



**Constance C. Holland, AICP**  
**Director, Office of State Planning Coordination**  
**State of Delaware**  
**122 William Penn Street, Suite 302**  
**Haslet Building, Third Floor**  
**Dover, DE 19901**

**17 April 2007**  
**Via: Fed Ex**

RE: PLUS review – PLUS 2007-02-05; Woodfield Preserve

Dear Ms. Holland:

In regard to the above referenced project and pursuant to your comment letter dated 26 March 07, please find the following point by point response in blue for your review. A revised plan will be submitted to the State once the initial comments are received from Sussex County Planning and Zoning.

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

This proposal is located in Investment Level 4 according to the *Strategies for State Policies and Spending*, and is in a Low Density area according to the Sussex County certified comprehensive plan. **The comments in this letter are technical, and are not intended to suggest that the State supports this development proposal. This letter does not in any way suggest or imply that you may receive or may be entitled to permits or other approvals necessary to construct the development you indicate or any subdivision thereof on these lands.**

This project represents a major land development that will result in 256 residential units in an Investment Level 4 area according to the *2004 Strategies for State Policies and Spending*. This project is also located in the Low Density area according to the Sussex County certified plan. Investment Level 4 indicates where State investments will support agricultural preservation, natural resource protection, and the continuation of the rural nature of these areas. New development activities and suburban development are not supported in Investment Level 4 areas. These areas are comprised of prime agricultural lands and environmentally sensitive wetlands and wildlife habitats, which should be, and in many cases have been preserved.

From a fiscal responsibility perspective, development of this site is likewise inappropriate. The cost of providing services to development in rural areas is an inefficient and wasteful use of the State's fiscal resources. The project as proposed is likely to bring more than 650 new residents to an area where the State has no plans to invest in infrastructure upgrades or additional services. These residents will need access to such services and infrastructure as schools, police, and transportation. To provide some examples, the State government funds 100% of road maintenance and drainage improvements for the transportation system, 100% of school transportation and paratransit services, up to 80% of school construction costs, and about 90% of the cost of police protection in the unincorporated portion of Sussex County where this development is proposed. Over the longer term, the unseen negative ramifications of this development will become even more evident as the community matures and the cost of maintaining infrastructure and providing services increases. Because the

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development is inconsistent with the *Strategies for State Policies and Spending*, the State is opposed to this proposed subdivision.

It is understood that this proposed development is within a Level 4 area, however the site's close proximity to the Town of Milton, SR 1, Broadkill Beach and the adjacent Rookery Golf Course makes for an appropriate area for a rural type residential community. The development would have easy access for future residents and supporting services without requiring significant upgrades to infrastructure. The site will also provide great natural and recreational amenities to the community. The most environmentally sensitive portions of the site will remain unchanged and activities such as the proposed afforestation will assist in improving air quality for the region.

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

The Division of Historical and Cultural Affairs is not in favor of this development in Level 4. It will lead to the destruction of historic properties, including archaeological sites, and to the further destruction of the historic agricultural landscape in this area. This parcel contains an agricultural building (S-3310) and is across Broadkill Rd from the D. H. Robinson House (S-297; Beers Atlas 1868). There is an agricultural complex (S-3308) which may be in the out-parcel between this parcel and the golf course. There are areas of high to medium potential for prehistoric-period archaeological sites. Beers Atlas shows two properties within or very near this parcel: the Capt. A. Russell House and the Jno. Wiltbank House. There may be archaeological remains associated with these properties.

In the event that a Corps of Engineers permit is required on the property, the owner/developer will be required to consult with the DHCA office and may be required to do an archaeological survey, depending on the area of the permit. They will be happy to assist him through this process.

Small, rural, family cemeteries often are found in relation to historic farm complexes, such as the Russell and Wiltbank houses, usually a good distance behind or to the side of the house. 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. They would have to have a copy of any archaeological report done for this purpose. They will be happy to discuss these issues with the developer.

In the event that this development is approved, the DHCA requests that the developer move the planned entrance away from the Robinson House, and provide sufficient landscaping to block and noise or visual intrusions on the nearby historic properties. They request the opportunity to document any buildings within the parcel that are older than 50 years old prior to any demolition activities. The DHCA would also appreciate an opportunity to examine the area for archaeological sites prior to any ground-disturbing activities, to learn something about their location, nature, and extent.

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Upon approval of the development, the Developer/Designer will further investigate the potential for historic structures and archeological sites on the property and will investigate the possibility of any family cemeteries and report back to the DHCA with any findings. The location of the development entrance will be adjusted to eliminate any direct influence on the Robinson House and a landscaping plan can be provided for agency review.

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

Thompson Schell, LLC seeks to develop 256 single-family detached houses on a 196.25- acre parcel (Tax Parcels 2-35-9.00-23.00) on the south side of Broadkill Road (Delaware Route 16) east of Delaware Route 1), and more specifically on the east edge of the Rookery Golf Course. The land is zoned AR-1 in Sussex County and would be developed under the County’s cluster development option.

Previously the subject land was included in a larger development proposal known as The Preserve at the Rookery (also SSR4261 a.k.a. the Aydelotte Property), a development of 500 single-family detached houses on a 375-acre assemblage of parcels. Woodfield Preserve replaces that development.

Because this development is proposed for a Level 4 Area, it is inconsistent with the *Strategies for State Policies and Spending*. As part of their commitment to support the *Strategies*, DelDOT refrains from participating in the cost of any road improvements needed to support this development and is opposed to any road improvements that will substantially increase the transportation system capacity in this area. DelDOT will only support taking the steps necessary to preserve the existing transportation infrastructure and make whatever safety and drainage related improvements are deemed appropriate and necessary. The intent is to preserve the open space, agricultural lands, natural habitats and forestlands that are typically found in Level 4 Areas while avoiding the creation of isolated development areas that cannot be served effectively or efficiently by public transportation, emergency responders, and other public services.

DelDOT strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in approved Comprehensive Plans. They encourage the use of transfer of development rights where this growth management tool is available.

If this development proposal is approved, notwithstanding inconsistencies with the relevant plans and policies, DelDOT will provide further technical review and comments.

As indicated above the proposed development is in close proximity to the Town of Milton and SR 1 and is therefore easily accessible for the future residents and required services. A Traffic Impact Study has been submitted to DelDOT and their comments were received on 12 April 2007. The Developer will coordinate a meeting with DelDOT to discuss the recommended improvements and associated costs.

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



#### **Investment Level 4 Policy Statement**

This project is proposed for an Investment Level 4 area as defined by the *Strategies for State Policies and Spending* and is also located outside of a designated growth area in the relevant municipal and county certified comprehensive plans. According to the *Strategies* this project is inappropriate in this location. In Investment Level 4 areas, the State's investments and policies, from DNREC's perspective, should retain the rural landscape and preserve open spaces and farmlands. Open space investments should emphasize the protection of critical natural habitat and wildlife to support a diversity of species, and the protection of present and future water supplies. Open space investments should also provide for recreational activities, while helping to define growth areas. Additional state investments in water and wastewater systems should be limited to existing or imminent public health, safety or environmental risks only, with little provision for additional capacity to accommodate further development.

With continued development in Investment Level 4 areas, the State will have a difficult, if not impossible, time attaining water quality (e.g., TMDLs) and air quality (e.g., nonattainment areas for ozone and fine particulates) goals. Present and future investments in green infrastructure, as defined in Governor Minner's Executive Order No. 61, will be threatened. DNREC strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in certified Comprehensive Plans. DNREC encourages the use of transfer of development rights where this growth management tool is available.

This particular development certainly compromises the integrity of the State Strategies and the preservation goals inherent in many of DNREC's programs. Of particular concern are potential impacts to all three layers of the Green Infrastructure map (natural resource and recreation priorities, cropland, and forest land), potential impacts to wetlands, potential impacts to the Broadkill River State Resource Area/Natural Area, a majority (85-90%) of the project site is in the 100-Year floodplain, and impacts to potential Delmarva fox squirrel habitat. While mitigating measures such as conservation design, central wastewater systems instead of individual on-site septic systems, and other best management practices may help mitigate impacts from this project, not doing the project at all is the best avenue for avoiding negative impacts. As such, this project will receive no financial, technical or other support of any kind from DNREC. Any required permits or other authorizations for this project shall be considered in light of the project's conflict with our State growth strategies.

It is understood that this proposed development is within a Level 4 area, however the site's close proximity to the Town of Milton, SR 1, Broadkill Beach and the adjacent Rookery Golf Course makes for an appropriate area for a rural type residential community. The design attempts to utilize the BMP's as outlined by DNREC – clusters of smaller lots, central wastewater, large wetland buffers and green technology BMP's for stormwater management. The most environmentally sensitive portions of the site will remain unchanged. No wetlands are to be impacted and substantial buffers to the wetlands are being proposed. Forested areas are being virtually untouched and an afforestation program is being proposed. The known areas of critical habitat are being avoided and investigated to ensure no impacts occur.

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### **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.

[See the previous comment.](#)

### **Soils**

According to the Sussex County soil survey update, Ingleside, Henlopen-Rosedale complex, Hammonton, Hurlock Askecksy, and Transquaking-Mispillion complex were mapped in the immediate vicinity of the proposed construction on this parcel. Ingleside is a well-drained upland soil that, generally, has few limitations for development. Henlopen-Rosedale is a somewhat excessively to well-drained upland soil that has few to moderate limitations on account of rapid permeability. Hammonton is a moderately well drained soil of low-lying uplands that has moderate limitations for development. Hurlock and Askecksy are poorly-drained wetland associated (hydric) soils that have severe limitations for development. Transquaking-Mispillion complex soils are very poorly drained (hydric) associated with tidally-influenced estuarine wetlands.

[Comment acknowledged. The designer is working with an environmental and geotechnical consultant to evaluate the soils for potential use in wastewater treatment, stormwater management and structural support.](#)

### **Wetlands**

According to the Statewide Wetland Mapping Project (SWMP) mapping, nontidal palustrine forested and palustrine forested/scrub-shrub riparian headwater wetlands were mapped in association with an unnamed (or name unknown) stream tributary draining the northeastern corner of subject parcel. Tidally-influenced palustrine forested riparian headwater wetlands were mapped in association with an unnamed (or name unknown) stream tributary draining much of the parcel's western boundary. Additionally, tidally influenced estuarine emergent and estuarine unconsolidated bottom wetlands were mapped over much of the extreme southern portion of the parcel.

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Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. Vegetated buffers of no less than 100 feet should be employed from the edge of the wetland complex. The developer should note that both DNREC and U.S. Army Corps of Engineers (USACE, or “the Corps”) discourage allowing lot lines to contain wetlands to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.

Headwater riparian wetlands are important for the protection of water quality and the maintenance/integrity of the ecological functions throughout the length of the stream, including the floodplain system and/or water bodies further downstream. Since such streams are a major avenue for nutrient-laden stormwater and sediment runoff their protection deserves the highest priority. In recognition of this concern, the Watershed Assessment Section strongly recommends the applicant preserve the existing forested buffer(s) adjacent to the headwater riparian wetlands and associated stream headwater stream tributaries draining this parcel in their entirety. Otherwise, an upland buffer width of at least 100-foot is the recommended minimum. In the situation where the natural buffer vegetation has been removed or reduced by past development or farming activities, the developer is encouraged to restore or establish a buffer to said minimum or greater with native herbaceous and/or woody vegetation.

PLUS application materials indicate that wetlands have been delineated (presumably a field delineation). This delineation should be verified by the Corps through the Jurisdictional Determination process. Please note that impacts to palustrine wetlands are regulated by the Corps through Section 404 of the Clean Water Act. In situations where the applicant believes that the delineated wetlands on their parcel are nonjurisdictional isolated wetlands, the Corps must be contacted to make the final jurisdictional assessment. They can be reached by phone at 736-9763. Certain drainage ditches may also be jurisdictional either under the Corps Program or through the DNREC Wetland and Subaqueous Lands program.

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 Programs Section. Each of these certifications represents a separate permitting process.

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.

A detailed environmental wetlands assessment will be performed before the final design stage. The initial field work has delineated wetlands, subaqueous lands and tax ditches as shown on the site plan. The design is such that none of these features will be impacted. Large buffers (well in excess of the minimums required) are being proposed for lot lines and structures near wetlands. In addition to attending a JPP meeting the Designer will also be meeting with the Drainage Division of DNREC.

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**Impervious Cover**

Based on a review of the PLUS application, post-development surface imperviousness is estimated to be about 12.5 percent. However, given the scope and density of this project, this estimate is **clearly an underestimate**. Some of the major reasons for this underestimate are the applicant’s apparent use of natural areas (potential wetlands) and/or stormwater management areas for meeting the County’s open space requirements. Use of wetlands and/or or stormwater management in such a manner ultimately results in an underestimate of this project’s calculated surface imperviousness and environmental impacts. Therefore, the parcel’s calculated amount of surface imperviousness should use as its basis, a calculated open space figure that reflects the omission of all delineated wetlands (i.e., after Corps approval) and stormwater management areas. Additionally, all created forms of constructed surface imperviousness (i.e., rooftops, sidewalks, and all paved surfaces), should be included in the calculation for surface imperviousness.

**Therefore, in summary, the finalized calculation for surface imperviousness should reflect all of the above-mentioned concerns so that an accurate assessment of this project’s impacts can be made.**

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.

The impervious calculations have been reviewed and the following estimates (acreage and percentage of site) are provided:

|                                    |                  |                          |                                   |
|------------------------------------|------------------|--------------------------|-----------------------------------|
| Total site area                    |                  | 195.63 ac.               |                                   |
| Total site area excluding wetlands |                  | 167.18 ac.               |                                   |
|                                    | <u>Acreage</u>   | <u>% of Overall Site</u> | <u>% of Site without Wetlands</u> |
| Roadways/Sidewalks/<br>Driveways   | 13.63 ac.        | 7.0%                     | 8.2%                              |
| Rooftops                           | 8.85 ac.         | 4.5%                     | 5.3%                              |
| <b>Total</b>                       | <b>22.48 ac.</b> | <b>11.5%</b>             | <b>13.5%</b>                      |

During final engineering, the stormwater management calculations will account for all impervious services in accordance with regulatory requirements and industry standards. Pervious materials will be utilized where practical and careful consideration will be paid to landscaping that will assist in reducing impervious coverage.



### **TMDLs**

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Broadkill 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. In the greater Broadkill watershed, in which this project is located, “nutrient reductions” of 40 percent will be required for nitrogen and phosphorus. Additionally, a 75 percent reduction in bacteria will also be required.

The SWM BMP's that will be employed will be designed such that the pollutant reduction meets/exceeds the requirements outlined by both DNREC and the Sussex Conservation District. The Designer is initiating meetings with SCD now to outline potential BMP's for the site.

### **TMDL compliance through the Pollution Control Strategy (PCS)**

As indicated above, Total Maximum Daily loads (TMDLs) for nitrogen and phosphorus have been proposed for the Broadkill watershed. The TMDL calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 75 percent reduction in bacteria. A pollution control strategy will be used as a regulatory framework to ensure that these nutrient and bacteria reduction targets are attained. The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients and bacteria to meet the TMDL requirements. Additional nutrient and bacteria reductions may be possible through the implementation of Best Management Practices such as wider vegetated buffers along watercourses, increasing passive, wooded open space, using enhanced nutrient and bacteria removal wastewater technologies or connection to an existing central sewer (if available), and the use of green-technology stormwater management treatment trains. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

See comment above. In addition, the Designer will contact Mr. Lyle Jones for more information relative to the TMDL tool.

### **Water Resource Protection Areas**

The Water Supply Section has determined that it is partially within a wellhead protection area for the Broadkill Beach public water supply system (Map 1). Wellhead protection areas are surface and subsurface areas surrounding a public water supply well where land use activities or impervious cover may adversely affect the quantity and quality of ground water moving toward such wells.

- The proposed development does not show impervious surface on the wellhead protection area for Broadkill Beach public water supply system (Map 2).
- However, the applicant states that Tidewater Utilities is considering using an existing well for regional water supply. The TEPP Database shows one well on the parcel. This existing well is permitted for domestic use and screened in an unconfined aquifer. Its exact location is not noted. The developer may choose to reclassify or abandon the well.

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In order to avoid any potential limitations to the land use in the wellhead protection area, the developer should have the well abandoned by a Delaware Licensed driller. Once the well is abandoned the wellhead protection area can be removed from consideration and eliminate the impervious cover recommendations.

Reclassifying the well as a public well would make it subject to impervious cover recommendations by DNREC. The wellhead protection area would be delineated based on the type of aquifer, pumping rate, and allocation. This new wellhead protection area would then be subject to DNREC recommendations.

Another option would be to apply to DNREC Water Resources Well reclassified as something other than a public or miscellaneous public well. The water could not be used for public consumption as outlined in the Delaware Regulations Governing the Construction and Use of Wells (DNREC, 1997). Should the developer not wish to abandon or reclassify the well to non-potable use, the DNREC Water Supply Section recommend that the portion of the new development within the wellhead protection area not exceed 20% impervious cover (DNREC, 2005). Some allowance for augmenting ground-water recharge should be considered if the impervious cover exceeds 20% but is less than 50% of that portion of the parcel within this area (Kauffman, 2005). However, the development should not exceed 50% regardless. 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.

Ideally, relocating any open space areas to the part of the parcel within the wellhead protection area would decrease the total impervious area in the wellhead protection area. Augmenting the ground-water recharge with clean rooftop run-off systems are another alternative to reducing the total impervious cover.

In addition, because the wellhead protection area the source of public drinking water, 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:

Delaware Department of Natural Resources and Environmental Control, 1997, Delaware Regulations Governing the Construction and Use of Wells, p. 49.  
<http://www.dnrec.state.de.us/water2000/Sections/WatSupp/WellPermits/WSSWellPermits.htm#data>

Delaware Department of Natural Resources and Environmental Control, 2005, Source Water Protection Guidance Manual for the Local Governments of Delaware, p. 144.  
[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)

Kauffman, G.J., Wozniak, S.L., and Vonck, K.J., 2005, Delaware Ground-Water Recharge Design Manual: Newark, DE, Water Resources Agency, University of Delaware, p. 31.

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<http://www.wr.udel.edu/swaphome/Publications/SWPguidancemanual.html>

**Map 1. Woodfield Preserve (PLUS 2007-02-05)**

The dark red area shows the wellhead protection area with affected parcel in light blue.

**Map 2. Woodfield Preserve (PLUS 2007-02-05)**

The dark red area shows the wellhead protection area with affected parcel in light blue. The site plan is overlain in the parcel.

No disturbance is proposed within the wellhead protection area. As the site design evolves the Designer will be working closely with Tidewater or other utility to address the concerns presented here.

**Water Supply**

The information provided indicates that Tidewater Utilities will provide well water to the proposed projects through a central public water system. DNREC files reflect that Tidewater Utilities does not currently hold a certificate of public convenience and necessity (CPCN) to provide public water in these areas. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site public well be needed, it must be located at least 150 feet from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

For any parcel, lot, or subdivision created or recorded within fifty (50) feet of, or within the boundaries of, an Agricultural Lands Preservation District (as defined in Title 3, Del. C., Chapter 9); all wells constructed on such parcels shall be located a minimum of fifty (50) feet from any boundary of the Agricultural Lands Preservation District. This requirement does not apply to parcels recorded prior to the implementation date of these Regulations. However, it is recommended that all wells be placed the maximum distance possible from lands which are or have been used for the production of crops which have been subjected to the application of land applied federally regulated chemicals.

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.

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

The Designer will be working closely with Tidewater or other utilities to address the concerns presented here. As the design evolves Mr. Rick Rios will be contacted to discuss the requirements for wells and/or dewatering.

### **Sediment and Erosion Control/Stormwater Management**

Standard Comments:

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

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

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

Applying practices to mimic the pre-development hydrology on the site, promote recharge, maximize the use of existing natural features on the site, and limit the reliance on structural stormwater components, such as maintaining open spaces, should be considered in the overall design of the project as a stormwater management technique. Each stormwater management facility should have an adequate outlet for release of stormwater. Any drainage conveyed onto this site from neighboring properties must be adequately conveyed through the site to the discharge point without interruption.

Clearly address how Stormwater Quality and Quantity Treatment will be provided. If this project is eligible for a Quantity Waiver, please make the request in the stormwater narrative citing the specific regulation.

Please indicate on the sediment and stormwater management plan who shall be responsible for maintenance of the stormwater management facilities both during construction and after. During the design of the sediment control and stormwater management plan, considerations should be made for maintenance (i.e. access, easements, etc.) of any structures or facilities.

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If a stormwater management pond is going to be utilized as a sediment trap/basin during construction it must be designed to accommodate 3600 cubic feet of storage per acre of contributing drainage area until project stabilization is complete.

All ponds are required to be constructed per Pond Code 378. Please note that if the stormwater facilities will impact wetlands, a permit must be provided to the District prior to receiving approval. Please address.

A Certified Construction Reviewer (CCR) is required for any project that is 50 acres or greater.

DNREC regulations require no more than 20 acres to be disturbed at more time. A phased erosion and sediment control plan and sequence of construction will be required.

Under the DNREC Health and Safety Memo of 2000, all wet ponds are required to have an open space depth of 3 feet or more that comprises 50-75 percent of the area of the pond. Consideration should be made for any adjacent properties during the design of the project, including drainage and erosion/sediment control.

Specific Comments:

Green technology best management practices are the preferred option for stormwater quality control [Delaware Sediment and Stormwater Regulations, 10.3.5].

This project is within an impaired watershed. A Total Maximum Daily Load (TMDL) has been promulgated. The applicant is encouraged to preserve any existing riparian buffers to aid in the reduction of nutrients, sediment, and other pollutants. For the further enhancement of water quality, additional widths of vegetated buffers and other water quality measures are encouraged to be implemented on this project. Additionally, the applicant should be aware that additional best management practices for storm water quality may be required by state regulation and county ordinances due to the project location in an impaired waterway.

The Designer will set up meetings with DNREC's SWM Division and the Sussex Conservation District (SCD) to discuss outfalls and predevelopment drainage areas as well as BMP's to be utilized within the proposed development. The topic of quantity control waivers will be discussed since the site is located in close proximity to tidal waters. During the final engineering phase all SWM calculations and designs will be submitted to SCD for their detailed review. This information will include a detailed stormwater report with narrative and stormwater management and Erosion and Sediment Control Plans. All BMP's will be designed and built in accordance with DNREC and SCD requirements. The CCR review will be a critical component during the construction activities to ensure that the designs are implemented correctly.

## **Drainage**

1. The Drainage Program recommends a 50-foot maintenance area on the north side of the ditch that drains the existing pond on the property. The area should be element



dedicated open space and utilized for mechanized maintenance, and possible spoil placement, if the ditch requires periodic maintenance or future re-construction. By utilizing open space as a maintenance area, equipment obstacles such as decks, sheds, fences, and pools are avoided. Trees planted within the maintenance area should be spaced to allow mechanized construction at maturity. This recommendation would also apply to other open drainage systems within the development.

2. The Drainage Program requests that the engineer take precautions to ensure that 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.
3. 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.
4. Increase the side yard setback to 15 feet 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.
5. 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.
6. 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.
7. 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.

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

[Comments acknowledged and appreciated. The information outlined above contains practices that the Designer is continuing to utilize in the design/engineering process.](#)

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Mr. Sullivan will be contacted once the design has evolved in order to review the concepts with the Division.

### **Floodplains**

After looking at the FEMA floodplain maps for this proposed site, approximately 85-90% of the site is located within the 100 year floodplain (Zone AE). The remaining portion of the site is located within the 500 year floodplain (Zone X shaded). The 100 year floodplain is better described as a 1-percent annual chance flood area. What this means is that there is a 1-percent chance of a flood of that size happening in any year. Over the course of a 30 year loan there is a 26% chance that a flood of 100-year magnitude will occur in a Zone AE floodplain. Our concern is for the 250 homes that will be placed in the floodplain. Is fill going to be placed on the site to remove the homes from the floodplain? If so, there are certain building restrictions that must be followed per FEMA's Technical Bulletin 10. Will the developer have the FEMA floodplain maps amended for the site? If this is not done, the approximately 250 homeowners will be required to purchase flood insurance in order to obtain a mortgage.

Comment acknowledged. All FEMA restrictions will be followed as fill is intended for the subject site.

### **Open Space**

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 areas adjacent to the Broadkill River are to be protected 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.

Open space is a critical component of the Woodfield Preserve design. Continuous greenways are being designed such that there is continuity for both people and habitats to travel throughout the site. All open space, including small pocket parks, will be managed by the HOA and protected from future development. No lot lines will be designed to infringe upon protected areas. An Open Space Management plan will be established and will become part of the recorded subdivision. The appropriate signage will be placed to demark the protected areas.

### **Rare Species**

There is a documented presence of Delmarva fox squirrel (*Sciurus niger cinereus*, DFS) in a woodlot adjacent to this project. Delmarva fox squirrels are large-bodied tree squirrels that only inhabit mature forests on the Delmarva Peninsula. Threatened mainly by loss of its forested habitat, DFS have been protected as an endangered species since 1967.

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As required by the Endangered Species Act, the U.S. Fish and Wildlife Service review projects that may harm this species or their habitat. Please contact Trevor Clark of the U.S. Fish and Wildlife Service (410-573-4527) to learn how to avoid impacting the habitat. He may recommend simple alterations to your project or suggest you have surveys conducted to determine if Delmarva fox squirrels are present.

If surveys are conducted, our Division has offered to survey via camera array and you indicated an interest at the PLUS meeting. This service would be at no cost to the applicant/developer. Please contact Holly Niederriter at (302) 653-2880 to discuss logistics. If you have your own surveys conducted, they must be done by a federally approved fox squirrel surveyor. A list of qualified surveyors is available upon request. Please note that surveys may confirm the presence of fox squirrels but cannot confirm absence.

[The Developer and Designer are aware of the DFS issue and will contact Trevor Clark and Holly Niederriter to discuss the best plan of action for addressing the potential issue.](#)

### **Forest Preservation**

According to the application 42.8 acres of woods are present within the project area, and it was indicated that 1.34 acres is to be removed. The amount removed may be higher once this site is built out and there is further clearing by homeowners. We encourage the developer to include a conservation easement or deed restriction that will prevent further clearing. In addition, you indicated at the meeting (and it is on Exhibit F: Proposed Plan) that there may be additional tree removal (and wetland impacts) within this project area and on the adjacent golf course for an extension/connection to the existing golf course. This amount of forest loss should also be factored in and considered overall.

If feasible, DNREC recommends trees not be removed from April 1st to July 31st to reduce impacts to birds and other wildlife that utilize trees for breeding.

The site plan 'Exhibit F' which was distributed at the PLUS meeting has a fairly large green area incorrectly designated as 'wooded area to remain'. This area has few trees and is largely comprised of tidal marsh. It is recommended that the site plan be corrected to reflect the actual natural resources of the site, i.e. wetlands.

To clarify, the two wetland areas in the northeastern quadrant of the site plan 'Exhibit F' are not clearly marked as such and could be misinterpreted as proposed stormwater management ponds. At the meeting you indicated that these two areas are delineated wetlands and were not going to be converted into stormwater management ponds. We recommend that these wetland areas be more clearly marked as such.

Lastly, it was indicated at the PLUS meeting that 12 acres of trees would be planted ("aforestation") and DNREC commends the developer for this effort. If the applicant is interested in habitat restoration, our program botanist, Bill McAvoy (302-653-2880) can assist in developing a list of native trees or other plant species that are suited to the hydrology and soil characteristics of the site.

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The site plan will be amended to clarify the existing wetland locations and the tidal marsh area. The golf course extension would be into agricultural areas not wooded areas, however the reviewer is correct that some additional trees may be removed to provide pedestrian and golf cart access to the expanded golf area. Mr. Bill McAvoy will be contacted to discuss the landscaping plan for the site.

### **Nuisance Geese**

Stormwater management ponds may attract waterfowl like resident Canada geese and mute swans. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. The applicant indicated that the use of a monofilament grid was being considered as a method to deter geese from utilizing the ponds. This method may deter geese, but safety issues with residents (including children) should be considered as well as the fact that the maintenance of this 'grid' will fall onto the homeowners association once the developer moves onto another project.

As a long term solution that is likely less maintenance intensive, we recommend that a buffer comprised of tall grasses, wildflowers, shrubs, and trees be planted at the edge and within a buffer area around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with proper landscaping, monitoring, and other techniques, geese problems can be minimized.

At this point in time the exact measures to be taken are not known. The Designer/Developer will be hiring a consultant to assist in determining the best methods for nuisance geese control. The planted buffer solution is one that has been successful in other subdivisions and at a minimum will be utilized here. Although the Division of Fish and Wildlife does not provide control services we will consult with them for inputs on the final design methods.

### **State Resource Area/Natural Area**

The fringe upland and associated marshlands located on the southerly portion of the proposed development is part of the Broadkill River Natural Area and State Resource Area (SRA).

Natural Areas involve areas of land or water, or of both land and water, whether in public or private ownership, which either retains or has reestablished its natural character (although it need not be undisturbed), or has unusual flora or fauna, or has biotic, geological, scenic or archaeological features of scientific or educational value.



State Resource Area lands include any open lands characterized by great natural scenic beauty, or whose existing openness, natural condition or present state of use, if retained, would maintain important recreational areas and wildlife habitat, and enhance the present or potential value of abutting or surrounding urban development, or would maintain or enhance the conservation of natural or scenic resources, including environmentally sensitive areas.

That said, the Office of Nature Preserves appreciates the effort by the applicant to mostly remain out of the Natural Area/SRA and urges the applicant to maintain the upland forest fringe as a buffer to the marshes associated with the Broadkill River Natural Area and SRA.

[Comment acknowledged.](#)

### **Solid Waste**

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

[Comment acknowledged. At this point in time the Developer has not committed to a particular builder/builders but selection of such will certainly consider the builder's commitment to minimizing waste.](#)

### **Underground Storage Tanks**

There are no LUST site(s) located near the proposed project. 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.

[Comment acknowledged.](#)

### **Air Quality**

Once complete, vehicle emissions associated with this project are estimated to be 19.6 tons (39,293.3 pounds) per year of VOC (volatile organic compounds), 16.3 tons (32,532.2 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 12.0 tons (24,002.9 pounds) per year of SO<sub>2</sub> (sulfur dioxide), 1.1 ton (2,136.7 pounds) per year of fine particulates and 1,643.4 tons (3,286,836.9 pounds) per year of CO<sub>2</sub> (carbon dioxide).

***However, because this project is in a level 4 area, mobile emission calculations should be increased by 118 pounds for VOC emissions for each mile outside the designated growth areas per household unit; by 154 pounds for NO<sub>x</sub>; and by 2 pounds for particulate emissions. A typical development of 100 units that is planned***

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***10 miles outside the growth areas will have additional 59 tons per year of VOC emissions, 77 tons per year of NOx emissions and 1 ton per year of particulate emissions versus the same development built in a growth area (level 1,2 or 3).***

Emissions from area sources associated with this project are estimated to be 7.9 tons (15,848.8 pounds) per year of VOC (volatile organic compounds), 0.9 ton (1,743.8 pounds) per year of NOx (nitrogen oxides), 0.7 ton (1,447.1 pounds) per year of SO2 (sulfur dioxide), 0.9 ton (1,867.5 pounds) per year of fine particulates and 32.1 tons (64,247.4 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 3.1 tons (6,281.3 pounds) per year of NOx (nitrogen oxides), 10.9 tons (21,848.1 pounds) per year of SO2 (sulfur dioxide) and 1,611.3 tons (3,222,589.4 pounds) per year of CO2 (carbon dioxide).

|                     | VOC  | NOx  | SO2  | PM2.5 | CO2    |
|---------------------|------|------|------|-------|--------|
| Mobile              | 19.6 | 16.3 | 12.0 | 1.1   | 1643.4 |
| Residential         | 7.9  | 0.9  | 0.7  | 0.9   | 32.1   |
| Electrical<br>Power |      | 3.1  | 10.9 |       | 1611.3 |
| TOTAL               | 27.5 | 20.3 | 23.6 | 2.0   | 3286.8 |

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 3.1 tons of nitrogen oxides per year and 10.9 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 Energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. They highly recommend this project development and other residential proposals increase the energy efficiency of their homes.



The Energy Office also recommends 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.

Comments acknowledged. The Developer has not committed to a particular builder/builders at this point in time, however the selection of such will certainly consider the builder's commitment to the Energy Star Program. The afforestation program proposed will assist in providing improved air quality as well.

**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.
- 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 roads leading into the subdivision 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 turnaround 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.

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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.delawarestatefiremarshal.com](http://www.delawarestatefiremarshal.com), technical services link, plan review, applications or brochures.

The plan will be reviewed in detail with the Local Fire Department to ensure adequate access is provided for protection. During the final engineering process a Fire Marshal plan will be submitted to the State Fire Marshal for review and approval.

**Department of Agriculture - Contact: Scott Blaier 698-4500**

The proposed development is in an area designated as Investment Level 4 under the *Strategies for State Policies and Spending*. The *Strategies* do not support this type of isolated development in this area. The intent of this plan is to preserve the agricultural lands, forestlands, recreational uses, and open spaces that are preferred uses in Level 4 areas. The Department of Agriculture opposes development which conflicts with the preferred land uses, making it more difficult for agriculture and forestry to succeed, and increases the cost to the public for services and facilities.

More importantly, the Department of Agriculture opposes this project because it negatively impacts those land uses that are the backbone of Delaware’s resource industries - agriculture, forestry, horticulture - and the related industries they support. Often new residents of developments like this one, with little understanding or appreciation for modern agriculture and forestry, find their own lifestyles in direct conflict with the demands of these industries. Often these conflicts result in compromised health and safety; one example being decreased highway safety with farm equipment and cars competing on rural roads. The crucial economic, environmental and open space benefits of agriculture and forestry are compromised by such development. We oppose the creation of isolated development areas that are inefficient in terms of the full range of public facilities and services funded with public dollars. Public investments in areas such as this are best directed to agricultural and forestry preservation.

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The proposed development is adjacent to a property permanently preserved through the State's Agricultural Lands Preservation Program (Sharp Expansion of the Howard T. West Memorial District 2.35-16.00-2.00). Therefore, the activities conducted on this preserved property will be protected by the agricultural use protections outlined in Title 3, Del. C., Chapter 9. These protections effect adjoining developing properties. The 300 foot notification requirement affects **all new deeds** in a subdivision located in whole or part within 300 feet of an Agricultural District. Please take note of these restrictions as follows:

**§ 910. Agricultural use protections.**

(a) Normal agricultural uses and activities conducted in a lawful manner are preferred and priority uses and activities in Agricultural Preservation Districts. 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 use adjacent to Agricultural Preservation Districts shall be subject to the following restrictions:

(1) For any new subdivision development located in whole or in part within 300 feet of the boundary of an Agricultural Preservation District, 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 an established Agricultural Preservation District in 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."

(2) For any new subdivision development located in whole or in part within 50 feet of the boundary of an Agricultural Preservation District, no improvement requiring an occupancy approval shall be constructed within 50 feet of the boundary of the Agricultural Preservation District.

(b) Normal agricultural uses and activities conducted in accordance with good husbandry and best management practices in Agricultural Preservation Districts shall be deemed protected actions and not subject to any claim or complaint of nuisance, including any such claims under any existing or future county or municipal code or ordinance. In the event a formal complaint alleging nuisance related to normal agricultural uses and activities is filed against an owner of lands located in an Agricultural Preservation District, such owner, upon prevailing in any such action, shall be entitled to recover reasonably incurred costs and expenses related to the defense of any such action, including reasonable attorney's fees (68 Del. Laws, c. 118, § 2.).

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In addition, if any wells are to be installed, Section 4.01(A)(2) of the Delaware Regulations Governing the Construction and Use of Wells will apply. This regulation states:

(2) For any parcel, lot, or subdivision created or recorded within fifty (50) feet of, or within the boundaries of, an Agricultural Lands Preservation District (as defined in Title 3, Del. C., Chapter 9); all wells constructed on such parcels shall be located a minimum of fifty (50) feet from any boundary of the Agricultural Lands Preservation District. This requirement does not apply to parcels recorded prior to the implementation date of these Regulations. However, it is recommended that all wells be placed the maximum distance possible from lands which are or have been used for the production of crops which have been subjected to the application of land applied federally regulated chemicals.

This site overlaps with the State's Green Infrastructure Investment Strategy Plan. The Crop Land and Natural Areas layers are present on the entire site. This designation identifies areas of the state that have viable and valuable agricultural 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.

The Delaware Department of Agriculture supports growth which expands and builds on existing urban areas and growth zones in approved State, county and local plans. Where additional land preservation can occur through the use of transfer of development rights, and other land use measures, we will support these efforts and work with developers to implement these measures. If this project is approved we will work with the developers to minimize impacts to the agricultural and forestry industries.

It is understood that this particular proposed development is adjacent to preserved farmlands therefore all appropriate buffers and notifications will be implemented. The proposed subdivision is designed as a single family neighborhood and will continue to function with quite a bit of green space and vegetation. Although the site abuts preserved agricultural land it also abuts an active recreational facility in the Rookery Golf Course and the heavily traveled SR1.

#### *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.

Comment acknowledged. A detailed landscaping plan will be developed to incorporate the proper tree selection and placement.

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### *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 landuse 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.

[Comment acknowledged. A detailed landscaping plan will be developed to incorporate the proper tree selection and placement. The Delaware Department of Agriculture Plant Industry Section will be contacted to discuss the plan.](#)

### *Tree Mitigation*

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

[As indicated previously an afforestation program is planned for this community. The Developer/Designer will contact the Delaware Forest Service to discuss the intended program and how best to implement it.](#)

### **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.

[At this point in time there have been no decisions made relative to the use of natural gas or propane on the site. As the final engineering process takes place the Designer will contact Mr. Malak Michael to discuss options, details and requirements for such utilities.](#)

### **Delaware State Housing Authority – Contact Vicki Walsh 739-4263**

This proposal is a site plan review for 265 residential units on 196 acres, located on Broadkill Road, east of Route 1 and adjacent to the existing Rookery Golf Course, near Milford. The Delaware State Housing Authority opposes this proposal, as the location of the site appears to be inconsistent with where the State and County would like to see new residential development. According to the State Strategies Map, the proposal is located in an Investment Level 4 area and outside the growth zone. Instead, the areas east of State Route 1 have been targeted for preservation. DSHA encourages land use proposals consistent with that use.

[It is understood that this proposed development is within a Level 4 area, however the site's close proximity to the Town of Milton, SR 1, Broadkill Beach and the adjacent Rookery Golf Course makes for an appropriate area for a rural type residential community. The development would have easy access for future residents and](#)

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supporting services without requiring significant upgrades to infrastructure. The site will also provide great natural and recreational amenities to the community.

**Department of Education – Contact: John Marinucci 739-4658**

DOE recognizes that this development project is in level 4 of the State Strategies for Policies and Spending and as such, DOE does not support the approval of this project.

They also recognize that 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 128 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. 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.
6. 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.

The Developer will be in contact with the Cape Henlopen School District to discuss any potential impacts that development may have on the school district.

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

Because this project is an AR-1 Cluster subdivision, the developer must include in the application a plan for the management of all open space. Also, the developer must document for the Planning and Zoning Commission how the proposed development: provides for a total environment and design which are superior to that which would be allowed under the standard lot option; preserves the natural environment and historic or archeological resources; and, will not have an adverse effect on any of the items included under Ordinance Number 1152 (County Code 99-9C). These issues can be addressed by including in the application an explanation of how the developer plans to mitigate them and the issues raised by the State agencies during this review.

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This year Sussex County will be considering implementation of a Source Water Protection Program required by the State. Depending on the requirements adopted by the County Council this project might be affected. Any well location should insure that the wellhead protection area is entirely on site.

The Sussex County Engineer Comments:

The project proposes to develop using a private central community wastewater system. It is recommended that the wastewater system be operated under a long-term contract with a capable wastewater utility. In addition, we recommend they have a wastewater utility provider prior to approving the project. The proposed project is located outside of the Inland Bays Planning area where Sussex County expects to provide sewer service. Sussex County requires design and construction of the collection and transmission system to meet Sussex County sewer standards and specifications. A review and approval of the treatment and disposal system by the Sussex County Engineering Department is also required and plan review fees may apply. Disposal fields should not be counted as open space. Wastewater disposal fields should be clearly identified on recorded plots.

If Sussex County ever provides sewer service, it is required that the treatment system be abandoned and a direct connection made to the County system at the developers and/or owners expense.

For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department at (302) 855-1299.

Prior to the meeting with the Sussex County Planning and Zoning Commission a detailed report of how this proposed development is superior to a standard subdivision will be presented. Specifically the items in Section 99-9c will be individually addressed. The WWTP system being proposed will be operated and maintained by publicly regulated utilities only. The infrastructure of the site will be designed such that a connection to an eventual County system would be seamless.

Upon your review of the above, should you have any questions or require additional information, please do not hesitate to contact this office at 302.645.0777. Thank you.

Sincerely,  
Element

Douglas M. Warner, PE

CC: Sussex County (w/enc)  
Preston Schell, OAA (w/enc)  
Nick Hammonds, OAA (w/enc)  
File