



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

April 20, 2016

Mr. Patrick Miller  
Indian River School District  
31 Hosier St.  
Selbyville, DE 19975

RE: PLUS review 2016-03-08; Indian River School District – Ingram Pond

Dear Patrick,

Thank you for meeting with State agency planners on March 23, 2016 to discuss the suitability of a 20-25 acre parcel along Godwan School Road west of Millsboro for a 75,000 square foot school.

**Please note that this review was for the site feasibility only. If this site is chosen and a site plan is completed, it must be submitted to this office for PLUS review. 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, development of this property would 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 3 according to the *Strategies for State Policies and Spending*. 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 may support future growth in these areas, but please be advised that the State has other priorities for the near future. We encourage you to design the site with respect for the environmental features which are present.

Below are complete list of State agency comments which should help determine any issues or regulatory requirements associated with building on this site.

## **Code Requirements/Agency Permitting Requirements**

### **Delaware Department of Transportation – Contact Bill Brockenbrough 760-2109**

- As discussed in the Preface to DelDOT's Development Coordination Manual, DelDOT is responsible for the regulation and control of the location, design and operation of the access points and transportation facilities that the State maintains. For that reason, they have review authority with regard to a wide range of land developments and the review processes vary with the size of the development or the change therein.

DelDOT recommends that the School District have their site engineer or another appropriate design professional contact the Subdivision Reviewer for this part of Sussex County, Mr. Derek Sapp, and maintain that contact as plan development progresses. The District will be responsible for the design and construction of site access in accordance with the Development Coordination Manual. Mr. Sapp may be reached at (302) 760-4803 or [Derek.Sapp@state.de.us](mailto:Derek.Sapp@state.de.us).

- Pursuant to Section P.3 of the Development Coordination Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request this meeting and guidance on what will be covered there and how to prepare for it is located at [http://www.deldot.gov/information/business/subdivisions/Meeting\\_Request\\_Form.pdf](http://www.deldot.gov/information/business/subdivisions/Meeting_Request_Form.pdf).
- Section P.5 of the Development Coordination Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.
- Per Section 2.2.2.1 of the Development Coordination Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends per hour in any hour of the day. On the PLUS application, the total daily trips are estimated at 1,500 to 1,900 vehicle trip ends per day. Using either number, this project would warrant a TIS.

Per Section 2.2.2.2 of the Development Coordination Manual, for developments generating between fewer than 2,000 vehicle trip ends per day and fewer than 200 vehicle trip ends per hour in any hour of the day, DelDOT may accept an Area-Wide Study Fee in lieu of a TIS. However, using the Institute of Transportation Engineers' Trip Generation Manual, DelDOT estimates that the school would generate at least 338 vehicle trip ends during the weekday morning peak hour. Thus a TIS will be necessary for the proposed school. The Area-Wide Study Fee is not an option.

Because the TIS process typically takes several months, and in the case of a school DeIDOT would require that traffic counts be done during the school year, it is recommended that the District retain a traffic engineer and have them begin work on the study now. The TIS will need to include analysis of the site entrance(s), which they understand have yet to be planned, but it should be possible to begin the TIS before the site layout is determined.

To obtain a scope of work for the TIS, the applicant may have their engineer contact Mr. Troy Brestel of this office. Mr. Brestel may be reached at (302) 760-2167.

- Section 3.2.4.2 of the Development Coordination Manual addresses the placement of right-of-way monuments (markers) along the roads on which a property fronts, in this case Godwin School Road. Monuments sufficient to re-establish the permanent rights-of-way after the dedication discussed below should be shown on the plan and provided in the field in accordance with this section.
- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Development Coordination Manual, DeIDOT will require dedication of right-of-way along the site's frontage on Godwin School Road. By this regulation, this dedication is to provide a minimum of 30 feet of right-of-way from the road centerline on Godwin School Road. The following right-of-way dedication note is required, **"An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat."**
- In accordance with Section 3.2.5.1.2 of the Development Coordination Manual, DeIDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on Godwin School Road. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, **"A 15-foot wide permanent easement is hereby established to the State of Delaware, as per this plat."**
- In accordance with Section 3.4 of the Development Coordination Manual, a record plan shall be prepared prior to issuing "Letter of No Objection". The following information will be required for the "Letter of No Objection" review:
  - Initial Stage Fee Calculation Form
  - Initial Stage Review Fee
  - Gate-Keeping Checklist – Site Plan
  - Design Checklist - Record Plan
  - Sight Distance Spreadsheet
  - Owners and Engineers' name and e-mail address
  - Record Plan
  - Conceptual Entrance Plan
  - Submission of the Area-Wide Study Fee (If applicable)
- Referring to Section 3.4.2 of the Development Coordination Manual, the functional classification of Godwin School Road should be labeled on the plans.

- Referring to Section 3.4.2.1 of the Development Coordination Manual, the following items, among other things, are required on the Record Plan:
  - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.
  - Depiction of all existing entrances within 450 feet of the proposed entrance(s).
  - Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted.
  - The existing and dedicated rights-of-way and the permanent easements. These should be dimensioned from the road centerlines.
  
- Section 3.5.4.2 of the Development Coordination Manual addresses requirements for shared-use paths and sidewalks. Projects located in Level 3 Investment Areas are required to install a shared-use path or sidewalk along the State-maintained road frontage if the project abuts an existing facility. The Subdivision Engineer may waive the requirement where there is no facility on an abutting parcel.
  
- Referring to Section 4.3 of the Development Coordination Manual, an entrance plan shall be prepared prior to 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
  - Auxiliary Lane Spreadsheet
  - Entrance Plan
  - Pipe/Angle Spreadsheet (If applicable)
  - SWM Report and Calculations (If applicable)
  
- In accordance with Section 5.2.5.6 of the Development Coordination Manual, Turning Movement Diagrams shall be provided to verify vehicles can safely enter and exit the site entrance(s). As per Section 5.2.3 of the Development Coordination Manual, the entrance(s) shall be designed for the largest vehicle using the entrance.
  
- In accordance with Section 5.2.9 of the Development Coordination Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrance and how long those lanes should be. The worksheet can be found at [http://www.deldot.gov/information/business/subdivisions/auxiliary\\_lane\\_worksheet.xls](http://www.deldot.gov/information/business/subdivisions/auxiliary_lane_worksheet.xls).
  
- Section 7.7.2 of the Development Coordination Manual addresses the need to provide 20-foot wide drainage easements for all storm drainage systems, open or closed, that fall outside the existing right-of-way or the drainage/utility easement. In accordance with this section, metes and bounds and total areas need to be shown for any drainage easements. The easements should be shown and noted on the record plan.

**Department of Natural Resources and Environmental Control – Contact Michael Tholstrup 735-3352**

DNREC appreciates the Indian River School District’s efforts to conserve and protect sensitive habitat in the western portion of the project parcel, including Ingram Pond and its forested buffer. While the conservation and protection of this area will have benefit for wildlife, neighboring parcels, water and air quality, there remain several opportunities to conserve and protect important sensitive habitat, and reduce greenhouse gas emissions.

DNREC is supportive of the applicant’s intent to utilize current open farm space in order to minimize environmental impacts. Additionally, an abundant use of native vegetation and shade trees throughout the landscape, as well as pervious pavement and green infrastructure technologies would serve to absorb carbon dioxide, protect air and water quality, and provide relief to employees/students on hot days. They encourage the applicant to use high performance building standards and consider alternative energy sources, including use of solar or geothermal.

DNREC would like to point out that if access to Millsboro’s public water supply is not feasible and a well is needed, the adjacent parcel to the south has been identified as a potential contamination source. The property is active under the HSCA Program due to nitrate being a potential contaminant of concern.

The following pages provide information about applicable regulations and detailed recommendations associated with this project from various DNREC Divisions. DNREC would like to be a partner in creating sustainable development that protects and highlights the environment as a natural amenity of the landscape. The Department has resources and expertise that are available to help make this a reality, often at no expense to the landowner. Contact information for specific offices are listed below or you can contact Michael Tholstrup at (302) 735-3352.

**TMDLs, PCS, and Nutrient Management plans.**

- The project is located in the high nutrient reduction zone of 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. The TMDL for the Inland Bays watershed calls for 85 percent reduction in nitrogen and a 65 percent reduction in phosphorus, both from baseline conditions. The TMDL also calls for a 40 percent reduction (17 percent for marine waters) in bacteria from baseline conditions.

A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited waterbody” can assimilate and still meet State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; *State of Delaware Surface Water Quality Standards, as amended July 11, 2004*) to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Please view the following web link for further information on the regulatory requirements and

technical analysis involved in the development of the specific TMDLs:

<http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessmentTMDLs.aspx>.

The Inland Bays Pollution Control Strategy (PCS) and the accompanying regulations were finalized by order of the DNREC Secretary on October 2008. The PCS regulations can be reviewed here: <http://regulations.delaware.gov/documents/November2008c.pdf>. Background information about the PCS with guidance documents and mapping tools can be retrieved here:

[http://www.dnrec.state.de.us/water2000/Sections/Watershed/ws/ib\\_pcs.htm](http://www.dnrec.state.de.us/water2000/Sections/Watershed/ws/ib_pcs.htm).

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 proposed open space will exceed this 10-acre threshold. Please contact the Delaware Nutrient Management Program at (302) 739-4811 for further information concerning compliance requirements, or view additional information here: <http://dda.delaware.gov/nutrients/index.shtml>.

### **Water Supply.**

- The information provided indicates that the Town of Millsboro will provide water to the proposed project through a public water system. DNRC files reflect that the Town of Millsboro does not currently hold a Certificate of Public Convenience and Necessity (CPCN) to provide public water in these areas. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at (302) 736-7500.

Should an on-site public well be needed, a minimum isolation distance of 150 feet is required between the well and any potential source of contamination, such as a septic tank and sewage disposal areas, and at least 150 feet from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

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 take approximately four weeks to process, which allows the necessary time for technical review and advertising. Should you have any questions concerning these comments, please contact Rick Rios, at (302) 739-9944.

**Sediment and Erosion Control/Stormwater Management.**

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through the Division of Soil and Water Conservation Sediment and Stormwater Program. Contact Elaine Webb with the Sediment and Stormwater Program at (302) 739-9921 for details regarding submittal requirements and fees.

It is strongly recommended that you contact the reviewing agency to schedule a pre-application meeting with the Sediment and Stormwater Section 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.

**Air Quality.**

- DNREC encourages developers and builders to consider all sustainable growth practices in their design, but we believe, however, that the air quality impacts associated with the project should be completely considered. The applicant shall comply with all applicable Delaware air quality regulations. Please note that the following regulations in Table 1 – Potential Regulatory Requirements may apply:

<b>Table 1: Potential Regulatory Requirements</b>	
<b>Regulation</b>	<b>Requirements</b>
<b>7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling</b>	<ul style="list-style-type: none"> <li>• Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.</li> <li>• Use covers on trucks that transport material to and from site to prevent visible emissions</li> </ul>
<b>7 DE Admin. Code 1113 – Open Burning</b>	<ul style="list-style-type: none"> <li>• Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year.</li> <li>• Prohibit the burning of land clearing debris.</li> <li>• Prohibit the burning of trash or building materials/debris.</li> </ul>
<b>7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan</b>	<ul style="list-style-type: none"> <li>• Require, for any “federal action,” a conformity determination for each pollutant where the total of direct and indirect emissions would equal or exceed any of the de minimus levels (See Section 3.2.1)</li> </ul>

<b>7 DE Admin. Code 1141</b> – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products	<ul style="list-style-type: none"> <li>• Use structural/ paint coatings that are low in Volatile Organic Compounds.</li> <li>• Use covers on paint containers when paint containers are not in use.</li> </ul>
<b>7 DE Admin. Code 1144</b> – Control of Stationary Generator Emissions	<ul style="list-style-type: none"> <li>• Ensure that emissions of nitrogen oxides (NO<sub>x</sub>), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), and carbon dioxide (CO<sub>2</sub>) from emergency generators meet the emissions limits established. (See section 3.2).</li> <li>• Maintain recordkeeping and reporting requirements.</li> </ul>
<b>7 DE Admin. Code 1145</b> – Excessive Idling of Heavy Duty Vehicles	<ul style="list-style-type: none"> <li>• Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</li> </ul>

For a complete listing of all Delaware applicable regulations, please look at the website: <http://www.dnrec.delaware.gov/Air/Pages/Air-Regulations.aspx>.

- Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) for this project were quantified. Table 2 – Projected Air Quality Emissions represents the actual impact the Indian River- Ingram Pond site may have on air quality.

<b>Table 2: Projected Air Quality Emissions for Indian River School District</b>					
Emissions Attributable to Indian River School District (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NO <sub>x</sub> )	Sulfur Dioxide (SO <sub>2</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )	Carbon Dioxide (CO <sub>2</sub> )
Mobile Source emissions	6.3	8.3	*	*	*

(\*) *Indicates data is not available.*

Note that emissions associated with the actual construction of the road, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.

- DNREC encourages sustainable growth practices that:
  - Control sprawl;
  - Preserve rural and forested areas;

- Identify conflicting land use priorities;
- Encourage growth on previously developed sites and denser communities while at the same time protect our diminishing land base;
- Coordinate transportation, housing, environment, and climate protection plans with land use plans; and
- Demonstrate that communities can achieve the qualities of privacy, community, and contact with nature without degrading the natural environment or generating unacceptable environmental costs in terms of congestion, use of natural resources, or pollution.

### **Hazardous Waste**

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

There is one SIRS site within a half mile radius of the property in question.

### **Townsend Ingram Pond (DE-0201) is located adjacent south of the project property:**

- The Site was used by a local chicken processing company that dumped soybean wastes into the Ingram Pond Site from the 1970's until 1982.
- A Preliminary Assessment was conducted in 1988 because of the high levels of nitrate in the groundwater and surrounding areas.
- SIRS conducted a site visit in November 2000 and found that the site was inactive and pine trees covered the area. During this time there was no evidence of nitrate contamination and no eutrophication of the Ingram Pond.
- It was determined that site will remain active under the HSCA Program and be further investigated due to nitrate being a potential contaminant of concern and its presence and affect future land uses.

### **State Historic Preservation Office – Contact Terrence Burns 736-7404**

- There are no known archaeological sites or National Register-listed properties on this parcel. If any development or construction project proceeds, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law, in Chapter 54, of Title 7, of the Delaware Code.

Abandoned or unmarked family cemeteries are very common in the State of Delaware. They are usually in rural or open space areas, and sometimes near or within the boundary of an historic farm site. Even a marked cemetery can frequently have unmarked graves or burials outside of the known boundary line or limit. Disturbing unmarked graves or burials triggers the Delaware's Unmarked Human Burials and Human Skeletal Remains Law (7 Del. C. Ch. 54), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. If there is a discovery of any

unmarked graves, burials or a cemetery, it is very costly to have them archaeologically excavated and the burials moved. The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area, to the full extent, to see if there is any unmarked cemetery, graves, or burial sites. In the event of such a discovery, the Division of Historical & Cultural Affairs also recommends that the plans be re-drawn to leave the full extent of the cemeteries or any burials on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with the landowner association or development. If you would like to know more information pertaining to unmarked human remains or cemeteries, please go to the following websites for additional information: [www.history.delaware.gov/preservation/umhr.shtml](http://www.history.delaware.gov/preservation/umhr.shtml) and [www.history.delaware.gov/preservation/cemeteries.shtml](http://www.history.delaware.gov/preservation/cemeteries.shtml).

Therefore, prior to any demolition or ground-disturbing activities, the developer should hire an archaeological consultant, to examine the parcel for archaeological resources, especially a cemetery or unmarked human remains.

- If there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential cultural or historic resources. Owners and developers who may plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the National Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground-disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties.

Any preconstruction activities without adherence to these stipulations may jeopardize the issuance of any permit or funds. If you need further information or additional details pertaining to the Section 106 process and the Advisory Council's role, please review the Advisory Council's website at [www.achp.gov](http://www.achp.gov).

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

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

- **Fire Protection Water Requirements:**
  - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.

- Where a water distribution system is proposed for educational sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.
- **Fire Protection Features:**
  - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
  - Buildings greater than 10,000 sq. ft. 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
  - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
  - Show Fire Lanes and Sign Detail as shown in DSFPR
- **Accessibility:**
  - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
  - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
  - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.
- **Gas Piping and System Information**
  - Provide type of fuel proposed, and show locations of bulk containers on plan.
- **Required Notes:**
  - Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
  - Proposed Use
  - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
  - Square footage of each structure (Total of all Floors)
  - National Fire Protection Association (NFPA) Construction Type
  - Maximum Height of Buildings (including number of stories)
  - Note indicating if building is to be sprinklered
  - Name of Water Provider
  - Letter from Water Provider approving the system layout
  - Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
  - Provide Road Names, even for County Roads

### **Recommendations/Additional Information**

This section includes a list of site specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped (**but in no way required**) that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

### **Delaware Department of Transportation – Contact Bill Brockenbrough 760-2109**

- As originally proposed, the Plantation Lakes development extended north of Shoals Branch to Sheep Pen Road and beyond that road to Country Living Road. Plans have never been recorded for the land north of Shoals Branch but the Plantation Lakes developer still owns that land and various parties have periodically approached us with plans to develop it.

The 1994 Traffic Impact Study (TIS) for Plantation Lakes (revised in 1997) addressed all of the land and consequently identified road improvements needed to support development of the lands north of Shoal Branch. When those lands are developed, we anticipate requiring that developer to improve several roads to meet DelDOT standards, including Godwin School Road from the north end of their frontage to where the improvements built south of Shoals Branch end and Sheep Pen Road from Godwin School Road to Delaware Route 20.

- Section 3.2.5.1.1 of the Development Coordination Manual provides DelDOT's requirements regarding easements for signs and structures at neighborhood entrances. While it is not wholly applicable to signs at the school entrance(s) the District should expect requirements that such signs be located outside of any existing and/or proposed right-of-way and not pose a sight distance and/or safety hazard.
- Please be advised that DelDOT is about to advertise for adoption, in the April Register of Regulations, an update of the Development Coordination Manual. The effective date will be April 11, 2016. While in most respects, the changes are incremental, they are located throughout the Development Coordination Manual and could have some effect on the entrance designs.
- Please be advised that as of August 1, 2015, all new plan submittals and re-submittals, including major, minor and commercial plans, shall now be uploaded via the PDCA (Planning Development Coordination Application) with any review fee paid online via credit card or electronic check. Guidance on how to do this is available on our website at <http://www.deldot.gov/information/business/subdivisions/>
- Be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision date of January 28, 2016. The notes can be found at [http://www.deldot.gov/information/business/subdivisions/Sheet\\_Notes.doc?012816](http://www.deldot.gov/information/business/subdivisions/Sheet_Notes.doc?012816).

**Department of Natural Resources and Environmental Control – Contact Michael Tholstrup 735-3352**

**Soils Assessment**

- Based on soils survey mapping update, Longmarsh Indiantown (LO) is the primary soil mapping unit of concern on subject parcel. Longmarsh Indiantown is a very poorly drained wetland associated hydric soil that has severe limitations for development (Figure 1).

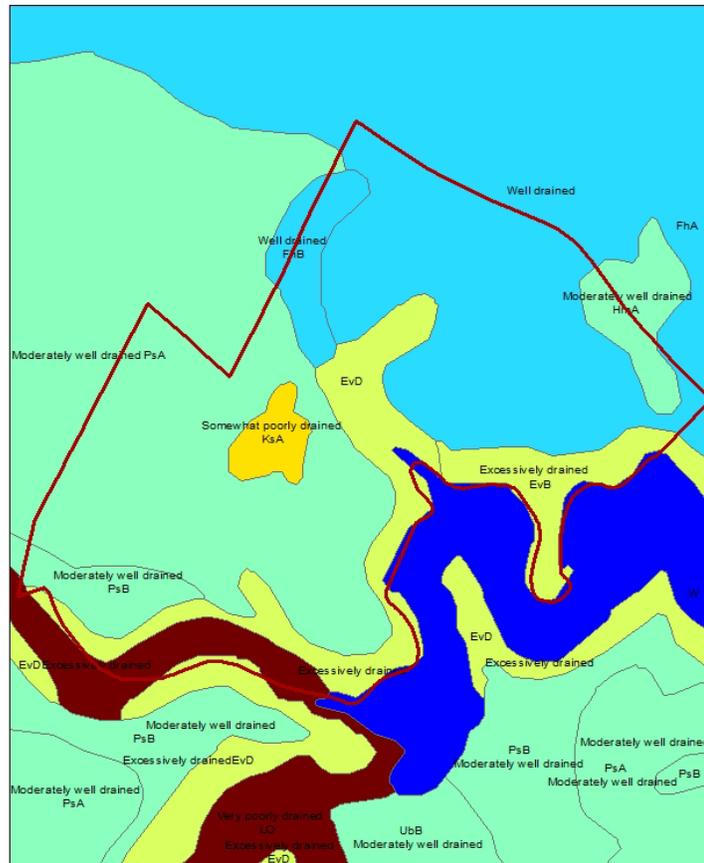


Figure 1: NRCS soil survey mapping update in the immediate vicinity of the proposed construction

0 410 820 1,640 Feet

- Legend**
- Drainage Class**
- Well drained
  - Moderately well drained
  - Poorly drained
  - Somewhat excessively drained
  - Somewhat poorly drained
  - Very poorly drained
  - Well drained
- DrainClass**
- Null
  - Excessively drained
  - Moderately well drained
  - Poorly drained
  - Somewhat excessively drained
  - Somewhat poorly drained
  - Very poorly drained
  - Well drained



**Fish and Wildlife**

- The proposed construction area appears to be limited to a small area of agricultural land to the northeast of the parcel. It would be best if disturbance is limited to this area, and impacts to the surrounding forest is avoided to the greatest extent practicable. In particular, the forest along the southwestern portion of the parcel is considered Key Wildlife Habitat because it is

part of a large forest block that can support an array of plant and animal species, and should be avoided.

Also note that Ingram Pond is state-owned and supports rare species, so it will be important for the existing forested buffers to be maintained between the project area and the pond. Additionally, the importance of containing sediment during construction is paramount. The project area is not that far removed from the pond, so it would be best to implement a variety of stormwater techniques that involve filtration of stormwater (e.g. bioswales, filter strips, rooftop collection) rather than a direct outlet pipe to the pond. Filamentous algae has been noted in this pond in the past several years, and measures that improve the quality of stormwater entering the pond would help keep the algae from becoming excessive.

### **Compliance with TMDLs through the Pollution Control Strategy (PCS).**

- Compliance with the specified TMDL nutrient and bacterial reduction requirements specified for the Inland Bays watershed can be facilitated by adherence to the strategies and requirements described in the Inland Bays PCS, and the implementation of the following recommended BMPs:
  - Preserve and/or maintain as much of the existing forest cover as possible. It is suggested that additional native tree, shrub and/or native herbaceous vegetation plantings in areas of open space, wherever possible.
  - Maintain a vegetated buffer of at least 100 feet from the adjoining wetlands and waterbodies. Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882.), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish this aforementioned 100-foot buffer width (planted in native vegetation) from all waterbodies (including ponds) and all non-tidal and tidal wetlands (i.e., a USACE approved field wetlands delineation for non-tidal wetlands and State approved wetlands delineation for tidal wetlands).
  - 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, ponds, and roads) included in the calculation. Omission of any of the above-stated forms of surface imperviousness will result in an underestimate of the actual post-development surface imperviousness and the associated environmental impacts.
  - Employ green-technology storm water management and rain gardens (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant runoff. Please contact Lara Allison at (302) 739-9939 for further information about the possibility for installing rain gardens on this parcel.
  - Use pervious paving materials instead of conventional paving materials (e.g., asphalt or concrete) to help reduce the amount of water and pollutant runoff draining to adjoining streams and wetlands. Pervious pavers are especially recommended for areas designated for parking.

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

**Additional information on hazardous waste.**

- DNREC 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. SIRS should also be contacted as soon as possible at (302) 395-2600 for further instructions.

**Additional information on air quality.**

- New homes, businesses, and schools may emit, or cause to be emitted, air contaminants into Delaware’s air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:
  - Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
  - The emission of greenhouse gases which are associated with climate change, and
  - The emission of air toxics.

Air emissions generated from new homes include emissions from the following activities:

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

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

These measures include:

- **Constructing with only energy efficient products.** Energy Star qualified products are up to 30% more energy efficient. Savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of energy efficiency translates into a percent reduction in pollution. The Energy Star Program is an excellent way to save on energy costs and reduce air pollution.
- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation and from the use of oil or gas heating equipment.
- **Constructing with high albedo, high solar reflectance materials.** This includes roofing and hardscape. These materials help to reduce heat island impacts and, by extension, help to minimize the potential for localized ground-level ozone formation. These materials also help reduce demands on air conditioning systems and save on energy costs.
- **Providing infrastructure for plug-in vehicles.** Such measure may entice a potential community center guest to purchase an electric vehicle if the electrical outlets are available as this will help minimize vehicle emissions.
- **Providing shade for parking lot areas.** Approaches may include architectural devices, vegetation, or solar panels. Providing shade for parking areas helps to reduce heat island impacts, and, by extension, helps to minimize the potential for localized ground-level ozone formation. Such measures can also have the additional benefit of channeling or infiltrating stormwater.
- **Encouraging the use of safe multimodal transportation.** This measure can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk or bike path, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year.
- **Using retrofitted diesel engines during construction.** This includes equipment that is on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees in vegetative buffer areas.** Native trees reduce emissions by trapping dust particles and replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the project. The applicant should submit a plan to the DNREC Division of Air Quality (DAQ) which addresses the above listed measures, and details all of the specific emission mitigation measures that will be incorporated into the Indian River- Ingram Pond site evaluation. The DAQ point of contact is Deanna Cuccinello, (302) 739-9402.

#### **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](http://www.statefiremarshal.delaware.gov) technical services link, plan

review, applications or brochures.

**Department of Agriculture – Contact Scott Blaier 698-4529**

- The Department of Agriculture prefers that any new schools be built on existing school district property whenever possible, as opposed to purchasing and developing existing farmland.

**Department of Education-Contact Karen Field Rogers 857-3392**

- The DOE will continue to work with the district, architect, site engineer, municipal government and various state agencies regarding the project. The DOE reserves the right to provide continued and on-going comments and input as the project develops.

**Approval Process**

School sites must be approved by the Secretary of Education, the Director of OMB, and the Director of the Office of State Planning Coordination. The *Strategies for State Policies and Spending*, the information contained within this PLUS letter and other factors will be considered when the Secretary and the two Directors make the determination about whether or not to approve a school site.

Once the District decides on a school site or sites to pursue for approval, the district must submit a letter requesting approval of the site(s) to the Department of Education. The letter should be directed to the Education Associate responsible for School Plant Planning and Maintenance. The letter should contain a tax parcel ID #, PLUS review #, and all relevant information regarding the site and the proposed school.

**Once a school site has been selected and approved, and the site plan for the school has been designed, a new PLUS review will be required prior to submission of the plan to the local government.**

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  
Town of Millsboro