EGG HARBOR PONDS

COUNTY: Atlantic

MUNICIPALITY: Galloway, Hamilton, Mullica Twps.

PHYSIOGRAPHIC PROVINCE: Outer Coastal Plain

QUAD: Egg Harbor City

COORDINATES: Confidential

ACREAGE: These two ponds comprise approximately 27 and 16 acres. Including the woodlands that immediately surround the ponds and act as buffer, the total area of concern includes roughly 200 acres.

OWNERSHIP: The major landowner of the ponds and surrounding woodland is Wildlife Preserves, Inc. (c/o Robert Perkins, Trustee, 154 E. Clinton Ave., Tenefly, N.J. 07670), a private organization. However, approximately 14 other companies or individuals own tracts of varying size in the ponds or woodlands. The larger landowners include South Jersey Lots, Inc., J.& M. Land Co., Atlantic City Lots, and Galloway Township.

LAND USE: The property of Wildlife Preserves, Inc. is tax exempt under the N.J. Green Acres Program. Under this provision, the owner must allow free public access to the property for passive recreation or conservation purposes. The area appears to be little used, although dirt-bike and off-road vehicle tracks were apparent in September 1982 surrounding an access point to one of the ponds. A hunters blind and tire decoys were visible at one pond.

NATURAL RESOURCE ELEMENTS:

1. Plant Community Types: These ponds comprise two open basins and their surrounding woodland communities. Because the ponds are underlain by an impermeable clay lense, the basins fill with rainwater (2-3 feet deep) during late winter and early spring, but become dry by mid to late summer. Considerable variation in water level also occurs from year to year. Such fluctuation

in water level is believed to be one factor which contributes to the total absence of woody plants and the unusually large assemblage of rare herbaceous plant species at these pond sites (Snyder, 1983).

When dry, the pond areas are dominated by graminid patches (i.e., herbaceous plants of the grass, sedge and rush families). There is a noticable lack of peat moss (Sphagnum spp.) and when the ponds dry up completely in later summer it becomes apparent that they are underlain by a surface of sand. Thus, the pond area does not possess characteristics typical of a south Jersey bog. Some of the more abundant species noted during September of 1982 include Panicum spretum, pipewort (Eriocaulon spp.), hedge-hyssop (Gratiola aurea), Juncus militaris, yellow-eyed grass (Xyris spp.), floating-heart (Nymphoides cordata), Rhynchospora gracilenta, mermaid-weed (Proserpinaca sp.), and sundews (Drocera spp.). Both ponds appear to drain to the east by seasonal streams.

The border between pond and surrounding woodlands is very abrupt with little evidence of successional woody species encroachment. If a border exists at all it consists of a narrow band of peatmoss and sundews followed by a zone of dense ericaceous shrubs towards the forest border, particularly cranberry (Vaccinium spp.) and leatherleaf (Chamaedaphne calyculata).

Both ponds are almost completely surrounded by hardwood swamp forest containing a canopy of red maple (Acer rubrum), sassafras (Sassafras albidum), pitch pine (Pinus rigida), birch (Betula sp.), and scattered individuals of Atlantic white cedar (Chamaecyparis thyoides). The dominant shrubs include sweet pepperbush (Clethra alnifolia) and blueberry (Vaccinium spp.). Other community types within the site include pitch pine lowland, which consists of a relatively poorly drained forest type dominated by pitch pine, and oak-pine forest, which is generally dominated by oaks (Quercus spp.) and contains smaller numbers of pitch pine (McCormick, 1979).

2. Wildlife: No specific information is currently available on wildlife species which utilize the ponds and surrounding woodlands. Mammals and birds characteristic of hardwood swamp, pitch pine lowland and oak-pine forests of the Pinelands would be expected to occur within these woodland communities.

3. Rare Plants: The pond areas contain an unusually high diversity of rare New Jersey plant species and have been recommended to the Pinelands Commission as the most important rare plant sites within the Pinelands

region (Caiazza & Fairbrothers, 1980). The following species have been reported to be threatened in New Jersey and in need of immediate protection (Snyder, 1983) (the first four species are of both national and state significance):

Rhynchospora inundata (Slender Beaked-rush)
Rhexia aristosa (Awned Meadow Beauty)
Utricularia olivacea (Dwarf Bladderwort)
Lobelia boykinii (Boykin's Lobelia)
Myriophyllum tenellum (Slender Water Milfoil)
Utricularia resupinata (Reversed Bladderwort)
Eleocharis equisetoides (Knotted Spike-rush)

The following species have been reported by Snyder (1983) as being threatened in New Jersey:

Panicum hemitomon (Maiden Cane)
Utricularia purpurea (Purple Bladderwort)

In addition, Gallegos and Cavileer (1979) have reported three additional rare species at the ponds. These include Sagittaria teres (Quill-like Arrowhead) (threatened and in need of immediate protection), Lobelia canbyi, (Canby's lobelia), and Ludwigia linearis (Linear-leaved Ludwigia) (both threatened in N.J.).

According to John Gallegos (personal communication), water level fluctuation both within and between years appears to be an important determinant of the diversity of species at this site. For example, a high water level may favor the presence of some species but result in the exclusion of others. It follows that an inventory of species during any one year or season would provide a very poor inventory of plant species diversity. It also seems reasonable to assume that the seed bank of species is much larger than the amount of species present at any single point in time.

4. Rare Wildlife: Although unverified, these ponds are though to be a breeding site for the State endangered Pine Barrens treefrog (Hyla andersoni). No other information is available.

5. Geographical/Topographic Features: The Egg Harbor Ponds are centrally located within the New Jersey Pine Barrens. Surficially, the area in composed of Cohansey Sand deposited during the Triassic Period. The area surrounding the ponds is of very level low relief and consists of poorly drained Pocomoke sandy loam. Other soils include the moderately drained soils of Hammonton loamy sand and Klej loamy sand, and the well drained level to gently sloping Downer loamy sand. Elevations

are less than 60 feet. The site lies within the Mullica River basin, Lower Mullica River sub-basin and, in turn, within the Landing Creek drainage basin (the smallest watershed subdivision available). The ponds are drained by Landing Creek, which feeds the Mullica River.

REASONS FOR INCLUSION OF AREA IN NATURAL AREAS REGISTER:

Egg Harbor Ponds provides habitat which supports populations of several plant species which have been determined to be threatened on both the national and state level. Of lesser importance is the presence of several surrounding forest communities representative of the Pine Barrens region. Although the surrounding forests do not directly support rare plant populations, their function as buffer areas necessitates their inclusion within the Register site.

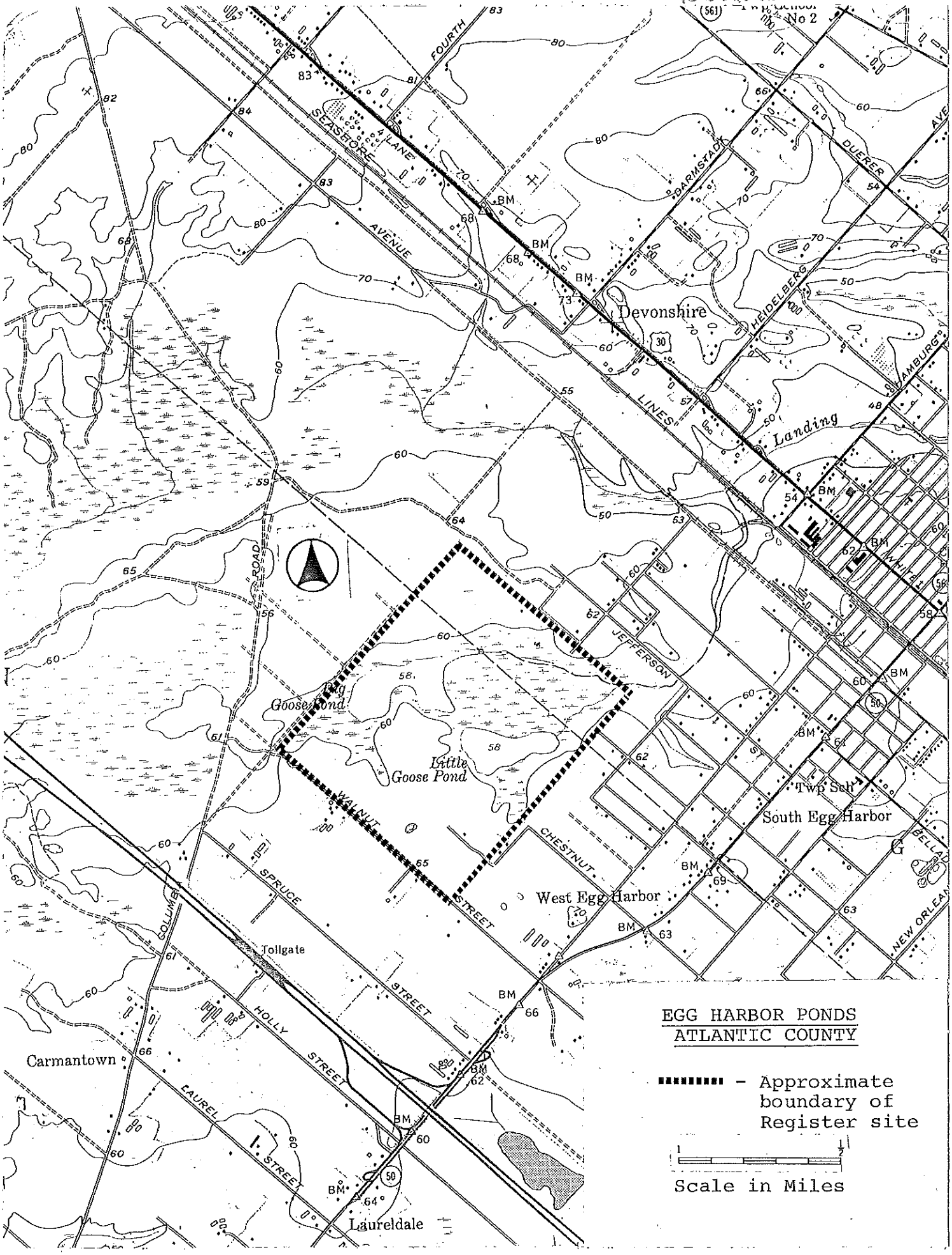
REFERENCES CITED:

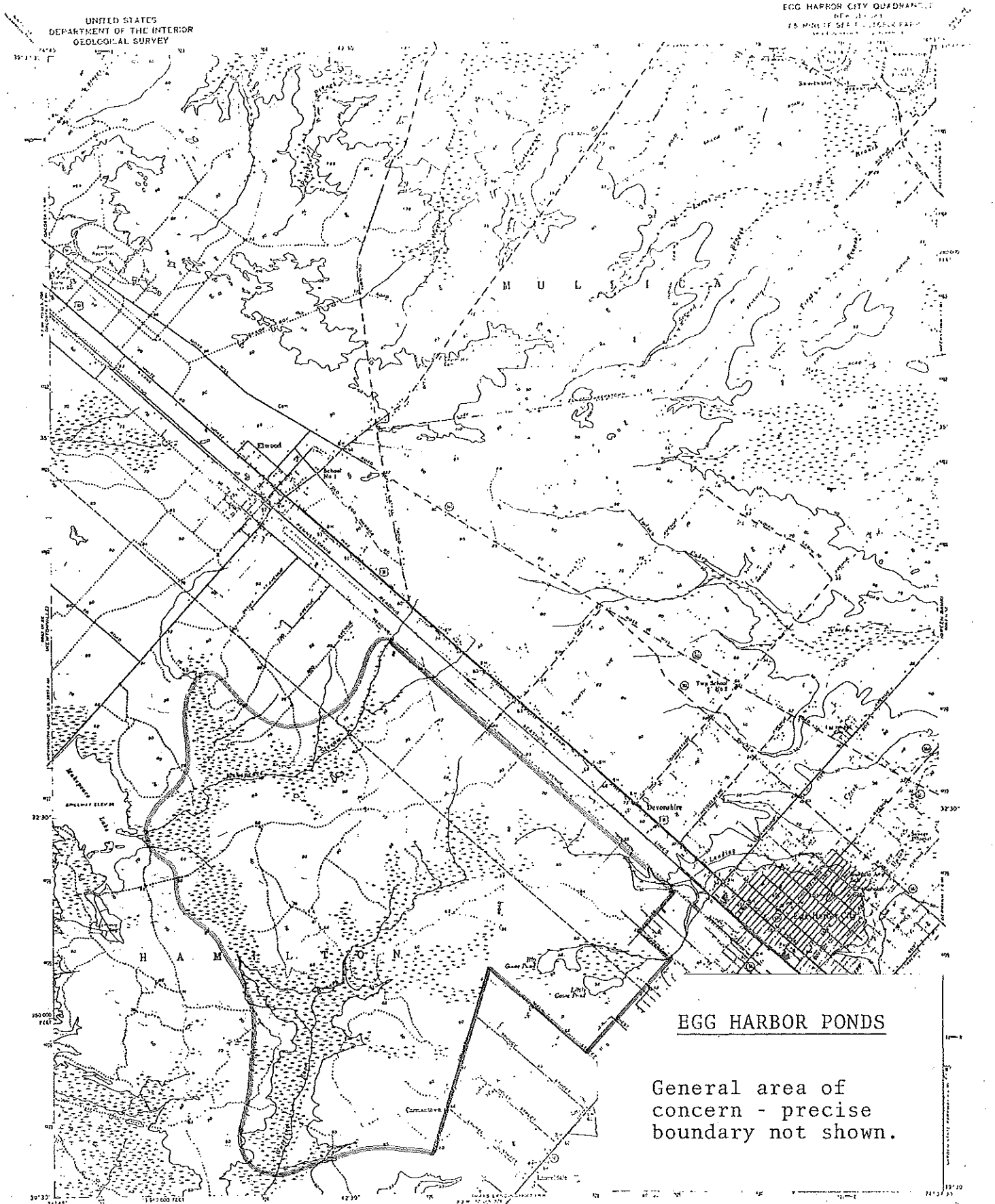
Caiazza, N.A. and D.E. Fairbrothers. 1980. Threatened and endangered vascular plant species of the New Jersey Pinelands and their habitats. Report prepared for the New Jersey Pinelands Commission. (Confidential report).

Gallegos, J.B. and G. Cavileer. 1979. "Rare/Endangered" plant species within southern New Jersey (II). Unpublished report.

McCormick, J. 1979. The vegetation of the New Jersey Pine Barrens. In R.T.T. Forman (Ed.) Pine Barrens: Ecosystem and landscape. Academic Press, New York.

Snyder D.B. 1983. New Jersey's threatened plant species. Unpublished report prepared for the New Jersey Department of Environmental Protection.




UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
EGG HARBOR CITY QUADRANGLE
M U L L I C A
H A M I L T O N
Elwood
Devonshire
EGG HARBOR PONDS
General area of concern - precise boundary not shown.
EGG HARBOR CITY, N. J.
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