



December 3, 2007

Mr. Mark Davidson
Design Consultants Group, LLC
18072 Davidson Drive
Milton, DE 19968

RE: PLUS review – PLUS 2007-10-09; Deep Valley Farm Subdivision

Dear Mr. Davidson:

Thank you for meeting with State agency planners on October 31, 2007 to discuss the proposed plans for the Deep Valley Farm Subdivision project to be located on the south side of Delaware Route 9, approximately ¼ mile west of Route 1.

According to the information received, you are seeking site plan approval for 183 residential units on 86 acres.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

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

The State Office of Planning and Coordination recognizes that the proposed development is located within a Level 2 / Level 3 Investment area near the community of Lewes and is an area that we anticipate future growth. This office has no objections to the proposed project; however, this office would recommend the following to further improve upon the proposed:

- The developer should coordinate with Del-Dot in their efforts to improve the Five Points intersection and further coordinate with the adjacent proposed Vineyards and Nassau project to address any necessary road improvements and promote local connectivity between projects.
- The developer should coordinate with the Department of Natural Resources and Environmental Control to address regional storm water management issues to address future and existing flooding problems within the area.
- Should work with the neighboring historical communities of Jim Town and Belle Town to address their concerns regarding future growth within and surrounding their communities.

Street Design and Transportation

- The Western Parkway is a proposed north-south road that would relieve congestion on Delaware Route 1 from north of Nassau to Delaware Route 24. DelDOT is evaluating alternative alignments through the National Environmental Policy Act (NEPA) process, but one part of the project common to all the alternatives is the relocation of US Route 9 to tie into and follow Delaware Route 23 from the Parkway to Route 1.

As shown, the plan for this development does not show a feasible alignment for the relocation of Route 9. The developer's engineer should coordinate with the DelDOT Regional Group Engineer managing the Western Parkway project, Mr. Donald Plows, regarding a feasible alignment, and should expect a requirement to dedicate the needed rights-of-way. Mr. Plows may be reached at (302) 760-2524.

- DelDOT will require the developer to provide a 15-foot wide permanent easement along the property frontage on both roads and to provide a 10-foot wide shared use path within that easement.

- Presently, DelDOT is reviewing entrance plans for The Vineyards at Nassau Valley, located on the north side of Route 9, across from this development. The access for the two projects will need to be coordinated.
- DelDOT recommends that a pedestrian path be added from the north end of Chester Street to the multimodal path.
- Splitter islands should be added at the roundabout on Deep Valley Boulevard to direct traffic the proper way around the roundabout.

Natural and Cultural Resources

- It is recommended that vegetated buffers should be employed from the edge of the wetland complex and other water bodies on site. It is important to note that both DNREC and the Corps discourage allowing lot lines to contain wetlands and associated buffers, to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.
- DNREC recommends including the DNREC Drainage and Stormwater Section, including the Sussex Conservation District, in any future discussions with DelDOT and area property owners regarding the future DelDOT road expansion proposed along the western boundary of the property. Drainage and stormwater should be considered early in this project and regionally to avoid future drainage and flooding problems locally and downstream.
- Because of the parcel's location in an impaired watershed and the amount of impervious surface typically associated with the development of a commercial site, the applicants should incorporate green technology best management practices and low impact development practices to reduce stormwater flow and meet water quality goals.
- Have all drainage easements recorded on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future re-construction. Future property owners may not be aware of a drainage easement on their property if the easement is only on the record plan. However, by recording the drainage easement on the deed, the second owner, and any subsequent owner of the property, will be fully aware of the drainage easement on their property.

- Preserve existing riparian buffers on this site to aid in the reduction of nutrients, sediment, and other pollutants entering the watershed. Please explore methods to filter excess nutrients in stormwater runoff from this site before releasing the stormwater into the watershed.

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

Office of State Planning Coordination – Contact: Bryan Hall 739-3090

The State Office of Planning and Coordination recognizes that the proposed development is located within a Level 2 / Level 3 Investment area near the community of Lewes and is an area that we anticipate future growth. This office has no objections to the proposed project; however, this office would recommend the following to further improve upon the proposed:

- The developer should coordinate with Del-Dot in their efforts to improve the Five Points intersection and further coordinate with the adjacent proposed Vineyards and Nassau project to address any necessary road improvements and promote local connectivity between projects.
- The developer should coordinate with the Department of Natural Resources and Environmental Control to address regional storm water management issues to address future and existing flooding problems within the area.
- Should work with the neighboring historical communities of Jim Town and Belle Town to address their concerns regarding future growth within and surrounding their communities.

Division of Historical and Cultural Affairs – Contact: Terrance Burns 739-5685

In reference to this particular parcel, the historic resources at State Historic Preservation Office of the Division of Historic & Cultural Affairs did show and indicate the following:

- There was no indication of a known Archaeological site or National Register listed property on or within parcel, but this parcel is still in a vicinity where it is a possibility that there could be a potential archaeological site on this parcel, or somewhere nearby.
- The developer should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out.
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discovery of unmarked human remains during construction can result in significant delays while the process is carried out.

- Prior to any demolition or ground-disturbing activities, or before any type of construction proceeds the developer may want to hire an archaeological consultant to check or examine this parcel/property for the possibility of a cemetery here, or to see if there are any archaeological sites on it.

The State Historic Preservation Office of the Division of Historic & Cultural Affairs recommends and do hope that the developer will take these comments in to consideration. Also, if the developer would like to discuss this in further detail, contact Mr. Terence Burns, Information Resource Specialist, at the State Historic Preservation Office of the Division of Historic & Cultural Affairs at (302) 736-7400.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

Cedar Creek Properties, LLC seeks to develop 183 single-family detached on an approximately 88.44-acre assemblage of parcels (Tax Parcels 3-34-5.00-176 and 177) located on the south side of US Route 9 and the north side of Delaware Route 23 (Beaver Dam Road and Sussex County Road 285) near Lewes. The land is zoned AR-1, with an Environmentally Sensitive Development District Overlay Zone overlay, in Sussex County.

- 1) The Western Parkway is a proposed north-south road that would relieve congestion on Delaware Route 1 from north of Nassau to Delaware Route 24. DelDOT is evaluating alternative alignments through the National Environmental Policy Act (NEPA) process, but one part of the project common to all the alternatives is the relocation of US Route 9 to tie into and follow Delaware Route 23 from the Parkway to Route 1.

As shown, the plan for this development does not show a feasible alignment for the relocation of Route 9. The developer's engineer should coordinate with the DelDOT Regional Group Engineer managing the Western Parkway project, Mr. Donald Plows, regarding a feasible alignment, and should expect a requirement to dedicate the needed rights-of-way. Mr. Plows may be reached at (302) 760-2524.

- 2) US Route 9 is classified as a principal arterial road and Beaver Dam Road is classified as a collector road. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 50 feet from the centerline on principal roads and 40 feet from the centerline on collector and minor arterial roads. Therefore DelDOT will require right-of-way dedication

- along the frontage to provide any additional width needed from this project. The plan distributed at the PLUS meeting appears to meet this requirement.
- 3) DeIDOT will require the developer to provide a 15-foot wide permanent easement along the property frontage on both roads and to provide a 10-foot wide shared use path within that easement. The plan distributed at the PLUS meeting appears to meet this requirement.
 - 4) The subject development does not meet DeIDOT's current warrants for a traffic impact study (TIS), but would meet warrants contained in a pending revision to our highway access regulations. DeIDOT anticipates adopting these revised regulations later this calendar year. Having said that, a TIS was prepared in 2005 for a previous proposal to develop the same lands. While that proposal was for a more intense development, our review of that study identified a set of needed improvements that, on further review, seem applicable to this development proposal as well. A copy of the DeIDOT on that TIS is enclosed with this letter. With appropriate adjustments for project size, the developer should expect these items to be required as conditions for plan approval
 - 5) Presently, DeIDOT is reviewing entrance plans for The Vineyards at Nassau Valley, located on the north side of Route 9, across from this development. The access for the two projects will need to be coordinated.
 - 6) DeIDOT recommends that a pedestrian path be added from the north end of Chester Street to the multimodal path.
 - 7) Splitter islands should be added at the roundabout on Deep Valley Boulevard to direct traffic the proper way around the roundabout.
 - 8) The developer's site engineer should contact the DeIDOT Subdivision Manager for eastern Sussex County, Mr. John Fiori, regarding specific requirements for access and off-site improvements. Mr. Fiori may be reached at (302) 760-2260.

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

Soils

Based on the Sussex County soil survey update, Downer and Hammonton were mapped in the immediate vicinity of the proposed construction. Downer is a well-drained upland

soil that, generally, has few limitations for development. Hammonton is a moderately well-drained soil of low-lying uplands that has moderate limitations for development.

Wetlands

Based on the Statewide Wetland Mapping Project (SWMP) maps, palustrine forested wetlands were mapped in the northwestern and southwestern portions of the parcel.

Impacts to Palustrine wetlands are regulated by the U.S. Army Corps of Engineers (USACE, or “the Corps”) through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Corps also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Management Program (DCMP) Section. Each of these certifications represents a separate permitting process. Please be advised that nationwide permits have been suspended in Delaware and are pending further coordination with the Corps. Therefore, contrary to past practices, Coastal Zone Management approval can no longer be assumed. Individual certifications must be granted from the DCMP office for each project intending to utilize a Nationwide Permit. For more information on the Federal Consistency process, please contact the DCMP office at 302.739.9283. To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-9943 to schedule a meeting.

It is recommended that vegetated buffers should be employed from the edge of the wetland complex and other water bodies on site. It is important to note that both DNREC and the Corps discourage allowing lot lines to contain wetlands and associated buffers, to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.

Impervious Cover

Based on information provided by the applicant in the PLUS application form, this project’s post-development surface imperviousness is estimated to reach 34 percent. However, given the scope and density of this project (i.e., as viewed from the conceptual project layout) this estimate appears to be an underestimate. When calculating surface imperviousness, it is important to include all forms of constructed surface imperviousness (i.e., rooftops, sidewalks, stormwater management structures, and roads) in the calculation for surface imperviousness; this will ensure a realistic assessment of this project’s likely post-construction environmental impacts. Surface imperviousness should

be recalculated with all of the above-mentioned forms of constructed surface imperviousness included.

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate 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 an increase in forest cover preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

ERES Waters

This project is located adjacent to receiving waters of the 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 pollutants 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 achievable and, where practicable, implementation of a standard requiring no discharge of pollutants.

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 nitrogen and phosphorus. Additionally, 40 percent reduction in bacteria will also be required.

Compliance with TMDLs through the PCS

As stated above, Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Inland Bays Watershed. The TMDL calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. Additionally, a 40 percent reduction in bacteria will also be required from baseline conditions. A Pollution Control Strategy (PCS) will provide the regulatory framework for achieving them. Additional nutrient reductions may be possible through the implementation of Best Management Practices such as wider vegetated buffers along watercourses (and/or wetlands), increasing passive, wooded open space that reduce surface imperviousness (i.e., pervious pavers), and the use of green-technology stormwater management technologies.

The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

Water Supply

The project information sheets state water will be provided to the project by Tidewater Utilities via a public water system. DNREC records indicate that the project is located within the public water service area granted to Tidewater Utilities under Certificate of Public Convenience and Necessity 83-W-15.

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. 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.

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.

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

Sediment and Erosion Control/ Stormwater Management

DNREC recommends including the DNREC Drainage and Stormwater Section, including the Sussex Conservation District, in any future discussions with DelDOT and area property owners regarding the future DelDOT road expansion proposed along the western boundary of the property. Drainage and stormwater should be considered early in this project and regionally to avoid future drainage and flooding problems locally and downstream.

The DNREC Sediment and Stormwater Program ensure sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater management facilities. However, we do not support placement in resource protection areas or the removal of trees for the sole purpose of placement of a stormwater management facility/practice.

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site over 5,000 square feet. Because the Sediment and Stormwater Program is in the process of revising its state regulations it is a good idea to contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. 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. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-7219 for details regarding submittal requirements and fees.

Because of the parcel's location in an impaired watershed and the amount of impervious surface typically associated with the development of a commercial site, the applicants should incorporate green technology best management practices and low impact development practices to reduce stormwater flow and meet water quality goals.

Drainage

The Drainage Program has researched the Tax Ditch rights-of-ways for parcel # 334-5.00-177.00. The information is as follows:

- This parcel lies on both sides of Road 285, partially in the Graves-Rollins Tax Ditch. The Main has rights-of-way on both pieces of the property. From Sta 1+00 to Sta 3+60, there are 35-foot construction rights-of-way on the left side of the Main, looking upstream. These rights-of-way are measured from the top of

the ditch bank, and include the ditch from the centerline to the top of the bank. There are 20-foot rights-of-way on both sides of the Main, looking upstream, from Sta 4+16 to Sta 6+10. These are measured from the centerline of the ditch. The Main also has 16.5-foot access rights-of-way around the upper end measured from top of the bank.

Contact the DNREC Drainage Program in Georgetown at (302) 855-1930 to discuss impacts to the Tax Ditch and the release of stormwater into the Tax Ditch.

In addition the Drainage Program has the following comments for this site:

- The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them.
- The Drainage Program encourages the elevation of rear yards to direct water towards the streets where storm drains are accessible for maintenance. However, the Drainage Program recognizes the need for catch basins in yards in certain cases. Therefore, catch basins placed in rear and side yards will need to be clear of obstructions and be accessible for maintenance. Decks, sheds, fences, pools, and kennels can hinder drainage patterns as well as future maintenance to the storm drain or catch basin. Deed restrictions, along with drainage easements recorded on deeds, should ensure adequate future maintenance access.
- An increase of the side yard setback to 15 feet may be needed on all properties with a drainage easement on the side. The increase will allow room for equipment to utilize the entire easement and maneuver free of obstructions if the drainage conveyance requires periodic maintenance or future re-construction. The side yard setback would only increase on the side with the drainage easement.
- All catch basins in rear or side yards should have a 10-foot drainage easement around them on all sides. Place restrictions on fences, sheds, and other structures within the easement to prevent obstructions from being place next to the catch basin. Record the easement on the deed.
- Have all drainage easements recorded on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future re-construction. Future property owners may not be aware of a drainage easement on their property if the easement is only on the record plan. However,

by recording the drainage easement on the deed, the second owner, and any subsequent owner of the property, will be fully aware of the drainage easement on their property.

- Preserve existing riparian buffers on this site to aid in the reduction of nutrients, sediment, and other pollutants entering the watershed. Please explore methods to filter excess nutrients in stormwater runoff from this site before releasing the stormwater into the watershed.

Open Space

The developer is strongly urged to consider alternatives to mowed grass within community open space areas, especially along stormwater management facilities upon development of this parcel. Mowing and other maintenance costs from lawn areas can become a substantial burden. There may be areas that are appropriate for warm or cool season grasses. The maintenance costs associated with meadow type grasses are much lower than those of lawn grasses, and provide food and habitat for birds and other wildlife and can help reduce non-point source pollution. The developer is encouraged to review "Community Spaces, Natural Places: A guide to restoration, management, and maintenance of community open space". This document provides a reference of practical and successful open space management techniques that emphasize natural landscape alternatives other than turf grass management. The guidebook is available online at: <http://www.dnrec.state.de.us/dnrec2000/Divisions/Soil/dcmp/>.

Forested Wetland Buffers

Headwaters of the Goslee Creek System occur within the project area. A fifty foot wetland easement along the wetland border is highly insufficient for water quality and wildlife habitat protection. There should be a minimum of 100 feet between these wetlands and lots/infrastructure. Lots and infrastructure within 100 feet of these headwater wetlands should be omitted. This likely entails lot #s 164-169, although this would have to be ground-truthed for accuracy.

This recommendation is based on peer reviewed scientific research and is important not only for water quality protection but because of cumulative impacts from other developments in the general area. This wetland buffer is a travel corridor for wildlife, serves as habitat for many terrestrial species dependent on aquatic habitats for a portion of their life cycle, and is a foraging area for Bald Eagles which nest nearby. Buffers also reduce inputs of sediments, pollutants, and other non-point source material that may

affect the function and integrity of habitat and the condition and survivability of aquatic organisms.

Nuisance Geese

Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance for community residents. 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. Trails around two of the ponds are depicted in the site plan, but it is unclear if an adequate vegetative buffer (not mowed lawn) is going to be left intact around the perimeter as well. DNREC recommends native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within an adequate buffer (15-30 feet in width) around the ponds. This type of habitat is not as attractive to geese because their view of the surrounding area is blocked and they can't scan for predators.

At this time, DNREC does not recommend using monofilament grids due to the potential for birds and other wildlife to become entangled if the grids are not properly installed and maintained. In addition, the on-going maintenance (removing entangled trash, etc.) may become a burden to the homeowners association.

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.

Underground Storage Tanks

There is one inactive LUST site(s) located near the proposed project:

Edgehill Pharmacy Warehouse, Facility # 5-000661, Project # S9512290

No environmental impact is expected from the above inactive/active LUST site(s). 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 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.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 14.0 tons (28,088.6 pounds) per year of VOC (volatile organic compounds), 11.6 tons (23,255.5 pounds) per year of NO_x (nitrogen oxides), 8.6 tons (17,158.3 pounds) per year of SO₂ (sulfur dioxide), 0.8 ton (1,527.4 pounds) per year of fine particulates and 1,174.8 tons (2,349,574.8 pounds) per year of CO₂ (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 5.7 tons (11,329.4 pounds) per year of VOC (volatile organic compounds), 0.6 ton (1,246.6 pounds) per year of NO_x (nitrogen oxides), 0.5 ton (1,034.5 pounds) per year of SO₂ (sulfur dioxide), 0.7 ton (1,335.0 pounds) per year of fine particulates and 23.0 tons (45,926.9 pounds) per year of CO₂ (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 2.2 tons (4,490.2 pounds) per year of NO_x (nitrogen oxides), 7.8 tons (15,618.0 pounds) per year of SO₂ (sulfur dioxide) and 1,151.8 tons (2,303,647.9 pounds) per year of CO₂ (carbon dioxide).

	VOC	NO _x	SO ₂	PM _{2.5}	CO ₂
Mobile	14.0	11.6	8.6	0.8	1174.8
Residential	5.7	0.6	0.5	0.7	23.0
Electrical Power		2.2	7.8		1151.8
TOTAL	19.7	14.4	16.9	1.5	2349.6

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 2.2 tons of nitrogen oxides per year and 7.8 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 DNREC Energy Office 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. They 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.

State Fire Marshal’s Office – Contact: Duane Fox 856-5298

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):

a. **Fire Protection Water Requirements:**

- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.
- Where a water distribution system is proposed for townhouse type dwellings it shall be capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required.

- The infrastructure for fire protection water shall be provided, including the size of water mains.

b. 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 the main thoroughfares, especially from Route 9 and from Beaver Dam Road must be constructed so fire department apparatus may negotiate it.
- 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.
- 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 use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- 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.

c. Gas Piping and System Information:

- Provide type of fuel proposed, and show locations of bulk containers on plan.

d. 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”
- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Townhouse 2-hr separation wall details shall be shown on site plans
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

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.statefiremarshal.delaware.gov, technical services link, plan review, applications

Department of Agriculture - Contact: Scott Blaier 698-4500

The Delaware Department of Agriculture has no objections to the proposed project. The *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 3 areas.

Section 1, Chapter 99, Code of Sussex Section 99-6 may apply to this subdivision. The applicant should verify the applicability of this provision with Sussex County. This Section of the Code states:

G. Agricultural Use Protections.

(1) Normal agricultural uses and activities conducted in a lawful manner are preferred. In order to establish and maintain a preference and priority for such normal agricultural uses and activities and avert and negate complaints arising from normal noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations, land uses adjacent to land used primarily for agricultural purposes shall be subject to the following restrictions:

(a) For any new subdivision development located in whole or in part within three hundred (300) feet of the boundary of land used primarily for agricultural purposes, the owner of the development shall provide in the deed restrictions and any leases or agreements of sale for any residential lot or dwelling unit the following notice:

“This property is located in the vicinity of land used primarily for agricultural purposes on which normal agricultural uses and activities have been afforded the highest priority use status. It can be anticipated that such agricultural uses and activities may now or in the future involve noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations. The use and enjoyment of this property is expressly conditioned on acceptance of any annoyance or inconvenience which may result from such normal agricultural uses and activities.”

(b) For any new subdivision development located in whole or in part within fifty (50) feet of the boundary of land used primarily for agricultural

purposes no improvement requiring and occupancy approval for a residential type use shall be constructed within fifty (50) feet of the boundary of land used primarily for agricultural purposes.

This site overlaps the State's Green Infrastructure Investment Strategy Plan. The cropland layer is present on the entire site. This designation identifies areas of the state that have viable and valuable cropland, as discussed in Governor Minner's Executive Order Number 61. Areas such as these should be preserved as such, and not developed for residential use.

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. Please feel free to contact the Delaware Forest Service at (302) 698-4500 for more information.

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.

Public Service Commission - Contact: Andrea Maucher 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.

Delaware State Housing Authority – Contact Vicki Powers 739-4263

This proposal is for a site plan review of 183 residential units on 88.44 acres located on the south side of Delaware Route 9, northwest and southeast of Sussex County Road 285, approximately ¼ mile west of Route 1 near Lewes. According to the State Strategies

Map, the proposal is located in a level 3 Environmentally-Sensitive Developing area. While the prices of the units are not known at this time, they encourage the applicant to include prices that are affordable to low- and moderate-income households. The 2003 Statewide Housing Needs Assessment indicates that much of the housing in the Lewes CCD is outside of the affordability level of low- and moderate-income households. For example, real estate data collected by DSHA for the second quarter of 2007 indicated that the median home price was \$350,000, which is outside the affordability level of low- and moderate-income households. Conversely, the affordability price for low- and moderate-income households earning 100% of area median income is estimated to be \$169,101. Households that cannot afford to live in the coastal resort area have been displaced to western Sussex County. The provision of moderately-priced units for first time homebuyers would help support the housing needs of low- and moderate-income families employed by the local retail, service, and tourism economy.

Department of Education – Contact: John Marinucci 735-4055

This proposed development is within the Cape Henlopen School District boundaries. DOE offers the following comments on behalf of the Cape Henlopen School District.

1. Using the DOE standard formula, this development will generate an estimated 92 students.
2. DOE records indicate that the Cape Henlopen School Districts' *elementary schools are not at or beyond 100% of current capacity* based on September 30, 2006 elementary enrollment.
3. DOE records indicate that the Cape Henlopen School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2006 secondary enrollment.
4. While the Cape Henlopen School District secondary and elementary schools are not currently beyond capacity, ***the district does NOT*** have adequate student capacity to accommodate the additional students likely to be generated from this development given the number of planned and recorded residential sub divisions within district boundaries.
5. Continued development will cause significant burden to the Cape Henlopen School District without the provision for additional educational infrastructure.
6. The developer is strongly encouraged to the Cape Henlopen School District Administration to address the issue of school over-crowding that this development will exacerbate.
7. DOE requests the developer work with the Cape Henlopen School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the school district.

Sussex County – Contact: Richard Kautz 855-7878

The developer should provide the stub road access to adjacent property as requested by DelDOT.

Because this project is an AR-1 ESDA subdivision, the developer is allowed to reduce the lot size to provide for mitigation of the impact on environmental factors. The reduction of the proposed 183 lots from 20,000 sq. ft. to an average lot size of 7,825 sq. ft. allows for more than 51 acres of open space merely through the reduction in lot size. Yet, only 36 acres of total open space, including stormwater management and wetlands, is provided.

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. Use of Low Impact Design principals and Green Technology helps address the environmental issues.

The Sussex County Engineer Comments:

The project proposes connection to a Sussex County operated central sewer system. Sussex County supports the project connecting to a County operated sewer system.

The project is in the Environmentally Sensitive Developing Zone (ESDZ) and adjoins the West Rehoboth Expansion of the Dewey Beach Sanitary Sewer District (WRX). Sewer service is not available to the parcels at this time however, and it is uncertain how the project can receive sewer service. If and when it is determined that Sussex County can provide sewer service, and following approval of a concept plan, a request for annexation into the WRX will be considered. A listing of steps to be completed for annexation was given to the developer at the meeting.

Sussex County previously considered a project on the State's May 2006 PLUS agenda and provided comments. The developers of the project funded a study by the County's consultants to determine the impact of the Graves project on the WRX system and provided a recommendation for providing sewer service from the WRX system. The Graves Report was completed and approved by the County on November 1, 2006. The findings of the study required a replacement of regional Pumpstation #207 and a rerouting of its discharge as an alternative to upgrading the Route 9 collection and

transmission system. The report identified needed upgrades that were not acted on by the developer of the Graves project and a nearby project is undertaking the upgrades. The project on the Graves parcel will not be permitted to connect until upgrades are completed. In addition, the property owner or the developer of the Graves parcel shall contact the developer of the Vineyards at Nassau Valley project to assure they include capacity in the upgrade for the Graves project.

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 was given to the developer during the meeting. Conformity to the North Coastal Area planning study (NCPA), Technical Memorandum for the Graves Property and the approved concept plan will be required. Any additional evaluation and upgrades would also be at the developer's expense. An extension of mainline sewer from an approved connection point will also be required and at the developers expense. In addition, the developer will be required to provide a connection point for the adjoining 19.5-acre parcel owned by the Delaware State Housing Authority and located to the southeast of the proposed project.

The Sussex County Engineering Department recommends that the proposed alignment of the future Delaware Department of Transportation (DELDOT) right of way (shown on the preliminary site plan attached to the PLUS application) be established now and adjusted as necessary at some future time.

If the project connects to a Sussex County operated sewer district, System Connection Charges will apply as well. The current rate in the WRX for the period through June 30, 2008 is \$3994.00 per EDU.

For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department at (302) 855-7820 .

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