qualified biologists. A Wildlife Division permit may be required by the biologist to conduct survey work, you should ask if your biologist has one. The results of this investigation can be forwarded to the Wildlife Division and, after evaluation, recommendations for additional surveys, if any, will be made.

Consultation with the Wildlife Division should not be substituted for site-specific surveys that may be required for environmental assessments. The time of year when any work will take place will affect these species if they are present on the site when the work is scheduled. Please be advised that should state permits be required or should state involvement occur in some other fashion, specific restrictions or conditions relating to the species discussed above may apply. In this situation, additional evaluation of the proposal by the DEP Wildlife

Division should be requested. If the proposed project has not been initiated within 6 months of this review, contact the NDDB for an updated review. If you have additional questions please contact Julie.Victoria@ct.gov, and reference the NDDB #16057.

Natural Diversity Data Base information includes all information regarding critical biologic resources available to us at the time of the request. This information is a compilation of data collected over the years by the Environmental and Geographic Information Center's Geological and Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Connecticut Department of Environmental Protection

BALD EAGLE

Haliaeetus leucocephalus

State Endangered Species

Background

The bald eagle is best known as the national emblem of the United States of America. It was chosen for this honor in 1782 by the Second Continental Congress because the species is unique to North America. However, the bald eagle went from being common in the early 1700s to extremely rare in the lower 48 states by the 1960s. This precipitous decline was due to loss of habitat and nesting trees, food contamination by pesticides, and illegal shooting. Contamination of food by the organochlorine pesticide DDT is widely accepted as a major reason why populations of eagles, along with many other raptor species, declined in the mid-20th century. DDT accumulated in the food chain and, when contaminated food was ingested by eagles, it caused them to lay eggs with weakened shells that cracked when the birds incubated their eggs. Eagle populations across the country were decimated. General use of DDT was banned in the United States in 1972.

The bald eagle was first declared an endangered species with the passage of the federal Endangered Species Act in 1973. Populations eventually began to recover due to the ban on DDT use, successful reintroduction programs of fostered chicks and fledglings, and habitat and nest protection measures. In 1995, the U.S. Fish and Wildlife Service reclassified the bald eagle from endangered to threatened in the lower 48 states. Populations continued to recover enough that, in 2007, the bald eagle was officially removed from the federal Endangered Species List. However, bald eagles are still protected on the federal level by the Bald Eagle and Golden Eagle Protection Act of 1940 and the Migratory Bird Treaty Act of 1918.

In Connecticut, the bald eagle became an extirpated nesting species by the 1950s. In 1992, it was classified as an endangered species on Connecticut's first official Endangered, Threatened,

and Special Concern Species List, the same year that the state documented its first successful nesting of bald eagles since the 1950s, when a pair raised two young in Litchfield County. Leg bands revealed that the nesting pair of eagles came from a reintroduction project in Massachusetts sponsored by the Massachusetts Division of Fisheries and Wildlife. Five years later, a second pair of bald eagles successfully nested in Connecticut. The nesting population has increased gradually and, in 2007, 15 pairs of bald eagles made nesting attempts in the state. Nesting attempts or territorial pairs have been documented in 6 of the state's 8 counties. Although the number of nesting pairs has increased over the years, the recovery of Connecticut's eagle population has been slow compared to other regions in the nation. Therefore, the bald eagle still satisfies the criteria for state listing and remains a Connecticut endangered species.

Wintering eagles come to Connecticut looking for open water in which to feed when the land and waters in Maine and Canada are frozen. If harsh weather in Connecticut caused any open water to freeze over as well, the eagles would continue to migrate farther south. Up to 100 eagles winter in Connecticut from December to early March along major rivers and at large reservoirs. This number has been increasing slowly, but there is still a challenge to reconcile human population growth and urban/suburban sprawl with the specific needs of this state endangered species.

Range
The bald eagle nests from Alaska and Newfoundland south to Baja California, the Gulf Coast and Florida. The greatest concentrations of wintering bald eagles are found from November to March in the western and midwestern United States. Smaller concentrations of wintering eagles are also found in New England during this same time period.

Description
Adult bald eagles have a snow-white head and tail, and a brownish-black body. The bill, eyes, and feet are yellow. Immature eagles are uniformly grayish-brown. The distinctive adult plumage is attained at 4 to 5 years of age. Bald eagles are about 34 to 43 inches long, can weigh 8 to 14 pounds, and have a wingspan of 6 to 8 feet. The sexes are similar in appearance, although the females are larger. Bald eagles have a life expectancy of 25 to 30 years, and longer in captivity.

Young bald eagles are often confused with golden eagles; however, they are grayer than the darker golden eagle, and the bill is much heavier.

Habitat and Diet
Natural year-round habitat of bald eagles includes lakes, marshes, rivers, or seacoasts, where there are tall trees nearby for nesting and roosting and plenty of fish for eating.

Although bald eagles feed primarily on fish, they also are opportunistic predators and scavengers that will eat anything that can be caught easily or scavenged, such as waterfowl, small and large mammals, and livestock carrion. In addition, they have a reputation of being thieves, robbing other raptors or gulls of their catch.

Eagles kill prey by grasping it with their strong feet and sharp talons. They can carry their prey in flight but are unable to carry much more than 4 pounds. An eagle's beak is used solely for tearing flesh.

Life History
Bald eagles reach sexual maturity at 4 to 6 years of age. The breeding season in Connecticut begins in January, and most pairs lay their eggs in February and March. Bald eagles return to the same nesting areas year after year and often breed with the same mate. If something happens to either the male or female, the surviving bird will find a new mate. The nest, which sometimes measures 7 to 8 feet across, is a flat-topped mass of sticks, with a lining of fine vegetation such as rushes, mosses, or grasses. It is built in trees, 10 to 150 feet above ground. There are usually 1 to 3 (average 2) dull, white eggs in a clutch. Both the male and female incubate the eggs and

feed the young. The eggs are incubated for about 35 days, and the chicks usually fledge (reach flying stage) in 12 weeks.

Interesting Facts
The flight speed of a bald eagle ranges between 36 and 44 miles per hour.

At night, wintering eagles often congregate at communal roost trees; in some cases, they travel 12 or more miles from a feeding area to a roost site. Roosts are often used for several years. Many roosts are protected from the wind by vegetation or terrain, providing a favorable thermal environment. Use of these protected sites helps minimize energy stress. In addition, communal roosting may aid the birds in their search for food.

Despite their large size, eagles are easily disturbed by unpredictable human activity, making delineated protection zones necessary around areas of high eagle use, particularly nest sites and winter roosts. Disturbance at nest sites may cause the birds to abandon their nest, even if there are eggs or young in the nest. Because winter is a stressful time for eagles, it is important that preferred winter feeding areas be protected. If the birds are frequently disturbed from feeding and forced to travel to a different area for food, their lives may be threatened. Adult eagles are more easily disturbed than juveniles.

How You Can Help
Winter is a difficult time for any wildlife species, including bald eagles. Food is harder to find and cold temperatures cause energy stress. If you see one or more eagles feeding or roosting, leave them alone and observe them from a distance.

It is also important to stay away from nesting areas to avoid disturbing the birds. Several Connecticut bald eagle nests are located on private property where there is no public access. Respect posted areas and do not trespass on private property to view eagles.

The Wildlife Division participates in a midwinter eagle survey in January for the United States Geological Survey; volunteers are always welcome to help in this effort.

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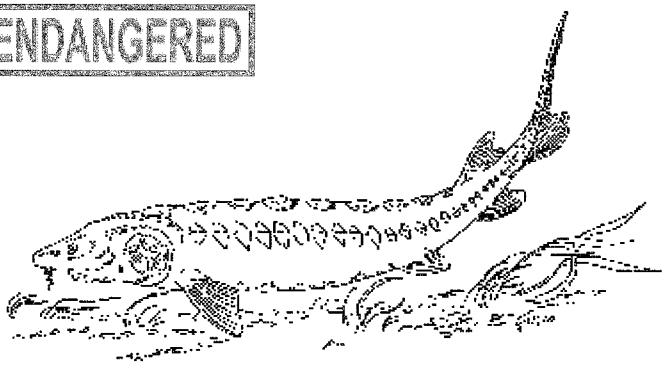
(rev. 5/08)

Connecticut Department of Environmental Protection

SHORTNOSE STURGEON

Acipenser brevirostrum

ENDANGERED



Habitat: Main channel of large rivers, estuaries, and open ocean; may be found in all water depths in rivers.
Weight: Adults average about 8 pounds.
Length: Adults, 36-38 inches.

Life Expectancy: Ages from 50 to 75 years have been reported.
Food: Primarily invertebrates, insects, crustaceans, mollusks, and snails.
Status: Federally and state endangered.

Identification: Sturgeon are primitive-looking fishes, with a heterocercal tail (the upper lobe is much longer than the lower lobe) and a body covered with 5 rows of large bony plates. These heavy, cylindrical fish have an elongated, bony snout, with a tube-like mouth located on the underside of the head. The mouth protrudes several inches when the fish is feeding. Shortnose sturgeon range in color from grayish-olive to brownish above, shading to white on the belly.

Shortnose sturgeon can be distinguished from Atlantic sturgeon by the relative width of their mouths. Shortnose sturgeon could be called "bigmouth" sturgeon; their mouth widths (inside the lips) are greater than 60 percent of the distance between the eyes, while Atlantic sturgeon have small mouths that measure 50 percent or less of the distance measured between the eyes.

Range: Shortnose sturgeon are restricted to the east coast of North America, from the St. John River in New Brunswick, Canada, to the Indian River in Florida. Two populations of shortnose sturgeon can be found in the Connecticut River. One group is landlocked between the Holyoke and Turners Falls Dams in Massachusetts. The other group occurs in the lower Connecticut River from the Holyoke Dam to Long Island Sound.

Reproduction: Shortnose sturgeon have very specific spawning requirements. All spawning occurs in fresh water within a 1- to 2-week period, from the end of April to the first week of May. If environmental conditions are not acceptable, shortnose sturgeon will not spawn, resorbing their eggs and milt (sperm). Females only spawn every 3 to 5 years after reaching sexual maturity at age 8 to 12. Males likely spawn every year after reaching age 6 to 10.

Reason for Decline: Shortnose sturgeon populations in North America have declined due to overfishing, loss of habitat, limited access to spawning areas and water pollution.

History in Connecticut: The number of shortnose sturgeon present in Connecticut waters prior to the 1980s is unknown. It is likely that shortnose sturgeon caught in the shad and Atlantic

sturgeon fisheries were kept or sold, but not recorded.

Interesting Facts: Sturgeon are among the oldest living species of fish. They have retained many primitive characteristics, suggesting what fish may have looked like during the age of the dinosaurs. The almost two dozen species of sturgeon can only be found in the Northern Hemisphere. Seven of these species occur in North America.

Sturgeon are occasionally seen jumping clear out of the water (breaching). It is unknown why sturgeon breach, although it has been suggested that they may be attempting to rid themselves of parasites.

Among fishes, sturgeon are very slow-growing and long-lived. Once they reach adult size, sturgeon have no natural enemies except humans. The largest recorded shortnose sturgeon, a female weighing over 90 pounds, was captured in the St. John River in Canada.

Protective Legislation: *Federal* - Endangered Species Act of 1973. *State* - Connecticut General Statutes Sec. 26-112-45(1) and 26-311.

What You Can Do: Some sturgeon are unnecessarily killed by people wanting to learn the identity of the fish. Become familiar with various fish species by consulting identification keys and pictures before going fishing. Return all live sturgeon to the water after capture. All dead specimens should be reported to the DEP Fisheries Division. It is illegal to keep any shortnose sturgeon taken in Connecticut waters. If you catch or observe a sturgeon, please report it to the Marine Fisheries Office (203-434-6043). Documented reports of sturgeon smaller than 18 inches are extremely rare, and all sightings of these small sturgeon are especially sought by the Fisheries Division.

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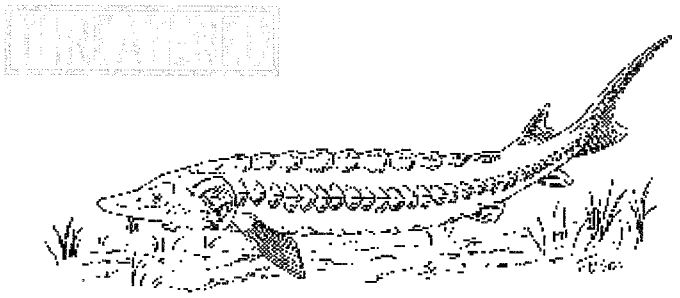
Connecticut Department of Environmental Protection

ATLANTIC STURGEON

Acipenser oxyrinchus



Habitat: Main channel of large rivers, estuaries and open ocean.
Weight: Adults, up to 800 pounds.
Length: Adults, up to 12 feet.

Life expectancy: Ages from 50 to 75 years have been reported.
Food: Mollusks, worms, snails, invertebrates, shrimps, small bottom-dwelling fish and insect larvae.
Status: State threatened in inland (fresh) waters.

Identification: Sturgeon are primitive-looking fishes, with a heterocercal tail (the upper lobe is much longer than the lower lobe) and a body covered with 5 rows of large bony plates. These heavy, cylindrical fish have an elongated bony snout, with a tubelike mouth located on the underside of the head. The mouth protrudes several inches when the fish is feeding. The Atlantic sturgeon ranges in color from brownish-gray to blue-black on the back and upper side, shading to white on the belly.

Any sturgeon found in Connecticut waters that is more than 4 feet long is an Atlantic sturgeon. Atlantic sturgeon can be distinguished from shortnose sturgeon by their relative mouth width. Atlantic sturgeon have mouth widths (inside the lips) that measure less than 50 percent of the distance between the eyes, while shortnose sturgeon have large mouths that measure greater than 60 percent of the distance between the eyes.

Range: Atlantic sturgeon range along the entire east coast of North America, from the St. John River in New Brunswick, Canada, to the St. Johns River along the east coast of Florida. A separate subspecies, the gulf sturgeon, is found along the west coast of Florida and throughout the Gulf of Mexico. Atlantic sturgeon native to Connecticut waters are believed to be extinct.

Reproduction: Atlantic sturgeon are anadromous, entering large freshwater river systems to spawn during the spring. Only a few states still have spawning populations of the Atlantic sturgeon. The Hudson River in New York has the only spawning population in New England.

Reason for Decline: Populations of Atlantic sturgeon have declined due to overfishing, loss of habitat, limited access to spawning areas and water pollution.

History in Connecticut: Atlantic sturgeon once supported a commercial fishery in the Connecticut River, but the lack of reliable records makes it difficult to estimate the size of the population at that time.

Interesting Facts: Sturgeon are among the oldest living species of fish. They have retained many primitive characteristics, suggesting what fish may have looked like during the age of the dinosaurs. The almost two dozen species of sturgeon can only be found in the Northern Hemisphere. Seven of these species occur in North America.

During the summer, juvenile Atlantic sturgeon can occasionally be found in the lower portions of the three major rivers in Connecticut. However, these are sexually immature fish from the Hudson River that only stay a few months before heading back out to sea.

The size of Atlantic sturgeon at sexual maturity is approximately 6 feet. Age at that size varies by sex and latitude. Females are generally older than males of a similar size and are thought to live longer and grow larger than males.

Atlantic sturgeon of all sizes are seen or captured in Long Island Sound. The Sound may be an important feeding or resting area on the way to and from spawning areas. Occasionally adult-sized (6 or more inches) sturgeon are seen in the rivers of Connecticut. It is believed that these fish are simply foraging or perhaps lost, having made a wrong turn.

Sturgeon are occasionally seen jumping clear out of the water (breaching). It is unknown why sturgeon breach, although it has been suggested that they may be attempting to rid themselves of parasites.

Protective Legislation: *State* - Connecticut General Statutes Sec. 26-112-45(1) and 26-311.

What You Can Do: Some sturgeon are unnecessarily killed by people wanting to learn the identity of the fish. Become familiar with various fish species by consulting identification keys and pictures before going fishing. Return all live sturgeon to the water after capture. All dead specimens should be reported to the DEP Fisheries Division. If you catch or observe a sturgeon, please report it to the Marine Fisheries Office (203-434-6043). It is illegal to keep any Atlantic sturgeon taken in inland waters. Atlantic sturgeon larger than 6 feet that are seen in inland waters may be attempting to return to spawning areas and should not be disturbed.

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(rev. 12/99)

Connecticut Department of Environmental Protection

Tidewater Mucket

Leptodea ochracea

Key Features

Threatened

Size: Up to three inches.
Shape: Ovate. Valves laterally inflated. Females usually more rounded toward the posterior ventral margin. Valves strong and uniformly thick.
Periostracum: Color yellowish or greenish-brown, sometimes with a bronze or reddish-yellow tint. Shell rays present, particularly in juveniles and light-colored adults.
Lateral Teeth: Present. Two on the left valve and one on the right valve.
Pseudocardinal Teeth: Present. Two on both the right valve and left valve. The teeth are thin and elongate, and are located well anterior of the beak [this feature is important to distinguish this species from the yellow lampmussel].
Nacre: Color pinkish or salmon-colored.

External Shell

Internal shell, right valve

Hinge teeth

Often Confused With...

Yellow lampmussel, eastern lampmussel

Habitat

The tidewater mucket is usually found in medium to large-sized rivers and coastal ponds, and inhabits a variety of substrates.

Range in Connecticut

Though rare, the tidewater mucket is found throughout the Connecticut River and its tributaries. It has not been found in the Housatonic River watershed since the 1800s.

Conservation

The tidewater mucket is listed as threatened in Connecticut. Some recent evidence suggests that its range may be expanding, presumably due to river restoration and recovery of anadromous fish runs. Thorough surveys in the Connecticut River and its principal tributaries are needed to determine its population status and trends. It is listed as threatened in Maine and special concern in Massachusetts.

Freshwater Mussel Fact Sheets

Eastern Pearlshell
Dwarf Wedgemussel
Triangle Floater
Creeper
Eastern Elliptio
Eastern Floater
Eastern Pondmussel
Tidewater Mucket
Yellow Lampmussel

Connecticut Department of Environmental Protection

Eastern Pondmussel

Ligumia nasuta

Key Features

Special Concern

Size: Up to six inches.
Shape: Narrow and elongate, tapering to a blunt point posteriorly. Females are often distinctly more rounded along the posterior ventral margin. Valves laterally compressed, thin, and strong.
Periostracum: Color yellowish or greenish-black (juveniles) to dark brown or black (adults). Shell rays are often only visible in juveniles or light-colored adults.
Lateral Teeth: Present but delicate. Two on the left valve and one on the right valve.
Pseudocardinal Teeth: Present but delicate. One or two on both the left valve and right valve.
Nacre: Color usually silvery-white, pinkish, or purple.

External Shell

Internal shell, right valve

Hinge teeth

Often Confused With...

Not easily confused with any other species in Connecticut, although the eastern pearlshell may have a similar elongate shape.

Habitat

The eastern pondmussel inhabits a variety of habitats such as coastal ponds, streams, and rivers.

Range in Connecticut

Known from the Connecticut River watershed and south-central coastal watersheds.

Conservation

The eastern pondmussel is listed as special concern in Connecticut. Many of its historic populations are thought to be extirpated or in decline, and there are few remaining populations that are considered healthy and stable. Environmental pollution and habitat degradation are considered the primary reasons for its decline. It is also listed as special concern in Massachusetts.

Freshwater Mussel Fact Sheets

Eastern Pearlshell
Dwarf Wedgemussel
Triangle Floater
Brook Floater
Creeper
Eastern Elliptio
Eastern Floater
Alewife Floater
Eastern Pondmussel
Tidewater Mucket
Yellow Lampmussel
Eastern Lampmussel

The Freshwater Mussels of Connecticut

Fisheries Habitat

One of the responsibilities of the DEP Inland Fisheries Division, Habitat Conservation and Enhancement program (HCE) is to advise staff of the Department of Environmental Protection, the federal government, local governments and the general public on matters affecting the fisheries and fish habitat within Connecticut's waters. The Team fisheries biologist participated to identify fisheries resources in the vicinity of the parcels that may need to be protected or managed and opportunities for fisheries related recreation on the parcels.

Description of the Parcels

According to the information provided to the Team during the April 2, 2008 site walk, the Otfinoski Parcel is an undeveloped 4.6-acre parcel in a R-2 zone with 200 feet of frontage on the Connecticut River. There is potential access to the parcel over a private easement known as Myers Lane. As evidenced by a number of site preparations, such as cleared vegetation, the owner was planning to build a home and was preparing the lot, but then canceled this plan and has offered the parcel for sale. There are other modifications that appear to pre-date these activities, such as bank stabilization with stone along the waterfront and a small excavated basin that is connected to the river.

The Dona & Bonanomi Parcel is a 23-acre parcel bounded by Ferry Road to the north and Dock road to the south. It has 2,200 feet of frontage on the Connecticut River. During the meeting it was stated that the parcel cannot be developed and the State of Connecticut holds scenic easement restrictions. The parcel has a variety of terrestrial and wetland habitats and a naturally vegetated shoreline. A channel at the northern end, which is about 15 to 20 feet wide and probably created by excavation, connects the river to an extensive shallow marsh on an adjacent parcel.

Fisheries and Fish Habitat in the Connecticut River

With respect to fish and fish habitat, the primary significance of both parcels is their considerable frontage on the Connecticut River. The fish community in the Connecticut River is diverse and varies seasonally. Resident species that can be expected to occur in the vicinity of the parcels include northern pike, largemouth bass, smallmouth bass, white perch, yellow perch, black crappie, channel catfish, white catfish, bluegill, pumpkinseed, redbreast sunfish, rock bass, common carp, golden shiner, spottail shiner and white sucker.

The Connecticut River supports a number of anadromous species (i.e. species that migrate from the sea to freshwater spawning areas) such as Atlantic salmon, American shad, alewife and blueback herring, as well as a catadromous species (i.e. the adults return to the sea to spawn), the American eel. Anadromous fishes use the river in the vicinity of Chester primarily as a migratory corridor during their upriver spawning migration and descent to the ocean as post spawning adults and juveniles. The upstream migration period for most of these species occurs during the months of April, May and June. The downstream migration

of Atlantic salmon smolts (i.e. juveniles) also occurs during this period. The downstream migration of young-of-the-year American shad and river herring occurs during late summer and into the fall. The catadromous American eel enters the lower river in early spring as glass eels, which is an early post larval stage of development. The glass eels move up the river and into various tributaries of the river. Adult American eel inhabit the Connecticut River and its tributaries for as many as 20 years before returning to the Sargasso Sea to spawn.

Striped bass is another anadromous species that is abundant in the river and would occur in the vicinity of Chester most any time of the year. The abundance of this species decreased alarmingly along the Atlantic coast in the 1970's, and in response many states implemented moratoria on the take of striped bass in the mid 1980's. The moratoria lead to a steady increase in the coastal population with expansion to their historic range, including the Connecticut River. Juvenile striped bass are now abundant in the river year-round. Although striped bass are anadromous and adults enter the Connecticut River in spring, it is unknown if they spawn in the Connecticut River. It is believed that most, if not all, of the striped bass in the river originated in the Hudson River or the Chesapeake Bay watershed.

Shortnose sturgeon, a species listed under Federal and State regulations as Endangered, occurs in the Chester area of the river. It is likely they do not remain in the area for long periods of time; rather, they transit the area on a seasonal basis as they move between feeding areas in the lower river and feeding and spawning areas in northern reaches.

If members of the Conservation Commission require more detailed information on the fish community and habitats in the Connecticut River, there are a number of publications that contain excellent discussions of the various species and their habitats. Some of these are listed at the end of this report. The Team fisheries biologist can also provide additional information if needed.

Observations and Conclusions

Since upland activities can affect the water quality, and thus the fisheries, of the Connecticut River, it is desirable to preserve land within the watershed and mitigate activities that might degrade water quality. On parcels that can be developed, one important measure is to preserve an undeveloped buffer along the river that includes the riparian zone.

The Dona & Bonanomi Parcel, which has about 2,200 feet of frontage on the river, is already protected from development. It would appear the only activity that currently takes place is the mowing of a field that is in the middle of the parcel and extending almost its entire length. A substantial wooded buffer with some wetlands lies between the field and the river. Therefore no improvements need to be made to protect the river from upland activities.

It appears that the primary value of purchasing the Dona & Bonanomi Parcel would be to provide public access for the purposes of passive recreation such as wildlife viewing and outdoor education. There may be wildlife management opportunities that could be pursued with the DEP Wildlife Division. The parcel would be an excellent candidate for all these purposes.

It is not clear if the Commission considers fishing a form of passive recreation, but since we evaluate fishing access as a matter of course the Team fisheries biologist considered the opportunities during the site walk. While fishing the Connecticut River would be possible from the Dona & Bonanomi Parcel, the shoreline is not easily accessible and would not be very convenient to fish from due to the heavy vegetation along the bank. Also, improving access to the shoreline would have to be weighed against the impacts to the various terrestrial, wetland and riparian zone habitats that might be modified in the process.

The Otfinoski Parcel is not as ecologically diverse and productive as the Dona & Bonanomi Parcel. The parcel does offer wildlife viewing and educational possibilities, although perhaps not as diverse as those of the Dona & Bonanomi Parcel. However, the parcel can be developed, and so it would be beneficial to purchase the property in order to manage it as open space along the river.

The Otfinoski Parcel offers easy access to the riverfront for water-based recreation. The relatively open shorefront offers excellent fishing access in an area where such access is limited, and it appears that it would be relatively simple to make the shorefront accessible for handicapped anglers. The small basin off the river would be a convenient place to launch canoes and kayaks. If properly planned, the necessary improvements would not result in significant impacts to sensitive habitats.

Based on these considerations, purchasing and managing the Otfinoski Parcel as open space appears to offer greater benefit to the town and the Connecticut River. The Team fisheries biologist is available for additional consultation, particularly with regard to providing fishing access.

Additional Information on the Fish and Fish Habitats of the Connecticut River

Living Resources and Habitats of the Lower Connecticut River. Edited by Glenn D. Dreyer and Marcianna Caplis. A publication of the Connecticut College Arboretum, New London, CT. Bulletin Number 37, December 2001.

A Fisheries Guide to Lakes and Ponds of Connecticut Including the Connecticut River and Its Coves. Principal authors: Robert J. Jacobs and Eileen B. O'Donnell. A publication of the CT Department of Environmental Protection. Bulletin 35, 2002.

Tidewaters of the Connecticut River, An Explorer's Guide to Hidden Coves and Marshes. Principal author: Thomas Maloney et al. Rivers End Press, Essex, CT. 2001.

The Connecticut River Ecological Study (1965-1973) Revisited: Ecology of the Lower Connecticut River 1973-2003. Principal authors: Paul M. Jacobson et al. American Fisheries Society Monograph 9, 2004.

Wildlife Habitat

Introduction

The following comments are provided to help guide the Chester Conservation Commission in evaluating the two parcels of land under consideration for purchase for open space by the town. The assessment is based on a review of the maps provided by the Connecticut Environmental Review Team Program, and available DEP ECOS Mapping Data.

It is highly recommended that if the Town desires a more in-depth comprehensive assessment of the two parcels and their value to wildlife, that they hire the services of a well-qualified consulting biologist who could spend the time necessary to perform such an evaluation.

The Parcels

Otfinoski Parcel (4.6 acres). This wooded parcel has some value to wildlife because it is located on the Connecticut River, which is a major migratory corridor for birds in the state. Forested habitat along the river is vital to birds as they stop to feed and rest before moving north or south again. This small patch of forest, while very limited also provides some year round habitat for a variety of wildlife to nest in, and find food and cover in. Its value is very limited by its small size and the densely developed marina to the north and the residential development to the south and west.

Dona & Bonanomi Parcel (23 acres) has the same value as migratory stopover habitat to birds, but has greater general wildlife value because it is larger and is connected to patches of less developed habitat to the north and south. In addition, it offers both forestland and field habitats for use by wildlife. Early successional habitats, which include fields, old fields, meadows, grasslands, etc., have been identified in Connecticut's Comprehensive Wildlife Strategy (See Chapter 4 Habitat 12 Intensively Managed) as a key habitat type that provides critical habitat to many species considered to be of greatest conservation need. This field area looks to be about ten acres in size and could potentially provide habitat for species like the field sparrow, bobolink, indigo bunting, eastern ribbon snake and regal fritillary, among many others.

It is important to manage this type of habitat because without management it will eventually grow or succeed into forestland. Early successional stages habitats are rapidly declining for a variety of reasons including natural succession because man's development of the landscape and interruption of natural disturbance patterns and where they can occur has greatly altered these important habitats. Also, many of these habitats have been developed and no longer exist and many are intensively managed for agriculture. Many early successional dependent species are experiencing significant population declines in large part due to habitat loss.

Therefore, if the town purchases the land the field should be managed to maintain or enhance wildlife values. Because the area is only about 10 acres and most grassland dependent birds require larger acreages and the adjoining habitats appears to be a mix of shrubs, shrub thickets and trees and open field areas, managing the area as an old field would maximize wildlife usage. Old fields contain some woody shrubs, seedlings and very small sapling growth, along with larger areas of grasses and herbaceous or weedy growth. To accomplish this goal, the area should be mowed periodically, every 3 to 8 years to prevent the field from growing back up into forestland. It should be mowed when the small trees are not so big that a tractor and a brush hog can't cut them down feasibly. Periodically cutting the field will help maintain the valuable early successional habitat.

Archaeological and Historical Review

Reviewing the two parcels being considered by the Town of Chester for open space acquisition, the Office of State Archaeology (OSA) and the State Historic Preservation Office (SHPO) suggest that the Otfinoski Parcel has a high sensitivity for cultural resources associated with Native American settlement along the Connecticut River, while the Dona & Bonanomi Parcel south of the ferry dock has a low sensitivity.

The State of Connecticut Archaeological Site Files and Maps show five Pre-Contact Indian sites in the general vicinity along the western bank of the Connecticut River, all of which are situated on elevated, well-drained soils. The Otfinoski Parcel contains topographic and environmental elements which would have provided early indigenous inhabitants a suitable living area as well as access to the navigable waterway and access to the interior and Long Island Sound. The Dona & Bonanomi Parcel may be too low lying in topography, and, hence, unlikely to contain an archaeological resource.

The OSA and SHPO are available to provide technical assistance in the identification and evaluation of cultural resources on the two parcels under consideration.

Watershed Management Perspective

The Town of Chester is contemplating the purchase of one or more parcels abutting the Connecticut River for open space. The first parcel, Otfinoski, lies north of the existing town boat launch off of Parkers Point Road. The second parcel, Dona & Bonanomi (D&B), is located south of the ferry dock off Ferry Road. From a watershed perspective, both are located within the Connecticut River Main Stem Regional Basin (#4000). However, each is very different in terms of its hydrology, habitat and vegetation, as such, each poses a different potential for recreational use.

Otfinoski slopes steadily from the private easement access point on Myers Lane down toward the river. The hillside is braided by intermittent watercourses, drainage channels, wetland fingers and seeps. The area closest to the river is relatively flat with large, mature trees that had been partly cleared for site development. It also has a small inlet pond separating the open forest from the boat launch to the south. Otfinoski offers small-scale, outdoor excursion opportunities with a scenic vista. The mature floodplain forest provides shade and little understory. This scenic site may lend itself to picnicking, fishing, camping and limited hiking; and possibly a hand-carry boat launch. Construction of one or more trails to descend the hillside, or at least improvement of the existing path, could be enhanced with native plantings and the removal of invasives. Although relatively small, this reviewer believes this site is worth preserving because there seems to be relatively few such mature floodplain forest habitat in this area.

Dona & Bonanomi is less desirable to develop for public access to the river, except for the most northern portion of the site. D&B has a much more vegetated understory and an elongated floodplain swamp paralleling the river. It is flanked to the west by an existing hayed field. Ignoring the existing scenic easement held by DEP, developing access to the shoreline through the floodplain at this site would appear to pose greater impacts to the wetlands, which may also contain vernal pools. A small hand-carry boat launch and parking area may be feasible at the northern end of the property immediately south of Route 148 and the ferry dock, but this would need to be evaluated for traffic considerations queuing for the ferry. There is also an on-going erosion problem at this location that should be stabilized.

Although the D&B parcel faces the entrance to the highly touted Whalebone Creek, this location would be more disruptive to construct access through the wetlands, which would require paddlers to traverse mud flats during low tide, as well as posing difficult terrain for fisherman to trek along the shoreline. If the hay field were converted to a grassed area, this may be appropriate for passive recreation except that is lacks shade trees. Nevertheless, the site merits conserving as a riparian buffer and natural area. Riparian buffers help to reduce pollution while providing valuable wildlife habitat, flood attenuation, water quality renovation, and groundwater recharge, so it is important to protect these areas from degradation and development.

DEP – Office of Long Island Sound Programs Comments

Otfinoski Parcel

This sparsely to densely wooded floodplain site previously supported a residential structure. Previous on-site waste disposal and fuel storage facilities and spring freshet flood elevations should be investigated to determine possible site remediation and flood hazard management issues associated with any proposed reuse of the property. The peninsula on the site provides excellent views both upstream and downstream along the Connecticut River. The right-of-way (ROW) to the parcel should be researched to ensure there are no restrictions on improving the existing access road to accommodate public use.

The tidally influenced dredged basin (Figure 1) extending from the site to the Connecticut River was devoid of tidal wetland vegetation. Water depths and substrate indicate the basin could readily support a hand-carry boat launch through minor modifications to the existing banks along the basin. No evidence of bank scour associated with high flows within the River where identified. This low energy hydrodynamic environment would therefore likely not require regular maintenance or repair of a hand-carry boat launch if such a facility were appropriately sited, designed and constructed. Because the basin is not subject to strong currents, it would provide a nice alternative to the nearby Town-owned Parkers Point Boat Launch for launching small craft and accommodating nature-based recreational activity for children. However, water depths at low tide should be investigated before determining whether such a launch could provide safe boating access to the River throughout all parts of the tidal cycle. Water depths along the Connecticut River shoreline portion of the parcel appear to be sufficient to support reasonable fishing access opportunities (see Aquatic Habitat section).

Figure 1
Otfinoski Parcel Tidal Basin

Dona & Bonanomi Parcel

This flood plain forest and field site supports significant inland wetlands. The property is subject to a conservation easement in favor of Connecticut DEP. The terms of the easement should be reviewed to determine whether the site improvements needed to support public use of the site (e.g., parking, boat launching facilities, etc.) are allowed. If they are not, it should not be assumed that the terms of the easement could be modified by the easement grantee (CT DEP).

In order to provide public access to the waterfront using the existing access road on the south side of the site, a sensitive shoreline area of floodplain forest wooded wetland would need to be crossed. Substrate, water depths and riparian vegetation along this section of the site's shoreline would likely preclude or significantly hinder boating and fishing access opportunities. No evidence of significant wetland crossing constraints to access the River was noted along northern portion of the site adjacent to Ferry Road. However, shallow water depths at low tide within near an inlet this area are believed to restrict hand-carry boating access to the River only during periods of high water. Additional investigation is needed to confirm water depth restrictions at low tide during low River flow conditions. Observations by others during low flow or low tide indicate that significant intertidal flats are exposed that may preclude boating access to the River. Other restrictions to accommodating public use within this area apply. Specifically, vehicle egress and access at the site would likely be complicated during summer weekends when vehicles queue to access the Connecticut River ferry. It is unknown if the terms of the conservation easement that apply to this parcel would preclude developing a parking area and boat launch in this area. The easement should be carefully reviewed and discussed with the grantee before proceeding with plans to construct parking and water access facilities at this site.

Recreation Planner Comments

Otfinoski Parcel

A 4.6 acre wooded riverfront parcel. It is Chester's desire to have additional public access on the Connecticut River. This tract could be an attractive small park offering picnicking, fishing, canoe/kayak potential with perhaps a 6-10 car parking lot. However, to avoid becoming a likely management problem (nocturnal party spot, etc.) a gate would be needed together with guaranteed nightly locking by police.

Issues to be considered include:

- Likely high cost of the property.
- Legal status of driveway over Parker's Point Road neighbor. Are there constraints on type/volume/purpose of the right-of-way? Does the driveway encroach at all on abutting DEP property leased by the Valley Railroad Co?
- Traffic capacity of Parker's Point Road and likely reaction of neighbors.

Myers Lane

Dona & Bonanomi Parcel

A 23 acre riverfront floodplain tract consists of wetland woodland adjacent to a rough hayfield. It is bordered by wetlands to the west and is split by a channel +/- 200 feet south of Ferry Road draining the wetland to the west. A conservation restriction (plus wetland regulation) prevents development. Property is accessed from the north off of Ferry Road (paved road in good condition) and from the south off of Dock Road (periodically flooded).

Acquisition of the property would foster Gateway area protection goals plus provide some public access, especially in the roughly acre-sited section north of the aforementioned channel. A small parking lot adjacent to the ferry is recommended, servicing bank fishermen and those launching canoes or kayaks. This public location would e easy to patrol and have limited nuisance potential.

South of the channel the main management goal should be to maintain the open meadow character through annual mowing both from aesthetic and grassland bird habitat standpoints. Perhaps the overgrown Dock Road right-of-way to the river could be cleared for pedestrian access for fishermen depending on who owns it. To service such activity, a small fenced parking lot at the extreme southern end of the Dona & Bonanomi Parcel could be provided.

Planning Considerations

The circumstance under review centers on the fact that two separate Connecticut River properties have been offered to the Town of Chester for purchase. The Town – the Chester Board of Selectmen – has turned over the duties of investigating the ecological significance of the properties to the Chester Conservation Commission who have in turn requested this investigation by the Environmental Review Team. Both parcels are vacant and are characterized by conditions which would make them ideal for both public access to the river, a goal of interest to the Town, and preservation of open space. Being on the riverfront, both properties are located within the Connecticut River Gateway Conservation Zone and are therefore of interest to the Connecticut River Gateway Commission.

Background

The 26 acre property known as "Dona & Bonanomi" is located immediately south of the Chester Ferry launch and has a river frontage of slightly over 2,000 linear feet. The property has road frontage on both Route 148 to the north and Dock Road to the south. With the exception of a small portion of the parcel at the north end of the site immediately adjacent to the ferry landing, the property is characterized by a southerly increasing buffer of trees and scrub vegetation at the riverfront which varies from a width of tens of feet at the north to several hundred feet at the southerly boundary. Immediately landward of the area of trees is a long narrow open meadow which is reportedly mowed twice a year. With the exception of the non-treed riverfront area at the north end of the property, any access to the river would have to be accomplished via a path cleared through the vegetated buffer. Access to the property is achieved via Route 148 to the north (the road to the Chester Ferry) and Dock Road to the south. Likely the most challenging aspect of this property is the fact that it is protected by a conservation easement that has been in place since 1985. That easement is currently held by the Connecticut Department of Environmental Protection after transfer from the Connecticut River Gateway Commission. Language in that conservation easement document appears to preclude development of the property.

The second property, known as "Otfinoski", is a smaller parcel located at the northern end of the Chester riverfront adjacent to the Middlesex Yacht Club and is only a fraction of the size and has a fraction of the river frontage of Bonanomi. Unlike Bonanomi, the Otfinoski parcel is not protected by any conservation easements and is therefore considered developable for residential purposes. In fact, a proposal for a residential structure of significant size came before the Chester Planning & Zoning Commission in 2006 (that application, presented by the Otfinoski's, was unsuccessful and has ultimately resulted in the desire of the Otfinoski's to sell the property). The parcel is relatively flat at the riverfront, includes numerous large deciduous trees and does not include a vegetated buffer like the Bonanomi parcel. An upland portion of the property is occupied by inland wetlands while much of the riverfront area is grassed and quite open. The open nature of the riverfront on this property makes river access much easier and less environmentally disruptive. In addition, a small cove exists off the river in a way that provides an ideal setting for a small access dock that would be protected from open river conditions and the boat wakes that can be significant in this location.

As with the Bonanomi property, the Otfinoski property is also encumbered by an easement, although in this instance an access easement. Specifically, access to the parcel is gained through the crossing of an easement on the adjacent residential parcel.

Factors for Consideration

In that the Town has expressed interest in the ownership of the two properties for various reasons including the provision for additional public access to the Connecticut River, several factors will impact the ability of the Town to achieve their goals. Those factors are as follows:

1. **Easements**

   Although the potential market value of the Otfinoski parcel may well be significant and prohibitive, it seems likely that the most significant question that may arise with acquisition of either property would be one of easements and what such easements will or won't allow. With the Bonanomi property, easement language precludes the *grantor* from developing the property in any way. Specifically, document language states that the "[g]*rantor shall not place or construct upon the land hereinbefore described any new structures, buildings, improvements or developments of any kind*" (Appendix A). The ***grantee*** is permitted ingress and egress, the marking of boundaries and the ability to remove unauthorized structures or improvements. What is *not* clear is whether or not the grantee would have the right to use the property in any way they choose. Although this scenario doesn't seem likely, a legal interpretation of the easement would be necessary, and the final legal authority on the easement would be the Attorney General of the State of Connecticut. If the Town desires to construct a small parking lot and clear an access ramp to accomplish riverfront access and small craft launching, the legal interpretation of the easement and what it will and won't allow will be of paramount importance to the Town prior to any attempt at acquisition.

   With the Otfinoski property, given that the property is intended for public use, investigation of the access easement and the intention/concerns of the grantor would be required. If the grantor – the adjacent neighbor over whose property the access is gained - is not willing to allow or is concerned about the public use of the adjacent property and the activity that may result, it seems they may have the control to say that they won't amend the access easement that currently exists for the Otfinoski property. As a result, prior to any effort to acquire the property, a legal interpretation of the access easement and discussions with the adjacent property owners may be required.

   As a note, the Connecticut River Gateway Commission – the organization to whom the Bonanomi easement was originally granted in 1985 – expresses general concern over changing the language of established easements when such changes are intended

to relax preservation or conservation restrictions. Although public access to the river may be appropriate and is generally supported by the Gateway Commission, they have concern that relaxation of conservation restrictions can establish a precedent that may lead to reluctance on the part of potential benefactors who desire and expect such restrictions to remain in effect in perpetuity. If circumstances should lead to the potential acquisition of the Bonanomi property, it is requested that the Gateway Commission be consulted for the purpose of discussion of easement modification.

2. River Access

From the standpoint of river access, the Otfinoski property has several pluses that would make that site ideal for riverfront access. Despite its location in close proximity to the Parker's Point public access point several lots to the south, the site would be ideal for public use because of its relatively flat nature, especially at the riverfront. The large trees without a significant vegetated buffer would likely create conditions for a shaded picnic area with significant water front area that can be used for fishing or just observation. As discussed, the small isolated cove would be an ideal location for the construction of a small floating dock where paddlecraft could be launched in a quiet water area off the river. The structure could be a combination launch site and fishing structure.

The Bonanomi property would be more of a challenge in terms of river access. In addition to the question of what the conservation easement will and won't allow, the configuration of the property is such that there is only one area to the north where access could be gained without significant disruption of the riverfront riparian buffer. The advantageous aspect of the likely access being to the north is that the area would be directly accessible from Route 148 as it approaches the ferry landing. The small open area with little or no vegetated buffer would be the ideal location for a small gravel parking lot and access ramp. The challenge of this access location, however, is that traffic waiting to board the Chester Ferry can at times back up significantly from the landing. Vehicles trying to make their way to the access point may get caught in such queues. It seems unlikely that the southern 5/6 of the property – the area with the treed riparian buffer – would be ideal for any access given the disruption that may be necessary to gain access through that buffer. In addition, the greater the impact of gaining access through the vegetated buffer would likely mean more reluctance on the part of the holder of the easement to relax any restrictions that exist, if there's a willingness to relax restrictions at all.

3. Preservation of Open Space

Although it seems that preservation of open space is a desirable, but not highest, priority purpose for the acquisition of these properties, preservation of the two properties presents two different open space scenarios. It seems evident that the Bonanomi parcel, whether acquired or not, will remain in a predominantly if not totally natural state. If it is worked out that the Town is able to construct an access point, the significant remaining portion will likely continue to be protected by the conservation easement which currently exists. The Otfinoski property, on the other

hand, is a viable and desirable development site and would appear to be in significant risk of residential development. Its value as a park setting would seem to be significant and provide significant access opportunities. Although the Parker's Point public access point is close by, it is small in comparison and is primarily occupied by a parking lot. Again, the downside of the acquisition of the Otfinoski property is one of questionable access and the potentially significant price tag that the property may carry because of its development desirability.

4. **Purchase Price**

Although only little is known about the purchase price of the two properties by the reviewer, it is suspected that the cost of the Otfinoski property will be significantly higher than the Bonanomi property as a result of the fact that a conservation easement doesn't exist on the former. As a developable piece of residential land in this highly desirable section of the lower Connecticut River valley, the owners will likely be able to ask and receive a significant amount. Although concessions may be made for the town, it's unlikely that the property owner will sacrifice too much value. As for the Bonanomi property, the potential limitations of its use will likely mean that the asking price is much lower.

Summary

Although many considerations enter into a decision to purchase properties for public use, it would appear that (1) if price were not a consideration (which it of course is), (2) the primary purpose of the acquisition would be for the purpose of improved public access to the river, and (3) there are no vehicular access concerns with respect to its public use, the Otfinoski property would be the highest priority acquisition while the Bonanomi property would be lower. Again, the unknowns with respect to the limitations of the easements on both properties will be a significant factor into whether or not the Town will want to pursue acquisition of either property.

Appendix

THE CONNECTICUT RIVER GATEWAY CONSERVATION ZONE

GRANT OF SCENIC EASEMENT AND DEVELOPMENT RIGHTS

THIS INDENTURE, made this 22nd day of August, 1985, by Louis T. Bonanomi and the Town of Chester, County of Middlesex and State of Connecticut, hereafter "GRANTOR", and the STATE OF CONNECTICUT, acting herein by Stanley J. Pac, its COMMISSIONER OF ENVIRONMENTAL PROTECTION, duly authorized under the provisions of Section 22a-25 and 25-102f of the General Statutes of Connecticut, Revised to 1985, as amended, hereafter "GRANTEE",

W I T N E S S E T H:

WHEREAS, it is found that the lower Connecticut River and the towns abutting the river posses unique scenic, ecological, scientific and historic value contributing to the public enjoyment, inspiration and scientific study; and

WHEREAS, it is in the public interest to preserve such values and to prevent deterioration of the natural and traditional river scene for the enjoyment of present and future generations of the State of Connecticut; and

WHEREAS, the Grantor agrees with the objectives and purposes set forth above and in Section 25-102a, et seq. of the General Statutes of Connecticut, Revised to 1985, as amended, and desires to convey certain rights and easements in furtherance thereof; and

WHEREAS, the Grantee is desirous of carrying out the purposes and objectives of said Section 25-102a, et seq. of the General Statutes of Connecticut, Revised to 1985, as amended, concerning the preservation of the lower Connecticut River area, in connection with which the Grantee desires to secure certain easements and right in, over, under and upon the hereinafter described land of the Grantor.

The contractor agrees and warrants that in the performance of this contract he will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, sex, mental retardation or physical disability, including, but not limited to, blindness, unless it is shown by such contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the state of Connecticut. The contractor agrees and

warrants that he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such project. The contractor further agrees to provide the commission on human rights and opportunities with such information requested by the commission concerning the employment practices and procedures of the contractors as relate to the provisions of this section and section 46a-56. For the purposes of this section, "minority business enterprise" means any subcontractor or supplier of materials fifty-one per cent or more of the capital stock, if any, or assets of which is owned by a person or persons; (1) Who are active in the daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of section 32-9n.

NOW, THEREFORE, for and in consideration of the sum of One Dollar ($1.00) and other good and valuable consideration, the receipt whereof if hereby acknowledged, the Grantor does hereby grant, bargain and convey unto the Grantee, its successors and assigns, a perpetual scenic easement in, over, under and upon all that certain piece or parcel of land located in the Town of Chester, County of Middlesex and State of Connecticut, and the Grantor's right to improve such property, including the right to change the terrain, remove natural vegetation and construct buildings thereon; such property being bounded and described as follows:

Northerly: By the Ferry Road;
Easterly : By the Connecticut River;
Southerly: By the Chester Dock Road
Westerly : By Zipper's Creek or land formerly of William Moravec and Marie Moravec, more lately of Stanley M. Warner;
Southerly
Again : By land formerly of said William Moravec and Marie Moravec, more lately of said Stanley M. Warner;
Westerly
Again : In part by land formerly of Agnes F. Warner more lately of said Stanley M. Warner, and in part by land of the New York, New Haven & Hartford Railroad Company.

Said parcel contains 46.50± acres, more or less and is shown on a map entitled: "Land of Louis T. Bonanomi, Ferry & Dock Roads, Chester, Conn., Scale 1" = 100', Dated April 4, 1985, Richard W. Gates, Land Surveyor, Main Street, Centerbrook, Conn.

which map is on file in the Office of the Town Clerk of Chester.

Being (a portion of) the property described in a deed from David W. King to Louis T. Bonanomi dated April 11, 1979, and recorded in Chester Land Records, Volume 49, Page 440.

AND ALSO, I, the said Grantor, do for myself and my heirs, executors, administrators and assigns, covenant with the said Grantee, its successors and assigns, that at and until the ensealing of these presents, I am well seized of the premises, as good indefeasible estate in FEE SIMPLE; and have good right to bargain and sell the same in manner

and form as is above written, and that the same is free from all encumbrances whatsoever.

The grants, covenants and stipulations hereon shall extend to and are binding upon the respective heirs, executors, administrators, successors and assigns hereto.

1. The Grantor shall not place or construct upon the land hereinbefore described any new structures, buildings, improvements or developments of any kind.

2. The Grantor shall not use the land hereinbefore described for mining, quarrying, or sand, gravel, or topsoil removal operations.

3. The Grantor reserves the right to harvest timber or trees on the land hereinbefore described in accordance with forest management practices and shall continue to use the land for agriculture purposes.

4. The Grantor shall not place, dump or deposit the trash or unsightly material on the land hereinbefore described.

5. The Grantor shall not erect or permit to be erected any sign, billboard, or outdoor advertisement on the land hereinbefore described.

6. The Grantor reserves the right to perform ordinary maintenance on or to the landscape, shrubbery and trees; to perform ordinary maintenance on or to replace or rebuild any existing structures, buildings, or developments in substantially the same form and location if the same be deteriorated by fair wear and tear or if the same are damaged or destroyed by fire, storm or other casualty on the land hereinbefore described.

7. The Grantor reserves the right to use said land hereinbefore described or any part thereof at any time and for any purpose, provided such use does not interfere with the full enjoyment by the Grantee of the scenic easement and development rights herein conveyed. The Grantor further reserves the right for himself, his heirs and assigns to farm, hunt and trap on the property and the right for himself, his heirs and assigns to launch boats from his end of the Dock Road.

8. The Grantee, its employees, agents and contractors shall have the right of ingress and egress to and from the land hereinbefore described via other contiguous land of the Grantor.

9. The Grantee shall have the right to post or mark boundaries

of the land hereinbefore described and to mark the route of ingress and egress.

10. The Grantee, its employees, agents and contractors, shall have the right to enter upon and across the land hereinbefore described for inspection purposes; together with such right the Grantee may, at its election, cause the removal from the land hereinbefore described any unauthorization structures, buildings, improvements or developments, signs, billboards or outdoor advertisement, accumulation of trash or unsightly material, or dead, dying or diseased understory or overstory growth.

TO HAVE AND TO HOLD the above granted easement unto the said Grantee, its successors and assigns, forever.

IN WITNESS WHEREOF, the parties hereto have executed this instrument in their respective names and have affixed their respective seals.

Signed, Sealed and Delivered
in the Presence of:

Arthur F. Carter

Louis Bonanomi (L.S.)
Louis T. Bonanomi

Elizabeth A. Varhue
Elizabeth A. Varhue

Mary T. Corcoran
Mary T. Corcoran

STATE OF CONNECTICUT,
DEPARTMENT OF ENVIRONMENTAL PROTECTION

By Stanley J. Pac (L.S.)
Stanley J. Pac
Its Commissioner

Elizabeth A. Varhue
Elizabeth A. Varhue

STATE OF CONNECTICUT)
: ss. GUILFORD
COUNTY OF NEW HAVEN)

The foregoing innstrument was acknowledged before me this 21st day of August, 1985, by Louis T. Bonanomi.

Arthur F. Carter
Arthur F. Carter ~~Notary Public~~
Commissioner of the Superior Court

My Commission Expires:

STATE OF CONNECTICUT)
: ss. Hartford
COUNTY OF HARTFORD)

The foregoing instrument was acknowledged before me this 22nd day of August, 1985, by STANLEY J. PAC, COMMISSIONER OF ENVIRONMENTAL PROTECTION, STATE OF CONNECTICUT.

Mary T. Corcoran
Notary Public

My Commission Expires:
March 31, 1989

APPROVED BY
CONNECTICUT RIVER GATEWAY COMMISSION

Chairman

Date: 8-22-85

APPROVED AS TO FORM,

Deputy Attorney General

Date: NOV 27 1985

ABOUT THE TEAM

The Eastern Connecticut Environmental Review Team (ERT) is a group of professionals in environmental fields drawn together from a variety of federal, state and regional agencies. Specialists on the Team include geologists, biologists, foresters, soil specialists, engineers and planners. The ERT operates with state funding under the supervision of the Eastern Connecticut Resource Conservation and Development (RC&D) Area — an 86 town region.

The services of the Team are available as a public service at no cost to Connecticut towns.

PURPOSE OF THE TEAM

The Environmental Review Team is available to help towns and developers in the review of sites proposed for major land use activities. To date, the ERT has been involved in reviewing a wide range of projects including subdivisions, landfills, commercial and industrial developments, sand and gravel excavations, active adult, recreation/open space projects, watershed studies and resource inventories.

Reviews are conducted in the interest of providing information and analysis that will assist towns and developers in environmentally sound decision-making. This is done through identifying the natural resource base of the project site and highlighting opportunities and limitations for the proposed land use.

REQUESTING A REVIEW

Environmental reviews may be requested by the chief elected official of a municipality and/or the chairman of town commissions such as planning and zoning, conservation, inland wetlands, parks and recreation or economic development. Requests should be directed to the chairman of your local Conservation District and the ERT Coordinator. A request form should be completely filled out and should include the required materials. When this request is reviewed by the local Conservation District and approved by the ERT Subcommittee, the Team will undertake the review on a priority basis.

For additional information and request forms regarding the Environmental Review Team please contact the ERT Coordinator: 860-345-3977, Eastern Connecticut RC&D Area, P.O. Box 70, Haddam, Connecticut 06438, e-mail: ctert@comcast.net