

**ADDENDUM IV**

**TRC OMNI ENVIRONMENTAL CORPORATION  
WETLANDS INVESTIGATION REPORT  
REGARDING A CONNECTOR ROAD  
BETWEEN  
ORCHARD ROAD & ROUTE 518  
JUNE 3, 2002**

## **I. INTRODUCTION**

TRC Omni Environmental Corporation (TRC Omni) was asked to complete a preliminary wetlands delineation to identify wetlands permitting issues associated with a proposed new, north-south connector road between Orchard Road and Route 518, approximately midway between Opossum Road and Route 206. Figure 1 depicts the approximate location of the proposed road and shows the location and classification of wetlands as recorded in the U.S. Fish and Wildlife Service's (USFWS) National Wetlands Inventory (NWI) database, which is used by New Jersey Department of Environmental Protection (NJDEP).

On April 30, 2002 and May 2, 2002, Dr. Peter L. Kallin, a wetlands scientist from TRC Omni, conducted a field reconnaissance of the proposed route to verify the NWI mapping, mark the wetland areas that met the technical criteria of the Federal Manual for Identifying and Delineating Jurisdictional Wetlands, 1989 (FMIDJW, 1989), and to assess the quality of the wetland and its suitability as wildlife habitat. Additionally, a written query was submitted to NJDEP's Heritage Data Base to obtain information on possible endangered species in the vicinity. This report summarizes the preliminary results of those investigations.

## **II. FIELD RECONNAISSANCE**

Wetlands possess three essential characteristics: 1) hydrophytic vegetation; 2) hydric soils; and 3) wetland hydrology. These three technical characteristics are mandatory and, except in disturbed areas, must be present for an area to be identified as wetlands (FMIDJW, 1989). Hydrophytic vegetation is defined as macrophytic plant life growing in water, soil, or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content (FMIDJW, 1989). Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part (USDA, Soil Conservation Service, 1987). In general, hydric soils are flooded, ponded, or saturated for usually one week or more during the period when soil temperatures are above biological zero (41°F). Wetland hydrology (permanent/periodic inundation or soil saturation to the surface) is the driving force behind wetland formation. The presence of water for a week or more during the growing season creates anaerobic conditions in the soil, which affects the types of plants that can emerge and the types of soils that develop.

On April 30, 2002 and May 2, 2002, Dr. Peter L. Kallin of TRC Omni delineated the wetlands along the proposed road route, using the Routine Onsite Determination Method

(FMIDJW, 1989). Additional references were used as listed in the references at the end of this report. Data sheets were filled out for representative points in the project area. These sheets are available for any future permit applications. There were several areas that met all the technical criteria of FMIDJW (1989) and these wetlands are depicted on the Site Plan (Figure 2, attached). These locations are based on hand-held GPS mapping and should be accurate to approximately 20 feet.

The proposed route intersects Orchard Road between two large corporate parking lots and runs south across the Beden Brook and then through an existing agricultural field until Route 518. A small unnamed tributary stream runs from Orchard Rd. to Beden Brook, to the west of the proposed route. This stream has a narrow fringe of riparian scrub/shrub wetlands associated with it that varies from 2 - 25 ft wide, with the widest portion on the western bank of the stream. The dominant trees are floodplain species such as black willows (*Salix nigra*), box elder (*Acer negundo*), and green ash (*Fraxinus pennsylvanica*). The understory, which is heavily browsed by white-tail deer, contains various shrubs and saplings such as stiff, silky, and red osier dogwoods (*Cornus foemina*, *C. amomum*, and *C. stolonifera*), spice bush (*Lindera benzoin*) and elderberry (*Sambucus canadensis*). The herbaceous layer includes such wetland species as swamp saxifrage (*Saxifraga pennsylvanica*) and jewelweed (*Impatiens capensis*), as well as upland plants such as garlic mustard (*Alliaria petiolata*). The soils are floodplain soils derived from the Klinesville Shaly Sandy Loam that is present in the nearby uplands. While not normally hydric, these soils meet the hydric criteria due to the presence of mottles and oxidized pore linings along plant roots, which are indicative of hydric conditions. There is field evidence of frequent flooding, including debris drift lines and flow patterns in the sediments.

This scrub/shrub wetland is too small to provide significant wildlife habitat, but does provide a linear travel route from Orchard Road to the larger wetland complex along the Beden Brook Floodplain. Figures 3 and 4 depict typical views of this wetland. Additionally, there is a small wetland meadow between the stream and the parking lot to the west of the stream. This meadow appears to receive runoff from the parking lot and is dominated by tussock sedge (*Carex stricta*), soft rush (*Juncus effusus*) and swamp saxifrage, with multiflora rose (*Rosa multiflora*), black willows, and silky dogwoods along the edges. Figure 5 shows this meadow area.

The only area of wetlands along the route south of Beden Brook is a small patch of modified agricultural wetlands that was mapped previously during the LOI for the corporate complex off of Rt. 518. That wetland was described in that LOI and will not be further discussed here.

### **III. PERMITTING ISSUES**

The wetlands identified between Orchard Road and Route 518 are smaller and of lower quality than the wetlands complex north of Linton Drive that was investigated earlier. It is anticipated that the resource value classification of these wetlands will be intermediate, as defined by NJAC 7:7A-2.4, resulting in a transition area requirement of 50 feet. The only way that this would not be the case is if NJDEP had documented threatened or endangered species habitat in this area. A request has been submitted to NJDEP to query their Natural Heritage Database for threatened and endangered species for this area but to date a response has not yet been received.

Assuming a 50-foot wide right of way and 50-foot transition area, the proposed road would cross approximately 300 feet of wetlands, affecting approximately 1/3 of an acre of wetlands. This exceeds the limitations for a General Permit 10A (Very minor road crossings) so an individual wetlands permit would be required. This would require an alternatives analysis as required by NJAC 7:7A-7.2, but assuming the intermediate resource value is correct; this permit could likely be obtained without too much difficulty. It would be granted subject to mitigation requirements based on the total wetlands impacts and would likely require construction of approximately 2/3 of an acre of similar wetlands in the vicinity.

### **IV. CONCLUSIONS AND RECOMMENDATIONS**

It is our professional opinion that, unless NJDEP believes there are threatened or endangered species in this vicinity, it will be possible to obtain permits to construct this connector road without too much difficulty. We should receive a response to our Natural Heritage Database query shortly that will resolve the endangered species issue. If the Traffic Advisory Committee then wants to proceed with this alternative, the next step in the process is to arrange a pre-application meeting with Mr. Chris Jones, NJDEP's permitting authority for this area. Based on that meeting we could move forward with a complete permit application.

**V. REFERENCES**

Collins, Beryl R. and Karl H. Anderson, 1994. Plant Communities of New Jersey. Rutgers University Press, New Brunswick, NJ

Cowardin, L.M., V. Carter, F. Golet, and E. LaRoe, 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service. 103 pp.

FMIDJW, 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands - January 1989. An Interagency Cooperative Publication of USFWS, USEPA, DOA, SCS. Washington, D. C.

Little, Elbert L., 1995. National Audubon Society Field Guide to North American Trees-Eastern Region. Alfred E. Knopf, New York.

Munsell Soil Color Charts, 2000. GretagMachbeth, New Windsor, NY.

Neiring, William A., 1998. Wetlands-National Audobon Society Field Guide. Alfred E. Knopf, New York.

Newcomb, Lawrence, 1977. Newcomb's Wildflower Guide. Little Brown and Co. Boston, MA.

USDA Soil Conservation Service, 1972. Soil Survey of Mercer County, NJ. U. S. Government Printing Office, Washington, D.C.

USDA Soil Conservation Service, 1987. Hydric Soils of the United States Washington, D.C.

USDoI Fish and Wildlife Service 1988. National List of Plant Species that Occur in Wetlands: Northeast (Region I) Biological Report 88 (26.1) May 1988. St. Petersburg, FL.

Wander, Sharon and Wade Wander, 1991. Common Plants of Northern New Jersey: A Field Guide for Wetland Delineation. Cook College Office of Continuing Education, New Brunswick, NJ.