STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION

November 18, 2011

Mr. Michael Riemann
Becker Morgan Group
309 South Governors Avenue
Dover, DE 19901

RE: PLUS review – PLUS 2011-10-03; Polytech High School

Dear Mr. Riemann:

Thank you for meeting with State agency planners on October 26, 2011 to discuss the proposed plans expansion of the Polytech High School.

According to the information received, you are seeking an 58,000 sq. ft. expansion of the existing high school.

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 Kent 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 1 according to the *Strategies for State Policies and Spending.* This site is also located in Kent County and is the expansion of an existing school. 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.

Code Requirements/Agency Permitting Requirements

State Historic Preservation Office – Contact Terrence Burns 736-7404

There are no known cultural or historic resources such as a National Registered listed property, archaeological site, or historic structure or dwelling on this parcel (property). However, 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 culture 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.

Department of Transportation – Contact Bill Brockenbrough 760-2109

In accordance with Section 3.9 of DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT will require a Traffic Operational Analysis to examine the site access. We have already discussed specific requirements with the school district and their engineer, but briefly, new traffic counts will need to be done at the east entrance, projections of future traffic at both entrances will need to be developed and the appropriate design for both entrances will need to be developed. Previous counts at the west entrance, done for the Loganberry Village development, may be reused and have been shared with the school district's engineer.

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

TMDLs

The project is located in the greater Delaware River and Bay drainage, specifically within the St. Jones River watershed. In this watershed, the State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets for nitrogen, phosphorus, and bacteria (under the auspices of Section 303(d) of the Clean Water Act). 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 St. Jones River watershed calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 90 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

Water Supply

The project information sheets state that water will be provided by an existing individual on-site well but are considering towards connecting to Tidewater Utilities to 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 PSC-1190. It is recommended that the developer contact Tidewater Utilities to determine the availability of public water. 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. The Division of Water Resources will consider applications for the construction of on-site well(s) provided the well(s) 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 are an Underground Storage Tank associated with Uncle Willies #15, and a Large On-Site Septic System associated with Kent County Poly Tech located within 1000 feet of the proposed project.

Water Resource Protection Areas

The DNREC Water Supply Section has determined that the project falls partially within a wellhead protection area for Polytech High School and fully within an excellent ground-water recharge potential area for Kent County (see map).

Wellhead protection areas are the surface and subsurface areas adjacent to public water supply wells where contamination could, if released, travel to the well. Land use activities or impervious cover on wellhead protection areas may adversely affect the quality and quantity of drinking water in these areas.

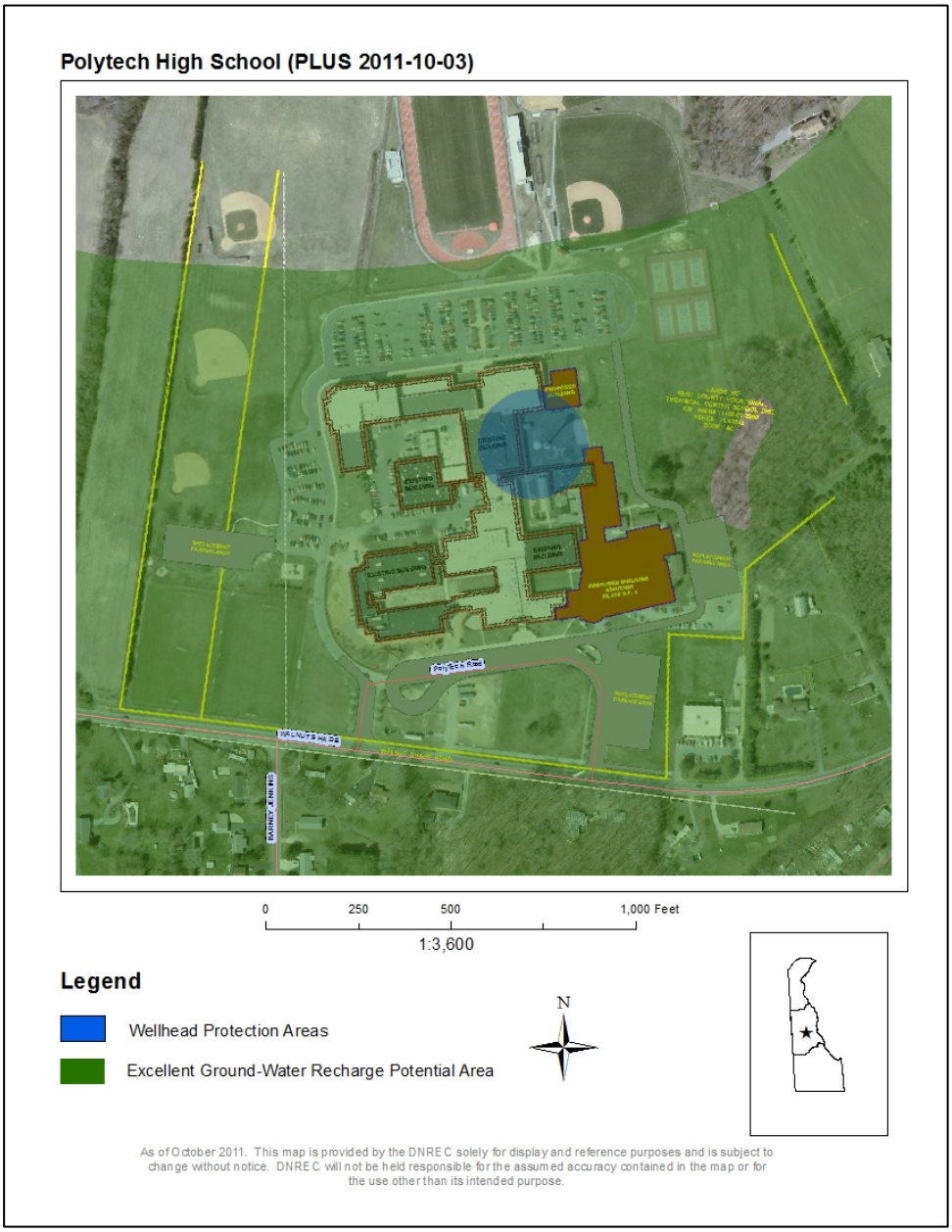
Excellent Ground-Water Recharge Areas are those areas mapped by the Delaware Geological Survey where the first 20 feet of subsurface soils and geologic materials are exceptionally sandy. These soils are able to transmit water very quickly from the land surface to the water table. This map category is an "indicator of how fast contaminants will move and how much water may become contaminated" (Andres, 2004, pg. 1). Land use activities or impervious cover on areas of excellent groundwater recharge potential may adversely affect the quality and quantity of ground water in these areas.

In addition, because the wellhead protection area is the source of public drinking water for Polytech High School and the excellent ground-water recharge area so readily affects the underlying aquifer, the storage of hazardous substances or wastes should not be allowed within these areas unless specific approval is obtained from the relevant state, federal, or local program.

DNREC recommends:

- Keep impervious cover to less than 50%
- Perform an environmental assessment report showing that *water quality* as well as *water quantity* of post development recharge is equal to or greater than pre-development recharge (Kaufmann, 2005).
- Quantify amount of recharge lost due to impervious cover and provide for onsite infiltration of water at least equal to or greater than pre-development recharge (Kaufmann, 2005).
- Pretreatment of parking area runoff to remove dissolved chemical and nutrient loads prior to infiltration
- Use Better Management Practices in the design, construction, and maintenance of a stormwater management system designed to address water quality with respect to nutrient and other pollutant loads.

In addition, because the excellent ground water recharge area 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

Sediment and Stormwater Program

Be advised that the Sediment and Stormwater Regulations are currently undergoing a revision. It is anticipated that revised regulations will be effective in August 2012. Projects received for review after the effective date will be expected to comply with the revised regulations. A detailed Sediment and Stormwater Management Plan must be approved prior to any land disturbing activity taking place on the site. The project will be reviewed for compliance with the Delaware Sediment and Stormwater Regulations by the DNREC Sediment and Stormwater Program. A Notice of Intent (NOI) for Discharge of Stormwater from Construction Activities and the $195 NOI fee must be submitted prior to DNREC prior to Sediment and Stormwater Plan approval. A pre application meeting is strongly recommended prior to putting a lot of effort into a design. Contact Elaine Webb, DNREC Sediment and Stormwater Program, at (302) 739-9921 or Elaine.Webb@state.de.us to schedule a pre application meeting. The first preferred practices for management of stormwater quality are practices that mimic the pre development hydrology and promote recharge, including Green Technology BMPs. Other practices may only be considered for stormwater quality management when Green Technology BMPs have been ruled out for engineering reasons. (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101)

Drainage Program

It is not known where the stormwater runoff from the proposed improvements will ultimately discharge from the site; however, the wooded areas on the north and east sides of the school site have known drainage concerns. Any discharges to these areas will require evaluation of the impact to those areas that currently have poor drainage. (Title 7, Delaware Code, Chapter 41)

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.

- The following confirmed leaking underground storage tank (LUST) project exists **within the boundaries of the project site**:

    - PolyTech High School, Facility: 1-000058, Projects: K9212271 (Inactive), K0312099 (Inactive)

- The following confirmed leaking underground storage tank (LUST) project is located within a quarter mile from the proposed project area:

    - Woodside BP #2467 (Uncle Willies 15), Facility: 1-000570, Project: K0311071 (Active)

- 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.

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

DelDOT suggests that an emergency access, closed off with gates or removable bollards, be maintained between the bus turnaround and the west driveway to provide access all the way around the perimeter of the building. From discussion at the PLUS meeting we understand that the pavement is to be retained in this area, although the drawing submitted with the PLUS application suggests otherwise. While providing emergency access is important, preventing non-emergency access there is important to maintaining a smooth flow of traffic on both facilities.

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

Wetlands

According to the Statewide Wetland Mapping Project (SWMP) maps, potential jurisdictional wetlands may be in or near the proposed project area (See figure 1). Therefore, we strongly recommend a United States Army Corps of Engineers (USACE) approved field wetlands delineation before commencing any development activities on this parcel(s). The USACE can be reached by phone at 736-9763.

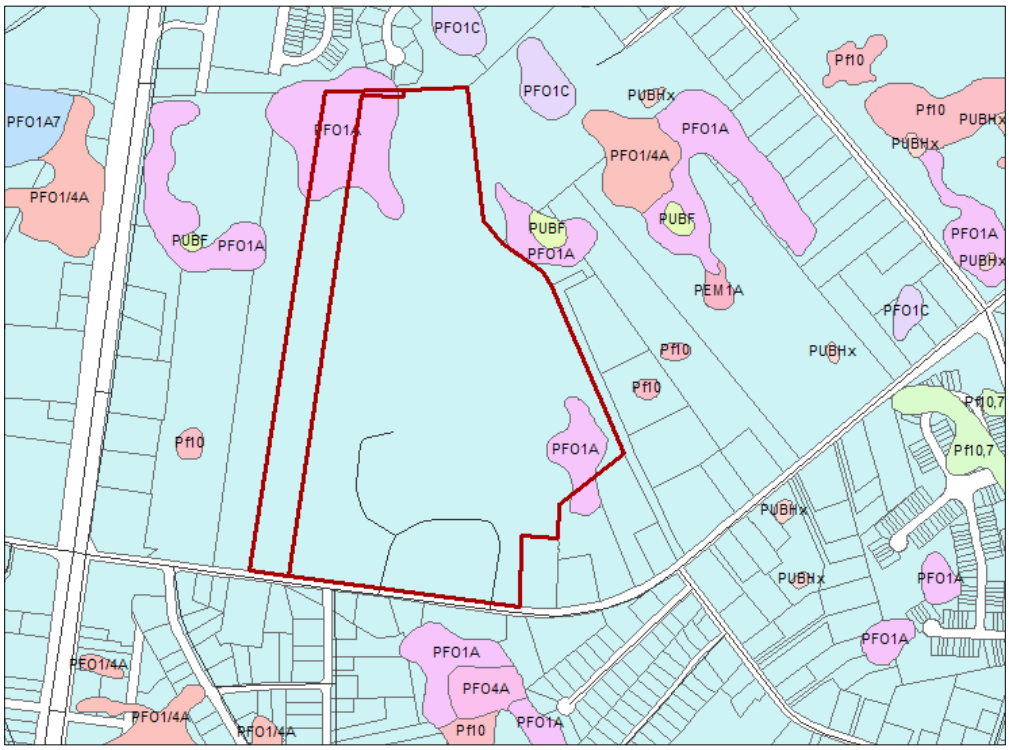


Figure 1: SWMP mapped wetlands in the immediate vicinity of the proposed project area

Additional information on TMDLs

A pollution control strategy (PCS) is the regulatory directive requiring the implementation of various best management practices (BMPs) that help reduce transport of nutrient and bacterial pollutant runoff from all waters draining into a "greater" common watershed, with the ultimate objective of achieving the obligatory TMDL reduction requirements for that watershed. However, the PCS for the St. Jones River watershed has not been formally completed to date. In absence of a current PCS, the applicant is strongly urged to reduce nutrient and bacterial pollutants through voluntary commitment to the implementation of the following recommended BMPs:

- Maximize open space by retaining as much of the existing native tree cover as possible. We also recommend the planting of additional native trees and /or native herbaceous cover, wherever possible.

- DNREC strongly encourages the maintenance of the recommended 100-foot buffer width from all delineated wetlands (USACOE approved wetland delineations) and water bodies. We also encourage the applicant to have an USACOE approved wetlands delineation conducted from the onset. According to information submitted by the applicant in the PLUS application, a field wetlands delineation has been conducted and is currently undergoing an approval process by the USACE.

- 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.

- 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. DNREC recommends 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 some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

- 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.

Habitat and Rare/Threatened/Endangered Species

The Division of Fish and Wildlife scientists have not surveyed this project area; therefore, we are unable to provide information pertaining to the existence of State-rare or federally listed plants, animals or natural communities at this project site. In the absence of site specific information we offer the following:

1. The site plan submitted for the PLUS application shows possible tree clearing adjacent to and on the east side of the school, but the application states that forest removal amounts are unknown (question #20). To minimize potential impacts to wildlife, efforts to

minimize the amount of tree clearing is recommended. In addition, the forest on these two parcels is likely an asset to hands-on science/biology based courses. Future clearing of forest in the northern part of the property should be avoided as our GIS database indicates large areas of wetlands.

2. Application materials indicate only 25-foot upland buffers from the edge of wetlands. To protect water quality and ecological integrity, it is widely recommended that upland buffers be at least 100 feet in width. Buffers that support the survival of wildlife can be much larger. Upland buffers around wetlands can provide critical habitat for wetland dependent species and buffers along waterways provide sources of food and water, protective cover from predators, shelter from harsh weather, and connections between isolated populations. To be most effective, upland buffers should not include impervious surfaces, mowed lawn, parking lots, roadways, structures, or stormwater facilities.

3. If tree clearing is part of the project, we recommend plans be made to avoid clearing during a time of year when many birds and other wildlife are especially vulnerable to impacts. Breeding/nesting peaks for many species from April 1st to July 31st and it would be best to avoid clearing during this time.

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.

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
Director, Office of State Planning Coordination

Cc: Kent County