



✓XC: 1/12/05

Exhibit #139

Connecticut Fund for the Environment

January 6, 2005

Old Saybrook Planning Commission
Town of Old Saybrook
302 Main Street
Old Saybrook, CT 06475

**Re: River Sound Development, LLC
Special Exception Application**

Presentation for public hearing on January 12, 2005

Dear Chairman McIntyre and Commission Members:

The attached printout is a copy of a power point presentation that will be presented to the Old Saybrook Planning Commission at your next meeting on January 12, 2005.

Very Truly Yours,

Charles J. Rothenberger

The Preserve

PUBLIC HEARING

January 12, 2005

Overview

- An Open Space Subdivision must conserve natural resources
- The site is ecologically unique
- The applicant's proposal would damage the ecology of the site
- A feasible, prudent and ecologically-sensitive alternative exists

Measuring Impacts to Natural Diversity at the Landscape Level

George Logan

Landscape Ecology

- Is the study of how landscape structure affects the abundance and distribution of organisms. It looks at:
 - ⌘ “Composition” (e.g. habitat types and size, length of forest edge, density of houses and roads)
 - ⌘ “Configuration” (e.g. juxtaposition of habitat types, measures of habitat fragmentation)

Habitat Fragmentation

- “Habitat fragmentation is the most serious threat to biological diversity and is the primary cause of the present extinction crisis.” (Wilcox and Murphy 1985)
- Biological Diversity or Biodiversity includes genetic diversity, species diversity and ecological diversity

Forest fragmentation

- Is responsible in our region for adverse changes in *natural diversity* and for declines and local extinctions of
 - Birds vulnerable to nest predation and parasitism
 - Small forest wildlife and invertebrates (e.g. moths and butterflies with poor dispersal abilities)
 - Uncommon forest understory plants

Landscape-scale metrics

- Metrics can be measured to evaluate and compare impacts to *natural diversity* using Geographic Information Systems (GIS):
 - Unfragmented, undisturbed habitat remaining
 - Water resource impacts
 - Natural Diversity or “Listed Species” Impacts
 - Vernal Pool Habitat Impacts

The Natural Resources Index

- Scale of 1-100
- Score of 100 represents land in undeveloped state
- Score is a relative composite of
 - ∩ Ecological integrity
 - ∩ Environmental impact



Green-fringed orchid

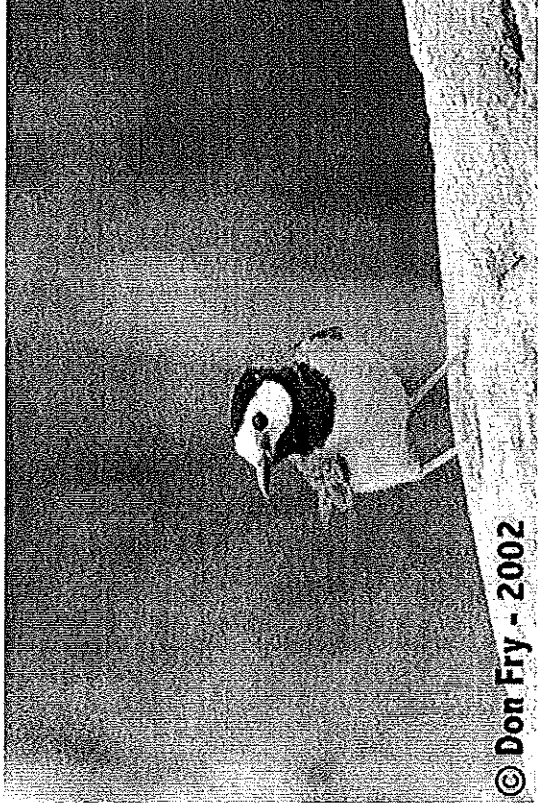
Natural Resources on the Preserve



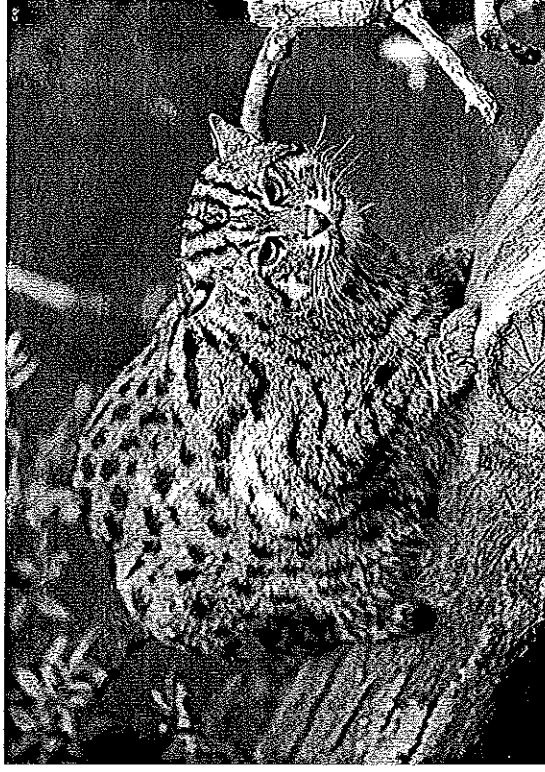
- Large intact forest--Index: 100
- Buffer shown in 100' increments to 400'

Forest Resources

- Area-sensitive species: worm-eating warbler, hooded warbler, scarlet tanager, bobcat



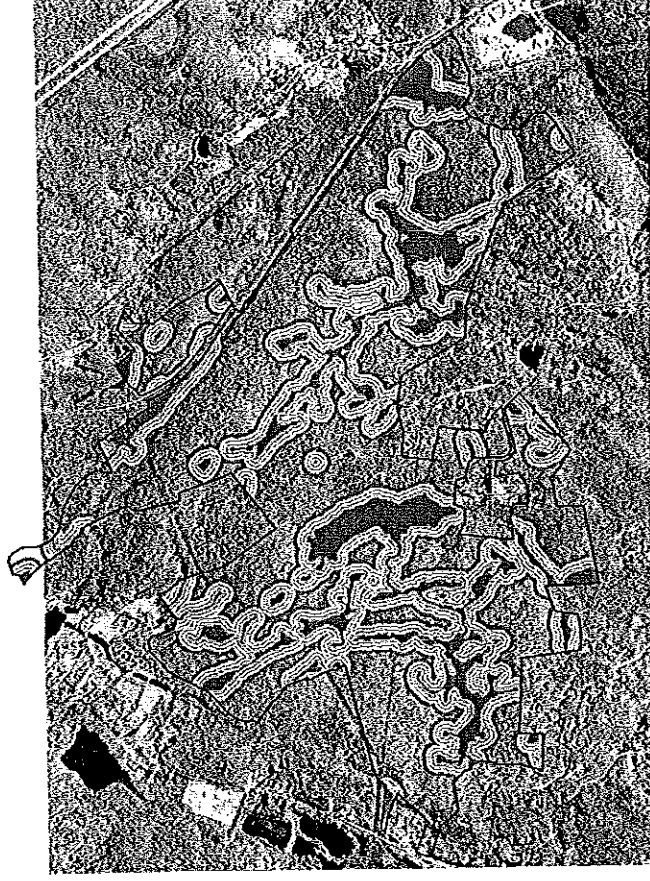
Hooded warbler



Bobcat

Water Resources

- Pequot Swamp
Pond
- Class A Streams
- Headwaters of
Oyster River
- Riparian / natural
buffers
- Natural resource
index: 100

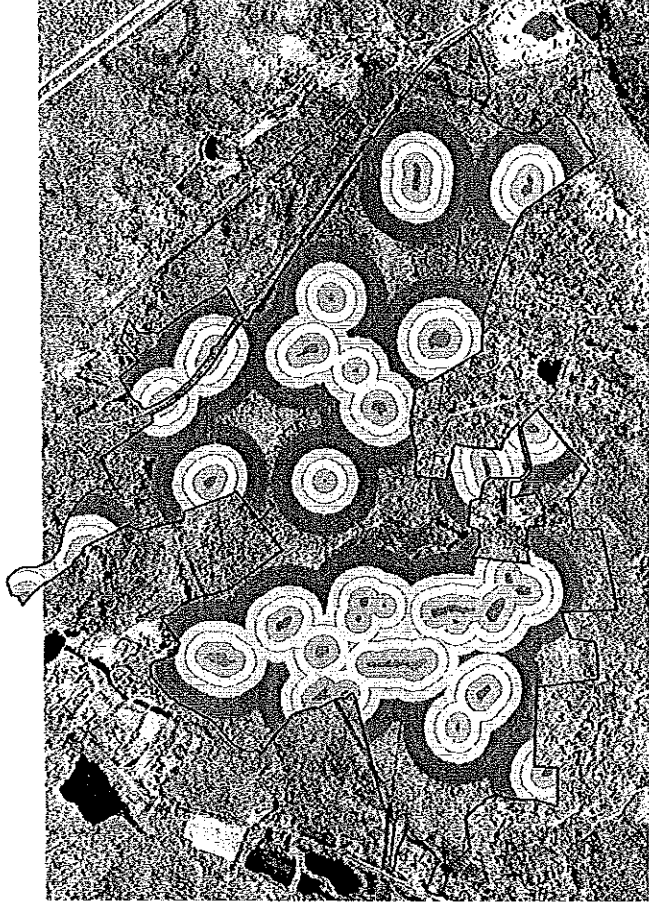


Dark green=wetlands;

Buffer shown in 50' increments to 200'

Vernal Pools

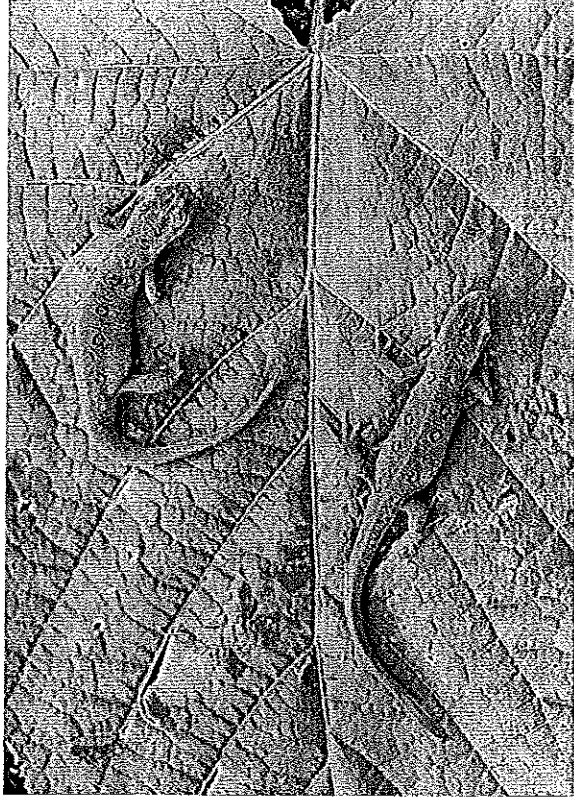
- 31 vernal pools
- Interconnected
- 750 foot upland areas critical habitat
- Natural Resource Index: 100



Dark Green=vernal pool
Buffers in increments up to 750'

Amphibian Populations

- 14 amphibian species
- Productive breeding habitat
- Amphibians inhabit 750' surrounding upland forest, or more.



Red-spotted newt

Species of Special Concern

- Animals: Box turtle, red bat, ribbon snake
- Plants: Prickly pear (*Opuntia humifosa*), false hop sedge (*Carex lupuliformis*) and *Polygala cruciata*



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Polygala cruciata

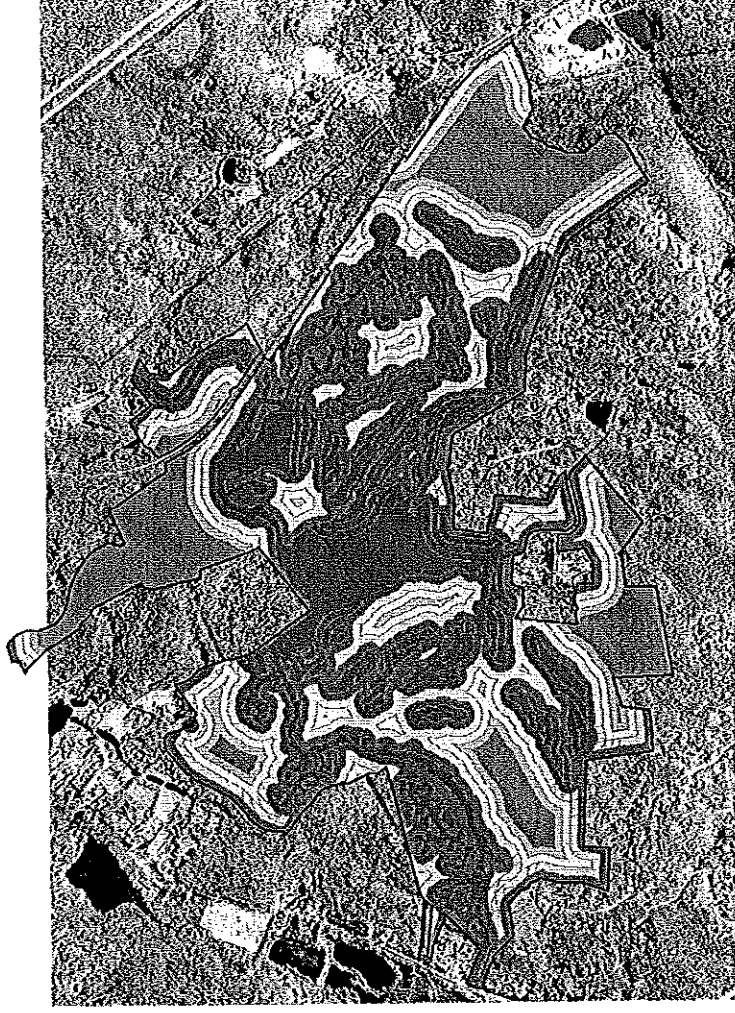
Impacts of the Applicant's Proposal

- Resource impairment
 - Forest fragmentation
 - Negative Edge effects
 - Loss of wetlands connectivity
 - Habitat degradation
 - Pollution



Forest Fragmentation

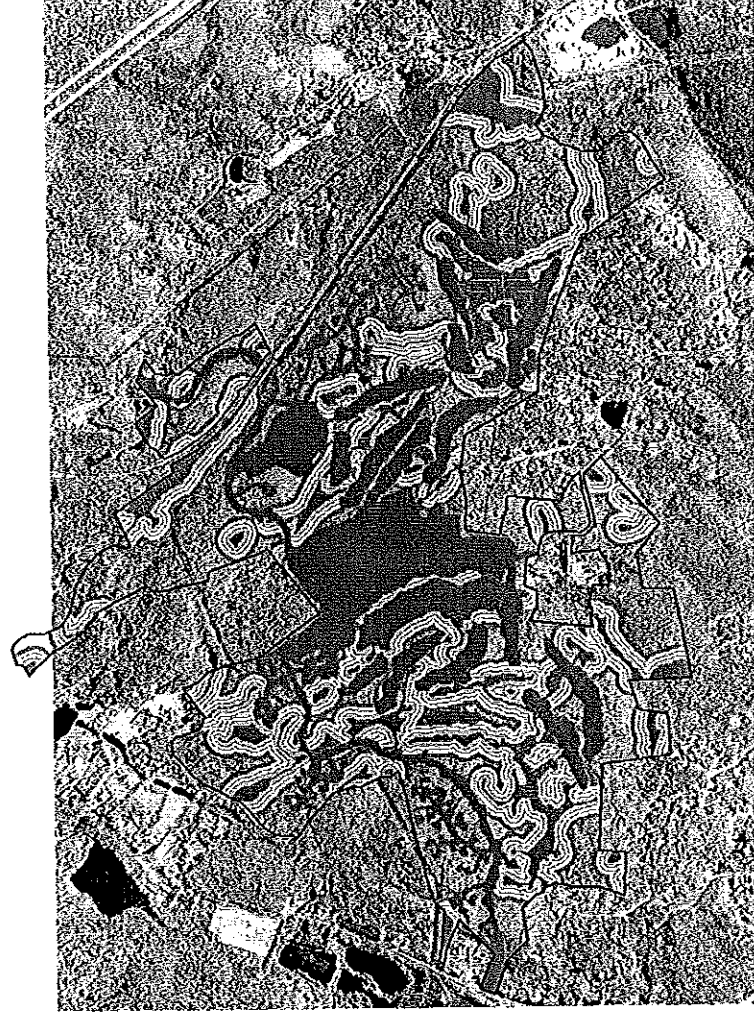
- Edge effects can extend 400'
- Six small core patches remain
- Natural Resource index: 42



Dark green = quality forest core

Impact on Water Resources

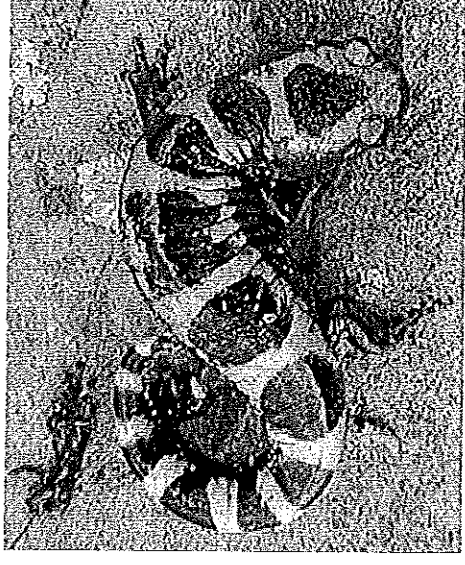
- Sediment and silt enter wetlands where development intrudes
- Pesticides used on golf course, landscaped areas
- Natural resource index: 83



Dark green=wetlands; Lighter green= 100' buff

Applicant's Integrated Pest Management Plan

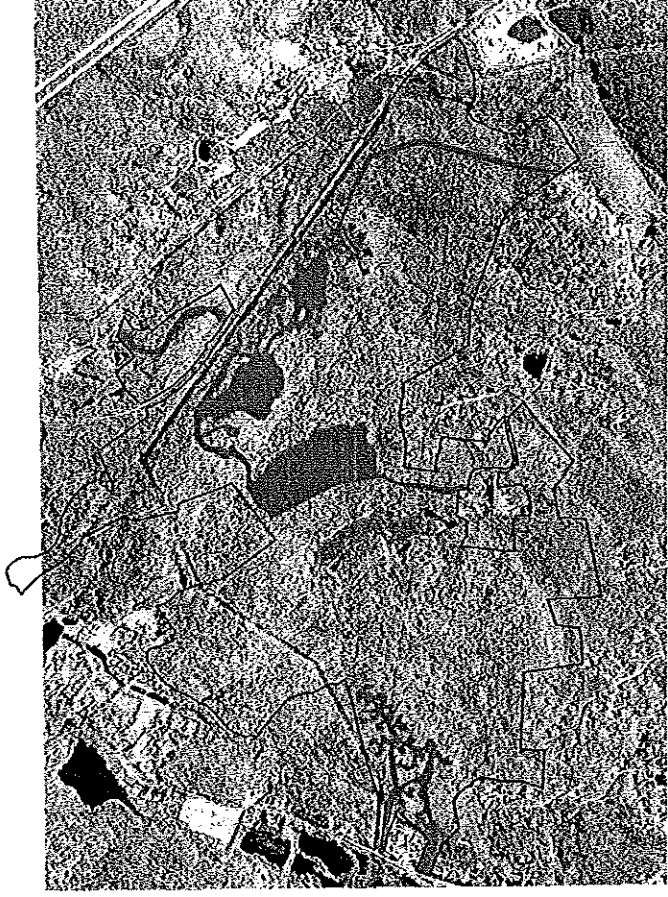
- Lists 9 of 12 toxic pesticides identified as high risk by the EPA
- Allows application within 25 feet from a water feature
- Fails to apply IPM principle of “spot treatment only”
 - Allows treatment of 20% of the entire course at one time

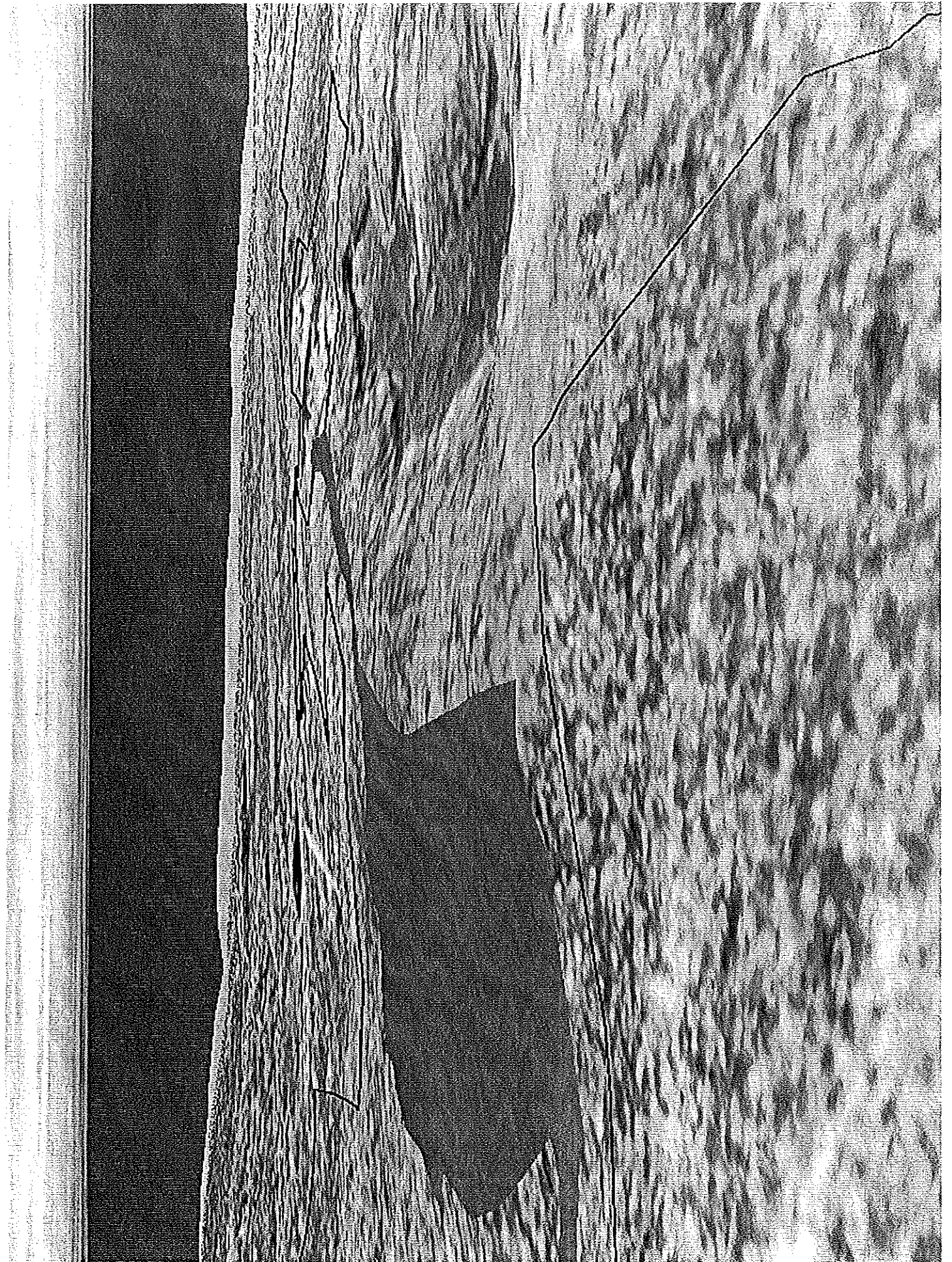


Marbled salamander

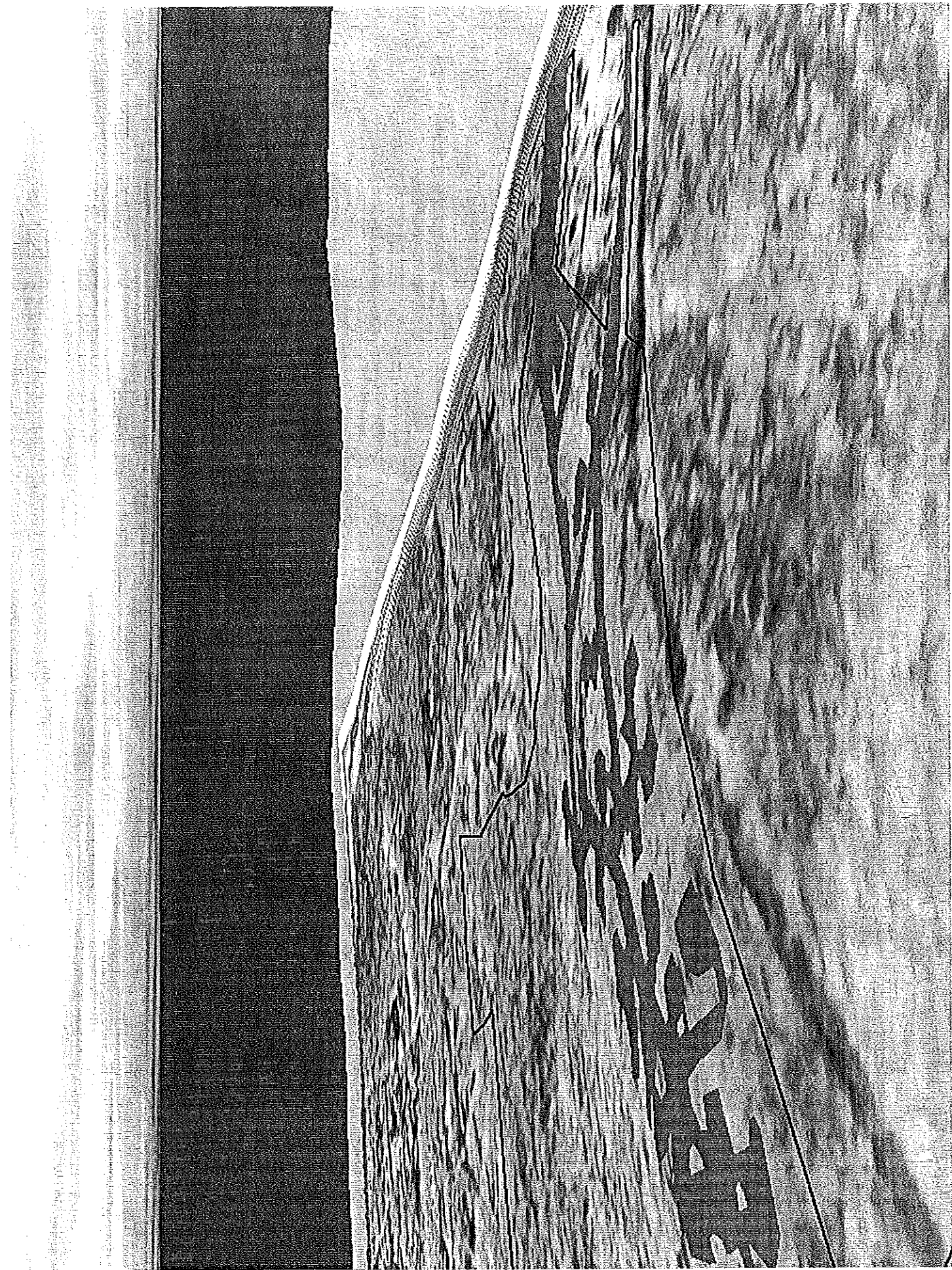
A Better Alternative: A Real Open Space Subdivision

- Golf course and spine road eliminated
- Same density, more clustered
- Larger forest blocks preserved
- Less habitat fragmentation
- Lower density, more clustering would allow even better alternative



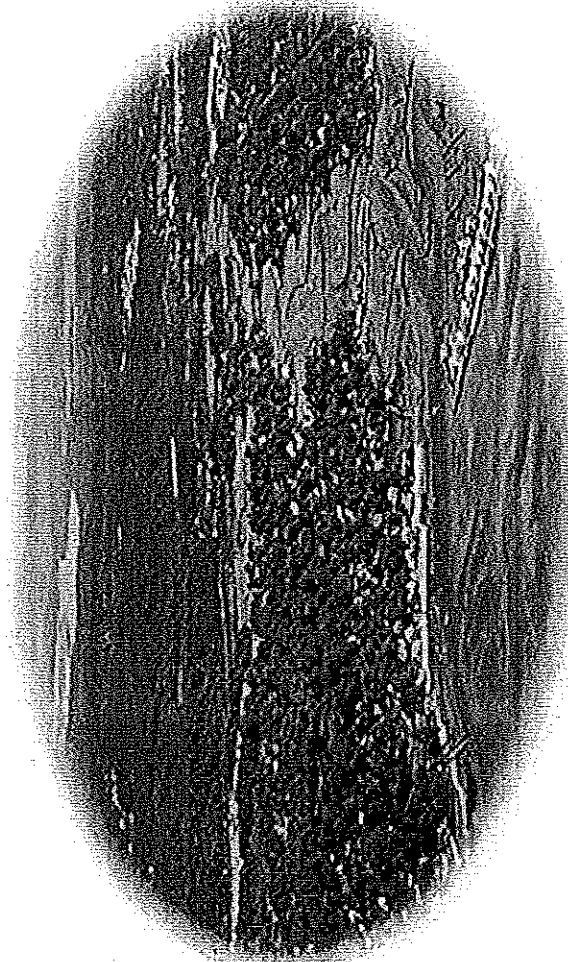






It's All About the Future

- Old Saybrook is the shepherd of our natural resources
- Does the applicant's proposal qualify for approval?



Bob Lorenz, of Lorenz Photography, New York

The estuary where the Oyster River meets Long Island Sound in Old Saybrook. An edge of The Preserve Property is in the upper left hand corner of the photograph. The Connecticut River is in the upper portion of the photograph.

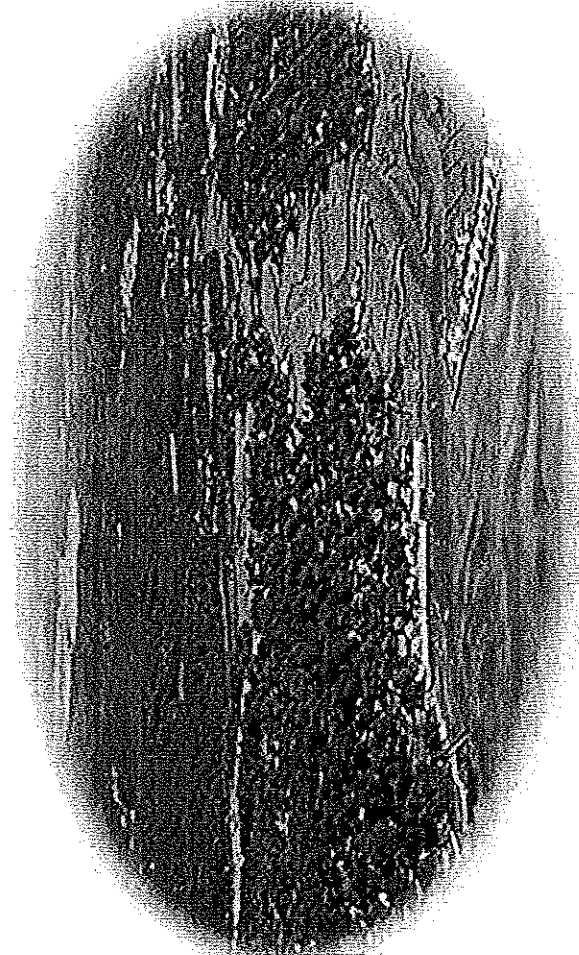
Requirements for Approval of an Open Space Subdivision

- Quality Open Space – 50% or more
- Preservation of natural, scenic and cultural resources
- Density no greater than conventional subdivision
- Protection of health, safety and property values

Are you satisfied?

It's All About the Future

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The estuary where the Oyster River meets Long Island Sound in Old Saybrook. An edge of The Preserve Property is in the upper left hand corner of the photograph. The Connecticut River is in the upper portion of the photograph.

Do the Right Thing

- Deny the application and require the applicant to redesign the project
 - ⌌ The proposal does not measure up under the regulations
 - ⌌ It will impair natural resources
 - ⌌ Better alternatives exist



Scarlet tanager