



STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF MANAGEMENT AND BUDGET  
STATE PLANNING COORDINATION

October 24, 2007

Michael J. Riccitelli  
Green Cascades, Inc.  
834 NE 2<sup>nd</sup> Street  
Corvallis, OR 97330-6223

RE: PLUS review – PLUS 2007-09-05; Silver Woods

Dear Mr. Riccitelli:

Thank you for meeting with State agency planners on October 3, 2007 to discuss the proposed plans for Silver Woods project to be located on the southern side of SCR 368, ½ mile east of SCR 84, across from Bear Trap Dunes.

According to the information received, you are seeking annexation into the Town of Ocean View with site plan approval for 372 residential units.

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 Office of State Planning and Coordination recognizes the proposed project is within an Investment Level 2 and 3 as defined by the State's Strategies for Policy and Spending and the site is within the Environmentally Sensitive Developing District as defined by the 2003 Sussex County Comprehensive Land Use Plan. Also the applicant has requested to be annexed by the Town of Ocean View. This office would encourage the developer to work with both the County and the Town as the project moves forward to address any concerns identified in this letter with the annexation process. In addition as identified by the developer's presentation, the site has several environmental constraints and is located within an area that has growing traffic concerns. This office would ask the developer to work closely with DNREC to address drainage concerns for the parcel and to work with Del-Dot to identify necessary road improvements within and near the proposed project. If you have any questions, please contact my office.

### **Street Design and Transportation**

- In November 2006, DelDOT reviewed a PLUS application for the Evergreen subdivision (Tax Parcel 1-34-16.00-51.00) shown on the PLUS plan as Lands of William B. & Judith D. Warrington), which adjoins the east side of the subject land and fronts on Parker House Road (Sussex Road 362). It is possible that the developer of Evergreen could be persuaded to change their plans enough to permit a bicycle and pedestrian connection. DelDOT would not recommend a street connection in this instance because it could promote cut-through traffic. DelDOT asked that you approach the developer of Evergreen about a bicycle and pedestrian connection and make the connection if it is possible. Contact information for the developer of Evergreen is available on request.
- DelDOT also asks that a stub street be provided to the lands of Wesley O. Taylor (Tax Parcel 1-34-16.00-46.00) for a future connection if that parcel is ever redeveloped.
- DelDOT anticipates the proposed development generating about 2,928 vehicle trips per day, which exceeds our current warrant for traffic impact studies (TIS). For that reason, we will require a TIS as a condition for plan approval. When they are ready to begin the TIS, the developer should have their traffic engineer

contact Mr. Troy Brestel of this office to schedule a scoping meeting. Mr. Brestel may be reached at (302) 760-2167.

- Without prejudging the results of the TIS, DelDOT anticipates requiring the developer to contribute to DelDOT's SR 26 Detour Routes project (Contract No. 21-112-04). This project will improve Beaver Dam Road along this development's frontage, and other roads in the area, to provide 11-foot lanes and 5-foot shoulders.
- According to DelDOT mapping, the presently recorded Starlight Woods plan shows a west entrance that is slightly offset from the Magnolia Street entrance to Bear Trap Dunes. On the new plan, the west entrance should be aligned directly across from Magnolia Street.
- DelDOT recommends that Exeter Court be extended north to connect to Thornton Drive to improve circulation within the development.
- The quadrilateral open space area near Exeter Court has no access. They recommend that at least one gap be left between proposed lots so that the area can be maintained without passing through private property.

### **Natural and Cultural Resources**

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 placed 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.

The Drainage Program does not support the removal of trees for the creation of stormwater management areas. However, the Drainage Program recognizes that tree removal is unavoidable in some cases. Where practical, plant native trees and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided.

DNREC has never surveyed the project site and our community ecologist, Robert Coxe, respectfully requests the opportunity to conduct a survey. This would be conducted at no cost or liability to the landowner/developer. Robert is currently conducting a vegetative community mapping project throughout the State and is especially interested in the succession that has occurred at this project site. It is unique in that it was harvested in the past but no management efforts have taken place to either restore or replant

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

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

The Office of State Planning and Coordination recognizes the proposed project is within an Investment Level 2 and 3 as defined by the State's Strategies for Policy and Spending and the site is within the Environmentally Sensitive Developing District as defined by the 2003 Sussex County Comprehensive Land Use Plan. Also the applicant has requested to be annexed by the Town of Ocean View. This office would encourage the developer to work with both the County and the Town as the project moves forward to address any

concerns identified in this letter with the annexation process. In addition as identified by the developer's presentation, the site has several environmental constraints and is located within an area that has growing traffic concerns. This office would ask the developer to work closely with DNREC to address drainage concerns for the parcel and to work with Del-Dot to identify necessary road improvements within and near the proposed project. If you have any questions, please contact my office.

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

According to the historical resources and documents at the State Historic Preservation Office, it appears that there is or was a house partially on or within, or close to this parcel. The house is a Cultural Resource Survey (CRS) site, and it is known as the F. E. West House (S-2346), but it is not a National Register property. Because of the nature of where this parcel is located there is a possibility that there still could be an un-discovered prehistoric or historic archaeological site on this parcel, or nearby.

In addition, 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, and the developer may want to hire an archaeological consultant to check for the possibility of a cemetery here if this development is approved. If any construction proceeds on this parcel, the State Historic Preservation Office of the Division of Historical & Cultural Affairs would like the opportunity to examine the area prior to any demolition or ground-disturbing activities, to see if there are any archaeological sites on it, in order to learn more information about this area in detail.

If you would like to discuss this information or other issues further, contact the State Historic Preservation Office Division of Historical & Cultural Affairs at (302) 744-7400 ext.25, and we will be more than happy to assist you.

**Department of Transportation – Contact: Bill Brockenbrough 760-2109**

- 1) The response to Item 42 on the PLUS application is that "Adjacent subdivision layouts do not permit future connections." In November 2006, DelDOT reviewed a PLUS application for the Evergreen subdivision (Tax Parcel 1-34-16.00-51.00) shown on the PLUS plan as Lands of William B. & Judith D. Warrington), which adjoins the east side of the subject land and fronts on Parker House Road (Sussex Road 362). It is possible that the developer of Evergreen could be persuaded to change their plans enough to permit a bicycle and pedestrian connection. DelDOT would not recommend a street connection in this

instance because it could promote cut-through traffic. DelDOT asked that you approach the developer of Evergreen about a bicycle and pedestrian connection and make the connection if it is possible. Contact information for the developer of Evergreen is available on request.

DelDOT also asks that a stub street be provided to the lands of Wesley O. Taylor (Tax Parcel 1-34-16.00-46.00) for a future connection if that parcel is ever redeveloped.

- 2) DelDOT anticipates the proposed development generating about 2,928 vehicle trips per day, which exceeds our current warrant for traffic impact studies (TIS). For that reason, we will require a TIS as a condition for plan approval. When they are ready to begin the TIS, the developer should have their traffic engineer contact Mr. Troy Brestel of this office to schedule a scoping meeting. Mr. Brestel may be reached at (302) 760-2167.

DelDOT's standard practice until recently has been to require that TIS be prepared by engineers working directly for developers and submitted to DelDOT for review and comment. They are now able to offer the services of consultants working for DelDOT to prepare the studies at the developer's expense. Through this new process they hope to offer the developer significant time savings while reducing the expense to taxpayers. If it is of interest, the developer may request a proposal in this regard at the scoping meeting.

- 3) Without prejudging the results of the TIS, DelDOT anticipates requiring the developer to contribute to DelDOT's SR 26 Detour Routes project (Contract No. 21-112-04). This project will improve Beaver Dam Road along this development's frontage, and other roads in the area, to provide 11-foot lanes and 5-foot shoulders. For more information regarding this project, the developer may contact our project manager, Mr. Thomas Banez. He may be reached at (302) 760-2363.
- 4) According to DelDOT mapping, the presently recorded Starlight Woods plan shows a west entrance that is slightly offset from the Magnolia Street entrance to Bear Trap Dunes. On the new plan, the west entrance should be aligned directly across from Magnolia Street.
- 5) DelDOT recommends that Exeter Court be extended north to connect to Thornton Drive to improve circulation within the development.

- 6) The quadrilateral open space area near Exeter Court has no access. They recommend that at least one gap be left between proposed lots so that the area can be maintained without passing through private property.
- 7) If the annexation is approved, the developer's site engineer should contact the DelDOT 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**

### **Green Infrastructure**

Portions or all of the lands associated with this proposal are within the Livable Delaware Green Infrastructure area established under Governor Minner's Executive Order #61 that represents a network of ecologically important natural resource lands of special state conservation interest.

Green infrastructure is defined as Delaware's natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, productive agricultural and forest land, greenways, cultural, historic and recreational sites and other natural areas all with conservation value. Preserving Delaware's Green Infrastructure network will support and enhance biodiversity and functional ecosystems, protect native plant and animal species, improve air and water quality, prevent flooding, lessen the disruption to natural landscapes, provide opportunities for profitable farming and forestry enterprises, limit invasive species, and foster ecotourism.

Voluntary stewardship by private landowners is essential to green infrastructure conservation in Delaware, since approximately 80 percent of the State's land base is in private hands. It is in that spirit of stewardship that the Department appeals to the landowner and development team to protect sensitive resources through an appropriate site design.

### **Soils**

According to the Sussex County soil survey update, Hambrook, Hurlock and Mullica were mapped in the immediate vicinity of the proposed construction. Hambrook is a moderately well-drained soil of low-lying uplands that has moderate limitations for development. Hurlock and Mullica are poorly to very poorly-drained wetland associated (hydric) soil that has severe limitations for development.

Approximately 90-95% of the soils mapped on subject parcel were mapped as Hurlock and Mullica (hydric). Hydric soils typically have a seasonal high water table at or near the soil surface (within one-foot of soil surface or less). Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding, especially during extended periods of high-intensity rainfall events such as tropical storms/hurricanes or "nor'easters." This is in addition to increased flooding probabilities from surface water runoff emanating from future created forms of structural imperviousness (roof tops, roads, sidewalks, and stormwater management structures).

Based on the Chapter 99, Section 16A of the Sussex County Code (paraphrased), lands compromised by improper drainage or flooding potential pose significant threats to the safety and general welfare of future residents and, therefore, shall not be developed.

Soils mapped as Mullica and Hurlock fit the criterion for improper drainage or high flooding potential, and should be avoided. The Watershed Assessment Section believes permitting development on such soils would be inconsistent with above-mentioned regulatory guidelines in the Sussex County Code.

#### **Wetlands and Permitting Information**

Based on the Statewide Wetland Mapping Project (SWMP) mapping, palustrine forested wetlands were mapped over most of the combined parcel land area. Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. PLUS materials indicate that a wetland delineation was conducted. This should be verified Corps of Engineers through the Jurisdictional Determination process.

Impacts to Palustrine wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers 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.

### **Impervious Cover**

Based on information provided by the applicant on the PLUS application form, the applicant's projected estimate of post-construction surface imperviousness should not exceed 7 percent. However, given the scope and density of this project, this estimate appears to be significant underestimate.

The applicant should realize that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks, stormwater management structures, and roads) should be included in the calculation for surface imperviousness; it was unclear from the submittal whether constructed surface imperviousness was comprehensively considered. Nonetheless, it is strongly recommended that the applicant include all of aforementioned forms of surface imperviousness in their finalized calculation for surface imperviousness. This will ensure a realistic assessment of this project's likely post-construction environmental impacts.

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 Little Assawoman Bay designated as having waters of 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 Little Assawoman 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. The TMDL nutrient reduction requirements for the Little Assawoman watershed require a 40 percent reduction in nitrogen and phosphorus. Additionally, the TMDL reduction requirement for bacteria is also 40 percent.

### **Compliance with TMDLs through the Pollution Control Strategy (PCS)**

As stated above, Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Little Assawoman watershed. The TMDL calls for a 40% reduction in nitrogen and phosphorus from baseline conditions. Additionally, a 40 percent reduction in bacteria will also be required from baseline conditions. Additional nutrient reductions may be possible through the implementation of Best Management Practices such as wider vegetated buffers along watercourses or ditches, increasing passive, wooded open space, use of pervious paving materials to reduce surface imperviousness, and the use of green-technology stormwater management treatment trains. 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 Resource Protection Areas**

A small portion of the eastern section of the parcel is mapped as an Excellent Ground Water Recharge Potential Area (see attached map).

Excellent ground-water recharge potential areas are those areas mapped by the Delaware Geological Survey where the first 20 feet of subsurface soils and geologic materials are exceptionally sandy. These soils are able to transmit water very quickly from the land surface to the water table. This map category is an “indicator of how fast contaminants will move and how much water may become contaminated” (Andres, 2004, pg 1). Land

use activities or impervious cover on areas of excellent ground-water recharge potential may adversely affect the quantity and quality of ground water beneath these areas.

The DNREC Water Supply Section recommends that the portion of the new development within the excellent ground-water recharge area not exceed 20% impervious cover (DNREC, 2005). 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.

The proposed development would change the impervious from 0% to approximately 10-15%. The Developer provided these numbers on the PLUS application form.

In addition, because the excellent ground water recharge area can so quickly affect the underlying aquifer if contaminants are spilled or discharged across the area, the storage of hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program.

#### References

Andres, A. Scott, 2004, Ground-Water Recharge Potential Mapping in Kent and Sussex Counties, Delaware: Delaware Geological Survey Report of Investigations No. 66, p. 14. <http://www.udel.edu/dgs/Publications/pubform.html#nvestigations>

Delaware Department of Natural Resources and Environmental Control (2005): Source Water Protection Guidance Manual for the Local Governments of Delaware: Dover, DE, 144 p. [http://www.wr.udel.edu/publications/SWAPP/swapp\\_manual\\_final/swapp\\_guidance\\_manual\\_final.pdf](http://www.wr.udel.edu/publications/SWAPP/swapp_manual_final/swapp_guidance_manual_final.pdf)

#### **Water Supply**

The project information sheets state water will be provided to the project by Tidewater Utilities via a public water system. DNRC 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 83-W-6.

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**

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. 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.

### **Drainage**

1. 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.
2. 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.
3. 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.
4. 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 placed next to the catch basin. Record the easement on the deed.
  5. 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.
  6. 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.
  7. The Drainage Program does not support the removal of trees for the creation of stormwater management areas. However, the Drainage Program recognizes that tree removal is unavoidable in some cases. Where practical, plant native trees and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided.

For questions or clarifications, please contact Jim Sullivan at (302) 739-9921.

### **Open Space**

Delaware Coastal Programs (DCP) recommends providing access easements to all open space areas within the subdivision. Otherwise, over time, these areas become burdensome for communities to maintain especially when they cannot be utilized by all residents. The open space area between lots 67-82 off Old Forge Way does not have an access easement for all residents to use the open space. DCP recommends that this area and other isolated pockets of open space (e.g., Thornton Street, between lots 22 & 23; West Pittston Ct., between lots 43-49) be combined and this acreage be relocated to enhance and expand wetland buffers to further provide environmental benefits needed in an environmentally sensitive developing area.

In areas set aside for passive open space, the developer is encouraged to consider establishment of additional forested areas or meadow-type grasses. Doing so will provide wildlife habitat and it will create recreational opportunities for residents. 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. Natural habitat could consist of increasing tree canopy density, reforesting portions of open space or establishing meadow grasses. 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/>.

In addition, Delaware Coastal Programs strongly urges the developer to record a detailed open space management plan with the County. This plan should outline how to manage each open space area for natural habitat, as well as invasive species. If mitigation will occur, the developer is encouraged to protect this area by permanent conservation easement or other permanent protection mechanism, the developer is encouraged to place signage and demark the areas to avoid infringement by homeowners.

### **Site Visit Request**

DNREC has never surveyed the project site and our community ecologist, Robert Coxe, respectfully requests the opportunity to conduct a survey. This would be conducted at no cost or liability to the landowner/developer. Robert is currently conducting a vegetative community mapping project throughout the State and is especially interested in the succession that has occurred at this project site. It is unique in that it was harvested in the past but no management efforts have taken place to either restore or replant. The probability of finding rare plants is low, but the information regarding successional growth would be of value to Robert's project. If the developer would be open to a site visit, Robert can be reached at (302) 653-2880. The survey should be conducted prior to habitat restoration efforts or ground disturbing activities associated with construction.

### **Forest Preservation**

Cumulative forest loss throughout the state is of utmost concern to the Division of fish and Wildlife which is responsible for conserving and managing the State's wildlife (see [www.fw.delaware.gov](http://www.fw.delaware.gov) and the Delaware Code, Title 7). Because of an overall lack of

forest protection, the State has to rely on applicants and/or the entity that approves the project (i.e. counties and municipalities) to consider implementing measures that will aide in forest loss reduction.

1. DNREC appreciates this developer's effort to create a more 'green' version of this development. The developer expressed a willingness to try and preserve existing forested resources by minimizing the clearing needed to put in infrastructure and housing units.
2. To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, we recommend that clearing not occur April 1st to July 31st. This clearing recommendation would only protect those species during one breeding season; once trees are cleared the result is an overall loss of habitat.
3. The developer mentioned that a habitat restoration plan was going to be drafted for at least 30 acres of remaining open space. This would include plantings of native species and possible installation of nesting structures and other wildlife amenities. DNREC requests that efforts to maintain the integrity of forested wetlands be one of the goals of this project.

### **Assawoman Wildlife Area**

This project is not directly adjacent to the Assawoman Wildlife Area, but will cause the displacement of some wildlife and result in an increase in the human population of the area. As habitat is converted by development, wildlife must disperse into surrounding areas which can create human/animal conflicts, including increased interactions on the roadways. Habitat conversion can also cause increased pressure on nearby wildlife areas and other protected lands as wildlife vie for resources and become more densely populated. Higher wildlife population densities can lead to habitat degradation, disease and poor general health.

The habitat restoration efforts mentioned above are especially important for minimizing negative effects. In addition, maintaining forested connections to adjacent parcels will allow wildlife travel to and from areas that still contain habitat. It may be beneficial for the developer or consultant drafting the restoration plan to coordinate with the Wildlife Area Manager to ensure that local wildlife needs are considered. Rob Gano is the Regional Wildlife Area Manager and can be contacted at (302) 539-3160.

DNREC recommends that people buying into this development are made aware of the following:

1. Residents should be aware that herbicide control of invasive plant species and controlled burning of grass stands are on-going tools used to maintain wildlife habitat. Habitat management is extremely important to the health and use of the Wildlife Area and the methods used are well established.
2. Hunting is a legal activity that takes place on the Wildlife Area and is often used by hunters in the early morning hours. Residents will be subject to the noise of fire arms and barking dogs that are pursuing game. Hunting is a recreational opportunity offered to all residents of Delaware, occurs on publicly owned land, is a method of wildlife management, and is well established at this Wildlife Area.
3. The use of ATV's (all terrain vehicles) by non-Wildlife Area staff is illegal on the Wildlife Area. This has become a problem at other Wildlife Areas where residential developments have been built adjacent or near to State Land. Not only do ATV's destroy habitat, but their use becomes an on-going enforcement issue.

**Air Quality**

Once complete, vehicle emissions associated with this project are estimated to be 23.9 tons (47,735.3 pounds) per year of VOC (volatile organic compounds), 19.8 tons (39,521.6 pounds) per year of NOx (nitrogen oxides), 17.4 tons (34,879.2 pounds) per year of SO2 (sulfur dioxide), 1.6 ton (3,104.8 pounds) per year of fine particulates and 2,388.1 tons (4,776,184.8 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 11.5 tons (23,030.3 pounds) per year of VOC (volatile organic compounds), 1.3 ton (2,534.0 pounds) per year of NOx (nitrogen oxides), 1.1 ton (2,102.9 pounds) per year of SO2 (sulfur dioxide), 1.4 ton (2,713.7 pounds) per year of fine particulates and 46.7 tons (93,359.6 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 4.6 tons (9,127.5 pounds) per year of NOx (nitrogen oxides), 15.9 tons (31,748.0 pounds) per year of SO2 (sulfur dioxide) and 2,341.4 tons (4,682,825.3 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO <sub>2</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Mobile	23.9	19.8	17.4	1.6	2388.1

Residential	11.5	1.3	1.1	1.4	46.7
Electrical Power		4.6	15.9		2341.4
TOTAL	35.4	25.7	34.4	3.0	4776.2

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 4.6 tons of nitrogen oxides per year and 15.9 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. We highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

We 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:**

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
- Where a water distribution system is proposed for multi-family sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**

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

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 both access road to the subdivision from Beaver dam Rd 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.

d. **Gas Piping and System Information**

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

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)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Townhouse 2-hr separation wall details shall be shown on site plans
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- 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](http://www.statefiremarshal.delaware.gov) technical services link, plan review, applications or brochures.

**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 2 and 3 areas, and it is our understanding the owner will also seek annexation by the Town of Ocean View.

Section 1, Chapter 99, Code of Sussex Section 99-6 may apply to this subdivision if it is not annexed into the Town of Ocean View. 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.

*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 Walsh 739-4263**

This proposal is for a rezoning of 127 acres from GR to GR/RPC and a site plan for a 372 residential subdivision located on the south side of Beaverdam Road, 1/2 mile east of Central Avenue across from Bear Trap Dunes near Frankford. According to the State Strategies Map, the proposal is located in an Investment Level 2 and 3 area and environmentally-sensitive area. As a general planning practice, DSHA encourages residential development in areas where residents will have proximity to services, markets, and employment opportunities such as Investment Level 2 areas outlined in the State Strategies Map. DSHA supports the fact that this proposal targets the full range of incomes including first time homebuyers. For informational purposes, the most recent real estate data collected by DSHA shows the median home price in Sussex County to be \$258,500. However, families earning respectively 100% of Sussex County’s median income only qualify for mortgages of \$169,101, thus creating an affordability gap of \$89,399. The provision of units within reach of families earning at least 100% of Sussex

County's median income would help increase housing opportunities for first time homebuyers. We recommend that some of the units be set-aside at this price level to ensure that working households have access to affordable housing.

**Department of Education – Contact: John Marinucci 735-4055**

This proposed development is in the Indian River School District. DOE offers the following comments on behalf of the Indian River School District.

1. Using the DOE standard formula, this development will generate an estimated 186 students.
2. DOE records indicate that the Indian River School Districts' *elementary schools are at or beyond 100% of current capacity* based on September 30, 2006 elementary enrollment.
3. DOE records indicate that the Indian River School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2006 secondary enrollment. In multiple correspondences from the Indian River School District administration, the district asserts that while the Indian River High School has capacity, the Indian River Middle Schools' student population exceeds student capacity.
4. This development will create additional elementary school and middle school student population growth which will further compound the existing shortage of space.
5. The developer is strongly encouraged to contact the Indian River School District Administration to address the issue of elementary school over-crowding that this development will exacerbate.
6. DOE requests developer work with the Indian River 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 local school district.

**Sussex County – Contact: Richard Kautz 855-7878**

No comment about the project. The site is to be entirely within the town limits and does not directly impact County services or properties outside the town limits.

The town is encouraged to avoid the creation of new enclaves when annexing, to eliminate existing enclaves during its negotiation of the annexation agreement, and to notify the Sussex County Planning Department when the annexation becomes effective.

The Sussex County Engineer Comments:

The project is within the boundary of the Miller Creek Sanitary Sewer District and connection to the sewer system is mandatory. The Sussex County Engineering Department (SCED) approved a sanitary sewer concept plan in January of 2003 for 311 dwelling units. The current project proposes a total of 372 units. We have concerns with the additional units as well as units now shown where wetlands were previously indicated on the approved concept plan.

Sewer service is available in the area, but has not been fully extended to the parcels at this time. Sussex County does not have a schedule for extending sewer to the area. The developer has previously completed construction of some infrastructure including an internal pump station, forcemain and gravity collection lines for up to 136 units. Additional units (more than 136) will require the construction of additional infrastructure to an approved connection point. An upgrade to existing pump station number 66 is required if any flow is directed to that station from Silver Woods. Those upgrades would be at the developer's expense. Any flow directed to the regional sewer in Bear Trap would require further examination. Upgrades could be required as well. Those upgrades would also be at the developer's expense. Capacity at existing Pump Station 67 is adequate for up to 311 units. Additional units will require further review and upgrades of that station may be required as well, which would also be at the developer's expense.

Sussex County requires design and construction of the collection and transmission system to meet Sussex County Engineering Department's requirements and procedures. The Sussex County Engineer must approve the connection points. A sewer concept plan must be submitted for review and approval prior to any sewer construction. The developer's engineer should contact the Sussex County Engineering Department prior to beginning preparation of the concept plan. A checklist for preparing sewer concept plans has been given to the developer. Please also provide a phasing plan and realistic schedule for when the phases would begin connecting. The concept plan and phasing plan should be submitted together. All costs associated with extending sewer service will be the sole responsibility of the developer. One-time system connection charges will apply. Please contact Ms. Denise Burns at 302 854-5017 for additional information on charges.

**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". The signature is written in black ink and is positioned above the typed name.

Constance C. Holland, AICP  
Director

CC: Sussex County