



PLANNING  
COMMISSION  
EXHIBIT #126

Connecticut Fund for the Environment

Ms. Christine Nelson, AICP  
Town Planner and Director of Land Use  
302 Main Street  
Old Saybrook, CT 06475-1741

Dear Ms. Nelson,

Attached, you will find several GIS maps that illustrate the natural resource impacts of several different development layouts on the property known as "the Preserve." To determine the relative scale of the ecological impacts of the differing proposals, the site in its undeveloped natural state was assigned a relative ecological inventory score of 100%. The ecological impact of various development designs was then evaluated with respect to three natural resource criteria drawn from Old Saybrook's Open Space Regulations and Connecticut statutes: Forest and Habitat Fragmentation, Water Resources, and Vernal Pools and Vernal Pool Habitat. Each proposal is scored for one or more of these natural resource values. The higher the resulting score, the better the proposal from an environmental perspective. Those calculations, and how they were derived, are illustrated in the accompanying sheets.

As is evident from the attached materials the applicant's development proposal will have a far greater negative impact on these natural resources than the alternative design proposed by the intervening party, Connecticut Fund for the Environment. This alternative was designed with several key concepts, beyond reducing natural resource impacts, in mind.<sup>1</sup> First, we used the applicant's own numbers regarding the number of units to be sited on the property (roughly 250). While we agree with the town of Old Saybrook's consultants that the number of units proposed by the applicant is unrealistically high, we wanted to demonstrate that even in the worst case scenario, i.e. using the applicant's proposed numbers, a prudent and feasible alternative that is more

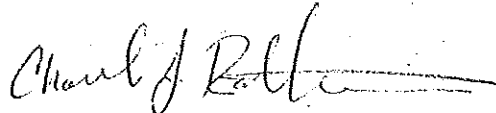
<sup>1</sup> In designing the alternative, we also had input from George Logan of Rema Ecological Services.

ecologically sensitive responsible exists. Second, we designed the alternative bearing in mind the town's requirements for multiple roadway access points and cul-de-sac limitations. Finally, while the prudent and feasible alternative identified by CFE has less environmental impact than the applicant's proposal, areas identified for development in the intervener's prudent and feasible alternative correspond generally to areas already identified as suitable for development by the applicant, although the prudent and feasible alternative has a much smaller footprint.

We anticipate that the applicant will complain about the removal of the golf course from the proposed alternative design. Specifically, we have heard several times during the course of these proceedings that the applicant believes that removing the golf course component would diminish its return on the project. The Commission should be aware, however, that neither your own zoning regulations nor the state Environmental Protection Act are designed to guarantee an applicant the greatest possible economic yield. Indeed, at its most fundamental level, zoning law recognizes that economic maximization is inconsistent with responsible development and planning. Every regulation necessarily limits the scope of what an applicant might otherwise choose to do if guided solely by self-interest and profit maximization. It may be that the applicant has made a bad investment decision; it is certainly not the obligation of this Commission to protect the applicant from the effects of its own folly.

In sum, these materials demonstrate that the application before you is reasonably likely to unreasonably pollute, impair or destroy the public trust in the natural resources of the state and that there is a prudent and feasible alternative consistent with the reasonable requirements of the public health, safety and welfare.<sup>2</sup>

Very Truly Yours,



Charles J. Rothenberger  
Legal Fellow

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<sup>2</sup> For further information, I refer you to the letter of Carolyn Longstreth, dated January 5, 2005, and the reports submitted by, inter alia, George Logan of Rema Ecological Services.

## Undisturbed Area

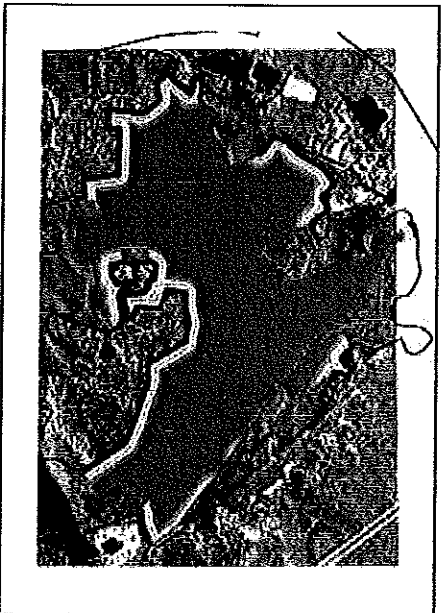
Measures how much of the parcel area is not impacted by development (homes, roads, lawns, driveways, cleared areas)



Value	Description	Area Measured	Weighted Score
1	Undeveloped area	983	983
0	Developed area	0	0
Score		983	
Base Case		983	
		=	<b>100%</b>

## Unfragmented Forest

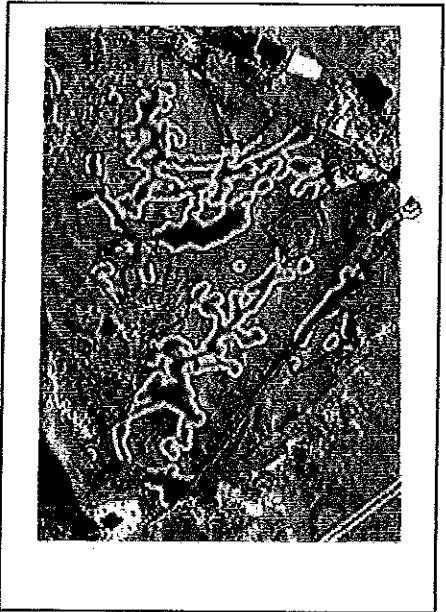
Measures how much of the parcel remains as forest and weights it by how remote the forest areas are from human activity (roads, homes, etc.)



Value	Description	Area Measured	Weighted Score
5	Forest areas 400 + feet from human activity	754	3,770
4	Forest areas 300 - 400 feet from human activity	56	224
3	Forest areas 200 to 300 feet from human activity	57	171
2	Forest areas 100 to 200 feet from human activity	57	114
1	Forest areas 0 to 100 feet from human activity	59	59
0	Developed area	0	0
Score		983	4,338
Base Case		4,338	
		=	<b>100%</b>

## Water Resources

Measures how much of the wetlands, watercourses, and buffer areas are not impacted by development (homes, roads, lawns, cleared areas) and weights it by proximity to the water resource

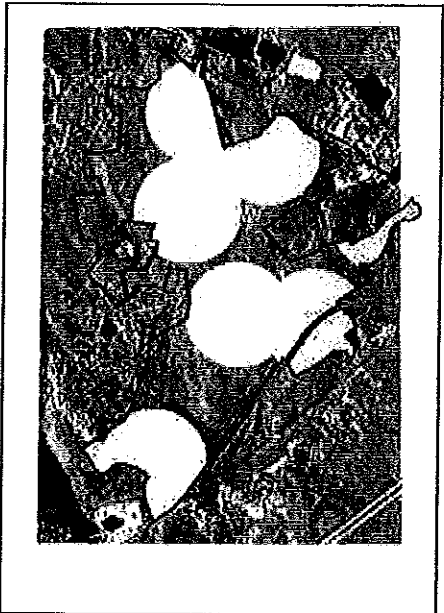


Value	Description	Area Measured	Weighted Score
5	Undeveloped wetland or watercourse	121	605
4	Undeveloped land within 0 to 50 feet of a wetland or watercourse	124	496
3	Undeveloped land within 50 to 100 feet of a wetland or watercourse	117	351
2	Undeveloped land within 100 to 150 feet of a wetland or watercourse	107	214
1	Undeveloped land within 150 to 200 feet of a wetland or watercourse	93	93
0	Developed land within 200 feet of a wetland or watercourse or areas located 200 + feet from wetland / watercourse	421	0
		<b>983</b>	<b>1,759</b>

$$\frac{\text{Score}}{\text{Base Case}} = \frac{1,759}{1,759} = \boxed{100\%}$$

## Natural Diversity

Measures how much of the Natural Diversity Database areas identified by DEP are not impacted by development (homes, roads, lawns, cleared areas)

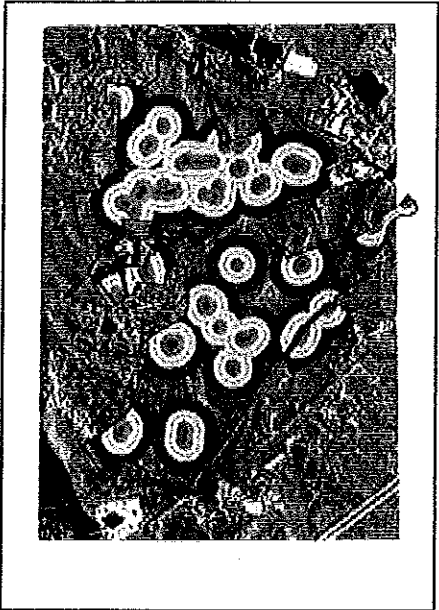


Value	Description	Area Measured	Weighted Score
1	Undeveloped land within NDD area	620	620
0	Developed land within NDD area or land outside NDD area	363	0
		<b>983</b>	<b>620</b>
		<b>620</b>	<b>620</b>

$$\frac{\text{Score}}{\text{Base Case}} = \frac{620}{620} = \boxed{100\%}$$

# Vernal Pool Habitat

Measures how much of the vernal pools and surrounding habitat areas are not impacted by development (homes, roads, lawns, cleared areas) and weights it by proximity to the vernal pool

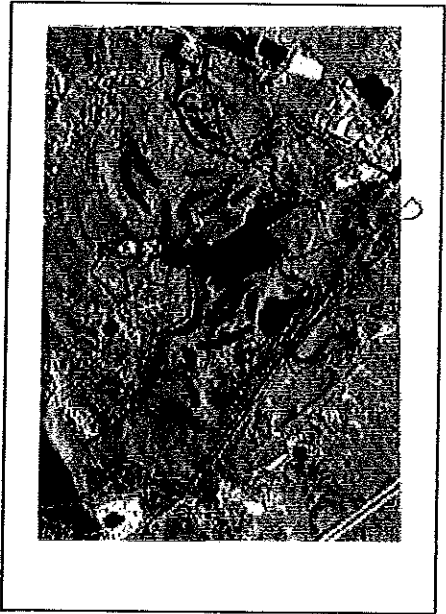


Value	Description	Area Measured	Weighted Score
5	Vernal pool	15	75
4	Undeveloped land within 0 to 150 feet from a vernal pool	103	412
3	Undeveloped land within 150 to 300 feet from a vernal pool	158	474
2	Undeveloped land within 300 to 450 feet from a vernal pool	168	336
1	Undeveloped land within 450 to 750 feet from a vernal pool	160	160
0	Developed land within 750 feet of a vernal pool or areas located 200 + feet from a vernal pool	379	0
		<b>983</b>	<b>1,457</b>

$$\frac{\text{Score}}{\text{Base Case}} = \frac{1,572}{1,572} = \boxed{100\%}$$

## Undisturbed Area

Measures how much of the parcel area is not impacted by development (homes, roads, lawns, driveways, cleared areas)

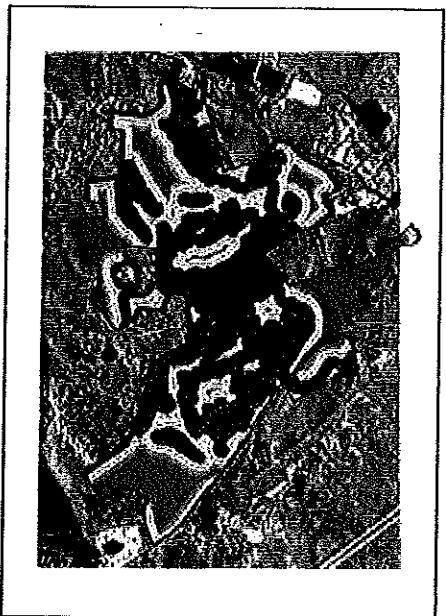


Value	Description	Area Measured	Weighted Score
1	Undeveloped area	718	718
0	Developed area	265	0
		983	718

$$\frac{\text{Score}}{\text{Base Case}} = \frac{718}{983} = \boxed{73\%}$$

## Unfragmented Forest

Measures how much of the parcel remains as forest and weights it by how remote the forest areas are from human activity (roads, homes, etc.)



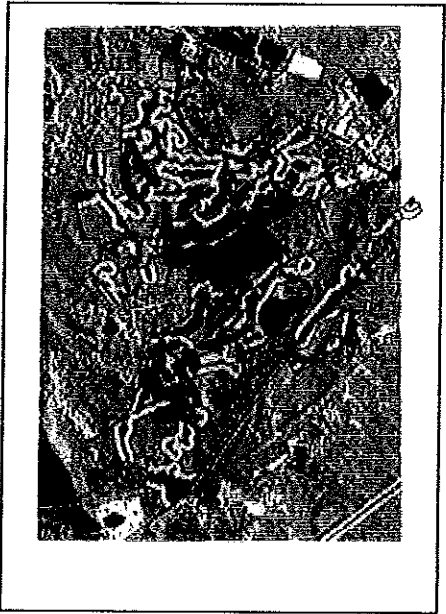
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Value	Description	Area Measured	Weighted Score
5	Forest areas 400 + feet from human activity	154	755
4	Forest areas 300 - 400 feet from human activity	56	224
3	Forest areas 200 to 300 feet from human activity	88	264
2	Forest areas 100 to 200 feet from human activity	152	304
1	Forest areas 0 to 100 feet from human activity	271	271
0	Developed area	265	0
		983	1818

$$\frac{\text{Score}}{\text{Base Case}} = \frac{1,818}{4,338} = \boxed{42\%}$$

## Water Resources

Measures how much of the wetlands, watercourses, and buffer areas are not impacted by development (homes, roads, lawns, cleared areas) and weights it by proximity to the water resource



Value	Description	Area Measured	Weighted Score
5	Undeveloped wetland or watercourse	114	570
4	Undeveloped land within 0 to 50 feet of a wetland or watercourse	103	412
3	Undeveloped land within 50 to 100 feet of a wetland or watercourse	88	264
2	Undeveloped land within 100 to 150 feet of a wetland or watercourse	74	148
1	Undeveloped land within 150 to 200 feet of a wetland or watercourse	63	63
0	Developed land within 200 feet of a wetland or watercourse or areas located 200 + feet from wetland / watercourse	541	0
		<b>983</b>	<b>1,457</b>

$$\text{Score} = \frac{1,457}{1,759} = \boxed{83\%}$$

Base Case

## Natural Diversity

Measures how much of the Natural Diversity Database areas identified by DEP are not impacted by development (homes, roads, lawns, cleared areas)



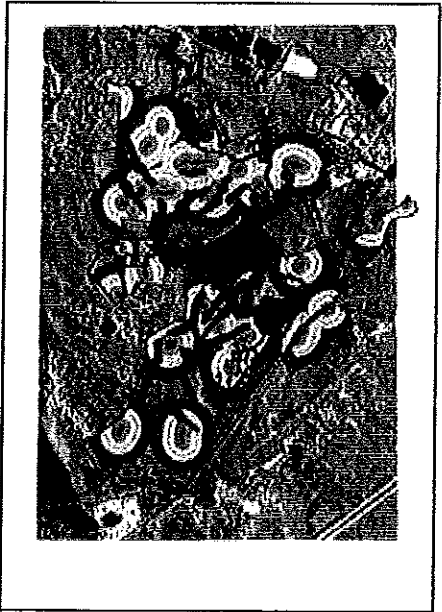
Value	Description	Area Measured	Weighted Score
1	Undeveloped land within NDD area	451	451
0	Developed land within NDD area or land outside NDD area	532	0
		<b>983</b>	<b>451</b>

$$\text{Score} = \frac{451}{620} = \boxed{73\%}$$

Base Case

# Vernal Pool Habitat

Measures how much of the vernal pools and surrounding habitat areas are not impacted by development (homes, roads, lawns, cleared areas) and weights it by proximity to the vernal pool



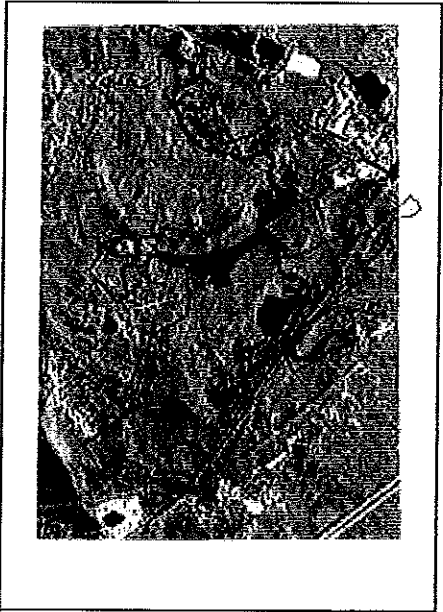
Value	Description	Area Measured	Weighted Score
5	Vernal pool	15	75
4	Undeveloped land within 0 to 150 feet from a vernal pool	87	348
3	Undeveloped land within 150 to 300 feet from a vernal pool	114	342
2	Undeveloped land within 300 to 450 feet from a vernal pool	121	242
1	Undeveloped land within 450 to 750 feet from a vernal pool	207	207
0	Developed land within 750 feet of a vernal pool or areas located 200 + feet from a vernal pool	439	0
		983	1,214

$$\frac{\text{Score}}{\text{Base Case}} = \frac{1,214}{1,572} = \boxed{77\%}$$



## Undisturbed Area

Measures how much of the parcel area is not impacted by development (homes, roads, lawns, driveways, cleared areas)



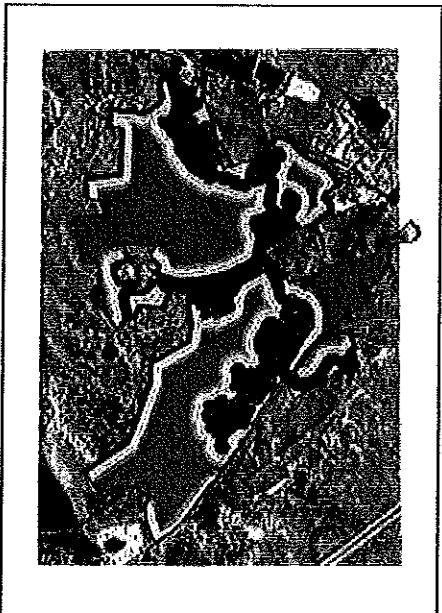
Value	Description	Area Measured	Weighted Score
1	Undeveloped area	847	847
0	Developed area	136	0
		983	847

Score	=	847	=	<b>86%</b>
Base Case	=	983	=	

## Unfragmented Forest

Measures how much of the parcel remains as forest and weights it by how remote the forest areas are from human activity (roads, homes, etc.)



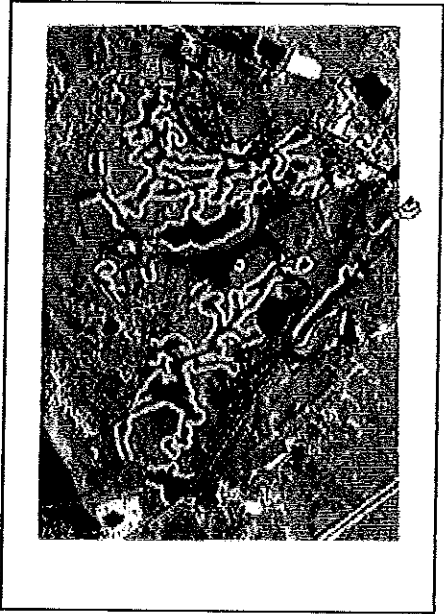
Value	Description	Area Measured	Weighted Score
5	Forest areas 400 + feet from human activity	368	1,840
4	Forest areas 300 - 400 feet from human activity	83	332
3	Forest areas 200 to 300 feet from human activity	96	288
2	Forest areas 100 to 200 feet from human activity	119	238
1	Forest areas 0 to 100 feet from human activity	181	181
0	Developed area	136	0
		983	2,879

Score	=	2,879	=	<b>66%</b>
Base Case	=	4,338	=	

## Water Resources

Measures how much of the wetlands, watercourses, and buffer areas are not impacted by development (homes, roads, lawns, cleared areas) and weights it by proximity to the water resource



Value	Description	Area Measured	Weighted Score
5	Undeveloped wetland or watercourse	121	605
4	Undeveloped land within 0 to 50 feet of a wetland or watercourse	122	488
3	Undeveloped land within 50 to 100 feet of a wetland or watercourse	112	336
2	Undeveloped land within 100 to 150 feet of a wetland or watercourse	98	196
1	Undeveloped land within 150 to 200 feet of a wetland or watercourse	83	83
0	Developed land within 200 feet of a wetland or watercourse or areas located 200 + feet from wetland / watercourse	447	0
		<b>983</b>	<b>1,708</b>

$$\frac{\text{Score}}{\text{Base Case}} = \frac{1,708}{1,759} = \boxed{97\%}$$

## Natural Diversity

Measures how much of the Natural Diversity Database areas identified by DEP are not impacted by development (homes, roads, lawns, cleared areas)

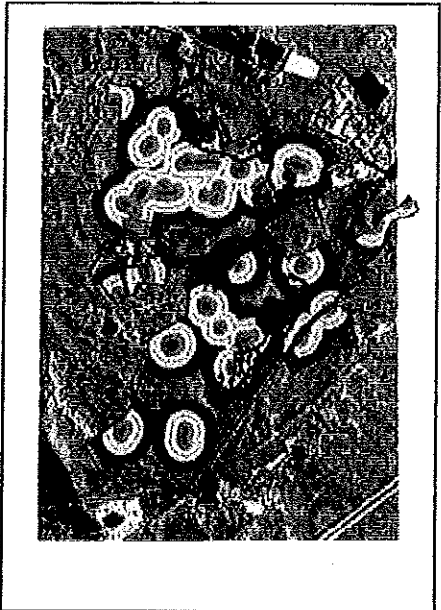


Value	Description	Area Measured	Weighted Score
1	Undeveloped land within NDD area	532	532
0	Developed land within NDD area or land outside NDD area	451	0
		<b>983</b>	<b>532</b>

$$\frac{\text{Score}}{\text{Base Case}} = \frac{532}{620} = \boxed{86\%}$$

# Vernal Pool Habitat

Measures how much of the vernal pools and surrounding habitat areas are not impacted by development (homes, roads, lawns, cleared areas) and weights it by proximity to the vernal pool



Value	Description	Area Measured	Weighted Score
5	Vernal pool	15	75
4	Undeveloped land within 0 to 150 feet from a vernal pool	100	400
3	Undeveloped land within 150 to 300 feet from a vernal pool	144	432
2	Undeveloped land within 300 to 450 feet from a vernal pool	144	288
1	Undeveloped land within 450 to 750 feet from a vernal pool	248	248
0	Developed land within 750 feet of a vernal pool or areas located 200 + feet from a vernal pool	332	0
		<b>983</b>	<b>1,443</b>

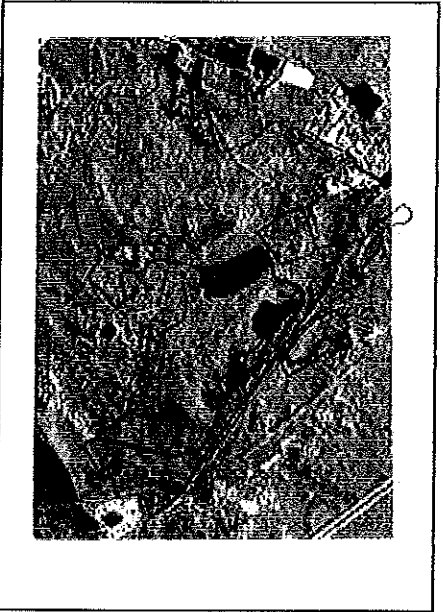
Score = 1,443

Base Case = 1,572

**92%**

## Undisturbed Area

Measures how much of the parcel area is not impacted by development (homes, roads, lawns, driveways, cleared areas)



Value	Description	Area Measured	Weighted Score
1	Undeveloped area	861	861
0	Developed area	122	0
		<b>983</b>	<b>861</b>

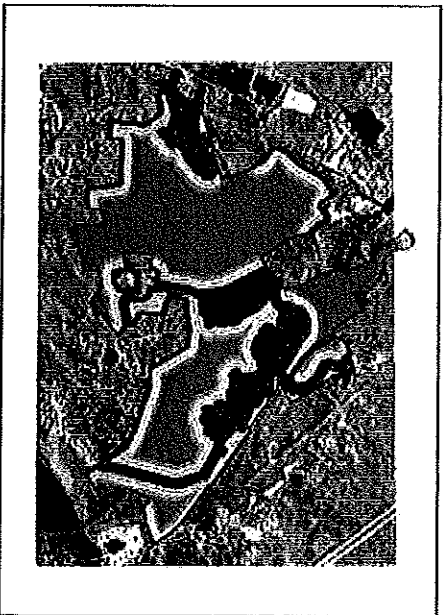
$$\text{Score} = 861$$

$$\text{Base Case} = 983$$

$$\text{Percentage} = \frac{861}{983} = \mathbf{87\%}$$

## Unfragmented Forest

Measures how much of the parcel remains as forest and weights it by how remote the forest areas are from human activity (roads, homes, etc.)



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Value	Description	Area Measured	Weighted Score
5	Forest areas 400 + feet from human activity	409	2,045
4	Forest areas 300 - 400 feet from human activity	79	316
3	Forest areas 200 to 300 feet from human activity	94	282
2	Forest areas 100 to 200 feet from human activity	116	232
1	Forest areas 0 to 100 feet from human activity	163	163
0	Developed area	122	2,876
		<b>983</b>	

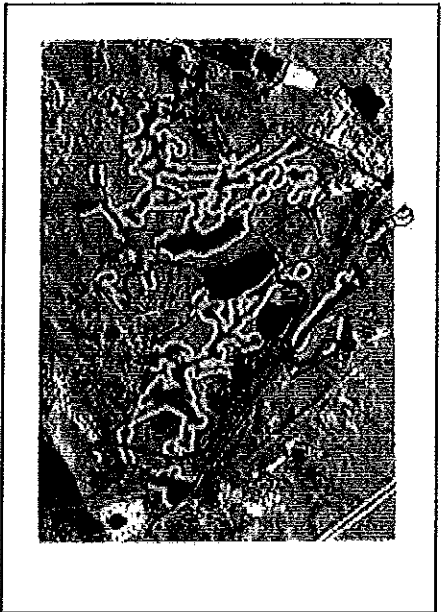
$$\text{Score} = 2,876$$

$$\text{Base Case} = 4,338$$

$$\text{Percentage} = \frac{2,876}{4,338} = \mathbf{66\%}$$

## Water Resources

Measures how much of the wetlands, watercourses, and buffer areas are not impacted by development (homes, roads, lawns, cleared areas) and weights it by proximity to the water resource



Value	Description	Area Measured	Weighted Score
5	Undeveloped wetland or watercourse	120	600
4	Undeveloped land within 0 to 50 feet of a wetland or watercourse	122	488
3	Undeveloped land within 50 to 100 feet of a wetland or watercourse	112	336
2	Undeveloped land within 100 to 150 feet of a wetland or watercourse	99	198
1	Undeveloped land within 150 to 200 feet of a wetland or watercourse	83	83
0	Developed land within 200 feet of a wetland or watercourse or areas located 200 + feet from wetland / watercourse	447	0
		<b>983</b>	<b>1,705</b>

$$\frac{\text{Score}}{\text{Base Case}} = \frac{1,705}{1,759} = \boxed{97\%}$$

## Natural Diversity

Measures how much of the Natural Diversity Database areas identified by DEP are not impacted by development (homes, roads, lawns, cleared areas)

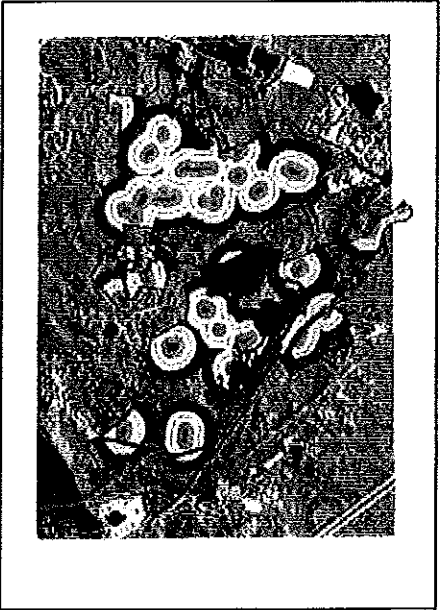


Value	Description	Area Measured	Weighted Score
1	Undeveloped land within NDD area	535	535
0	Developed land within NDD area or land outside NDD area	448	0
		<b>983</b>	<b>535</b>
		<b>535</b>	<b>620</b>

$$\frac{\text{Score}}{\text{Base Case}} = \frac{535}{620} = \boxed{86\%}$$

# Vernal Pool Habitat

Measures how much of the vernal pools and surrounding habitat areas are not impacted by development (homes, roads, lawns, cleared areas) and weights it by proximity to the vernal pool

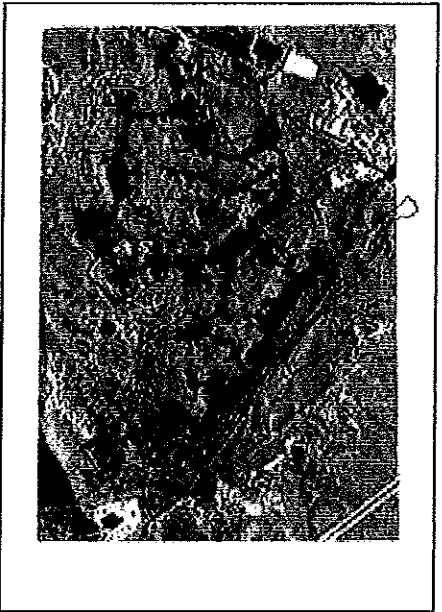


Value	Description	Area Measured	Weighted Score
5	Vernal pool	15	75
4	Undeveloped land within 0 to 150 feet from a vernal pool	98	392
3	Undeveloped land within 150 to 300 feet from a vernal pool	145	435
2	Undeveloped land within 300 to 450 feet from a vernal pool	146	292
1	Undeveloped land within 450 to 750 feet from a vernal pool	253	253
0	Developed land within 750 feet of a vernal pool or areas located 200 + feet from a vernal pool	326	0
		983	1,447

$$\frac{\text{Score}}{\text{Base Case}} = \frac{1,447}{1,572} = \boxed{92\%}$$

## Undisturbed Area

Measures how much of the parcel area is not impacted by development (homes, roads, lawns, driveways, cleared areas)

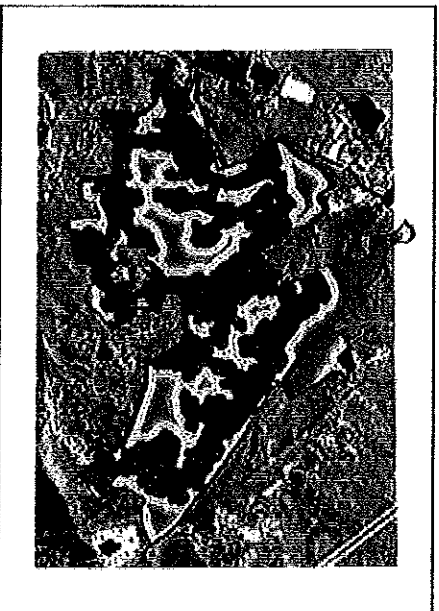


Value	Description	Area Measured	Weighted Score
1	Undeveloped area	661	661
0	Developed area	322	0
		<b>983</b>	<b>661</b>

Score =  $\frac{661}{983} =$  **67%**

## Unfragmented Forest

Measures how much of the parcel remains as forest and weights it by how remote the forest areas are from human activity (roads, homes, etc.)

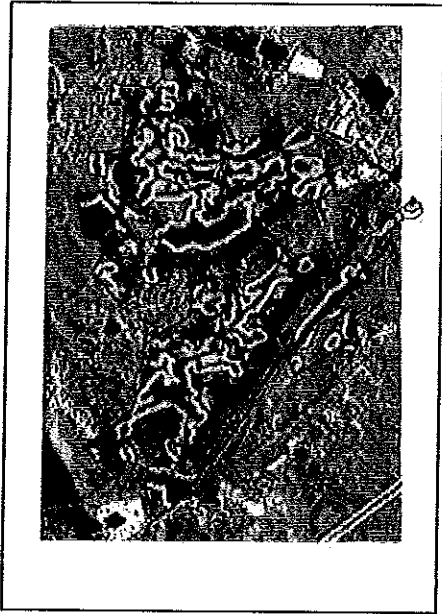


Value	Description	Area Measured	Weighted Score
5	Forest areas 400 + feet from human activity	72	360
4	Forest areas 300 - 400 feet from human activity	52	208
3	Forest areas 200 to 300 feet from human activity	90	270
2	Forest areas 100 to 200 feet from human activity	163	326
1	Forest areas 0 to 100 feet from human activity	284	284
0		322	0
		<b>983</b>	<b>1,448</b>

Score =  $\frac{1,448}{4,338} =$  **33%**

## Water Resources

Measures how much of the wetlands, watercourses, and buffer areas are not impacted by development (homes, roads, lawns, cleared areas) and weights it by proximity to the water resource



Value	Description	Area Measured	Weighted Score
5	Undeveloped wetland or watercourse	119	595
4	Undeveloped land within 0 to 50 feet of a wetland or watercourse	117	468
3	Undeveloped land within 50 to 100 feet of a wetland or watercourse	103	309
2	Undeveloped land within 100 to 150 feet of a wetland or watercourse	78	156
1	Undeveloped land within 150 to 200 feet of a wetland or watercourse	53	53
0	Developed land within 200 feet of a wetland or watercourse or areas located 200 + feet from wetland / watercourse	513	0
		<b>983</b>	<b>1,581</b>

$$\frac{\text{Score}}{\text{Base Case}} = \frac{1,581}{1,759} = \boxed{90\%}$$

## Natural Diversity

Measures how much of the Natural Diversity Database areas identified by DEP are not impacted by development (homes, roads, lawns, cleared areas)



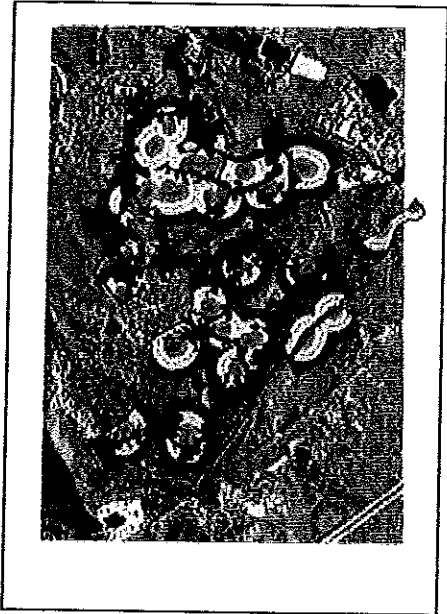
Value	Description	Area Measured	Weighted Score
1	Undeveloped land within NDD area	437	437
0	Developed land within NDD area or land outside NDD area	546	0
		<b>983</b>	<b>437</b>

$$\frac{\text{Score}}{\text{Base Case}} = \frac{437}{620} = \boxed{70\%}$$



# Vernal Pool Habitat

Measures how much of the vernal pools and surrounding habitat areas are not impacted by development (homes, roads, lawns, cleared areas) and weights it by proximity to the vernal pool



Value	Description	Area Measured	Weighted Score
5	Vernal pool	15	75
4	Undeveloped land within 0 to 150 feet from a vernal pool	85	340
3	Undeveloped land within 150 to 300 feet from a vernal pool	99	297
2	Undeveloped land within 300 to 450 feet from a vernal pool	105	210
1	Undeveloped land within 450 to 750 feet from a vernal pool	190	190
0	Developed land within 750 feet of a vernal pool or areas located 200 + feet from a vernal pool	489	0
		<b>983</b>	<b>1,112</b>

$$\frac{\text{Score}}{\text{Base Case}} = \frac{1,112}{1,572} = \boxed{71\%}$$