

Bayville Pointe

Sussex County, DE

March 5, 2007

Ms. Constance C. Holland, AICP, Director
The Delaware Office of State Planning Coordination
122 William Penn Street, 3rd Floor
Dover, Delaware 19901

RE: Bayville Pointe – Response to PLUS Review #2006-03-04 Comments

Dear Ms. Holland:

Thank you for your letter of April 13, 2006 containing the comments from State Agencies regarding the Bayville Pointe Conceptual Development Plan. The developer has modified the plan (see attached). The new site design proposes less overall residential units (242 units reduced to 173 units).

Our response to State Agency comments are as follows:

State Strategies/Project Location

This proposal is located within an Investment Level 3 area according to the *Strategies for State Policies and Spending* and within the Environmentally Sensitive Developing Area according to the Sussex County Comprehensive Plan. In these areas State policies support long-term, phased development that is sensitive to the natural environment and consistent with local comprehensive plans

Response:

We concur that the proposed development resides in the Investment Level 3 Area. Prior to establishing a site design, an inventory of environmental features (including wetlands, forests, topographic features, adjacent usage, etc.) was performed. Utilizing this information, a site design was established which proposed little impact to the existing wetlands. A large portion of the existing wooded land is to be preserved as well. Mitigation will be provided for any disturbance within these sensitive areas.

Street Design and Transportation

Bayville Road is classified as a local road. 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 along the frontage to provide any additional width needed from this project.

Response:

We will coordinate our site design with DelDOT's requirements for dedicated right-of-way.

The development should include a 10-foot wide shared use path in a 15-foot wide permanent easement across the frontage of the site.

Response:

We will coordinate efforts with DelDOT regarding the suggested pedestrian pathway. The site plan will be revised as is needed to support a shared use path, which could ultimately be linked to the proposed on-site walkway system, as shown on the updated plan.

On November 22, 2005, DelDOT wrote to Sussex County regarding the need for a traffic impact study for the subject rezoning, albeit with a different mix of dwelling types. A copy of that letter is enclosed. To summarize, while they did not recommend that the County require a traffic impact study, they did recommend that they require the developer to improve Bayville Road from the site entrance to Delaware Route 54 to meet DelDOT's local road standards (11-foot lanes and 5-foot shoulders). That is still DelDOT's recommendation. Having said that, DelDOT is developing a project to improve SR 54 from US Route 113 to Keen-Wik Road (Sussex Road 58C). They may require the developer to build a segment of that project to tie their Bayville Road improvements into Route 54.

Response:

Improvements to the local roadway system will become an integral part of the new development's overall appeal to a potential buyer. The developer and design team will look to combine resources and design efforts with DelDOT so that appropriate road upgrades may be achieved.

It is recommended that the developer attempt to obtain an access for emergency vehicles through the Treasure Beach Campground.

Response:

The suggestion for emergency access from Treasure Beach will be considered. We are concerned that environmental issues related to the adjacent lagoon and wetlands will preclude approval of said access.

While the Delaware Transit Corporation (DTC) does not presently provide service in the immediate area of this project, they are considering a future extension of a Delaware Resort Transit route to do so and would like to be able to serve this project. Accordingly, they ask that the developer contact Mr. Wayne Henderson of DTC's Planning Section regarding bus stops and related facilities that would be needed for DTC to provide that service. Mr. Henderson can be reached at (302) 576-6063.

Response:

Mr. Henderson will be consulted regarding the possibility of extending DTC's service to the subject property, which could inherently increase the marketability of the new development.

Natural and Cultural Resources

The Division of Historical and Cultural Affairs would like the opportunity to see the buildings and document them if necessary before any demolition activity takes place. In addition, they would like to check the area to see if any archaeological sites in fact exist there and to learn something about their location, nature, and extent prior to any ground-disturbing activities.

Response:

Following all plan approvals, and prior to any demolition or construction activities, we will work with the Division of Historical and Cultural Affairs - potentially affording them access to the site for the proposed research.

Because there is strong evidence that federally regulated wetlands exist on site, field wetland delineation, in accordance with the methodology established by the Corps of Engineers Wetlands Delineation Manual, (Technical Report Y-87-1) should be conducted

Response:

See the attached text provided by Mr. Ed Launay, Environmental Resources Inc..

This project is located directly adjacent to Little Assawoman Bay and sensitive headwater wetlands that ultimately drain into the greater Little Assawoman Bay watershed. This greatly increases the probability of harmful impacts to both surface and groundwater quality of all waters within this watershed which will make it more difficult for the State to achieve future required TMDL nutrient reductions. In recognition of the likely impacts to water and habitat quality and the necessity to protect it for long-term sustainable use, the Watershed Assessment Section strongly urges the applicant to consider a minimum 100-foot buffer from all wetlands and water bodies.

Response:

We have incorporated the required 50-foot buffer from tidal wetlands into the proposed site design. Buffers of greater width will be explored throughout the site engineering, and will be incorporated if feasible.

The application states that only 0.1 acres of wetlands are going to be impacted; however there are several features of the site plan that will likely affect a much larger percentage of wetlands. First of all, the 50-foot buffers are inadequate for protecting the function and integrity of wetlands and should be increased to at least 100 feet (preferably 300 feet to protect sensitive wetlands). In cases where natural buffer vegetation has been removed or reduced by past development or farming activities, the developer is encouraged to restore/establish to said buffer width or greater with native herbaceous and/or woody vegetation. Currently there are lots and infrastructure within this buffer zone which should be removed. Secondly, if the site plan is approved as it is now, wetlands are going to be fragmented, especially by townhome units 4, 5, 6, and 8. These units and associated infrastructure should not be permitted to fragment wetlands and should be omitted. Lastly, the wetlands should not be used as a stormwater outlet. Stormwater often contains nutrients and other substances which would be harmful to sensitive wetland communities. A conservation easement is recommended for open space and lands outside of lots to protect water resources.

Response:

We still anticipate approximately the same amount of wetland impacts. The revised plan proposes fewer crossings and a major reduction in the overall number of units. The current lot layout conforms to buffer regulations. As previously mentioned, we propose to maintain the required 50-foot buffer around all tidal wetlands, and will increase this width wherever feasible and possible. Any disturbance to the existing wetlands and/or associated buffers, will be mitigated with native plant material as is feasible. The reference to 'townhome units 4, 5, 6, and 8' has been misinterpreted. Those number designations actually refer to the number of units for each structure. In either case, the wetlands, as they exist today, appear to be fragmented. The new construction recognizes this random pattern, and utilizes it so to minimize any potential impacts. The current agricultural use is known to be a major contributor of nutrient pollution. The proposed residential use will greatly reduce the amount of nutrients entering the environmental areas. The use of DNREC approved best management practices, provides pre-treatment for all storm water runoff before it enters the adjacent wetlands. Utilizing the wetlands as part of the overall storm water management system is a common practice throughout Delmarva. This practice is actually encouraged because of its proven benefits.

The majority of the site is located within the 100-year floodplain. It is recommended that portions of the site within the 100-year floodplain remain undeveloped to minimize flood risk.

Response:

All of the proposed residential units will be engineered and built to code as is required for development within the 100-Year Floodplain.

The application states that approximately 11.66 acres out of 26.86 acres of trees are going to be removed. However, once the site is built out, a larger percentage of trees will be removed and what remains will be fragmented into smaller, disconnected sections.

Wildlife species that currently inhabit the forest will have to disperse into surrounding areas and there is a general lack of forested habitat in the vicinity. An increase in human/animal conflicts could result, including an increase in road mortality. DNREC recommend the following design changes which could serve to preserve a greater area of forest:

The number of lots/units should be reduced and/or clustered on the property. Also by reducing or clustering the lots, the roadways and parking spaces can be scaled back as well. There are several ways that space could be created for the lots that are removed from the forest. First of all, there are two large stormwater management ponds that are most likely merely aesthetic rather than a necessary feature. One of the ponds could probably be omitted and the other pond downsized or an alternate method of stormwater management could be utilized. Secondly, only 576 parking spaces are required, yet the site plan entails creating 598 parking spaces.

If trees are cleared despite our recommendations above, it is recommended that they not be cleared from April 1st to July 31st to reduce impacts to nesting birds and other wildlife that utilize forests for breeding.

Response:

As mentioned earlier, the proposed number of units has been reduced – from 242, to 173. The outer limits of the wooded areas became a guide, of sorts, for placing the new residential lots. By doing this, the design team was able to reduce the overall amount of forested disturbance. It may appear that the on-site forest stands are fragmented due to the new development, but each area still maintains a large amount of contiguous woody vegetation. Allowing each area to remain viable forests, capable of supporting the local habitat. The storm water ponds have been reduced in size. The new ponds are engineered to provide water quality and quantity treatment, as required by DNREC. The number of parking spaces has been reduced, almost to half of what was previously proposed. Yet again, the number of spaces is what is required for the new residential units and associated recreational facilities. We will attempt to include the recommended tree removal timeframe into the construction schedule to a feasible extent.

According to the DNREC GIS database, aerial photographs, and State Wetland Maps, there is a high potential for a category I wetland within the project area, specifically a sea level fen community. The plants that typically inhabit this globally rare wetland rely on a specific hydrology and may not persist if water quality is changed by sedimentary and nutrient inputs from this development. There is also a potential for rare animal species to exist in this wetland. The DNREC program botanist and zoologist respectfully request the opportunity to survey these parcels as their observations would allow us to make more informed comments. Also, recommendations they provide will allow the applicant the opportunity to reduce potential impacts to rare species. Please contact Bill McAvoy or Kitt Heckscher at (302) 653-2880 to set up a site visit.

Response:

See the attached text provided by Mr. Ed Launay, Environmental Resources Inc..

Since this project entails disturbance to wetlands and forest loss, we recommend that the developer/landowner contact the Delaware Native Plant Society to initiate a plant rescue. Selected plants from the site of disturbance will be collected by Society members and transplanted to the Society's nursery. Plants will then be used in restoration projects and/or sold at the Society's annual native plant sale. This can be done at no expense or liability to the developer/landowner. Please contact Lynn Redding at (302) 736-7726. lynn_redding@ml.com

Response:

Following all plan approvals, and prior to any demolition or construction activities, we will contact the Delaware Native Plant Society - potentially affording them access to the site for plant rescue procedures.

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

Office of State Planning Coordination – Contact: Herb Inden 739-3090

This proposal is located within an Investment Level 3 area according to the *Strategies for State Policies and Spending* and within the Environmentally Sensitive Developing Area according to the Sussex County Comprehensive Plan. In these areas State policies support long-term, phased development that is sensitive to the natural environment and consistent with local comprehensive plans.

Response:

We concur that the proposed development resides in the Investment Level 3 Area. Prior to establishing a site design, an inventory of environmental features (including wetlands, forests, topographic features, possible archeological features, adjacent usage, etc.) was performed. Utilizing this information, a site design was established which proposed little impact to the existing wetlands. A large portion of the existing wooded land is to be preserved as well. Mitigation will be provided for any disturbance within these sensitive areas.

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

Nothing is known on this parcel. The Capt. J. W. Lynch House appears on Beers Atlas of 1868 either on or close to this parcel. The USGS 15' Ocean City 1901 map shows a property in the area of the current house. This house does not appear in their inventory, so Alice does not know if this is the original house, or a later replacement. The USDA 1937 aerial photograph of this area shows two other houses on Bayville Rd within this parcel. There may be historic-period archaeological sites associated with these mapped locations. In addition, there are areas of high potential for prehistoric-period and for 17th- to early 18th-century, historic-period archaeological sites within this parcel.

Small, rural, family cemeteries often are found in relation to historic farm complexes, such as the Lynch house, usually a good distance behind or to the side of the house. The developer should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out. The DHCA will be happy to discuss these issues with the developer; the contact person for this program is Faye Stocum, 302-736-7400.

The Division of Historical and Cultural Affairs would like the opportunity to see the buildings and document them if necessary before any demolition activity takes place. In addition, they would like to check the area to see if any archaeological sites in fact exist there and to learn something about their location, nature, and extent prior to any ground-disturbing activities.

Response:

Following all plan approvals, and prior to any demolition or construction activities, we will work with the Division of Historical and Cultural Affairs - potentially affording them access to the site for the proposed research.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) Bayville Road is classified as a local road. 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 along the frontage to provide any additional width needed from this project.

Response:

We will coordinate our site design with DelDOT's requirements for dedicated right-of-way.

- 2) The development should include a 10-foot wide shared use path in a 15-foot wide permanent easement across the frontage of the site.

Response:

We will coordinate efforts with DelDOT regarding the suggested pedestrian pathway. The site plan will be revised as is needed to support the proposed shared use path, which could ultimately be linked to the proposed on-site walkway system, as shown on the updated plan.

- 3) On November 22, 2005, DelDOT wrote to Sussex County regarding the need for a traffic impact study for the subject rezoning, albeit with a different mix of dwelling types. A copy of that letter is enclosed. To summarize, while they did not recommend that the County require a traffic impact study, they did recommend that they require the developer to improve Bayville Road from the site entrance to Delaware Route 54 to meet DelDOT's local road standards (11-foot lanes and 5-foot shoulders). That is still DelDOT's recommendation. Having said that, DelDOT is developing a project to improve SR 54 from US Route 113 to Keen-Wik Road (Sussex Road 58C). They may require the developer to build a segment of that project to tie their Bayville Road improvements into Route 54.

Response:

Improvements to the local roadway system will become an integral part of the new development's overall appeal to a potential buyer. The developer and design team will look to combine resources and design efforts with DelDOT so that appropriate road upgrades may be achieved.

- 4) It is recommended that the developer attempt to obtain an access for emergency vehicles through the Treasure Beach Campground.

Response:

The suggestion for emergency access from Treasure Beach will be considered. We are concerned that environmental issues related to the adjacent lagoon and wetlands will preclude approval of said access.

- 5) While the Delaware Transit Corporation (DTC) does not presently provide service in the immediate area of this project, they are considering a future extension of a Delaware Resort Transit route to do so and would like to be able to serve this project. Accordingly, they ask that the developer contact Mr. Wayne Henderson of DTC's Planning Section regarding bus stops and related facilities that would be needed for DTC to provide that service. Mr. Henderson can be reached at (302) 576-6063.

Response:

Mr. Henderson will be consulted regarding the possibility of extending DTC's service to the subject property, which could inherently increase the marketability of the new development.

- 6) The developer's site engineer should contact Mr. John Fiori, our Subdivision Manager for Sussex County, regarding our specific requirements for access. He may be reached at (302) 760-2260.

Response:

We will discuss the new development with Mr. Fiori prior to engineering the final site entrances, traffic patterns and road alignment. We included his previous recommendations in the new design, and will continue to work with DelDOT throughout the approval process.

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

Soils

According to the Sussex County soil survey mapping update Runclint, Pepperbox-Rosedale complex, Hammonton, Klej, Hurlock, Broadkill, and Transquaking-Mispillion were mapped on subject parcel. Runclint is a somewhat well-drained upland soil that, generally, has few limitations for development. Hammonton and Pepperbox-Rosedale complex are moderately well to well-drained upland soils that have moderate to few limitations for development. Klej is a somewhat poorly-drained transitional soil that is likely to contain both wetland (hydric) and upland soil components. Hurlock and Mullica are poorly to very poorly-drained wetland associated (hydric) soils that have severe limitations for development. Broadkill and Mispillion-Transquaking complex soils are very poorly-drained soils (hydric) associated with tidally-influenced wetlands – such soils have the highest severity level for development. Most of the soils (estimated at +/-70%) mapped on this parcel are wetland associated (hydric) soils.

It should also be noted that a majority of the soils on this parcel are likely to have a seasonal high water table within one-foot of the soil surface. Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding – especially during extended periods of high-intensity rainfall events such as tropical storms/hurricanes or “nor’easters.” This is in addition to increased flooding likely from surface water runoff emanating from future created forms of structural imperviousness (roof tops, roads, and sidewalks).

Response:

We will retain the services of a licensed geotechnical engineer who will study the onsite soils in relation to the proposed construction. We will coordinate engineering with our geotechnical engineer throughout the development process. Further information is detailed in the attached text provided by Mr. Ed Launay, Environmental Resources Inc..

Wetlands

According to the Statewide Wetland Mapping Project Mapping (SWMP) maps, tidally-influenced estuarine emergent wetlands and nontidal palustrine forested wetlands were mapped over much of subject parcel, closely paralleling the occurrence of the hydric soil map units. Tidally-influenced wetlands were mapped far more extensively than the nontidal wetlands and are found over much of the eastern portion of the parcel.

These wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. The developer should note that both DNREC and Army Corps of Engineers discourage allowing lot lines to contain wetlands to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.

Because there is strong evidence that federally regulated wetlands exist on site, field wetland delineation, in accordance with the methodology established by the Corps of Engineers Wetlands Delineation Manual, (Technical Report Y-87-1) should be conducted. Once complete, this delineation should be verified Corps of Engineers through the Jurisdictional Determination process. A State of Delaware Subaqueous Lands Jurisdictional Determination should also be conducted. Contact the DNREC Wetlands and Subaqueous Lands Section at (302) 739-9943.

If impacts are anticipated, please note that Palustrine wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In situations where the applicant believes that the delineated wetlands on their parcel are nonjurisdictional isolated wetlands, the Corps must be contacted to make the final jurisdictional assessment. They can be reached by phone at 736-9763.

In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the Wetlands and Subaqueous Lands Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process.

Any water access may need permits from the State of Delaware and the US Army Corps of Engineers.

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.

This project is located directly adjacent to Little Assawoman Bay and sensitive headwater wetlands that ultimately drain into the greater Little Assawoman Bay watershed. This greatly increases the probability of harmful impacts to both surface and groundwater quality of all waters within this watershed which will make it more difficult for the State to achieve future required TMDL nutrient reductions. In recognition of the likely impacts to water and habitat quality and the necessity to protect it for long-term sustainable use, the Watershed Assessment Section strongly urges the applicant to consider a minimum 100-foot buffer from all wetlands and water bodies.

Response:

We have incorporated the required 50-foot buffer from tidal wetlands into the proposed site design. Buffers of greater width will be explored throughout the site engineering, and will be incorporated if feasible.

Wetland Buffers

The application states that only 0.1 acres of wetlands are going to be impacted; however there are several features of the site plan that will likely affect a much larger percentage of wetlands. First of all, the 50-foot buffers are inadequate for protecting the function and integrity of wetlands and should be increased to at least 100 feet (preferably 300 feet to protect sensitive wetlands). In cases where natural buffer vegetation has been removed or reduced by past development or farming activities, the developer is encouraged to restore/establish to said buffer width or greater with native herbaceous and/or woody vegetation. Currently there are lots and infrastructure within this buffer zone which should be removed. Secondly, if the site plan is approved as it is now, wetlands are going to be fragmented, especially by townhome units 4, 5, 6, and 8. These units and associated infrastructure should not be permitted to fragment wetlands and should be omitted. Lastly, the wetlands should not be used as a stormwater outlet. Stormwater often contains nutrients and other substances which would be harmful to sensitive wetland communities. A conservation easement is recommended for open space and lands outside of lots to protect water resources.

Response:

We still anticipate approximately the same amount of wetland impacts. The revised plan proposes fewer crossings and a major reduction in the overall number of units. The current lot layout conforms to buffer regulations. As previously mentioned, we propose to maintain the required 50-foot buffer around all tidal wetlands, and will increase this width wherever feasible and possible. Any disturbance to the existing wetlands and/or associated buffers, will be mitigated with native plant material as is feasible. The reference to 'townhome units 4, 5, 6, and 8' has been misinterpreted. Those number designations actually refer to the number of units for each structure. In either case, the wetlands, as they exist today, appear to be fragmented. The new construction recognizes this random pattern, and utilizes it so to minimize any potential impacts. The current agricultural use is known to be a major contributor of nutrient pollution. The proposed residential use will greatly reduce the amount of nutrients entering the environmental areas. The use of DNREC approved best management practices', provides pre-treatment for all storm water runoff before it enters the adjacent wetlands. Utilizing the wetlands as part of the overall storm water management system is a common practice throughout Delmarva. This practice is actually encouraged because of its proven benefits.

Impervious Cover

Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline. Based on the analyses of 2002 aerial photography by the University of Delaware, the Little Assawoman Bay watershed, at that time, had about 9.7 percent impervious cover. Although this data is about 4 years old and likely an underestimate, it illustrates the importance of a proactive strategy to mitigate for predictable and cumulative environmental impacts. Since this project will further increase the watershed's level of imperviousness, the applicant is strongly advised to pursue best management practices (BMPs) that mitigate or reduce 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 retention of existing forest cover or additional tree plantings are examples of practical BMPs that could easily be implemented to reduce surface imperviousness.

Based on a review of the submitted PLUS application, the applicant projects that only about 10% of this parcel will be rendered impervious following this parcel's development; however, this figure appears to be

a significant underestimate given the scope and density of this project. The applicant should be made aware that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks and roads) should be included in the impervious surface calculation, while wetlands acreage should be excluded from such calculations. It is strongly recommended that the applicant recalculate this figure to include the aforementioned concerns within the finalized project design plans.

Response:

We will comply with the Sussex Conservation District's Sediment and Erosion Control/ Stormwater program. The use of "Green Technology" stormwater practices will be proposed throughout the development; with this we will utilize DNREC's technical assistance. The original amount (679,324 SF) listed on the application was based on our best calculations, which included the items suggested above. The amount of proposed impervious cover will actually be reduced due to the change in the overall number of units. The new plan proposes approximately 607,909 SF, significantly less than our initial site plan.

ERES Waters

This project is located adjacent to receiving waters of Little Assawoman Bay 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). Moreover, provisions defined in subsection 5.6.3.5 of same section, specially authorize the Department to mandate BMPs to meet 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.

Response:

Best Management Practices, as approved by DNREC, will be employed to treat the storm water run-off from the proposed community to the satisfaction of the Sussex Conservation District.

TMDLs

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Little Assawoman Bay 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. TMDL nutrient reductions of 40 percent will be required for the Little Assawoman Bay watershed.

Response:

The proposed change in land use for the subject property will be a major factor in reducing the amount of nutrient pollution. It is commonly agreed that developing previously farmed land can actually provide up to a 50% reduction. A nutrient budget will be prepared as a part of final engineering for the project and the use of "Green Technology" stormwater best management practices will be utilized to the extent feasible.

TMDL Compliance through the PCS

The proposed pollution control strategy will require the completion of a nutrient budget to estimate nutrient load changes following development - documentation of these load changes will be assessed through a nutrient budget protocol. The nutrient budget protocol is a computer-based model that quantifies post-development nutrient loading under a variety of land use scenarios in combination with a variety (or absence) of BMP types and intensities. The post-development loading rate is then compared with the pre-development loading rate to assess whether the project meets the prescribed TMDL nutrient load reductions. Based on a preliminary evaluation of this project using said model (with the applicant's assumptions as reported in the Plus application), the development as currently conceived **does not** meet the Little Assawoman Bay watershed TMDL nutrient reduction requirements for phosphorus – the applicant is strongly advised to consider the use of appropriate BMPs and Best Available Technologies (BATs) to ensure compliance. Examples of BMPs or BATs that should be used to significantly reduce nutrient loading from this project, include practices that prevent or mitigate or minimize created surface imperviousness; maintenance/restoration of recommended wetland buffer widths; reducing the amount of overall forest cover removal, and; use of innovative “green-technology” stormwater methodologies rather than conventional open-water stormwater management structures. As mentioned previously, since impervious cover is a very important factor or variable for assessing the environmental impacts from development, the applicant should recalculate surface imperviousness in a more comprehensive manner by including all forms of created surface imperviousness (i.e., rooftops, sidewalks, and roads), while excluding wetlands acreage. Failure to do so will not reflect this project's true environmental impacts. We also suggest that the applicant verify their project's compliance with the specified TMDL loading rates by running the model themselves (with a more realistic impervious cover figure). Please contact Lyle Jones of Watershed Section at 739-9939 for the acceptable model protocol.

Response:

A nutrient budget will be prepared as a part of final engineering for the project, ensuring the required nutrient removal rates have been met. Again, this will be achieved through the use of approved BMPs' and BATs.

Water Supply

The project information sheets state that water will be provided to the project by a public water system. Our records indicate that the project is located within the public water service area granted to Artesian Water Company under Certificate of Public Convenience and Necessity 00-CPCN-07. Any public water utility providing water to the site must obtain a certificate of public convenience and necessity (CPCN) from the Public Service Commission. Information on CPCNs and the application process can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site public well be needed, it must be located at least 150 feet from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

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.

Response:

We concur with the information listed above. We will coordinate our efforts with Artesian Water Company prior to engineering the proposed infrastructure. The required CPCN will be obtained prior to construction. We will obtain the appropriate permits should dewatering be required.

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. The plan review and approval as well as construction inspection will be coordinated through Sussex Conservation District. Contact Sussex Conservation District at (302) 856-7219 for details regarding submittal requirements and fees.

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

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

Applying practices to mimic the pre-development hydrology on the site, promote recharge, maximize the use of existing natural features on the site, and limit the reliance on structural stormwater components, such as maintaining open spaces, should be considered in the overall design of the project as a stormwater management technique. Green Technology BMPs including bioretention, biofiltration, infiltration and filter strips must be given first consideration in stormwater quality management prior to ponds.

This site may be eligible for a waiver of stormwater quantity management if it can provide a non-erosive conveyance to tidal water. If stormwater quantity management is not required, ponds may not be necessary at all and all stormwater management can be accomplished using Green Technology BMPs and a conservation design approach.

Each stormwater management facility, including ponds, swales, bioretention facilities, and infiltration facilities should have an adequate outlet for release of stormwater. Any drainage conveyed onto this site from neighboring properties must be adequately conveyed through the site to the discharge point without interruption.

A Certified Construction Reviewer (CCR) may be required for the site during construction. You should contact Sussex Conservation District for details regarding the CCR requirement.

Response:

We will comply with the Sussex Conservation District's Sediment and Erosion Control/ Stormwater program. The use of "Green Technology" stormwater practices will be utilized to the extent feasible and DNREC's technical assistance will be utilized.

Floodplains

The majority of the site is located within the 100-year floodplain. It is recommended that portions of the site within the 100-year floodplain remain undeveloped to minimize flood risk. Any increase in building density in the floodplain will increase the amount of at-risk property. Pre-existing developments in this area have experienced drainage problems where fill has been used to elevate new development. Use of fill to elevate land elevation is discouraged unless it can be demonstrated that existing drainage patterns will not be adversely affected.

Response:

The proposed residential units and support facilities will be designed and engineered to code as is required for development within the 100-Year Floodplain.

Forest Preservation

The application states that approximately 11.66 acres out of 26.86 acres of trees are going to be removed. However, once the site is built out, a larger percentage of trees will be removed and what remains will be fragmented into smaller, disconnected sections.

Wildlife species that currently inhabit the forest will have to disperse into surrounding areas and there is a general lack of forested habitat in the vicinity. An increase in human/animal conflicts could result, including an increase in road mortality. DNREC recommend the following design changes which could serve to preserve a greater area of forest:

The number of lots/units should be reduced and/or clustered on the property. Also by reducing or clustering the lots, the roadways and parking spaces can be scaled back as well. There are several ways that space could be created for the lots that are removed from the forest. First of all, there are two large stormwater management ponds that are most likely merely aesthetic rather than a necessary feature. One of the ponds could probably be omitted and the other pond downsized or an alternate method of stormwater management could be utilized. Secondly, only 576 parking spaces are required, yet the site plan entails creating 598 parking spaces.

If trees are cleared despite our recommendations above, we recommend that they not be cleared from April 1st to July 31st to reduce impacts to nesting birds and other wildlife that utilize forests for breeding.

Response:

As mentioned earlier, the proposed number of units has been reduced – from 242, to 173. The outer limits of the wooded areas became a guide, of sorts, for placing the new residential lots. By doing this, the design team was able to reduce the overall amount of forested disturbance. It may appear that the on-site forest stands are fragmented due to the new development, but each area still maintains a large amount of contiguous woody vegetation. Allowing each area to remain viable forests, capable of supporting the local habitat. The storm water ponds have been reduced in size. The new ponds are engineered to provide water

quality and quantity treatment, as required by DNREC. The number of parking spaces has been reduced, almost to half of what was previously proposed. Yet again, the number of spaces is what is required for the new residential units and associated recreational facilities. We will attempt to include the recommended tree removal timeframe into the construction schedule to a feasible extent.

Site Visit Request

According to our GIS database, aerial photographs, and State Wetland Maps, there is a high potential for a category 1 wetland within the project area, specifically a sea level fen community. The plants that typically inhabit this globally rare wetland rely on a specific hydrology and may not persist if water quality is changed by sedimentary and nutrient inputs from this development. There is also a potential for rare animal species to exist in this wetland. Our program botanist and zoologist respectfully request the opportunity to survey these parcels as their observations would allow us to make more informed comments. Also, recommendations they provide will allow the applicant the opportunity to reduce potential impacts to rare species. Please contact Bill McAvoy or Kitt Heckscher at (302) 653-2880 to set up a site visit.

Response:

See the attached text provided by Mr. Ed Launay, Environmental Resources Inc..

Plant Rescue

Since this project entails disturbance to wetlands and forest loss, we recommend that the developer/landowner contact the Delaware Native Plant Society to initiate a plant rescue. Selected plants from the site of disturbance will be collected by Society members and transplanted to the Society's nursery. Plants will then be used in restoration projects and/or sold at the Society's annual native plant sale. This can be done at no expense or liability to the developer/landowner. Please contact Lynn Redding at (302) 736-7726. lynn_redding@ml.com

Response:

Following all plan approvals, and prior to any demolition or construction activities, we will contact the Delaware Native Plant Society - potentially affording them access to the site for plant rescue procedures.

Nuisance Geese

If stormwater management ponds remain in the site plan despite our recommendations, they will likely attract waterfowl like resident Canada geese and mute swans. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. DNREC recommends native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the number and/or size of the ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Response:

There are new technologies available to reduce the impact of said nuisance species, including the measures listed above. We will attempt to include these technologies into the pond designs.

Mosquito Control

Development projects that result in increased housing densities within 2 miles of large expanses of salt marshes or brackish wetlands can often lead to increased demands by the public (and their elected officials) 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 as the frequent consequence of approving these types of development projects; and State and local governments should then be prepared to deal with the increased budget demands for mosquito control services. 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 aid in achieving a reduction in pesticide use.

Response:

We recognize the issue of mosquito control, in relation to stormwater management ponds. Every effort will be made to reduce the proposed pond size and volume. We will also utilize aerators in the new ponds, reducing the likelihood of stagnant water – thus reducing the amount of algae and mosquitos.

Solid Waste

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

Response:

The amount of waste, associated with the new construction, will be limited to the fullest extent possible.

Underground Storage Tanks

There is one inactive LUST site(s) located near the proposed project:

Treasure Beach Park, Facility # 5-000173, Project # S9302131

No environmental impact is expected from the above inactive/active LUST site(s). However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel with nitrile rubber gaskets in the contaminated areas.

Response:

Should any tanks or contaminated soils be encountered during construction, we will notify the Tank Management Branch.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 18.6 tons (37,144.5 pounds) per year of VOC (volatile organic compounds), 15.4 tons (30,753.1 pounds) per year of NOx (nitrogen oxides), 11.3 tons (22,690.2 pounds) per year of SO2 (sulfur dioxide), 1.0 ton (2,019.8 pounds) per year of fine particulates and 1,553.5 tons (3,107,088.0 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 7.5 tons (14,982.1 pounds) per year of VOC (volatile organic compounds), 0.8 ton (1,648.5 pounds) per year of NOx (nitrogen oxides), 0.7 ton (1,368.0 pounds) per year of SO2 (sulfur dioxide), 0.9 ton (1,765.3 pounds) per year of fine particulates and 30.4 tons (60,733.9 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 3.0 tons (5,937.8 pounds) per year of NOx (nitrogen oxides), 10.3 tons (20,653.2 pounds) per year of SO2 (sulfur dioxide) and 1,523.2 tons (3,046,354.1 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO ₂	PM _{2.5}	CO ₂
Mobile	18.6	15.4	11.3	1.0	1553.5
Residential	7.5	0.8	0.7	0.9	30.4
Electrical Power		3.0	10.3		1523.2
TOTAL	26.1	19.2	22.3	1.9	3107.1

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 3.0 tons of nitrogen oxides per year and 10.3 tons of sulfur dioxide per year.

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

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

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

The Energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. They

highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

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.

Response:

The above recommendations will be taken into consideration as the design process progresses. As previously discussed, the proposed development will include pedestrian walkways throughout the site which could potentially connect with adjacent properties and walkway systems. All promoting pedestrian activity, thus reducing vehicular use. The option of extending the DTC service area to the subject property will promote mass transit use, again reducing individual vehicular use.

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

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

- a. **Fire Protection Water Requirements:**
 - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly, Apartments, and Townhouses)
 - 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. (One & Two- Family Dwelling)
 - Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

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

- c. **Accessibility**
 - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire

apparatus. This means that the access road to the subdivision from Bayville Road must be constructed so fire department apparatus may negotiate it.

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**

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

e. **Required Notes:**

- Provide a note on the final plans submitted for review to read " All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Townhouse 2-hr separation wall details shall be shown on site plans
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

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

Response:

Applicable requirements from the Fire Marshal's office will be complied with.

Department of Agriculture - Contact: Milton Melendez 698-4500

The Delaware Department of Agriculture has no objections to the Bayville Pointe application. The site is located on an environmentally sensitive development area. The *Strategies for State Policies and Spending* encourages environmentally responsible development in areas within an Investment Level 3 area.

In addition, the Department encourages the developer to consider the TMDL requirements for the Delaware Inland Bay watershed when designing this project. To help meet this requirement green technologies and

the use of trees are vital to ensuring water quality goals for this region. To this end the, the Department encourages the developer to consider:

Response:

The use of "Green Technology" stormwater practices will be utilized to the extent feasible and DNREC's technical assistance will be utilized.

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.

Response:

The idea of a sustainable development was considered when the site layout was developed. As suggested above, well-placed landscape elements can aid in reducing utility costs and required maintenance. The design team will continue to apply this concept throughout the engineering process.

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.

Response:

We have incorporated the required 50-foot buffer from tidal wetlands into the proposed site design. Buffers of greater width will be explored throughout the site engineering, and will be incorporated if feasible. The revegetation/ landscaping plans will include only native species.

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.

Response:

Agreed.

Delaware State Housing Authority - Contact Karen Horton 739-4263

The proposal is to develop a 242 Unit Residential Community with a mix of 50 single family lots, 177 townhouse-style units, and 15 condominium flats. The proposed development is located at the end of Bayville Road (58B) outside Fenwick Island north of Route 54. According to the *State Strategies Map*, the proposal is located in an Environmentally Sensitive Developing Area. As a general planning practice

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DSHA encourages residential development in areas where residents will have proximity to services, markets, and employment opportunities, such as Investment Level 1 and 2 areas outlined in the State Strategies Map. The proposal indicated the targeted population is for move-up buyers and second-home buyers. According to the most recent real estate data collected by DSHA, the average home price in Sussex County is \$250,000. However, families earning at least 100% of Sussex County's median income only qualify for mortgages of \$181,719. The provision of units within reach of families earning at least 100% of Sussex County's median income would help increase housing opportunities for first-time homebuyers. To facilitate the units targeted for first-time homebuyers, DSHA encourages the developer to apply for Sussex County's Moderately Priced Housing Units Program, which provides the following incentives: An expedited review; Waivers of some or all County fees associated with the county approval process; 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.

Response:

The developer has evaluated the marketplace and Sussex County's Moderately Priced Housing Units Program and has concluded that this location for the inclusion of such units would not be consistent with the project's overall strategic plan.

Department of Education – Contact: John Marinucci 739-4658

Request developer work with the local school district transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the local school district.

Response:

We will work with the Department of Education as the approval process continues.

Sussex County – Contact: Richard Kautz 855-7878

Per page 15 of the Comprehensive Plan, "any increased density by rezoning should only be permitted with proper environmental safeguards." Because this project is situated in an Environmentally Sensitive Development Area, the required report should include how this requirement and the PLUS comments have been addressed and how the plan has been revised accordingly.

Response:

Agreed.

All sidewalks and trails within the development and constructed at the request of DelDOT should tie together so that persons using wheelchairs or pushing strollers can navigate without hindrance.

Response:

The design of pedestrian walkways will adhere to ADA regulations and requirements.

The State Wetlands map indicates the possibility of wetlands impacting the location of proposed subdivision lots and roads. Therefore a jurisdictional determination letter should be provided to support the proposed design for that area and that the lot layout does not contain any wetlands.

Response:

See the attached text provided by Mr. Ed Launay, Environmental Resources Inc..

The Sussex County Engineer Comments:

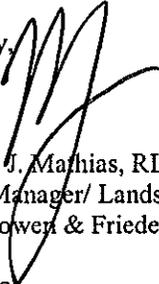
The project is within the boundaries of the Fenwick Island Sanitary Sewer District (FISSD). The project proposes a density of 4.01 EDUs/acre. The developer is responsible for extending sewer lines to the project. The connection point for this project is at Manhole 25-1. All sewer construction will have to meet Sussex County Engineering Departments Standards and Specifications and conform to the South Coastal Area Planning Study, update 2005. This will include the construction of a pump station on the site of the proposed project as well as force main and gravity sewer. Treatment capacity is available for the subdivision as proposed. There is insufficient capacity in Pump Station #30 near the intersection of County Road 81 and State Route 54, for the buildout of the FISSD. The Sussex County Engineering Department recommends a limit of 60 Equivalent Dwelling Units (EDUs) per year to allow time for the improvements to occur. There will be no limit after the improvements are complete. A sanitary sewer concept plan must be submitted and approved prior to any construction plan review. Also, please note system connection charges will be due prior to receiving any building permits.

Response:

We are aware of the current status of the site, in regards to the Fenwick Island Sanitary Sewer District. As the design process continues, we will work closely with the Sussex County Engineering Department so the required sewer extension will meet applicable requirements, as mentioned above. A sanitary sewer concept plan will be developed and submitted, prior to final engineering. All fees, associated with connecting to the existing sanitary system, will be paid.

This concludes our response to the comments provided by your office and all of the involved agencies and we appreciate your input. If you have any questions, please contact me at your convenience.

Sincerely,


Matthew J. Mathias, RLA, ASLA
Project Manager/ Landscape Architect
Davis, Bowen & Friedel, Inc.

Enclosure

Cc: Mr. Lawrence Lank, Sussex County Planning Office
Mr. Coleman Bunting

Bayville Pointe PLUS Comments

Environmental Resources, Inc. (ERI), was been retained on behalf of the Bayville Pointe project to identify wetlands and address other potential environmental issues. A complete field delineation of all State and federally regulated wetlands was completed by Edward M. Launay, a professional wetland scientist with ERI. The limits of federally regulated wetlands have been identified in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* and associated guidance. Wetland Boundaries were subsequently surveyed and is identified upon the project plans for Bayville Pointe. This information was utilized by the design team to avoid wetland impacts. The limits of State regulated tidal wetlands have been identified based upon field verification of the official DNREC Tidal Wetland Maps for this project. The limit of State regulated tidal wetlands is also provided on the project plans.

ERI identified several manmade agricultural ditches excavated through uplands extending through agricultural portions of the property. These ditches are not subject to tidal flow and, as based upon historic photography and topographic maps, are not part of any natural stream course. Accordingly, no DNREC regulated Subaqueous Lands lie on the interior portions of the property where development is being proposed. All of the wetlands identified by ERI's field delineation are adjacent to tidal waters and, therefore, subject to regulation under the Corps of Engineers' Regulatory Program. Therefore, PLUS comments regarding isolated wetlands do not apply to this particular site. A wetlands delineation report and plan were submitted to the Philadelphia District, Corps of Engineers on January 31, 2006 (CENAP-OP-R-200608232-23).

The current design of the Bayville Pointe project has avoided all regulated impacts to federally regulated wetlands and waters. Inclusion of nontidal wetlands within lots have been avoided to the maximum extent possible. The advice provided in the PLUS comments regarding various permit procedures and requirements is appreciated; however, based upon the current design of the project, neither DNREC Wetlands or Subaqueous Lands Permits are required, Corps of Engineers' Section 404 or Section 10 permits are not required. Therefore, Water Quality Certification or Coastal Zone Management Certification from DNREC is not required as no federal permits are being requested for the project.

PLUS comments forwarded from DNREC's Natural Heritage Program regarding the potential for the occurrence of a sea level fen on this site have been noted. Sea level fens are an extremely rare type of coastal wetland designated from a marsh and a bog by a distinct hydrological regime and unique vegetation associations. In general, sea level fens are open freshwater wetlands dominated by emergent vegetation located at the upland edges of wide tidal marshes. Unlike bogs whose primary water source is rainwater, a sea level fen's primary water source is an underground spring that supplies nutrient for groundwater to the system. For a sea level fen to form, a combination of environmental factors must occur. First, a natural spring usually seeping from a nearby slope must be present to allow the movement of groundwater into the area. Secondly, a fen must be sufficiently protected from tidal flooding to prevent an influx of nutrient-rich tidal flow or high salinity. Vegetation of sea level fens consists of an interesting combination of acid-tolerant bog plants and tidal freshwater plants capable of surviving in low nutrient areas.

The Bayville Pointe project does contain wide expanses of tidal marsh along its northerly boundary with Little Assawoman Bay. However, extending inland from the edge of the tidal marsh, palustrine forested wetlands occupy shoreline areas. The palustrine forested wetlands then transition to upland forest or agricultural field areas. As a practical matter, no freshwater emergent wetland vegetation types or habitats associated with a sea level fen occur on this project site based upon ERI's site investigation. For the most part, freshwater emergent wetlands are limited to a few scattered areas of *Phragmites australis* (common reed), an invasive species growing adjacent several agricultural field edges. While the presence of a sea level fen is unlikely at this site we have nonetheless asked ERI to schedule a site visit with the Natural Heritage and Endangered Species Program biologists.

In regard to the project's potential nutrient contribution to the waters of Little Assawoman Bay and the state's ability to achieve TMPL reductions, currently agricultural lands direct untreated runoff into agricultural ditches which discharge into these waters. Once the project is constructed, stormwater runoff will be directed into state of the art stormwater management treatment facilities and ponds which will be approved by the Sussex County Conservation District. Nutrient loading from this property will be dramatically reduced.

The upland areas being developed on this site are separated from the Little Assawoman Bay by significant areas of freshwater wetlands. As pointed out in the PLUS comments a wide expanse of tidal wetlands lies between these freshwater wetlands and Little Assawoman Bay. Water quality remediation of runoff is a function of these wetlands. The presence and retention of these wetlands in combination with the project's comprehensive stormwater management plan will prevent water quality impacts in conflict with TMDL reduction goals.