



**STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION**

May 17, 2012

Jeff Clark
Land Tech Land Planning
118 Atlantic Avenue, Ste. 202
Ocean View, DE 19970

RE: PLUS review – 2012-04-02; Castaways Bethany

Dear Mr. Clark:

Thank you for meeting with State agencies on April 24, 2012 to discuss the proposed plans for the Castaways Bethany project located off Cedar Neck Road, north of Ocean View.

Based upon your application you have ask the PLUS reviewers to consider a rezoning of the 38.98 acres from C-1 and MR to C-1, AR, and MR for a proposed RV & Cottage resort with a water park facility.

As you consider these comments, please note that any future 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 Sussex 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 cultural or historic resources such as an Archeological Site, a National Registered listed property, or a potential historic property of any kind on or

within this parcel (or property). Although there does not seem to be any known or identified known cultural or historic resources on the parcel is it still important that the developer be aware of Delaware's 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, and often they are on historic farm sites, rural areas or open space lands. Disturbing unmarked burials triggers 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. The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area for the presence of such a cemetery. If a cemetery is discovered, it is very costly to have it archaeologically excavated and the burials moved. In the event of such a discovery, the Division of Historical & Cultural Affairs recommends that the plans be re-drawn to leave the cemetery on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with a homeowners association or development. If you need or would like to read more information that pertains to cemeteries or unmarked human remains, please go to the following websites for additional information at www.history.delaware.gov/preservation/umhr.shtml and www.history.delaware.gov/preservation/cemeteries.shtml .

- Prior to any demolition or ground-disturbing activities (such as development or construction activities), the developer should consider hiring an archaeological consultant to examine the parcel for archaeological sites, such as 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. Any preconstruction activities without adherence to these stipulations may jeopardize the issuance of a permit or receipt of funding if it is determined that such opportunity to comment has been foreclosed. If you need further information or

additional details pertaining to the Section 106 process and the Advisory Council's role, please review the Advisory Council's website at www.achp.gov.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- Please refer to DeIDOT's Standards and Regulations for Subdivision Streets and State Highway Access (February 15, 2010) for the design of the site entrance. The website for the Standards and Regulations is:

http://www.deldot.gov/information/pubs_forms/

- Tax Parcel 1-34-09.00-21.00, the larger of the two subject parcels, was previously proposed for development as Seasons at Bethany. An entrance plan was approved for that development on September 26, 2007, but the entrance was never constructed. With the proposed change in use, that plan approval will need to be revisited. In accordance with Section 8.6 of the Standards and Regulations the developer will need to obtain both a Letter of No Objection and an entrance plan approval specific to the current development proposal.
- Also associated with Seasons at Bethany, a signal agreement was executed on August 31, 2007, between the State and Bethany Marina Liquidating Trust for the intersection of Cedar Neck Road (Sussex Road 357) and Fred Hudson Road (Sussex Road 360). In accordance with Section 3.10.1 of the Standards and Regulations, we will require the current developer to assume the same obligation. If it can be shown that the current developer has assumed responsibility for the 2007 agreement, it may not be necessary for them to enter a new agreement. The developer should contact Ms. Naa-Atswei Tetteh, an engineer in the Del-DOT Traffic Section, to determine whether a new agreement is needed. Ms. Tetteh may be reached at (302) 659-4097.
- Item 25 on the PLUS application states that the proposed development would generate 159 more trips per day than the “existing approved land uses.” We understand those uses to be the 63 townhouses and 80 condominiums contemplated in the plan for Seasons at Bethany and the existing self-storage facility, which we estimate to be about 35,000 square feet. By our calculations, the townhouses and condominiums would generate about 878 trips per day and the self-storage facility generates about 82 trips per day. Thus, if the proposed development would generate 159 more trips per day, we would expect that to be about 1,119 trips per day.
- Related to trip generation and traffic impact, we have four comments:
 - When the Seasons at Bethany was approved in 2007, The DeIDOT volume-based warrant for requiring a Traffic Impact Study (TIS) for a residential development was 2,100 trips per day. Consequently, no TIS was required or done for Seasons

at Bethany. However, later that year (effective in April 2008) DelDOT adopted revised regulations, lowering the threshold at which TIS are warranted. As specified Section 2.3.1 of the Standards and Regulations, TIS are warranted for developments generating more than 400 trips per day. Accordingly, they anticipate requiring a TIS for the development that is now proposed.

- Related to the TIS is the trip generation of the site. As might be expected, the PLUS application does not provide support for the statement that the trip generation would only be increased by 159 trips. DelDOT standard reference in this regard, the Institute of Transportation Engineers' Trip Generation report, does not provide daily trip generation rates or equations for Recreational Vehicle Parks. They understand that the trips were generated using the ITE data for Mobile Home Parks, but we calculate 1,038 trips on that basis or, by our calculations an increase of only 78 trips. DelDOT will need to reach agreement on the projected trip generation.
- Section 2.3.2 of the Standards and Regulations provides that where a TIS is required only because the volume warrants are met, and the projected trip generation will be less than 2,000 vehicles per day and less than 200 vehicles per hour, DelDOT may permit the developer to pay an Area Wide Study Fee of \$10 per daily trip in lieu of doing a TIS. DelDOT would permit them to do so in this instance.
- Section 3.9 of the Standards and Regulations provides that in evaluating access, DelDOT may require an Operational Analysis. While it is not contained in our regulations, DelDOT uses a threshold of 200 daily trips to determine when to begin considering the need for an Operational Analysis. A decision in this regard will be made at the pre-submittal meeting discussed below.
- As indicated on the DelDOT Meeting Request Form, available at <http://www.deldot.gov/information/business/>, because the site would generate more than 200 trips per day, a pre-submittal meeting is required. The purpose of such meetings, similar to PLUS meetings, is to identify problems with your plan so that they can be corrected before the plan enters the formal plan review process. Please complete and submit the form to request such a meeting.
- Referring to the Standards and Regulations, Section 3.4.1, Traffic Information, a traffic generation diagram is required.
- Section 3.4.1.2 of the Standards and Regulations specifies that for roadways with a posted speed limit of 35 miles per hour, all adjacent entrances within 300 feet of the site entrance must be shown on the site plan.

- Referring to the Standards and Regulations, Section 3.6.5, Dedication of Right-Of-Way, and Figure 3-3, Minimum Standards for Total Roadway Right-Of-Way, the project shall be required to dedicate 40 feet of right-of-way from the Cedar Neck Road centerline. When the Seasons at Bethany site plan was recorded (Plot Book 116, Page 165), a 20-foot strip was dedicated to public use, suggesting that the existing right-of-way was already 40 feet wide. Assuming that that is the case for the entire site frontage, the following plan note will be required, **“An additional 20’ of right-of-way is hereby dedicated to public use as per this plat.”**
- Referring to the Standards and Regulations, Section 1.4, Review Fees, the Initial Stage and Construction Stage review fees will be assessed for this project.
- In accordance with Section 3.4 of the Standards and Regulations, when submitting a site plan to obtain a Letter of No Objection for this project, following information will be required:

Initial Stage Fee Calculation Form
Initial Stage Review Fee
Gate-Keeping Checklist – Site Plan
Design Checklist – Record Plan*
Owners and Engineer’s name and e-mail address
Three (3) paper sets of the Site/Record Plan
Conceptual Entrance Plan
CD with a pdf of the Site/Record Plan
Submission of the Area-Wide Study Fee (If applicable)

*For the design checklist for the site plan, please refer to the Standards and Regulations, Appendix D, Checklist for Subdivision Record Plan Approval.

- Referring to the Standards and Regulations, Section 4.4, Commercial Entrance Plan Checklist, provides that an entrance plan shall be prepared prior to DelDOT issuing entrance approval. The following information will be required for Entrance Plan review:

Construction Stage Fee Calculation Form
Construction Review Fee
Gate-Keeping Checklist – Entrance Plan
Design Checklist – Entrance Plan**
Three (3) paper sets of the Entrance Plan
SWM Report and Calculations (If applicable)
CD with a pdf of the Entrance Plan

**For the design checklist for the entrance plan, please refer to the Standards and Regulations, Appendix D, Plan Review Checklist.

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

Wetlands

- According to the Statewide Wetland Mapping Project (SWMP) maps, non-tidal palustrine (PF01A7) and tidally-influenced estuarine wetlands (E2SS1/EM1P & E2EM1P) were mapped in the immediate area of the proposed project (See figure 1).

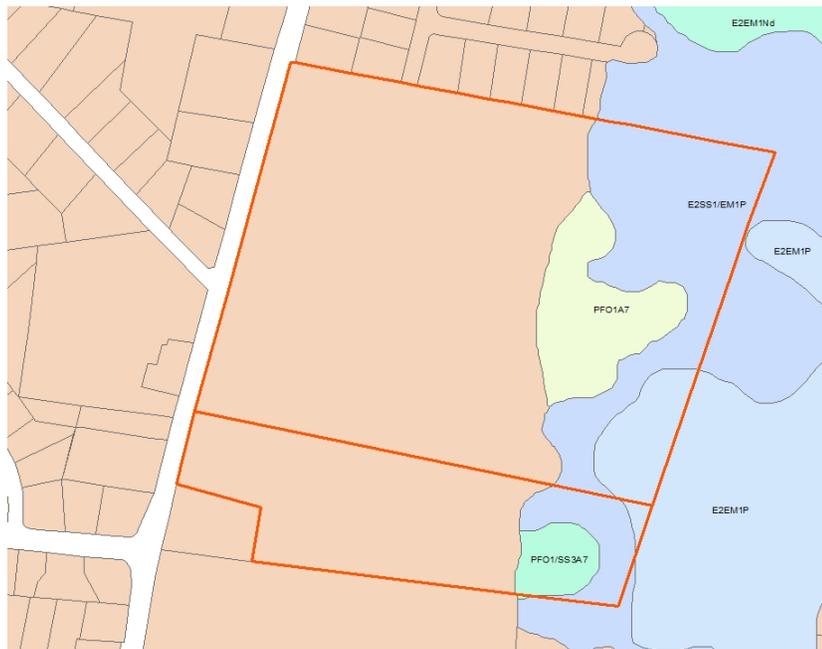


Figure1: SWMP mapping in the immediate vicinity of the proposed project

- The applicant is responsible for determining whether any State-regulated wetlands (regulated pursuant to 7 Del.C., Chapter 66 and the Wetlands Regulations) are present on the property. This determination can only be made by contacting the Division of Water's Wetlands and Subaqueous Lands Section at (302) 739-9943 and consulting the State's official wetland regulatory maps, which depict the extent of State jurisdiction. The area regulated by State law may be very different from the area under federal authority. No activity may take place in State-regulated wetlands without a permit from DNREC's Wetlands Section.
- In addition, most perennial streams and ditches and many intermittent streams and ditches are regulated pursuant to the Subaqueous Lands Act (7 Del.C., Chapter 72) and the Regulations Governing the Use of Subaqueous Lands. Ponds which are connected to other waters are also regulated, while isolated ponds are not. Any work in regulated streams, ditches or ponds requires a permit from the Wetlands and Subaqueous Lands

Section. An on-site jurisdictional determination is recommended in order to determine whether any regulated watercourses exist on the property. Please contact the Wetlands and Subaqueous Lands Section at (302) 739-9943 to schedule an on-site visit. Such appointments can usually be scheduled within 2 to 3 weeks.

When designing a project on a site with regulated watercourses, any extensive piping, filling or burying of streams or ditches in excess of the minimum needed for road crossings should be avoided. Where road crossings are necessary, bridge spans which avoid significant impacts to stream banks and channels should be used wherever possible. Where placement of culverts is unavoidable, culvert designs which utilize multiple barrels at different elevations to preserve a low flow channel are usually preferred. Contact the Wetlands and Subaqueous Lands Section for further information regarding preferred designs.

TMDLs

- The project is located in the greater Inland Bays watershed. In this watershed, Total Maximum Daily Load (TMDL) pollutant reduction targets have been developed by the State of Delaware (under the auspices of Section 303(d) of the 1972 Federal Clean Water Act) for nutrients (e.g., nitrogen, phosphorus), and bacteria. A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited water body” can assimilate and still meet State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; *State of Delaware Surface Water Quality Standards, as amended July 11, 2004*) to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. The TMDL for the Low Reduction zone of the Inland Bays watershed calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 40 percent reduction in bacteria from baseline conditions.
- A nutrient management plan is required under the *Delaware Nutrient Management Law (3 Del. C., 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>.
- The adopted Inland Bays Pollution Control Strategy regulation was published in the Delaware Register of Regulations on November 11, 2008 and is now an enforceable regulatory directive. A Pollution Control Strategy (PCS) is an implementation strategy that identifies the actions necessary (regulatory and nonregulatory) to systematically reduce the pollutant loading to a given water body, and meet the TMDL reduction requirements specified for that water body. These regulations can be reviewed at:

<http://regulations.delaware.gov/documents/November2008c.pdf>

And background information, guidance documents, and mapping tools can be retrieved from:

http://www.dnrec.state.de.us/water2000/Sections/Watershed/ws/ib_pcs.htm.

Water Supply

- The project information sheets state water will be provided to the project by Sussex Shores Water Company via a public water system. Our records indicate that the project is located within the public water service area granted to Sussex Shores Water Company under Certificate of Public Convenience and Necessity 89-CPCN-02.
- 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.

Water Resource Protection Areas

- The western portion of the project falls within an area of excellent ground-water recharge potential for Sussex County (see map).
- The site plan indicates that the water-slide park and swimming facility will be constructed in this area. These facilities and parking pads may require impervious cover. Impervious cover prevents precipitation from infiltrating through the soil to the water table aquifer. Impervious cover refers to structures including but not limited to roads, sidewalks, parking lots, and buildings. Any impervious cover within an area of excellent ground-water recharge potential area has the potential to have a negative effect the quality and quantity of drinking water available.
- Excellent Ground-Water Recharge Areas are those areas mapped by the Delaware Geological Survey where the first 20 feet of subsurface soils and geologic materials are exceptionally sandy. These soils are able to transmit water very quickly from the land surface to the water table. This map category (excellent) is an indicator of how fast contaminants will move and how much water may become contaminated (Andres, 2004).

Land use activities or impervious cover on areas of excellent ground-water recharge potential may adversely affect ground water in these areas.

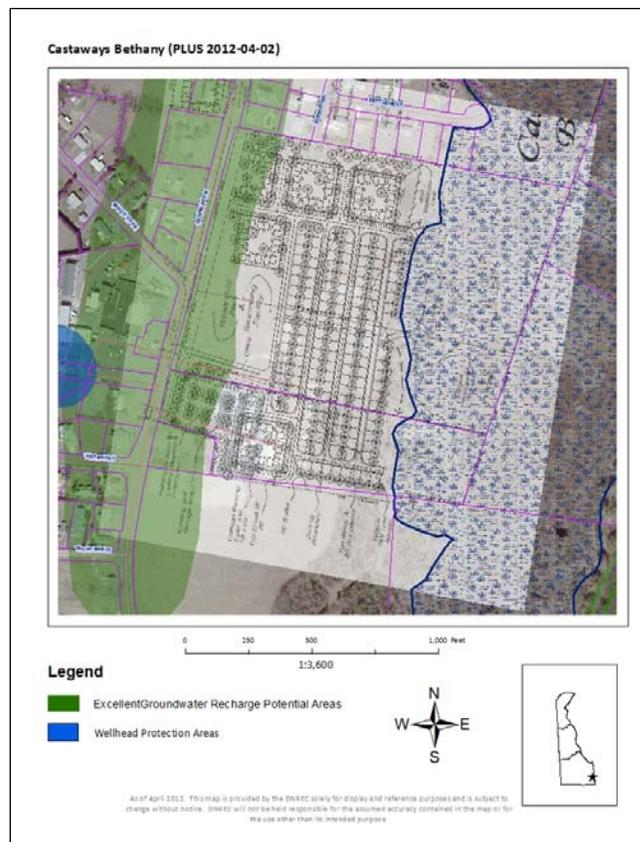
- Construction of a waterslide park and swimming facility will require excavation, hauling, and grading. The heavy equipment used in this phase has the capacity to compact and degrade the structure of the strata that defines the area as an excellent ground-water recharge area (Schueler, 2000). Changes to the structural soil properties may cause significant reduction in recharge capacity. Such facilities in excellent ground-water recharge areas have the potential to contaminate the ground water beneath it with chlorine and infiltrate into the aquifer.
- Although the Sussex County's Source Water Protection Ordinance meets the minimum standards of protection, this protection does not limit impervious cover in excellent groundwater recharge potential areas. Ground Water Protection Branch recommends keeping impervious cover to less than 35% but no greater than 60% provided the following criteria are met:
 - Perform an environmental assessment report showing that *water quality* as well as *water quantity* of post development recharge is equal to or greater than pre-development recharge (Kaufmann, 2005).
 - Quantify amount of recharge lost due to impervious cover and provide for onsite infiltration of water at least equal to or greater than pre-development recharge (Kaufmann, 2005).
 - Pretreatment of parking area runoff to remove dissolved chemical and nutrient loads prior to infiltration
 - Use Better Management Practices in the design, construction, and maintenance of a storm water management system designed to address water quality with respect to nutrient and other pollutant loads.
- In addition, because the excellent ground water recharge area can readily affect the underlying aquifer if contaminants are spilled or discharged across the area, the storage of hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program.

References

- Andres, A. Scott, 2004, Ground-Water Recharge Potential Mapping in Kent and Sussex Counties, Delaware: Delaware Geological Survey Report of Investigations No. 66, p. 14.
<http://www.udel.edu/dgs/Publications/pubform.html#investigations>
- Kauffman, G.J., Wozniak, S.L., and Vonck, K.J., 2005, *Delaware Ground-Water Recharge Design Manual*: Newark, DE, Water Resources Agency, University of Delaware, p. 31.

<http://www.wr.udel.edu/swaphome/Publications/SWPguidancemanual.html>

Schueler, T. R., 2000, The Compaction of Urban Soils, *in* Schueler, T.R., and Holland, H.K., eds., The Practice of Watershed Protection: Ellicott City, MD, Center for Watershed Protection, p. 752.



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 Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees. (Title 7, Delaware Code, Chapter 40 and Delaware Regulations, Title 7, Administrative Code, 5101)

Flood Management

- More than half of this parcel is located in the 1% annual chance floodplain for Indian River Bay. The location of the floodplain boundary is not located on the site plan. A large portion of the cottages are going to be required to be built to meet the County's floodplain regulations; there may also be a flood insurance requirement as well. There are also requirements for the RV's to be placed in the floodplain as well.

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.

Tank Management Section Please be aware:

- If a release of a Regulated Substance occurs at the proposed 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 following confirmed leaking underground storage tank (LUST) project is located within a quarter mile from the proposed project area:
 - Hocker's G&E Inc., Facility: 5-000182, Project: S1007068 (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 Section by calling 302-395-2500.

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:

- **Fire Protection Water Requirements:**
 - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 1000 feet spacing on centers.
 - Where a water distribution system is proposed for duplex type dwelling sites, the infrastructure for fire protection water shall be provided, including the size of water mains.
- **Fire Protection Features:**
 - For duplex buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan
- **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 subdivision from Cedar Neck Road must be constructed so fire department apparatus may negotiate it. If a “center island” is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.
 - 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.
 - Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
 - 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:**
 - Proposed Use

- Square footage of each structure (Total of all Floors)
 - National Fire Protection Association (NFPA) Construction Type
 - Maximum Height of Buildings (including number of stories)
 - Name of Water Provider
 - Letter from Water Provider approving the system layout
 - Duplex, 2-hr separation wall details shall be shown on site plans
 - Provide Road Names, even for County Roads.
- **Amusement/Water Park buildings:**
 - Additional safeguards may be required depending on the nature and character of the proposed structures, These will be discussed upon submission of plans to our office in the future for review.

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

- The proposed streets would necessarily be maintained privately and therefore are outside DelDOT's jurisdiction. Nonetheless, we recommend that the use of turning template software in refining the site plan. Some of the proposed internal street geometry appears difficult for a Recreational Vehicle driver to navigate.
- The developer's engineer should determine whether any utilities will need to be relocated as part of this project. The developer should expect a requirement that any utility relocations necessary for their entrance construction be done prior to DelDOT issuing an entrance permit.
- The developer should expect a requirement for a 20-foot wide buffer from the edge of any stormwater management pond to the ultimate right-of-way line of Cedar Neck Road, that is, in accordance with Section 3.6.5 in the Standards and Regulations, a line 40 feet from the centerline of the roadway.

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

Soils Assessment

- Based on soils survey mapping update, Fort Mott (FhA), Klej (KsA), Askecksy (AsA) and Transquaking-Mispillion (TP) were mapped in the immediate vicinity of the proposed project. Fort Mott is a well-drained upland soil that has few limitations for development. Klej is a somewhat poorly-drained (transitional soil between uplands and wetlands) soil that may contain both upland and wetland (hydric) soil components. Askecksy and Transquaking-Mispillion are poorly to very poorly-drained wetland associated (hydric) soils that have severe limitations for development and should be avoided - filling and grading these soils may increase the potential for onsite and offsite flooding events (See figure 2).

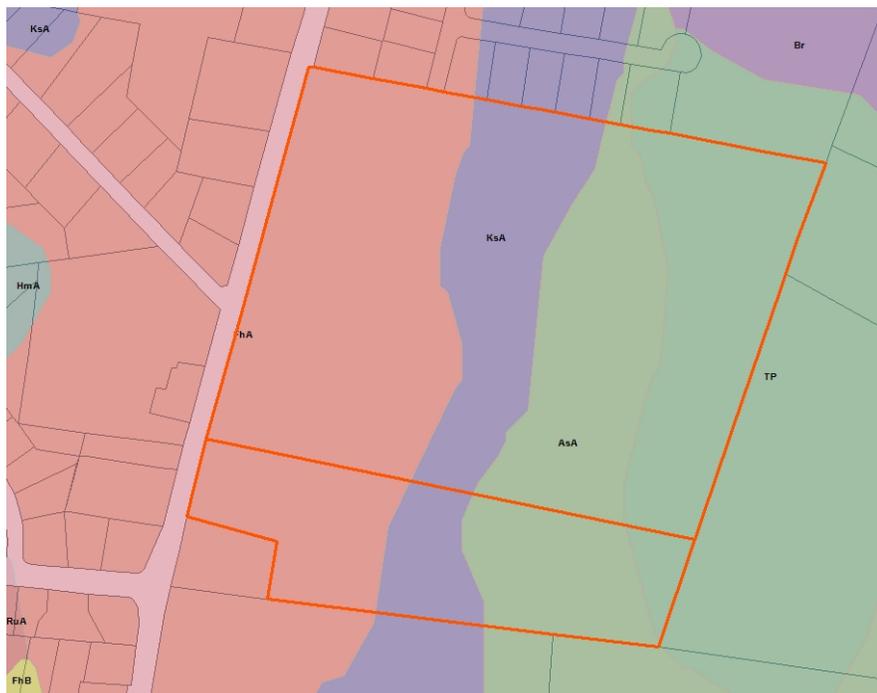


Figure 2: Soils mapping in the immediate vicinity of the proposed project area

Additional information on TMDLs and water quality

- Maintain as much of the existing forest cover as possible. We further recommend additional native tree and native herbaceous planting wherever possible.
- A United States Army Corps of Engineers (USACE) approved wetlands delineation is strongly recommended. According to the PLUS application, a Corps-approved wetlands

delineation was conducted; however, it was not available to DNREC at the time of review.

- 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, DNREC recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all water bodies (including ditches) and wetlands.
- The applicant should calculate post-construction surface imperviousness with all forms of created (or constructed) surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, and roads) included in the calculation.
- Since this is a large project that will likely generate a great amount of impervious cover, we strongly advise the use of pervious paving materials (instead of conventional asphalt and concrete) as a BMP to reduce the impacts associated with surface imperviousness, wherever practicable.
- We recommend the use of rain gardens, and green-technology storm water management structures (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant impacts via runoff from impervious surfaces.
- The applicant should voluntarily assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the “Nutrient Load Assessment protocol.” The protocol is a tool used to assess changes in nutrient (e.g., nitrogen and phosphorus) and bacterial loading that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their project’s impact(s) on baseline water quality. We encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact Lyle Jones at 302-739-9939 for more information on the protocol.

Key Wildlife Habitat

- The wetlands at this site are mapped as Key Wildlife Habitat (KWH) in the Delaware Wildlife Action Plan¹ (DEWAP) because they are part of a large wetland complex. KWH

¹ 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 support the full array of species across the landscape and the maps in DEWAP show areas of the state where conservation efforts can be focused. Although designation as KWH is non-regulatory, these maps are intended to help guide site-specific conservation planning efforts. Equally important are the forested uplands adjacent to these wetlands which provide a buffer for water quality and provide habitat for wildlife. Wildlife corridors found adjacent to streams or wetlands support the survival of many species by providing sources of food and water, providing protective cover from predators and shelter from harsh weather, and reconnecting isolated populations. Research studies show a great number of songbirds, game birds, small mammals, reptiles and amphibians, and other wildlife use corridors as a regular part of their life cycles.

Recommendation: DNREC highly recommends that the applicant consider reconfiguring the site plan to avoid clearing the existing forested buffer along wetlands associated with Slough's Gut and to leave at least a 100-foot buffer intact between lots and these wetlands. The site plan as designed depicts a whole section of lots and some infrastructure well within 100 feet of wetlands shown as '404 Wetlands' on the site plan.

Additional information on hazardous substances

- 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.

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

Additional information on 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.

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

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

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: Sussex County