

CA

Old Bridge

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A report on the delineation of  
wetlands in the Brunetti  
development area

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A  
REPORT ON  
THE DELINEATION OF WETLANDS  
IN THE  
BRUNETTI DEVELOPMENT AREA

Presented to: THE OLD BRIDGE PLANNING BOARD.

Presented by: Norbert P. Psuty

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1.0 This report presents information on the identification and distribution of wetlands in the central portion of Old Bridge township, specifically the area proposed for development by Brunetti.

There are two specific objectives of this report:

1. A verification of the boundaries of wetlands units (developed by the National Wetlands Inventory) as represented in the Environmental Impact Assessment submitted by Brunetti.
2. A determination of the existence of other wetlands areas in the development tract, as well as a determination of non-wetlands in the NWI delineation.

## 2.0 SOURCES OF INFORMATION

- 2.1 Environmental Impact Assessment report submitted by the Oaks Development Corporation. This statement incorporates reference to the acreage of lands shown on the National Wetlands Inventory.
- 2.2 Soil Conservation Service Soils of Middlesex County (Draft).
- 2.3 U.S.G.S. Topographic Maps, 1:24,000 scale; South Amboy.
- 2.4 National Wetlands Inventory Report, New Jersey, and its accompanying map; 1:24,000 scale, South Amboy.

2.5 Aerial photograph, blue line copy of mylar mozaic available from the Township of Old Bridge.

2.6 Aerial photographs, 1:4800 scale, 1974, blue line copies of mylars available from the Middlesex County office, New Brunswick.

2.7 Land Use and Property map, 1:4800 scale prepared by Beyer, Blinder, and Belle, 1985.

2.8 Aerial photographs, 1:20,000 scale, 1966, black and white stereo prints, 9" X 9", Soil Conservation Service, on file at Rutgers University.

2.9 Field identification.

### 3.0 VERIFICATION OF NWI WETLANDS BOUNDARIES ON MAPS

Using the National Wetlands Inventory maps, we interpreted the general description of the wetlands as represented in the Environmental Impact Assessment and determined that there was general agreement between the two sources.

Thus it is judged that the Brunetti EIA contains an accurate representation of the acreage of wetlands as presented in the National Wetlands Inventory.

### 4.0 IDENTIFICATION OF WETLANDS IN ADDITION TO THOSE SHOWN ON THE NWI MAPS.

The NWI maps were accomplished with little or no on-site field identification. Soils maps, topographic maps,

and aerial photographs were the principal data sources and identifications were made on the basis of expertise in photo interpretation and knowledge of relationships among vegetation, soils, topography, and hydrology. Some spot checking was done in the field but we cannot determine if field checks were done in Old Bridge.

Our identification of potential areas of other wetlands followed a similar methodology as that utilized by the National Wetlands Inventory. There were, however, two notable additions in our procedure. First, we had access to more-detailed aerial photography and, second, we field-verified the interpretations that we made from the county soils maps, the U.S.G.S. topographic maps, and the aerial photos.

Essentially, information derived from the soils maps and topographic maps was compared with photographic signatures (color, texture, pattern, and associations of these variables) and the distribution of wetlands from the NWI. Using these sources, sites were selected for field visits to determine whether the area was wetland or upland. Each field visit resulted in a site specific identification of what existed in a particular location and whether the area was wetland. The field identifications (included as Appendix I) provided the specific information that was subsequently related to the photographic signature as well as the topographic and wetlands maps.

Our identification of wetlands areas follows the

identical criteria as used in the National Wetlands Inventory Report. We identified areas which consisted of hydric soils, wetlands vegetation (tree canopy and understory assemblages), and presence of water at or near the surface. We did not delineate the wetlands. We did identify areas where wetlands exist. We conclude that there are four areas of wetlands in the development , see Appendix I and the accompanying map.

#### 5.0 IDENTIFICATION OF NON-WETLANDS AREAS ON NWI MAPS

The NWI maps are generous in their depiction of wetlands in the Brunetti tract. Each of the mapped areas appears to be larger than that identified in the field. More detailed mapping of this area is required.

#### 6.0 CONCLUSION

6.1 The wetlands acreage incorporated in the EIA is a faithful representation of the NWI map.

6.2 There are fewer wetlands on the site. They should be identified through detailed interpretation of the aerial photographs and further field mapping. Wetlands do exist in the area. Their exact extent must be determined.

#### 7.0 APPENDIX I. Site descriptions of wetlands areas.

#### 8.0 EXHIBIT I. Map of distribution of wetland areas.

APPENDIX 1 - Site Descriptions

Brunetti Development Area, Old Bridge Township

- Field inspections were conducted on June 24, 1986 -

SITE	VEGETATION <sup>1</sup>		SOILS	HYDROLOGY	COMMENTS
	Canopy	Understory			
1	Red Maple Gray Birch Black Gum	Blueberry Cinnamon Fern <u>Sphagnum</u> spp.	Organic	-evidence of standing water in past	-narrow hardwood swamp along intermittent stream
2	No Field Check. Area verified as wetland by careful analysis of aerial photographs, topographic map and soils map.				
3	Red Maple Pitch Pine Black Gum	Blueberry Sheep Laurel Leatherleaf	-	-evidence of standing water in past	-fairly broad mixed hardwood/pine swamp.
4		<u>Juncus</u> spp. Sedges Red maple (saplings)	Organic	-evidence of standing water in past	-marsh/shrub wetland in vicinity of powerline ROW. Increased canopy adjacent to ROW.

<sup>1</sup>Common species from each site are listed. They are not listed in order or relative abundance. This brief list does not represent a complete list of species at the respective sites.



FIGURE 1.0. WETLAND AREAS IN BRUNETTI TRACT.