Requirements

TMDLs. The project is located in the greater Delaware River and Bay drainage area, specifically within the C & D Canal and Red Lion Creek watersheds. In the Red Lion Creek watershed, the State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets for nutrients (e.g., nitrogen, phosphorus), and bacteria (under the auspices of Section 303(d) of the Federal Clean Water Act). A TMDL is the maximum level of pollutant that 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 Red Lion Creek watershed calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 38 percent reduction in bacteria from baseline conditions. Since a TMDL has not been developed for the C&D Canal watershed to date, the TMDL developed for the Red Lion Creek will apply to the entirety of the project area**.**

Water Supply. The project information sheets state water will be provided to the project by Artesian Water Company via a public water system. Our records indicate that the project is located within the public water service area granted to Artesian Water Company under Certificate of Public Convenience and Necessity 85-WS-03.

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 an Underground Storage Tank associated with Cochran & Trivits located within 1000 feet of the proposed project. *Ricardo Rios - (302) 739-9944, Ricardo.Rios@state.de.us*

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 New Castle County Dept. of Land Use Engineering Section. Contact Dept. of Land Use at (302) 395-5470 for details regarding submittal requirements and fees (Delaware Code, Title 7, Chapter 40; Delaware Regulations, Administrative Code, Title 7, 5101). *James Sullivan - (302) 739-9921, James.Sullivan@state.de.us*

Hazardous Waste Sites. If it is determined by the Department that there was a release of a hazardous substance on the property in question, it is required that the guidelines and provisions of 7 Del.C. Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware *Regulations Governing Hazardous Substance Cleanup* be followed.

There is one SIRB site found within a ½-mile radius of the proposed project:

- Cochran & Trivits Firestone (DE-1274) located east of the project area.
- Site was transferred to the Tanks Management Branch.

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. *Krystal Stanley - (302) 395-2644, Krystal.Stanley@state.de.us*

Tank Management Branch. If a release of a Regulated Substance occurs at the project site, compliance with 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 rezoning site:

- Cochran & Trivits, Facility: 3-001568, Project: N9902050, Inactive
- DuPont Parkway Apartments, Facility 3-000979, Project: N9501010, 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."

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.
Elizabeth Wolff - (302) 395-2500, Elizabeth.Wolff@state.de.us

Recommendations

Soils Assessment. We strongly recommend that the applicant avoid soils mapped as Othello (OtA; See figure 1). These soils are poorly-drained (hydric) and suggestive of wetland conditions. Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding, especially during extended periods of high-intensity rainfall events such as tropical storms/hurricanes or "nor'easters." This is in addition to the increased probability of flooding due to or increased surface water runoff emanating from future created or constructed forms of structural imperviousness (e.g., rooftops, roads, parking areas, sidewalks, and stormwater management structures).

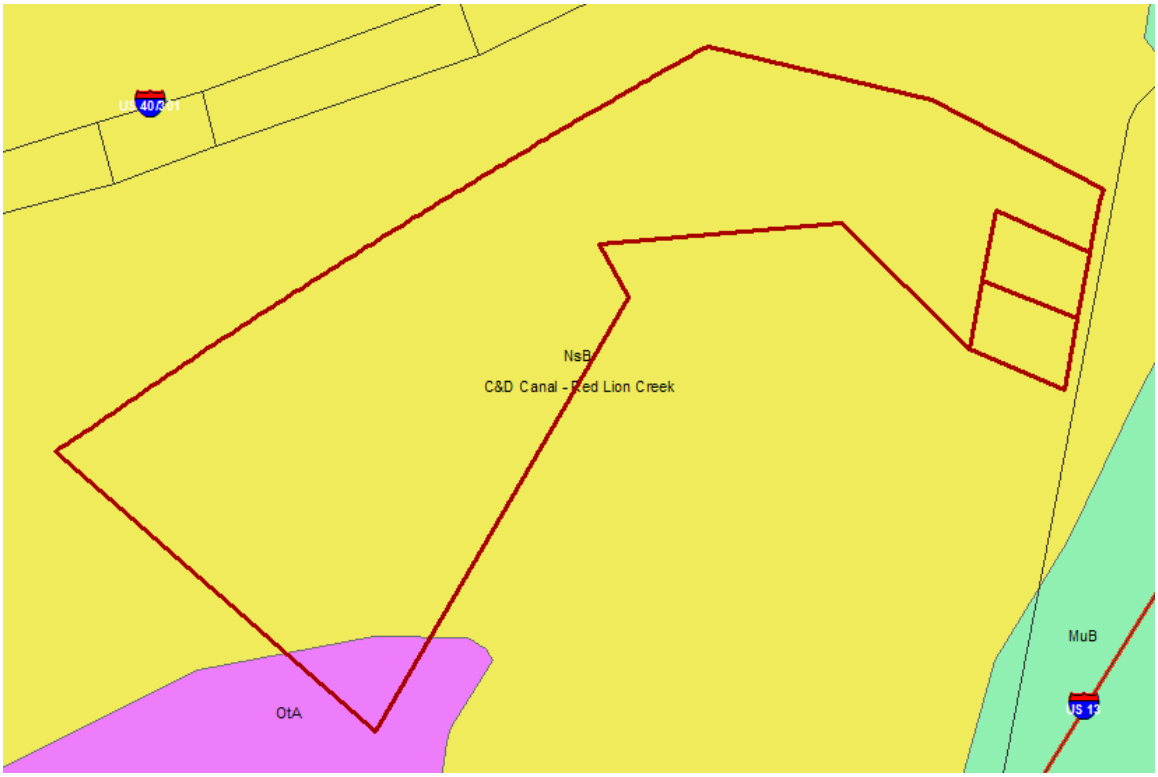

Figure 1: NRCS soil survey mapping in the immediate vicinity of the proposed project

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 C&D Canal and Red Lion Creek watersheds have not been formally completed to date. In absence of a current PCS, the applicant is strongly urged to reduce nutrient and bacterial pollutants through the voluntary commitment to the implementation of the following recommended BMPs:

- Much of this parcel is forested (about 50-60%). We strongly recommend that the applicant maintain as much of the existing forest cover as possible.

- We strongly recommend 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 some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

- Additionally, we 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 bacteria pollutant runoff impacts from the constructed forms of surface imperviousness.

- Since this project is a commercial project likely to generate large amounts of created surface imperviousness that will almost certainly increase the volume of pollutant-laden water ultimately draining to the Delaware River and Bay, we strongly urge the applicant to voluntarily limit paved surface imperviousness to 50% or less via implementation/use of pervious paving materials instead of conventional paving materials consisting of asphalt or concrete.

- The Department has also developed an assessment tool to evaluate how your proposed development may reduce nutrients and bacteria to help meet the TMDL requirements. Please contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

Soils and TMDL comments provided by John Martin, Watershed Assessment Section, (302) 739-9939, John.Martin@state.de.us

Flood Management. The site plan indicates this property does not lie within any FEMA designated floodplain as shown on panel 10003C0140F, dated October 6, 2000. The current effective maps that should be used for this determination are panels 10003C0165J and 10003C0145J, dated January 17, 2007. The current effective FEMA maps do not show this parcel located within a 1-percent-annual-chance floodplain. The site plan does indicate this property is subject to a non-delineated floodplain. *Gregory Williams - (302) 739-9921, Gregory.Williams@state.de.us*