



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

December 22, 2005

Amanda Jones  
Morris & Ritchie Associates  
18 Boulden Circle  
New Castle, DE 19720

RE: PLUS review – PLUS 2005-11-03; Old Courseys Mill

Dear Ms. Jones:

Thank you for meeting with State agency planners on November 30, 2005 to discuss the proposed plans for the Old Courseys Mill project to be located southeast intersection of Roesville Road and Canterbury Road, southwest of Frederica.

According to the information received, you are seeking site plan approval for 213 residential units on 83.60 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 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 project is located in Investment Level 3 according to the *Strategies for State Policies and Spending*. This site is also located in the Kent County Growth Zone. 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, but please be advised that the State may have other priorities in the near term future. We encourage you to design the site with respect for the environmental features which are present.

### **Street Design and Transportation**

- The proposed development is small enough, by one lot, that DelDOT does not expect it to meet the average daily traffic warrant for a traffic impact study (TIS). Further, TIS have been done and continue to be done for other, larger developments nearby, notably Roesville Estates. For these reasons, DelDOT will not require a TIS for this development, but they will require that the developer participate in some of the road improvements identified as being necessary in those studies.
- The developer will be required to improve Canterbury Road and Roesville Road to meet DelDOT's standard typical sections for the length of the site frontage.
- DelDOT recommends that the site be redesigned to eliminate at least some of the five proposed cul-de-sacs. Notably, the two cul-de-sacs closest to Roesville Estates and Hampton Ridge should be extended to form loops.
- DelDOT asks that an easement be provided to the outparcel on Roesville Road (Tax Parcel SM-00-140.00-01-44.01) so that the owner of that parcel can use the streets in the proposed development for access.

### **Natural and Cultural Resources**

- Based on a preliminary evaluation of this project using this model, the development as currently conceived **does not** meet the Murderkill River watershed TMDL nutrient reduction requirements for nitrogen and phosphorus –

the applicant is strongly advised to consider the use of appropriate BMPs and Best Available Technologies (BATS) to ensure compliance.

- The DNREC Water Supply Section has determined that it falls entirely within an excellent recharge area (see following map and attached map). Excellent recharge areas near-surface areas within which precipitation infiltrates the land surface to the unconfined aquifer at a more rapid rate than other areas.
- The DNREC Water Supply Section recommends that the portion of the new development within the excellent recharge area not exceed 50% impervious cover. Further, 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

### **Water Utility**

- Public Service Commission records indicate that Artesian Water Company holds the CPCN for this property, yet the application indicates that Tidewater Utilities will be serving water to the site. The developer is advised to contact Artesian regarding water service.

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

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

This project is located in Investment Level 3 according to the *Strategies for State Policies and Spending*. This site is also located in the Kent County Growth Zone. 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, but please be advised that the State may have other priorities in the near term future. We encourage you to design the site with respect for the environmental features which are present.

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

There is nothing known within this parcel. However, Beers Atlas of 1868 shows the T. B. Coursey and the T. Black houses within the parcel. There are probably surviving archaeological resources associated with these houses. There are areas of medium to high potential for prehistoric archaeological sites here as well. The National Register-listed Thomas B. Coursey House (K-2783; Beers Atlas) is to the south of this parcel near Coursey Millpond. There are two historic houses adjacent to the parcel, one across

Roesville Rd. (K-2785) and one across Canterbury Rd (K-2784) now owned by the Department of Natural Resources and Environmental Control.

Small, rural, family cemeteries often are found in relation to historic farm complexes, usually a good distance from the house. The developer should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs 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. The DHCA will be happy to discuss these issues with the developer; the contact person for this program is Faye Stocum, 302-736-7400.

The DHCA recommend that the developer include sufficient landscaping around the development to protect the nearby historic properties for visual and noise intrusions. They would also appreciate the opportunity to look for archaeological sites here and learn something about their location, extent, and nature prior to any ground-disturbing activities.

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

- 1) The proposed development is small enough, by one lot, that DelDOT does not expect it to meet the average daily traffic warrant for a traffic impact study (TIS). Further, TIS have been done and continue to be done for other, larger developments nearby, notably Roesville Estates. For these reasons, DelDOT will not require a TIS for this development, but they will require that the developer participate in some of the road improvements identified as being necessary in those studies.
- 2) Roesville Road is classified as a local road and Canterbury Road is classified as a major collector road. Local roads in Delaware typically have right-of-way widths ranging from 33 to 50 feet. Collector road rights-of-way vary in Delaware but are typically wider than those of local roads. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads and 40 feet from the centerline on collector roads. Therefore we will require right-of-way dedication along the frontage to provide any additional width needed from this project. Additionally, sufficient right-of-way should be provided at the entrance on Roesville Road to allow for the construction of future protected left turn lanes when the parcel across from the entrance is developed.
- 3) DelDOT will also require that a paved multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site on both roads.

- 4) The developer will be required to improve Canterbury Road and Roesville Road to meet DelDOT's standard typical sections for the length of the site frontage. These improvements should include two twelve-foot travel lanes and two eight-foot shoulders on Canterbury Road, two eleven-foot travel lanes and two five-foot shoulders on Roesville Road, and possibly overlaying the existing through travel lanes. DelDOT will analyze the through travel lanes' pavement section and recommend an overlay thickness to the developer's engineer if it is needed.
- 5) DelDOT recommends that the site be redesigned to eliminate at least some of the five proposed cul-de-sacs. Notably, the two cul-de-sacs closest to Roesville Estates and Hampton Ridge should be extended to form loops. While DelDOT acknowledges that cul-de-sacs are necessary to make efficient use of the land in environmentally constrained areas, they discourage pedestrian travel within the development and do not promote a sense of community. Where possible, they should be avoided.
- 6) DelDOT commends the developer for providing the proposed stub streets to Roesville Estates and Hampton Ridge.
- 7) DelDOT asks that an easement be provided to the outparcel on Roesville Road (Tax Parcel SM-00-140.00-01-44.01) so that the owner of that parcel can use the streets in the proposed development for access.
- 8) The developer's site engineer should contact Mr. Brad Herb, the project manager for Kent County, regarding specific requirements for streets and access. He may be reached at (302) 266-9600.

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

### **Soils**

Based on the Kent County soil survey Sassafra, and Fallsington were mapped in the immediate vicinity of the proposed project. Sassafra is a well-drained upland soil that, generally, has few limitations for development. Fallsington is a very poorly-drained wetland associated (hydric) soil that has severe limitations for development.

## **Wetlands**

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine forested riparian wetlands along the southeastern corner of subject parcel. Because there is strong evidence that federally regulated wetlands exist on site, a wetland field delineation, in accordance with the methodology established by the Corps of Engineers Wetlands Delineation Manual, (Technical Report Y-87-1) should be conducted. Once complete, this delineation should be verified by the Corps of Engineers through the Jurisdictional Determination process.

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.

This project is located directly adjacent to headwater or near headwater riparian wetlands that drain directly into Coursey Pond – greatly increasing the probability of harmful impacts to surface and groundwater quality to all waters within the Murderkill River watershed - making it more difficult for the State to achieve future required TMDL nutrient reductions. It should also be noted that harmful impacts to water quality are directly correlated with the deterioration in the ecological function of a stream along its entire length, including the floodplain system further downstream. In recognition of the impacts to water and habitat quality and the necessity to protect it for long-term sustainable use, the Watershed Assessment Section strongly urges the applicant to consider the preserving the existing naturally-forested buffer in its entirety. Otherwise, a 100-foot upland buffer width is the recommended minimum.

## **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 Murderkill watershed, at that time, had about 8.1 percent impervious cover. Although this data is almost 4 years old and likely an underestimate - it illustrates the necessity for a proactive strategy to mitigate for likely cumulative environmental impacts. Since the amount of imperviousness generated by this project (reported as 13%, but likely a significant underestimate) is above the desirable watershed threshold of 10 percent, 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 reduce surface imperviousness.

The post-development surface imperviousness projected by the applicant (13%) appears to be an underestimate of this project’s projected imperviousness and, ultimately, its environmental impacts. It is strongly advised that the applicant recalculate this project’s surface imperviousness figure in a manner that takes into consideration all forms of created surface imperviousness – including imperviousness from paved road construction.

## **TMDLs**

With the adoption of Total Maximum Daily Loads (TMDLs) as a “nutrient-runoff-mitigation strategy” for reducing nutrients in the Murderkill River watershed, reduction of nitrogen and phosphorus loading will be mandatory. 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. Nutrient reductions prescribed under TMDLs are assigned to those watersheds or basins on the basis of recognized water quality impairments. In the Murderkill watershed, the primary source of water quality impairment is associated with nitrogen and phosphorus runoff from agricultural and/or residential development. The TMDL for the Murderkill River watershed will require post-development nitrogen and phosphorus reductions of 50 and 30 percent, respectively. Compliance with the post-development TMDL nutrient loading reduction requirements will 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 a similarly quantified pre-development loading rate as a means to assess whether the project meets the acceptable TMDL reduction levels. Based on a preliminary evaluation of this project using this model, the development as currently conceived **does not** meet the Murderkill River watershed TMDL nutrient reduction requirements for nitrogen and phosphorus – the applicant is strongly advised to consider the use of appropriate BMPs and Best Available Technologies (BATs) to ensure compliance. Examples of BMPs or BATs that should be used to significantly reduce nutrient loading from this project, include: practices that prevent or mitigate surface imperviousness; maintenance of recommended wetland buffer widths; and the use of innovative or “green-technology” stormwater methodologies. The applicant is encouraged to consider all of the above-suggested BMPs or BATs to ensure that these reductions are attained. DNREC suggests that the applicant verify their project’s compliance with the specified TMDL loading rates by running the model themselves. Please contact Lyle Jones of Watershed Section at 739-9939 for the acceptable model protocol.

### **Water Resource Protection Areas**

The DNREC Water Supply Section has determined that it falls entirely within an excellent recharge area (see following map and attached map). Excellent recharge areas near-surface areas within which precipitation infiltrates the land surface to the unconfined aquifer at a more rapid rate than other areas.

The DNREC Water Supply Section recommends that the portion of the new development within the excellent recharge area not exceed 50% impervious cover. Further, 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. 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. The impervious cover is proposed to change from 0% to 13%. This is below the threshold value for recommendations. The developer has effectively utilized available land to preserve the open space in the proposed development.

For more information refer to the Final: [Source Water Protection Guidance Manual for the Local Governments of Delaware](http://www.wr.udel.edu/publications/SWAPP/swapp_manual_final/swapp_guidance_manual_final.pdf):  
[http://www.wr.udel.edu/publications/SWAPP/swapp\\_manual\\_final/swapp\\_guidance\\_manual\\_final.pdf](http://www.wr.udel.edu/publications/SWAPP/swapp_manual_final/swapp_guidance_manual_final.pdf)

and

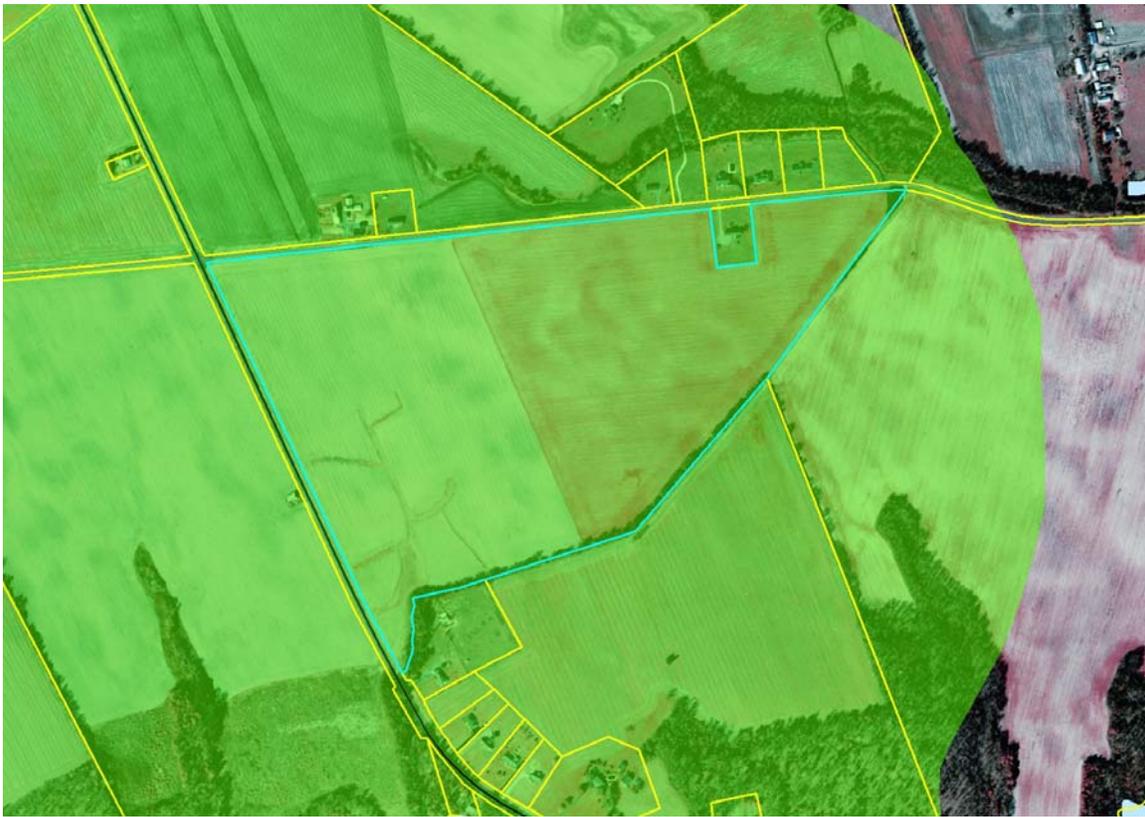
Ground-Water Recharge Design Methodology:

[http://www.wr.udel.edu/publications/SWAPP/swapp\\_manual\\_final/swapp\\_guidance\\_manual\\_supp\\_1\\_final.pdf](http://www.wr.udel.edu/publications/SWAPP/swapp_manual_final/swapp_guidance_manual_supp_1_final.pdf)

In addition, activities that include the storage or disposal of hazardous substances may be prohibited or otherwise regulated by other state regulations. For more information on activities that are regulated please refer to the

[http://www.wr.udel.edu/swaphome/phase2/Publications/Existing%20Authorities%2002\\_02.pdf](http://www.wr.udel.edu/swaphome/phase2/Publications/Existing%20Authorities%2002_02.pdf).

**Map of Old Coursey's Mill PLUS 2005-11-03, with excellent recharge in green with affected parcels outlined in light blue.**



## **Water Supply**

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 well(s).

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**

Requirements:

1. Land disturbing activities in excess of 5,000 square feet are regulated under the Delaware Sediment and Stormwater Regulations. A detailed sediment and stormwater management plan must be reviewed and approved by the Kent Conservation District prior to any land disturbing activity (i.e. clearing, grubbing, filling, grading, etc.) taking place. The review fee and a completed Application for a Detailed Plan are due at the time of plan submittal to the Kent Conservation District. Construction inspection fees based on developed area and stormwater facility maintenance inspection fees based on the number of stormwater facilities are due prior to the start of construction. Please refer to the fee schedule for those amounts.
2. The following notes must appear on the record plan:
  - The Kent Conservation District reserves the right to enter private property for purposes of periodic site inspection.

- The Kent Conservation District reserves the right to add, modify, or delete any erosion or sediment control measure, as it deems necessary.
  - A clear statement of defined maintenance responsibility for stormwater management facilities must be provided on the Record Plan.
3. Ease of maintenance must be considered as a site design component and a maintenance set aside area for disposal of sediments removed from the basins during the course of regular maintenance must be shown on the Record Plan for the subdivision.
  4. All drainage ways and storm drains should be contained within drainage easements and clearly shown on the plan to be recorded by Kent County.
  5. Limited tree clearing must be considered by the designer.

Comments:

1. The submitted plus plans are showing a stormwater basin location however not the type of basin, it's assumed a wet basin will be proposed. The site appears to have mostly well drained soils and an outfall. Provide soils for basin design verification.
2. The site does have some considerable slopes. Erosion and sediment control will need to be considered in the design.
3. The designer is encouraged to consider the conservation design approach and limit the amount of tree clearing required for the development of the site including the stormwater management facilities shown in the wooded areas.
4. Access to the proposed stormwater facility must be provided for periodic maintenance. This access should be at least 12 feet wide to leading to the facility and around the facility's perimeter.
5. It is recommended that the stormwater management areas be incorporated into the overall landscape plan to enhance water quality and to make the stormwater facility an attractive community amenity.
6. A letter of no objection to re-recording will be provided once the detailed Sediment and Stormwater Management plan has been re-approved.

7. Proper drainage of developed lots and active open space should be considered in the development of the grading plan for this subdivision.
8. Based on the site characteristics, a pre-application meeting is suggested to discuss stormwater management and drainage for this site.

### **Drainage**

The Drainage Program requests 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 construction. Please notify downstream landowners if there will be a change in the volume of water released on them.

The Drainage Program encourages the elevation of rear yards to direct water towards the streets where storm drains are accessible for maintenance. The Drainage Program recognizes the need for catch basins in rear yards in certain cases. Catch basins placed in rear yards will need to be clear of obstructions and be accessible for maintenance. Decks, sheds, fences, and kennels should not be placed along the storm drain or near the catch basin. Deed restrictions or easements recorded on the deed, should be placed on the property to ensure maintenance access.

This project is within the Murderkill River Watershed, a designated critical area, with a promulgated Total Maximum Daily Load (TMDL). Preserve existing riparian buffers to aid in the reduction of nutrients, sediment, and other pollutants. For the further enhancement of water quality in the Murderkill watershed, the Drainage Program encourages additional widths of vegetated buffers and other water quality measures on this project. Please explore the use of a created wetland to filter excess nutrients in stormwater runoff from this site before releasing stormwater into Coursey Pond.

### **Open Space**

PLUS materials indicate that 14.2 acres are proposed for open space. In areas set aside for passive open space, the developer is encouraged to consider establishment of additional forested areas or meadow-type grasses. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces.

Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be demarked to avoid infringement by homeowners.

### **Nuisance Waterfowl**

Stormwater management ponds that remain in the site plan may attract waterfowl like resident Canada geese and mute swans. 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. We recommend native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. 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 proper landscaping, monitoring, and other techniques, geese problems can be minimized.

### **Recreation**

DNREC recommends that sidewalks be built fronting at least one side of residential streets and stub streets. A complete system of sidewalks will: 1) fulfill the recreation need for walking and biking facilities, 2) provide opportunities for neighbors to interact in the community, and 3) facilitate safe, convenient off-road access to neighboring communities, parks, public mass transit stops, schools, stores, work, etc.

### **Solid Waste**

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average, each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to be aware of the impact this project will have on the State's limited landfill resources and, to the extent possible, take steps to minimize the amount of construction waste associated with this development.

## Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 16.3 tons (32,693.3 pounds) per year of VOC (volatile organic compounds), 13.5 tons (27,067.8 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 10.0 tons (19,971.1 pounds) per year of SO<sub>2</sub> (sulfur dioxide), 0.9 ton (1,777.8 pounds) per year of fine particulates and 1,367.4 tons (2,734,751.0 pounds) per year of CO<sub>2</sub> (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 6.6 tons (13,186.7 pounds) per year of VOC (volatile organic compounds), 0.7 ton (1,450.9 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 0.6 ton (1,204.1 pounds) per year of SO<sub>2</sub> (sulfur dioxide), 0.8 ton (1,553.8 pounds) per year of fine particulates and 26.7 tons (53,455.9 pounds) per year of CO<sub>2</sub> (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 2.6 tons (5,226.3 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 9.1 tons (18,178.3 pounds) per year of SO<sub>2</sub> (sulfur dioxide) and 1,340.6 tons (2,681,295.1 pounds) per year of CO<sub>2</sub> (carbon dioxide).

	VOC	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Mobile	16.3	13.5	10.0	0.9	1367.4
Residential	6.6	0.7	0.6	0.8	26.7
Electrical Power		2.6	9.1		1340.6
TOTAL	22.9	16.8	19.7	1.7	2734.7

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 2.6 tons of nitrogen oxides per year and 9.1 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, <http://www.energystar.gov/>:

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on

heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades,  
high performance windows,  
controlled air infiltration,  
upgraded heating and air conditioning systems,  
tight duct systems and  
upgraded water-heating equipment.”

The energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. They highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction.

The development should provide tie-ins to the nearest bike paths, links to mass transit, and fund a lawnmower exchange program for their new occupants

**State Fire Marshal’s Office – Contact: John Rossiter 302-739-4394**

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):

- a. **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. (Assembly)
  - Where a water distribution system is proposed for single family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required. (One & Two- Family Dwelling)
  - Where a water distribution system is proposed for the site, 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 or 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 Canterbury Road and Roesville Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- 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**

Neither the Delaware Department of Agriculture nor the Delaware Forest Service has any objections to the Old Courseys Pond application. The site is located on a long-range designated controlled development area. The *Strategies for State Policies and Spending* encourages environmentally responsible development in areas within a Growth Level 3 Zone. We request that you consider limiting impervious cover as much as possible when designing this site. This site is a part of an “excellent recharge” area. The State of Delaware has mapped all ground water potential recharge areas. An “excellent” rating is the second highest rating and designates an area as having important groundwater recharge qualities. 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.

*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.

### *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 the DDA office at (302) 349-5754.

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

The project information sheets state that Tidewater Utilities will be used to provide water for the proposed project. 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 number 04-CPCN-17. It is recommended that the developer contact Artesian Water Company to determine the availability of public water. Any questions concerning CPCNs should be directed to the Public Service Commission at 302-739-4247.

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,

A handwritten signature in cursive script that reads "Constance C. Holland". The signature is written in black ink and is positioned above the printed name and title.

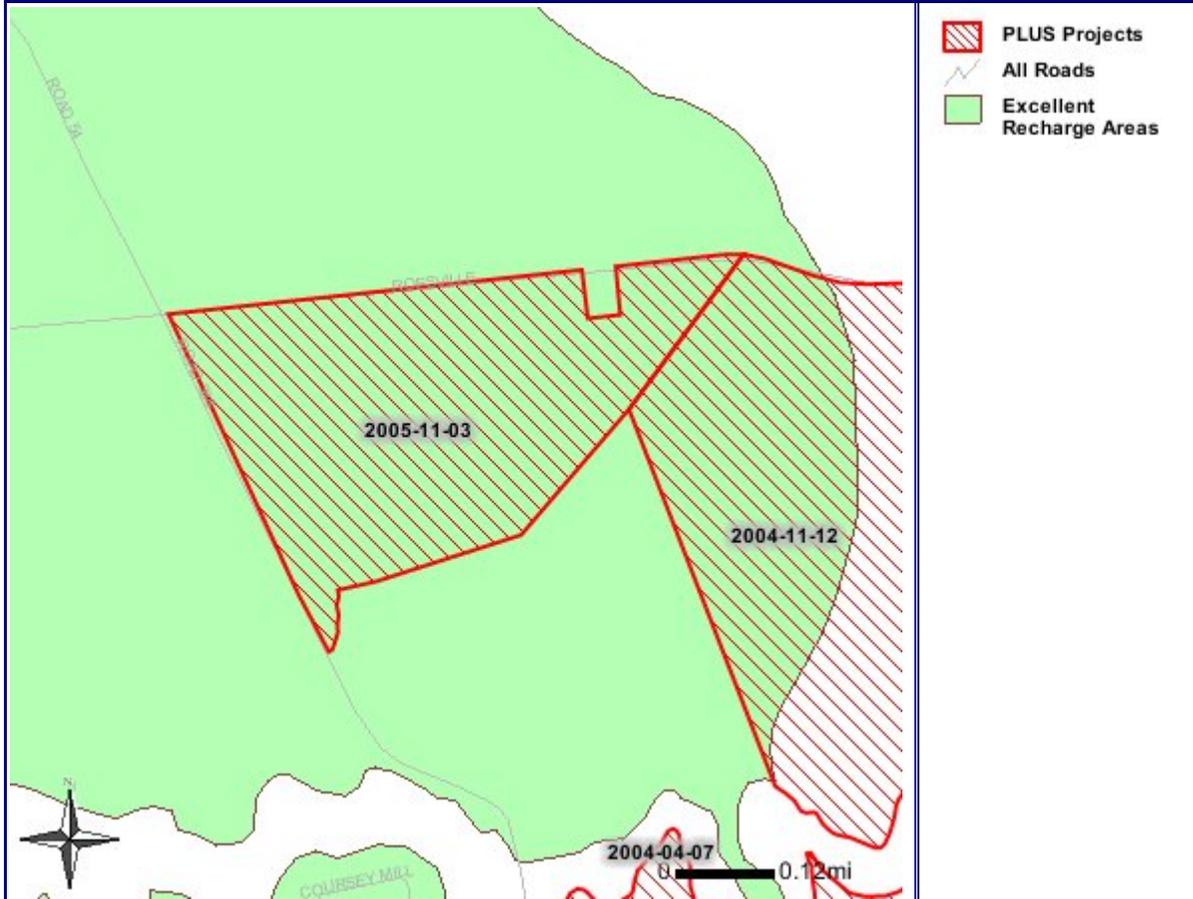
Constance C. Holland, AICP  
Director

CC: Kent County



# Old Courseys Mill

2005-11-03



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

