STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION

August 18, 2010

Mr. Ted Williams
Landmark
100 W. Commons Blvd., Ste. 301
New Castle, DE 19720

RE: PLUS review – 2010-07-02; Appoquinimink School District

Dear Mr. Williams:

Thank you for meeting with State agency planners on July 28, 2010 to discuss the proposed plans for the Appoquinimink School district project to be located on the west side of Old State Road south of Odessa.

According to the information received, you are seeking site plan approval through New Castle County for a K-12 school campus to consist of four schools and the related facilities.

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 New Castle 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 parcel is located in a Level 3 area according to the Strategies for State Policies and Spending. The office of State Planning has reviewed this site before under PLUIS 2009-08-07 to determine the feasibility of using it as a school campus. Because of its proximity to the Town of Odessa and the surrounding residential areas that it will serve, the State had no objections to this parcel being used as a school site.

Does the school district currently own this site? All school sites must be approved by the directors of the Department of Education, the Office of Management and Budget, and the Office of State Planning Coordination. If you have not already done so, the School District should initiate the approval of land acquisition letter as required by 29 Del. C § 7525 as soon as possible.

We would like to note that although we do not have objections to a school campus on this parcel, DNREC has noted a potential issue with the site regarding the protection of the federally protected bog turtle. It is likely the federal requirements for the protection of this species could affect the configuration of the future football stadium.

Code Requirements/Agency Permitting Requirements

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are some known Archaeological Sites (N-3874, N-9645, N-9647, and N-9649) on this parcel (property), and a couple more nearby, but one of them seems to be very close or slightly on or within this parcel on the southwest side. According to the Pomeroy and Beers Atlas of 1868 (historic map), it seems that there were dwelling/structure associated with Vandyke/Matthews on this parcel, and the USGS Topographic Map of 1931 also indicated and show that a dwelling/structure was there as well. In addition, there is a possibility that there may be an archaeological site or remains associated with this dwelling/structure such as a cemetery with unmarked human remains. With this in mind, it is important that the developer be aware of the Delaware Unmarked Human Remains Act of 1987, outlined in Chapter 54 of Title 7 of the Delaware Code, which pertains to the discovery and disposition of such remains.

  The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out. Therefore, prior to any demolition or ground-disturbing activities, the developer may want to consider hiring an archaeological consultant to examine the parcel to investigate the archaeological resources and to see if there is a cemetery or unmarked human remains there.

- 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 or in reference to historic or cultural resources.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- The site access and streets must be designed in accordance with DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access. This manual is available on-line at

http://www.deldot.gov/information/pubs_forms/manuals/subdivisions/pdf/Subdivision_Manual_Revision_1_proposed_060110.pdf.

- The proposed development meets DelDOT's volume warrants for a Traffic Impact Study (TIS), as contained in Section 2.3.1 of DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access, and DelDOT understands that New Castle County has also required a TIS. DelDOT is working with the school district to find a way to accomplish that study in a way that meets their schedule for developing the site.

  Further regarding the TIS mentioned above, Section 2.1 of the Standards and Regulations says that a TIS "may include, but is not limited to" four specific types of analysis. DelDOT anticipates requiring two work efforts not normally found in such studies:

  First, given the site's current access and its proximity to the Salem Nuclear Plant, DelDOT will require the development of an Evacuation Plan.

  Second, DelDOT will require trip generation studies. The Institute of Transportation Engineers' Trip Generation report provides rates and equations for estimating the trip generation of different types of school. However, the data on which these rates and equations are based show a significant amount of scatter, and the R^2 values for the equations are generally low, suggesting that trip generation is largely a function of things that ITE does not measure, for example the ability of students to walk, bicycle or ride public transit to and from school. Accordingly, we anticipate requiring the District's traffic engineer to count traffic at comparable schools in the district to supplement the ITE data.

- Apart from the TIS, because it would likely be outside the scope of the TIS, DelDOT anticipates requiring a Traffic Operational Analysis (TOA) per Section 3.9 of the Standards and Regulations to identify improvements needed at the US Route 13/Old State Road intersection.

- Old State Road is classified as a Local Road, which per Section 3.6.5 of the Standards and Regulations requires a 60-foot right-of-way (30 feet from centerline of right-of-way). Therefore, in accordance with the section just cited, additional right-of-way should be dedicated to public use in order to obtain the required rights-of-way along the entire property frontage. The right-of-way dedication notes should read as follows, "A 30' strip of right-of-way from the road centerline of Old State Road is hereby dedicated to public use as per this plat."

- DelDOT anticipates that New Castle County will require a "Letter of No Objection" from the Department for this project. Per Section 3.4 of the Standards and Regulations, the developer must submit **three (3) signed and sealed paper copies and one electronic (pdf) copy** of the **record plan**, with an Initial Stage Fee Calculation Form and the Initial

Stage Fee. The review fee will be based on the number of lots within the subdivision. Please make all submissions to Mr. Pao Lin, Subdivision Manager. The entrance plan will not be reviewed until after the "Letter of No Objection" has been issued.

- As specified in Section 4.1 of the Standards and Regulations, when the entrance construction plans are submitted for review, the developer must submit **two (2) paper copies and one electronic (pdf) copy** of the construction plans, one copy of the record plan, an Initial Stage Fee Calculation Form, a Construction Stage Fee Calculation Form, a Construction Stage Review Fee**,** an application for highway entrance permit and a signed and sealed commercial entrance design checklist for review and approval. Be advised that the Department will not review the entrance plan until it has signed off on the record plan. Please make all submissions to Mr. Pao Lin, Subdivision Manager.

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

- **Federally Protected Species.** Bog turtles are known to occur within close proximity to the project site. Because the bog turtle is a federally listed species, protected under the Endangered Species Act, its presence can affect the scope of work. The applicant will have to work with the US Fish and Wildlife Service (Andy Moser, 410-573-4532) and the Natural Heritage and Endangered Species Program (Holly Niederriter, 302-735-8670) to determine what actions are necessary to protect the bog turtle.

  It is important to note that potential for the presence of bog turtle was initially flagged via PLUS 2006-09-18 and PLUS 2009-09-07. The school district was contacted directly by DNREC staff to inform them of the need to initiate contact with the USFWS prior to drafting a site plan. **Because the site plan was drafted without the benefit of input from the USFWS, it is imperative that the applicant (or representatives of) contact them as soon as possible to discuss this project. It is likely the federal requirements will affect the configuration of the future football stadium.**

- **Wetlands.** An initial review of the site indicates that there are significant areas of State-regulated wetlands on the site, including some forested tidal wetlands which receive the highest level of protection [according to the Statewide Wetland Mapping Project (SWMP) maps, tidal (E2EM1N & PSS1R, & PF01R) and non-tidal riparian (PF01A7) wetlands were mapped on subject parcel (Figure 1)]. The State wetland boundary should be indicated on all site plans as a separate boundary line distinct from any delineation of federal wetlands. Contact the Wetlands and Subaqueous Lands Section at 302/739-9943 to review the official State wetland maps of the area and to determine whether a field verification of the State wetland boundary by DNREC staff is necessary.

  Any construction, including temporary impacts, within State-regulated wetlands should be avoided during all phases of construction and State wetlands should be buffered to the maximum extent possible to avoid adverse impacts to these areas. The conceptual plan currently indicates a proposal to construct a large boardwalk and viewing platform

within State-regulated wetlands on the northern portion of the site. Please be advised that this structure as proposed would be unlikely to receive a permit as it does not meet the water dependent purpose criterion contained in Delaware's Wetlands Regulations.

- In addition, any streams or ditches on the site may be regulated under the Subaqueous Lands Act. The Wetlands and Subaqueous Lands Section should be contacted to perform an official jurisdictional determination of these waterways.

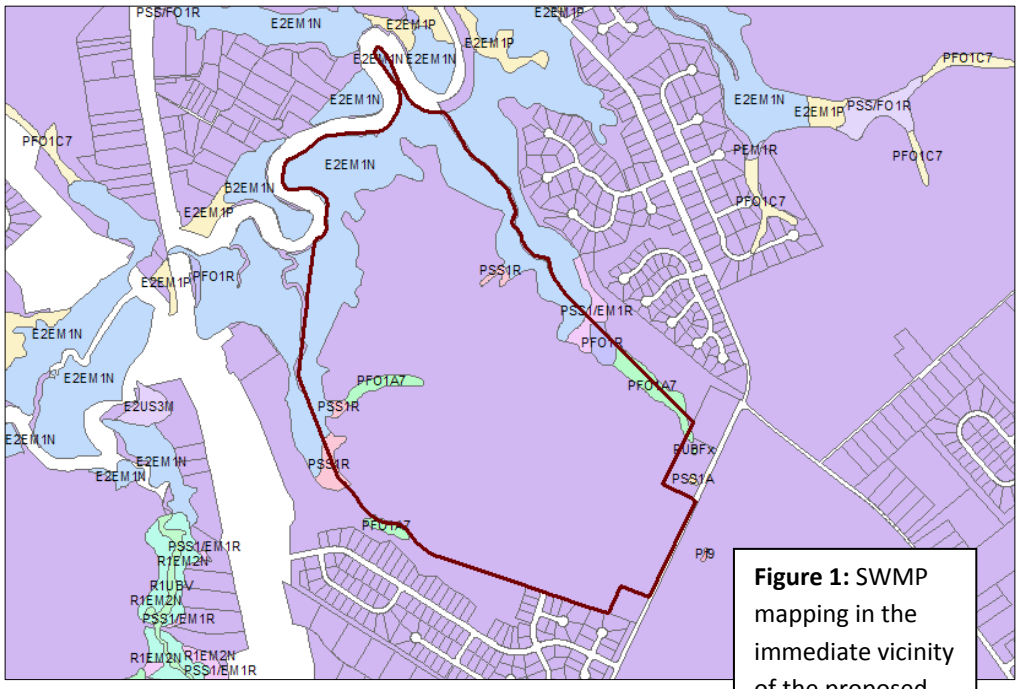

Figure 1: SWMP mapping in the immediate vicinity of the proposed project

- **TMDLs.** Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Appoquinimink watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet 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.

  TMDLs are required by federal law (Section 303(d) of the 1972 Clean Water Act), and the states are charged with developing and implementing standards to support these desired use goals. The project is located in the greater Piedmont drainage, specifically within the Appoquinimink watershed. The TMDL for the Appoquinimink watershed calls for a 60 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for an 8 percent reduction in bacteria from baseline conditions. The specific required nutrient and bacterial reductions can also be reviewed and retrieved

from the following web link (click on TMDLs under Services):
http://www.dnrec.delaware.gov/Pages/default.aspx

- **Water Supply.** 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 Zone B Spray Irrigation site associated with MOT/Sheets Farm located within 1000 feet of the proposed project.

- **Sediment and Stormwater Program.** Prior to developing this parcel, a Sediment and Stormwater Management Plan must be reviewed and approved by the DNREC Sediment and Stormwater Program. DNREC appreciates your meeting with Elaine Webb to discuss sediment and stormwater on this site and encourages you to continue to work with her throughout the stormwater management plan approval process (Delaware Code, Title 7, Chapter 40; Delaware Regulations, Administrative Code, Title 7, 5101).

- **Natural Areas.** Note #12 on the plan identifies 12.6369 acres of forested natural area on this parcel when in fact the parcel contains 110.06 acres of the Appoquinimink River Natural Area. Per the Unified Development Code (UDC), the applicant is required to contact the Office of Nature Preserves regarding the Natural Area boundary. To date, there has been no correspondence between the applicant and the Office of Nature Preserves. It is likely DNREC staff will be conducting field surveys necessary and in association with the review of this plan. If rare species are confirmed within the Natural Area, such identification fulfills the criteria for the category of "Rare Species Critical Natural Area" per the UDC. The County determines the Natural Area categories; however, if the County deems a portion of the Natural Area a Rare Species CNA, that portion is afforded 100% protection.
- **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.

There are two LUST projects located within a quarter mile of the project site:

- DOT-Carlisle Property #1 (3-001608), Project: N9603049 (Inactive)
- Mumford & Miller Concrete (3-001565), Project: N0401022 (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 Branch by calling 302-395-2500."

- **Air Quality.** The applicant shall comply with <u>all</u> applicable Delaware air quality regulations. These regulations include:

Regulation 1106 - Particulate Emissions from Construction and Materials Handling
- Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.
- Use covers on trucks that transport material to and from site to prevent visible emissions.

Regulation 1113 - Open Burning
- Prohibits open burns statewide during the Ozone Season from May 1-Sept. 30 each year.
- Prohibits the burning of land clearing debris, trash or building materials/debris.

Regulation 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products
- Restricts the use of certain coatings and consumer products in typical architectural applications.

Regulation 1145 - Excessive Idling of Heavy Duty Vehicles
- Restricts idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

Delaware State Fire Marshall's Office – Contact Duane Fox 739-4394

- At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

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

b. **Fire Protection Features:**
   - All structures over 10,000 Sq. Ft. aggregate, including the Fieldhouse Building at the football field will require automatic sprinkler protection installed.
   - Buildings greater than 10,000 sq.ft., 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.
   - Show Fire Department Connection location (It must be within 300 feet of fire hydrant), and detail as shown in the Delaware State Fire Prevention Regulations.
   - Show Fire Lanes and Sign Detail as shown in DSFPR

c. **Accessibility:**
   - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the site from Old State Road and the median divider in the access road must be constructed so fire department apparatus may negotiate it.
   - Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
   - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
   - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information**
   - Provide type of fuel proposed, and show locations of bulk containers, including fuel for any proposed emergency electrical generator, on the plan.

e. Required **Notes**:

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

Department of Education – Contact John Marinucci 735-4199

- As noted above, the school district must initiate the approval of land acquisition letter as required by 29 Del.C. §7525 as soon as possible.

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.

State Historic Preservation Office – Contact Terrence Burns 736-7404

- The developer should also consider maintaining the existing historic buildings within the development on separate, larger parcels. The boundary of the development should be sufficiently landscaped to block the view of this development from any historic properties in or near the Odessa Historic District.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- DelDOT anticipates the need for a Memorandum of Understanding between the District, the Department of Education and DelDOT regarding the funding of the off-site improvements identified through the TIS and TOA mentioned above. This Memorandum should be executed before the plan is recorded and referenced on the record plan.

- The exploratory sketch plan shows a future road connection leading from the site's internal road system toward Route 13. DelDOT understands from Mr. Williams that the

District is not willing or able to make that connection. However, DelDOT believes that the TIS may show such a connection to be highly desirable, certainly in the event of an evacuation, but also on a more routine event basis, such as high school football games, if not on a daily basis. The timing, funding and construction responsibility for that connection can be addressed in the Memorandum of Understanding mentioned above. However, the location must be addressed in the land development plan process.

As proposed, the road connection would stub into an access road serving a cluster of four ball fields, with parking on either side. DelDOT recommends that an area be set aside to locate this road where the two south ball fields are proposed, so that the road can tie in as the fourth leg of the roundabout proposed east of those ball fields.

- DelDOT appreciates the proposed pedestrian connection to Labrador Lane in Spring Creek. We ask that the District submit the plans to the Safe Routes to School Coordinator, Ms. Sarah Coakley, for a review of the site plan with particular regard to pedestrian circulation. Ms. Coakley may be reached at (302) 760-2236.

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

- **Parking Lots.** DNREC recognizes that the school district has substantially reduced the number of parking spaces by combining school facilities on one campus and sharing parking. As discussed, it would be beneficial if the parking lot at the northern end of the property could be flipped with the ball fields so the parking spaces are not encroaching on the sensitive areas.

- **Athletic Field Surfaces.** In most cases, because of the proximity to surface waters and sensitive ecological communities in an impaired watershed, synthetic playing surfaces would be preferable to fertilized natural grass. If natural grass fields are required, several soil tests should be performed to indicate the amount of nutrients, if any, that are required. Phosphorus or potassium should not be applied if soil test levels are above optimum. Also, consider composting toilets to serve that northern end of the campus.

- **Additional Information on Wetlands.** Some of the mapped wetlands may also be federally regulated. Therefore, it is strongly recommended that the applicant avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils, as they may be subject to regulatory jurisdiction under Federal 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE) manual is considered the acceptable basis for making a jurisdictional wetland determination for non-tidal wetlands in Delaware. The applicant should note that USACE views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for making such delineations. To ensure compliance with said USACE regulatory requirements, it is strongly recommended that a field wetlands delineation be conducted

before commencing any construction activities. It is further recommended that the USACE be given the opportunity to officially approve the completed delineation. The USACE can be reached by phone at 736-9763**.**

- In circumstances where the applicant or applicant's consultant delineates what they believe are non-jurisdictional isolated (SWANCC) wetlands, it is strongly recommended that the USACE be contacted to assess or evaluate the jurisdictional validity of such a delineation.

- 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 (See figure 1).

- **Additional Information on TMDLs.** A Pollution Control Strategy (PCS) is an implementation strategy that identifies the actions (i.e., regulatory and nonregulatory) necessary to systematically reduce the pollutant loading to a given water body; ultimately leading to the attainment of the obligatory TMDL pollutant load reduction requirements specified for that water body. In the absence of a finalized PCS (may be signed and approved by the DNREC Secretary in August), the applicant is strongly urged to reduce nutrient and bacterial pollutants through voluntary commitment to the implementation of the following recommended Best Management Practices:

    - DNREC suggests that the applicant maintain as much of the existing forest cover as possible. They further suggest additional native tree and native herbaceous planting wherever possible.

    - Maintenance of 100-foot buffer width(s) from all delineated wetlands (USACOE and State approved wetland delineations) is strongly recommended.

    - DNREC strongly recommends that the applicant 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. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness via the application/use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation (or establishment of

additional forest cover acreage) – are examples of some practical BMPs that could easily be implemented to help reduce surface imperviousness.

- DNREC strongly recommend 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.

- DNREC also strongly encourages the applicant to 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. They 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.

- **State-rare Communities and Rare Plants.** The presence of State-rare species can impact the regulatory process and the following information is of benefit to the applicant and should not be omitted. State-rare species occur within the State Natural Area on this property.

  A vegetation community survey and rare-plant survey was conducted on August 2, 2010 and on August 5, 2010 by scientists from the Delaware Natural Heritage and Endangered Species Program (DNHESP)[1] within the Delaware Division of Fish and Wildlife, Department of Natural Resources and Environmental Control. The purpose of this survey was to classify and map vegetation communities, which can be used to later assess habitat conditions for Species of Greatest Conservation Need[2] (SGCN) [as defined in the

[1] DNHESP scientists participating in the field survey include Robert Coxe (vegetation ecologist) and Bill McAvoy (botanist).

[2] Species of greatest conservation need (SGCN) are indicative of the overall diversity and health of the State's wildlife resources. Some may be rare or declining, others may be vital components of certain habitats, and still others may have a significant portion of their population in Delaware. SGCN are identified in the Delaware Wildlife Action Plan (DEWAP) which is a comprehensive strategy for conserving the full array of native wildlife and habitats-common and uncommon- as vital components of the state's natural resources. Congress challenged the states to demonstrate comprehensive wildlife conservation. Delaware, along with all of the other states and provinces throughout the country are working to implement their wildlife action plans. DEWAP can be viewed via the Natural Heritage and Endangered Species program website at **http://www.dnrec.state.de.us/nhp**. This document also contains a list of species of greatest conservation need, Key Wildlife Habitat Maps, and species-habitat associations.

Delaware Wildlife Action Plan (DEWAP)]. It should be noted that surveys were not conducted for animal species of concern at this time. A full report including maps of elements of concern is being drafted and will be available soon. Seven state-rare plants and two vegetation communities of concern were observed during the surveys.

- A **Central Appalachian Basic Seepage Swamp community**[3] containing seven state-rare plants was observed during the survey. This state-rare community type is generally found at the headwaters of streams and bases of slopes where groundwater reaches the surface. In Delaware, a diagnostic feature of this community type is the dominance or co-dominance of black ash (*Fraxinus nigra*). Maintaining freshwater inputs into this wetland is extremely important for the continued existence of the community. If hydrological changes occur as a result of this project, this community could be impacted. It is unclear at this time how the proposed hydrology compares to the existing hydrology that is currently allowing this community to persist. Hydrological studies may be needed.

  Rare plants that occur within the Central Appalachian Basic Seepage Swamp Community include:

  Marsh marigold (*Caltha palustris*)-S2*
  Brome-like sedge (*Carex bromoides*)-S2
  Roundleaf goldenrod (*Solidago patula*)- S1 Coastal Plain
  Stiff dogwood (*Cornus stricta*)-S2
  Black ash (*Fraxinus nigra*)-S2
  Spring cress (*Cardamine bulbosa*)-S2 Coastal Plain
  Poison sumac (*Toxicodendron vernix*)-S3
  ***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

- A **Chesapeake Bay River Bluff Chestnut Oak Forest** covering approximately 24 acres of the site was mapped. This forest community is considered very rare within the state. It is locally common on bluffs fronting the Appoquinimink River and its tributaries such as Drawyers Creek. Chestnut oak (Quercus prinus) is the dominate canopy species and this community was considered to be mature in age. Most of this community can be seen on 1937 aerial imagery.

- **Reforestation.** DNREC requests that no invasive species be used in the re-vegetation of disturbed areas. They further recommend the use of Delaware native plants and direct you to the '*Flora of Delaware Checklist'* which includes a list of all plant species native to Delaware and their habitat requirements. This publication is not yet available electronically, but can be obtained by contacting our program botanist, Bill McAvoy, at

[3] Community names follow the National Vegetation Classification System. This community type is also called a Black-Ash Seepage Swamp.

302-735-8668 or William.McAvoy@state.de.us. In addition, Bill would gladly assist in drafting a list of plants suitable for this site.

- **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 TMB. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMB.

  Should the municipality anticipate being more restrictive than Delaware's Regulations Governing Underground Storage Tank Systems or Delaware's Regulations Governing Aboveground Storage Tanks, please be aware that the municipality shall be responsible for enforcing the more restrictive rules.

- **Hazardous Waste Sites.** SIRB strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Assessment 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.

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

- **Additional Information on Air Quality.** Measures may be taken to substantially reduce the air quality emissions and include:

  - **Construct only energy efficient buildings.** Energy Star qualified buildings are up to 30% more energy efficient. These savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of increased energy efficiency translates into a percent reduction in pollution.
  - **Offer 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.
  - **Provide tie-ins to the nearest bike paths and links to any nearby mass transport system**. For every vehicle trip that is replaced by someone using a

sidewalk, bike path or mass transit can significantly reduce mobile source emissions.

- Additionally, the following measures will reduce emissions associated with the actual construction phase of the development:

    - **Use retrofitted diesel engines during construction**. This includes equipment that is on-site as well as equipment used to transport materials to and from site.
    - **Use pre-painted/pre-coated flooring, cabinets, fencing, etc**. These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
    - **Plant trees at residential units and in vegetative buffer areas**. Trees reduce emissions by trapping dust particles and by replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development on air quality.

Delaware State Fire Marshall's Office – Contact Duane Fox 739-4394

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

Department of Education – Contact John Marinucci 735-4199

- The DOE supports locating school facilities on parcels with existing or reasonable access to civil infrastructure to include but not limited to:

    Roads, pedestrian walkways and shared use paths
    Waste water/sewerage and domestic water
    Electric, and telecommunications
    Storm water drainage and conveyance

- The DOE recommends school sites with public water and sewer utilities or access to public water and sewer utilities over sites requiring on-site facilities.

- The DOE supports the State Strategies for Policies and Spending. When considering school facility locations, the DOE considers proximity and access to basic support services as a high priority.

- The DOE supports locating school facilities strategically within the geographic region and/or community the facility is intended to serve in order to:

  Encourage non-student pedestrian access to the school facility in an effort to reduce vehicle miles traveled to the extent practical
  Encourage student pedestrian access to the school facility, in order to contain the school's life-cycle operating costs associated with student transportation, as practicable
  Create education campuses by co-locating educational facilities and services in an effort to reduce life-cycle costs as a result of the co-located schools sharing common spaces, facilities and services.

- The DOE supports this site and site plan for the Appoquinimink School District.

  The DOE has been involved in the initial planning for the acquisition and development of this site.
  The Appoquinimink School District has engaged the stakeholders and interested parties/jurisdictions in their planning of the development of the site.

<u>Department of Agriculture – Contact Scott Blaier 698-4529</u>

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

Callery Pear	Ash Trees
Leyland Cypress	Red Oak (except for Willow Oak)

  If you would like to learn more about the potential problems or impacts associated with these trees, please contact the Delaware Forest Service for more information at (302) 698-4500.

- Native Landscapes - The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees

and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

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

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

Sincerely,

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

CC: New Castle County
Town of Odessa