



STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF MANAGEMENT AND BUDGET  
Budget Development, Planning and Administration  
State Planning Coordination

November 24, 2009

Mr. Ring Lardner  
Davis, Bowen & Friedel  
23 N. Walnut Street  
Milford, DE 19963

RE: PLUS review – PLUS 2009-10-02; Spring Hall

Dear Mr. Lardner:

Thank you for meeting with State agency planners on October 28, 2009 to discuss the proposed plans for the Spring Hall project to be located north of the intersection of Johnnycake Landing Road and Carpenter Bridge Road within the Town of Frederica.

According to the information received, you are seeking site plan approval for 939 residential units and 338,000 sq. ft of commercial space on 258.19 acres.

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 the Town of Frederica is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the Town.

**Executive Summary**

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

### **State Strategies/Project Location**

- This project is located in Investment Levels 2 and 3 according to the *Strategies for State Policies and Spending*. This site is also located in the Town of Frederica. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer term future, or areas that may have environmental or other constraints to development. State investments will support growth in these areas.

### **Street Design and Transportation**

- The Department of Transportation has listed specific recommendations below regarding the design of this subdivision.

### **Natural and Cultural Resources**

- There is one (1) known historic property within this parcel (project site), a late 19-century or early 20th-century farm (K-2767). It consists of a house with outbuildings (barns). According to the USGS Topographic Map of 1936, there was a dwelling existing approximately in the same location. The SHPO recommends that the developer consider keeping the house on a larger lot within the development. If this is not possible, they would appreciate an opportunity to examine the buildings before any demolition takes place.
- In the interest of water quality and to protect rare species and sensitive wetlands, the existing forest should be left intact. At the very least, a 100-foot upland buffer should be left along Spring Creek and associated wetlands and tributaries. The current site plan depicts buffer widths much less than what is ecologically needed to maintain habitat and protect water quality.
  - a. This buffer should not contain lot lines or infrastructure (i.e. there should be at least a 100-foot buffer between wetlands and lots, roadways, stormwater ponds). We note several lots within 100 feet of wetlands: Lots L 8-12, L 13-17, L 19-20, L 43-46, L 51-56, L 60, D 15-21, D 23-28, D 31-32 and D 44-46.
  - b. In addition, the impervious roadway between lots L 19 and L 20 are within 50 feet of wetlands.
  - c. 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 Resources' 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.

- d. To ensure compliance with the Army Corps of Engineers' regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation.
- Green-technology best-management practices should be used because of the parcel's location in an impaired watershed and the high percentage of impervious cover; low-impact development practices should be considered a priority to reduce stormwater flow and to meet water-quality goals. These practices include but are not limited to porous pavements, swales, bio-retention ponds, rain gardens, and roof top drains to infiltration facilities.
  - The highly impervious commercial section of the project includes a delineated excellent recharge area. DNREC recommends:
    - e. Limit impervious cover to 20% of that area within the portion of the parcel in the excellent ground-water recharge potential area; or;
    - f. Allow no more than 50% impervious cover of that area within the portion of the parcel within the excellent ground-water recharge potential area if an environmental assessment documents that post-development recharge is equal to or greater than pre-development recharge when computed on an annual basis; and/or
    - g. Either move some or all of the commercial area outside of the excellent recharge zone or redistribute the townhomes so they are not segregated from the other housing styles, a design that would be both more in the character of traditional neighborhood design and less impervious; and
    - h. Move the stormwater pond out of the delineated excellent recharge area.
  - It is recommended that the existing forest on this site be left intact as it serves as wildlife habitat, a wildlife travel corridor and a riparian buffer zone. Cumulative impacts regarding forest loss and wetland degradation is a real concern considering the number of in-progress or proposed developments in this area. In addition, as forests are cleared, wildlife must disperse into the surrounding area which often leads to human/animal conflicts, including interactions on the roadways.

This office has received the following comments from State agencies:

**Office of State Planning Coordination – Contact: David Edgell 739-3090**

This project is located in Investment Levels 2 and 3 according to the *Strategies for State Policies and Spending*. This site is also located in the Town of Frederica. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer term future, or areas that may have environmental or other constraints to development. In addition, these lands have been annexed into the Town of Frederica in accordance with an adopted comprehensive plan amendment which has been accepted as an amendment to Frederica's certified plan. State investments will support growth in these areas.

The Office of State Planning Coordination is aware that this development is the result of a multi-year planning process between the applicant and the Town. The Town's 2007 Comprehensive Plan Amendment and subsequent TND (Traditional Neighborhood Design) zoning district have set clear parameters for the type and style of development project that was desired by the town. The applicants are to be commended for developing a design which contains a number of features commonly associated with Traditional Neighborhood Designs, including:

- An interconnected street pattern, including the use of alleys
- An interconnected bicycle and pedestrian network
- A mixture of dwelling unit types
- Adjacent to an existing community, with the goal of being integrated into the street pattern via numerous street stubs
- An option for transit service in the future
- Mixed uses, including commercial services and employment
- Near existing community services and an existing downtown
- Open spaces and pocket parks located throughout the development in prominent locations

Our office would like to offer the following recommendations to the applicant and the Town in order to enhance this project. Please note that these are only recommendations, as the final approval authority for the land development plan rests with the Town of Frederica in accordance with their ordinances.

- The development is designed to segregate all unit types into separate neighborhoods. In other words, all of the townhouses are in one neighborhood, all duplexes are in a separate neighborhood and so on. It is strongly recommended that the subdivision plan be redesigned to intersperse the different unit types throughout all neighborhoods.

- Most successful TND developments provide this diversity of unit types throughout the community and use architecture and urban design to create attractive streetscapes and neighborhood areas.
  - As a potential benefit to the developer, the integration of multiple unit types in all neighborhoods will allow sales of different home types and price points in every phase of development.
- At the PLUS meeting the applicant made it clear that the design of the commercial area is an early stage “yield plan” to demonstrate compliance with the minimum zoning standards. The applicant further indicated that excess parking was included. Our office notes that the current design is more typical of a standard suburban shopping center rather than a pedestrian friendly TND design that would be more appropriate in this development. We offer the following recommendations to improve the design of this commercial area:
  - Design a pedestrian oriented streetscape. Offices and retail buildings should front on the main through street and connector streets with shallow setbacks and ample sidewalks. Parking can be located on the street, and to the side and rear of buildings.
  - Reduce the overall amount of parking spaces to account for joint use parking in this pedestrian oriented environment.
  - Design multiple pedestrian and bicycle interconnections between the commercial and the residential areas.
  - Require that all buildings conform to high architectural and urban design standards.
  - Consider mixed use building types that contain retail, office, and even residential uses. Use standard commercial “box” style building sparingly, if at all. If such buildings are used, require architecture that is compatible with the design themes found throughout the commercial district.
  - Consider providing a community open space area in the commercial district. Such an area need not be large in size, but when strategically and centrally located can become a focus of community activity and greatly enhance the urban design of this area.
  - Enact design standards for the pad sights to ensure that eventual construction fits in with the remainder of the commercial area. Better yet, design these structures as a part of the commercial portion from the start.
- It is recommended that the applicant and the Town contact Kent County to learn about the process for developing a plan for a Transportation Improvement District (TID) in this area. Ideally the applicant and the Town can participate in this planning process. Also, please see DelDOT’s detailed comments regarding transportation below in this letter.
- Please review DNREC’s comments in this letter carefully, as they contain many recommendations that will improve the environmental design of this project so that it integrates well into the sensitive ecological area in which it is proposed.

While our office supports growth within municipalities, this letter serves to offer State agency recommendations that we feel will enhance any development that may be approved for this property.

**State Historic Preservation Office (SHPO) – Contact: Terrence Burns 739-5685**

There is one (1) known historic property within this parcel (project site), a late 19-century or early 20th-century farm (K-2767). It consists of a house with outbuildings (barns). According to the USGS Topographic Map of 1936, there was a dwelling existing approximately in the same location.

Delaware has a strong agricultural and rural heritage, and intruding on these areas adversely affects the historic landscape as well as this resource historically associated with farming. The SHPO recommends that the developer consider keeping the house on a larger lot within the development. If this is not possible, they would appreciate an opportunity to examine the buildings before any demolition takes place. In addition, besides the archaeology associated with the farmstead, small family farms such as this often had a family cemetery which could contain unmarked human remains. With this in mind, it is important that the developer be aware of the Delaware Unmarked Human Remains Act of 1987, outlined in Chapter 54 of Title 7 of the Delaware Code, which pertains to the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out. This parcel also has a high probability for prehistoric archaeological sites.

Therefore, prior to any demolition or ground-disturbing activities, the developer may want to consider hiring an archaeological consultant to examine the parcel for archaeological sites, including a cemetery or unmarked human remains. In addition, the developer should also consider sufficient landscaping to cut off the view of this development because the Frederica Historic District, which is listed in the National Register of Historic Places could be visually affected. If you have any questions, or would like to discuss these comments further, please contact Terence Burns at 302-736-7404.

**Department of Transportation – Contact: Bill Brockenbrough 760-2109**

The land is located in the Town of Frederica, on the west edge of the town, and more specifically on the north side of Delaware Route 12 (Johnnycake Landing Road) immediately west of Carpenter Bridge Road (Kent Road 35). The land is zoned R-5 and no rezoning would be needed to permit the development.

- 1) With an estimated trip generation of 16,869 trips per day, the proposed development warrants a traffic impact study (TIS). Recognizing that, the developer's engineers met with us on October 8, 2009, to set a scope of work for the study.

- 2) Access to the site received considerable discussion at the TIS scoping meeting. On the plan accompanying the PLUS application, the shopping center entrance would be about 350 feet west of Carpenter Bridge Road and the main site entrance would be about 1,200 feet west of Carpenter Bridge Road. While DelDOT agrees that the proposed development should have at least two entrances, this spacing is less than desirable. They understand that the developer now plans to align the shopping center entrance opposite Carpenter Bridge Road and the main site access opposite the already recorded entrance to the Twin Farms subdivision on the south side of Route 12. These are positive changes, but the following points also need to be considered:
  - a) Roundabouts are planned for the intersections of Route 12 with Carpenter Bridge Road and Delaware Route 15. DelDOT may require that the main site entrance be controlled by a roundabout.
  - b) In the southwest corner of the subject land, there is a strip of land, about 175 feet wide, extending down to Route 12. While that strip alone does not have sufficient frontage for an entrance, the adjacent parcel to the west is undeveloped and has a similar, 75-foot wide, strip of land which serves as its sole access. If the developer and the owner of that adjoining parcel can collaborate on the creation of a right-of-way, they might be able to build a combined access there. DelDOT understands that the developer only wants to pursue this access if the TIS shows that it is essential.

DelDOT will need to reach agreement with the developer's engineer on acceptable access locations and configurations before they can approve the preliminary traffic impact study.

- 3) Without prejudging the results of the TIS, we anticipate the following requirements with regard to offsite road improvements:
  - a) Consistent with Comment 2)a) above, the developer may be required to install a single lane roundabout at the intersection of Delaware Route 12 and Carpenter Bridge Road. If a roundabout should be determined to be infeasible at this intersection, the developer would be required to enter into a traffic signal agreement with DelDOT for this intersection.
  - b) Consistent with Comment 2)a) above, the developer may be required to install a single lane roundabout at the intersection of Delaware Route 12 and Delaware Route 15. If a roundabout should be determined to be infeasible, the developer would be required to enter into a traffic signal agreement with DelDOT for this intersection.
  - c) The developer may be required to enter into an agreement with DelDOT to fund an equitable portion of the local matching funds required for

Delaware Route 1 and Frederica Road (North) Grade-Separated  
Interchange Project (State Contract No. 24-122-03).

- 4) Route 12 is classified as a minor arterial road. DeIDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 40 feet from the centerline on minor arterial roads. Therefore DeIDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.
- 5) DeIDOT records show that Route 12 has 11.5-foot lanes and 6-foot paved shoulders. They anticipate requiring the developer to widen Route 12 within the limits of their site frontage to our standard widths for arterial roads, which are 12-foot lanes and 10-foot shoulders. This is in addition to any intersection improvements identified through the TIS process.
- 6) DeIDOT also anticipates requiring the developer to provide a sidewalk or shared used path to accommodate pedestrians and bicyclists who are not comfortable using the shoulder. The standard requirement for unincorporated areas in this regard is a 10-foot shared use path in a 15-foot easement. However, DeIDOT is willing to work with the Town to require an alternative facility, e.g. sidewalks, if that would be more consistent with their plan and standards. In addition, depending on the expected volume of pedestrian traffic between the proposed development and downtown Frederica, it may be appropriate to require this developer to extend a pedestrian connection across the frontage of the adjoining parcel to provide that connection. This would be consistent with the Governor's directive that DeIDOT work cooperatively to establish better pedestrian networks as part of the Complete Streets initiative.
- 7) The plan presented shows a footpath along the edge of the wetlands that border the north edge of the development. DeIDOT encourages the creation of such a path for recreational purposes. As discussed at the PLUS meeting, connections to link the path to the internal street system will need to be added to the plan.
- 8) Because the subject development is located within an incorporated municipality, the internal streets would be either municipal or private. DeIDOT would not accept them for maintenance and can impose no requirements regarding them. However, They offer the following advisory comments for consideration by the developer and the Town:
  - a) From discussion at the PLUS meeting, DeIDOT understands that the Town anticipates changing their street standards to match Kent County's and to require a minimum street width of 28 feet, in addition to any curb and gutter. They recommend that the Town give careful consideration to any changes to their street standards. Much has been said about the need for wide streets to provide adequate access for fire trucks and ambulances. Public safety is clearly an important concern. However, it should be

looked at from a broader perspective that takes into account all of the related issues when contemplating the use of wider subdivision streets.

Current standards include a minimum width of 22 feet, or 32 feet for streets serving more than 500 trips per day, or about 50 houses. While these widths have been our standard for many years and have generally served them well, they have now proposed changing the 22-foot minimum width to 24 feet in response to concerns from the fire-fighting community. This change is in a revision to the standards which is now advertised for public comment. There are many places, in Delaware and elsewhere, that function with streets as narrow as 18 feet.

Positive aspects of narrow streets include the following: reduced vehicle speeds and thus safer streets, less need for traffic calming, reduced storm water run-off, reduced right-of-way requirements, lower maintenance costs and, where a wider parallel street exists, often less traffic. DelDOT recommends that the Town consider all of these factors in evaluating their street standards. The DelDOT Subdivision Engineer, Mr. Marc Cote', may be contacted at (302) 760-2266 if the Town would like further information on our standards or technical assistance with theirs.

- b) DelDOT recognizes and appreciates the number of stub connections provided on the PLUS plan, three stub streets provided to the west and one stub street and two commercial driveways to the east. They suggest that further consideration be given to how the connections on the east side might one day connect to Frederica's downtown street network. Presently the Town has two streets running parallel to Route 12 that could be extended west toward this property, Coleman Avenue and Lowber Avenue. Coleman Avenue presently stops just east of a wetland area and is therefore unlikely to ever be extended. Lowber Avenue, however, is a likely candidate for extension westward. While there is a relatively large parcel between the present west end of Lowber Avenue and the subject land, a significant S-curve would be needed to provide a continuous connection to the east-west stub street shown on the plan. It is recommended that the plan be modified to include an east-west stub street closer to Route 12, possibly between the shopping center and the townhouses.

DelDOT understands that the Town will require a connection for the extension of Lowber Avenue, as specified in an annexation agreement for the subject land. However, they further understand that the Town may be willing to accept a bicycle and pedestrian connection in this regard. As important as bicycle and pedestrian connections are, we would encourage the Town to require the extension of Lowber Avenue as a street. A bicycle and pedestrian connection could be used for recreational purposes

and possibly for some commuting, but a street would be useful for most trips to and from the proposed shopping center.

- c) The use of alleys to serve the proposed townhouses is good planning. DelDOT suggests that the developer consider adding alleys to serve the houses fronting on the east-west collector streets as well.
- d) The above comment on alleys is related to the subject of street hierarchy. At the scale shown, it is difficult to distinguish details, but DelDOT would urge the developer to design the streets leading from the central boulevard into the neighborhoods to a higher standard than the streets within those neighborhoods. Similarly, streets that have a stub on one or both ends should be designed to a higher standard so that they can handle any increase in traffic that might reasonably be expected when the adjacent lands are developed. Chapters 3 and 5 in DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access may be helpful in this regard if the Town does not have another set of standards.
- e) Near the northwest edge of the property, a pair of off-set tee intersections is proposed on a street that would stub into the adjoining property. While off-set tee intersections are generally undesirable, they are particularly undesirable on a street that connects to a currently undeveloped property because the future traffic volumes that the street may carry are unknown. It is recommended that either the offset be eliminated or the stub be shifted one block south.
- f) As mentioned in Comment 2)b) above, the adjoining parcel to the west is accessed by a 75-foot wide strip of land that extends for about 1,840 feet of their common boundary. Immediately west of that strip is a large parcel that is in an agricultural preservation district. DelDOT recommends that the developer contact the owner of the 75-foot wide strip regarding their intentions. If the owner of the strip intends to join the agricultural preservation district, the plan should be reworked to eliminate the stub streets. However, if the 75-foot strip can reasonably be expected to become a right-of-way, the proposed lot layout adjoining it is probably sufficient.

The developer should also consult the Town's planning commission in this regard. Ordinarily we would comment based upon the Town's Comprehensive Plan but the Plan was last updated comprehensively in 2005 and conditions have changed significantly since then. In the 2005 Plan, the subject land was shown as an Area of Concern; it has since been annexed.

- 9) DelDOT recommends that the developer have their engineer contact the Subdivision Manager for the south part of Kent County, Ms. Diane Calloway, for

more detailed comments on the site plan as they develop it further. Ms. Calloway may be reached at (302) 760-2571.

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

A well-designed mixed-use development linked to the town would be an appropriate land use in an existing community such as Frederica. However, this maximum-yield project affects several environmentally sensitive features and would lie in a watershed where pollution-control limits have been established to improve water quality.

**Overall recommendations:**

- 2) In the interest of water quality and to protect rare species and sensitive wetlands, the existing forest should be left intact. At the very least, a 100-foot upland buffer should be left along Spring Creek and associated wetlands and tributaries. The current site plan depicts buffer widths much less than what is ecologically needed to maintain habitat and protect water quality.
  - a. This buffer should not contain lot lines or infrastructure (i.e. there should be at least a 100-foot buffer between wetlands and lots, roadways, stormwater ponds). We note several lots within 100 feet of wetlands: Lots L 8-12, L 13-17, L 19-20, L 43-46, L 51-56, L 60, D 15-21, D 23-28, D 31-32 and D 44-46.
  - b. In addition, the impervious roadway between lots L 19 and L 20 are within 50 feet of wetlands.
  - c. 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 Resources' 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.
  - d. To ensure compliance with the Army Corps of Engineers' regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation.
- 3) Green-technology best-management practices should be used because of the parcel's location in an impaired watershed and the high percentage of impervious

- cover; low-impact development practices should be considered a priority to reduce stormwater flow and to meet water-quality goals. These practices include but are not limited to porous pavements, swales, bio-retention ponds, rain gardens, and roof top drains to infiltration facilities.
- 4) The highly impervious commercial section of the project includes a delineated excellent recharge area. DNREC recommends:
    - a. Limit impervious cover to 20% of that area within the portion of the parcel in the excellent ground-water recharge potential area; or;
    - b. Allow no more than 50% impervious cover of that area within the portion of the parcel within the excellent ground-water recharge potential area if an environmental assessment documents that post-development recharge is equal to or greater than pre-development recharge when computed on an annual basis; and/or
    - c. Either move some or all of the commercial area outside of the excellent recharge zone or redistribute the townhomes so they are not segregated from the other housing styles, a design that would be both more in the character of traditional neighborhood design and less impervious; and
    - d. Move the stormwater pond out of the delineated excellent recharge area.
  
  - 5) It is recommended that the existing forest on this site be left intact as it serves as wildlife habitat, a wildlife travel corridor and a riparian buffer zone. Cumulative impacts regarding forest loss and wetland degradation is a real concern considering the number of in-progress or proposed developments in this area. In addition, as forests are cleared, wildlife must disperse into the surrounding area which often leads to human/animal conflicts, including interactions on the roadways.

Additional and more detailed comments by division and program follow.

### **Fish and Wildlife**

**Site Visit Request.** In order to provide informed comments, our program scientists request the opportunity to conduct a survey of the property to evaluate habitat and determine the potential for species of conservation concern. Please note that our scientists have decades of experience in comprehensive rare species survey methods. They have extensive knowledge of the flora and fauna of the state and are qualified in making rare species identifications. The survey will be conducted at no expense to the landowner.

Please contact Edna Stetzar at (302) 653-2880 ext. 101 or at [Edna.Stetzar@state.de.us](mailto:Edna.Stetzar@state.de.us) if the landowner will grant a site visit.

**Rare Species.** There are records of *Lycaena hyllus* (bronze copper), a state-rare (ranked as an S2-very rare within the state with 6-20 occurrences) butterfly within scrub-shrub wetlands that border Spring Creek. Because this same type of habitat exists within the project area, this species could be present within the project area as well. In addition, this type of wetland is very significant as it is becoming quite rare in Delaware. Inadequate upland buffers, such as proposed with this project, could be detrimental to this wetland type and to species that depend upon those wetlands.

Tidal shrub wetlands are transitional between emergent wetlands and forested wetlands and possess many important wetland values and functions, as well as providing important habitat for an array of wildlife species. Specific hydrologic, edaphic, and topographical conditions must be in place in order for tidal shrub wetlands to develop. If these conditions are disturbed or changed in any way from land-use changes, the potential exists for community structure and plant species composition to shift in an unfavorable direction.

**Key Wildlife Habitat.** The forest on this property is mapped as Key Wildlife Habitat in the Delaware Wildlife Action Plan (DEWAP). 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. This document can be viewed via our program website at <http://www.dnrec.state.de.us/nhp>. This document also contains a list of species of greatest conservation need as well as species-habitat associations.

The current site plan will result in direct impacts to Key Wildlife Habitat by clearing. The forested areas that are not cleared outright are going to be largely fragmented by stormwater ponds, roads, and lots. Forested lots will also be subject to further clearing by homeowners who want amenities such as dog kennels, swimming pools, sheds, etc. Clearing restrictions placed on homeowners can be hard to enforce and still do not prevent fragmentation of an intact forest. Essentially this project will result in the conversion of 61 acres of forested habitat into a residential area.

*Edna Stetzar - (302) 653-2880, [Edna.Stetzar@state.de.us](mailto:Edna.Stetzar@state.de.us)*

## **Soil and Water**

**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 pre-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 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.

Because of the parcel's location in an impaired watershed and the amount of impervious surface, green technology BMPs and low impact development practices should be considered a priority to reduce stormwater flow and to meet water quality goals.

**Drainage Program.** The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project.

Have all drainage easements recorded on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future re-construction. Future property owners may not be aware of a drainage easement on their property if the easement is only on the record plan. However, by recording the drainage easement on the deed, the second owner, and any subsequent owner of the property, will be fully aware of the drainage easement on their property.

Preserve existing riparian buffers on this site to aid in the reduction of nutrients, sediment, and other pollutants entering the watershed. Please explore methods to filter excess nutrients in stormwater runoff from this site before releasing the stormwater into the watershed.

The Drainage Program does not support the removal of trees for the creation of stormwater management areas.

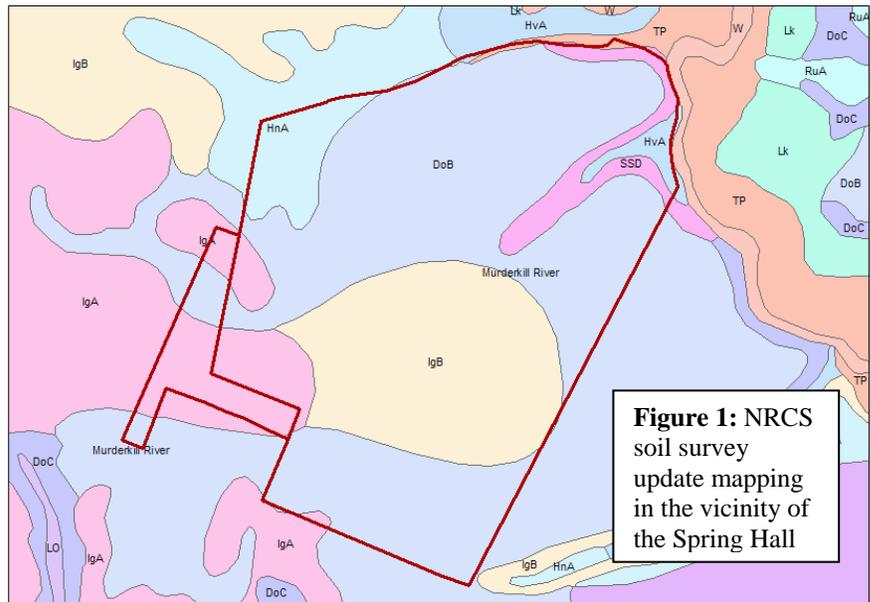
*Sediment/Stormwater and Drainage comments provided by James Sullivan - (302) 739-9921, [James.Sullivan@state.de.us](mailto:James.Sullivan@state.de.us)*

## Water Resources

### Soils Assessment.

According to the Sussex County soil survey Downer (DoB), Ingleside (IgA & IgB), Sassafras (SSD; 10-15% slope), and Hurlock were mapped in the immediate vicinity of the proposed construction (Figure 1). Downer and Ingleside are well-drained upland soils that, generally, have few limitations for development. Sassafras has severe limitations for development because of steeply-sloping topography.

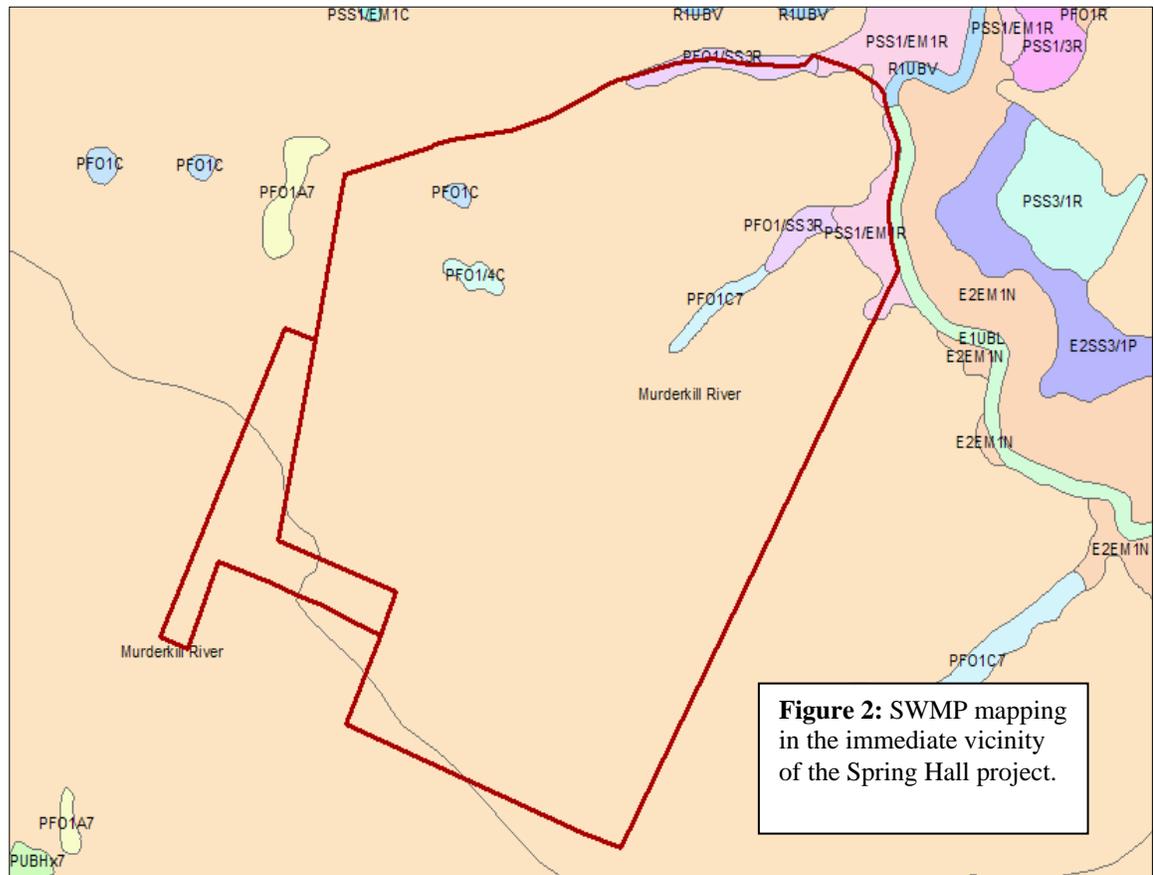
Hurlock is a poorly-drained wetland associated (hydic) soil that has severe limitations for development and should be avoided.



**Figure 1:** NRCS soil survey update mapping in the vicinity of the Spring Hall

**Wetlands.** According to the Statewide Wetland Mapping Project (SWMP) mapping, nontidal and tidally-influenced palustrine wetlands were mapped on subject parcel. The nontidal wetlands are palustrine wetlands and were symbolically designated on the SWMP map as follows: PFO1C7, PFO1/4C, and PFO1C. The tidally influenced wetlands are palustrine and estuarine wetlands and were symbolically designated on the map as follows: PFO1/SS3R and PSS1/EM1R, E2EM1N & E2UBL. Headwater riparian wetlands are found within and along much of the northeastern boundary of the parcel(s).

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 Resources' 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. Since this parcel contains State-regulated tidally-influenced wetlands, the State Wetlands section should be contacted prior to commencing any development activities.



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. A potential ditch may be bisecting this parcel and draining to Providence Creek. An on-site jurisdictional determination should be conducted to determine whether this water body is subject to State regulatory jurisdiction under the Subaqueous Lands Act. 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.

The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they are subject to regulatory jurisdiction under Federal 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE or “the Corps”) manual is the acceptable basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware.

The applicant is forewarned that the Corps views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for making such delineations. To ensure compliance with said Corps regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation. In circumstances where the applicant or applicant’s consultant delineates what they believe are nonjurisdictional isolated (SWANCC) wetlands, the Corps must be contacted to evaluate and assess the jurisdictional validity of such a delineation. The final jurisdictional authority for making isolated wetlands determinations rests with the Corps; they can be reached by phone at 736-9763.

As noted previously, the palustrine headwater water riparian wetlands bound the northeastern boundary of subject parcel. Headwater riparian wetlands serve to protect water quality which helps maintain the ecological integrity and functions throughout the length of the stream, including the floodplain system and/or water bodies further downstream. Since headwater riparian wetlands serve as natural buffers that protect the water and habitat quality of streams from sediment and nutrient-laden runoff, their protection deserves the highest priority.

**TMDLs.** Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Murderkill 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 water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. In the Murderkill River watershed, “target-rate-nutrient reductions” of 30 and 50 percent will be required for nitrogen and phosphorus, respectively. Additionally, “target-rate-reductions” of 32 percent will be required for bacteria.

A Pollution Control Strategy (PCS) will be used as a regulatory framework to ensure that these nutrient reduction targets are attained. The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional nutrient reductions may be possible through

the implementation of BMPs such as increasing the amount of passive, wooded open space (planted with native woody and herbaceous vegetation), wider vegetated buffers along watercourses, use of pervious paving materials to reduce surface imperviousness, and the deployment of green-technology stormwater management treatment technologies.

While a regulation has not been established for the Murderkill watershed, projects are still required to meet these nutrient reductions. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

*Soils, wetlands, subaqueous lands and TMDL comments provided by John Martin, Watershed Assessment Section, (302) 739-9939, [John.Martin@state.de.us](mailto:John.Martin@state.de.us)*

**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 (CPCN) 05-CPCN-01.

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.

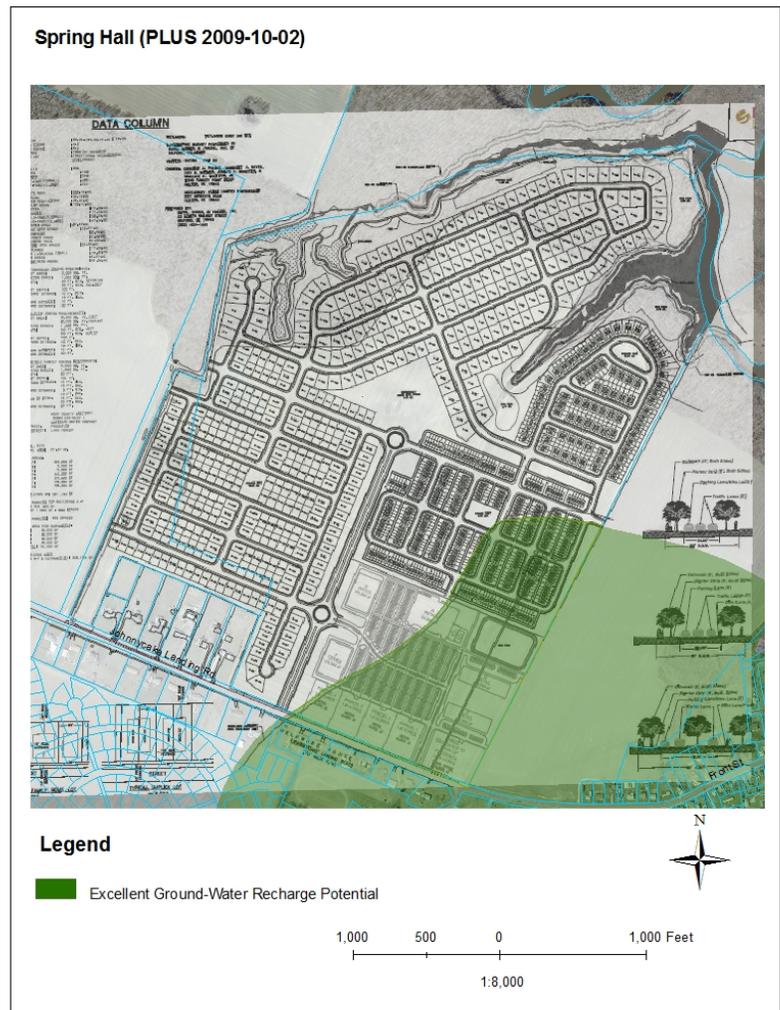
All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising. *Ricardo Rios - (302) 739-9944, [Ricardo.Rios@state.de.us](mailto:Ricardo.Rios@state.de.us)*

**Water Resource Protection Areas.** The DNREC Ground-Water Protection Branch (GPB) has reviewed the above referenced PLUS project and determined that it falls within an excellent ground-water recharge area for the Town of Frederica (see map below). The site plan shows stormwater management ponds in the area of excellent recharge. The Town of Frederica adopted Water Resource Protection measures as Article 12 Section 12-1, of their Land Development Ordinance in 2005. The ordinance is not protective of the resource.

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.

The application states that the proposed development would change the impervious cover from zero to 51.34%. This calculation is based on the total area of the two parcels not just the area within the excellent ground water recharge potential area.

It appears that the amount of impervious cover within the area of excellent recharge potential exceeds the 20% limit recommended by DNREC (DNREC, 2005). Additionally it appears to exceed the 50% upper limit allowed if an environmental assessment documents that post-development recharge is equal to or greater than pre-development recharge when computed on an annual basis (Kauffman, 2005). In addition, the five parcels bordering Johnnycake Landing Road will increase the amount of impervious cover when developed.



Constructing stormwater management ponds within an area of excellent ground-water recharge potential can damage the resource. The construction phase of stormwater management ponds requires 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. Installing storm-water management ponds in excellent ground-water recharge areas has the potential to contaminate the ground water beneath it and carry contaminants into the aquifer.

Anne Mundel - (302) 739-9945, [Anne.Mundel@state.de.us](mailto:Anne.Mundel@state.de.us)

**Parks and Recreation**

**Riparian Buffer Area Trail.** At the PLUS meeting, the Project Designer/Engineer spoke about a concrete or blacktop trail through the riparian buffer area. Should there be any questions regarding trail design or layout, please contact the Delaware Division of Parks and Recreation, David Bartoo, Trail Specialist at 302-739-9235. *Kendall Sommers* - (302) 739-9242, [Kendall.Sommers@state.de.us](mailto:Kendall.Sommers@state.de.us)

**Air and Waste**

**Air Quality.** Housing developments may unnecessarily emit, or cause to be emitted, significant amounts of 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 housing developments include emissions from:

- Area sources like painting, lawn and garden equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity needed to support the homes in your development, and
- Car and truck activity associated with the homes in your new development.

These three air emissions components (i.e., area, electric power generation, and mobile sources) are quantified below, based on a per household/residential unit emission factor that was developed using 2002 Delaware data. These emissions in the table represent the actual impact the Spring Hall development may have.

**Emissions Attributable to Spring Hall Subdivision (Tons per Year)**

	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO <sub>2</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )	Carbon Dioxide (CO <sub>2</sub> )
Direct Residential	29.1	3.2	2.7	3.4	117.8
Electrical Power Generation	ND*	11.5	40.1	ND*	5,910.2
Mobile	43.0	44.9	1.3	0.5	27,752.1
<b>Total</b>	<b>72.1</b>	<b>59.6</b>	<b>44.1</b>	<b>3.9</b>	<b>33,780.1</b>

(\*) Indicates data is not available.

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

*Recommendations:*

The applicant shall comply with all applicable Delaware air quality regulations. These regulations include:

<p><b>Regulation 6 -</b> Particulate Emissions from Construction and Materials Handling</p>	<ul style="list-style-type: none"> <li>• <b>Using dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.</b></li> <li>• <b>Using covers on trucks that transport material to and from site to prevent visible emissions.</b></li> </ul>
<p><b>Regulation 1113 –</b> Open Burning</p>	<ul style="list-style-type: none"> <li>• <b>Prohibiting open burns statewide during the Ozone Season from May 1-Sept. 30 each year.</b></li> <li>• <b>Prohibiting the burning of land clearing debris.</b></li> <li>• <b>Prohibiting the burning of trash or building materials/debris.</b></li> </ul>
<p><b>Regulation 1145 –</b> Excessive Idling of Heavy Duty Vehicles</p>	<ul style="list-style-type: none"> <li>• <b>Restricting idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</b></li> </ul>

Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:

- **Constructing only energy efficient homes.** Energy Star qualified homes are up to 30% more energy efficient than typical homes. These 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 increased 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.

- **Funding a lawnmower exchange program.** New lawn and garden equipment emits significantly less than equipment as little as 7 years old, and may significantly reduce emissions from this new development. The builder could fund such a program for the new occupants.

Additionally, the following measures will reduce emissions associated with the actual construction phase of the development:

- **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 at residential units and in vegetative buffer areas.** Trees reduce emissions by trapping dust particles and by 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 on air quality. Air Quality Management Section points of contact are Phil Wheeler and Deanna Morozowich, and they may be reached at (302) 739-9402.

*Deanna Morozowich - (302) 739-9402, [Deanna.Morozowich@state.de.us](mailto:Deanna.Morozowich@state.de.us)*

**Hazardous Waste Sites.** DNREC's Site Investigation and Restoration Branch (SIRB) has reviewed the proposed project. No SIRB sites or salvage yards were found within a ½-mile radius of the proposed development. However, based on the previous agricultural use of the proposed project site, which may have involved the use of pesticides and herbicides, SIRB recommends that a Phase I Environmental Site Assessment be performed prior to development. In addition, should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions.

*Krystal Stanley - (302) 395-2644, [Krystal.Stanley@state.de.us](mailto:Krystal.Stanley@state.de.us)*

**Tank Management Branch.** There are no LUST project sites located within a quarter mile from the proposed project. No environmental impact is anticipated; however, should any underground storage tanks or petroleum contaminated soil be discovered by

any person during construction, the DNREC-TMB at (302) 395-2500 and the DNREC Emergency Response Hotline at (800) 662-8802 must be notified within 24 hours.

Should any contamination be encountered, PVC pipe materials will have to be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

Also, please note that if any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMB. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMB. *Elizabeth Wolff* - (302) 395-2500, [Elizabeth.Wolff@state.de.us](mailto:Elizabeth.Wolff@state.de.us)

**Note:** The PLUS application stated that the project does not impact a sourcewater protection area; in fact, the most intensive and impervious commercial development is over an excellent recharge area (see map). Also, the application stated that the project does not border preserved land, such as an agricultural preservation district (question 34). It is bordered on the west by a preserved farm and on the north and northwest by state forest and forested easements, according to state GIS maps.

**State Fire Marshal's Office – Contact: Duane Fox 856-5298**

No comments were received from this agency. You should contact the agency to determine what regulatory requirements pertain to this proposed subdivision

**Department of Agriculture - Contact: Scott Blaier 739-4811**

The Delaware Department of Agriculture has no objections to the proposed project. It is located within the Town of Frederica, and the *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 2 and 3 areas. However, this project is adjacent to a permanently preserved historically significant farm. Please consider (and abide when required) the Department's comments carefully.

The proposed development is adjacent to a property permanently preserved through the State's Agricultural Lands Preservation Program (Miller District (Parcel Number SM-130.00-02-20.00)). Therefore, the activities conducted on this preserved property will be protected by the agricultural use protections outlined in Title 3, Del. C., Chapter 9. These protections effect adjoining developing properties. The 300 foot notification requirement affects **all new deeds** in a subdivision located in whole or part within 300 feet of an Agricultural District. Please take note of these restrictions as follows:

**§ 910. Agricultural use protections.**

- (a) Normal agricultural uses and activities conducted in a lawful manner are preferred and priority uses and activities in Agricultural Preservation Districts. In order to establish and maintain a preference

and priority for such normal agricultural uses and activities and avert and negate complaints arising from normal noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations, land use adjacent to Agricultural Preservation Districts shall be subject to the following restrictions:

(1) For any new subdivision development located in whole or in part within 300 feet of the boundary of an Agricultural Preservation District, the owner of the development shall provide in the deed restrictions and any leases or agreements of sale for any residential lot or dwelling unit the following notice:

This property is located in the vicinity of an established Agricultural Preservation District in which normal agricultural uses and activities have been afforded the highest priority use status. It can be anticipated that such agricultural uses and activities may now or in the future involve noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations. The use and enjoyment of this property is expressly conditioned on acceptance of any annoyance or inconvenience which may result from such normal agricultural uses and activities."

(2) For any new subdivision development located in whole or in part within 50 feet of the boundary of an Agricultural Preservation District, no improvement requiring an occupancy approval shall be constructed within 50 feet of the boundary of the Agricultural Preservation District.

(b) Normal agricultural uses and activities conducted in accordance with good husbandry and best management practices in Agricultural Preservation Districts shall be deemed protected actions and not subject to any claim or complaint of nuisance, including any such claims under any existing or future county or municipal code or ordinance. In the event a formal complaint alleging nuisance related to normal agricultural uses and activities is filed against an owner of lands located in an Agricultural Preservation District, such owner, upon prevailing in any such action, shall be entitled to recover reasonably incurred costs and expenses related to the defense of any such action, including reasonable attorney's fees (68 Del. Laws, c. 118, § 2.).

In addition, if any wells are to be installed, Section 4.01(A)(2) of the Delaware Regulations Governing the Construction and Use of Wells will apply. This regulation states:

(2) For any parcel, lot, or subdivision created or recorded within fifty (50) feet of, or within the boundaries of, an Agricultural Lands Preservation

District (as defined in Title 3, Del. C., Chapter 9); all wells constructed on such parcels shall be located a minimum of fifty (50) feet from any boundary of the Agricultural Lands Preservation District. This requirement does not apply to parcels recorded prior to the implementation date of these Regulations. However, it is recommended that all wells be placed the maximum distance possible from lands which are or have been used for the production of crops which have been subjected to the application of land applied federally regulated chemicals.

The Department asks the developer to give special consideration to the adjacent Miller farm. Below is an excerpt from the Delaware Century Farms awards ceremony program, which was held at the Miller farm in October 2009. This excerpt illustrates the tremendous historical significance of this farm property, and why it deserves to be preserved and protected for posterity and future generations. The Department would be glad to work with the developer concerning visual and noise and buffers, trespassing signage, fencing, etc. to protect and preserve this farm (302) 698-4532.

**T**his year's Century Farm Ceremony is being held here at the Miller

Farm to once again recognize and honor this farm for 325 years of family owned farming business. The Miller Family was presented both Century Farm and Historic Structures Award back in 1988 from Delaware Department of Agriculture. Today, Dr. Emily Miller (retired professor of history) is present, as you can see this farm continues to be farmed as it has been since 1684 when it was first purchased by the ancestries of Dr. Miller.

The farm has produced fruit, sorghum, tomatoes, and soybeans. Other generations that farmed this land raised livestock including horses, and cows for work and milk, and poultry such as chickens, turkeys and guinea hens. Six structures on the property qualified for the Historic Structures Award in 1988:

The brick house (built 1782 & the second section of the house built 1784)

The two story wooden potato house (built 1920)

The one story smoke house (built 1920)

The horse barn with loft (built 1920)

The one story single corn crib (built 1930)

The one story, double, corn crib (built 1930)

There was found to be extensive materials in Delaware Archives and Kent County will & deed records (additional supporting materials were found in Virginia, Pennsylvania and Maryland archives); which provided facts which lead to the Miller Family being added to the "Five Hundred First Families of America."

In 2003, the farm was recognized as the fifth-oldest family business in the United

States, and the Family Business Center at the University of Delaware Alfred Lerner College of Business and Economics Diamond Awards, honored Dr. Miller with its special “Longevity Award” for the ninth generation to own and farm for 318 years in business. Additionally that same year, an article was published in the Family Business Magazine which is a national magazine based in Philadelphia, the article also stated that The Miller farm beat out such family business titans as Levi Strauss & Co. (1853) of San Francisco and Anheuser-Busch (1860) of St. Louis. This magazine listed 102 of the oldest family businesses, and 21 of those 102 businesses were farms. And, the Miller Farm held the fifth spot on the list of oldest family businesses.

### *Right Tree for the Right Place*

The Delaware Department of Agriculture Forest Service encourages the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

### *Do Not Plant List*

Due to the high risk of mortality from insects and disease, the Delaware Forest Service does not recommend planting any of the following species:

Callery Pear  
Leyland Cypress  
Red Oak (except for Willow Oak)  
Ash Trees

Please contact the Delaware Forest Service for more information at (302) 698-4500.

### *Native Landscape*

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

**Public Service Commission - Contact: Andrea Maucher 739-4247**

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

**Delaware Economic Development Office – Contact: Jeff Stone 672-6849**

No comments were received from this agency.

**Delaware Division of Public Health- Health Promotion Bureau- Contact: Michelle Eichinger (302) 744-1011**

No comments were received regarding this project.

**Delaware State Housing Authority – Contact Valerie Miller 739-4263**

This proposal is for a site plan review of 939 residential units and 338,000 sq. ft. of retail and office space within the western boundary of the Town of Frederica, north of the intersection of Johnnycake Landing Road and Carpenter Bridge Road. According to the *State Strategies Map*, the proposal is located in an Investment Level 2 and Level 3 area. DSHA supports this proposal because residents will have proximity to existing services, markets, and employment opportunities. In addition, this proposed subdivision is a residential planned community that features a variety of housing types and targets first-time homebuyers. DSHA appreciates the use of alleys and the intent on providing interconnectivity within the subdivision. DSHA recommends the consideration of quality design standards that architecturally compliments the different housing types.

**Department of Education – Contact: John Marinucci 735-4055**

No comments were received regarding this project.

**Kent MPO – Contact: JimGalvin: 302-760-2713**

- The proposal is an aggressive subdivision in a small town currently incapable of providing the necessary services or the capacity to move the generated traffic. It is being proposed within the Kent County Growth Zone. The site is identified as a Level 3 area in the State Strategies for Policies and Spending, which identifies areas that will likely be developed in the future.
- The proposal is for over 900 units of varying home types on 107 acres with 28 acres of commercial space. A characteristic of TND is a pedestrian-friendly neighborhood. The design incorporates the concepts within the limitations of the site. With the Governor’s Executive Order to implement Complete Streets policies statewide, the neighborhood design should implement the elements of the policy: sidewalks throughout, a transit stop, bike lanes.

- The bike lanes that are indicated should be required and dedicated, and not be shared with parking lanes. They should be provided on all the major streets, especially the entry street and primary connections.
- There are stub streets on three sides of the proposal. They should be maintained and dedicated for future interconnection. Sidewalks are indicated, fantastic. They should be maintained in the plan.
- The boulevard concept with roundabouts and the commercial area offer opportunities for a transit stop to serve the 2500 +/- residents of the neighborhood. The transit stop should be designed and built into the street system, **regardless of immediate service**. The standard for transit is walking distance of ¼ mile. A stop at the northernmost roundabout would serve nearly the entire neighborhood. A stop in the commercial area will serve approximately 50% of the homes.
- The neighborhood design segregates the single family homes using the street layout.
- This is a worthy attempt at TND while maintaining the perceived necessity of a secure, segregated area for larger SF homes.

**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,

A handwritten signature in cursive script that reads "Constance C. Holland".

Constance C. Holland, AICP  
Director

CC: Town of Frederica  
Kent County