



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

February 25, 2008

Mr. Tom Ford
LANDDESIGN, Inc.
Oak Square, Ste. 3
Central Avenue
Ocean View, DE 19970

RE: PLUS review – 2008-01-04; Marsh Properties

Dear Mr. Ford:

Thank you for meeting with State agency planners on January 30, 2008 to discuss the proposed plans for the Marsh Properties project to be located on Camp Arrowhead Road at Water View Road in Sussex County.

According to the information received, you are seeking site plan approval for 134 residential units on 93 acres.

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

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The

full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies/Project Location

According to the information received, the developer is seeking approval for the proposed project known as the Marsh Properties which calls for the creation of 134 residential units on 93 acres site located on Camp Arrowhead Road at Water View Road in Sussex County. In addition, the proposed project is located within a Level Three (3 / Level Four (4) Investment Area as defined by the Delaware Strategies for State Policies and Spending which is an area that the state considers for future long-term growth by a local jurisdiction. Finally, the proposed is located within the Environmentally Sensitive Development Area as defined by the 2003 Sussex County Comprehensive Land Use Plan which calls for sensitive development design to protect the natural resources within and adjacent to the site.

Street Design and Transportation

- Camp Arrowhead Road and Waterview Roads are classified as local roads. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore DelDOT will require right-of-way dedication to provide any additional width needed from this project.
- DelDOT will also require that a 10-foot wide shared use path, located in a 15-foot wide permanent easement, be provided across the frontage of the site.
- The proposed development would be situated on a relatively sharp curve in Camp Arrowhead Road. There is presently a DelDOT project under design to improve the road in this area, and DelDOT anticipates needing an additional 10 to 15 feet of right-of-way on each side of the road to accommodate this improvement.
- The pond proposed along the west side of Camp Arrowhead Road may need to be set back farther from the road.

Natural and Cultural Resources

- 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 wetlands and water bodies (including ditches).

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site.
- The Drainage Program encourages the elevation of rear yards to direct water towards the streets and alleyways where storm drains are accessible for maintenance.
- An increase of the side yard setback to 15 feet may be needed on all properties with a drainage easement on the side.
- All catch basins in rear or side yards should have a 10-foot drainage easement around them on all sides.
- 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.
- There are approximately 10 lots that are partially located in the 500-year (0.2% chance) floodplain. It is recommended that you design these homes so they reasonably safe from flooding.
- The applicant has made an effort to preserve the existing forested area which is much appreciated. According to the application approximately 2.7 acres of forest will be removed by this project. To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, it is recommended that clearing not occur April 1st to July 31st.
- DNREC recommends that efforts be made to redesign the site so the forested riparian buffer along the headwaters of Cherry Walk Creek is at least 100 feet in width (300 feet preferred) so that rare species downstream can persist.

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

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

The proposed project is located within a Level Three (3) / Level Four (4) Investment Area as defined by the Delaware Strategies for State Policies and Spending, which is an area that the state considers for future long-term growth by a local jurisdiction. In

addition, the proposed is located within the Environmentally Sensitive Development Area as defined by the 2003 Sussex County Comprehensive Land Use Plan which calls for sensitive development design to protect the natural resources within and adjacent to the site. Given the location of this project, this office has no objection to the project even though a portion of the project is within a Level Four (4) Investment Area. Given the no objection by this office; however, the developer is expected to work with Del-Dot to address traffic impacts to Camp Arrow Head Road and with DNREC to address environmental impacts to the Inland Bay water resources.

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

There appears to be one known historic and cultural resource on this project area, and it is late 19th-century or early 20th-century agricultural complex, which consists of a house along with scattered outbuildings that are old farm buildings (S-2936).

Another historical aspect is that according to the Beers Atlas of 1868 (an historical map), this project area appears to be within the area or vicinity of Indian River Hundred, and there is a variety of historical attributes or aspects within that particular area or vicinity of Indian River Hundred. Also according to the Beers Atlas of 1868, it appears that there was a dwelling of some type very close to where the project area (parcel/property) is today, and that dwelling was associated or affiliated with someone by the name of J.A. Marsh. It is a possibility that there could be potential historic and cultural resources or potential archaeological resources associated with that dwelling or related to that dwelling.

In addition, it is extremely important to remember and be aware that a portion of this project area (parcel/property) is in a Level-4 area. Level-4 areas are often or usually environmentally sensitive areas, and sometime there area historical attributes or aspects within these types of environmental sensitive areas. The State Historic Preservation Office of the Division of Historical & Cultural Affairs is not in favor of any type of zoning change, construction, building project, or development in Level-4 areas.

Since this project area is in a location where there are some historical attributes or aspects, it is also an indication that it is a possibility that there could be potential historic and cultural resources or potential archaeological resources on or within this project area. The potential historic and cultural resources or potential archaeological resources could a cemetery, burial ground, unmarked human remains, or some other type of hidden contents or remains, which has historical attributes or aspects.

Prior to any type of ground-disturbing activities, demolition, or construction, the developer show review Chapters 53 and 54, in Title 7, of the Delaware State Code. Chapter 53 pertains to the discovery and disposition of “Conservation of Archaeological

Resources In or On State Lands”. Chapter 54 pertains to the “Delaware Unmarked Human Remains Act of 1987”, such as the discovery and disposition of Unmarked Human Burials or Skeletal Remains”. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out.

Also prior to any type of ground-disturbing activities, demolition, or construction, the developer may want to hire an archaeological consultant to check and examine the project area thoroughly. The purpose for this is to make sure that there is no indication or evidence of a potential historic and cultural resource or potential archaeological resource such as a cemetery, burial ground, unmarked human remains, or some other type of hidden contents or remains, which has historical attributes or aspects.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) The proposed development would warrant a traffic impact study under DelDOT’s newly adopted Standards and Regulations for Subdivision Streets and State Highway Access. Grandfathering provisions will exempt developments for which an application has been filed with the relevant government and accepted for review by that local government on or before March 31, 2008, and under the previous regulations such a study would not be required.

Under the new regulations, responsibility for preparing the scope of work for a TIS has shifted to the developer’s engineer. If this development is proceeding under the new regulations, the developer’s engineer should contact Troy Brestel or Bill Brockenbrough from the DelDOT Planning Office when you are ready for a scoping meeting.

- 2) Camp Arrowhead Road and Waterview Roads are classified as local roads. DelDOT’s policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore DelDOT will require right-of-way dedication to provide any additional width needed from this project.
- 3) DelDOT will also require that a 10-foot wide shared use path, located in a 15-foot wide permanent easement, be provided across the frontage of the site.
- 4) The proposed development would be situated on a relatively sharp curve in Camp Arrowhead Road. There is presently a DelDOT project under design to improve the road in this area, and DelDOT anticipates needing an additional 10 to 15 feet of right-of-way on each side of the road to accommodate this improvement.

- Depending on funding, construction could begin as early as Fiscal Year 2011. DelDOT recommends that the developer contact our project engineer, Mr. Jeffrey Van Horn, become familiar with the project, and as necessary coordinate their entrance improvements with that work. Mr. Van Horn may be reached at (302) 760-2748.
- 5) The pond proposed along the west side of Camp Arrowhead Road may need to be set back farther from the road. DelDOT will require a minimum setback of 20 feet from the ultimate right-of-way, as per Comments 2 and 4 above, to the top of the pond's slope. An acceptable location for the path and permanent easement, to east or west of the pond, will need to be determined.
 - 6) DelDOT recommends that stub streets be provided to Parcels 2-34-11.00-50.00 (Wanendale Farms, Inc.), and 2-34-12.00-16.00 (The Adkins Company), 2-34-12.00-22.00 (Charles and John Guy, both north and south of Waterview Road) and most especially 2-34-12.00-18.01 (James M. Lovett) to allow for interconnections if those parcels are developed. The connection to the Lovett Property could be provided most easily by placing the right-of-way line for the entrance road at the shared property line. DelDOT understands that the Wanendale Farms property may be developed as a spray irrigation field for wastewater treatment. If that can be confirmed, DelDOT would not want stub streets to it.
 - 7) The developer's site engineer should contact the DelDOT Subdivision Manager for Sussex County, Mr. John Fiori, regarding requirements for access and off-site improvements. Mr. Fiori may be reached at (302) 760-2260.

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

Green Infrastructure

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

Green infrastructure is defined as Delaware's natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, productive agricultural and forest land, greenways, cultural, historic and recreational sites and other natural areas all with conservation value. Preserving Delaware's Green Infrastructure network will

support and enhance biodiversity and functional ecosystems, protect native plant and animal species, improve air and water quality, prevent flooding, lessen the disruption to natural landscapes, provide opportunities for profitable farming and forestry enterprises, limit invasive species, and foster ecotourism.

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

Soils

Based on the Sussex County soil survey update, Downer, Askecksy, Hurlock, and Manahawkin were mapped on subject parcel. Downer is a well-drained upland soil that, generally, has few limitations for development. Askecksy and Hurlock are poorly-drained wetland associated (hydric) soils that have severe limitations for development. Manahawkin is a very poorly-drained wetland associated (hydric) soil that has severe limitations for development.

Wetlands

Based on the Statewide Wetland Mapping Project (SWMP) maps, palustrine forested riparian wetlands were mapped along most of the southern boundary of the combined land area of the parcel. The wetlands closely mirror the mapped occurrence of the hydric soils.

Impacts to Palustrine wetlands are regulated by the U.S. Army Corps of Engineers (USACE, or "the Corps") through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Corps also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Management Program (DCMP) Section. Each of these certifications represents a separate permitting process. Please be advised that Nationwide permits have been suspended in Delaware and are pending further coordination with the Corps. Therefore, contrary to past practices, Coastal Zone Management approval can no longer be assumed. Individual certifications must be granted from the DCMP office for each project intending to utilize a Nationwide Permit. For more information on the Federal Consistency process, please contact the DCMP office at 302.739.9283. To find out more about permitting requirements, the applicant is

encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-9943 to schedule a meeting.

Based on a review of existing buffer research by Castelle et al. (1994), an adequately-sized buffer that effectively protects wetlands and streams is, in most circumstances, 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 wetlands and water bodies (including ditches).

Impervious Cover

The applicant estimates this project's post-construction surface imperviousness to reach about 25 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 (i.e., rooftops, sidewalks, open-water stormwater management structures/ponds, and roads) in the calculation for surface imperviousness; this will ensure a realistic assessment of this project's likely post-construction environmental impacts. Since it is apparent that the applicant's estimate for surface imperviousness is a significant underestimate of their project's actual post-construction impacts, it should be recalculated with or include, all forms of constructed surface imperviousness. Failures to do so will significantly understate this project's true environmental impacts.

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

ERES Waters

This project is located adjacent to receiving waters of the Inland Bays designated as waters having Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in

Section 5.6 of Delaware's "Surface Water Quality Standards" (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of pollutants through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 5.6.3.5 of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree achievable and, where practicable, implementation of a standard requiring no discharge of pollutants.

TMDLs

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Inland Bays Watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. This project is located in the **low** nutrient reduction area requiring a 40 percent reduction in nitrogen and phosphorus, respectively. Additionally, 40 percent reduction in bacteria will also be required.

Compliance with TMDLs through the PCS

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

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

Water Supply

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

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

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

Sediment and Erosion Control/ Stormwater Management

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-7219 for details regarding submittal requirements and fees.

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

Floodplains

There are approximately 10 lots that are partially located in the 500-year (0.2% chance) floodplain. It is recommended that you design these homes so they are reasonably safe from flooding.

Rare Species

DNREC never surveyed the project area; therefore, it is unknown if there are State-rare or federally listed plants, animals or natural communities at this project site.

They do have records of the following forest dependent birds within the vicinity, and it is possible that these species occur within the forested areas within the project parcels as well:

Coragyps atratus (Black Vulture), *Dendroica dominica* (Yellow-throated Warbler), and *Melanerpes erythrocephalus* (Red-headed Woodpecker), which is also listed as State-Endangered.

Forested Wildlife Habitat

The forest within the project area is part of a larger forest block and also buffers the headwaters of Cherry Walk Creek. There is a sea level fen community containing 29 species of rare plants and animals just downstream and maintaining the existing forested buffer is extremely important for protecting water quality that will enable these species to persist. This unique wetland could be impacted by run-off from this project if an adequate buffer is not left intact along this sensitive riparian area.

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 State and local forest protection, we have to rely on landowners/developers and/or the entity that approves projects (i.e. counties and municipalities) to consider implementing recommendations that will aid in reducing forest loss.

Recommendations:

1. The applicant has made an effort to preserve the existing forested area which is much appreciated. According to the application approximately 2.7 acres of forest will be removed by this project. To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, we recommend that clearing not

- occur April 1st to July 31st. This clearing recommendation would only protect those species during one breeding season; once trees are cleared the result is an overall loss of habitat.
2. DNREC recommends that efforts be made to redesign the site so the forested riparian buffer along the headwaters of Cherry Walk Creek is at least 100 feet in width (300 feet preferred) so that rare species downstream can persist. The current Sussex County Code requirement of 50 feet does not appear to recognize scientific research which supports the need for 100-foot wetland buffers for adequate protection of water quality. Riparian buffers also serve as critical habitat for wetland-dependent species which utilize upland buffers during a portion of their life cycle, and as a travel corridor for wildlife which often travel along water courses during migratory, foraging or seasonal movements.

State Natural Heritage Site

The forested area around the headwaters of Cherry Walk Creek lies within a State Natural Heritage Site. This is a criteria used to determine the presence of Critical Resource Waters. The final decision regarding Critical Resource Waters, if this is an issue, will be made by the U.S. Army Corps of Engineers (USACE, or “the Corps”). The information above will aid the Corps in their determination.

Nuisance 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 feet in width) around the ponds. 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, we do 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 and/or size of the ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 10.3 tons (20,567.6 pounds) per year of VOC (volatile organic compounds), 8.5 tons (17,028.6 pounds) per year of NO_x (nitrogen oxides), 6.3 tons (12,564.0 pounds) per year of SO₂ (sulfur dioxide), 0.6 ton (1,118.4 pounds) per year of fine particulates and 860.2 tons (1,720,453.7 pounds) per year of CO₂ (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 4.1 tons (8,295.8 pounds) per year of VOC (volatile organic compounds), 0.5 ton (912.8 pounds) per year of NO_x (nitrogen oxides), 0.4 ton (757.5 pounds) per year of SO₂ (sulfur dioxide), 0.5 ton (977.5 pounds) per year of fine particulates and 16.8 tons (33,629.5 pounds) per year of CO₂ (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.6 tons (3,287.9 pounds) per year of NO_x (nitrogen oxides), 5.7 tons (11,436.1 pounds) per year of SO₂ (sulfur dioxide) and 843.4 tons (1,686,824.2 pounds) per year of CO₂ (carbon dioxide).

	VOC	NO _x	SO ₂	PM _{2.5}	CO ₂
Mobile	10.3	8.5	6.3	0.6	860.2
Residential	4.1	0.5	0.4	0.5	16.8
Electrical Power		1.6	5.7		843.4
TOTAL	14.4	10.6	12.4	1.1	1720.4

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 1.6 tons of nitrogen oxides per year and 5.7 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, <http://www.energystar.gov/>:

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades,
high performance windows,
controlled air infiltration,
upgraded heating and air conditioning systems,
tight duct systems and
upgraded water-heating equipment.”

The DNREC Energy Office is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. The Energy Office highly recommends this project development and other residential proposals increase the energy efficiency of their homes.

They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths, links to mass transit, and fund a lawnmower exchange program for their new occupants.

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

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal’s Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

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

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

b. Accessibility:

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from the main 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.
- 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 698-4500

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

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

G. Agricultural Use Protections.

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

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

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

(b) For any new subdivision development located in whole or in part within fifty (50) feet of the boundary of land used primarily for agricultural purposes no improvement requiring and occupancy approval for a residential type use shall be constructed within fifty (50) feet of the boundary of land used primarily for agricultural purposes.

The developer should also coordinate with Sussex County to ensure their project is in compliance with the County's forested buffer requirements.

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

Right Tree for the Right Place

The Delaware Department of Agriculture Forest Service encourages the developer to use the "Right Tree for the Right Place" for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource. To further support this concept the Delaware Forest Service does not recommend the planting of the following species due to the high risk of mortality from insects and disease:

Callery Pear

Ash Trees

Leyland Cypress

Red Oak (except for Willow Oak)

If you would like to learn more about the potential problems or impacts associated with these 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 State Housing Authority – Contact Vicki Powers 739-4263

The proposal is for a site plan review for 134 residential units on 93.09 acres, located on Camp Arrowhead Road and both sides for Water View Road at the intersection of Water View Road and Camp Arrowhead Road near Long Neck. According to the State Strategies Map, the proposal is located in an Investment Level 3 area and environmentally-sensitive developing area. DSHA supports the fact that this proposal targets first-time homebuyers. According to the most recent real estate data collected by DSHA, the average home price in Sussex County is \$280,000. However, families earning respectively 100% of Sussex County’s median income only qualify for mortgages of \$164,791, thus creating an affordability gap of \$115,209. 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. To facilitate the units targeted for first-time homebuyers, DSHA encourages the developer to apply for Sussex County’s Moderately Price Housing Unit (MPHU) Program, which provides the following incentives: an expedited review, density bonuses, and full utilization of the zoning designated for the parcel.

A Request for Proposal (RFP) process has been established to select initial program participants. The developer is encouraged to call William C. Lecates, Director of Sussex County’s Community Development and Housing Division at (302) 855-7777 to learn more about the RFP application process.

Department of Education – Contact: John Marinucci 735-4055

DOE recognizes that this development project is in level 3& 4 of the State Strategies for Policies and Spending and as such, DOE does not support projects located in level 4.

1. This proposed development is within the Cape Henlopen School District boundaries.
2. DOE offers the following comments on behalf of the Cape Henlopen School District.
3. Using the DOE standard formula, this development will generate an estimated 67 students.

4. DOE records indicate that the Cape Henlopen School Districts' *elementary schools are very close to 100% of current capacity* based on September 30, 2007 elementary enrollment.
5. DOE records indicate that the Cape Henlopen School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2007 secondary enrollment.
6. While the Cape Henlopen School District secondary and elementary schools are not currently beyond capacity, *the district does NOT* have adequate student capacity to accommodate the additional students likely to be generated from this development given the number of planned and recorded residential sub divisions within district boundaries.
7. Continued development will cause significant burden to the Cape Henlopen School District without the provision for additional educational infrastructure. The developer is strongly encouraged to the Cape Henlopen School District Administration to address the issue of school over-crowding that this development will exacerbate.
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

This project is an AR-1 ESDA subdivision and the developer is allowed to reduce the lot size to provide for mitigation of the impact on environmental factors. Because this project is situated in an Environmentally Sensitive Development Area, the required report should discuss how both this requirement to mitigate environmental impact and the PLUS comments have been addressed. The report should also explain how the plan has been revised accordingly. Use of Low Impact Design principals and Green Technology helps address the environmental issues.

The developer should relocate the long and narrow stormwater management pond located along the property frontage to an interior, less visible location.

The Sussex County Engineer Comments:

The proposed project is in the Environmentally Sensitive Developing (ESDZ) and adjoins the Angola Neck Sanitary Sewer District (ANSSD). Connection to the sewer system is mandatory. Sussex County has undertaken design of the sewer system to serve the area. In addition, a planning study that is nearing completion will recommend regional infrastructure to serve the parcels. When it is determined how the parcels can receive

sewer service, and following approval of a concept plan, a request for annexation into the ANSSD will be considered. The proposed development will require a developer installed collection system in accordance with Sussex County standard requirements and procedures. In addition, it will be the developer's responsibility to install regional infrastructure from an approved connection point in accordance with the North Coastal Area Planning Study Update. The Sussex County Engineer must approve the connection point. In addition, the developer may be required to contribute towards regional infrastructure that Sussex County will build. The Sussex County Engineering Department requires that a Sewer Concept Plan be submitted for review and approval prior to requesting annexation to the ANSSD. A checklist for preparing conceptual plans was handed out at the meeting along with the County's policy and steps for extending sewer district boundaries. All costs associated with extending sewer service will be the sole responsibility of the developer. One-time system connection charges will apply. Please contact Mrs. Christine Fletcher at 302 854-5086 for additional information on charges.

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

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

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

Sincerely,

A handwritten signature in cursive script that reads "Constance C. Holland".

Constance C. Holland, AICP
Director

CC: Sussex County