

Rec'd Jan 25 07
(11:44) etc

McCCRONE

- Engineering
- Environmental Sciences
- Construction Services
- Land Planning & Surveying

January 24, 2007

Ms. Constance C. Holland, AICP
 Director
 Delaware Office of State Planning Coordination
 122 William Penn Street, Suite 302
 Haslet Building, Third Floor
 Dover, DE 19901
 Phone: (302) 739-3090
 Fax: (302) 739-6958

Re: PLUS review – PLUS 2005-11-04; Nentego

Dear Constance,

This letter is in response to comments received from the Delaware Office of State Planning Coordination following the PLUS review of the Nentego in Sussex County, Delaware. The PLUS Comments are included herein with [our responses in blue.]

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies/Project Location

- This proposal is located in an Investment Level 2 area according to the *Strategies for State Policies and Spending* and in the Environmentally Sensitive Developing Area according to the Sussex County Comprehensive Plan. In these areas, State policies support development activities that are sensitive to the natural environment and in keeping with the character of the area. [It is noted that the Nentego Development is located within the Environmentally Sensitive Developing Area.]

Street Design and Transportation

- A TIS has been completed and the recommendation letter sent to Sussex

County in November. The County should require the developer to adhere to the 8 recommendations in the letter (copy attached) [A meeting was held on January 19, 2006 to review the recommendations presented in the original Davis/Norwood Property TIS. As a result, a revised TIS review has been completed. (A copy of the TIS review, completed by McCormick Taylor, dated January 19, 2006, has been enclosed for your use.) It shall be noted that there are now 6 recommendations in the review. The developer intends to address all six recommendations in their entirety.]

- DeIDOT recommends that stub streets be provided to the James and Jean Norwood property (Tax Parcel 2-34-29-220) and to one or more properties along Layton Davis Road. [Nentego is a proposed private development which will have its own Home Owners Association, Condominium Organization, and Maintenance standards. Therefore, a stub street to the adjacent parcels is not included, as it does not lend well to this design.]

Natural and Cultural Resources

- The developer should use best management practices (BMP's) to mitigate for the amount of impervious cover proposed. Pervious alternatives to impervious surfaces should be used where appropriate. [Best management practices (BMP's) will be utilized on site to accommodate the runoff from proposed impervious areas.]
- Based on a preliminary evaluation of this project using a model computer model developed by DNREC, the development as currently conceived **does not** meet TMDL nutrient reduction requirements for nitrogen and phosphorus – the applicant is strongly advised to consider the use of appropriate BMPs and Best Available Technologies (BATS) to ensure compliance. [A detailed TMDL analysis has been completed for this site. The model results stated that with the proposed BMP's, the proposed development meets required TMDL reduction for both Total Nitrogen and Phosphorus.]
- The site falls within a wellhead protection area for Tidewater Utilities (Meadows District). Most of the northern parcel and a section of the southern parcel are covered by a wellhead protection area (see following map and attached map). Specific comments are included in the "Water Resource Protection Area" section of the letter. [The wellhead protection area for Tidewater Utilities has been identified in the layout and design of this site. Efforts have been made to minimize the amount of proposed impervious area in this protection area.]

- According to the site plan, 3.2 out of 6.6 acres of trees are going to be removed. Reconfiguration of the site plan could preserve this wooded area. If all of the proposed stormwater management ponds aren't necessary for flood abatement, one or two could be eliminated. The space created could be used for features that are currently in the wooded area. The wooded area could then be saved as community open space. [It is expected that all of the proposed stormwater management ponds will be needed in order to address the necessary water quality and quantity requirements. The developer intends to preserve trees where possible.]

The following are a complete list of comments received by State agencies:

Office of State Planning Coordination – Contact: Ann Marie Townshend 739-3090

This proposal is located in an Investment Level 2 area according to the *Strategies for State Policies and Spending* and in the Environmentally Sensitive Developing Area according to the Sussex County Comprehensive Plan. In these areas, State policies support development activities that are sensitive to the natural environment and in keeping with the character of the area. [It is noted that this development is located with in Investment Level 2 and within the Environmentally Sensitive Developing Area. The developer intends to preserve trees where possible as well as maintain natural environmental characteristics of the site, in keeping with the character of the area.]

We note that this proposal is adjacent to the Riverside Plaza proposal which was reviewed through PLUS as 2004-06-21. The Riverside Plaza proposal included a street connection to this site. We recommend that the developer work with the developer of the adjacent proposal to provide appropriate interconnections. [The plan has been revised to include an interconnection with the Riverside Plaza proposal.]

Division of Historic and Cultural Affairs – Contact: Alice Guerrant 739-5685

This parcel contains the National Register-listed Robert Davis Farmhouse (S-754), which is part of the Nanticoke Indian Community Thematic Resources nomination. Other properties that are part of this nomination are located around this parcel, including the Harmon School (S-165; now the Nanticoke Indian Museum) on Rt. 24 to the northeast; the Isaac Harmon Farmhouse (S-751) on Layton Davis Rd. to the south; and Indian Mission School (S-757) and Harmony Church (S-753) on Rt. 24 to the southwest. The parcel has only low potential for archaeological resources not directly related to the Davis Farmhouse. [The developer has worked with the State of Delaware Historical and Cultural Affairs concerning the Robert Davis Farmhouse (S-754). It is the opinion from the State that "we have no objection to the demolition of the building."]

While this development is in Investment Level 2, it continues the indirect adverse visual and noise effects on the Nanticoke Indian Community through the destruction of the historic farming landscape that was the setting for these historically significant properties and the increase in traffic and general noise, and will be a direct adverse effect on the Davis Farmhouse through its demolition. The DHCA requests that the development be adequately landscaped to mitigate the adverse visual effect on the nearby properties. The developer said at the PLUS meeting that the house is now too deteriorated to move, and that he would arrange access for a recordation of the property. They thank him for this and will be in contact with him soon. [Landscaping will be provided on this site in order to lessen then effects of developing the historic farmland.]

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) A traffic impact study (TIS) was done for this development under the name Davis/Norwood Property. The DelDOT consultant, McCormick Taylor (MT) reviewed that study and provided their findings to DelDOT in a letter dated October 3, 2005, which was sent to the Sussex County Planning & Zoning Commission on November 8, 2005. A copy of MT's letter is enclosed. Their letter recommends several things, contained in a list of eight numbered items, that the County should require of the developer. To clarify the seventh item in that list, the plan for an adjacent development, Riverside Plaza, includes an easement for a street connection between the two developments. The developer of Nentego should be required to provide an easement or right-of-way to connect to that easement and build a street in that easement or right-of-way. If the developer of Riverside Plaza has already built the street on their side, the developer of Nentego should be required to build the connection. [A meeting was held on January 19, 2006 to review the recommendations presented in the original Davis/Norwood Property TIS. As a result, a revised TIS review has been completed. (A copy of the TIS review, completed by McCormick Taylor, dated January 19, 2006, has been enclosed for your use.) It shall be noted that there are now 6 recommendations in the review. The developer intends to address all six recommendations in their entirety.]

- 2) DelDOT recommends that stub streets be provided to the James and Jean Norwood property (Tax Parcel 2-34-29-220) and to one or more properties along Layton Davis Road. Given the seasonal congestion on Route 24, it is recommended that the developer provide a connection to Layton Davis Road now, if possible, so that residents of the Rosedale Beach area can access the proposed development without using Route 24. If they cannot obtain the land to build that connection now, they should provide a stub street to a parcel along Layton Davis Road that is large enough to be subdivided and redeveloped in the future. DelDOT recognizes that the proposed wastewater treatment area would make most of those parcels inaccessible but there are other parcels through which a connection could be made. [Nentego is a proposed private development which will have its own Home Owners Association, Condominium Organization, and Maintenance standards. Therefore, a stub street to the adjacent parcels is not

included, as it does not lend well to this design.]

- 3) DelDOT Contract No. 24-112-09, would improve Route 24 from Holly Lake Road (Sussex Road 301) to Oak Orchard Road. While the TIS did discuss the project in general terms, DelDOT wants to be sure that the developer and the project team are aware of each other's efforts and are coordinating them as necessary. The manager for our project is Mr. Mark Harbeson. He may be reached at (302) 760-2346. If the developer's site engineer has not already done so, it is recommended he contact Mr. Harbeson and become familiar with the project. [The recommendation to coordinate efforts between the developer and the project team with regards to improvements to be made on Route 24 has been noted.]
- 4) Route 24 is classified as a major collector road. Collector road rights-of-way vary but are generally wider than those of local roads. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 40 feet from the centerline on collector roads. Therefore they will require right-of-way dedication along the frontage to provide any additional width needed from this project. [The dedication of land will be provided in order to create the required right-of-way.]
- 1) DelDOT will also require that sidewalks or a paved multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site. A final determination of which form of path should be provided in which location will be made later in the plan development process. DelDOT recommends that sidewalks be provided within the site to promote walking for short trips, such as between the condominiums and the shopping center. [A 15-foot wide easement will be provided as required.]
- 2) The developer's site engineer should contact Mr. John Fiori, DelDOT Subdivision Manager for Sussex County, regarding their specific requirements for access. He may be reached at (302) 760-2260. [The developer's site engineer will contact Mr. John Fiori to discuss this project.]

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-9071

Soils

According to the soil survey update, Fort Mott, Pepperbox, and Downer were mapped in the immediate vicinity of subject parcel. Fort Mott is a well-drained upland soil that, generally, has few limitations for development. Pepperbox is a moderately well-drained soil of low-lying uplands that has moderate limitations for development. Downer is a well-drained upland soil that, generally, has few limitations for development. [A Soil

Reconnaissance Report for Wastewater Disposal, prepared by Eastern Shore Soil Services, has been completed for this site. The report concludes that "the site can support some sort of on-site wastewater disposal."]

Impervious Cover

Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline. Based on analyses of 2002 aerial photography by the University of Delaware, the Inland Bays watershed (Indian River & Rehoboth Bays), at that time, had about 8.7 percent impervious cover. Although this data is almost 4 years old and likely an underestimate - it illustrates the importance of a proactive strategy to mitigate for predictable and cumulative environmental impacts. Since the amount of imperviousness generated by this project (approximately 24%) will far exceed the desirable watershed threshold of 10 percent, the applicant is strongly advised to pursue best management practices (BMPs) that mitigate or reduce some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with retention of existing forest cover or additional tree plantings – are examples of practical BMPs that could easily be implemented to reduce surface imperviousness. [This site has been designed with the concept of minimizing proposed impervious area. BMP's will be implemented on site in order to reduce impacts of the proposed impervious areas. Proposed landscaping will be provided, in addition to preserving existing trees where feasible.]

TMDLs

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Inland Bays Watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. This project is located in the **low** nutrient reduction area requiring a 40 percent reduction in both nitrogen and phosphorus.

TMDL Compliance through the PCS

Significant nitrogen and phosphorus loading reductions must be realized from all sources, including community onsite wastewater systems. The Department has developed performance standards for on-site wastewater treatment and disposal systems that have been presented as a part of the proposed Pollution Control Strategy (PCS). Upon promulgation of the proposed PCS regulation, new and existing wastewater disposal

systems will be required to significantly reduce nitrogen and phosphorus loading in receiving waters of the greater Inland Bays watershed. Such reductions – known as “Performance Standards” - will require (where applicable) nitrogen and phosphorus loading not exceed average annual discharge concentration levels of 5 and 2 mg/l for nitrogen and phosphorus, respectively.

The proposed pollution control strategy (PCS) will also require the completion of a nutrient budget for the proposed project in order to estimate how TMDL nutrient loads will change with the development of this parcel. The protocol for this nutrient budget is a computer-based model that considers a variety of land use scenarios in combination or absence of BMPs. Based on a preliminary evaluation of this project using this model, the development as currently conceived **does not** meet TMDL nutrient reduction requirements for nitrogen and phosphorus – the applicant is strongly advised to consider the use of appropriate BMPs and Best Available Technologies (BATs) to ensure compliance. Examples of BMPs or BATs that should be used to significantly reduce nutrient loading from this project, include: practices that reduce impervious cover; reducing the amount of forest cover removal, use of appropriate buffering widths from wetlands (if applicable); use of innovative or “green technology” methodologies for stormwater; and use of performance-based wastewater disposal systems or, better yet, making connection to a public sewer. The applicant is encouraged to consider all of the above-suggested BMPs or BATs to ensure that these reductions are attained. We suggest that the applicant verify their project’s compliance with the specified TMDL loading rates by running the model themselves. Please contact Lyle Jones of Watershed Section at 739-9939 for the acceptable model protocol. [A detailed TMDL analysis has been completed for this site. The model results stated that with the proposed BMP’s, the proposed development meets required TMDL reduction for both Total Nitrogen and Phosphorus.]

ERES Waters

This project is located adjacent to receiving waters of Inland Bays designated as waters having Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 5.6 of Delaware’s “Surface Water Quality Standards” (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a “pollution control strategy” to reduce non-point sources of nutrient runoff through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 5.6.3.5 of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree practicable, or where attainable, a standard requiring no discharge of pollutants. [The site is not adjacent to any waterways.]

Water Resource Protection Areas

The DNREC Water Supply Section has determined that it does fall within a wellhead protection area for Tidewater Utilities (Meadows District). Most of the northern parcel and a section of the southern parcel are covered by a wellhead protection area (see following map and attached map). Wellhead protection areas are surface and subsurface areas surrounding a public water supply well where the quantity and quality of groundwater moving toward such wells may be adversely affected by land use activities.

The DNREC Water Supply Section recommends that the portion of the new development within the wellhead protection area not exceed 50% impervious cover. Further, some allowance for augmenting ground-water recharge should be considered if the impervious cover exceeds 20% but is less than 50% of that portion of the parcel within this area. The purpose of an impervious cover threshold is to minimize loss of recharge (and associated increases in storm water) and protect the quality and quantity of ground water and surface water supplies. [Efforts have been made in this design to reduce the amount of proposed impervious area within the wellhead protection area.]

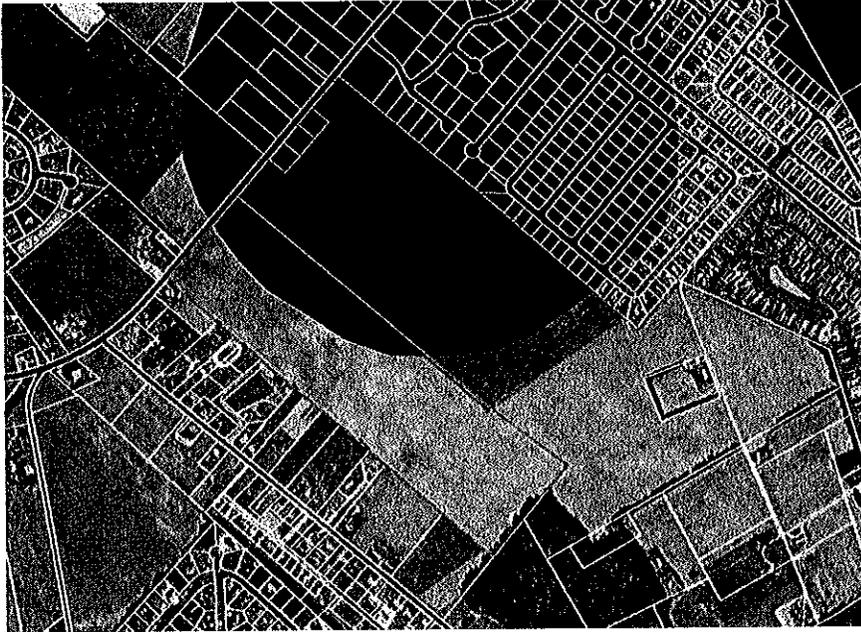
The proposed development would change the impervious over from 0% to approximately 24.1%. These numbers were provided by developer on the PLUS application. The development plan includes 57.65 acres of open space. Ideally, relocating open space areas to the northern parcel and the northern part of the southern parcel would decrease the total impervious area in the wellhead protection area. Augmenting the groundwater recharge with clean rooftop run-off systems are another alternative to reducing the total impervious cover in the wellhead protection area. [The developer has revised the site plan to eliminate the 12 unit apartment buildings, thus eliminating the proposed large impervious parking areas for each 12 unit building.]

For more information refer to the March 2004 Final Source Water Protection Guidance Manual for the Local Governments of Delaware
<http://www.wr.udel.edu/swaphome/phase2/SWPguidancemanual.html>

and

Ground-Water Recharge Design Methodology
http://www.wr.udel.edu/swaphome/phase2/Publications/swapp_manual_final/swapp_guidance_manual_supp_1_2005_05_02.pdf

Map of Nentego with affected parcels in light blue and wellhead protection areas in dark red.



Water Supply

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. [It is noted that a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points.] In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation. [It is noted that a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.] All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising. Potential Contamination Sources do exist in the area, and any well permit applications will undergo a detailed review that may increase turnaround time and may require site specific conditions/recommendations. In this case, there is an Underground Storage Tank within 1000' feet of the proposed project: Davis Property. [It is noted that all well permit applications must be prepared and signed by a licensed water well contractor.]

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

Sediment and Erosion Control/Stormwater Management

A detailed sediment and stormwater plan will be required prior to any land disturbing

activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through Sussex Conservation District. Contact Sussex Conservation District at (302) 856-7219 for details regarding submittal requirements and fees. [A detailed sediment and stormwater plan will be prepared prior to land disturbing activity.]

A Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity must be submitted to DNREC Division of Soil and Water Conservation along with the \$195 NOI fee prior to plan approval. [A NOI for Stormwater Discharges associated with Construction Activity will be submitted to DNREC.]

Applying practices to mimic the pre-development hydrology on the site, promote recharge, maximize the use of existing natural features on the site, and limit the reliance on structural stormwater components, such as maintaining open spaces, should be considered in the overall design of the project as a stormwater management technique. Green Technology BMPs must be given first consideration for stormwater quality management. Each stormwater management facility should have an adequate outlet for release of stormwater. [Post-development hydrology will be less than or equivalent to the pre-development hydrology. Green Technology BMP's will be investigated as part of the overall stormwater management design.]

It is strongly recommended that you contact the reviewing agency to schedule a preliminary meeting to discuss the sediment and erosion control and stormwater management components of the plan. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. [It is noted that a preliminary meeting is recommended.]

Open Space

The proposed site plan includes 57.65 acres of open space. Traditional maintenance of open space in the form of turf grass can be expensive and labor intensive. In areas set aside for open space, the developer is encouraged to consider establishment of forested areas or meadow-type grasses. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces. [It is noted that the developer is encouraged to establish forested areas or meadow type grasses in the open space areas.]

Forest Preservation

According to the site plan, 3.2 out of 6.6 acres of trees are going to be removed. Reconfiguration of the site plan could preserve this wooded area. If all of the proposed stormwater management ponds aren't necessary for flood abatement, one or two could be

eliminated. The space created could be used for features that are currently in the wooded area. The wooded area could then be saved as community open space. [The site has been designed to preserve existing trees where feasible.]

Although leaving a forest intact is usually more beneficial to the existing wildlife and is preferential to clearing, it is recommended that clearing not occur April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize forests for breeding. [The recommendation to prohibit clearing from April 1st to July 31st has been noted.]

Nuisance Waterfowl

There are numerous stormwater management ponds in the site plan and they may attract waterfowl like resident Canada geese and mute swans. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. We recommend native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the number of ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized. [The recommendation to provide native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the perimeter, has been noted.]

Underground Storage Tanks

There are two active LUST sites located near the proposed project:

Davis Property, Facility # 5-000118, Project # S9207199
Wagner Property, Facility # 5-000849, Project # S9701008

No environmental impact is expected from the above active LUST site. However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would be need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel with nitrile rubber gaskets in the contaminated areas. [The Tank Management Branch shall be notified should any underground storage tank or petroleum contaminated soil be

discovered during construction. Should any unanticipated contamination be encountered and PVC pipe is being utilized, ductile steel with nitrile rubber gaskets shall be introduced to replace said pipe in the contaminated areas.]

Solid Waste

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average, each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to be aware of the impact this project will have on the State's limited landfill resources and, to the extent possible, take steps to minimize the amount of construction waste associated with this development. [The developer is aware of the current impacts and will take steps to minimize the amount of construction waste associated with this development.]

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 6.4 tons (12,739.6 pounds) per year of VOC (volatile organic compounds), 5.3 tons (10,547.6 pounds) per year of NOx (nitrogen oxides), 3.9 tons (7,782.2 pounds) per year of SO2 (sulfur dioxide), 0.3 ton (692.7 pounds) per year of fine particulates and 532.8 tons (1,065,654.1 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 2.6 tons (5,138.5 pounds) per year of VOC (volatile organic compounds), 0.3 ton (565.4 pounds) per year of NOx (nitrogen oxides), 0.2 ton (469.2 pounds) per year of SO2 (sulfur dioxide), 0.3 ton (605.5 pounds) per year of fine particulates and 10.4 tons (20,830.2 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.0 tons (2,036.5 pounds) per year of NOx (nitrogen oxides), 3.5 tons (7,083.6 pounds) per year of SO2 (sulfur dioxide) and 522.4 tons (1,044,823.9 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO2	PM2.5	CO2
Mobile	6.4	5.3	3.9	0.3	532.8
Residential	2.6	0.3	0.2	0.3	10.4
Electrical Power		1.0	3.5		522.4
TOTAL	9.0	6.6	7.6	0.6	1065.6

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 1.0 tons of nitrogen oxides per year and 3.5 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, <http://www.energystar.gov/>:

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades,
high performance windows,
controlled air infiltration,
upgraded heating and air conditioning systems,
tight duct systems and
upgraded water-heating equipment.”

The energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. We highly recommend this project development and other residential proposals increase the energy efficiency of their homes. They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths, links to mass transit, and fund a lawnmower exchange program for their new occupants. [It is noted that DNREC would like the developer to require the builder to construct Energy Star qualified homes. The recommendations that the home builders offer geothermal and photo voltaic energy options, use of retrofitted diesel engines during construction, the transportation provisions, and lawnmower exchange program have been noted also.]

State Fire Marshal's Office – Contact: Duane Fox 302-856-5800

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements:**

- Water distribution system capable of delivering at least 1500 gpm for 2hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Mercantile) [Noted.]
- Water distribution system capable of delivering at least 1000 gpm for 1hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly and Townhouses) [Noted.]
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems. [Noted.]

b. **Fire Protection Features:**

- All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed. [Noted.]
- Buildings greater than 10,000 sq.ft., 3-stories of more or over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements. [Noted.]
- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR. [Noted.]
- Show Fire Lanes and Sign Detail as shown in DSFPR [Noted.]
- For townhouse buildings provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan. [Noted.]

c. **Accessibility**

- All premises which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from John Williams Hwy must be constructed so fire department apparatus may negotiate it. [All premises which the fire department may be called upon shall be designed with suitable gates and access roads and fire lanes as applicable.]
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door. [Fire department access will be provided in manner such that fire apparatus will be able to locate with 100 feet of the front door.]
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around. [The cul-de-sac located within this site shall be designed to allow access for all fire department vehicles.]
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements. [The

use of speed bumps or other methods of traffic speed reduction shall be designed in accordance with the Delaware Department of Transportation.]

- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property. [It is noted that the Fire Chief shall approve in writing the use of gates that limit fire department access into and out of the development.]

d. **Gas Piping and System Information:**

- Provide type of fuel proposed, and show locations of bulk containers on plan. [The type of proposed fuel and locations of bulk containers shall be shown on the plans.]

e. **Required Notes:**

- Provide a note on the final plans submitted for review to read “All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
 - Proposed Use
 - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
 - Square footage of each structure (Total of all floors)
 - National Fire Protection Association (NFPA) Construction type
 - Maximum Height of Buildings (including number of stories)
 - Townhouse 2-hr separation wall details shall be shown on site plans
 - Note indicating if building is to be sprinklered
 - Name of water provider
 - Letter from Water Provider approving system layout
 - Provide Lock Box Note (as detailed on DSFPR) if Building it to be sprinklered
 - Provide Road names even for County Roads
- [All of the notes required by the State Fire Marshal's Office shall be provided on the plans.]

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Milton Melendez 698-4500

Neither the Delaware Department of Agriculture nor the Delaware Forest Service has any objections to the Nentego application. The site is located on a long-range designated

development area. The *Strategies for State Policies and Spending* encourages responsible development in areas within a Investment Level 2 area. We request that you consider limiting impervious cover as much as possible when designing this site. This site is a part of a “good recharge” area. The State of Delaware has mapped all ground water potential recharge areas. A “good” rating is the second highest rating and designates an area as having important groundwater recharge qualities. Maintaining pervious cover in “Excellent” and “Good” recharge areas is crucial for the overall environmental health of our state and extremely important to efforts which ensure a safe drinking water supply for future generations. Retention of pervious cover to ensure an adequate future water supply is also important for the future viability of agriculture in the First State. The loss of every acre of land designated as “excellent” and “good” recharge areas adversely impacts the future prospects for agriculture in Delaware.

Right Tree for the Right Place

The Delaware Department of Agriculture Forest Service encourages the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource. [The “right tree for the right place” will be considered in the design of the landscaping plan.]

Native Landscapes

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500. [A landscape plan appropriate for this property shall be used and will encourage native trees and shrubs when possible.]

Tree Mitigation

The Delaware Forest Service encourages the developer to implement a tree mitigation program to replace trees at a 1:1 ratio within the site and throughout the community. This will help to meet the community’s forestry goals and objectives and reduce the environmental impacts to the surrounding natural resources. To learn more, please contact our offices at (302) 349-5754 [It is noted that the Delaware Forest Service encourages the developer to implement a tree mitigation program to replace trees at a 1:1 ratio.]

Public Service Commission - Contact: Andrea Maucher 739-4247

The project information sheets state that Long Neck Water Company will be used to provide water for the proposed project. PSC records indicate that the project is located within the public water service area granted to Public Water Supply (a.k.a. Tidewater Utilities) under Certificate of Public Convenience and Necessity number 87-WR-04. They recommend that the developer contact Public Water Supply (a.k.a. Tidewater Utilities) to determine the availability of public water. Any questions concerning CPCN's should be directed to the Public Service Commission at 302-739-4247.

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247. [All expansion of natural gas or installation of a closed propane system shall follow Pipeline Safety Guidelines.]

Delaware State Housing Authority – Contact Jimmy Atkins 739-4263

This proposal is to develop 373 units and 116,000 square feet of commercial space on 109 acres located on the southeast side of Route 24, south of Route 2, and east of Millsboro. According to the State Strategies Map, the proposal is located in an Investment Level 2 area. DSHA supports this proposal because residents will have proximity to services, markets, and employment opportunities. The proposal also targets first time homebuyers. For informational purposes, the most recent real estate data collected by DSHA, the median home price in Millsboro is \$250,000. However, families earning 80% of Sussex County's median income only qualify for mortgages of \$142,040. The provision of units within reach of families earning at least 80% of Sussex County's median income would help increase housing opportunities for first time homebuyers. [The median homes prices versus the median family incomes have been noted.]

Sussex County - Contact: Richard Kautz 855-7878

The developer might want to reconsider the location and size of the commercial out parcels. The Planning Commission is no longer granting waivers for parking within the front setback per 115-166C of the Zoning Ordinance. [The parking layout has been revised to remove all proposed parking within the front setback.]

The 116,000 sq. ft. large scale commercial area parking lot should be landscaped per 115-166.1 of the Zoning Ordinance. [The commercial area parking lot will be landscaped per Sussex County Code.]

The residential parking should be reconfigured. Only three parking areas do not require vehicles to back out into the main thoroughfares and at least five parking areas require vehicles to back into intersections. [The developer did not want to introduce large "parking lots" as part of their design layout, but rather maintain large areas of pervious

open spaces around the townhouse units. The parking provided along the streets is necessary to meet the parking space requirement per Sussex County Code.]

Per page 15 of the Comprehensive Plan, "any increased density by rezoning should only be permitted with proper environmental safeguards." Because this project is situated in an Environmentally Sensitive Development Area, the required report should include how this requirement and the PLUS comments have been addressed and how the plan has been revised accordingly.

The Sussex County Engineer Comments:

The project is in the Environmentally Sensitive Developing Zone (ESDZ) near the Oak Orchard Sanitary Sewer District and Sussex County is considering serving the entire project within the Inland Bays Planning Area for sewer service. The study will conclude approximately May 2006. The study will develop options for sewer service and make a recommendation.

The project proposes to develop using a private central community wastewater system. The Sussex County Engineering Department opposes community systems in planning areas unless there are no other solutions. The developer should contact adjacent property owners and request annexation into the Oak Orchard Sanitary Sewer District. The Engineering Department would support an annexation request of this nature. [The developer is in the process of investigating the possibility of annexation into the Oak Orchard Sanitary Sewer District. It is still the intent to provide the facilities for a private central community wastewater system should annexation not be possible.]

Sussex County requires design and construction of the collection and transmission system to meet Sussex County sewer standards and specifications. A sewer concept plan must be submitted to the Sussex County Engineering Department for review and approval prior to the design of the sewer system. A checklist for preparing concept plans is attached. [The sewer design will meet the Sussex County standards and specifications. A sewer concept plan will be submitted.]

If the project is not annexed into the Oak Orchard Sanitary Sewer District, a review and approval of the treatment and disposal system by the Sussex County Engineering Department is also required and plan review fees may apply. We recommend that the wastewater system be operated under a long-term contract with a capable wastewater utility that meets TMDL limits for Delaware's Inland Bays. Disposal fields should not be counted as open space. Wastewater disposal fields should be clearly identified on recorded plots. If Sussex County ever provides sewer service, it is required that the treatment system be abandoned and a direct connection made to the County system at the developers and/or homeowners association expense. [It is noted that if the annexation is not accepted an approval from Sussex County will be required.]

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of

State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

A handwritten signature in cursive script that reads "Constance C. Holland".

Constance C. Holland, AICP Director

CC: Sussex County