

IN THE MATTER OF : *APPLICATION NO. IW-96-131*
CONNECTICUT DEPARTMENT OF
TRANSPORTATION/ROUTE 66,
MIDDLEFIELD : *DECEMBER 22, 1999*

PROPOSED FINAL DECISION

SUMMARY:

This proceeding concerns an application filed pursuant to Conn. Gen. Stat. §§22a-36 through 22a-45, by the Connecticut Department of Transportation with the Department of Environmental Protection (DEP) Bureau of Water Management, Inland Wetland Water Resources Division. The applicant seeks a permit to conduct regulated activities within 1.77 acres of designated inland wetlands and watercourses. These regulated activities are associated with the proposed reconstruction and realignment of a 2.1 mile section of Route 66 in Middlefield, Connecticut. The applicant is proposing to compensate for the loss of wetlands by creating and restoring 2.38 acres of wetlands. The parties to this proceeding are: the Department of Transportation (applicant); the DEP Bureau of Water Management, Inland Water Resources Division (staff); and the Town of Middlefield and Citizens for a Sensible 66 (collectively, the intervenors).

The staff does not object to issuance of the requested permit and has prepared a draft permit authorizing the proposed regulated activities. The intervenors, while conceding the need for some highway improvements, object to the applicant's proposal to widen the entire 2.1 mile portion of Route 66 to a four-lane highway. Instead, the intervenors propose widening only part of Route 66 to four lanes and reconfiguring the remaining portion.

I conclude that if the proposed project is constructed in accordance with the conditions of the

draft permit with the modifications recommended herein, the proposed regulated activities would have no significant adverse environmental impacts and would be consistent with all applicable legal requirements. I further conclude that the intervenors' alternative, while feasible, is not prudent in that it would not adequately address the safety and traffic concerns that are the reasons for the proposed regulated activities. I therefore recommend that the Commissioner issue the requested permit with the modifications recommended below.

FINDINGS OF FACT

Procedural History

1. On August 15, 1996, pursuant to the Inland Wetlands and Watercourses Act, Conn. Gen. Stat. §§22a-36 through 22a-45, and the regulations thereunder, the Connecticut Department of Transportation (applicant) submitted an application to the Department of Environmental Protection (DEP) Bureau of Water Management, Inland Wetland Water Resources Division (staff). The applicant seeks a permit to conduct regulated activities (the proposed regulated activities) within 16 designated wetlands in conjunction with the proposed reconstruction and realignment of a 2.1 mile section of Route 66 (the proposed project) in Middlefield, Connecticut. (Ex. DOT-20; *see* Attachment No. 1, Site Map from Ex. DOT-20)

2. The staff does not object to the issuance of the requested permit and has prepared a draft permit that would authorize the proposed regulated activities. (*See* Ex. DEP-6, the draft permit, attached hereto as Attachment No. 2) On June 29, 1998, the staff issued a tentative determination to approve the application and caused notice to be published of the public hearing on the application. (Ex. DEP-9)

3. On August 30, 1996 and February 18, 1997, pursuant to Conn. Gen. Stat. §22a-19, the Town of Middlefield and Citizens for a Sensible 66 (intervenors), respectively, were granted intervenor status in this proceeding. Kathleen M. Kokoszka, Marianne Corona, and Mr. and Mrs. Brian McNaughton were also granted §22a-19 intervenor status; they withdrew on July 28, 1998. (Docket Items No. 2, 5, 17, 18, 21A, 25)

The intervenors agree that some improvements to the section of Route 66 at issue are necessary and that the proposed project would improve the safety of this section of the highway, but they object to some of the specific improvements proposed by the applicant. (Test. Kokoszka, 8/17/98, tr. p. 127, 9/17/98, tr. p. 66; test. Augur, 8/17/98, tr. p. 139)

4. I conducted hearings in this matter on August 11, 12, 14, 17, and September 17, 1998. The record closed on July 30, 1999.

The Proposed Project Area

5. The proposed regulated activities would occur along a 2.1 mile portion of Route 66 from its junction with Interstate 691 to 1,200 feet east of its intersection with Jackson Hill Road/Higby Road. (This 2.1 portion of Route 66, and the property immediately adjacent to it, will be referred to henceforth as the proposed project area.) (Ex. DOT-20)

At the western terminus of the proposed project area, the existing highway consists of a two-lane divided highway with two 12-foot wide lanes, an 8-foot wide right shoulder and a 4-foot wide left shoulder. As it continues east, the highway tapers to a 30-foot wide undivided highway, crosses Route 147 (also known as Baileyville Road), and then runs through the Mount Higby Reservoir (the Reservoir). Continuing east, Route 66 intersects School Street and then continues along and around

the north side of Coe Hill where, approximately 1,000 feet west of Jackson Hill Road, there is a westbound climbing lane. Past the crest of Coe Hill, Route 66 intersects Jackson Hill Road/Higby Road. The proposed project area ends at a point 1,200 feet beyond this intersection after Route 66 passes through an area of commercial development and crosses an unnamed stream. The intersections of Route 66 with Route 147 and Jackson Hill Road/Higby Road are signalized and there is a flasher at the intersection of Route 66 with School Street. (Exs. DOT-16a, 16b, 20)

6. The Reservoir is owned and controlled by the City of Middletown and provides approximately a third of the City's drinking water. (Ex. DOT-17b) The Reservoir is divided by Route 66 into northern and southern parts that are connected by a culvert under the highway. (Ex. DOT-16b) The *Connecticut Water Quality Standards and Criteria*, adopted pursuant to Conn. Gen. Stat. §22a-426, classify the Reservoir as a Class AA water body, which means it is a designated public drinking water supply and any development within its watershed may be subject to regulation by the Connecticut Department of Public Health. (Exs. DOT-2, 3)

7. The proposed project area is located within the Reservoir and Coginchaug River watersheds of the Mattabasset Regional Drainage Basin. There are two commercial buildings and one residence near the Route 66/Route 147 intersection. Outside of the Reservoir watershed, at the eastern end of the proposed project area, there is extensive commercial and residential development. (Ex. DOT-20)

Purpose of Proposed Project

8. The purpose of the proposed project is to increase the safety and levels of service (LOS)¹ along the section of Route 66 at issue to accommodate existing and future traffic volume.

¹Operational conditions along a segment of highway are defined as "levels of service, with an LOS of "A" being

To serve that purpose, the applicant proposes to:

- widen Route 66 from two lanes to four over the entire 2.1 mile length of the proposed project;
- soften the “S” curve through the Reservoir;
- widen the shoulders of Route 66 over the length of the proposed project;
- reduce the steepness of Route 66 at the east end of the proposed project;
- install safety control signals and realign the School Street intersection;
- install turning lanes at each intersection; and
- construct retaining walls and a spill containment system where Route 66 runs through the Reservoir.

(Exs. DOT-17a, 17c,20; test. Hillson, 9/17/98, tr. pp. 31-38; test. Armstrong, 9/17/98, tr. pp. 11-19)

9. During 1990 to 1998, the average daily traffic volume on Route 66 from the western end of the proposed project area to the intersection with Route 147 increased from 22,500 to 28,400 vehicles per day (VPD). This represented an increase of 47% or nearly half of the 35, 000 VPD increased capacity expected in a current design for year 2015. East of Route 147, the traffic volume has increased from 17,500 to 22,800 VPD over the same period, a 46% increase of the year 2015 design capacity of 29,000 VPD. (Ex. DOT-17c; test. Hillson, 8/12/98, tr. pp. 13-22)

The actual growth in traffic from 1990 to 1998 was more than the growth rate anticipated in the 2015 design year traffic volumes. These large increases in traffic volume have resulted in additional congestion during high volume periods including traffic back-ups and stop and go traffic.

These traffic conditions will only become more severe in the future as the traffic volume on Route

the highest level signifying a free flow of traffic without noticeable interference from other motorists, and LOS of “F” being forced flow of traffic and stop and go operation where the traffic volume approaches or exceeds the highway capacity. (Ex. DOT-17c)

66 continues to increase. (Ex. DOT-17c)

10. The LOS on Route 66 in the proposed project area is currently “F” during one or more hours a day, signifying that the highway is operating beyond capacity during that time period. (Ex. DOT-20) Widening Route 66 to four lanes throughout the proposed project area, as the applicant proposes, would raise the LOS to “B” in both directions at current traffic volumes. This improvement would also allow the highway to safely handle anticipated future traffic volumes. Although increased traffic capacity could contribute to increased traffic volumes, widening Route 66 from two lanes to four would not, by itself, lead to increased traffic volumes. (Ex. DOT-17c)

11. Traffic volumes at two of the three signalized intersections within the proposed project area currently exceed their design capacity during peak traffic periods. With the improvements proposed by the applicant (*i.e.*, four traffic lanes and a turning lane at each signalized intersection), the LOS at each intersection would be “C” or better during peak periods except at the Jackson Hill Road/Higby Road intersection, which would operate at LOS “D” during the afternoon peak period. (DOT-17c; test. Hillson, 8/12/98, tr. pp. 45-47)

12. Between January 1, 1985 and March 31, 1997, the applicant recorded at least 561 accidents occurred within the proposed project area. One hundred thirty-four of these accidents occurred at the two signalized intersections (Route 147 and Jackson Hill Road/Higby Road), which both have higher than the applicant’s expected annual accident rates. The combination of high traffic volumes, steep grades, poor sight distances, absence of a turning lane at the Jackson Hill Road/Higby Road intersection, and poor alignment of the School Street intersection all contribute to the high frequency of accidents within the proposed project area. (Exs. DOT-17c, 20; test. Hillson, 8/12/98, tr. pp. 18-24)

13. Between January, 1985 and March, 1997, there were eleven fatalities along the section of Route 66 within the proposed project area. (During the course of these proceedings, two additional fatalities occurred in this area.) There is one fatality every 15 months along this section of Route 66. Within the last 10 years, the fatality rate along this section of Route 66 was more than four times the statewide average. (Exs. DOT-16a, 17c, 24; test. Hillson, 8/12/98, tr. pp. 18-40)

Nine of the eleven fatalities within the proposed project area occurred within the 3,000 foot long “S” curve through the Reservoir. One of every ten accidents along this section of Route 66 results in a fatality, a ratio ten times the statewide average for such occurrences. The “S” curve is particularly dangerous because it has narrow two to three foot shoulders and curves ranging from six to eight degrees in combination with five to seven percent grades. A highway with five percent grades with curves over five degrees is generally associated with higher accident rates and skidding. Highway conditions at the “S” curve leave little room for driver error or room to recover from loss of vehicle control and thus have contributed to the high rate of fatalities along that section of Route 66. (Exs. DOT-6a-6e, 16a, 17a, 17c, 20; test. Hillson, 8/12/98, tr. pp. 27-29, 32-33)

14. The proposed project should reduce both the number and severity of traffic accidents along Route 66 within the proposed project area because it would allow drivers more room and time to react to potential accident situations, and the improved traffic flow would reduce the frustration of drivers. (Exs. DOT-17a, 17c) The intervenors (Citizens for a Sensible Route 66) conceded that upgrading a two-lane road to four lanes could result in a significant decrease in accident rates. (Test. Kaliski, 8/11/98, tr. pp. 198-199)

Wetlands and Watercourses

15. There are several wetlands and watercourses within, and adjacent to, the proposed

project area. The watercourses include the Reservoir, an unnamed perennial stream, and an unnamed intermittent stream.² The wetlands include deciduous forest, mowed lawn areas surrounding the Reservoir, meadows, drainage swales, a small detention pond and a red maple swamp. These wetlands and watercourses convey stormwater and provide wildlife habitat, flood control, nutrient and sediment/toxicant removal, and supply public drinking water. (Exs. DOT-17b, 20; test. Wardwell, 8/11/98, tr. pp. 8-21)

16. The proposed regulated activities would alter 5% of the total wetlands within or near the proposed project area. The wetlands that would be impacted by the proposed project range in size from approximately 100 square feet to 17,000 square feet and provide a variety of wetland functions. Because of their proximity to the existing Route 66 and its run-off, these wetlands are already partially degraded. (Exs. DOT-17b, 20; test. Hagman, 8/11/98, tr. p. 106; test. Wardwell, 8/17/98, tr. pp. 22, 78) Although the proposed project would alter the edges of these wetlands, the integrity and function of the overall wetland system would remain intact. (Test. Wardwell, 9/17/98, tr. pp. 21, 24)

17. The following are the specific wetland areas that would be impacted by construction of the proposed project traveling along Route 66 west to east. Unless otherwise indicated, the impacts would result from side slope encroachment associated with the proposed widening of the highway.

- Area 1 (impact area: 0.18 acres) The proposed regulated activity would impact an intermittent stream that drains into a widening scrub shrub swamp that performs flood storage,

²The *Connecticut Water Quality Standards* (see text, *supra*, p.6) classify these streams as Class A, which means they are known or presumed to support use for potential drinking water supply, fish and wildlife habitat, recreational use, agricultural, industrial supply, and other legitimate uses. (Ex. DOT-20)

nutrient retention, sediment/toxicant removal, and wildlife habitat functions. Currently, this stream and swamp collect stormwater runoff from the adjacent highway and the steep traprock hills to the north and west. Pollutants present in the runoff are attenuated before reaching the Reservoir and other downstream areas. The diversity of plants in this wetland, and the fact that it is the only major source of water in this portion of the proposed project area, contribute to its value as wildlife habitat.

- Area 2 (impact area: 0.27 acres) The proposed regulated activity would impact a narrow, rock-lined watercourse that broadens into a marsh/meadow. This stream is part of the same system as Area 1. Although located adjacent to Route 66, the plant diversity of this wetland and the fact that it is the only major source of water in this portion of the proposed project area, contribute to its value as wildlife habitat. The wetland also performs stormwater renovation functions.

- Area 3 (impact area: 105 square feet) The proposed regulated activity would impact a rock-lined watercourse that passes flow underneath Route 66 to the south. The functional value of this wetland is low except for erosion control of adjacent land and some pollutant attenuation.

- Area 4 (impact area: 0.39 acres) The proposed regulated activity would impact a watercourse that broadens to a narrow floodplain that is flooded and/or inundated regularly. A broadened area in the watercourse reduces water velocity, thereby promoting the settling of suspended solids and the reduction of pollutant loads to the Reservoir. This wetland is part of the generally unbroken landscape association of the Reservoir/floodplain/upland forest on the south side of the highway. This wetland provides flood storage, nutrient retention, and valuable wildlife habitat functions.

- Area 5 (impact area: 0.40 acres) The proposed regulated activity would impact a watercourse that expands into a regularly inundated broad wetland area. A broadened area in the

watercourse reduces water velocity, thereby promoting the settling of suspended solids and the reduction of pollutant loads to the Reservoir. This wetland constitutes the lower portion of the generally unbroken landscape association of the Reservoir/floodplain/upland forest on the south side of Route 66. This wetland provides flood storage, nutrient retention, and valuable wildlife habitat functions.

- Area 6 (impact area: 0.20 acres) The proposed regulated activity would impact a low, regularly inundated flat mucky wetland. A broadened area in this wetland reduces water velocity, thereby promoting the settling of suspended solids and the reduction of pollutant loads to the Reservoir. This wetland is part of the generally unbroken Reservoir/floodplain/upland forest association to the north of Route 66. This wetland provides valuable wildlife habitat, flood storage, and nutrient retention functions.

- Area 7 (impact area: 118 square feet) The proposed regulated activity would impact a low, flat mucky wetland that floods or is inundated on a regular basis. This wetland is part of the Reservoir/floodplain/upland forest on the north side of Route 66. The wetland provides flood storage, nutrient retention, and wildlife habitat functions. The impacted wetland area is small, therefore, the functional loss of wetlands would be minimal.

- Area 8 (impact area: 0.05 acres) The proposed regulated activity would impact a low, flat wetland that floods or is inundated on a regular basis. This wetland performs wildlife habitat, flood storage, and nutrient retention functions. This wetland is isolated from the larger wetland system to the east and south of Route 66, therefore, its wetland value is moderate.

- Area 9 (impact area: 0.01 acres) The proposed regulated activity would consist of the filling of a portion of an intermittent watercourse for the proposed highway realignment. The

impacted intermittent watercourse has low habitat value due to its small size and intermittent nature.

- Area 10 (impact area 0.01 acres) The proposed regulated activity would consist of side slope encroachments of an intermittent watercourse for the proposed highway realignment. The watercourse carries flow from an upslope wetland underneath Route 66.

- Area 11 (impact area 0.01 acres) The proposed regulated activity would consist of side slope cuts into a level, perched wetland forest for the proposed highway realignment. These cuts may cause minor drainage of the wetland. Some small depressed areas throughout the area may serve as a water source for wildlife. Due to the large expanse of upland and wetland forest nearby, the wildlife habitat value is moderate.

- Area 12 (impact area: 0.07 acres) The proposed regulated activity would consist of side slope cuts into a perched wetland for the proposed highway widening. The cuts may cause minor drainage of the wetland. Some small depressed areas throughout the area may serve as a water source for wildlife. Due to the large expanse of upland and wetland forest nearby, the wildlife habitat value is moderate.

- Area 13 (impact area 0.04 acres) The proposed regulated activity would impact a wet meadow that was formerly an agricultural field. This area has minimal habitat function because it is next to the highway and contains low value plant species dominated by *Phragmites* (common reed) and *Goldenrod*. This wetland has some flood storage value because it is connected to a larger wet meadow/intermittent stream system to the east (Areas 14, 15 and 16) that includes the headwaters of a stream that feeds the Coginchaug River to the south.

- Area 14 (impact area: 0.08 acres) The proposed regulated activity would impact a wet meadow that was formerly an agricultural field. This wetland has minimal habitat function because

it contains low value plant species dominated by *Phragmites* and *Goldenrod*. This wetland has some flood storage value and is part of the larger wet meadow/intermittent stream system that includes the headwaters of a stream that feeds the Coginchaug River to the south.

- Area 15 (impact area: 0.05 acres) The proposed regulated activity would consist of side slope encroachment for the proposed highway widening and culvert replacement. The area impacted is a forested/shrub scrub floodplain and a narrow stream that eventually feeds the Coginchaug River to the south. The wetland provides edge habitat for wildlife and flood storage functions and forms a forested riparian corridor between the agricultural fields and residences nearby.

- Area 16 (impact area: 0.01 acres) The proposed regulated activity would consist of side slope encroachment for the proposed highway widening and culvert replacement of the same narrow stream noted in Area 15, but further south. This area has wetland functions similar to Area 15, but has less flood control value. (Exs. DOT-7, 16b, 17b, 20; test. Wardwell, 8/11/98, tr. pp. 8-20; *see also*, Attachment No. 3, Wetlands Disturbance by Function Table)

18. Temporary impacts to wetlands and watercourses that may be expected during construction would be sedimentation from runoff from disturbed and/or stockpiled soil areas. (Ex. DEP-6; Exs. DOT-7, 17a; test. Wardwell, 9/17/98, tr. pp. 24-26) Potential long-term impacts, in addition to the wetland portions impacted by filling and draining during construction, include increased surface runoff from the enlarged highway. Impacts also include permanent loss of 1.77 acres of wetlands and watercourses with their associated functions including loss of wildlife habitat, flood storage capacity, and sediment/toxicant and nutrient retention. (Ex. DOT-17b)

Although the intervenors raised the issue of the potential impact of the proposed project on vernal pools, no vernal pools exist in any of the wetlands impacted by the proposed regulated

activities. (Test. Golembiewski, 9/14/98, tr. pp. 53-54; *see also*, test. Wardwell, 8/11/98, tr. p. 47)

19. To minimize the impacts of the proposed project on wetlands and watercourses the permit³, which I recommend be issued with modifications, requires the applicant to:

- where practical, reconstruct the highway within existing paved areas;
- where feasible, avoid widening the highway on the side of the road where wetlands are present;
- construct side slopes near wetlands and watercourses at a two-to-one ratio, as compared to the more typical three-to-one ratio, to minimize the amount of fill and grading required; and
- use grassy slopes, as opposed to riprap-lined slopes, to stabilize the side slopes to provide additional “cleansing” of runoff sediments.

(Ex. DEP-6; Exs. DOT-17b, 20; test. Wardwell, 8/11/98, tr. pp. 47-50)

Wetland Mitigation

20. To compensate for the loss of 1.77 acres of wetlands that would result from the proposed project, the draft permit would require the applicant to create and restore 2.38 acres of wetlands on three sites near Route 66 and the Reservoir (a net gain of .61 acres). (*NOTE*: The applicant’s proposal contains a wetland mitigation plan, which is, in fact, compensation and restoration for the wetland loss.) The applicant selected these sites after consulting with the staff, the U.S. Fish and Wildlife Service and the Army Corps of Engineers; all approved the sites selected.

(Ex. DOT-20, Attachments A-1, Q-2; test. Wardwell, 8/11/98, tr. pp. 51, 56, 9/7/98, tr. pp. 29-30; test. Golembiewski, 8/11/98, tr. p. 108)

³These requirements are either set forth in the application, which is incorporated by reference into the draft permit (Ex. DEP-6), or I am recommending that they be made special permit conditions. The applicant and the staff stipulated to some of these requirements. (Docket Item 55; test. Chase, 9/17/98, tr. pp. 57-59) (*See* Attachment No. 4)

The newly created and restored wetlands would replace and improve wetland functions that would be lost from construction of the proposed project including wildlife habitat, pollutant attenuation, and stormwater retention. The new wetlands would also enhance and protect existing wetlands and the Reservoir, and result in stormwater discharges to the Reservoir that would be of better quality than those currently discharged. (Exs. DOT-16d, 17b, 20; test. Wardwell, 9/17/98, tr. pp. 8, 28-30)

21. The following are the three proposed wetland mitigation areas:

- Reservoir North. This area would consist of 1.16 acres abutting the southern edge of the northern Reservoir. The proposed new wetlands would support predominantly emergent vegetation with areas of shore and open waters and would provide a vegetative edge for wildlife habitat. They would also attenuate runoff from the adjacent slopes and would improve the existing wildlife corridor that connects the wooded peninsula to the east with the main forested area to the west.

- Reservoir South. This area would consist of .22 acres abutting the northeast corner of the southern Reservoir near the southern right-of-way line of Route 66. Emergent vegetation would be dominant, but there would also be smaller areas of shrubs. This wetland would primarily function as an additional measure to attenuate pollutants and “polish” return water before it enters the Reservoir from the stormwater treatment basin. It would also provide additional wildlife habitat.

- White Oaks. This area would consist of approximately one acre abutting the existing drainage ditch on the northwest side of the southern Reservoir. It is several hundred yards south of Route 66. The applicant proposes to enlarge an existing wetland by restoring a former wetlands that is buried under a foot of fill material. The enlarged wetland would function as a source of food and

shelter for wildlife and would provide stormwater pollution abatement and increased flood storage capacity. (Exs. DOT-2, 17b, 20, Attachment Q)

22. To ensure the success of the proposed wetlands mitigation and to minimize impacts to wetlands and watercourses, I am recommending the following special conditions in the issued permit. The applicant would be required to:

- construct the wetland mitigation areas by the expiration date of the permit;
- monitor the success of the wetland mitigation efforts annually for five years from the first anniversary of the completion of its mitigation efforts, and report the results of that monitoring to the Commissioner and the Town of Middlefield Inland Wetlands Conservation Commission, and the Citizens for a Sensible 66;
- take any remedial actions required by the Commissioner to insure the success of the wetlands mitigation, including but not limited to creating, obtaining or rehabilitating additional wetlands as off-site compensation;
- include microtopographical features such as hummocks, logs, boulders, and grading irregularities in the wetlands mitigation areas;
- install the largest possible sized conduit in the highway at STATION 55+00 for the purpose of connecting wetland impact Areas 5 and 6, and providing passage for wildlife;
- retain a qualified wetlands scientist approved by the Commissioner to design and supervise the planting of forbs, shrubs and trees within and adjacent to the wetland mitigation and construction areas;
- submit, on or before September 30 of each year for a period of five years after the wetlands mitigation is completed, an annual monitoring report to the Commissioner, the Town of Middlefield Inland Wetlands Conservation Commission, and the Citizens for a Sensible 66, on the advance and establishment of nuisance plant species, including *Lythrum Salicari* (purple loosestrife) and *Phragmites* (common reed), within and adjacent to the mitigation areas, and measures to be taken by the applicant for the control of these species;
- obtain written approval of the wetlands planting plan from the Commissioner at least sixty (60) days prior to commencing construction;
- install an adequately sized oil/grit separator chamber in the stormwater drainage system east of Coe Hill in addition to the grassed swale and check dams already

proposed;

- obtain written approval from the Commissioner prior to initiating any control measures for invasive species involving the use of herbicides at the site;
- comply with the Commissioner's *Non-Native Invasive Plant Species Policy* of November 17, 1998; and
- retain on the site during all periods of activity authorized by this permit, a full-time environmental inspector approved by the Commissioner.

(Ex. DOT-20; *see* Attachments No. 4 and No. 5, respectively, the stipulated special permit conditions and *Non-Native Invasive Plant Species Policy*; *see also*, f.n. #3)

Stormwater Management

23. To prevent erosion during construction of the proposed project, the applicant would construct separate systems to handle “clean” water from the watershed surrounding the proposed project area and “dirty” water from construction areas. Clean water would be collected in riprap-lined ditches that would discharge to the existing wetlands. Dirty water would be routed through ditches lined with erosion control mats and periodically spaced crushed stone check dams and would discharge to sedimentation basins and then to wetlands or the Reservoir. As road segments are completed, dirty water would be piped to the sedimentation basins. After the proposed project is completed, the sedimentation basins would be cleaned and redesigned to serve as permanent stormwater detention basins. (Exs. DOT-17b, 20)

24. The draft permit would require the applicant to employ best management practices to prevent sedimentation and erosion during construction of the proposed project. These practices would include the following:

- weekly inspections of all wetland and watercourse areas and ditch banks, and daily

inspections of same when it rains, to ensure that the sedimentation and erosion controls are maintained and properly functioning;

- the prohibition of the storage of vehicles and the stockpiling of materials in the wetland areas or within 1,000 feet of the Reservoir;
- installation of haybales and/or sediment fencing along the perimeter of all wetlands and watercourses along the proposed project area;
- the prompt planting of vegetative cover over exposed soil areas to prevent erosion; and
- the presence of a full-time on-site inspector for the project's duration to ensure compliance with all the permit conditions.

(Ex. DEP-6; Exs. DOT-17b, 20)

25. To control runoff after project completion, the draft permit would require the applicant to install a permanent stormwater management system in accordance with the *Connecticut Guidelines for Soil Erosion and Sediment Control*⁴. The applicant would construct two separate systems to manage stormwater flows, one for watershed runoff and one for runoff containing highway and vehicle pollutants.

The watershed drainage system would intercept overland flows, or “clean” stormwater, from all non-highway sources. These flows would drain to grassed areas, swales, or riprap-lined channels to detain flows and aid in the removal of sediments prior to drainage to the Reservoir. Highway runoff would be isolated and treated in a completely enclosed system prior to discharge. Runoff from Route 66 and adjacent impervious surfaces would be collected in a series of catch basins and then directed to one of two retention ponds for treatment. The applicant would then treat the

⁴The *Connecticut Guidelines for Soil Erosion and Sediment Control* were adopted pursuant to Conn. Gen. Stat. §22a-32 and set forth key erosion and sediment control principles, and professionally accepted measures to control erosion and sediment.

highway runoff in two stages. Water exiting from this collection system would discharge into a spill containment structure for gross particle and oil separation and then be discharged to a wet basin for the removal of sediment-related pollutants and nutrients.

The spill containment systems would be designed to hold up to 10,000 gallons in the event of a discharge of toxic liquid from a truck. A series of shut-off valves would allow the applicant to shut down the system during a spill so that cleanup could occur without adversely affecting the Reservoir. The applicant has designed the spill containment system to meet the requirements of the City of Middletown Water Department. The Connecticut Department of Public Health has also reviewed and approved this system. (Ex. DEP-7; Exs. DOT-3, 9, 17b, 20; test. Wardwell, 8/11/98, tr. pp. 8-29; test. Colentonio, 8/12/98, tr. pp. 110-11; test. Yurasevecz, 8/14/98, tr. pp. 8-10)

Overall, the implementation of these measures by the applicant would improve the quality of the discharges to the Reservoir and other wetlands and watercourses through erosion and sediment controls and by the creation and restoration of wetland areas with their additional stormwater attenuation functions. (Exs. DOT-2, 17b, 20, Attachment Q; test. Wardwell, 9/18/98, tr. p. 30)

26. To prevent pollution of the Hans Brook tributary (which is about a mile from the proposed project area), the applicant has agreed to install (in addition to the grassed swale and check dams already proposed) an oil/grit separator chamber in the storm water drainage system east of Coe Hill so that highway runoff would be pretreated prior to discharge to the Hans Brook tributary. (*See* Attachment No. 4)

Flooding

27. There are no floodways or flood hazard zones in the proposed project area. The low risk of flooding is due to the proposed project area's high position in the watershed, the undeveloped

nature of the adjacent watershed lands, and the flood control capacity of the Reservoir. (Ex. DOT-20)

28. The permit would require the applicant to replace the existing culverts at the eastern end of the proposed project area to prevent downstream flooding from watershed runoff and from the 8.1 acres of additional impervious surface to be created by the proposed project. Replacing these culverts would protect the downstream areas from any significant increase in flooding and from resultant sedimentation and erosion. (Exs. DOT-2, 20; test. Colantonio, 8/12/98, tr. pp. 109-111, 8/17/98, tr. pp. 159-168; test. Yurasevecz, 8/12/98, tr. pp. 7-10, 9/17/98, tr. pp. 55-57; test. Golembiewski, 9/17/98, tr. pp. 50, 57)

Flora and Fauna

29. There are no extant populations of threatened, endangered or species of special concern in the area of the proposed regulated activities, however, there may be site features or travel corridors on or adjacent to those areas which may be utilized by some species in need of protection. (Exs. DEP-11, 13; Ex. DOT-20) Two species of special concern - *Corydalis Fravula* (yellow corydalis), a flower native to West Virginia, and the *Anthocharis Midea* (falcote orange tip), a butterfly at the northern end of its range - have been observed in the traprock ridges outside of the proposed project area. (Exs. DEP-13, 20). In addition, a witness reported that she may have seen a five-lined skink (an endangered species, and New England's only lizard) in those traprock ridges. (Test. Fish, 8/14/98, tr. p. 230; *see also* Exs. DEP-13, 20) There are no reports of a five-lined skink being observed within the proposed regulated area and experts for the applicant and staff did not observe any after repeated efforts to do so. (Ex. DOT-20; test. Hagman, 8/11/98, tr. pp. 21-28; test.

Wardwell, 8/11/98, tr. pp. 43-46, 8/17/98, tr. pp. 60, 62, 85 and 98; test. McKay, 8/12/98, tr. p. 47)

30. To protect endangered, threatened or species of special concern found or made known to the applicant in the proposed project area during construction, I am recommending as a special condition of the permit that the applicant immediately cease construction activity in the location where such species have been located and identified and notify DEP staff of their existence and location. DEP staff would then provide assistance in relocating such species or in mitigating the impacts of the proposed project on such species. (*See Attachment No. 4, #10*)

Fisheries

31. The Reservoir and Hans Brook support viable fish populations and would be minimally impacted by the proposed project provided the applicant adheres to best management practices for stormwater runoff and the sedimentation and erosion controls required by the draft permit.⁵ (Exs. DEP-1, 6, 12)

Potable Wells

32. There are no public potable wells within 150 feet of the site and there is no evidence that any public or private drinking water supplies would be affected by the proposed project. (Ex. DOT-20)

⁵To ensure that fisheries resources in Hans Brook would not be adversely affected by this proposed project, I directed staff to have DEP fisheries biologist Brian Murphy conduct a second review of the proposed project's impacts on this brook. He again concluded that if the applicant employed best management practices there would be no impact to Hans Brook or the unnamed tributary flowing into Hans Brook and he recommended that the proposed project be approved without modification. (Exs. DEP-1, 12)

Property

33. The applicant's existing rights-of-way would be sufficient to complete most of the proposed project. The applicant has obtained a Change-in-Use Permit from the Department of Public Health with respect to the transfer from the Middletown Water and Sewer Department of some property needed for the proposed project. (Ex. DOT-3) A small amount of private property would also be affected by this proposed project, primarily by the taking of small strips of land for the road widening. There is no evidence in the record that the applicant plans to conduct any future regulated activities that are contingent on the construction of the proposed project. (Exs. DOT-2, 20, Attachment D)

Alternatives Analysis

34. In an unsuccessful attempt to reduce the frequency of accidents within the proposed project area, the applicant reduced the speed limit and installed street lighting, flashing warning signs, and additional signs and pavement markings. (Ex. DOT-17a; test. Hillson, 8/12/98, tr. pp. 30-31, 54-56; test. Armstrong, 9/17/98, tr. pp. 12-13) The applicant rejected making additional "spot improvements" to Route 66 because such improvements would not significantly improve the safety or capacity of the highway and would provide no additional public water supply protection for the Reservoir. (Exs. DOT-17a, 20)

35. The applicant initially considered a number of alternative configurations for the proposed project that would offer a range of highway improvements with varying degrees of impacts. (Exs. DOT-17a, 19, 20, Attachment J) The applicant received input on the alternatives from the staff, the Town of Middlefield, the Army Corps of Engineers, the Midstate Regional

Planning Agency, the Connecticut Office of Office and Policy Management, the Federal Highway Administration, the City of Middletown, the Connecticut Department of Health Services (now the Department of Public Health), the U.S. Fish and Wildlife Service, the United States Environmental Protection Agency and the public. (Ex. DOT-2)

36. DOT considered the “no-build” alternative for further analysis. (Exs. DOT-17a, 20, Attachment J) Under this scenario, the applicant would undertake no improvements other than routine maintenance. Existing poor sight distances and sharp curves would remain, and the levels of service would continue to decrease until the year 2015. The entire highway section in question would eventually operate at LOS “F” and the public's safety would not be improved. (Exs. DOT-17a, 20, Attachment J; test. Hillson, 8/12/98, tr. pp. 14-16)

37. In addition to the “no-build” alternative, the applicant considered the following alternatives:

- Alternative 1: This design would straighten the curve west of the Reservoir by relocating a portion of the road 300 feet to the south. Retaining walls would be required in the vicinity of the Reservoir to support the highway embankment. This relocated portion of the proposed highway would have two 12-foot lanes, a 10-foot inside shoulder and an 8-foot outside shoulder.
- Alternative 2: The curve east of the Reservoir would be reduced in severity by relocating the road about 150 feet to the east. The curve west of the Reservoir would remain. Retaining walls would also be necessary. The remaining highway would be improved as described in Alternative 1 above.
- Alternative 3: The curves east and west of the Reservoir would be eliminated through

a major realignment of the highway 650 feet to the north, thereby spanning the Reservoir. This would require a connection from School Street.

- Alternative 4: This alternative would reduce the degree of the curve on the east and west sides of the Reservoir through the creation of a two-level highway. The lower level would carry westbound traffic on an embankment causeway with barrier walls on both sides. A 12-foot span continuous bridge would serve as the upper lane carrying eastbound traffic. The remaining highway would be improved as described in Alternative 1 above.

- Alternative 5: This alternative would consist of shifting to the south the existing alignment in the area west of Route 147. The alignment follows the existing highway up to the eastern end of the Reservoir. From School Street to Jackson Hill Road/Higby Road the alignment would be shifted to the east. The resulting highway would have two 12-foot lanes in each direction, an 8-foot right shoulder, 2-foot inside shoulders and a minimum 4-foot wide raised median.

- Alternative 6: The existing alignment would be shifted to the southeast at the eastern terminus of the project. West of the Reservoir, the alignment would be centered along the existing highway. The resulting highway width would be the same as in Alternative 5 above.

- Alternative 7: This is a combination of Alternatives 5 and 6 above; however, in this scheme, the median would be flush with the pavement and there would be no physical separation of westbound and eastbound traffic in the vicinity of the Reservoir. Also, a bridge would be constructed in the vicinity of the Reservoir to minimize the impact to the Reservoir. The resulting highway would have two 12-foot lanes in each direction, an 8-foot right shoulder and 2-foot inside shoulders.

38. The applicant rejected the first four alternatives because of its concerns regarding

wetland impacts and the protection of water supply. Alternatives 6 and 7 were discarded due to concerns regarding the taking of additional water company lands and water supply and wetlands impacts. The applicant considered Alternative 5 to represent the best balance of highway improvements with minimal environmental impacts. The applicant further refined Alternative 5 into two alternatives for analysis. These alternatives were a four lane/two lane combination highway (Alternative #1), and a four lane highway (Alternative #2). (Ex. DOT-20)

39. Alternative #1 is supported by the intervenors. This alternative is the four-lane/two-lane combination highway, which is almost identical to the alternative one of the intervenors' witnesses recommended during the hearing. (Test. Kaliski, 8/12/98, tr. pp. 59-60)

At the western terminus of the project area, the existing highway is one lane in each direction. This alternative would widen this segment to two 12-foot lanes in each direction with an 8-foot right shoulder and a 2-foot inside shoulder. A median would separate the eastbound and westbound lanes. East of Route 147, the road would transition from four lanes to two lanes with 8-foot shoulders to the eastern terminus of the project. Left turning lanes would be provided at the intersections of Route 147, School Street and Jackson Hill Road/Higby Road and a climbing lane would be provided for the westbound direction from the eastern terminus of the project to approximately 500 feet east of the Reservoir. (Exs. DOT-17a, 20, Attachment J)

In the area from the western terminus to Route 147, this alternative would minimize impacts to wetlands by widening the south of the existing alignment. In the area east of Route 147 to School Street, the alignment would be shifted to lessen the curves in the vicinity of the Reservoir. Also, the vertical alignment would be modified by reducing the grades and increasing the sight distance to improve the safety of the highway. (Exs. DOT-17a, 20, Attachment J) Transitioning from a four-

lane limited access highway to a two-lane rural road can cause congestion and increased accidents, therefore, Alternative #1 would not meet present or future highway capacity requirements. (*See*, test. Kaliski, 8/11/98, tr. pp. 189-190)

40. Alternative #2, the one the applicant proposes, is a full four-lane realignment of Route 66 for 2.1 miles from the western terminus of Route 66 to Route 147. East of Route 147 at the eastern terminus, a four-lane highway would be constructed without a center median. Along the Reservoir, the applicant would install retaining walls with a concrete barrier that would serve several purposes. First, it would protect the Reservoir by constructing a closed drainage and hazardous spill containment system; second, it would protect against vehicles leaving the highway. (Exs. DOT-17a, 20)

41. Under either alternative, it would be impossible to design a highway that avoids wetlands impacts while meeting safe engineering standards. (Test. Colantonio, 8/12/98, tr. p. 113) Either would involve some loss of wetlands, although Alternative #1 would result in the loss of .28 acres of wetlands, or 19% fewer total wetlands, than Alternative #2. Alternative #1 would cost 92% of the cost of Alternative #2 and would result in 18% less paved area. (Exs. DOT-17a, 20; test. Wardwell, 8/11/98, tr. pp. 22-33)

CONCLUSIONS OF LAW

A. *INLAND WETLANDS & WATERCOURSES ACT*

Pursuant to Conn. Gen. Stat. §22a-39(h), no state agency or department may conduct regulated activities in a wetland or watercourse without a permit from the Commissioner. In addition, pursuant to Conn. Gen. Stat. §22a-41(a)(1)-(6), when deciding whether to grant such a permit, the Commissioner shall consider all relevant facts and circumstances including, but not limited to, the following:

- (1) the environmental impact of the proposed regulated activity on wetlands or watercourses;
- (2) the applicant's purpose for, and any feasible and prudent alternatives to, the proposed regulated activity which alternatives would cause less or no environmental impact to wetlands or watercourses;
- (3) the relationship between the short-term and long-term impacts of the proposed regulated activity on wetlands or watercourses and the maintenance and enhancement of long-term productivity of such wetlands or watercourses;
- (4) irreversible and irretrievable loss of wetland or watercourse resources which would be caused by the proposed regulated activity, including the extent to which such activity would foreclose a future ability to protect, enhance or restore such resources and any mitigation measures, which may be considered as a condition of issuing a permit for such activity including, but not limited to, measures to (A) prevent or minimize pollution or other environmental damage, (B) maintain or enhance existing environmental quality, or (C) in the following order of priority: restore, enhance and create productive wetland or watercourse resources;

- (5) the character and degree of injury to, or interference with, safety, health or the reasonable use of property which is caused or threatened by the proposed regulated activity; and
- (6) impacts of the proposed regulated activity on wetlands or watercourses outside the area for which the activity is proposed and future activities associated with, or reasonably related to, the proposed regulated activity which are made inevitable by the proposed regulated activity and which may have an impact on wetlands or watercourses.

In addition, pursuant to Conn. Gen. Stat. §22a-41(b)(1), because a hearing was held on this application, I must determine whether a feasible and prudent alternative to the proposed project exists.

1. *The Environmental Impact of the Proposed Activity on Wetlands and Watercourses.*

The proposed regulated activities would result in the loss of 1.77 acres of 16 partially degraded wetland slivers along Route 66 in Middlefield. These wetlands would represent a loss of approximately 5% of the wetlands in the proposed project area. However, this loss would not interfere with the integrity or function of the overall wetland system of which they are a part. (Finding of Fact-16, 20, hereinafter FF)

To protect the wetlands in the proposed project area, the issued permit would require the applicant to comply with best management practices and install and maintain erosion and sediment controls to manage stormwater discharges both during construction and after completion of the proposed project. (FF-23-25) These activities will improve the quality of the discharges to the Reservoir and to wetlands and watercourses. (FF-25-26)

In addition, the proposed project will not increase flooding or adversely impact fisheries. (FF-27, 28, 31) Although there is no evidence of extant populations of any endangered, threatened

or species of special concern within the proposed regulated area, such species may exist within or near the proposed project area. (FF-29) I have recommended as a special condition of the permit, a term to ensure that the proposed regulated activity would not adversely impact such protected species, if they are found to exist at or adjacent to the proposed regulated areas. (FF-30)

Therefore, based on the above, I find that the proposed regulated activities will not result in significant adverse impacts to wetlands and watercourses.

2. *The Purpose for, and any Suitable Alternatives to, the Proposed Project.*

The purpose of the proposed regulated activities is to facilitate improvements to a 2.1 mile section of Route 66 in Middlefield to address safety and capacity problems associated with that section of Route 66. Specifically, the applicant proposes, *inter alia*, to widen Route 66 from two lanes to four, reconfigure sections of the highway to “soften” its curves and reduce its grade, and install safety controls and construct turning lanes at major intersections. (FF-8)

The applicant tried unsuccessfully to address some of these problems through various “spot improvements.” (FF-34) The applicant rejected making further spot improvements and the “no build” alternative because neither option would address the safety and capacity problems which exist along this section of Route 66, or provide additional protection for the Reservoir. (FF-36)

After considering a number of possible reconfigurations, the applicant narrowed its consideration to two alternatives. Alternative #1, the one urged by the intervenors, would consist of a widening of Route 66 from two to four lanes from its western juncture with Route 691 to the Route 147 intersection. East of Route 147, Route 66 would transition down to two lanes and various realignments and highway improvements would be made to that section of the highway. (FF-39)

Alternative #2, the applicant's proposal, is nearly identical to Alternative #1 from the western

terminus of the proposed project up to the Route 147 intersection. However, this alternative will continue the expansion of Route 66 from two lanes to four after Route 147 to the eastern end of the proposed project. (FF-40)

Both alternatives would result in some loss of wetlands, although Alternative #1 would impact .28 acres fewer wetlands than Alternative #2. Alternative #1 is also slightly less expensive and would result in slightly less paved area than Alternative #2. Both alternatives would improve the safety of the subject section of Route 66. However, because of its failure to provide four lanes east of Route 147, Alternative #1 would not address the current lack of capacity on Route 66. Alternative #1 would also create additional safety problems because of the “necking” of lanes that would take place east of route 147. (FF-41) For this reason, and because traffic volume and safety are interrelated (FF-9-12), Alternative #1 would not be as safe as Alternative #2. (FF-39). In addition, Alternative #1 would reduce the number of travel lanes along the “S” curve through the Reservoir, the most dangerous section of Route 66 in the proposed project area and the area with the highest rate of fatalities. (FF-13) Alternative #1 is therefore deficient at the exact location where highway improvements are most needed.

A “feasible alternative” is one that can be constructed or implemented consistent with sound engineering principals. Conn. Gen. Stat. §22a-38(17). A “prudent alternative” is one, which is economical and otherwise reasonable in light of the social benefits to be derived from the proposed regulated activity. Although cost may be considered in determining whether an alternative is prudent, a mere showing of additional expenses will not necessarily mean an alternative is imprudent. Conn. Gen. Stat. §22a-38(18).

Both alternatives are feasible. (FF-39-41) However, Alternative #1 would not address the

underlying purpose of the proposed project as well as Alternative #2, and would not result in a significant savings in environmental or economic resources as compared to Alternative #1. (FF-39) Alternative #1 is not a prudent alternative to Alternative #2.

Therefore, for the above reasons, I find that there is no feasible and prudent alternative to the applicant's proposal. I further find that this determination also satisfies the requirements of Conn. Gen. Stat. §22a-41(b)(1).

3. *Relationship Between the Short Term and Long Term Impacts of the Proposed Regulated Activity on Wetlands and Watercourses, and the Maintenance and Enhancement of Long Term Productivity of such Wetlands and Watercourses.*

The permit will require the applicant to protect the wetlands and watercourses from any short-term adverse impacts. (FF-20, 22-26) Although the proposed regulated activities would result in the permanent loss of 1.77 acres of partially degraded wetlands, the long-term productivity of the overall wetland and watercourse system would remain viable. With the successful completion of the applicant's mitigation efforts, function and quality of the system would improve. (FF-16-21) In addition, the proposed regulated activities would provide additional protection for, and result in an improvement of the quality of the discharge to, the Reservoir and to other wetlands and watercourses within or near the proposed project area. (FF-24, 25).

Therefore, I find that there would be no significant short or long-term adverse environmental impacts as a result of the regulated activities on wetlands and watercourses, or on the maintenance and enhancement of the long-term productivity of such wetlands and watercourses.

4. *Irreversible and Irretrievable Loss of Wetland or Watercourse Resources Which Would be Caused by the Proposed Regulated Activity, Including the Extent to Which Such Activity Would Foreclose a Future Ability to Protect, Enhance or Restore Such Resources, and any Mitigation Measures Which may be Considered as a Condition of Issuing a Permit for Such Activity Including, but not Limited to, Measures to (A) Prevent or Minimize Pollution or Other Environmental Damage, (B) Maintain or Enhance Existing Environmental Quality, or (C) In the Following Order of Priority: Restore, Enhance and Create Productive Wetland or Watercourse Resources. . . .*

The proposed regulated activities would result in the permanent loss of 1.77 acres of partially degraded wetlands. The wetlands that would be lost represent 5% of the existing wetlands in or near the proposed project area and their loss would not have a significant adverse affect on the viability or functionality of the overall wetlands system of which they are a part. (FF-16, 18)

The applicant would be required under the issued permit to prevent or minimize pollution and other environmental damage and to maintain and enhance existing environmental quality. The proposed regulated activities would minimize the amount of wetlands lost to fill consistent with sound engineering practices and the overall goals of the proposed project. (FF-19) The erosion and sediment controls required both during and after construction would protect fisheries resources and downstream wetlands and watercourses, prevent flooding, and improve the stormwater discharge to the Reservoir and other wetlands and watercourses. (FF-24-27, 30, 31) The spill containment system proposed by the applicant would also help prevent pollution of the Reservoir from motor vehicle accidents. (FF-25)

The required mitigation plan would result in the creation and restoration of 2.38 acres of wetlands. These wetlands would, in part, also enhance the existing wetlands and watercourses in or near the proposed project area. (FF-20-26)

Therefore, I find that although the proposed regulated activities would result in the

permanent loss of 1.77 acres of partially degraded wetlands, this loss would not foreclose future ability to protect, enhance or restore such resources within the proposed project area. I also find that the issued permit would require the applicant, in undertaking these activities, to take the necessary measures to prevent or minimize pollution or other environmental damage, while maintaining or enhancing environmental quality. These measures would include actions to restore, enhance and create productive wetlands and watercourses.

5. *The Character and Degree of Injury to, or Interference with, Safety, Health, or the Reasonable Use of Property Which is Caused or Threatened by the Proposed Regulated Activity.*

The proposed project will reconstruct and realign a 2.1 mile portion of Route 66 in Middlefield. This project will improve the public's safety along this portion of the highway, which currently has a high accident and fatality rate. (FF-12-14)

All of the wetlands and watercourses that would be impacted by the proposed regulated activities are adjacent to the existing highway and most of the property necessary for this project is within the applicant's existing right-of-way. A small amount of private land would also be required to complete the proposed project. (FF-16, 17, 33)

The required erosion and sediment controls would ensure that the proposed regulated activities would improve the quality of the discharge to the Reservoir, control stormwater discharges, prevent pollution of downstream wetlands and watercourses, protect fishery resources, and preserve the economic, recreational and other public and private uses of the affected wetlands and watercourses. (FF-18, 19, 20-26, 28)

Therefore, I find the proposed regulated activities will not injure, interfere with, or threaten, the safety, health or the reasonable use of the property.

6. *Impacts of the Proposed Regulated Activity on Wetlands and Watercourses Outside the Area for Which the Activity is Proposed and Future Activities Associated With, or Reasonably Related to, the Proposed Regulated Activity Which are made Inevitable by the Proposed Regulated Activity and Which may have an Impact on Wetlands and Watercourses.*

The proposed regulated activities would have no significant adverse impact on wetlands and watercourses outside of the proposed project area. The required erosion and sedimentation and stormwater discharge controls would actually improve the quality of the discharges to, and help protect, the Reservoir and other wetlands and watercourses in or near the proposed project area. (FF-20-25) Similarly, the proposed mitigation plan would create and restore more wetlands than those lost (a net wetland gain of .61 acres), with improved wetland functions. (FF-20) Such mitigation would also restore and enhance existing wetlands and watercourses outside the proposed project area. (FF-20)

Most of the wetlands and watercourses in the immediate vicinity of the proposed regulated activity are within the watershed of the Reservoir, a source of public drinking water supply, and cannot be further developed without the approval of the Connecticut Department of Public Health. (FF-6-7) To the west of the proposed project area, Route 66 is already a divided four-lane highway and there would therefore be no reason to widen that section of the highway if this proposed project is constructed. East of the proposed project, Route 66 travels through a heavily-developed urban area. There is no evidence that the proposed project would have any impact on any remaining wetlands and watercourses in that area or that the applicant plans to conduct any further regulated activities in the vicinity of the proposed project area. (FF-7) No such activities are made inevitable if the proposed project is constructed. (Ex. DOT-2)

Therefore, I find the proposed regulated activities would have no significant adverse impacts

on wetlands and watercourses outside the areas for which the activities are proposed. I also find no significant adverse environmental impacts on future activities associated with, or reasonably related to, the proposed regulated activities which are made inevitable by these activities and which may have an impact on wetlands and watercourses.

B. CONN. GEN. STAT. §22A-19.

The Town of Middlefield and Citizens for a Sensible 66 intervened in this proceeding pursuant to Conn. Gen. Stat. §22a-19, alleging that the proposed regulated activities are reasonably likely to unreasonably pollute, impair or destroy the public's trust in the air, water or other natural resources of the state. Section 22a-19 provides that an agency "shall consider the alleged unreasonable pollution, impairment or destruction of the public trust in the air, water or other natural resources of the state and no conduct shall be authorized or approved which does, or is reasonably likely to, have such effect so long as, considering all relevant surrounding circumstances and factors, there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety and welfare."

The project is designed to address serious and significant problems regarding the safety and capacity of Route 66 within the proposed project area. (FF-8-14) The proposed project is thus intended to serve the public health, safety and welfare. The applicant would be required to take reasonable steps to minimize the amount of wetlands required to be filled to construct the proposed project and to limit any potential adverse impacts to surrounding wetlands and watercourses. (FF-18, 19, 22, 24-26, 28) The wetlands that would be lost are already partially degraded because of their proximity to the existing highway and comprise approximately 5% of the total wetlands in or

near the proposed project area. The loss of these wetlands would not have a significant adverse effect on the overall productivity of the wetlands system of which they are a part. (FF-16) The proposed project would improve the discharges to the Reservoir (a significant public drinking water supply) and Hans Brook (a Class “A” stream) and its tributary while protecting against downstream flooding. (FF-25, 27, 28) The proposed project would also protect the Reservoir from pollution from motor vehicle accidents or highway runoff. (FF-25, 26)

Although areas within and adjacent to the proposed project area provide wildlife habitat, there is no evidence that the proposed project would have any significant adverse impacts on flora, fauna and fisheries. (FF-22, 29, 30, 31) The applicant will compensate for the loss of wetlands habitat resulting from the proposed project through the creation and restoration of 2.38 acres of wetlands that would result in a net increase of .61 acres of wetlands. (FF-20) Because the proposed wetland mitigation areas would have a greater habitat value and increase the value of existing adjacent wetlands over those wetlands that would be lost, the proposed project would have a beneficial impact on area wildlife. (FF-17, 20, 21)

As the moving party, the burden is on the intervenors to establish such reasonable likelihood of unreasonable pollution. *Manchester Coalition v. Stockton*, 184 Conn. 51, 57 (1981). Upon review of this record, I find that the intervenors have not met their burden of proof under Conn. Gen. Stat. §22a-19. The proposed project will not result in significant adverse environmental impacts that are reasonably likely to have the effect of causing unreasonable pollution of the air, water or other natural resources of the state.

Even if I was to conclude, as the intervenors contend, that the proposed project would unreasonably pollute the air, water and other resources of the state, the proposed project should be

approved. Upon consideration of all relevant factors and circumstances, I find there is no alternative to Alternative #2 that is both feasible and prudent consistent with the reasonable requirements of the public health, safety and welfare, and in consideration of the social benefits to be derived from the proposed regulated activities. Conn. Gen. Stat. §§22a-19(b); 22a-38(17); 22a-38(18). *Sampari v. Inland Wetlands Agency*, 226 Conn. 579, 595 (1993); *Gardiner v. Conservation Commission*, 222 Conn. 98, 109-110 (1992).

RECOMMENDATIONS:

Based on the above findings and conclusions, I hereby respectfully recommend that the Commissioner issue the requested permit incorporating the terms and conditions of the draft permit (*see* Attachment No. 2) with the following modifications:

1. On page 1, first paragraph, delete “Jackson Street” and insert “Jackson Hill Road/Higby Road.”
2. On page 1, under the section entitled “Special Conditions”, delete the word “none” and insert the following:
 - “1. The permittee shall construct the wetland mitigation areas in accordance with the plans and specifications set forth in its application by the expiration date of this permit. The permittee shall include microtopographical features such as hummocks, logs, boulders, and grading irregularities in the wetlands mitigation areas.
 2. The permittee shall retain a qualified wetlands scientist approved by the Commissioner to design and supervise the planting of the forbs, shrubs and trees within and adjacent to the wetland mitigation and construction areas.
 3. The Commissioner may at any time require the permittee to take remedial action to ensure the success of the wetland mitigation areas, including, but not limited to, creating, obtaining or rehabilitating additional wetlands as off-site compensation.

4. The permittee shall, for a period of five years from the completion of its mitigation efforts, submit an annual report to the Commissioner, the Town of Middlefield Inland Wetlands Conservation Commission, and Citizens for a Sensible 66. This monitoring report shall detail: the level of success of its mitigation efforts; any problems and/or failures encountered; and efforts and plans to make the mitigation plan successful. In addition, this report shall include annual plant and wildlife surveys conducted during the spring and summer months by a qualified wetlands scientist or biologist.
5. The permittee shall, both during construction of the mitigation areas and for a period of five years following completion of creation and restoration of wetlands, manage all wetland mitigation areas to control invasive species as set forth in the Commissioner's *Non-Native Invasive Plant Species Policy* of November 17, 1998. (*See Attachment No. 5*).
6. On or before September 30 of each year, for a period of five years after the wetlands mitigation is completed, the permittee shall submit to the Commissioner, and the Town of Middlefield Inland Wetlands Conservation Commission, and Citizens for a Sensible 66 an annual monitoring report on the advance and establishment of nuisance plant species, including *Lythrum Salicari* (purple loosestrife) and *Phragmites* (common reed), within and adjacent to the mitigation area, which shall include measures to be taken by the applicant for the control of such species. The permittee shall obtain written approval from the Commissioner prior to initiating any control measures for invasive species involving the use of herbicides or pesticides and shall notify the Town of Middlefield Inland Wetlands Conservation Commission, the Middletown Water Department, the Commissioner, and Citizens for a Sensible 66 of said intended action.
7. The permittee shall install and maintain grassed swales with a check dam and an adequately sized oil/grit separator chamber in the stormwater drainage system east of Coe Hill to prevent highway runoff prior to it being discharged to the Hans Brook tributary. If any highway runoff enters this tributary, the permittee shall take immediate corrective action and notify the Commissioner, the Town of Middlefield Inland Wetlands Conservation Commission, and Citizens for a Sensible 66.

8. At least sixty days before the anticipated start of construction, the permittee shall submit a planting plan to the Commissioner for his review and written approval for the wetland areas immediately adjacent to wetland fills for the relocated section of watercourse at wetlands impact Areas numbers 2 and 4. The planting plan shall include native fruit bearing shrubs adapted to the differing soil drainage types and wetland hydrology and microtopography of those areas.
 9. The permittee shall install the largest possible sized conduit in the highway at STATION 55+00 for the purpose of connecting wetland impact Area numbers 5 and 6 and to provide a corridor for wildlife.
 10. If the permittee finds, or otherwise learns of the existence of, any endangered, threatened, or species of special concern at or adjacent to the area of the regulated activities, the permittee shall contact the DEP Natural Diversity Database staff at (860) 424-3540 for assistance in relocating or mitigating the impacts to such specie(s). The permittee shall immediately cease all work at the specific location where the specie(s) are found until a written plan to mitigate the impact to said specie(s) is approved by the Commissioner and implemented by the permittee. (Docket Item Nos. 55-59)
 11. To insure compliance with this permit, the permittee shall retain on-site during all periods of activity authorized by this permit, a full-time environmental inspector approved by the Commissioner.
 12. In the case of a conflict between the plans, specifications or representations set forth in the application and the terms and conditions of this permit, the terms and conditions of this permit shall control.”
3. On page 6, Condition #9, last line, delete “Section 53-157” and insert “Section 53a-157b.”

December 22, 1999
Date

/s/ Lewis J. Miller
Lewis J. Miller, Hearing Officer