



**STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF MANAGEMENT AND BUDGET  
STATE PLANNING COORDINATION**

August 21, 2006

Greg Scott  
Scott Engineering  
838 Walker Road, Ste. 21-2  
Dover, DE 19904

RE: PLUS review – PLUS 2006-07-13; Joshi Construction

Dear Mr. Scott:

Thank you for meeting with State agency planners on July 26, 2006 to discuss the proposed plans for the Joshi Construction Property project to be located at 4642 N. DuPont Highway, south of Cheswold.

According to the information received, you are seeking rezoning of 3.5 acres from IG to BG for an unspecified commercial use. This PLUS review is for both the rezoning application and the comprehensive plan amendment that will be required should Levy Court choose to rezone this property.

It should be noted that while the PLUS review was for the rezoning of the property only, State agency reviewers gave some site specific comments regarding future development of the property. If the County approves the rezoning, the developer should contact this office to determine if the site plan meets the criteria and is required to go through the Preliminary Land Use (PLUS) process.

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

### **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 PLUS review includes both a comprehensive plan amendment and a rezoning request. The rezoning of this property is at the discretion of Kent County Levy Court. Should the Levy Court ultimately choose to grant this rezoning request, the comprehensive plan amendment must be adopted prior to or concurrently with the zoning change.
- This rezoning is located in Investment Level 2 according to the *State Strategies for Policies and Spending*. This site is also located in the Kent County Growth Zone. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas.

### **Street Design and Transportation**

- A traffic impact study (TIS) will be required for this rezoning. The developer's traffic engineer should contact Mr. Todd Sammons of this office to obtain a scope of work for that study. Mr. Sammons may be reached at (302) 760-2134.
- Presently there is a crossover opposite the site frontage. However, the developer should not assume that left-turn movements will be permitted at the site entrance. The operation of the site entrance will need to be evaluated in the TIS and one way to address left turn movements that operate poorly is to eliminate them in favor of U-turns.

### **Natural and Cultural Resources**

- If the house on the parcel is proposed for demolition in the future, The DHCA would appreciate the opportunity to document it prior to any demolition

activities. In addition, they request that sufficient landscaping be included in any future plans to protect the neighboring historic house from the view and noise of a commercial development.

- PLUS application materials indicate that wetlands have been delineated (presumably a field delineation). This delineation should be verified by the Army Corps of Engineers through the Jurisdictional Determination process. Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. The developer should maintain a 100-foot vegetated buffer from the wetlands. There should not be any buildings or associated infrastructure within the buffer.
- The DNREC Water Supply Section recommends that the portion of the new development within the excellent ground-water recharge area not exceed 20% impervious cover. Some allowance for augmenting ground-water recharge should be considered if the impervious cover exceeds 20% but is less than 50% of that portion of the parcel within this area. However, the development should not exceed 50% regardless.

The following are a complete list of comments received by State agencies:

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

This PLUS review includes both a comprehensive plan amendment and a rezoning request. The rezoning of this property is at the discretion of Kent County Levy Court. Should the Levy Court ultimately choose to grant this rezoning request, the comprehensive plan amendment must be adopted prior to or concurrently with the zoning change. This rezoning is located in Investment Level 2 according to the *State Strategies for Policies and Spending*. This site is also located in the Kent County Growth Zone. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas. Our office has no objections to the proposed rezoning of this parcel in accordance with the relevant County codes and ordinances.

**Division of Historical and Cultural Affairs – Contact: Alice Guerrant 739-5685**

The proposed rezoning will not affect historic properties. There is a historic house (K-3153) within the parcel, which first appears on the USGS Dover quadrangle for 1930. There is also a historic house (K-1001) immediately adjacent to this parcel to the south. There is only a low potential for archaeological sites of any period here.

If the house on the parcel is proposed for demolition in the future, The DHCA would appreciate the opportunity to document it prior to any demolition activities. In addition, they request that sufficient landscaping be included in any future plans to protect the neighboring historic house from the view and noise of a commercial development.

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

- 1) A traffic impact study (TIS) will be required for this rezoning. The developer's traffic engineer should contact Mr. Todd Sammons of this office to obtain a scope of work for that study. Mr. Sammons may be reached at (302) 760-2134.
- 2) Presently there is a crossover opposite the site frontage. However, the developer should not assume that left-turn movements will be permitted at the site entrance. The operation of the site entrance will need to be evaluated in the TIS and one way to address left turn movements that operate poorly is to eliminate them in favor of U-turns.
- 3) If the rezoning is approved, the developer's site engineer should contact the project manager for Kent County, Mr. Brad Herb, regarding requirements for access. Mr. Herb may be reached at (302) 266-9600.

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

**Soils**

According to the Kent County soil survey, Fallsington was mapped in the immediate vicinity of the proposed construction. Fallsington is a poorly-drained wetland associated (hydric) soil that has severe limitations for development.

It should also be noted that the hydric soils (Fallsington) mapped on subject parcels are likely to have a seasonal high water table within a depth of one-foot from the soil surface. Building in such soils may leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surface water ponding; this issue is of particular concern during periods of high-intensity long duration rainfall events associated with tropical storms/hurricanes or "nor'easters." Flooding probabilities may be further augmented by surface water runoff emanating from created forms of structural imperviousness (roof tops, roads, and sidewalks). Therefore, the applicant should refrain from building on lots containing mapped hydric soils or soils

delineated as such by their consulting soil scientist, while attempting to reduce all forms of constructed surface imperviousness.

### **Wetlands**

Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. The developer should maintain a 100-foot vegetated buffer from the wetlands. There should not be any buildings or associated infrastructure within the buffer.

PLUS application materials indicate that wetlands have been delineated (presumably a field delineation). This delineation should be verified by the Army Corps of Engineers through the Jurisdictional Determination process. Please note that impacts to palustrine wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In situations where the applicant believes that the delineated wetlands on their parcel are nonjurisdictional isolated wetlands, the Corps must be contacted to make the final jurisdictional assessment. They can be reached by phone at 736-9763.

In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process.

To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-9943 to schedule a meeting.

### **Wetland Buffers**

Buffers are an integral component of aquatic and wetland habitats, reducing the amount of sediments, pollutants, and other non-point source material that may affect the function and integrity of habitat and the condition and survivability of aquatic organisms. Forested buffers also serve as habitat for many terrestrial species that are dependent on aquatic and wetlands habitats for a portion of their annual life cycle.

DNREC recommends a buffer at least 100 feet in width to protect water quality and species that depend on wetlands. This is especially important considering this project will result in 75% impervious surface and is located within an excellent groundwater recharge areas; vegetated buffers will help to assist in the infiltration of ground water and alleviate

impacts from impervious surfaces. There should not be buildings or structures within this buffer zone.

### **Impervious Cover**

Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline. Based on analyses of 2002 aerial photography by the University of Delaware, the Leipsic River watershed, at that time, had about 5.1 percent impervious cover. Although this data is about 4 years old and likely an underestimate, it illustrates the importance of a proactive strategy to mitigate for predictable and likely cumulative environmental impacts. Since the amount of imperviousness generated by this project is likely to be significantly above the desirable watershed threshold of 10 percent (reported as 75%) in this watershed, the applicant is strongly advised to pursue best management practices (BMPs) that mitigate or reduce some of the most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials (“pervious pavers”) in lieu of asphalt or concrete in conjunction with an increase in forest cover via additional tree plantings are examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

### **TMDLs**

A Total Maximum Daily Load (TMDL) is the maximum level of pollution for which a water quality limited water body can assimilate without compromising use and recreational goals such as swimming, fishing, drinking water, and shell fish harvesting. Compliance with TMDL nutrient loading reduction requirements will ultimately be assessed via nutrient budget protocol, a computer-based model that quantifies post-development nutrient loading under a variety of land use scenarios in combination with a variety (or absence) of BMP types and intensities. This post-development loading rate is then compared with the pre-development loading rate as a means to assess whether the project meets the acceptable TMDL reduction levels. Although TMDLs have not yet been finalized for the Leipsic River watershed to date, the applicant should be made aware that they will be available in the near future (before December 2006), and may be applicable to this project. It is strongly advised, therefore, that the applicant be proactive and employ best management practices (BMPs) and Best Available Technologies (BATs) as methodological mitigative strategies to reduce the likely degradative impacts associated with this development. Examples of BMPs or BATs that should be used to significantly reduce nutrient loading from this project, include practices that prevent or mitigate or minimize created surface imperviousness, maintenance of recommended wetland buffer widths (100 feet), and use of innovative “green-technology” stormwater methodologies rather than conventional open-water stormwater management structures.

We suggest that the applicant periodically contact our office regarding the status of the nutrient budget protocol and obtain it as soon as possible. When it becomes available, we suggest that the applicant then verify their project's compliance with the specified TMDL loading rates by running the model themselves, or contacting us if assistance is needed. The contact person for obtaining the protocol is Lyle Jones at 739-9939.

### **Water Resource Protection Areas**

The DNREC Water Supply Section has determined that it falls entirely within an excellent ground-water recharge area (see attached map). 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. As such, these soils are able to transmit water very quickly from the land surface to the water table. Consequently, ground water in these areas may very readily be adversely affected by land use activities or impervious cover.

The DNREC Water Supply Section recommends that the portion of the new development within the excellent ground-water recharge area not exceed 20% impervious cover. Some allowance for augmenting ground-water recharge should be considered if the impervious cover exceeds 20% but is less than 50% of that portion of the parcel within this area. However, the development should not exceed 50% regardless. A water balance calculation will be necessary to determine the quantity of clean water to be recharged via a recharge basin. The purpose of an impervious cover threshold is to minimize loss of recharge (and associated increases in storm water) and protect the quality and quantity of ground water and surface water supplies.

Ideally, relocating any open space areas to the part of the parcel within the excellent ground-water recharge area would decrease the total impervious area. Augmenting the groundwater recharge with clean rooftop run-off systems are another alternative to maintaining the quality and quantity of water recharging the aquifer.

In addition, because the excellent ground water recharge area can so quickly affect the underlying aquifer if contaminants are spilled or discharged across the area, the storage of hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program.

For more information refer to the Final Source Water Protection Guidance Manual for the Local Governments of Delaware

<http://www.wr.udel.edu/swaphome/phase2/SWPguidancemanual.html>

and

#### Ground-Water Recharge Design Methodology

[http://www.wr.udel.edu/swaphome/phase2/Publications/swapp\\_manual\\_final/swapp\\_guidance\\_manual\\_supp\\_1\\_2005\\_05\\_02.pdf](http://www.wr.udel.edu/swaphome/phase2/Publications/swapp_manual_final/swapp_guidance_manual_supp_1_2005_05_02.pdf).

Please contact the Water Supply Section at 302-739-9945 for more information.

### **Water Supply**

The project information sheets state water will be provided to the project by Tidewater Utilities via a central water system. DNREC records indicate that the project is located within the public water service area granted to Tidewater Utilities under Certificate of Public Convenience and Necessity PSC-1190.

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.

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 Management Plan must be approved by the Kent Conservation District prior to any land disturbing activity (i.e. clearing, grading, filling, etc.) over 5000 square feet.

### **Drainage**

The Drainage Program is aware of concerns with the drainage downstream of this site and requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The Drainage Program requests the engineer check existing downstream ditches and pipes for function and blockages prior to

the construction. Notify downstream landowners of the change in volume of water released on them.

### **Nuisance Waterfowl**

If stormwater management ponds are planned they may attract waterfowl like resident Canada geese and mute swans that will create a nuisance for community residents. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. However, native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (at least 50 feet) around ponds, are not as attractive to geese because they do not feel safe from predators and other disturbance when their view of the area is blocked. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the number of ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

### **Underground Storage Tanks**

There are no LUST site(s) located near the proposed project. However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel with nitrile rubber gaskets in the contaminated areas.

### **Site Investigation and Restoration**

Three SIRB sites were found within a half-mile radius of the proposed project area:

- Mays Body Shop (DE-0273) is located south east of the proposed site. This site is considered a low priority site by DNREC; it has no major issues. DNREC does not foresee any negative impact on the proposed site.
- Cheswold Landfill (DE-002) is located far south of the proposed site. Sampling at the site revealed levels of contaminants that were below levels of concern. DNREC does not foresee any negative impact on the proposed site.

- Paul's Antiques (DE-1095) is located south of the proposed site. A Remedial Investigation (RI) revealed low levels of VOCs and pesticides. DNREC does not foresee any negative impact on the proposed site.

**State Fire Marshal's Office – Contact: John Rossiter 739-4394**

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. 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):

❖ *This Agency has no objection to the re-zoning request. The information provided below shall be considered when plans are being designed.*

a. **Fire Protection Water Requirements:**

- Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
- Where a water distribution system is proposed for (Storage) sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **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

c. **Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that

the access road to the subdivision from North duPont Hwy must be constructed so fire department apparatus may negotiate it.

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
  - Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
  - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
  - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.
- d. **Gas Piping and System Information:**
- Provide type of fuel proposed, and show locations of bulk containers on plan.
- e. **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

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.delawarestatefiremarshal.com](http://www.delawarestatefiremarshal.com), technical services link, plan review, applications or brochures.

**Department of Agriculture - Contact: Milton Melendez 698-4500**

The Delaware Department of Agriculture has no objections to the proposed rezoning. The *Strategies for State Policies and Spending* encourages responsible development in areas within Investment Level 2.

The entire site has been designated as having “excellent” ground-water recharge potential. DNREC has mapped all ground-water recharge-potential recharge areas for the state. An “excellent” rating designates an area as having important groundwater recharge qualities.

Senate Bill 119, enacted by the 141<sup>st</sup> General Assembly in June of 2001, requires the counties and municipalities with over 2,000 people to adopt as part of the update and implementation of their 2007 comprehensive land use plans, areas delineating excellent ground-water recharge potential areas. Furthermore, the counties and municipalities are required to adopt regulations by December 31, 2007 governing land uses within those areas to preserve ground-water quality and quantity.

Maintaining pervious cover in excellent and good recharge areas is crucial for the overall environmental health of our state and extremely important to efforts which ensure a safe drinking water supply for future generations. Retention of pervious cover to ensure an adequate future water supply is also important for the future viability of agriculture in the First State. The loss of every acre of land designated as “excellent” and “good” recharge areas adversely impacts the future prospects for agriculture in Delaware. The developer should make every effort to protect and maintain valuable ground-water recharge potential areas.

*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 excess 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.

*Native Landscapes*

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.

Tree Mitigation

The Delaware Forest Service encourages the developer to implement a tree mitigation program to replace trees at a 1:1 ratio within the site and throughout the community. This will help to meet the community's forestry goals and objectives and reduce the environmental impacts to the surrounding natural resources. To learn more, please contact our offices at (302) 349-5754.

**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.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,



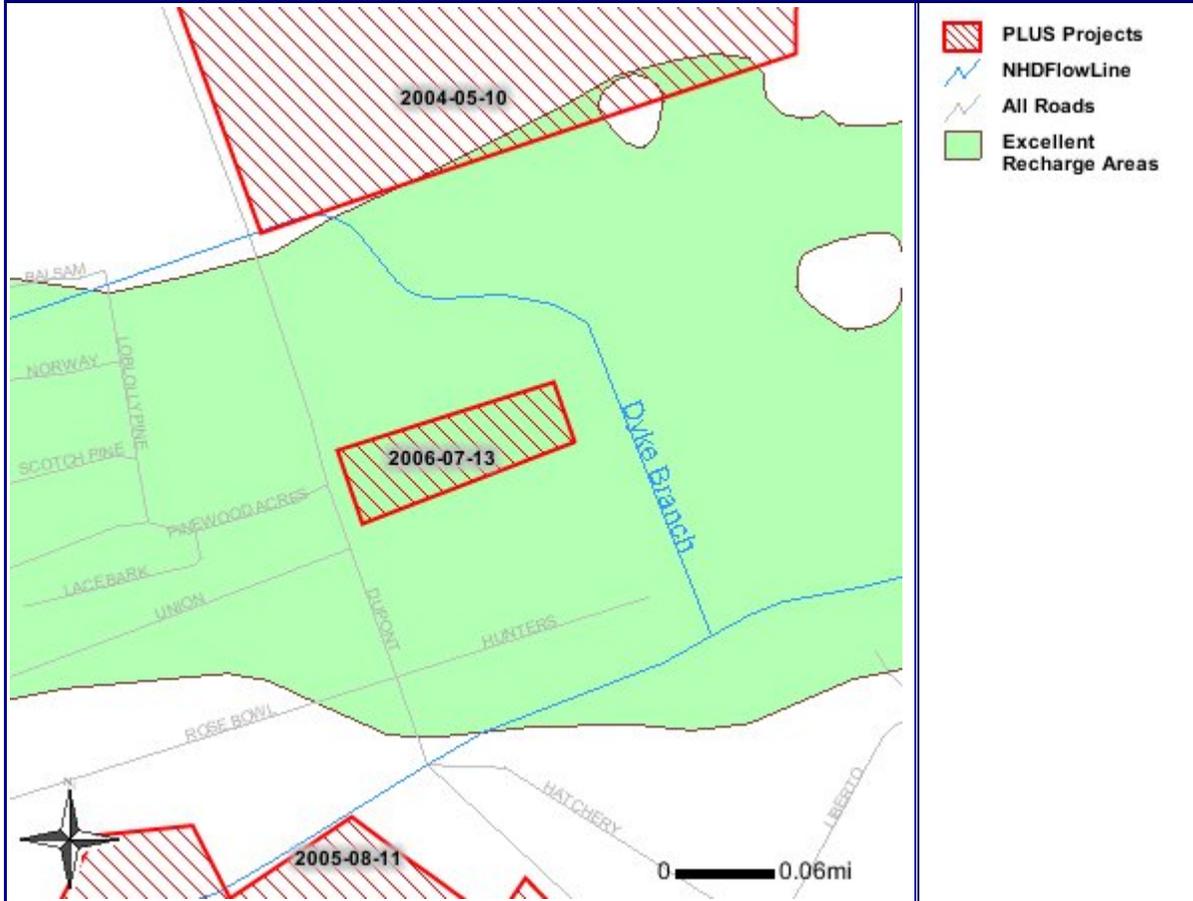
Constance C. Holland, AICP  
Director

CC: Kent County  
Town of Cheswold



# Joshi Construction

2006-07-13



This map was produced by the Delaware Department of Natural Resources and Environmental Control.

