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November 21, 2014

Office of State Planning Coordinator
122 William Penn Street
Third Floor
Dover, DE 19901

Attn: Constance C. Holland, AICP

RE: PLUS Review 2014-10-03, Lakeland Storage Facility
DBF #575B033.001

Dear Ms. Holland:

We have read and reviewed the comments provided during the PLUS Review of the Project on October 22, 2014, and have received from the Office of State Planning dated November 19, 2014. We offer the following item-by-item narrative for your review:

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 the Kent County Growth Zone. 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.

The proposed commercial development will be a good addition to the surrounding area and is consistent with the State Strategies and County Growth Plans. The site design will minimize impacts on environmental features.

Code Requirements/Agency Permitting Requirements

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There is a known archaeological site (K-6650, 7K-C-405) and a former mill site (K-6651) on this parcel. The archaeological site (K-6650, 7K-C-405) is associated with a house, but that house and the mill site (K-6651) are not there anymore. With this in mind, the developer

should be aware of the Unmarked Human Burials and Human Skeletal Remains Law, which is in Title 7, Chapter 54, 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 the 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 pertaining to unmarked human remains or cemeteries, please check the following websites for additional information: www.history.delaware.gov/preservation/umhr.shtml and www.history.delaware.gov/preservation/cemeteries.shtml.

Prior to any demolition or ground-disturbing activities, the developer may want to hire an archaeological consultant to examine the parcel for any potential archaeological site (historic or pre-historic), historic cemetery or unmarked human remains.

We thank the State Historic Preservation Office for the known historic archeological mill and dwelling site information. The developer is aware of Delaware's Unmarked Human Burials and Human Skeletal Remains Law and will comply with requirements should they pertain to this site.

- 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.

Preplanning activities for this project involved making a detailed delineation and survey of state and federally regulated wetlands and waters boundaries. The project has been designed to avoid impacts to both state and federally regulated wetlands. In the event that regulated activities are proposed requiring a permit from the Corps of Engineers or other federal agency, the developer will consult with those agencies to determine the area of potential effects. As determined by the Section 106 process, the developer will then retain a qualified archeologist to perform any required site evaluations or studies offsite for possible impact to historic or cultural resources.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- By the developer's estimate on the PLUS application, the site would generate 321 vehicle trip ends per day. What is the basis for it? Using rates and equations from the Institute of Transportation Engineers' Trip Generation Manual, DelDOT estimates that the proposed development would generate trips as follows:

| | ITE Land Use Code | Average Weekday | Weekday AM Peak Hour | Weekday PM Peak Hour |
|----------------------------|-------------------|-----------------|----------------------|----------------------|
| 30,000 sf General Office | 710 | 526 | 73 | 112 |
| 60,000 sf General Office | 710 | 890 | 127 | 146 |
| 86,100 sf Mini-Storage | 151 | 215 | 12 | 22 |
| 39 Mobile Homes (existing) | 240 | 195 | 17 | 23 |

Based on the above table, the mini-storage units would generate about as much traffic as the existing mobile homes on the site that they would replace. However, even the first phase of the proposed office development would meet the traffic volume warrants found in Section 2.3.1 of the Standards and Regulations for Subdivision Streets and State Highway Access (400 vehicle trips per day or 50 vehicle trips per hour).

Therefore the proposed development warrants a Traffic Impact Study (TIS). However, in accordance with Section 2.3.2, if the County does not require a TIS, DelDOT may accept a fee of \$10 per daily trip in lieu of a TIS for developments generating fewer than 2,000 vehicle trips per day and fewer than 200 vehicle trips per hour in the peak hours of the day. The payment of the fee would not exempt the developer from contributing toward off-site improvements or count toward those improvements.

Payment of the fee also would not exempt the developer from the requirement to perform a Traffic Operational Analysis (TOA) if DelDOT should determine that one is needed. The need for a TOA would be determined at the Pre-Submittal Meeting.

Per conversations with DelDOT since the PLUS meeting, it has been determined that the site could construct the mini storage facilities as well as 20,000 SF of office space before a TIS would be required. With that information/agreement, the site will plan will be revised to show proposed 20,000 SF of office instead of the previously proposed 30,000 SF.

- Please be advised that DelDOT has advertised for comment a comprehensive revision of the Standards and Regulations. The comment period ran through June 30 and DelDOT could adopt this revision as soon as January 2015. Implementation guidance has not been developed but DelDOT recommends that the developer's engineer become familiar with the proposed changes and assess whether any of them could be relevant to this project. Information on the proposed revision is available in the Register of Regulations and at http://www.deldot.gov/information/pubs_forms/revisions_to_ASR/index.shtml.
- DelDOT will require the developer to provide sidewalks that meet Americans with Disabilities Act (ADA) standards along the property frontage on Lakeland Avenue, fill in the missing sidewalk along South State Street and improve the existing sidewalks along South State Street to meet ADA standards. Particularly, in the latter regard, curb ramps will be needed and streetlights will need to be moved outside the walkway.

We thank DelDOT for the required information.

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

Wetlands

- State regulated wetlands ARE located adjacent to this property based on a review of the State wetland maps. State regulated wetlands are those wetlands identified on the State's official State Regulated Wetland Maps. Any activity in State regulated wetlands may require a permit from DNREC's Wetlands and Subaqueous Lands Section. Additional information about State regulated wetlands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or on line at <http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx>
- State regulated subaqueous lands ARE located adjacent to this property based on a review of aerial photographs, SWMP maps, Soil Surveys and USGS topographic maps. Upon review of the GIS layers, Perennial River/Stream are located on the property. State subaqueous lands include all tidal waters (up to the mean high water line), most non-tidal rivers, streams, lakes, ponds, bays and inlets (up to the ordinary high water line), most perennial streams and ditches and many intermittent streams and ditches. An on-site inspection by a representative of the Wetlands and Subaqueous Lands Section or an environmental consultant is

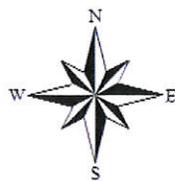
recommended to determine the limits of jurisdictional State subaqueous lands. Upon review of the GIS layers, Perennial River/Streams are located on the property. Additional information about State regulated subaqueous lands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or on line at <http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx>.

- 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 USGS topographic maps. 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. Please check with the county to be sure appropriate buffers are adhered to around the wetland areas. 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 jurisdiction. 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>.

County: Sussex
PLUS 2010-10-03
Lakeland Storage Facility



0 110 220 440 660 880
Feet



Map created by: Kitty Bronson
DNREC Wetlands and Subaqueous Lands



Professional Wetland Scientists from Environmental Resources, Inc. were retained to conduct a detailed delineation of state and federally regulated waters and wetlands. Project plans submitted as part of the approval process will depict these boundaries and will include a statement from a qualified professional wetland scientist certifying the accuracy of these boundaries. Agency coordination and onsite review of these boundaries will be conducted as part of authorizing any unavoidable impact to regulated water or wetlands. The project goal is to avoid and minimize impacts to wetlands and waters to the maximum extent possible.

TMDLs

- The project is located in the greater Delaware River and Bay drainage area, 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 waterbody” 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.

We thank you for providing us with the required reductions for this site. A nutrient management plan will be prepared for this project should it meet the threshold for requiring the plan during the construction document preparation. The site will comply with the Delaware River & Bay drainage area and St. Jones River watershed Pollution Control Strategy Regulation.

Flood Management

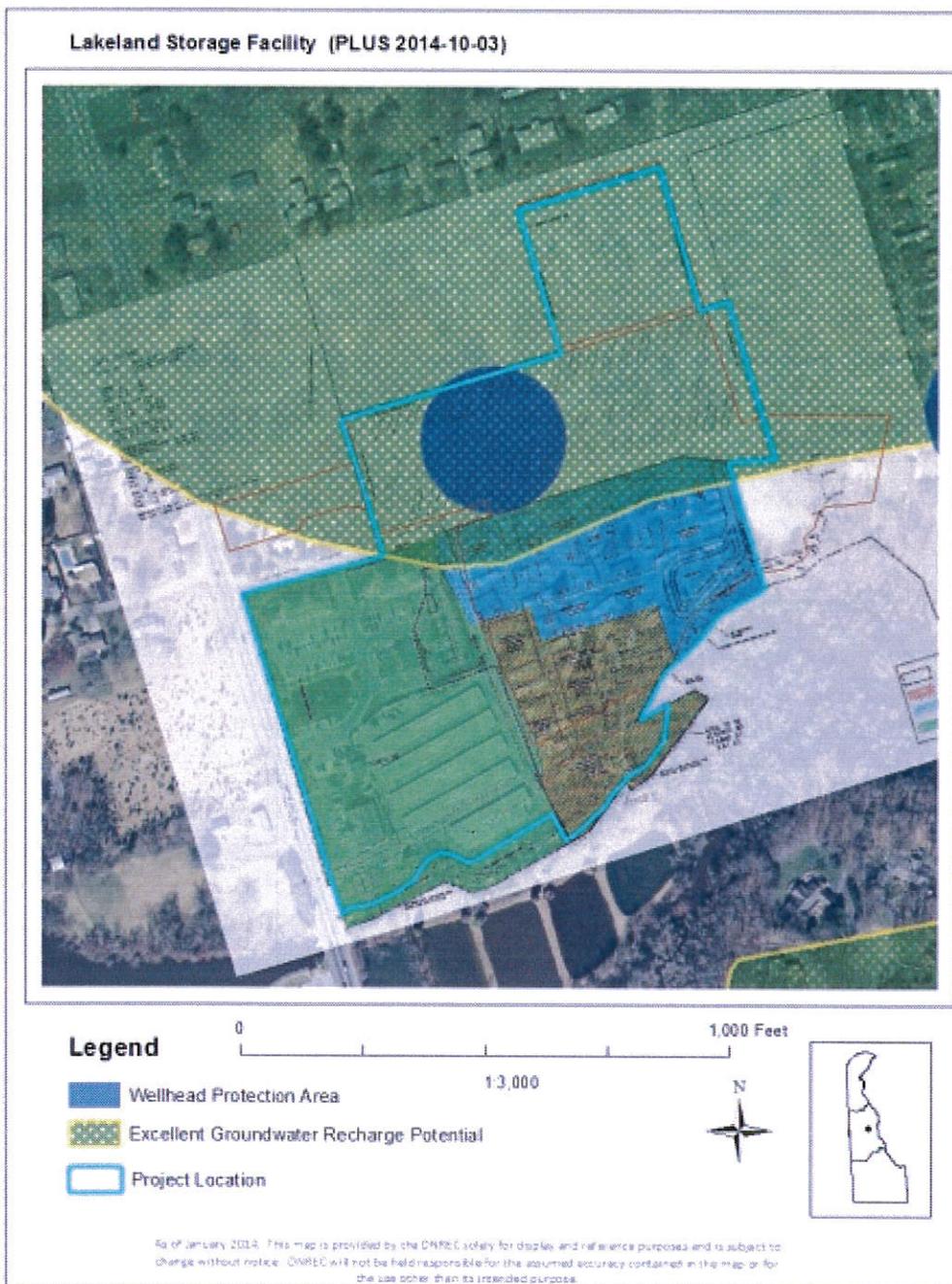
- Portions of this property are located in a FEMA mapped floodplain of Isaacs Branch. Laying out all individual lots and all buildings completely outside of the floodplain will reduce the likelihood of flooding, reduce in price or completely eliminate the requirement for flood insurance, and eliminate the requirement for floor elevations surveys which are likely to be required for structures which are located on lots which contain floodplain. Kent County also has regulations which limit or prohibit the subdividing of land and construction in floodplains.

We thank you for providing us with the flood information, the proposed site will attempt to keep all buildings outside of the floodplain to reduce likelihood of flooding. However, if a

buildings is located within the floodplain the correct process will be follow to meet regulations.

Water Supply

- The project information sheets state water will be provided to the project by Tidewater Utilities via a public water system. DNREC records indicate that part of the project (parcels: ED-00-086.00-01-19.01 and ED-00-086.00-01-19.02) are located within the public water service area granted to Tidewater Utilities under Certificate of Public Convenience and Necessity 99-CPCN-07; however, parcel ED-00-086.14-02-01.00 is not located within the jurisdiction of Tidewater Utilities' CPCN. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-736-7547.
- 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 the 7Eleven Store located within 1,000 feet of the proposed project.



We will obtain a “Willing and Able” letter from Tidewater Utilities, Inc. for the project. Well permits will be obtained if needed for dewatering and in accordance with all rules and regulations and understand permits may require longer review based on local potential contamination.

Sediment and Stormwater Program

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. It is strongly recommended that the owner and consultant contact the Kent Conservation District to schedule a project application meeting to discuss the sediment and erosion control and stormwater management components of the plan. 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 Kent Conservation District. Contact Jared Adkins, Program Manager, at the Kent Conservation District at (302) 741-2600, ext. 3 for details regarding submittal requirements and fees. (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101).

Our office will contact the District and will coordinate with them through design and construction of the project.

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:

| Table 1: Potential Regulatory Requirements | |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regulation | Requirements |
| 7 DE Admin. Code 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. |
| 7 DE Admin. Code 1113 – Open Burning | Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year. Prohibit the burning of land clearing debris. Prohibit the burning of trash or building materials/debris. |
| 7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan | 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) |
| 7 DE Admin. Code 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products | Use structural/ paint coatings that are low in Volatile Organic Compounds. Use covers on paint containers when paint containers are not in use. |

| | |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>7 DE Admin. Code 1144 – Control of Stationary Generator Emissions</p> | <p>Ensure that emissions of nitrogen oxides (NO_x), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO₂), carbon monoxide (CO), and carbon dioxide (CO₂) from emergency generators meet the emissions limits established. (See section 3.2). Maintain recordkeeping and reporting requirements.</p> |
| <p>7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles</p> | <p>Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</p> |

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

The project will comply with all regulatory requirements.

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 suggested 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 SIRS site found within a ½-mile radius of the proposed project. Pugh Dump Site (DE-0227) located 0.19 mi to the east portion of the project area. The area was used for sand and gravel excavation for approximately 10 years before being used for Christmas tree cultivation. Some areas of the Site were used by the owner for the storage of scrap metal, mobile homes and vehicles. Some illegal dumping was reported to occur on the Site in the past, debris such as refrigerators, abandoned cars, construction and house hold waste. The site was issued a No Further Action designation in 1990.

The Owner / Developer will perform mediation if a release of a hazardous material is determined by the Department.

Tank Management Section

- 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 project is located within the parcel of interest:
 - Lakeside Dairy Market Dover, Facility: 1-000395, Projects: K9105103 and K9502055 (Both Inactive projects)

- The following confirmed leaking underground storage tank (LUST) projects are located within a quarter mile from the proposed project area:
 - Moores Lake Pump Station # 3, Facility: 1-000634, Project: K9811191 (Inactive)
 - Taylor Property, Facility: 1-000533, Project: K9303045 (Inactive)
- The following registered above ground storage tank (AST) facility is located within the parcel of interest:
 - Villabona Mobile Home Trailer Park, Facility: 6-000002
- Per the **UST Regulations: Part E, § 1. Reporting Requirements:**
 - Any indication of a Release of a Regulated Substance that is discovered by any Person, including but not limited to environmental consultants, contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within 24 hours to:
 - The Department's 24-hour Release Hot Line by calling 800-662-8802; and
The DNREC Tank Management Section by calling 302-395-2500.

We thank the branch for providing us with the known LUST and AST. The project will comply with all requirements regarding reporting and releases of Regulated Substances.

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

- Because the proposed development would generate more than 200 vehicle trips per day, a Pre-Submittal Meeting is required before plans are submitted for review. Guidance on what will be covered at this meeting and how to prepare for it is located at http://www.deldot.gov/information/business/subdivisions/Pre-Submittal_Meeting_Requirements.doc. The form needed to request this meeting is available at http://www.deldot.gov/information/business/subdivisions/Meeting_Request_Form.doc.
- Presently, Lakeland Avenue has a paved width of about 16 feet. A subdivision street right-of-way, ranging in width from about 28 feet to about 43 feet, extends about 300 feet east from South State Street, after which the road continues east as a private mobile home park

street. At the intersection with South State Street, it appears that part of the existing roadway is outside the right-of-way. DelDOT anticipates requiring the developer to dedicate rights-of-way and improve the public portion of Lakeland Avenue to meet DelDOT's current subdivision street standards, as defined in DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access, as nearly as possible. A copy of the Standards and Regulations is available at http://www.deldot.gov/information/pubs_forms/manuals/subdivisions/pdf/Subdivision_Manual_Revision_1_proposed_060110.pdf. Because the proposed office and mini-storage facilities would be expansions of existing facilities with access on Lakeland Avenue and South State Street, those existing access points will need to be evaluated and improved as necessary.

- While DelDOT would encourage the developer to improve the private portion of Lakeland Avenue to meet State standards and to dedicate a right-of-way there to public use but DelDOT does not require that they do so. Many changes to the existing mobile home park would be needed to do that, and the head-in perpendicular parking now proposed along the north edge of the subject land would need to be eliminated.
- Be advised that the standard general notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision date of May 21, 2014 for the Record/Site Plan and Construction Plan general notes and the Temporary Traffic Control general notes. The notes can be found at http://www.deldot.gov/information/business/subdivisions/DelDOT_Development_Coordination_Plan_Sheet_Notes.doc.
- Please check to determine whether any utilities will need to be relocated as part of this project.

The Developer/Owner will schedule a pre-submittal meeting with DelDOT to discuss improvements and requirements mentioned above and also other anticipated comments from DelDOT to incorporate into the design.

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

Sea Level Rise

- A portion of the planned development area, along the Isaac Branch, lies within an area that will be subject to direct and permanent inundation from sea level rise (<http://de.gov/slrmap>). Sea levels in Delaware have risen by about a foot over the past century (NOAA, 2014). This rate of sea level rise is likely to accelerate in the coming decades as a result of global climate change and local subsidence. Accelerated sea level rise will result in permanent flooding of low-lying coastal areas and increased risk of flood damage during storms (DNREC, 2012).

DNREC Preliminary Land Use Service maps depicting future inundation risk from sea level rise indicate that approximately .48 acres of this site out of 7.10 acres or 7 percent could be inundated by sea level rise of 1 meter. In the short-term, sea level rise on this parcel, combined with periodic coastal flooding events, may result in repetitive flood damage to homes within this neighborhood and significant difficulties maintaining storm water, drainage and other infrastructure. In the long-term, this increased flood and inundation risk could result in costly public and private flood abatement and drainage projects and an eventual abandonment of homes.

- Recommendations:
 - Lots within flood prone areas should be eliminated.
 - Any structures that are built within an area mapped as both floodplain and sea level rise zone should be constructed with 18 inches of freeboard plus additional freeboard to accommodate future sea levels.
 - Filling lots to elevate them to above base flood elevation is discouraged.
 - Access roads should be designed to be flood resilient for the entirety of its design life span. This includes ensuring that the roadway functions for the 1% chance flood plus anticipated future sea level rise.

References:

NOAA (National Oceanic and Atmospheric Administration). (2014). Mean Sea Level Trend, Lewes, DE. Retrieved from http://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?stnid=8557380.

DNREC Delaware Coastal Programs. (2012). Preparing for Tomorrow's High Tide: Sea Level Rise Vulnerability Assessment for the State of Delaware. Dover, DE: Department of Natural Resources and Environmental Control. Retrieved from <http://de.gov/slrva>.

We thank you for the information regarding the Sea Level Rise. The developer will take the above information into consideration during the design process of the site.

Wetland Buffers

- Instead of 25 feet, a minimum 100-foot buffer should be left intact around the perimeter of wetlands on the site to protect their function and integrity. This recommendation is based on peer reviewed scientific literature that shows an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. Upland buffers also serve as habitat for many terrestrial species that are dependent on aquatic and wetlands habitats for a portion of their annual life cycle. Lot lines, roadways, and infrastructure should not be placed within this buffer zone.

The developer will take the above information into consideration during the design process of the site. If impacts to the buffer are impacted, the developer will make every effort to minimize those impacts.

Soils Assessment

- Based on soils survey mapping update, mostly well-drained soil mapping units (HkB & HkC) were mapped on subject parcel.

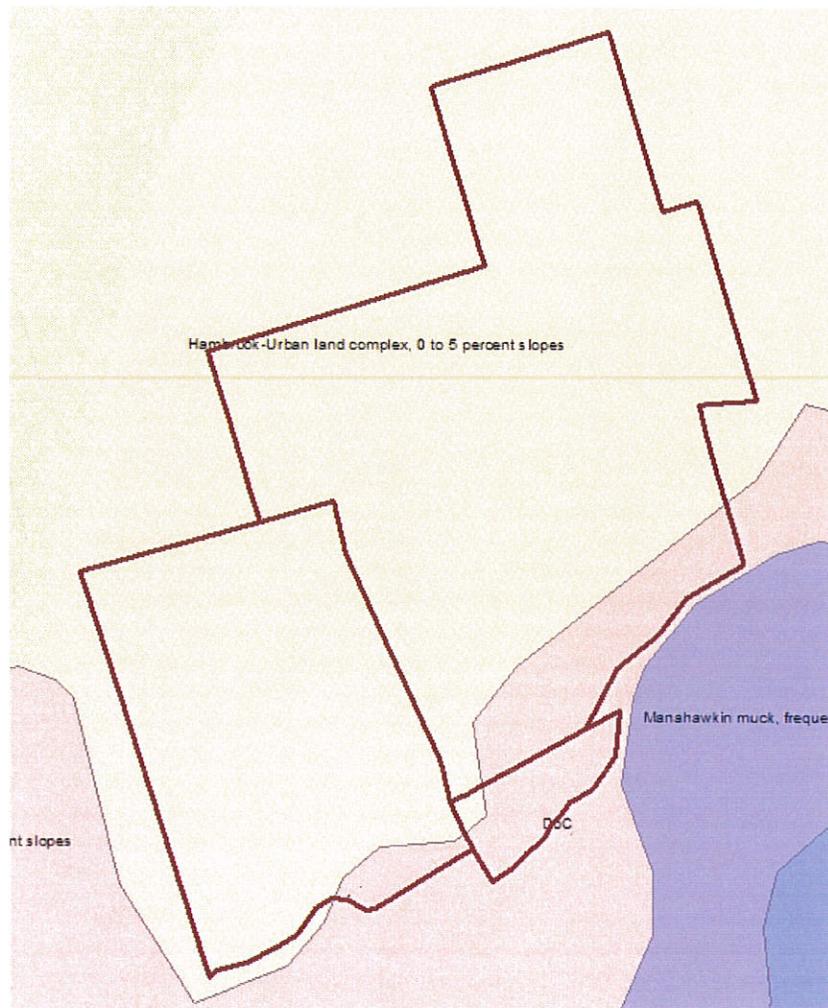


Figure 1: NRCS soil survey mapping update in the vicinity of the proposed project

Additional information on TMDLs and water quality

- A Pollution Control Strategy (PCS) to achieve the required TMDL nutrient and bacterial load reduction requirements has been established for the St. Jones watershed. The web link for the St. Jones PCS strategies is as follows: <http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedManagementPlans.aspx>
- DNREC strongly encourages the applicant reduce nutrient and bacterial pollutants through voluntary implementation of the following recommended BMPs:
 - DNREC strongly encourages the applicant to consider additional native woody tree/shrub/herbaceous plantings, wherever possible.
 - A United States Army Corps of Engineers (USACE) approved wetlands delineation is strongly recommended.
 - Maintain or establish a 100-foot minimum buffer width from all wetlands. 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 the water quality draining to 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 waterbodies and delineated wetlands (i.e., USACE approved delineation). According to the PLUS application, the applicant is proposing a 25 foot buffer from a wetland/stream; this buffer width is well short of the recommended minimum 100 foot buffer width necessary for protecting water quality.

- Calculate post-construction surface imperviousness with all forms of created surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, roads, and wastewater disposal system) included in the calculation.
- Use of pervious paving materials as a substitute for conventionally paved materials (e.g., concrete or asphalt) is a strongly recommended BMP to help reduce pollutant runoff from parking lots and roads in this project.
- Use of green-technology storm water management structures (in lieu of open-water management structures) and raingardens as BMPs to reduce nutrient pollutant impacts. Please contact Lara Allison for further information on raingardens at 739-9922.
- 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. DNREC strongly encourages the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact Jen Walls or John Martin at 302-739-9939 for more information on the protocol.

The post construction impervious area will be discussed with Kent Conservation District to determine the appropriate type/area for stormwater management purposes.

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.

If contamination is encountered PVC piping will be utilized, also any tank installed per above guidelines will be registered or approved by TMS.

Additional information on hazardous waste sites

- Site Investigation Restoration Section (SIRS) 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.

The Developer will take into consideration the recommendation above, before proceeding with development of this site. Mediation will be performed if a release of a hazardous material is determined by the Department.

Additional information on air quality

- The overall scope includes 7.10 acres with a few trees throughout and a forested area to the southeast. This vegetation provides a buffer between the properties and an adjacent wetland extending from Isaac Branch. While the developer indicates that zero acres of forest are to be removed for this project, the concept layout appears to show some development activity in the forested area. Furthermore, the developer indicates that zero acres are proposed for “open space”. DAQ encourages the developer to clarify its intent regarding the forested area along the adjacent wetland.
- New businesses may emit, or cause to be emitted, additional 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; Delaware currently violates federal health-based air quality standards for ozone,
 - The emission of greenhouse gases which are associated with climate change, and
 - The emission of air toxics.
- Air emissions generated from new businesses 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, and
 - All transportation activity.

- Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) for the project could not be quantified. DAQ was able, however, to quantify the mobile emissions based on the proposed daily trip data presented in the application and data taken from the ITE Trip Generation Manual, 8th Edition. Table 2 represents the actual impact the Lakeland Storage Facility project may have on air quality. This impact may change if the percentage of vehicle trips attributable to trucks, excluding vans and pick-up trucks, exceeds the less-than two percent indicated in the application.

| Emissions Attributable to Lakeland Storage Facility (Tons per Year) | Volatile Organic Compounds (VOC) | Nitrogen Oxides (NOx) | Sulfur Dioxide (SO ₂) | Fine Particulate Matter (PM _{2.5}) | Carbon Dioxide (CO ₂) |
|---------------------------------------------------------------------|----------------------------------|-----------------------|-----------------------------------|----------------------------------------------|-----------------------------------|
| Mobile | 1.1 | 1.4 | * | * | * |

(*) Indicates data is not available

- Note that emissions associated with the actual construction of the business, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.
- DNREC encourages sustainable growth practices that:
 - Control sprawl;
 - Preserve rural and forested areas;
 - Identify conflicting land use priorities;
 - Encourage growth on previously developed sites and denser communities while at the same time protect our diminishing land base;
 - Coordinate transportation, housing, environment, and climate protection plans with land use plans; and
 - Demonstrate that communities can achieve the qualities of privacy, community, and contact with nature without degrading the natural environment or generating unacceptable environmental costs in terms of congestion, use of natural resources, or pollution.
- Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:
 - Constructing with only energy efficient products. Energy Star qualified products are up to 30% more energy efficient. Savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of energy efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.

- Offering geothermal and/or photo voltaic energy options. These systems can significantly reduce emissions from electrical generation and from the use of oil or gas heating equipment.
- Constructing with high albedo, high solar reflectance materials. This includes roofing and hardscape. These materials help to reduce heat island impacts and, by extension, help to minimize the potential for localized ground-level ozone formation. These materials also help reduce demands on air conditioning systems and save on energy costs.
- Providing shade for parking areas. Approaches may include architectural devices, vegetation, or solar panels. Providing shade for parking areas helps to reduce heat island impacts, and, by extension, helps to minimize the potential for localized ground-level ozone formation. Such measures can also have the additional benefit of channeling or infiltrating stormwater.
- Encouraging the use of safe multimodal transportation. This measure can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk, 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 is 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, particularly those between the site and adjacent residential areas. Trees reduce emissions by trapping dust particles and replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development. The applicant should submit a plan to the DNREC DAQ which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Lakeland Storage Facility project.

The project will comply with all regulatory requirements.

Source Water Protection Areas

- The DNREC Water Supply Section has determined that a significant portion of the proposed project falls within an excellent ground-water recharge area. In addition, a wellhead protection area for Kent County lies within the project boundaries (See Map). This well is part of the Tidewater Utilities Lakeland Mobile Home Park public water system.

Excellent ground-water recharge potential areas are near-surface areas within which precipitation infiltrates the land surface to the unconfined aquifer at a more rapid rate than other areas. Kent County has approximately 14 percent of its total area classified as “excellent” recharge. DNREC Water Supply Section recommends that that portion of the

new development within the excellent ground-water recharge area not exceed 20% impervious cover. The purpose of an impervious cover threshold is to minimize loss of recharge (and associated increases in storm water) and protect the quality and quantity of ground water and surface water supplies (DNREC, 1999).

Wellhead protection areas are surface and subsurface areas surrounding a public water supply well where the quantity and quality of ground water moving toward such wells may be adversely affected by land use activities. DNREC recommends that Parcels of land within one-hundred fifty feet of the well annulus be preserved in a natural condition with the exception of impervious surface limited to building and access associated with the well and distribution and treatment facilities and their maintenance. In addition, because the wellhead protection area the source of public drinking water, 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.

The Owner / Developer will take the wellhead protection area into consideration during design to minimize impacts to this area.

On behalf of the Developer we thank the State for providing us with these comments. Please contact me at (302) 424-1441 if you have any questions or need additional information.

Sincerely,
Davis, Bowen & Friedel, Inc.



Jamie Sechler, P.E.
Associate

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CC: Derrick Strine