

GI. Growth Inducing and Cumulative Impacts

Comment 1

The *Growth Inducing and Cumulative Impacts* chapter of the DEIS focuses on potential development and economic impacts that may accrue due to construction of the project, and casts these potential impacts in a mostly positive light. No discussion is provided of potential cumulative impacts to natural resources. The discussion of cumulative impacts should be substantially expanded to discuss potential impacts to natural resources, including species, both within and beyond the border of the 937-acre site. The discussion should include potential impacts from all large scale proposed developments along the Route 22/55 corridor, and must include a discussion of species, habitats and fragmentation and/or connectivity of habitats throughout the Route 22 corridor and Great Swamp. The discussion should include, but not necessarily be limited to, the following large-scale projects:

- Ketcham's Corners (Dover, NY)
- Country Squire (Dover, NY)
- Stony Brook (Dover, NY)
- Furnia Subdivision (Dover, NY)
- Wind Rose (Dover, NY)
- Carvel (Pine Plains, NY)
- Brady Brook (Pawling, NY)
- Madison Woods Development Company (Pawling, NY)
- Deerfield Estates (Pawling, NY)
- Jucca Company/Castagna Realty/Westage Company (Pawling, NY)
- Silo Ridge (Amenia, NY)
- Keane Stud Ridge (Amenia, NY)

(Scott Ballard, Environmental Analyst, NYSDEC, Letter, 6/30/09, Pg. 12)

Response 1

Unlike most of the proposed projects listed above, the Knolls of Dover project entails the redevelopment of an existing facility rather than the development of undisturbed raw land. The site development plan has been modified to pull development away from the sensitive habitats on the site and concentrate development in previously disturbed portions of the site. A majority of the currently-undeveloped areas of the site will remain as open space, including portions of the site which presently serves as important habitat and dispersal corridors for wildlife and migratory birds. It is not known whether the other proposed projects listed in the comment are adhering to the same development practices that are being utilized at the Knolls of Dover site, given the variety of project locations, and individual site conditions. It is also noted that SEQRA requires that the potential growth inducing and cumulative impacts of the proposed action be studied. An evaluation of the potential impacts of other developments is not within the scope of this EIS. However, the following information is provided to further consider potential cumulative impacts of the 12 identified regional projects, located in the Town of Dover, Town of Pawling, Town of Amenia and Town of Pine Plains (see Exhibit II.GI-1, Regional Projects).

While seven of the 12 projects are within a few miles of the project site, the remainder are a significant distance from the proposed development:

- *The proposed Carvel project is located approximately 26 miles north of the Project in the Towns of Pine Plains and Milan;*
- *The proposed Silo Ridge and Keane Stud Ridge are located approximately 15 miles north of the Project in the Town of Amenia;*
- *The proposed Brady Brook and Jucca Company projects are located approximately 7 miles south of the Project in the Town of Pawling.*

Given these distances, the cumulative impacts of these projects on the Knolls of Dover project are limited. The Draft Environmental Impact Statement analyzed the potential impact of proposed development in the region on area roadways, including Route 22, which links these projects together; the lone exception is the Carvel project, which is proximate to the Taconic State Parkway. Beyond any traffic impacts to the Route 22 corridor, the significant distances would likely preclude any cumulative impacts to wildlife, habitats and other natural features.

The remaining seven projects identified by the NYSDEC are geographically closer to the subject site. Each of the projects was mapped in reference to several environmental features, such as NYSDEC designated wetlands, waterbodies, streams, topography and Critical Environmental Areas (CEA) (see Exhibits II.GI-2 and II.GI-3). The following is a review of each project in reference to the environmental features listed above:

Ketcham's Corners

Ketcham's Corners is a project located at the northeast intersection of Route 22 and Mill Street in the hamlet of Dover Plains within the Town of Dover. The site is a mixed-use building that is currently developed and operating in the center of the hamlet. The project includes approximately 10,000 square feet of commercial space and 6 residential units. While the project might result in a modest increase to traffic on the Route 22 corridor, it is not likely to result in any adverse impacts of a cumulative nature on sensitive environmental resources. No CEA's are in the vicinity of this project.

Stony Brook

Stony Brook is a proposed 28-unit residential condominium project located on the west side of Route 22 in the hamlet of Dover Plains within the Town of Dover. The site consists predominantly of agricultural fields and old fields with some forested areas around the northern perimeter. A stream cuts through the agricultural fields in the southwest portion of the site, but otherwise does not appear to have any sensitive environmental constraints that would result in cumulative impacts on the corridor. The stream is tributary to the Ten Mile River and is classified as C(T) by NYSDEC. The applicant for this project has already conserved a significant portion of the site through the donation of approximately 63 acres to the Town of Dover. No CEA's are in the vicinity of this project.

Country Squire

Country Squire is a proposed multi-family development in the hamlet of Dover Plains of approximately 17 dwelling units. A stream that is tributary to the Ten Mile River crosses through a portion of the property and is classified as C(T) by NYSDEC. Given that a portion of the property is currently developed with a multi-family residential use, it is not likely that the project would result in cumulative impacts, beyond a slight increase of traffic generation. No CEA's are in the vicinity of this project.

Furnia Subdivision

The proposed Furnia Subdivision is located adjacent to Route 22 in the Town of Dover, approximately 4 miles north of the Proposed Action. The subdivision would include approximately 32 residential lots. The western portion of the site contains a residence and several outbuildings. The eastern portion of the site is forested with the Swamp River (Class C(T)) forming the eastern property boundary. From the Knolls of Dover Project Site, the Swamp River flows north, eventually crossing the southeastern boundary of the Furnia Subdivision site. The site does not appear to contain any steep slopes, but there may be wetlands associated with the Swamp River. The wetlands are not mapped as regulated by NYSDEC. This project could potentially contribute to cumulative impacts to water quality and loss or degradation of wildlife habitat associated with the Swamp River and the Ten Mile River, which the Swamp River joins to approximately one mile north of the site. The northern most portion of the Great Swamp CEA is located greater than one mile to the south of this project site. There are no other CEAs on or near the site.

Wind Rose¹

The proposed Wind Rose project is located approximately 1.0 miles to the south of the Proposed Action. Of all of the projects the NYSDEC requested be part of a cumulative analysis, the proposed Wind Rose project envelops the largest land area. Wind Rose would include approximately 230 to 260 dwelling units, a golf course and other recreational amenities on 1,100 acres located in the Town of Dover and Town of Pawling. Initial analyses of available map resources for the site identify two streams and several minor waterbodies, as well as portions of NYSDEC regulated freshwater wetlands DP-22, DP-33 and PL-4. The eastern portion of the site also contains acreage within the Great Swamp CEA. Given the size of the proposed development and its relationship to the Great Swamp CEA, the proposed development of this site could contribute to cumulative impacts to several sensitive environmental features, including water quality and habitat issues relating to the Great Swamp CEA.

Deerfield Estates

Deerfield Estates is a proposed subdivision of approximately 33 lots on a 116 acre site that is located 3.0 miles south of the Proposed Action in the Town of Pawling. A portion of the site had been used for mining gravel. The remaining site area consists of mixed deciduous forest along with some areas of wetlands that are associated with a southeast flowing perennial stream (Class C(T)) that crosses the south portion of the

¹ It is noted that the Wind Rose application has since been withdrawn. However, the proposal has been retained in this section in order to provide a more conservative analysis.

site. The stream ultimately flows into the Great Swamp that is located to the south of the site, south of River Road. The wetlands that are associated with the small stream are regulated by the NYSDEC. The site is not within the Great Swamp CEA or any other CEA. There are some areas of steep slopes in the north portion of the site.

Madison Woods

Madison Woods is a proposed subdivision of 34 residential lots on a 197 acre site that is located 3.5 miles south of the Proposed Action in the Town of Pawling. The site is undeveloped and represents a combination of mixed deciduous and coniferous forest, old field, and freshwater wetland habitats, including prevalent areas of invasive and non-native species. An excellent example of a rich, sloping fen is located on the west side of the site, and is considered to be potential bog turtle habitat. The larger wetlands on the west portion of the site are under the jurisdiction of the NYSDEC. The stream that flows through the wetlands on the site is tributary to Green Mountain Lake and is classified by NYSDEC as Class C. The wetlands on the site are not directly associated with the Great Swamp, and the site is not within the Great Swamp CEA or any other CEA. The site drains to the southeast to Green Mountain Lake, which ultimately drains to the north flowing portion of the Great Swamp. However, given that there is a lake as well as existing developed areas between the site and the Great Swamp it would be anticipated that there would not be a significant impact on the Great Swamp from the proposed subdivision. In addition to the environmentally sensitive wetlands west of Dodge Road there are also areas of steep slopes in the far western portion of the site.

If all seven of the above projects were approved and developed, they would combine to total approximately 410 new residential units and 10,000 square feet of new commercial space on approximately 1,467 acres of land within the Towns of Dover and Pawling. In comparison, the Towns of Dover and Pawling had a reported total of 6,367 housing units in the 2000 Census. Thus, if all 410 new residential units were to be approved and constructed it would represent an approximate 6% growth in the residential inventory of the Towns.

Collectively the projects might be expected to generate sewer and water demands of approximately 195,750 GPD and 215,325 GPD respectively. This estimate is considered conservative since the residential component of the demand estimate is based on an assumed hydraulic loading of 475 GPD/residence, the equivalent of a four bedroom home. The demand estimate for the new commercial development is based on an assumed 0.1 GPD/commercial square foot. Both unit flow estimates are based on suggested design flow rates outlined in NYSDEC's 1988 Design Standards for Wastewater Treatment Works Intermediate Sized Sewerage Facilities. Calculation of the combined sewer flow estimate is as follows:

$$(410 \text{ residences} \times 475 \text{ gpd/residence}) + (10,000 \text{ SF commercial} \times 0.1 \text{ gpd/SF commercial}) = 195,750 \text{ gpd}$$

For further comparison, the normal average flow of the Swamp River at Dover Plains is estimated at 6.6 CFS or 4,270,000 GPD. Thus, if all seven developments were in fact to be

constructed and their treated effluent discharged to the river, it would be expected to represent less than 5% of the flow through the Swamp River.

The 215,325 GPD estimate of combined water demand is based on the estimated sewer demand plus an additional 10% to account for water consumption. By multiplying the 195,750 GPD sewer demand estimate by 110%, the 215,325 GPD water demand estimate is obtained.

Not included in the 12 projects above, but equally important, is the proposed Cricket Valley Energy Center (CVEC). While not referenced by DEC, this project would include the construction of a natural gas electricity plant in the Town of Dover. The site is located approximately 2½ miles north of the Knolls of Dover project site, adjacent to the west of Route 22. A portion of the proposed site is within the Great Swamp CEA. Given the nature of the proposed use, the project could result in site specific impacts to air quality. The project could contribute to cumulative impacts to water quality, wildlife and habitats. Lead Agency status for the SEQRA review of the Cricket Valley Energy Center project may be taken by the Town Board of the Town of Dover or the NYSDEC.

As described above, several of the projects could contribute to cumulative impacts to environmental features. In addition to removing development from environmentally sensitive areas to the greatest extent practicable, the Applicant has committed to several environmentally sustainable and low impact development (LID) features that would mitigate potential long term impacts to wetlands, habitats and other natural features on-site. It is assumed that the various approval agencies reviewing the other projects in the region would adhere to the same standards for assessment of potential impacts and require the same type of mitigation measures proposed at the Knolls of Dover in each environmental review. This will be especially important in the environmental review of the proposed Wind Rose development and the Cricket Valley Energy Center, two significant projects currently proposed in the Town of Dover. If these and other regional projects commit to practices similar to those proposed by the Applicant, cumulative impacts to wetlands, plants, wildlife, wildlife corridors and habitats would be sufficiently mitigated.

Comment 2

One of the major sources of impacts to the health of the Great Swamp Watershed is the Route 22 corridor. The highway effects air quality, water quality and the quality of life for residents of the region, both human and nonhuman. Regulators and the developer must consider the traffic and offsite development impacts of a project of this size. Will the project eventually necessitate the expansion of the Route 22 corridor to handle increased traffic?

(Mark King, Director of Protection Programs, The Nature Conservancy, 6/26/09, Pg. 2)

Response 2

The traffic study presented in the DEIS studied 12 intersections along the Route 22/Route 55 corridor for the AM, PM, and Saturday peak hours, projecting traffic volumes to the year 2020. One of the traffic analyses considered future traffic conditions with traffic for 11 projects in the project's vicinity, including the proposals for Carvel, Silo Ridge and Wind Rose

developments. The results of the analyses include recommendations for intersection improvements and adjustments to signal timing at the Route 22/Wheeler Road and Route 22/Pleasant Ridge Road intersections, along with monitoring for potential future signalization at the additional intersections in the Route 22 corridor. The traffic study does not call for widening of Route 22, except where necessary (e.g., at Wheeler Road) to provide separate turning lanes.

Comment 3

The integrity of the Great Swamp and its habitat corridor is compromised every time development along its perimeter occurs, but the impacts of dense housing along its margin are especially detrimental because this focuses long term human activity in the most vulnerable zone. The degradation that results includes reducing the effective buffer of the wetland system upon which we depend.

(James Utter, Chairman, Friends of the Great Swamp, Letter, 6/30/09, Pg. 1)

Response 3

The Applicant has worked to balance the directives from the Town, other groups and planning experts to concentrate the proposed development around the existing train station with the directives to provide the necessary buffers for the sensitive environment that exists along that same train line. The requested Town Center at the intersection on Route 22 lies in close proximity to the Great Swamp and its floodplain. The majority of the proposed development is located in areas where former HVPC buildings exist. Outside these areas, environmental resources are protected to the maximum extent practicable.

Comment 4

A pervasive problem is that small impacts raise no alarm. But small impacts occurring at several locations, often including different types of impacts, none of which may be significant when considered separately, add up and interact in ways that cumulatively cause serious degradation of the system.

Consider the Great Swamp, the landscape integrator for Dover, Pawling, Patterson and Southeast. This 20 mile long wetland runs through the center of Dover Knolls. Small intrusions into wetland buffer zones at several points, withdrawal of groundwater by four wells into the aquifer, discharging of treated sewage effluent into the Swamp River, increasing stormwater runoff into the system as impervious surface is increased, adding more road salt to streams from deicing more roads on steep slopes, and increasing the human activity along its edge, none of these will ‘do in’ the Great Swamp the DEIS asserts, at least not over the short term. But taken cumulatively, these proposed actions may result in serious degradation of this Critical Environmental Resource.

Once it is acknowledged that Dover Knolls is not proposed in a development vacuum, but is taking place at a time Dover has at least two other major projects in the Great Swamp Watershed on the “drawing boards,” the potential arises for a plethora of unanticipated environmental impacts due to the cumulative effects. Consider water withdrawal from the aquifer – each

project proposes withdrawing nearly a million gallons of water per day. What will be the impact? Especially in light of all the other types of accompanying actions.

If the DEIS assesses such cumulative impacts, either on site or watershed-wide, I missed it. But such an evaluation is essential and a requirement of SEQRA.

(James Utter, Chairman, Friends of the Great Swamp, Letter, 6/30/09, Pg. 1-2; James Utter, Chairman, Friends of the Great Swamp, Public Hearing Transcript, 6/3/09, Pg. 215-216)

Response 4

The Project is a redevelopment project on a site that was extensively and intensively used for a very long time, unlike a project proposed on greenfields. Many aspects of the redevelopment improve the situation that resulted from the closure of the State facility with some new project impacts being less than those incurred from the 70 year state operation. The Applicant has discussed the impacts outlined in the Scoping Document as required under SEQRA, including cumulative impacts.

Comment 5

Each type of potential impact needs to be minimized since cumulative and synergistic interactions are not always easy to predict. In the case of Dover Knolls, examples include:

- Requiring tertiary treatment of sewage effluent to significantly reduce nutrient input to the Great Swamp; and
- Eliminating the row of housing units on the wetland buffer line north of Wheeler Road.

(James Utter, Chairman, Friends of the Great Swamp, Letter, 6/30/09, Pg. 2; James Utter, Chairman, Friends of the Great Swamp, Public Hearing Transcript, 6/3/09, Pg. 216)

Response 5

Tertiary treatment will be provided. The housing units described above were within the limits of FEMA's proposed 100-Year Floodplain boundaries and therefore have been relocated in the modified plan presented in the FEIS.