STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION

May 21, 2013

Mr. Mark Parker
Becker Morgan Group
309 South Governor's Avenue
Dover, DE 19904

RE: PLUS review – 2013-04-07; SPCA Commercial

Dear Mr. Parker:

Thank you for meeting with State agency planners on April 24, 2013 to discuss the proposed plans for the SPCA Commercial site located at 459 Stanton Christiana Road near Newark.

According to the information received, you are seeking a rezoning of 9.79 acres from BP to CR for 20,825 sq. ft. of retail services including a fast food restaurant, a convenience store with gas pumps, and a general retail building.

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 project is located in Investment Level 2 according to the *State Strategies for Policies and Spending*. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas.

Code Requirements/Agency Permitting Requirements

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There are no known historic or cultural resources such as an archaeological site or National Register-listed property on this parcel. However, if any development project does proceed on this parcel, it is still important that the developer be aware of the Delaware Unmarked Human Burials and Human Skeletal Remains Law, which is outlined in Chapter 54 of Title 7 of the Delaware Code.

  Abandoned or unmarked family cemeteries are very common in the State of Delaware. They are usually in rural or open space areas, and sometimes near or within the boundary of an historic farm site. Even a marked cemetery can frequently have unmarked graves or burials outside of the known boundary line or limit. Disturbing unmarked graves or burials triggers 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 that pertains 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 should consider hiring an archaeological consultant to examine the parcel for potential historic or cultural resources, such as a potential archaeological site, a cemetery or unmarked human remains. Furthermore, 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. Furthermore, 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 .

Department of Transportation – Contact Bill Brockenbrough 760-2109

- The applicant has requested a waiver of New Castle County and DelDOT requirements that a Traffic Impact Study (TIS) be performed and we anticipate the County asking us for concurrence regarding some aspects of that request. DelDOT's regulations in this regard are found in Section 2.3.4 of the Standards and Regulations for Subdivision Streets and State Highway Access. The applicant bases their request on the fact that the site is located in the Churchmans Crossing Area. Churchman's Crossing was the subject of an area study in 1997, and DelDOT and the County have agreed that it resembles a Transportation Improvement District (TID) in some ways.

  The theoretical basis for such a waiver, in both DelDOT and County regulations, is that the study prepared in creating the TID has already examined all transportation impacts of development in the District, determined what improvements are needed to address those impacts and established a plan, if not an impact fee, to effect those improvements. While much of that was true for Churchmans Crossing in 1997, and DelDOT has monitored conditions in the study area since then, we no longer have the level of information about the study area that we did then.

  As DelDOT understands it, even when they waive their requirement that a TIS be performed, New Castle County requires as a condition of plan approval that all intersections that a TIS would address be improved as necessary to operate at Level of Service (LOS) D or better. As mentioned above, we no longer have the level of information about the Churchmans Crossing Area that we did in 1997. To satisfy the County's information requirements, either a TIS or a Traffic Operational Analysis (TOA) similar or identical in scope to a TIS would be needed.

  While DelDOT has not received it yet, they understand that the applicant's engineer is at work on such a TOA. Whether they can meet the County's substantive requirements, i.e. to attain LOS D at all necessary intersections, has yet to be determined.

- Apart from satisfying County requirements, because of the short distance between the proposed site entrance and Delaware Route 7, DelDOT is concerned that this pair of intersections could operate poorly. Therefore, in accordance with Section 3.9 of the Standards and Regulations for Subdivision Streets and State Highway Access, DelDOT would require a TOA to address those two intersections regardless of what the County may require. This situation has been explained to the developer's engineer and we expect the TOA to address our concerns as well as any County requirements.

- In accordance with Section 3.5.4.2 of the Standards and Regulations for Subdivision Streets and State Highway Access, we expect to require sidewalks or a shared use path along the property frontage on the Route 7 Frontage Road. Typically we would require these facilities to be in a 15-foot wide permanent easement more or less parallel to the right-of-way. Given the geometry of the frontage road and its associated right-of-way, an alternative design may be appropriate.

Department of Natural Resources and Environmental Control – Contact Bahareh van Boekhold 735-3495

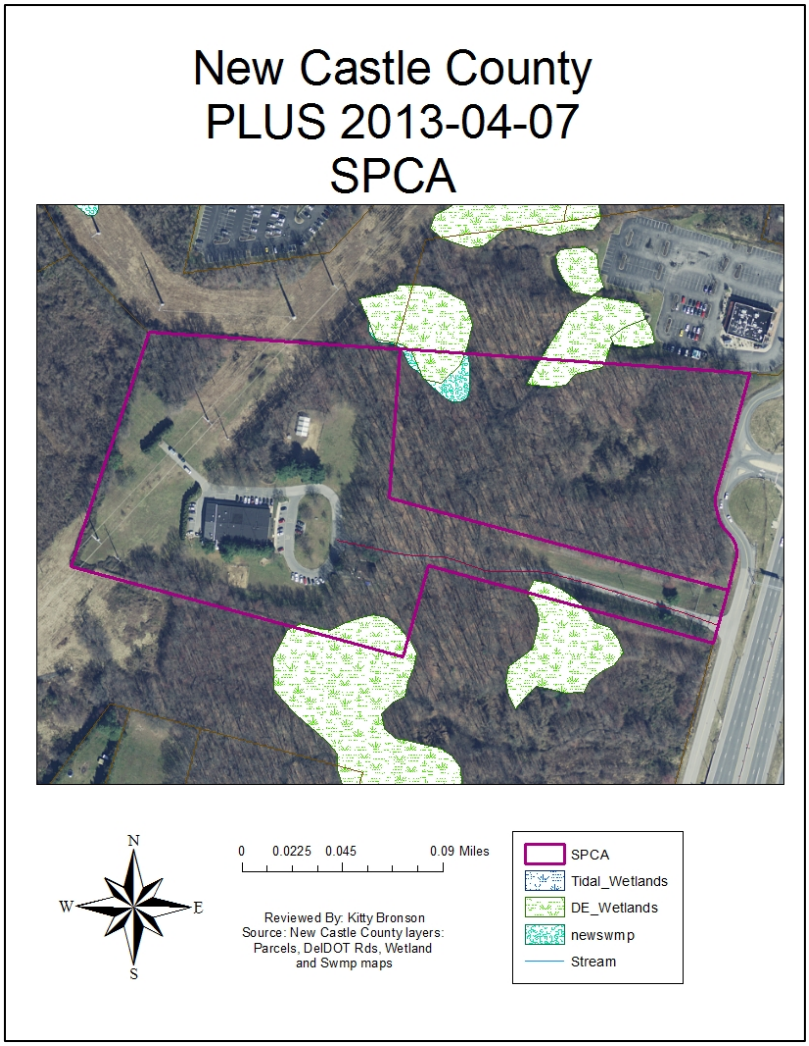
Wetlands

- State regulated wetlands ARE NOT located on 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. 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 NOT likely to be located on this property based on a review of aerial photographs, State Wetland Mapping Project (SWMP) maps, Soil Surveys and/or USGS topographic maps. 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. 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/or USGS topographic maps. According to our GIS SWMP maps, there are wetlands regulated by the U.S. Army Corps of Engineers on the edge of both parcels. We suggest contacting them for an on-site inspection**.** Waters of the United States include the following: navigable waters of the United States; wetlands; tributaries to navigable waters of the United States, including adjacent wetlands and lakes and ponds; interstate waters and their tributaries, including adjacent wetlands; and all other waters of the United States not identified above, such as isolated wetlands, intermittent streams, and other waters that are not part of a tributary system to interstate waters or to navigable waters of the United States, where the use, degradation or destruction of these waters could affect interstate or foreign commerce.

The extent of Federal jurisdiction over Waters of the United States is determined by the U.S. Army Corps of Engineers and is based on site specific conditions. Therefore, an on-site inspection by an environmental consultant is recommended to determine if Waters of the U.S. are located on the property and the limits of Federal jurisdictional. The U.S. Army Corps of Engineers can be contacted at (215) 656-6728 or online at http://www.nap.usace.army.mil/cenap-op/regulatory/regulatory.htm.



TMDLs

- Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Christina River 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 specific land use practices that support these desired use goals. The project is located in the greater Christina River Basin, specifically within the Christina River watershed. In the Christina River watershed, post-development nitrogen and phosphorus loading must be capped at the pre-development or baseline loading rate (or a 0% post-construction increase in N & P in Delaware's portion of the Christina River Basin) to meet the required TMDL for each nutrient. Moreover, bacteria must be reduced by 29-95% (depending on location) to meet the required TMDL. The specific required nutrient and bacterial requirements and background information is in the report entitled "*Christina River Basin High-Flow TMDL*" by the EPA. This report can retrieved from the following web link: http://www.epa.gov/reg3wapd/tmdl/pa_tmdl/ChristinaMeetingTMDL/index.htm

- 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 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 do 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 two Underground Storage

Tanks associated with a Former EXXON Station DE and DTCC-Del Tech Stanton, located within 1000 feet of the proposed project.

Sediment and Stormwater Program

- A sediment and stormwater plan will be required for 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 possible. 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 New Castle County Department of Land Use Engineering Section. Contact the Department of Land Use at (302) 395-5470 for details regarding submittal requirements and fees. (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101)

Water Resource Protection Areas

- The DNREC Ground-Water Protection Branch (GPB) has determined that the project does not fall within any wellhead protection or excellent groundwater recharge potential areas. However, the parcel falls entirely within the Red Clay Creek Drinking Water Watershed. This area is s a Level 2 Source Water Protection Area for the New Castle County.

  Level 2 Source Water Protection Areas are the delineated watershed upstream from public drinking water supply intakes. Land Use or Land Activity within these areas has the potential to influence water quality or quantity to the public drinking water system. DNREC recommends referring to the NCC Unified Development Code for regulations regarding development in these water resource protection areas.

Hazardous Waste Sites

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C., Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.

- There is one Site Investigation and Restoration Section (SIRS) site located within a ½ mile radius of the proposed area. The SIRS site is the Hampton Inn – Christina (DE-1541).

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 is located directly on the proposed project parcel:
  - Delaware SPCA, Facility: 3-000422, Project: N8703005 (Inactive)
    - Heating fuel UST compromised with water infiltration; lines were replaced; project closed January 1991.
  - Project: N9808134
    - Limited notes in file; project closed August 1998.

- The following confirmed LUST projects are located within a quarter mile from the proposed project area:
  - Hampton Inn Christiana Site, Facility: 9-000164, Project: N1302020 (Active)
  - Former Exxon Station DE, Facility: 3-001595, Project: N9508206 (Inactive)
  - Keystone Automobile Club, Facility: 3-001071, Project: N0711118 (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 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 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.
7 DE Admin. Code 1144 – Control of Stationary Generator Emissions	• Ensure that emissions of nitrogen oxides (NO_x), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO_2), carbon monoxide (CO), and carbon dioxide (CO_2) from emergency generators meet the emissions limits established. (See section 3.2). • Maintain recordkeeping and reporting requirements.
7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles	• Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

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

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):

- **Fire Protection Water Requirements**:
  - Water distribution system capable of delivering at least 1500 gpm for 2-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 Mercantile sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

- **Fire Protection Features:**
  - All structures over 10,000 Sq. Ft. aggregate, such as "Building 2", the proposed multi-tenant building will require automatic sprinkler protection installed.
  - Buildings greater than 3-stories or more, over 35 feet, or classified as High Hazard or greater than 10,000 sq. ft. (such as the "Building 2", the proposed multi-tenant building) are required to meet fire lane marking requirements
  - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
  - Show Fire Lanes and Sign Detail as shown in DSFPR

- **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 the existing Service 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.

- **Gas Piping and System Information:**
  - Provide type of fuel proposed, and show locations of bulk containers on plan.

- **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)
  - Note indicating if building is to be sprinklered
  - Name of Water Provider
  - Letter from Water Provider approving the system layout
  - Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
  - Provide Road Names, even for County Roads

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 recommends that the applicant have their site engineer contact our Subdivision Manager for this part of New Castle County, Mr. Joshua Schwartz, to discuss our requirements with regard to site and entrance plans. While we have no further comments on the plan presented here, we anticipate having some following our review of the TOA. Mr. Schwartz may be reached at (302) 760-2768.

Department of Natural Resources and Environmental Control – Contact Bahareh van Boekhold 735-3495

Habitat and Species of Greatest Conservation Need

- Based on information below, upland buffers are extremely important to wetland dependent species that live in these buffer areas for the majority of their life cycle. They are also utilized by species such as spotted turtle for nesting, for seasonal movements and in general. **It is recommended that the applicant consider providing at least 100ft buffers to all wetlands rather than the minimally required 50ft. In terms of water quality, peer reviewed research shows that buffer values increase noticeably with widths of 100 or more feet. Buffers necessary to support wildlife in some cases need to be much larger, so this is the minimum recommended. These buffer areas should be not be comprised of mowed lawn but rather of existing vegetation or planted with Delaware native plant species.**

  The applicant is proposing 39 more parking spaces than what is required. In order to preserve a greater area of open space and reduce impervious surface, the applicant could consider the feasibility of reducing the number of parking spaces and implementing other measures that would reduce the amount of impervious surface. It is possible with less % of impervious surface the amount of space necessary for stormwater management could be reduced as well. Then the space savings from the reduction in parking and stormwater could be incorporated into a reconfigured site plan that would allow 100-foot wide wetland buffers rather than only 50 feet.

DNREC scientists have not surveyed this project area; therefore, they are unable to provide specific 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 survey information, they offer the following comments:

- ***Species of Greatest Conservation Need.*** Spotted turtles (*Clemmys guttata*) have been documented just north of this project area and within wetlands that are part of a network of isolated wetlands on several adjacent parcels. This small semi-aquatic turtle is a Species of Greatest Conservation Need[1] (Tier 1[2]) as listed in the Delaware Wildlife Action Plan[3] due primarily to collection pressure and habitat loss. This species depends on shallow bodies of water with a soft bottom and aquatic vegetation and ponds surrounded by relatively undisturbed upland buffers are optimal. They will bask on the water's edge, on logs or clumps of vegetation. Spotted turtles will move among wetlands at a site and can spend a significant amount of time on land during the summer. They nest in late May to early July in upland areas. During cold weather they will hibernate in the muddy bottoms of wetland areas.

- ***Seasonal pond wetland.*** DNREC's GIS database indicates that there is potentially a unique and uncommon wetland feature referred to as a coastal plain seasonal pond (or 'seasonal pond wetland') in the forest on this parcel. This wetland type is usually mapped as an isolated wetland and is not afforded regulatory protection, but has high ecological value. This wetland type provides breeding habitat for a variety of animals, often supports a unique assemblage of plants, and a high diversity of species, many of which are considered rare. The ecological integrity of a seasonal pond wetland is maintained by fluctuating levels of groundwater and by the flooding and drying cycles that are critical for the diversity of plant species that form the habitat in the pond. Fish are typically absent from wetlands that dry down for part of the year which is why some rare amphibian species only breed in these types of wetlands. Because fish prey upon their eggs and larvae, a key characteristic of their breeding habitat is a lack of fish.

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[1] 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).

[2] **Tier 1** Species of Greatest Conservation Need (SGCN) are those that are most in need of conservation action on order to sustain or restore their populations. They are the focus of the Delaware Wildlife Action Plan (DEWAP), which is based on analyzing threats to their populations and their habitats, and on developing conservation actions to eliminate, minimize or compensate for these threats.

[3] The Delaware Wildlife Action Plan (DEWAP) 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. This document can be viewed via the Division of Fish and Wildlife's website at http://www.fw.delaware.gov/dwap/Pages/default.aspx.

Upland forest buffers around these seasonal ponds not only protect water quality, but provide critical habitat for amphibians and reptiles, such as the spotted turtle noted above. The *Partners for Amphibian and Reptile Conservation* publication "*Habitat Management Guidelines for Amphibian and Reptiles of the Northeastern United States*" (Mitchell et al 2006[4]) states that ponds will lose their amphibian and reptile populations if the supporting uplands are not also protected. For example, salamanders spend most of their life cycle in the forest surrounding these seasonal pond wetlands, only using the wetland during brief breeding and developmental periods early in the spring before the wetland dries out for the summer and fall. In a summary paper reviewing 40 studies of amphibian terrestrial movements, it was documented that salamanders travel between 117 and 268 meters from the edge of the primary wetland (Semlitsch and Bodie 2003[5]) into surrounding forest habitat.

Soils Assessment

- Based on soils survey mapping update, Urban Land (Up) was the only soil mapping unit mapped on subject parcel. Urban land is a soil that has been extensively modified through excavation, filling, and grading practices so that it no longer exhibits the natural characteristics of native undisturbed soils. Thus Urban Land has variable or indeterminate drainage. As a consequence, we strongly recommend a certified and licensed soil scientist (ARCPACs certified and Class D licensed) to make a site-specific evaluation of the soils in this parcel. Please contact the Underground Discharges Branch at 739-9948 for a list of soil scientists.

[4] Mitchell, J.C., A.R. Breisch and K.A. Buhlmann. 2003 Habitat Management Guidelines for Amphibians and Reptiles of the Northeastern United States. Partners in Amphibian and Reptile Conservation, Technical Publication HMG-3, Montgomery, Alabama. 108 pgs.

[5] Semlitsch, R.D. and J.R. Bodie. 2003. Biological criteria for buffer zones around wetlands and riparian habitats for amphibians and reptiles. Conservation Biology 17:5.

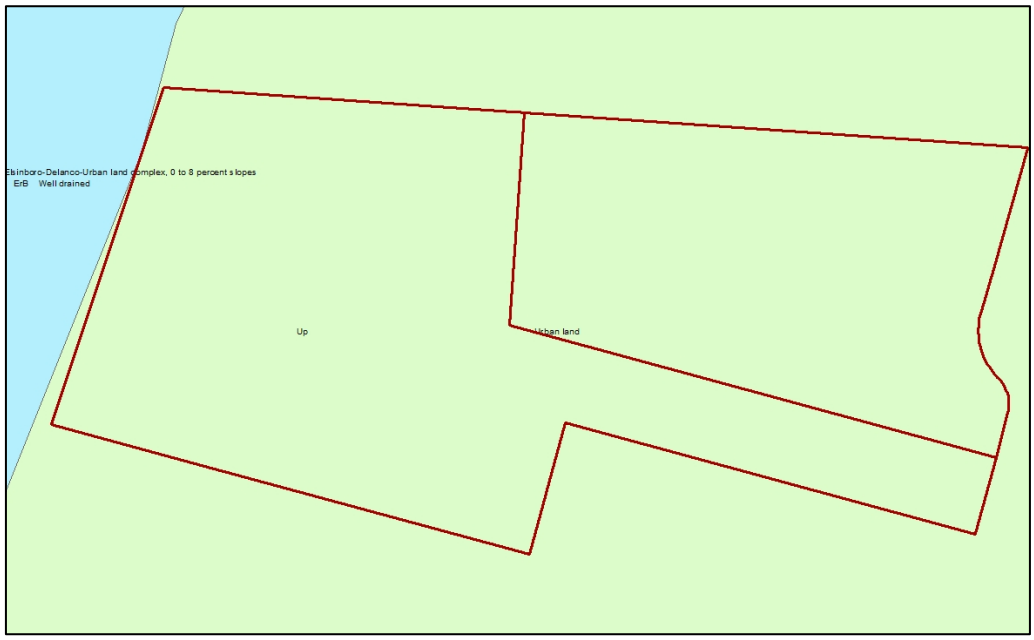

Figure 1: NRCS soil survey mapping update in the vicinity of the proposed construction.

Additional information on TMDLs and water quality

- In response to concerns about the need for reducing nonpoint source nutrient (nitrogen and phosphorus) and bacterial pollutants to levels sufficient to meet the prescribed TMDL reduction requirements in Delaware's portion of the Christina River Basin, a multifaceted and comprehensive process known as a Pollution Control Strategy (PCS) has been developed to enable such reductions. Specifically, a PCS is a combination of best management practices and control technologies that reduce nutrient and bacterial pollutant runoff loading in waters of a given watershed to level(s) consistent with the TMDL(s) reduction levels specified for that watershed. The PCS for the Christina River watershed consists of 41 recommendations from the following four areas: storm water, open space, wastewater, and agriculture. Additional information about Christina River PCS is available from the follow web link: http://www.dnrec.delaware.gov/swc/wa/Pages/ChristinaBasin.aspx

- In further support of the PCS, the applicant is also strongly urged to reduce nutrient and bacterial pollutants through voluntary commitment to the implementation of the following recommended BMPs:

    - United States Corps of Engineers (USACE) approved wetlands delineation is strongly recommended. According to information presented in the PLUS application, a wetlands delineation has been conducted but not yet approved by the USACE.

DNREC recommends that the applicant continue to pursue a USACE approved wetlands 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 (field delineated and approved by the USACE).

- Removal of forest cover to accommodate storm water management structures is strongly discouraged. It is apparent that the applicant intends to remove much of the existing forest cover (4.3 acres of a total 7.7 acres according to the PLUS application); removal of forest cover will likely increase nutrient runoff or discharges into both surface and groundwater. We strongly recommend the applicant pursue green-technology storm water management practices rather than open-water storm water management practices.

- 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, and roads) included in the calculation.

- The proposed project will significantly increase the amount of constructed surface imperviousness on this parcel which will significantly increase the potential for greater surface water flooding events while affecting the water quality of streams and water bodies further downstream. Therefore, the use of rain gardens, and green-technology stormwater management structures (in lieu of open-water management structures) as BMPs to mitigate or reduce pollutant runoff and flooding events is highly recommended.

- The applicant should voluntarily assess the nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the “Nutrient Load Assessment protocol.” The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their project’s impact(s) on baseline water quality. We strongly encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact the Watershed Assessment Section at 302-739-9939 for more information on the protocol.

Additional information on hazardous waste site

- SIRS strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment **(including a title search to identify environmental covenants)** in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.

  Additional remediation may be required if the project property or site is re-zoned by the county.

- There is 1 SIRS site located within a ½ mile radius of the proposed area. The SIRS site is the Hampton Inn – Christina (DE-1541).
  Should a release or imminent threat of a release of hazardous substances be discovered during the course of future 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). Site Investigation and Restoration Section (SIRS) should also be contacted as soon as possible at 302-395-2600 for further instructions.

Additional information on tank management.

- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

- If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS.

Additional information on air quality

- DNREC encourages developers and builders to consider all sustainable growth practices in their design, but we believe, however, that the air quality impacts associated with the project should be completely considered. Commercial spaces may emit, or cause to be emitted, air contaminants into Delaware's air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

  - Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
  - The emission of greenhouse gases which are associated with climate change, and
  - The emission of air toxics.

- Air emissions generated from commercial spaces include emissions from the following activities:

  - Area sources such as painting, maintenance equipment and the use of consumer products like roof coatings and roof primers.
  - The generation of electricity needed to support the commercial space, and
  - All transportation activity.

- Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) for this project could not be quantified. DNREC was, however, able 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 – Projected Air Quality Emissions represents the actual impact the Delaware SPCA project may have on air quality.

Table 2: Projected Air Quality Emissions for Delaware SPCA

Emissions Attributable to Delaware SPCA (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 Source	48.2	63.6	*	*	*

(*) *Indicates data is not available.*

Note that emissions associated with the actual construction of the road, 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.

  - **Providing tie-ins to the nearest bike paths and links to any nearby mass transport system**. These measures can significantly reduce mobile source emissions. **For every vehicle trip that is replaced by the use of a sidewalk, a bike path or mass transit, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year.**

  - **Using retrofitted diesel engines during construction**. This includes equipment that are on-site as well as equipment used to transport materials to and from site.

  - **Using pre-painted/pre-coated flooring, cabinets, fencing, etc**. These measures can significantly reduce the emission of VOCs from typical architectural coating operations

  - **Planting trees in vegetative buffer areas**. Trees reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, thereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

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

Delaware State Fire Marshall's Office – Contact R. T. Leicht 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.

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: New Castle County