



**STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF STATE PLANNING COORDINATION**

March 19, 2012

Jason Palkewicz  
Solutions, IPEM  
P.O. Box 416  
Georgetown, DE 19947

**RE: PLUS review – 2012-02-03; Baywood Greens**

Dear Mr. Palkewicz:

Thank you for meeting with State agency planners on February 22, 2012 to discuss the proposed plans for the Baywood Greens project to be located at on both sides of Route 24 and Long Neck Road in Sussex County.

According to the information received, you are seeking a rezoning for 1,183 acres from AR-1, B-1, C-1 & GR-RPC to GR-RPC to expand the existing Baywood GR-RPC to include the previously approved communities of Bridlewood, Duneside, and Villas that are adjacent to Baywood Greens. In combining these site plans, changes were made to the existing site plans to relate and redefine the commercial uses and reduce the setbacks and dingle family detached condos in the Duneside plan. According to the PLUS application, no overall density increase is being requested.

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 is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

**Strategies for State Policies and Spending**

This project is located in Investment Levels 1, 2 and 3 according to the 2010 *Strategies for State Policies and Spending*. This project is located in Investment Level 1 according to the *Strategies for State Policies and Spending*. Investment Level 1 reflects areas that are already developed in an urban or suburban fashion, where infrastructure is existing or readily available, and where

future redevelopment or infill projects are expected and encouraged by State policy. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer term future, or areas that may have environmental or other constraints to development. State investments will support growth in these areas.

### **Code Requirements/Agency Permitting Requirements**

#### **State Historic Preservation Office – Contact Terrence Burns 736-7404**

- There are no known cultural or historic resources such as an Archeological Site or National Register-listed property of any kind on this particular parcel, but according to the Pomeroy and Beers Atlas of 1868, it seems that there was some type of dwelling or structure on the parcel associated with a Mrs. M. Wine toward Long Neck Road and another associated with a P. R. Burton towards the bridge (Bridge 723, S-8357), which is on Bank Road (Road 298). Furthermore, the USGS Topographic Map of 1918 also indicated that structures were there as well. With this in mind, it is important that the developer be aware of Delaware's Unmarked Human Burials and Human Skeletal Remains Law.

Abandoned or unmarked family cemeteries are very common in the State of Delaware, and they are usually on a historic farm site or in vicinities that are rural areas or open space lands. Disturbing unmarked burials triggers Delaware's Unmarked Human Burials and Human Skeletal Remains Law (Title 7, Chapter 54 of the Delaware Code), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area for the presence of such a cemetery. If one is discovered, it is very costly to have it archaeologically excavated and the burials moved. In the event of such a discovery, the Division of Historical & Cultural Affairs recommends that the plans be re-drawn to leave the cemetery on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with a homeowners association or development. If you need or would like more information, please go to the following websites: [www.history.delaware.gov/preservation/umhr.shtml](http://www.history.delaware.gov/preservation/umhr.shtml) and [www.history.delaware.gov/preservation/cemeteries.shtml](http://www.history.delaware.gov/preservation/cemeteries.shtml).

Prior to any demolition or ground-disturbing activities, the developer should consider hiring an archaeological consultant to examine the parcel for archaeological sites, such as a cemetery or unmarked human remains.

- If there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential cultural or historic resources. Owners

and developers who may plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the National Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground-disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties. Any preconstruction activities without adherence to these stipulations may jeopardize the issuance of a permit or receipt of funding if it is determined that such opportunity to comment has been foreclosed. If you need further information or additional details pertaining to the Section 106 process and the Advisory Council's role, please review the Advisory Council's website at [www.achp.gov](http://www.achp.gov).

Department of Transportation – Contact Bill Brockenbrough 760-2109

- As detailed in Section 2.3 of DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access, a Traffic Impact Study (TIS) may be required for developments generating more than 50 peak hour trips or more than 400 trips per day

DelDOT understands, from the tables presented with the PLUS application, that the applicant expects the proposed changes will result in less traffic than was predicted in the 2008 TIS for Duneside at Baywood Phase 12. However, DelDOT cannot readily follow the calculations by which the applicant's engineer predicted this change. The changes in land use are relatively straightforward, but if properly done the trip generation calculations would be complex. While their first impression is that the proposed changes will, in fact, mean less traffic, DelDOT asks that the applicant have their engineer provide us with the details of their calculations. A separate meeting to review those calculations has been scheduled.

- Related to but separate from trip generation is trip distribution. It may be that even if the overall trip generation is reduced, proposed changes in the locations of the various uses could result in significant increases in the projected traffic at specific locations. Again, DelDOT will need more information from the applicant's engineers. If significant changes are predicted relative to what was previously considered, DelDOT may require a Traffic Operational Analysis (TOA) in accordance with Section 3.9 of the Standards and Regulations, to examine the effects of those changes.

Preliminarily, we do not see a need for a TIS and would not ask Sussex County to delay the application while one is done. DelDOT may require one or more TOAs as part of the plan review process. The main site entrance on Delaware Route 24 is where a TOA is most likely to be needed.

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

### **State Regulated Subaqueous Lands and Wetlands**

The State of Delaware regulates Subaqueous Lands and State Wetlands. Impacts to these regulated areas would require a permit from the State of Delaware. The following is a desk top review of the project area. This review provides background information and is not intended as a jurisdictional determination of the site. This information does not relieve the applicant of the responsibility to perform a thorough environmental evaluation of the site.

If the applicant would like a Jurisdictional Determination (JD) of the State-regulated Wetlands and Subaqueous Lands on the property, they may request a JD from the WSLs. The WSLs may be contacted at (302) 739-9943.

#### Hopkins Prong

- One portion of the Bridlewood project appears to be waterfront property on Hopkins Prong. The exact location of this waterfront property was not determined during this review. Hopkins Prong is a tidal water body and is regulated as State subaqueous lands. Additionally, the 1984 USGS topographic map for the Fairmount Quadrangle indicates contours indicative of streams adjacent to Hopkins Prong. These tributaries would also likely be regulated the State as Subaqueous Lands. The DNREC Wetlands maps 430 and 082 indicate the presence of State regulated Wetlands along Hopkins Prong, potentially within lands subject to this review. Prior to any work in State regulated Subaqueous Lands and Wetlands, the applicant would be required to submit a permit application and receive authorization from the WSLs.

#### Guinea Creek

- Guinea Creek is a tidal water body that runs in the central portion of what I believe is identified as Baywoods and extends west of Route 24. Guinea Creek is regulated as State Subaqueous Lands. Additionally, the 1984 USGS topographic map for the Fairmount Quadrangle indicates contours indicative of streams adjacent to Guinea Creek. These tributaries would also likely be regulated the State as Subaqueous Lands. The DNREC Wetlands maps 081 and 096 indicate the presence of State regulated wetlands in the vicinity of Guinea Creek within the study area. Prior to any work in State regulated Subaqueous Lands and Wetlands, the applicant would be required to submit a permit application and receive authorization from the WSLs.



## TMDLs

- The project is located in the greater Inland Bays watershed. In this watershed, Total Maximum Daily Load (TMDL) pollutant reduction targets have been developed by the State of Delaware (under the auspices of Section 303(d) of the 1972 Federal Clean Water Act) for nutrients (e.g., nitrogen, phosphorus), and bacteria. 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 State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; *State of Delaware Surface Water Quality Standards, as amended July 11, 2004*) to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. The TMDL for the Low Reduction zone of the Inland Bays watershed calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 40 percent reduction in bacteria from baseline conditions.
- A nutrient management plan is required under the *Delaware Nutrient Management Law (3 Del. C., Chapter 22)* for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. This project’s open space may exceed this 10-acre threshold. Please contact the Delaware Nutrient Management Program at 739-4811 for further information concerning compliance requirements or view the following web link for additional information: <http://dda.delaware.gov/nutrients/index.shtml>.
- The adopted Inland Bays Pollution Control Strategy regulation was published in the Delaware Register of Regulations on November 11, 2008 and is now an enforceable regulatory directive. A Pollution Control Strategy (PCS) is an implementation strategy that identifies the actions necessary (regulatory and nonregulatory) to systematically reduce the pollutant loading to a given water body, and meet the TMDL reduction requirements specified for that water body. These regulations can be reviewed at <http://regulations.delaware.gov/documents/November2008c.pdf> and background information, guidance documents, and mapping tools can be retrieved from [http://www.dnrec.state.de.us/water2000/Sections/Watershed/ws/ib\\_pcs.htm](http://www.dnrec.state.de.us/water2000/Sections/Watershed/ws/ib_pcs.htm).
- The applicant should assess nutrient loading on their parcel through the DNREC developed methodology known as the “Nutrient Load Assessment protocol.” The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their project’s impact(s) on baseline water quality. We strongly encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact Lyle Jones at 302-739-9939 for more information on the protocol.

## **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 both Tidewater Utilities and Long Neck Water Company under Certificate of Public Convenience and Necessity 87-WR-04 and 05-CPCN-05, respectively. The project information sheets also indicate that a new well will be installed; however, there was no indication on the subdivision plans. Should an on-site Public well be needed, a minimum isolation distance of 150 feet is required between the well and any potential source of contamination, such as a septic tank and sewage disposal area, and it must also 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.

Potential Contamination Sources exist in the area, and any well permit applications will undergo a detailed review that may increase turnaround time and may require site specific conditions/recommendations. In this case there is a Groundwater Management Zone B and Zone A associated with Baywoods located in and within 1000 feet of the proposed project.

## **Water Resource Protection Areas**

### **Excellent Groundwater Recharge Potential Areas**

- Portions of Tax Map Parcels (TMP) 234-17.00-23.01, 234-23.00-5.00, and 234-23.00-6.00 fall within excellent ground-water recharge areas for the Sussex County (see attached map). TMP 234-23.00-270.00 falls within a wellhead protection area for Tidewater Utilities Meadow District (see-attached map).
- Excellent Ground-Water Recharge Areas are those areas mapped by the Delaware Geological Survey where the first 20 feet of subsurface soils and geologic materials are

exceptionally sandy. These soils are able to transmit water very quickly from the land surface to the water table. This map category (excellent) is an indicator of how fast contaminants will move and how much water may become contaminated (Andres, 2004). Land use activities or impervious cover on areas of excellent ground-water recharge potential may adversely affect ground water in these areas.

DNREC recommends:

- Limit impervious cover to 20% of that area within the portion of the parcel in the excellent ground-water recharge potential area.

OR

- Allow no more than 50% impervious cover of that area within the portion of the parcel within the excellent ground-water recharge potential area if an environmental assessment documents that post-development recharge is equal to or greater than pre-development recharge when computed on an annual basis.
- The site plan submitted with the project shows several storm water management ponds within the areas of excellent groundwater recharge potential. Excellent groundwater recharge potential areas should be protected from development so that they may function for the maximum benefit possible to limit the generation of stormwater runoff. The intent of protecting these areas is to allow them to maintain their natural ground water recharge potential. However, this does not mean promoting these areas as places to prioritize for location of storm water facilities.
- The construction phase of these ponds requires excavation, hauling, and grading. The heavy equipment used in this phase has the capacity to compact and degrade the structure of the strata that defines the area as an excellent ground-water recharge area (Schueler, 2000). Changes to the structural soil properties may cause significant reduction in recharge capacity. Installing storm-water management ponds in excellent ground-water recharge areas has the potential to contaminate the ground water beneath it and infiltrate into the aquifer.

DNREC recommends:

- Relocate the ponds outside the excellent groundwater recharge potential areas.

OR

- Use Better Management Practices in the design, construction, and maintenance of a storm water management system designed to address water quality with respect to nutrient and other pollutant loads. Pre-treatment is recommended needed to reduce the potential for degrading ground water quality.

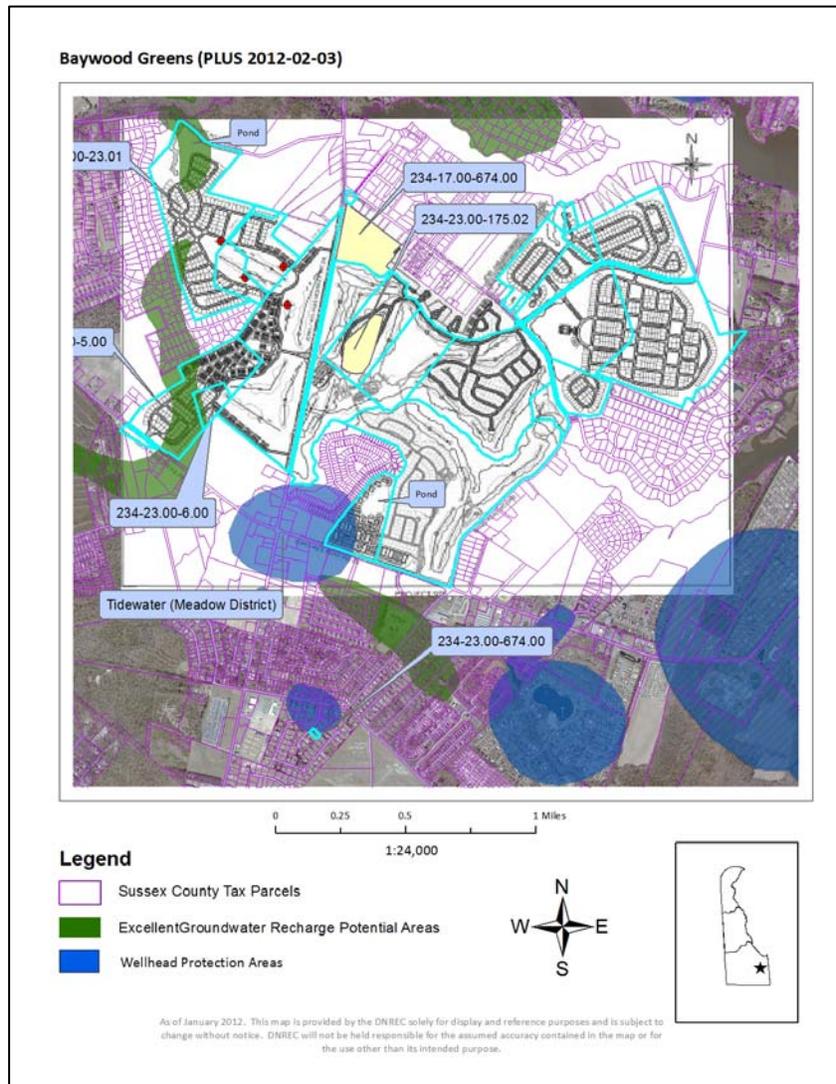
## Wellhead Protection Areas

- TMP 234-23.00-270.00 falls within a wellhead protection area for Tidewater Utilities Meadow District. Wellhead protection areas are surface and subsurface areas surrounding a public water supply well where land use activities or impervious cover may adversely affect the quantity and quality of ground water moving toward such wells. Impervious cover prevents precipitation from infiltrating through the soil to the water table aquifer. Impervious cover refers to structures including but not limited to roads, sidewalks, parking lots, and buildings. Any impervious cover within this wellhead protection area has the potential to have a negative affect the quality and quantity of drinking water available.
- The site plan submitted indicates that there is a significant amount of impervious surface planned for the portion of the parcel within the wellhead protection area. In addition, the applicant states that new public wells will be located on the site. The applicant does not indicate where these wells will be located. These wells will have wellhead protection areas associated with them.
  - DNREC recommends leaving the wellhead protection area as open space by rearranging the elements within the plan. (Ponds receiving water from impervious cover should not be located in wellhead protection areas).
- In addition, because wellhead protection and excellent ground water recharge potential areas can readily affect the underlying aquifer if contaminants are spilled or discharged across the area, the storage of hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program.

### *References*

Andres, A. Scott, 2004, Ground-Water Recharge Potential Mapping in Kent and Sussex Counties, Delaware: Delaware Geological Survey Report of Investigations No. 66, p. 14. <http://www.udel.edu/dgs/Publications/pubform.html#nvestigations>

Schueler, T. R., 2000, The Compaction of Urban Soils, in Schueler, T.R., and Holland, H.K., eds., The Practice of Watershed Protection: Ellicott City, MD, Center for



Watershed Protection, p. 752.

### Sediment and Stormwater Program

- Due to the proposed revisions a revised detailed sediment and stormwater plan may be required. Please contact the reviewing agency to schedule a project 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 Sussex Conservation District.

Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees. (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101)

### **Hazardous Waste Sites**

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C., Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware *Regulations Governing Hazardous Substance Cleanup* shall be followed.

### **Tank Management Branch**

- If a release of a Regulated Substance occurs at the proposed project site, compliance of 7 Del.C., Chapter 60, 7 Del.C., Chapter 74 and DE Admin. Code 1351, State of Delaware *Regulations Governing Underground Storage Tank Systems* (the UST Regulations) is required.
- The following confirmed leaking underground storage tank (LUST) projects are located within a quarter mile from the proposed project area:
  - Bell Atlantic 95540 Angola, Facility: 5-000765, Project: S9108173 (Inactive)
  - Pep Up #8, Facility: 5-000160, Project: S9207201, S0508079 (Inactive)
  - Shore Stop #295, Facility: 5-000493, Project: S0311068 (Active/Under Investigation)
  - Shorts Marine Inc., Facility: 5-000495, Project: S8908252, S9911250 (Inactive)
  - Shawn's Hide Away, Facility: 5-000649, Project: S0703025 (Inactive)
- Per the **UST Regulations: Part E, § 1. Reporting Requirements:**
  - Any indication of a Release of a Regulated Substance that is discovered by any Person, including but not limited to environmental consultants, contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within 24 hours to:
    - The Department's 24-hour Release Hot Line by calling 800-662-8802; and
    - The DNREC, Tank Management Section by calling 302-395-2500.

**Air Quality**

- The applicant shall comply with all applicable Delaware air quality regulations. Please note that the following regulations in Table 1, Potential Regulatory Requirements, may apply to your project:

<b>Table 1: Potential Regulatory Requirements</b>	
<b>Regulation</b>	<b>Requirements</b>
<b>7 DE Admin. Code 1106</b> - Particulate Emissions from Construction and Materials Handling	<ul style="list-style-type: none"> <li>• Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.</li> <li>• Use covers on trucks that transport material to and from site to prevent visible emissions.</li> </ul>
<b>7 DE Admin. Code 1113</b> – Open Burning	<ul style="list-style-type: none"> <li>• Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year.</li> <li>• Prohibit the burning of land clearing debris.</li> <li>• Prohibit the burning of trash or building materials/debris.</li> </ul>
<b>7 DE Admin. Code 1135</b> – Conformity of General Federal Actions to the State Implementation Plan	<ul style="list-style-type: none"> <li>• Require, for any “federal action,” a conformity determination for each pollutant where the total of direct and indirect emissions would equal or exceed any of the de minimus levels (See Section 3.2.1)</li> </ul>
<b>7 DE Admin. Code 1141</b> – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products	<ul style="list-style-type: none"> <li>• Use structural/ paint coatings that are low in Volatile Organic Compounds.</li> <li>• Use covers on paint containers when paint containers are not in use.</li> </ul>
<b>7 DE Admin. Code 1144</b> – Control of Stationary Generator Emissions	<ul style="list-style-type: none"> <li>• Ensure that emissions of nitrogen oxides (NO<sub>x</sub>), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), and carbon dioxide (CO<sub>2</sub>) from emergency generators meet the emissions limits established. (See section 3.2).</li> <li>• Maintain recordkeeping and reporting requirements.</li> </ul>
<b>7 DE Admin. Code 1145</b> – Excessive Idling of Heavy Duty Vehicles	<ul style="list-style-type: none"> <li>• Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</li> </ul>

For a complete listing of all Delaware applicable regulations, please look at our website: <http://www.awm.delaware.gov/AQM/Pages/AirRegulations.aspx>.

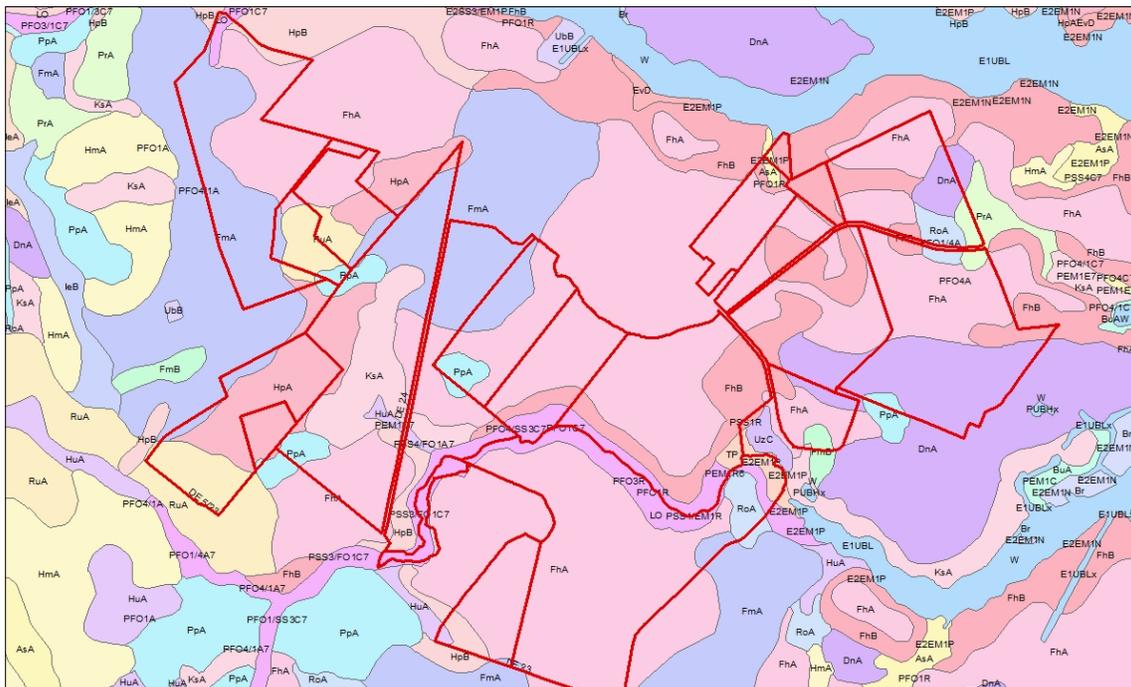
## Recommendations/Additional Information

This section includes a list of site specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped (**but in no way required**) that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

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

### Soils Assessment

- Based on soils survey mapping update Longmarsh and Indiantown (LO), Transquaking-Mispillion (TP) Hurlock (HuA) are principal soil mapping units found in the immediate vicinity of the proposed project that have severe limitations for development. These soils are poorly to very poorly-drained wetland associated (hydric) soils, and are considered unsuitable for development. Building on such soils is likely to increase the potential for on-site and off-site flooding potentials (see figure 2).



**Figure 2:** Soils mapping in the immediate vicinity of the proposed project area

### **Additional information on TMDLs and water quality**

- The applicant is encouraged to have a U.S. Army Corps of Engineers (USACE)-approved wetlands delineation conducted from the onset. According to the PLUS application, this has not been completed to date. The USACE can be reached by phone at 736-9763.
- Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882.), an adequately sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, DNREC recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands.
- Maximize the amount and/or preservation of passive wooded open space. We further recommend additional planting of native trees or shrubs wherever possible.
- The applicant should calculate post-construction surface imperviousness with all forms of created (or constructed) surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, and roads) included in the calculation.
- Since this is a large project that will likely generate a great amount of impervious cover, we strongly advise the use of pervious paving materials (instead of conventional asphalt and concrete) as a BMP to reduce the impacts associated with surface imperviousness, wherever practicable.
- DNREC recommends the use of rain gardens, and green-technology storm water management structures (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant impacts via runoff from impervious surfaces.
- The applicant should voluntarily assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the “Nutrient Load Assessment protocol.” The protocol is a tool used to assess changes in nutrient (e.g., nitrogen and phosphorus) and bacterial loading that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their project’s impact(s) on baseline water quality. We encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact Lyle Jones at 302-739-9939 for more information on the protocol.

### **Water Allocation**

- **The application states that the proposed developments fall in the Tidewater CPCN. That is only true for the areas marked Villas and Phases 1 - 10. The following areas fall in the Long Neck Water CPCN:**

<b>Phase 11 (Duneside Town Center)</b>	<b>270 residential units</b>
<b>Phase 12 (Duneside)</b>	<b>244 residential units</b>
<b>Bridlewood</b>	<b>658 residential units</b>
<b>T O T A L</b>	<b>1,172 residential units</b>

- **The estimated additional water demand is approximately 800,000 gallons peak day. Long Neck Water Company does not have adequate capacity to meet this additional demand and projected growth in demand in its current service area, safely and without causing aquifer impacts. The company has been contacted with regards to a saltwater intrusion study, which has not yet been completed.**

**The following areas fall in the Tidewater Meadows CPCN:**

<b>Phases 1 - 10</b>	<b>786 residential units</b>
<b>Villas</b>	<b>354 residential units</b>
<b>T O T A L</b>	<b>1,140 residential units</b>

**The estimated additional water demand is approximately 800,000 gallons peak day. Tidewater does not have adequate capacity to meet this additional demand and projected growth in demand in its current service area, with adequate backup well capacity. Tidewater needs a new well to meet the proposed increase in demand, and this well, also, may contribute to saltwater intrusion.**

**It is not clear that the proposed developments can be safely supplied with drinking water from local aquifers. Further study is needed.**

### **Rare Species and Wildlife Habitat Impacts**

- **During PLUS project reviews for Baywood Town Center (2005-04-16), Bridlewood at Baywoods (2005-08-01), Duneside Phase 12 (2005-08-08), and Duneside Town Center (2008-03-02), concerns were brought forth regarding impacts to species of conservation concern, large amounts of forest fragmentation and clearing, and inadequate wetlands buffers. It does not appear that any of those comments/recommendations were considered given the lack of readily apparent changes made to site plans that would address those still relevant issues.**

**In addition, tax parcels 234-23.00-273.00 and 234-23.00-274.00 are not part of the four developments listed above but are within the project area as indicated on the PLUS application form. Guinea Creek occurs on these two parcels, and wetland buffers along**

the creek have already been reduced to less than the recommended 100-foot width by development of the golf course.

#### **Additional information on hazardous substances**

- The proposed project is located on a SIRS site. Longneck Mercury Study (DE-1388) is located on the same proposed project property. The Site was an area wide investigation of mercury found in the groundwater. No point source was found, and levels of mercury stayed within the Maximum Contaminant Levels (MCLs) for drinking water. The Site was closed in 2010.

SIRS strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (**including a title search to identify environmental covenants**) in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.

Additional remediation may be required if the project property or site is re-zoned by the county or state, or if there are any changes in land use (i.e., from a golf course to residential use). Golf courses typically have high residual concentrations of herbicides, pesticides or fertilizers substances that, without cleanup, may make them unsuitable for residential use (i.e., homes, parks, food gardens, or daycares, schools, and playgrounds). SIRS recommends that a Phase I & II Environmental Site Assessment be performed prior to any residential development of the golf course portion.

- Should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRS should also be contacted as soon as possible at 302-395-2600 for further instructions.

#### **Additional information on tank management**

- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.
- If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS.

**Additional information on air quality**

- New homes may emit, or cause to be emitted, air contaminants into Delaware’s air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:
  - Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
  - The emission of greenhouse gases which are associated with climate change, and
  - The emission of air toxics.
- Air emissions generated from new homes include emissions from the following activities:
  - Area sources such as painting, maintenance equipment and the use of consumer products like roof coatings and roof primers.
  - The generation of electricity needed to support the new homes, and
  - All transportation activity associated with new homes.
- Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) for the development were quantified. Table 2 represents the actual impact the Baywood Greens development may have on air quality.
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**Table 2: Projected Air Quality Emissions for Baywood Greens**

Emissions Attributable to Baywood Greens (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO <sub>2</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )	Carbon Dioxide (CO <sub>2</sub> )
Mobile	103.0	107.7	3.1	1.2	66,498.8
Electric Power	*	27.6	96.0	*	14,161.8
Area Source	69.6	7.7	6.4	8.2	283.3
<b>Total</b>	172.6	143.0	105.5	9.4	80,942.9

(\*) Indicates data is not available.

- Note that emissions associated with the actual construction of the homes and retail space, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.
- DNREC encourages sustainable growth practices that:
  - Control sprawl;
  - Preserve rural and forested areas;

- Identify conflicting land use priorities;
  - Encourage growth on previously developed sites and denser communities while at the same time protect our diminishing land base;
  - Coordinate transportation, housing, environment, and climate protection plans with land use plans; and
  - Demonstrate that communities can achieve the qualities of privacy, community, and contact with nature without degrading the natural environment or generating unacceptable environmental costs in terms of congestion, use of natural resources, or pollution.
- Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:

### **Constructing with only energy efficient products**

- Energy Star qualified products are up to 30% more energy efficient. Savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of energy efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.
- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.
- **Providing tie-ins to the nearest bike paths and links to any nearby mass transport system.** These measures can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk, a bike path or mass transit, 7 pounds of VOC and 11.5 pounds of NO<sub>x</sub> are reduced each year.
- **Using retrofitted diesel engines during construction.** This includes equipment that are on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees in vegetative buffer areas.** Trees reduce emissions by trapping dust particles and replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development. The applicant should submit a plan to the DNREC Division of Air Quality

which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Baywood Greens development.

Department of Agriculture – Contact Scott Blaier 698-4529

- 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

Leyland Cypress

Ash Trees

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.

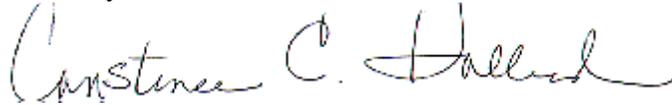
- Native Landscapes

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.

**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". The signature is written in black ink and is positioned above the printed name and title.

Constance C. Holland, AICP

Director, Office of State Planning Coordination

CC: Sussex County