



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

January 15, 2009

Mr. Doug Warner
Solutions Engineering, LLC
61 Glade Circle E
Rehoboth Beach, DE 19971

RE: PLUS review – 2008-12-07; Island Farm Subdivision

Dear Mr. Warner:

Thank you for meeting with State agency planners on December 17, 2009 to discuss the proposed plans for the Island Farm Subdivision project to be located south of Delaware Route 16 at the end of Graves Farm Road.

According to the information received, you are seeking site plan approval through Sussex County for 242 residential units on 213 acres.

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

This proposal is located in Investment Level 4 according to the *Strategies for State Policies and Spending*, and is within the 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 office has received the following comments from State agencies:

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

This project represents a major land development that will result in 242 residential units in an Investment Level 4 area according to the *2004 Strategies for State Policies and Spending*. This proposal is located in Investment Level 4 according to the *Strategies for State Policies and Spending*, and is within the Low Density area according to the Sussex County certified comprehensive 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 590 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 development is inconsistent with the *Strategies for State Policies and Spending*, the State is opposed to this proposed subdivision.

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

No comments received.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

Broadkill Reality, LLC seeks to develop 242 single-family detached houses on a 213-acre assemblage of parcels (Tax Parcels 2-35-9.00-21.03 and TM-2-35.00-9-24.00). The land is located east of Delaware Route 1, on the north shore of the Broadkill River, and more specifically at the south end of Graves Farm Road (Sussex Road 236A). The land is zoned AR-1 and would be developed under the County's cluster development option.

Because this land is located in a Level 4 Area, development of it as proposed is inconsistent with the *Strategies for State Policies and Spending*. As part of our 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. We encourage the use of transfer of development rights where this growth management tool is available.

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

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

Besides its location in Investment Level 4, DNREC has some significant concerns about this project and its impact on water quality, flooding and wildlife habitat, including:

- This entire parcel is located in a Special Flood Hazard Area, with the main road in and out of the property also located in a floodplain;
- The placement of several docks in tidal wetlands;
- An apparent underestimation of impervious cover; and
- Habitat for regulated species, including the Great Blue Heron and Delmarva Fox Squirrel

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., non-attainment 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. We encourage 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. 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.

Green Infrastructure

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

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

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

Soils

According to the Sussex County soil survey update, Downer, Ingleside, Rosedale, Zekiah, Longmarsh, and Transquaking-Misphillion complex were mapped in the immediate vicinity of the proposed construction. Downer, Ingleside, and Rosedale are well-drained upland soils that, generally, have few limitations for development. Zekiah,

Longmarsh, and Transquaking-Mispillion complex are very poorly-drained wetland associated (hydric) floodplain soils that have severe limitations for development.

Wetlands

- 1) The State-regulated wetlands do not appear to be accurately depicted on the project plans. The Wetlands and Subaqueous Lands section should be contacted to verify the State wetland line on the subdivision plan.
- 2) The developer should contact Sussex County to ensure that they are in compliance with the County's buffer requirements from tidal wetlands.
- 3) It is highly unlikely that the dock/pier/wetland walkways that provide water access to the Broadkill could be permitted as shown. Alternative water-access ideas for the community could be discussed at one of the monthly Joint Permit Processing (JPP) meetings.

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.

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 Cover

The applicant estimates this project's post-construction surface imperviousness to reach 16 percent. However, given the scope and density of this project (i.e., as viewed from the conceptual project layout) this estimate appears to be a significant underestimate. When calculating surface imperviousness it is important to include all forms of constructed surface imperviousness, such as: all paved surfaces including rooftops, sidewalks, driveways, and roads; open-water stormwater management structures swimming pools and ponds; and all area(s) containing a community wastewater disposal system; this will ensure a realistic assessment of this project's likely post-construction environmental impacts. Surface imperviousness, therefore, should be recalculated to reflect all of the above-mentioned forms of surface imperviousness in the finalized calculation. Failure to do so will significantly understate this project's true environmental impacts. **Note:** Wetlands should be excluded from the parcel's total open space area when calculating the parcel's total surface imperviousness.

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 this project's 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. Since this is a commercial project, it is strongly recommended that the applicant employ pervious paving materials, in lieu of conventional paving materials, for at least 50 percent of this project's total paved surface area.

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 Broadkill watershed, “target-rate-nutrient reductions” of 40 percent will be required for nitrogen and phosphorus. Additionally, “target-rate-reductions” of 75 percent will be required for bacteria.

TMDL Compliance through the PCS

As indicated above, 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 from baseline conditions. 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, connection to central sewer (if available), and the deployment of green-technology stormwater management treatment technologies. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

Water Supply

The project information sheet state water will be provided by Artesian Water Company via a central water system. Our records indicate that part of this project (Parcel Identification 2-35-9-24.00) is located in an area where public water service is not available; however, the other part of this project (Parcel Identification #'s 2-35-9-21.03) is located within the public water service area granted to Artesian Water Company under CPCN 06-CPCN-45. 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, 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, furthermore, they must be located at least 150 feet from the outermost boundaries of the project(s). The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be located and constructed 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.

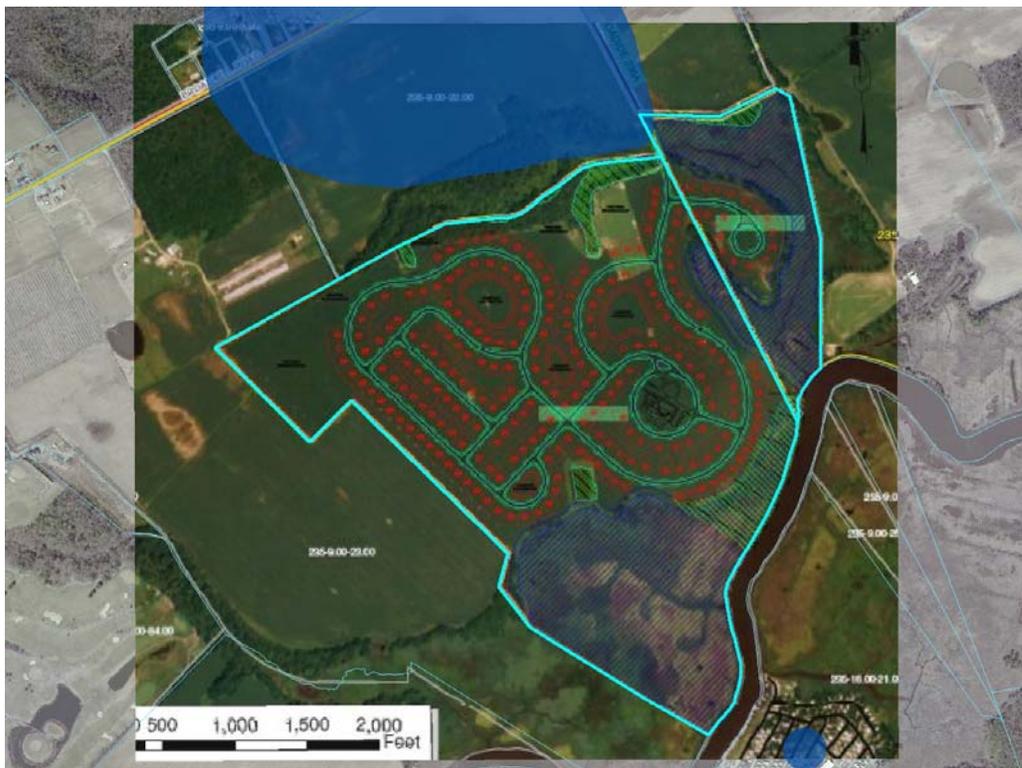
Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

Water Resource Protection Areas

The DNREC Water Supply Section has determined that it does not fall within any delineated areas of excellent ground-water recharge. The review did show that a minute portion in the north tip of falls in a wellhead protection areas or (see map).

The site plan shows this area as wetlands and without development.

Map of Island Farms (PLUS 2008-12-07) The wellhead protection area is shown in blue.



Sediment and Stormwater

- 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.
- Because of the parcel's location in an impaired watershed and the amount of impervious surface, green technology BMPs and low impact development practices should be considered a priority to reduce stormwater flow and to meet water quality goals. The Sediment and Stormwater Management Program ensures sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater management facilities. However, we do not support placement in resource protection areas or the removal of trees for the sole purpose of placement of a stormwater management facility/practice.

Drainage

- The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project.
- 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.

Floodplains

This entire parcel is located in a Special Flood Hazard Area. We do not recommend placing 242 units in a floodplain with the main road in and out of the property also located in a floodplain. Statistically there is a 26% chance of a flood occurring in this area during the life of a typical 30 year mortgage.

Site Visit Request

DNREC program scientists request the opportunity to conduct a survey of these parcels to evaluate the forested habitat, especially for use by Great Blue Heron (*Ardea herodias*). A field visit in April would be optimal as this species would be actively breeding and nesting at that time, making it easier to detect. This state-rare bird nests in colonies referred to as a heronry. It is protected by the federal Migratory Bird Treaty Act, which prohibits the destruction of native migratory birds, their nests, eggs and young. They are also protected by Delaware State Code, Title 7.

Heronry that were breeding in a nearby forest abandoned the site when construction of a golf course created disturbance. It is possible that they relocated to the riparian forest that occurs within the project parcels. There are only 6 known heronries in Delaware and the success of each one is important to the current and future status of this species in Delaware. The survey would be conducted at no expense to the landowner/developer. Please contact Edna Stetzar at (302) 653-2880 ext. 101 or at Edna.Stetzar@state.de.us if our scientists can survey the site.

Delmarva Fox Squirrel

There are lot lines and other project activities proposed within or in close proximity to the forest. Because your project lies within the area where Delmarva fox squirrels (*Sciurus niger cinereus*, DFS) are likely to occur, you must contact the U.S. Fish and Wildlife Service. 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. As required by the Endangered Species Act, the U.S. Fish and Wildlife Service reviews projects that may harm this species or their habitat. Based on past movement data, the Service only requires consultation on projects within 3 miles of known DFS populations.

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 you have surveys conducted, they must be done by a federally approved fox squirrel surveyor, be conducted twice; once in the fall, and again between March 15 and May 30. A list of qualified surveyors is available upon request. Please note that surveys may confirm the presence of fox squirrels but cannot confirm absence.

Fisheries Habitat Issue

The excessive number of docks being proposed will extend through wetlands and along the shore of the Broadkill River. Not only will these docks fragment a large area of wetlands, they will also replace shoreline habitat with man-made structure. The cumulative impacts from these projects may detrimentally impact fisheries in several ways: 1) alteration of shoreline habitat can affect the distribution of benthic and macro-

invertebrates which serve as the forage base for many fish species, 2) directly impact important nursery habitat by replacing natural habitat with man-made materials along the shoreline and 3) limit the use of this shoreline by anglers fishing from the river. Cumulative impacts should be considered, especially future erosion problems that may occur as the result of placing docks along the shoreline where currently there are none. If erosion becomes a problem and shoreline stabilization (i.e. rip-rap) becomes desirable, even more fisheries habitat will be impacted.

Nuisance Species

Mosquitoes

Development projects that result in increased housing densities within 2 miles of large expanses of salt marshes or brackish wetlands or within 1 mile of large tracts of freshwater wetlands, can often lead to increased demand for mosquito control services, going beyond what DNREC's Mosquito Control Section currently has the budget or resources to provide. Adverse impacts upon the State's allocation of public funds for mosquito control services must be realistically recognized (property taxes generated by this development will not result in an increase in the mosquito control operating budget).

Additionally, even though the EPA has scientifically determined that EPA-registered mosquito control insecticides can be applied "without posing any unreasonable risks to human health, wildlife or the environment" (when used in accordance with all product label instructions), avoiding or reducing the use of such pesticides should be employed whenever possible. Limiting development that is too close to wetlands will aide in achieving a reduction in pesticide use.

Waterfowl

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. We recommend native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within an adequate buffer (15-30 ft in width) around the ponds (planted in accordance with the Sediment and Stormwater Plan approval agency requirements). When the view of the surrounding area from the pond is blocked, geese can't scan for predators and are less likely to reside and nest in the area of the pond.

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 or land manager.

The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the number of ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Natural Areas

The forest and wetland areas in this project are currently listed on Delaware's Natural Areas Inventory. Natural Areas contain lands of statewide significance identified by the Natural Areas Advisory Council as the highest quality and most important natural lands remaining in Delaware. Consideration should be given to protecting these resources during design and construction of this project. The developer should investigate dedicating the Natural Area as a Nature Preserve through a conservation easement or donation of land.

In an effort to protect the existing Natural Area on the site, we recommend keeping the lot lines of the subdivision outside of the existing forested area. This would require the removal or relocation of lots #174 thru #178. By slightly altering the site design, these lots could be relocated in one of two places:

1. The area marked for reforestation on the northwest corner of the parcel

Or

2. In the open area marked for reforestation behind lots #170-172.

This would slightly reduce the amount of area slated for reforestation, but would protect the existing 'older' forested habitat that is currently on site.

Additionally, the area designated as 'nature easement' is located within tidal wetlands that are identified as Natural Area. Every effort should be made to protect these areas. As proposed, placing seven docks through this area would be detrimental to the habitat and compromise the integrity of the Natural Area. We strongly recommend redesigning the plan to include one community dock that could be utilized by all residents of the neighborhood. All efforts should be made to construct the dock outside of designated Natural Area (ideally the area of the northern most dock on the proposal).

For more information regarding Natural Areas or Nature Preserves, please contact the Office of Nature Preserves at 739-9235.

Site Investigation and Restoration

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.

Under/Aboveground Storage Tanks

There are no LUST sites located within a quarter mile of the proposed project. However, should any underground storage tanks or petroleum contaminated soil be discovered by any person during construction, the DNREC-TMB at (302) 395-2500 and the DNREC Emergency Response Hotline at (800) 662-8802 must be notified within 24 hours.

Should any contamination be encountered, PVC pipe materials would have to be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

Also, please note that if any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMB. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMB.

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 Island Farms development may have.

Emissions Attributable to Island Farms 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	7.5	0.8	0.7	0.9	30.4
Electrical Power Generation	ND*	3.0	10.3	ND*	1,523.2
Mobile	16.6	13.7	11.3	1.0	1,553.5
Total	24.1	17.5	22.3	1.9	3,107.1

(*) 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 Island Farms development. Air Quality Management Section points of contact are Phil Wheeler and Deanna Morozowich, and they may be reached at (302) 739-9402.

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 thoroughfare 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
- 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 proposed development is in an area designated as Investment Level 4 under the current *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.

The proposed development is adjacent to a property permanently preserved through the State's Agricultural Lands Preservation Program (Wells #2 Expansion of the Howard T. West Memorial District (Parcel Number 235-8.00-25.01)). 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.).

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.

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.

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

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

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 received.

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.

This proposed development is in a Level 4 area. Developing in such an area is inconsistent with the *Strategies for State Policies and Spending*. DPH is committed to the *Strategies* and therefore, does not support development in the proposed area.

DPH supports new development in and around existing towns and municipalities where compact and mixed land use patterns facilitate physical activity.

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*.

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

Delaware State Housing Authority – Contact Vicki Powers 739-4263

This proposal is for a site plan review of 242 residential units on 213 acres located approximately .05 miles off DE Route One, south of DE Route 16, at the end of Graves Farm Road near the Town of Lewes. According to the State Strategies Map, the proposal is located in an Investment Level 4 area. As a general planning practice, DSHA encourages residential development only in areas where residents will have proximity to services, markets, and employment opportunities, such as Investment Level 1 and 2 areas, as outlined in the State Strategies Map. Since, the proposal is located in an area targeted for agricultural and natural resource protection, and therefore inconsistent with where the State would like to see new residential development, DSHA does not support this proposal.

Department of Education – Contact: John Marinucci 735-4055

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

1. This proposed development is within the Cape Henlopen School District boundaries. DOE offers the following comments on behalf of the Cape Henlopen School District.
2. Using the DOE standard formula, this development will generate an estimated 121 students.
3. DOE records indicate that the Cape Henlopen School Districts' *elementary schools are at or beyond 100% of current capacity* based on September 30, 2008 elementary enrollment.
4. DOE records indicate that the Cape Henlopen School Districts' *secondary schools are at or beyond 100% of current capacity* based on September 30, 2008 secondary enrollment.
5. Furthermore, the Cape Henlopen School 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.
6. Continued development will cause significant burden to the Cape Henlopen School District without the provision for additional educational infrastructure.
7. The developer is strongly encouraged to contact the Cape Henlopen School District Administration to address the issue of school over-crowding that this development will exacerbate.
8. DOE requests the developer work with the Cape Henlopen School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the school district.

Sussex County – Contact: Richard Kautz 855-7878

Because this project is an AR-1 Cluster subdivision, the developer must comply with all ordinance amendments and 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 County application an explanation of how the developer plans to mitigate them and the issues raised by the State agencies during this review.

The entire site is within a FEMA designated flood plain with the base flood elevation of 9 or 10 feet. That should be shown on the plan. If the proposed layout shows a field located flood plain different from the official FEMA mapped flood plain for this site, then the area of difference should be shown on the plan with a notation stating that any dwellings located outside of the field located flood plain but within the FEMA mapped flood plain must be covered by flood insurance until the flood plain boundary is officially adjusted by FEMA.

In addition to the existing 50-foot buffer the following also must be shown on the appropriate plan.

1. Where adjacent to or when containing State tidal waters, tidal tributary streams or tidal wetlands, the location of the mean high water line and the DNREC map number source for the State tidal boundary,
2. The landward limits of the 50 foot buffer zones adjacent to the tidal waters, tidal tributary stream, tidal wetlands #1 above,
3. An appropriate description of the buffer zone native vegetation consistent with the definition as a contained in Article 115-193A,
4. The location of the appropriate required building setbacks for lots adjacent to the buffer zone,
5. No building setback lines within the buffer zone,
6. No wetlands within any lot,
7. No man-made encroachments or disturbances within the buffer zone unless there is no alternate design option,
8. When the buffer zone will be purposely established,
9. The type/location of monuments or fencing that distinguishes the upland edge of the buffer zone,
10. A notation to the effect that all silt fences will be on the upland edge of any buffer zone required under Article 115-193 of the County Code, and
11. Any deviations from mapped State tidal boundaries shall be highlighted and any areas of dispute which are to be resolved with DNREC shall be so noted.

As the entire subdivision is in a flood plain at the end of a "half mile cul-de-sac", an emergency alternate access should be provided for from the development.

The Sussex County Engineer Comments:

The project proposes to develop using a private central community wastewater system. We recommend 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 Environment Sensitive Developing 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 and separated from lot area. If Sussex County ever provides sewer service and the project has a CPCN, it is recommended that the treatment system be abandoned and a direct connection made to the County system at the developer's and/or owners expense. If Sussex County ever provides sewer service and the project does not have a CPCN, 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.

Sussex County recently adopted new road standards. The standard becomes affective January 1, 2009 and will apply to this project.

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

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

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

Sincerely,



Constance C. Holland, AICP
Director, State Planning Coordination

CC: Sussex County