



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF MANAGEMENT AND BUDGET
Budget Development, Planning and Administration
State Planning Coordination

June 17, 2009

Mr. Douglas Warner
Element
18335 Coastal Highway, Ste. C
Lewes, DE 19958

RE: PLUS review – 2009-05-06; Forest Landing

Dear Mr. Warner:

Thank you for meeting with State agency planners on May 27, 2009 to discuss the proposed plans for the Forest Landing project to be located on North Old State Highway, just north of the Town of Ellendale.

According to the information received, you are seeking rezoning and site plan approval through the Town of Ellendale for 399 units on 126.86 acres. It is noted that you are planning annexation into the Town of Ellendale for this project.

This parcel is located mostly within the Level 4 according to the Strategies for State Policies and Spending documents approved in July 2004. The State notes that the Town of Ellendale is currently updating their comprehensive plan and the draft shows this parcel within the Future Land Use and annexation area of the updated plan. The draft plan is currently being reviewed by the State for certification. Until the Town of Ellendale adopts this new plan and it is certified by the State, we recognize this parcel as being in a Level 4 area. Technical comments have been received from State agencies and are listed below; however, should this parcel not be included within the Town of Ellendale comprehensive plan when it is adopted or if it is not annexed by the Town of Ellendale, the State would object to the project because it would remain in a Level 4 area. The Town should table any action on this project until the draft comprehensive plan is adopted and certified through the State.

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. If this parcel is annexed, you will be required to comply with any and all regulations/restrictions set forth by the Town.

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

- If this parcel is included within the Town of Ellendale plan when it is adopted/certified and it is annexed, the State will have no objection to the development of this parcel. If, for any reason, this parcel is not annexed into the Town, the State would object to the development of this property because of its location.

Street Design and Transportation

- Two stub streets are shown on the south edge of the plan, for connections to the also-proposed Ingram Village development. They appear to be aligned with matching stub streets on the Ingram Village plans but that should be verified before the plan is recorded.
- DelDOT can see that no stub streets were provided to the lands to the north (Tax Parcels 2-30-19.00-109.00 and 111.00). It is recommended that one stub street be provided to each of these parcels.
- DelDOT recommends that Hornbeam Street and/or White Cedar Court be realigned so that they form a single intersection with Red Cedar Road.

Natural and Cultural Resources

- **Site Visit Request.** In order to provide informed comments, program scientists request the opportunity to conduct a survey of the property to evaluate habitat and determine the potential for species of greatest conservation need (SGCN). Please contact Edna Stetzar at (302) 653-2880 ext. 101 or at Edna.Stetzar@state.de.us if the landowner will grant a site visit.

- According to the PLUS application, 45 acres of forest on tax parcel 230-20.00-12.00 will be set aside as open space (question #36). The applicant also indicated that this forested open space will be ‘enhanced to provide a natural setting for the community’. Community trails are mentioned, but what exactly does the ‘enhancement’ entail?
- Is tax parcel #230-20.00-12.00 going to be permanently protected or can it still be used for future waste water, utilities, amenities, etc.? DNREC recommends consideration be made for placing this parcel in a conservation easement or other mechanism that would result in permanent conservation. This effort could offset some of the impacts the development will have on this forest block and on those species currently utilizing it.

Division of Fish and Wildlife scientists would like to offer assistance in the development of a plan to enhance tax parcel 230-20.00-12.00

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site.
- The Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands.
- 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.

This office has received the following comments from State agencies:

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

If this parcel is included within the Town of Ellendale plan when it is adopted/certified and it is annexed, the State will have no objection to the development of this parcel. If, for any reason, this parcel is not annexed into the Town, the State would object to the development of this property because of its location.

State Historic Preservation Office (SHPO) – Contact: Terrence Burns 739-5685

The role of the Division of Historical & Cultural Affairs in the Preliminary Land Use Service (PLUS) process is to provide information on the development's impacts to historic properties and archaeological sites and is an advocate for their protection. In addition, all of the information is according to the reference and resource materials at the

State Historic Preservation Office, which is the central research repository of the Division of Historical and Cultural Affairs. Preserving Delaware's heritage and showcasing the historic legacy of our state are the guiding principles of the agency, and through active historic preservation efforts, the Division is committed to enhancing Delaware's quality of life by helping people connect with those aspects of our past that have made this state what it is today.

In accordance with the Preliminary Land Use Service (PLUS) outlined in [Chapter 92 of Title 29](#) of the Delaware Code, here are the following observations:

As the developer is aware, this parcel is in a Level 4 Investment Area. Although this project site is within the proposed growth area of the Town of Ellendale, the Division of Historical & Cultural Affairs does not support, and is not in favor of any type of development in a Level 4 Area.

Delaware has a strong agricultural and rural heritage, and often there are historic resources such as buildings or archaeological sites in these areas. Intruding on these areas may affect the historic context as well as any resources historically associated with Delaware's rural heritage. Many historic-period or prehistoric-period archaeological sites have not been found or are not yet studied, but may contain important information about Delaware's history. In addition, the developer is aware there is a cemetery in this project area.

According to the Pomeroy and Beers Atlas of 1868, there was a dwelling associated with S. Warren in this project area. The USGS Topographic Map of 1918 shows this building as well as the cemetery.

Since there was a dwelling here, there may be archaeological resources associated with it. In addition, the developer should be aware of the Delaware Unmarked Human Remains Act of 1987, outlined in Chapter 54 of Title 7 of the Delaware Code, which pertains to 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.

Finally, prior to any demolition or ground-disturbing activities, the developer may want to consider hiring an archaeological consultant to examine the project area to see if there is a historic or prehistoric archaeological site, and especially if any unmarked burials exist around the known cemetery. In addition, the developer may want the project area to be buffered by landscaping in order to protect its visual setting. If you need any technical assistance, or would like to discuss these issues further, please contact Terence Burns at (302) 736-7404.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) A traffic impact study (TIS) was completed for the subject development in September 2008 and DelDOT sent comments regarding it to Sussex County in

- April 2009. A copy of that letter is enclosed. The plan has changed somewhat since the TIS was prepared, to include more single-family detached houses and fewer townhouses and duplexes. For this reason, development under the current plan would generate slightly more traffic than was assumed in the TIS. The entrance design should be based on the current plan, but beyond the entrance, the increase in traffic is small enough that the TIS and the recommendations in the letter of April 2009 remain valid.
- 2) Two stub streets are shown on the south edge of the plan, for connections to the also-proposed Ingram Village development. They appear to be aligned with matching stub streets on the Ingram Village plans but that should be verified before the plan is recorded. Also, for ease of navigation, DelDOT recommends that the Town require the developers to keep the street names and the addressing consistent from one development to the other.
 - 3) DelDOT can see that no stub streets were provided to the lands to the north (Tax Parcels 2-30-19.00-109.00 and 111.00). It is recommended that one stub street be provided to each of these parcels. One way to do this would be to extend Red Cedar Road and White Cedar Court.
 - 4) DelDOT recommends that Hornbeam Street and/or White Cedar Court be realigned so that they form a single intersection with Red Cedar Road. If possible, this should be done by shifting White Cedar Court north because shifting Hornbeam Street south may in turn require shifting Forest Landing Road south. Alternatively, perhaps the southernmost block of Hornbeam Street could be replaced by a shared-use path. In any case, if the plan continues to include a curve in Hornbeam Street immediately west of that street's intersection with Blossomville Road, a sight distance triangle should be provided on the inside of the curve by right-of-way or easement.

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

Fish and Wildlife

Rare Species. DNREC field scientists have not surveyed this project area; therefore, they are unable to provide information pertaining to the existence of state-rare or federally listed plants, animals or natural communities at this project site. In the absence of site-specific information, they offer the following comments:

DNREC has records of Red-Headed Woodpecker (*Melanerpes erythrocephalus*) in the vicinity and rare species downstream including the federally listed plant *Helonias bullata* (swamp pink). Swamp pink appears to be sensitive to changes in water quality and could be impacted by run-off from this development.

Site Visit Request. In order to provide informed comments, program scientists request the opportunity to conduct a survey of the property to evaluate habitat and determine the potential for species of greatest conservation need (SGCN). SGCN are indicative of the overall diversity and health of the State's wildlife resources. Some may be rare or declining, others may be vital components of certain habitats, and still others may have a significant portion of their population in Delaware. SGCN are identified in the Delaware Wildlife Action Plan (DEWAP) which is a comprehensive strategy for conserving the full array of native wildlife and habitats-common and uncommon- as vital components of the State's natural resources. This document can be viewed via the program website at <http://www.dnrec.state.de.us/nhp>. This document also contains a list of species of greatest conservation need, species-habitat associations, and maps of key wildlife habitat. Please note that DNREC scientists have decades of experience in comprehensive survey methods. They have extensive knowledge of the flora and fauna of the state and are qualified in making rare species identifications. The survey will be conducted at no expense to the landowner.

Please contact Edna Stetzar at (302) 653-2880 ext. 101 or at Edna.Stetzar@state.de.us if the landowner will grant a site visit.

Forest Preservation. 2002 aerial photographs depict a forest that has been regenerating for some time now. While certainly not considered 'old growth' this site has not been harvested for a number of years and developing it will represent a loss of 75 acres of habitat for species that depend on early successional habitat. In addition, this forest is part of a larger forest block and forest fragmentation separates populations, gives advantage to invasive species, increases vulnerability to predation, and increases human/animal interactions especially on the roadways.

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 and the Delaware Code, Title 7). Because of an overall lack of forest protection, DNREC 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.

Recommendations/Questions:

- According to the PLUS application, 45 acres of forest on tax parcel 230-20.00-12.00 will be set aside as open space (question #36). The applicant also indicated that this forested open space will be 'enhanced to provide a natural setting for the community'. Community trails are mentioned, but what exactly does the 'enhancement' entail? If clearing is planned, the acreage should be included in the forest loss estimate (currently 75 acres out of 120 leaving 45 acres un-cleared, question #27).
- Is tax parcel #230-20.00-12.00 going to be permanently protected or can it still be used for future waste water, utilities, amenities, etc.? DNREC recommends

consideration be made for placing this parcel in a conservation easement or other mechanism that would result in permanent conservation. This effort could offset some of the impacts the development will have on this forest block and on those species currently utilizing it.

- Division of Fish and Wildlife scientists would like to offer assistance in the development of a plan to enhance tax parcel 230-20.00-12.00. Please note that scientists have decades of knowledge and experience with Delaware's native flora and fauna and could aide in the enhancement of habitat that would benefit native species. In addition, recommendations could be made so that enhancement efforts that include community amenities don't impact habitat that supports those species.
- Although leaving a forest intact is usually more beneficial to the existing wildlife and is preferential to clearing, DNRC recommends that clearing not be conducted April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize forests for breeding. This recommendation will only protect those species for one breeding season because once trees are cleared there is an overall loss of habitat.
- DNREC further recommends that efforts to minimize the amount of clearing needed for the footprint of homes and infrastructure be employed. If feasible, mechanisms should also be put in place to reduce future clearing by landowners.
- Methods of stormwater management that do not involve tree clearing should be discussed with the district engineer as well as other ways to reduce the need to clear trees for stormwater management.

Nuisance Geese. Wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance for community residents. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species.

Many applicants plan to control nuisance species with BMPs and vegetation design. DNREC recommends that 'vegetation design' include native plantings of tall grasses, wildflowers, shrubs, and/or trees at the edge and within an adequate buffer (15-30 feet in width) around the ponds (planted in accordance with the Sediment and Stormwater Plan approval agency requirements). This type of habitat is not as attractive to geese because their view of the surrounding area is blocked and they can't scan for predators.

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

The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with proper landscaping, monitoring, and other techniques, geese problems can be minimized. *Edna Stetzar* - (302) 653-2880, Edna.Stetzar@state.de.us

Soil and Water

Sediment and Stormwater Program. 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) 856-2105 for details regarding submittal requirements and fees.

Drainage Program. This project is located within the School House Tax Ditch watershed; however, it is not affected by Tax Ditch rights-of-way.

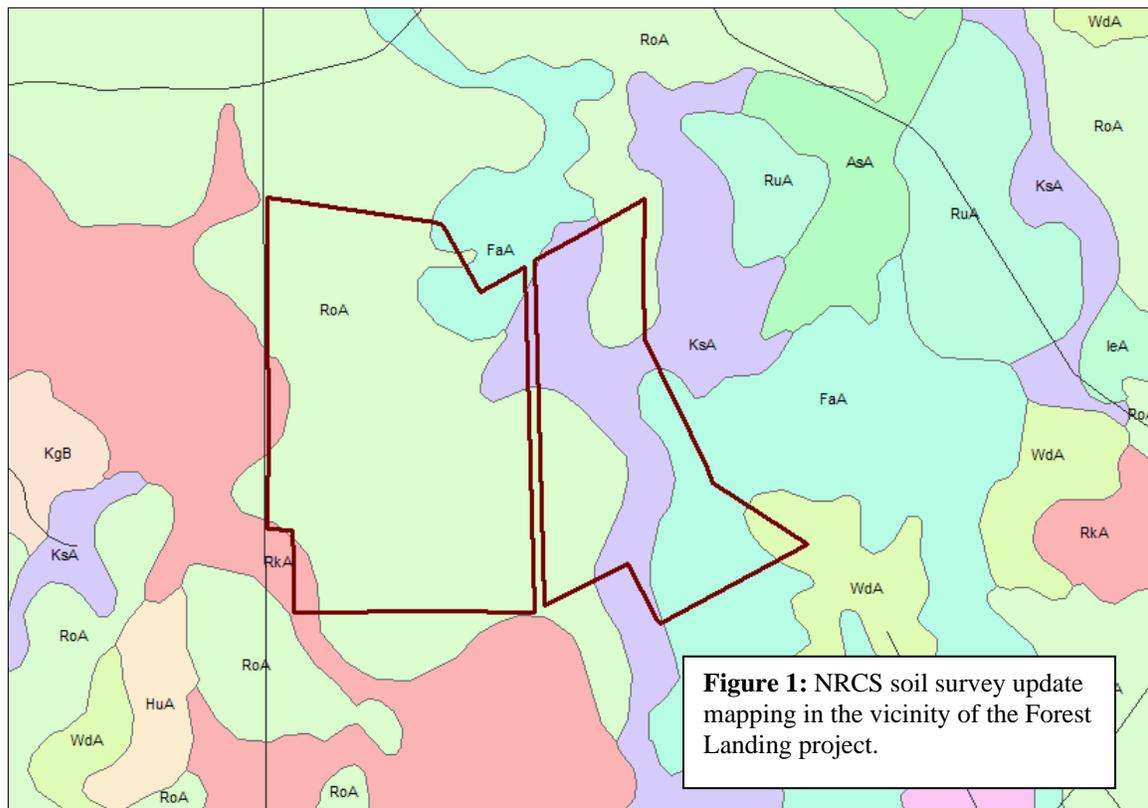
The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off-site drainage upstream of the project or create any off site drainage problems downstream by the release of on site stormwater. From the submitted site plan it appears the project will outlet stormwater across Old State Road into Prong 1 of the School House Tax Ditch. 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.

Since annexation into the Town of Ellendale is being actively pursued, stormwater conveyances should be located within street right-of-ways or open space. Drainage easements on private property should be recorded on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future reconstruction. 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.

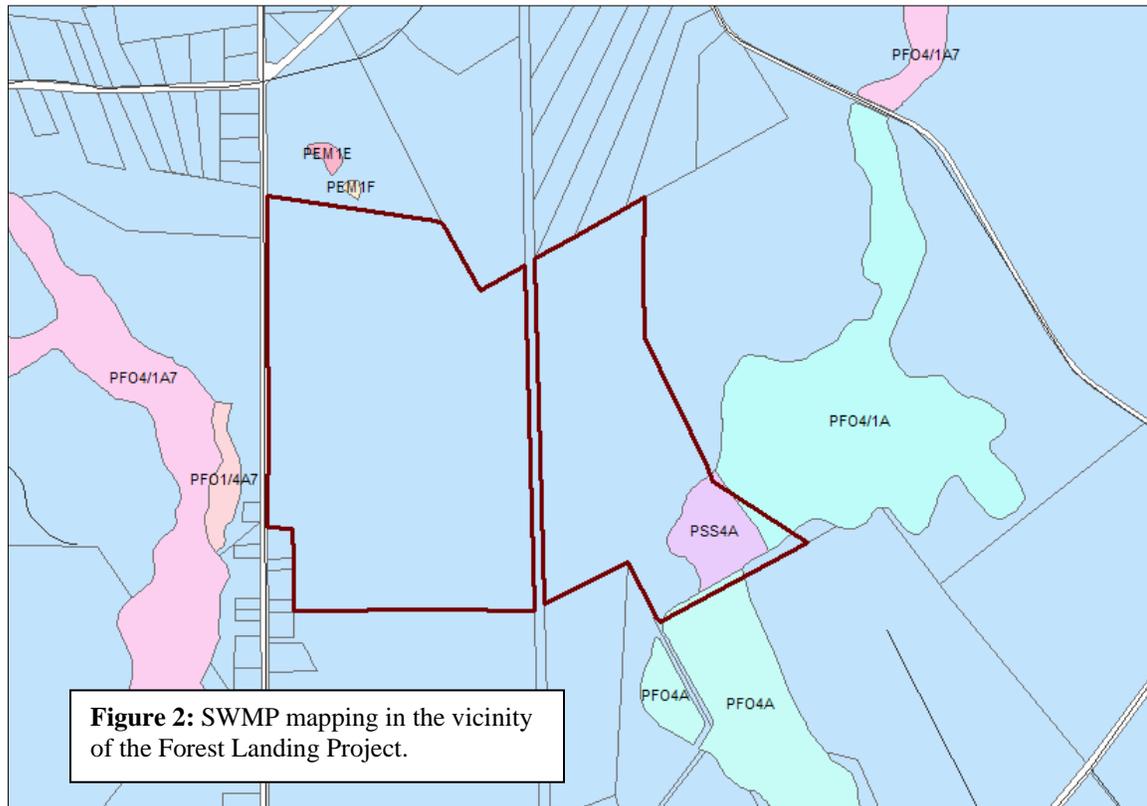
Sediment/Stormwater and Drainage comments provided by James Sullivan - (302) 739-9921, James.Sullivan@state.de.us

Water Resources

Soils Assessment. According to the NRCS soil survey update Rosedale (RoA), Rockawalkin (RkA), Klej (KsA), and Fallsington (FaA) were mapped in the immediate vicinity of the proposed construction. Rosedale is a well-drained upland soil that, generally, has few limitations for development. Rockawalkin and Klej are somewhat poorly-drained soils found on settings transitional between upland and wetland soil environments; consequently, they are likely to have moderate to severe limitations for development. Fallsington is a poorly-drained wetland associated (hydric) soil that has severe limitations for development (Figure 1).



Wetlands. According to the Statewide Wetlands Mapping Project (SWMP) maps palustrine scrub-shrub wetlands (PSS4A) were mapped on subject parcel (Figure 2). It is also likely that some unmapped wetlands may likely be found on some portions of the Fallsington and Klej soil mapping units (Figure 1).



The applicant is responsible for determining whether any State-regulated wetlands (regulated pursuant to 7 Del.C. Chapter 66 and the Wetlands Regulations) are present on the property. This determination can only be made by contacting the Division of Water Resources' Wetlands and Subaqueous Lands Section at 302/739-9943 and consulting the State's official wetland regulatory maps, which depict the extent of State jurisdiction. The area regulated by State law may be very different from the area under federal authority. No activity may take place in State-regulated wetlands without a permit from DNREC's Wetlands Section.

In addition, most perennial streams and ditches and many intermittent streams and ditches are regulated pursuant to the Subaqueous Lands Act (7 Del.C. Chapter 72) and the Regulations Governing the Use of Subaqueous Lands. Ponds which are connected to other waters are also regulated, while isolated ponds are not. Any work in regulated streams, ditches or ponds requires a permit from the Wetlands and Subaqueous Lands Section. An on-site jurisdictional determination is recommended in order to determine whether any regulated watercourses exist on the property. Please contact the Wetlands and Subaqueous Lands Section at 302/739-9943 to schedule an on-site visit. Such appointments can usually be scheduled within 2 to 3 weeks.

When designing a project on a site with regulated watercourses, any extensive piping, filling or burying of streams or ditches in excess of the minimum needed for road crossings should be avoided. Where road crossings are necessary, bridge spans which

avoid significant impacts to stream banks and channels should be used wherever possible. Where placement of culverts is unavoidable, culvert designs which utilize multiple barrels at different elevations to preserve a low flow channel are usually preferred. Contact the Wetlands and Subaqueous Lands Section for further information regarding preferred designs.

The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they are subject to regulatory jurisdiction under Federal 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE or “the Corps”) manual is the acceptable basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware. The applicant is forewarned that the Corps views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for making such delineations.

To ensure compliance with said Corps regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation. In circumstances where the applicant or applicant’s consultant delineates what they believe are nonjurisdictional isolated (SWANCC) wetlands, the Corps must be contacted to evaluate and assess the jurisdictional validity of such a delineation. The final jurisdictional authority for making isolated wetlands determinations rests with the Corps; they can be reached by phone at 736-9763.

Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands.

Impervious Surfaces and Best Management Practices. Based on the information presented by the applicant in the PLUS application, this project’s post-construction estimate for surface imperviousness should not exceed 38%. 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.

TMDLs. Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Mispillion 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 Mispillion watershed, “target-rate-nutrient reductions” of 57 percent from baseline conditions will be required for nitrogen and phosphorus. Additionally, “target-rate-reductions” of 87 percent from baseline conditions will be required for bacteria.

A Pollution Control Strategy (PCS) will be used as a regulatory framework to ensure that these nutrient reduction targets are attained. The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional nutrient reductions may be possible through the implementation of BMPs such as increasing the amount of passive, wooded open space (planted with native woody and herbaceous vegetation), use of pervious paving materials to reduce surface imperviousness, and the deployment of green-technology stormwater management treatment technologies. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

Soils, wetlands, subaqueous lands and TMDL comments provided by John Martin, Watershed Assessment Section, (302) 739-9939, John.Martin@state.de.us

Water Supply. The information provided indicates that Tidewater Utilities will provide well water to the proposed project through a 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 302-736-7547. Should an on-site public well be needed, it must be located at least 150 feet from the outermost boundaries of the project and a minimum isolation distance of 150 feet is required between the well and any potential source of contamination, such as a septic tank and sewage disposal area. 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.

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. *Ricardo Rios* - (302) 739-9944, Ricardo.Rios@state.de.us

Parks and Recreation

Natural Areas. The forested portions of these parcels are currently listed on Delaware's Natural Areas Inventory. Natural Areas contain lands of statewide significance identified by the Natural Areas Advisor Council as important natural land remaining in Delaware. The developer should investigate dedicating the remaining protected forest within this project as a Nature Preserve through a conservation easement or donation of land.

Trails. If the forested land on the east side of this project will have passive recreational trails, as stated in Question 33 of the PLUS application, how will people access these trails? The eastern parcel is separated by a rail line preventing easy access for residents of the community. Should there be any questions regarding trail design or layout, please contact the Delaware Division of Parks and Recreation, David Bartoo, Trail Specialist at 302-739-9235. *Kendall Sommers* - (302) 739-9242, Kendall.Sommers@state.de.us

Air and Waste

Air Quality. Housing developments may unnecessarily emit, or cause to be emitted, significant amounts of air contaminants into Delaware's air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

- Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
- The emission of greenhouse gases which are associated with climate change, and
- The emission of air toxics.

Air emissions generated from housing developments include emissions from:

- Area sources like painting, lawn and garden equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity needed to support the homes in your development, and
- Car and truck activity associated with the homes in your new development.

These three air emissions components (i.e., area, electric power generation, and mobile sources) are quantified below, based on a per household/residential unit emission factor that was developed using 2002 Delaware data. These emissions in the table represent the actual impact the Forest Landing development may have.

Emissions Attributable to Forest Landing Subdivision (Tons per Year)

	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO ₂)	Fine Particulate Matter (PM _{2.5})	Carbon Dioxide (CO ₂)
Direct Residential	12.4	1.4	1.1	1.5	50.1
Electrical Power Generation	ND*	4.9	17.0	ND*	2,511.4
Mobile	18.3	19.1	0.6	0.2	11,792.4
Total	30.7	25.4	18.7	1.7	14,353.9

(*) Indicates data is not available.

Note that emissions associated with the actual construction of the subdivision, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.

Recommendations:

The applicant shall comply with all applicable Delaware air quality regulations. These regulations include:

Regulation 6 - Particulate Emissions from Construction and Materials Handling	<ul style="list-style-type: none"> • Using dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. • Using covers on trucks that transport material to and from site to prevent visible emissions.
Regulation 1113 – Open Burning	<ul style="list-style-type: none"> • Prohibiting open burns statewide during the Ozone Season from May 1-Sept. 30 each year. • Prohibiting the burning of land clearing debris. • Prohibiting the burning of trash or building materials/debris.
Regulation 1145 – Excessive Idling of Heavy Duty Vehicles	<ul style="list-style-type: none"> • Restricting idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:

- **Constructing only energy-efficient homes.** Energy Star qualified homes are up to 30% more energy efficient than typical homes. These savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of increased energy

efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.

- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.
- **Providing tie-ins to the nearest bike paths and links to any nearby mass transport system.** These measures can significantly reduce mobile source emissions.
- **Funding a lawnmower exchange program.** New lawn and garden equipment emits significantly less than equipment as little as 7 years old, and may significantly reduce emissions from this new development. The builder could fund such a program for the new occupants.

Additionally, the following measures will reduce emissions associated with the actual construction phase of the development:

- **Using retrofitted diesel engines during construction.** This includes equipment that are on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees at residential units and in vegetative buffer areas.** Trees reduce emissions by trapping dust particles and by replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development on air quality. The applicant should submit a plan to the DNREC Air Quality Management Section which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Forest Landing development. Air Quality Management Section points of contact are Phil Wheeler and Deanna Morozowich, and they may be reached at (302) 739-9402. *Deanna Morozowich - (302) 739-9402, Deanna.Morozowich@state.de.us*

Hazardous Waste Sites. DNREC's Site Investigation and Restoration Branch (SIRB) has reviewed the proposed project. No SIRB sites or salvage yards were found within a ½-mile radius of the proposed development. However, based on the previous agricultural use of the proposed project site, which may have involved the use of pesticides and herbicides, SIRB recommends that a Phase I Environmental Site Assessment be performed prior to development. In addition, should a release or imminent threat of a

release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions. *Krystal Stanley - (302) 395-2644, Krystal.Stanley@state.de.us*

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. For the area where townhomes are constructed, water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required and fire hydrants are to be maximum 800 feet spacing on centers.
- The infrastructure for fire protection water shall be provided, including the size of water mains.

b. **Accessibility:**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from the main thoroughfares must be constructed so fire department apparatus may negotiate it. If a "center island" is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.

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

c. Gas Piping and System Information:

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

d. Required Notes:

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Townhouse 2-hr separation wall details shall be shown on site plans
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

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

Department of Agriculture - Contact: Scott Blaier 739-4811

The Department of Agriculture is opposed to development in areas designated as Investment Level 4 under the *Strategies for State Policies and Spending*. Although this project is partially located in an area currently designated as Investment Level 4, the Department is aware that it is also located within the growth zone of Ellendale’s revised comprehensive plan (currently being reviewed for state certification). The Department is also aware that the applicant intends to annex the project into town after their comprehensive plan has been certified. Given those circumstances, the Department offers no objections to the project if the aforementioned process is successfully completed.

At the PLUS meeting the developer expressed interest in possibly donating the portion of land located on the east side of the railroad tracks to the State Forest Service. The Department would welcome and appreciate any such land donation to increase the State’s public forestland. Please contact Austin Short, State Forester, at (302) 698-4548 if you are interested in a donation.

It may also interest the developer to know that there may be a significant tax benefit associated with such a donation. This benefit is part of the “Farm Bill”, but is due to expire at the end of 2009, unless reauthorized by congress (so the applicant should move quickly). Please see the link below, under “**2-Year Extension of Special Rule Encouraging Contributions of Capital Gain Real Property for Conservation Purposes**” and

consult your tax advisor to determine if you can take advantage of this tax benefit as a result of a land donation for conservation purposes.

<http://www.ers.usda.gov/farmbill/2008/titles/titleXVTradeTax.htm#tax>

The proposed project is adjacent to a property protected through the State's Agricultural Lands Preservation Program (Houseman Tracts District, (Parcel 230-20.00-13.00)). Therefore, the activities conducted on this preserved property are protected by the agricultural use protections outlined in Title 3, Del. C., Chapter 9. These protections effect adjoining developing properties. However, if the applicant were to donate the portion of land east of the railroad tracks, this requirement may not be necessary, as the balance of land would then be outside the 300 foot notification requirement. 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.).

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.

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.

Do Not Plant List

Due to the high risk of mortality from insects and disease, the Delaware Forest Service does not recommend planting any of the following species:

Callery Pear
Leyland Cypress
Red Oak (except for Willow Oak)
Ash Trees

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 Economic Development Office – Contact: Jeff Stone 672-6849

No comments were received regarding this application.

Delaware Division of Public Health- Health Promotion Bureau- Contact: Michelle Eichinger (302) 744-1011

Ensuring that new residential and commercial development incorporates pedestrian- and bicycle-friendly features allows people to travel by foot or by bicycle and promotes physical activity as part of daily routines. Regular physical activity offers a number of health benefits, including maintenance of weight and prevention of heart disease, type 2 diabetes and other chronic diseases.¹ Research shows that incorporating physical activity into daily routines has the potential to be a more effective and sustainable public health strategy than structured exercise programs.² This is particularly important considering about 65% of adult Delawareans are either overweight or obese.³ This current obesity crisis is also affecting children. Approximately 37% of Delaware's children are overweight or obese⁴, which places them at risk for a range of health consequences that include abnormal cholesterol, high blood pressure, type 2 diabetes, asthma, depression and anxiety.¹

In Delaware, as in other states across the nation, certain patterns of land use can act as a barrier to physical activity and healthy eating for children and adults alike. Examples of such barriers include neighborhoods constructed without sidewalks or parks and shopping centers with full-service grocery stores situated too far from residential areas to allow for walking or biking between them.

DPH supports new development in and around existing towns and municipalities where compact and mixed land use patterns facilitate physical activity. As a way to promote physical activity and access to healthy foods, we recommend that the following amenities be included in the Forest Landing:

Amenities to encourage active transportation

- The community design and the plan to connect to a bike/pedestrian network in Ellendale proper are to be commended.
- Designate bike paths to supplement the sidewalks already so that residents can travel by foot or by bicycle to the site. In addition, install bike racks throughout the development in convenient and safe locations within the site, especially around the amenities for recreation.

Amenities to encourage recreation

- The plan to have basketball and tennis courts is to be commended. To support active and passive recreation for all ages, having a playground and park benches around the stormwater ponds are recommended.

Increase opportunities for healthy eating

- Designate an area for a community garden. Community gardens not only provide residents access to healthy nutrition, but they also provide opportunities for physical activity and community cohesiveness.⁵

¹ Nemours Health and Prevention Services (2005). *Delaware Children’s Health Chartbook*, Newark, DE.

² Active Living by Design. *Transportation Fact Sheet*. Retrieved May 17, 2007, from http://www.activelivingbydesign.org/fileadmin/template/documents/factsheets/Transportation_Factsheet.pdf.

³ Delaware Health and Social Services (2008), *Division of Public Health, Behavioral Risk Factor Surveillance System (BRFSS), 1990-2007*.

⁴ Nemours Health and Prevention Services (2007). *2006 Delaware Survey of Children’s Health Descriptive Statistics Summary, Volume 1*.

⁵ Hancock, T. (2001). People, partnerships and human progress: building community capital. *Health Promotion International*, 16(3), 275-80.

Delaware State Housing Authority – Contact Valerie Miller 739-4263

This proposal is for a site plan review and rezoning of 399 residential units on 126.86 acres, located on North Old State Highway, just north of the Town of Ellendale. According to the *State Strategies Map*, the proposal is located partially in Level 3 and Level 4. However, the parcel is within the Phase 2 growth area in the draft Town of Ellendale Comprehensive Plan Update currently being reviewed through PLUS. DSHA supports this proposed subdivision because it is a residential planned community that features a variety of housing types and largely targets first-time homebuyers. Upon annexation, residents should be in proximity to existing services, markets, and employment opportunities. According to the most recent real estate data collected by DSHA, the average home price in Sussex County is \$206,000. Families earning respectively 100% of Sussex County’s median income qualify for mortgages of

\$199,104. The provision of units within reach of families earning at least 100% of Sussex County's median income will ensure housing that is affordable to first-time homebuyers.

Department of Education – Contact: John Marinucci 735-4055

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

1. Using the DOE standard formula, this development will generate an estimated 200 students.
2. DOE records indicate that the Milford School Districts' *elementary schools are at or beyond 100% of current capacity* based on September 30, 2008 elementary enrollment.
3. DOE records indicate that the Milford School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2008 secondary enrollment.
4. **The Milford School District has communicated to the DOE the district's lack of capacity at all grade levels given the number of planned and recorded residential subdivisions within district boundaries.**
5. This development will create significant additional elementary and secondary student population growth which will further compound the existing shortage of space experienced by the Milford School District.
6. The developer is strongly encouraged to contact the Milford School District Administration to address the issue of school over-crowding that this development will exacerbate.
7. DOE requests developer work with the Milford 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.

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,



Constance C. Holland, AICP
Director

CC: Sussex County