



STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF STATE PLANNING COORDINATION

August 21, 2013

Mr. Frank Kea  
Solutions, IPEM  
PO Box 416  
Georgetown, DE 19941

RE: PLUS review 2013-07-01, Windswept

Dear Mr. Kea,

Thank you for meeting with State agency planners on July 24, 2013 to discuss the proposed plans for Windswept. According to the information received, you are seeking a rezoning of 37.52 acres from AR-1 to MR/RPC and a site plan review for a 115 unit residential subdivision, located at the intersection of Route 24 and Tanglewood Drive in Sussex County.

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

### **Strategies for State Policies and Spending**

- This project is located in Investment Level 2 according to the *State Strategies for Policies and Spending*. This site is also located in the Sussex County Growth Zone. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. 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 historic or cultural resources such as an archaeological site or National Register-listed property on this parcel, but there is a late 19th or early 20th-century dwelling with outbuildings (S-1005), near the parcel, towards the road, which is John Williams Hwy (Route 24). According to the Pomeroy and

Beers Atlas (a 19th-century history map), it appears that there was a structure associated with a H. C. Fisher at or near the same location, and the USGS Topographic Map of 1918 indicated a structure there as well.

- Although there are not any known historic or cultural resources on the parcel, the developer should be aware of Delaware's Unmarked Human Burials and Human Skeletal Remains Law, which is outlined in Chapter 54 of Title 7 of the Delaware Code. Abandoned or unmarked family cemeteries are very common in the State of Delaware. They are usually in rural or open space areas, and sometimes near or within the boundary of an historic farm site. Even a marked cemetery can frequently have unmarked graves or burials outside of the known boundary line or limit. Disturbing unmarked graves or burials triggers Delaware's Unmarked Human Burials and Human Skeletal Remains Law (Delaware Code Title 7, Chapter 54), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. If there is a discovery of any unmarked graves, burials or a cemetery, it is very costly to have them archaeologically excavated and the burials moved.

The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area, to the full extent, to see if there is any unmarked cemetery, graves, or burial sites. In the event of such a discovery, the Division of Historical & Cultural Affairs also recommends that the plans be re-drawn to leave the full extent of the cemeteries or any burials on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with the landowner association or development. If you would like to know more information that pertains to unmarked human remains or cemeteries, please check the following websites for additional information: [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 potential historic or cultural resources, such as a potential archaeological site, a cemetery or unmarked human remains. Furthermore, the developer should also include sufficient landscaping between the proposed development and the nearby property (S-1005), to protect them from any adverse effect, such as noise or visual effects.

- In addition, 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 any permit or funds. 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

- Per Section 2.3.1 of the Standards and Regulations for Subdivision Streets and State Highway Access, Traffic Impact Studies (TIS) are warranted for developments generating more than 400 vehicle trip ends per day or 50 vehicle trip ends per hour. However, Section 2.3.2 provides that for developments generating less than 2,000 vehicle trip ends per day and less than 200 vehicle trip ends per hour, DelDOT may accept an Area Wide Study Fee of \$10 per daily trip in lieu of a TIS. To obtain a scope of work for a TIS, the developer may have their engineer contact Mr. Troy Brestel of the DelDOT Planning office. Mr. Brestel may be reached at (302) 760-2167.

Preliminarily, DelDOT believes that payment of the Area Wide Study Fee would be acceptable. If the developer chooses this option, payment would be due when the site plan is submitted for review. Payment of the fee would not relieve the developer of responsibility for making off-site improvements or contributing to DelDOT capital projects. In accordance with Section 3.10.2 of DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access, needed off-site improvements or contributions would need to be shown on the record plan by illustration or note.

- Because the site would generate more than 200 vehicle trip ends per day, a Traffic Operational Analysis may be required as part of the site plan review, in accordance with Section 2.14 (formerly 3.9) of the Standards and Regulations. If the developer performs a TIS, the work involved in a TOA would be included therein. Payment of the Area Wide Study Fee does not exempt the developer from providing a TOA if one is found to be necessary.
- The site entrance must be designed in accordance with DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access, which is available at [http://www.deldot.gov/information/pubs\\_forms/manuals/subdivisions/pdf/Subdivision\\_Manual\\_Revision\\_1\\_proposed\\_060110.pdf](http://www.deldot.gov/information/pubs_forms/manuals/subdivisions/pdf/Subdivision_Manual_Revision_1_proposed_060110.pdf). If the subdivision streets are to be built for State maintenance, they too must be designed in accordance with DelDOT's Standards and Regulations.
- Metes and bounds and total areas need to be shown for any drainage easements. Section 5.7.2.5 of DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access requires, in part, a minimum 20-foot wide drainage easement for storm drainage systems that fall outside the existing right-of-way or the drainage/utility easement. These easements must be shown on the record plan, not referenced by a note.

- Required entrance improvements, in accordance with Section 3.10.2 of DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access will likely include but are not limited to the following:
  - A protected left turn lane on Route 24 at the site entrance.
  - A right turn deceleration lane on Route 24 at the site entrance.
  - An overlay along Route 24, in which the overlay thickness will be determined at a later date. The minimum limits of the overlay would be from the northernmost property line to the southernmost property line.
  - Widening of Route 24 to provide 12-foot wide travel lanes and 8-foot wide shoulders. The minimum limits of the overlay would be from the northernmost property line to the southernmost property line. This section appears to exist on Route 24 now but it would need to be maintained with the entrance improvements mentioned above.
  - Installation of a 10-foot wide shared use path along Route 24.
  - Accommodation of bicycle and pedestrian facilities.
  
- In accordance with Section 3.4.1.2 of the Standards and Regulations for Subdivision Streets and State Highway Access, the Record Plan should show all existing entrances (residential/commercial) within 400-feet of the proposed site entrance.
  
- In accordance with Section 3.10 of the Standards and Regulations for Subdivision Streets and State Highway Access, the required off-site improvements and when they are warranted will need to be shown on the Record plan by note or illustration.
  
- In accordance with Section 3.6.5 and Figure 3-3 of the Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT will require dedication of right-of-way along the site's frontage on Route 24 to provide a minimum of 40 feet of right-of-way from the road centerline. The right-of-way dedication note has been revised to the following, "**An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat.**"
  
- In accordance with Section 3.6.5 of the Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on Route 24 for a future 10-foot wide pedestrian/bike path. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement for a future 10-foot wide multi-use path is hereby established, as per this plat.**"
  
- In accordance with Section 4.8 of the Standards and Regulations for Subdivision Streets and State Highway Access, a 20-foot wide buffer will be required from the edge of any stormwater management pond to the ultimate right-of-way of the nearest State-maintained road. The ultimate right-of-way is based on the functional classification of the road. From the concept plan presented, DelDOT does not see a problem in this regard.

- As specified in Section 3.4.1.1 of the Standards and Regulations for Subdivision Streets and State Highway Access, a traffic generation diagram is required on the Record Plan.
- Route 24 is served by DART First State. Therefore, in accordance with Section 3.5.5.5 of the Standards and Regulations for Subdivision Streets and State Highway Access, the Delaware Transit Corporation (DTC) will need to determine whether a bus stop will be required for this project and, if so, what if any amenities it may need to have. As necessary, the developer may contact Mr. Wayne Henderson, a Senior Planner at DTC in this regard. Mr. Henderson may be reached at (302) 576-6063.
- Refer to the Standards and Regulations for Subdivision Streets and State Highway Access, Appendix D – Plan Review Checklist, pages D-2 through D-39, for checklists associated with various types of plan submittal. For each plan submittal, submission of the appropriate checklist with the plan is required.
- Referring to the Standards and Regulations for Subdivision Streets and State Highway Access, Chapter 1 – Introduction, Section 1.4: Review Fees, page 1-8, the Initial Stage review fee shall be assessed to this project.
- In accordance with Section 3.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, a record plan shall be prepared prior to issuing “Letter of No Objection”. The following information will be required for the “Letter of No Objection” review:

- Copy of the Initial Stage Fee Calculation Form
- Copy of the Initial Stage Review Fee
- Gate-Keeping Checklist – Site Plan
- Design Checklist – Record Plan\*
- Owners and Engineer’s name and e-mail address
- Sight Distance Spreadsheet
- Auxiliary Lane Spreadsheet
- Three (3) paper sets of the Record Plan
- Conceptual Entrance Plan
- CD with a pdf of the Site Plan
- Submission of the Area-Wide Study Fee (if applicable)

\*For the design checklist for the site plan, please refer to the Standards and Regulations for Subdivision Streets and State Highway Access, Appendix D, Plan Review Checklist, page D-2 and D-3.

- Referring to the Standards and Regulations for Subdivision Streets and State Highway Access, Chapter 1 – Introduction, Section 1.4: Review Fees, page 1-8, the Construction Stage review fee shall be assessed to this project.
- Referring to the Standards and Regulations for Subdivision Streets and State Highway Access, Chapter 4 – Construction Plans, Section 4.3: Subdivision Construction Plan Checklist or Section 4.4: Commercial Entrance Plan Checklist,

an entrance plan shall be prepared prior to issuing entrance approval. The following information will be required for Subdivision/Entrance Plan review;

- Copy of the Construction Stage Fee Calculation Form
- Copy of the Construction Review Fee
- Gate-Keeping Checklist – Entrance Plan
- Design Checklist – Entrance Plan\*\*
- Three (3) paper sets of the Entrance Plan
- SWM Report and Calculations (If applicable)
- CD with a pdf of the Entrance Plan

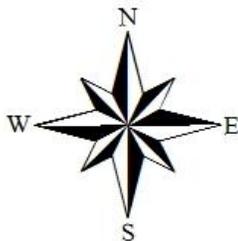
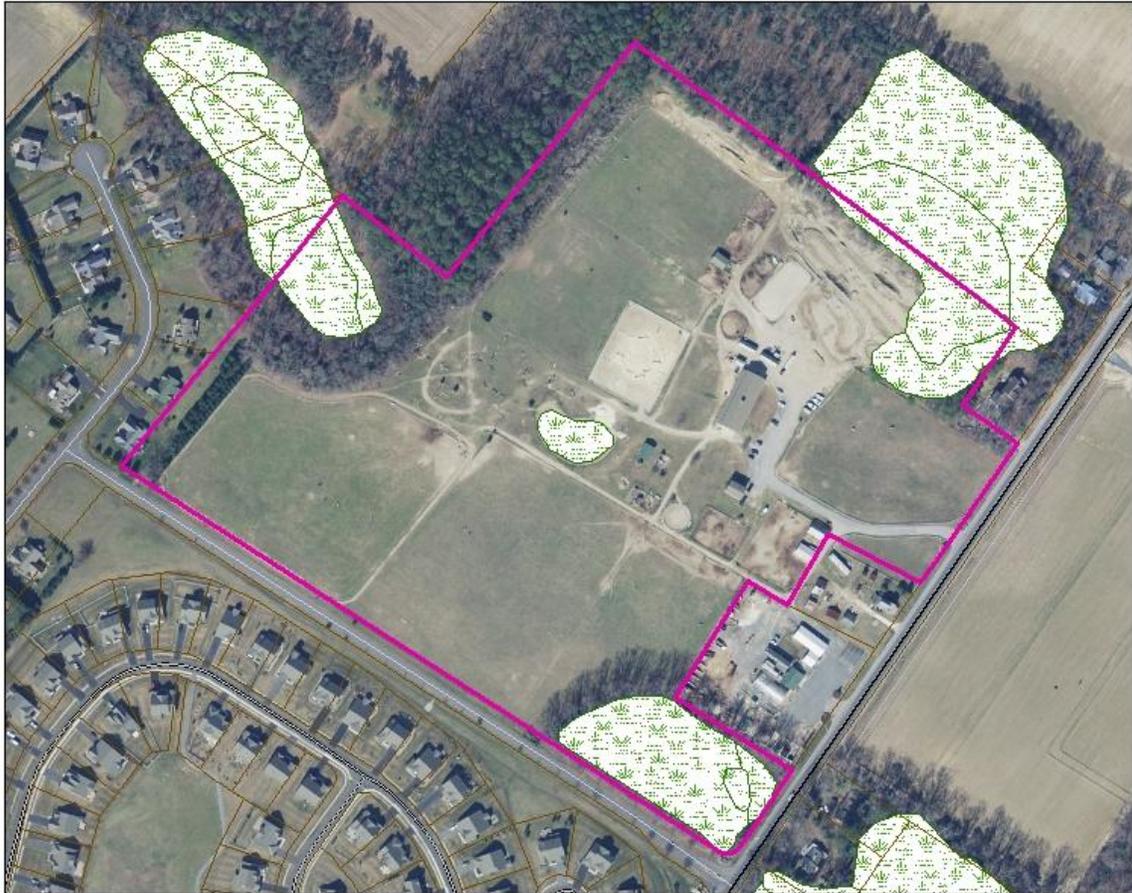
\*\*For the design checklist for the entrance plan, please refer to the Standards and Regulations for Subdivision Streets and State Highway Access, Appendix D, Plan Review Checklist, page D-9 and D-13.

Department of Natural Resources and Environmental Control – Contact Kevin Coyle 735-3495

#### **Wetlands**

- State regulated wetlands and subaqueous lands ARE NOT located on this property based on a review of the State wetland aerial photographs, State Wetland Mapping Project (SWMP) maps, Soil Surveys and/or USGS topographic maps.
- Waters of the U.S. regulated by the U.S. Army Corps of Engineers ARE likely to be located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and/or USGS topographic maps. According to DNREC GIS SWMP maps, there are wetland areas at the corners of the property regulated by the U.S. Army Corps of Engineers. The application states that there has been a delineation done by the U.S. Army Corps of Engineers and the project plan does not look like building will impact the wetlands. Be sure to check the setbacks for Sussex County.
- Waters of the United States include the following: navigable waters of the United States; wetlands; tributaries to navigable waters of the United States, including adjacent wetlands and lakes and ponds; interstate waters and their tributaries, including adjacent wetlands; and all other waters of the United States not identified above, such as isolated wetlands, intermittent streams, and other waters that are not part of a tributary system to interstate waters or to navigable waters of the United States, where the use, degradation or destruction of these waters could affect interstate or foreign commerce.
- The extent of Federal jurisdiction over Waters of the United States is determined by the U.S. Army Corps of Engineers and is based on site specific conditions. Therefore, an on-site inspection by an environmental consultant is recommended to determine if Waters of the U.S. are located on the property and the limits of Federal jurisdictional. The U.S. Army Corps of Engineers can be contacted at (215) 656-6728 or online at <http://www.nap.usace.army.mil/cenap-op/regulatory/regulatory.htm>.

# Windswept Sussex County PLUS 2013-07-01



Reviewed By: Kitty Bronson  
DNREC, Wetlands and Subaqueous Lands  
Data Source: DNREC GIS sources  
2012 Orthos, Wetland maps, Swamp layers



- The project is partially located in the *low nutrient reduction* zone of 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 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. 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 Inland Bays Pollution Control Strategy (PCS) and the accompanying regulations were finalized by order of the DNREC Secretary on October 2008. 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).

### Water Supply

- The project information sheets state that the water provider has not been determined to supply this project. DNREC records indicate that the project is located within the public water service area granted to Tidewater Utilities under Certificate of Public Convenience and Necessity 83-W-15. DNREC recommends that the developer contact Tidewater Utilities to determine the availability of public water. 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 CPCN's and the application process can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site Public/Miscellaneous 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.

### **Sediment and Stormwater Program**

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Contact the reviewing agency to schedule a 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 the 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.
- There are no SIRS sites or salvage yards found within a ½-mile radius of the proposed project.

### **Tank Management Branch**

Please be aware:

- 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.
- There are no confirmed leaking underground storage tanks (LUST) projects located within a quarter mile of the project boundary.
- No environmental impacts are anticipated; however, 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 Branch 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 the DNREC 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 Transportation – Contact Bill Brockenbrough 760-2109

- Please refer to the DeIDOT website for guidance as to whether a pre-submittal meeting is required and how to prepare for one. That guidance is available at <http://www.deldot.gov/information/business>.
- Be advised that the standard general notes have been updated and posted to the DeIDOT website. Begin using the new versions and look for the revision date of June 28, 2013 for the Record/Site Plan and Construction Plan general notes. The Temporary Traffic Control Notes (TTCN) still have the revision date of August 14, 2012. The notes can be found at

[http://www.deldot.gov/information/business/subdivisions/DeIDOT\\_Development\\_Coordination\\_Plan\\_Sheet\\_Notes.doc](http://www.deldot.gov/information/business/subdivisions/DeIDOT_Development_Coordination_Plan_Sheet_Notes.doc)

- In accordance with Section 3.6.4 of the Standards and Regulations for Subdivision Streets and State Highway Access, we recommend that right-of-way monuments be placed along the subdivision streets.
- Please check to determine if any utilities will need to be relocated as part of this project.
- The developer should anticipate a requirement that any sub-station and/or wastewater facilities have access from the internal subdivision streets with no direct access to the State-maintained highway. That does not appear to be a concern on this plan.
- All PLUS comments should be addressed prior to submitting record, subdivision or entrance plans for review.
- On June 27, 2012, a letter was sent out explaining the changes in the way checks should be submitted to DeIDOT. A copy of the letter is available at <http://www.deldot.gov/information/business/subdivisions/PaymentProcedure.pdf>.
- The developer should anticipate additional comments once the entrance plans are submitted for review.

Department of Natural Resources and Environmental Control – Contact Kevin Coyle 735-3495

**Soils Assessment**

- Based on NRCS soils survey mapping update, the only mapping unit of concern is Hurlock (HvA). Hurlock is a poorly-drained wetland associated (hydric) soil that has severe limitations for development (Figure 1). SNREC strongly recommends that the applicant avoid construction in the immediate vicinity of the Hurlock soil mapping unit
- The Statewide Wetland Mapping Project (SWMP) often uses the soil survey as the basis for mapping and delineating wetlands (Figure 1). The presence of a hydric soil is one of three key parameters that must be met in order to meet jurisdictional wetland requirements (as specified by the USACOE). The other parameters are hydrophytic vegetation and hydrology. Hence the presence of hydric soils is a correlate with wetland presence. Although the removal of hydrophytic vegetation may change the jurisdictional status of a wetland, it still does not mitigate the environmental consequences of such actions. That is, building on hydric soils (i.e., Hurlock) may increase the potential for future on-site and off-site flooding events, while increasing the volume of pollutant-laden surface water runoff and discharges to surface water bodies (streams, ponds, and ocean) and groundwater.



Figure 1: NRCS soil survey mapping update in the immediate vicinity of the proposed construction.

#### Additional information on TMDLs and water quality

- Compliance with the specified TMDL nutrient and bacterial reduction requirements specified for the Inland Bays watershed can be facilitated by the strategies and requirements described in the Inland Bays PCS, and the implementation/adherence to the following recommended BMPs:

- A United States Corps of Engineers (USACE) approved wetlands delineation is strongly recommended. According to information presented in the PLUS application, an approved USACE wetlands delineation has not been conducted.
- Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882.), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands (field delineated and approved by the USACE).
- Compliance with the specified TMDL nutrient and bacterial reduction requirements specified for the Inland Bays watershed can be facilitated by the strategies and requirements described in the Inland Bays PCS, and the implementation/adherence to the following recommended BMPs:
  - According to the conceptual plot plan, the applicant intends to install 2 storm water ponds in this parcel. DNREC strongly advises against the installation of any new additional open-water ponds because they will contribute to increases in nuisance algae, geese and mosquitoes. DNREC strongly recommends Green technology storm water management be utilized in lieu of open-water storm water management ponds.
  - 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, ponds, and roads) included in the calculation.
  - Wherever practicable, DNREC strongly advises the use of pervious paving materials (instead of conventional asphalt and concrete) as a BMP(s) to reduce the impacts from all forms of created surface imperviousness.
  - DNREC strongly 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 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 Jen Walls or John Martin at (Division of Watershed Stewardship) at 302-739-9939 for more information on the protocol.

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### Coastal Plain Seasonal Ponds

- This project has the potential to impact numerous species of concern due to its proximity to a complex of coastal plain seasonal ponds. One such pond, Hetty Fisher Pond, is partially on the tax parcel in question in the parcel's western edge. The parcel also contains portions of the Love Creek Natural Area which encompasses other coastal plain seasonal ponds.
- This wetland type is usually mapped as an isolated wetland and is not afforded regulatory protection, but has high ecological value. This wetland type provides breeding habitat for a variety of animals, often supports a unique assemblage of plants, and a high diversity of species, many of which are considered rare. The ecological integrity of a seasonal pond wetland is maintained by fluctuating levels of groundwater and by the flooding and drying cycles that are critical for the diversity of plant species that form the habitat in the pond. Fish are typically absent from wetlands that dry down for part of the year which is why some rare amphibian species only breed in these types of wetlands. Because fish prey upon their eggs and larvae, a key characteristic of their breeding habitat is a lack of fish.
- Upland forest buffers around these seasonal ponds not only protect water quality, but provide critical habitat for amphibians and reptiles that are dependent on the wetland for breeding. The *Partners for Amphibian and Reptile Conservation* publication "*Habitat Management Guidelines for Amphibian and Reptiles of the Northeastern United States*" (Mitchell et al 2006<sup>1</sup>) states that ponds will lose their amphibian and reptile populations if the supporting uplands are not also protected. Salamanders spend most of their life cycle in the forest surrounding these seasonal pond wetlands, only using the wetland during brief breeding and developmental periods early in the spring before the wetland dries out for the summer and fall. In a summary paper reviewing 40 studies of amphibian terrestrial movements, it was documented that salamanders travel between 117 and 268 meters from the edge of the primary wetland (Semlitsch and Bodie 2003<sup>2</sup>) into surrounding forest habitat.

### Species of Concern

- Hetty Fisher Pond once supported a population of the state-endangered tiger salamander (*Ambystoma tigrinum tigrinum*). The state rare plant Wright's witch grass (*Dicanthelium wrightianum*) has also been observed at Hetty Fisher Pond. In addition to the tiger salamander and the witch grass, the Love Creek Natural Area wetland complex also hosts a number of state rare species, including extant populations of tiger salamander, (see table below). Due to the contiguous nature of the wetland and forest complex within the natural area, it is likely that these species utilize the wetlands and upland forest buffers at Hetty Fisher Pond.

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<sup>1</sup> Mitchell, J.C., A.R. Breisch and K.A. Buhlmann. 2003 Habitat Management Guidelines For Amphibians and Reptiles of the Northeastern United States. Partners in Amphibian and Reptile Conservation, Technical Publication HMG-3, Montgomery, Alabama. 108 pgs.

<sup>2</sup> Semlitsch, R.D. and J.R. Bodie. 2003. Biological criteria for buffer zones around wetlands and riparian habitats for amphibians and reptiles. Conservation Biology 17:5.

- A review of the DNREC database indicates that the following state rare, federally listed or Species of Greatest Conservation Need (SGCN) occur at or adjacent to the project site:

Scientific Name	Common Name	Taxon	State Rank	State Status	SGC N Tier	Federal Status
<i>Ambystoma tigrinum</i>	Tiger Salamander	Amphibian	S1	E	1	-
<i>Dicanthelium wrightianum</i>	Wright's Witch Grass	Plant	S2	N/A	N/A	-
<i>Hyla gratiosa</i>	Barking Treefrog	Amphibian	S1	-	1	-
<i>Hyla chrysoscelis</i>	Cope's Gray Treefrog	Amphibian	S2	-	2	-
<i>Coreopsis roasea</i>	Rose Coreopsis	Plant	S1	N/A	N/A	-

- **State Rank: S1-** extremely rare within the state (typically 5 or fewer occurrences); **S2-** very rare within the state (6 to 20 occurrences); **S3-** rare to uncommon in Delaware, **B** - Breeding; **N** - Nonbreeding; **SX-** Extirpated or presumed extirpated from the state. All historical locations and/or potential habitat have been surveyed; **SH-** Historically known, but not verified for an extended period (usually 15+ years); there are expectations that the species may be rediscovered; **SE-** Non-native in the state (introduced through human influence); not a part of the native flora or fauna., **SNR-** not yet ranked in Delaware, **SNA-** occurrences in DE of limited conservation value, **\*\***of concern due to a restricted range; **SU-** Status uncertain within the state. Usually an uncommon species which is believed to be of conservation concern, but there is inadequate data to determine the degree of rarity.
- **State Status: E** – endangered, i.e. designated by the Delaware Division of Fish and Wildlife as seriously threatened with extinction in the state pursuant to State of Delaware Code (7 Del. §601 *et seq.*) and implementing regulation (Title 7, 3900, 16.0 Endangered Species) ; n/a-plants are not included in Title 7.
- **Federal Status: E** – endangered, i.e. designated by the U.S. Fish and Wildlife Service as being in danger of extinction throughout its range; **T** – threatened, i.e. designated by USFWS as being likely to become endangered in the foreseeable future throughout all or a significant portion of its range; **C-** candidate – Taxa for which the U.S. Fish and Wildlife Service has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species. NOAA Managed Candidate: **SC-Species of Concern** are those species about which NOAA's National Marine Fisheries Service (NMFS) has some concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA).
- **SGCN Tiers: Tier 1** Species of Greatest Conservation Need (SGCN) are those that are most in need of conservation action in order to sustain or restore their populations. They are the focus of the Delaware Wildlife Action Plan (DEWAP), which is based on analyzing threats to their populations and their habitats, and on developing conservation actions to eliminate, minimize or

compensate for these threats. **Tier 2** SGCN are also in need of conservation action, although not with the urgency of Tier 1 species. Their distribution across the landscape will help determine where DEWAP conservation actions will be implemented on the ground. **n/a**-plants are not addressed in DEWAP

### **Love Creek Natural Area**

- The tax parcel in question is on Delaware's Natural Areas Inventory. State Natural Areas involve areas of land or water, or of both land and water, whether in public or private ownership, which either retains or has reestablished its natural character (although it need not be undisturbed), or has unusual flora or fauna, or has biotic, geological, scenic or archaeological features of scientific or educational value. State Natural Areas are depicted on maps maintained by the Department of Natural Resources and Environmental Control, Division of Parks and Recreation, Natural Areas Program, as approved by the Department Secretary and upon recommendation by a governor appointed Natural Areas Advisory Council. If you require further information about this area for your planning project, please contact Eileen Butler, Natural Areas Program Manager, at (302) 739-9235.

### **Habitat Management**

- In accordance with habitat management guidelines which were derived from an extensive body of published information and developed by Partners in Amphibian and Reptile Conservation (PARC):
  - Upland buffers up to several hundred meters provide critical habitat for some wetland dependent reptiles and amphibians during a portion of their life cycle. It is recommended that efforts be made to ensure adequate upland buffers to protect water quality and to ensure ecological impacts are minimized.
  - Habitat connections are especially important for dispersal and for reducing mortality. Populations of these species may not persist if upland buffers are much reduced and connections to surrounding habitat are cut off by lots and roadways. We highly recommend the site plan be reconfigured to allow adequate upland buffers and connections to undeveloped open space habitat.
  - Avoid diverting surface water from roadways and stormwater facilities into these wetlands. Water quality could be detrimentally impacted by run-off which can contain oil and other pollutants (basically any substance a home owner may use on their lawn or driveway). In addition, it is important to maintain a wet-dry cycle which is critical to breeding success and keeps fish predators from becoming established in the wetlands.

### **Additional information on hazardous waste sites**

- DNREC 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.
- 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**

- DNREC encourages developers and builders to consider all sustainable growth practices in their design, but we believe, however, that the air quality impacts associated with the project should be completely considered. 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.
- 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 NOx 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 energy emissions by cooling during the summer and by providing wind breaks in the winter, thereby 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 DAQ which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into this project.

**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 typed name and title.

Constance C. Holland, AICP  
Director, Office of State Planning Coordination

CC: Sussex County