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June 5, 2007

Ms. Constance C. Holland, AICP, Director
Office of State Planning Coordination
122 William Penn Street
Haslett Armory, Ste. 302
Dover, DE 19901

RE: PLUS review – PLUS 2007-03-09; Shawnee Brooke

Dear Ms. Holland:

On behalf of Ameri-Star Homes, we thank you for meeting with us on March 28, 2007 to discuss the revised plans for the Shawnee Brook project to be located approximately 740 ft. north of Old Shawnee Road near the intersection with Union Church Road. Our client is applying for site plan approval through Sussex County for 80 residential units on 34 acres.

Accordingly, as we previously addressed comments from the original PLUS review in our letter to your office on February 20, 2007, we will describe how we have addressed your concerns with the previous changes. Therefore, we offer the following Point-by-Point response to comments our office received as a part of the PLUS review (our responses are offset in **bold**)

State Strategies/Project Location

- This is located in an Investment Level 3 in accordance with the *State Strategies for Policy and Spending*. In these areas, State policies encourage long term phased growth that is sensitive to the natural resources on and surrounding the site and in support of the efforts of future growth for the nearby local jurisdiction of Milford. The State has no objections to the development of this property in accordance with local ordinances.

- **The Developer would like to thank the Department for their review. As discussed in the meeting and with the application, the applicant: Ameri-Star Homes, intends to construct the subdivision and homes proposed at Old Shawnee Brook. Ameri-Star Homes has extensive successful experience with construction adjacent to sensitive environmental areas and protected lands. The Developer wishes to convey their interest in preserving and protecting trees and other sensitive areas as they feel it will make this project more marketable. We also would like to remind the Department that Ameri-Star Homes is a Certified Master Builder.**

Natural and Cultural Resources

- The Watershed Assessment Section recommends that the applicant maintain a minimum 100-foot upland buffer from the landward edges of all wetlands and water bodies.

- **The Developer understands the Departments position and desire for vegetative buffers. However maintaining a 100-foot buffer from the wetlands is not feasible given the tight geometry of the site. The developer is therefore proposing a minimum of a 50-foot riparian buffer in addition to a no clear zone at the rear of lots 17 through 31. This no clear zone ends at the back of the lots, and will subsequently create a buffer that varies between 80 and 150 feet to the wetlands. This buffer will meet or exceed the current Sussex County Code requirements.**

- The Water Supply Section recommends the following:

    1. Relocate the sanitary sewer pumping station to an area of the site not in the excellent ground-water recharge area.

- **The Developer will explore the use of additional engineering controls to minimize risks to groundwater. In addition, the Developer will limit equipment to the identified area of disturbance and stage all construction from within the proposed subdivision, outside of the identified area of excellent recharge.**
  The location of the pump station as proposed will offer the advantage of allowing other potential users to connect to a central collection, transmission and treatment system, rather than relying on localized septic. In addition, any future connection of tie-in will minimize disturbance within the future established community. Finally, the location or placement of pump stations in excellent recharge areas is allowed under the recent draft guidelines promulgated by the Sussex County Source Water Protection Program.

2. Relocate any open space areas to the part of the parcel within the excellent ground-water recharge area to decrease the total impervious area.

- **This has been incorporated into the revised plan.**

3. Augment the groundwater recharge with clean rooftop run-off systems as an alternative to maintain the quality and quantity of water recharging the aquifer.

- **The incorporation of "Rain Gardens" into the project is a commitment made by the Developer, as referenced on the revised application and as presented in the meeting.**

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

Office of State Planning Coordination – Contact: Bryan Hall 739-3090

This is located in an Investment Level 3 in accordance with the *State Strategies for Policy and Spending*. In these areas, State policies encourage long term phased growth that is sensitive to the natural resources on and surrounding the site and in support of the efforts of future growth for the nearby local jurisdiction of Milford. This office is pleased to see and effort to make improvements to the project as identified in the previous PLUS letter for this project. In addition, this office supports the additional comments provided by DNREC regarding this removal of forests on this site. This office would recommend that a forest mitigation plan be developed for the Open Space area along Old Shawnee Road south of the proposed entrance. This option may work to address some of the concerns expressed by DNREC; while providing improved used of a somewhat disconnected portion of the parcel.

- **The Developer will consider reforestation of the aforementioned Open Space, provided it does not inhibit its use by the community.**

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

The out-parcel to the front of this parcel contains an early-20th-c. house (S-3681), and the USDA 1937 aerial photograph of this area shows that the barns associated with the house extend into the development parcel. There are probably historic-period archaeological remains associated with this farmyard. There are also areas of high potential for prehistoric-period archaeological sites here. There are a number of early-20th-c. historic houses in the area.

Farms of this period are less likely to have family cemeteries associated with them, but 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, and the developer may want to hire an archaeological consultant to check for the possibility of a cemetery here if this development is approved. The DHCA would have to have a copy of any archaeological report done for this purpose. They will be happy to discuss these issues with the developer.

If this development is approved, the DHCA would like the opportunity to examine the area prior to any ground-disturbing activities, to see if there are in fact any archaeological sites on the parcel and to learn something about their location, nature, and extent. In addition, they request that the development include sufficient landscaping to block visual and noise intrusions on the nearby historic properties.

- **The Developer will extend an opportunity to the DCHA to visit the site. The Developer intends to incorporate landscaping at the entrance, along the frontage of Old Shawnee Road, as part of the home packages, as part of the rain gardens, and with street trees.**

Department of Transportation – Contact: Bill Brockenbrough 760-2109

This project was previously presented to the PLUS at the November 22, 2005, meeting, under Application No. 2005-11-13. At that time it consisted of 68 single-family detached houses. From our perspective, the 12-lot increase is not especially significant. DelDOTs comments from 2005 have been adequately addressed and they have no new ones.

- **The Developer appreciates your comments.**

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

Soils

According to the Sussex County soil survey, Ingleside, Sassafras (10-15% slopes), Fallsington, and Longmarsh-Indiantown were mapped in the immediate vicinity of the proposed construction. Ingleside is a well-drained upland soil that, generally, has few limitations for development. Sassafras is a well-drained upland soil that, generally, has few limitations for development. However, the steeply sloping land on which this soil

type is mapped renders this area unsuitable for development. Therefore, the area in the immediate vicinity of the steeply-sloping Sassafras soil mapping unit should be avoided entirely. Fallsington and Longmarsh-Indiantown are poorly to very poorly-drained wetland associated (hydric) soils that have severe limitations, and should also be avoided entirely

- **The revised plan presented in March has relocated proposed earth disturbing activities and lot lines away from the steeper slopes typically associated with the wetlands and buffers. Accordingly, as presented in the revised plan, all proposed development has been concentrated toward the center of the site.**

Wetlands / Wetland Permitting Information

According to the Statewide Wetland Mapping Project (SWMP) mapping, palustrine forested riparian wetlands were mapped in the immediate vicinity of a headwater stream tributary (Bowman Branch) draining to the Mispillion River. The palustrine forested riparian wetlands and associated headwater stream, immediately bound the entire western boundary and much of the southern boundary of subject parcel. Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. PLUS materials indicate that 1.54 non-tidal acres were delineated and the developer does not anticipate wetland impacts.

PLUS application materials provided by the developer indicate that wetlands have been delineated. It is recommended this delineation should be verified by the U.S. Army Corps of Engineers (USACE) through the Jurisdictional Determination process. Palustrine wetlands are regulated by the Corp through Section 404 of the Clean Water Act. In situations where the applicant believes that the delineated wetlands on their parcel are non jurisdictional isolated wetlands. In addition certain drainage ditches may also be jurisdictional either under the Corps Program or through the DNREC Wetland and Subaqueous Lands program. Also, individual 404 permits and certain Nationwide Permits from the Corps 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 clarify these concerns the Corps should be contacted at 736-9763 to make the any final jurisdictional assessment.

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. Please be advised that the new Nationwide Permits from the Corps became effective March 19, 2007. The Delaware Coastal Management Program (DCMP) has not completed their Federal Consistency review of the new permits; therefore, contrary to past practices, Coastal Zone Management approval cannot be assumed. Individual certifications must be granted from the DCMP office for each project intending to utilize a Nationwide Permit. For more information on the Federal Consistency process, please contact the DCMP office at (302) 739-9283.

- **A wetland delineation for the site has been completed. We are in the process of requesting a Jurisdictional Determination from the United States Army Corps of Engineers. Accordingly, we do not anticipate any impacts to wetlands at this time.**

As noted previously, the palustrine headwater water riparian wetlands border the entire western boundary and much of the southern boundary of subject parcel. Headwater riparian wetlands serve to protect water quality which helps maintain the ecological integrity and functions throughout the length of the stream, including the floodplain system and/or water bodies further downstream. Since headwater riparian wetlands serve as natural buffers that protect the water and habitat quality of steams from sediment and nutrient-laden runoff, their protection deserves the highest priority. **Therefore, the Watershed Assessment Section recommends that the applicant maintain a minimum 100-foot upland buffer from the landward edges of all wetlands and water bodies.** A literature review of existing buffer research by Castelle et al. (1994) has documented consensus among researchers that a 100-foot upland buffer is the minimum buffer width necessary, under most circumstances, to protect water quality.

- **The Developer understands the Departments position and desire for vegetative buffers. However maintaining a 100-foot buffer from the wetlands is not feasible given the tight geometry of the site. The Developer is therefore proposing a minimum of a 50-foot riparian buffer in addition to a no clear zone at the rear of lots 17 through 31. This no clear zone ends at the back of the lots, and will subsequently create a buffer that varies between 80 and 150 feet to the wetlands. This buffer will meet or exceed the current Sussex County Code requirements. Furthermore, in lieu of the existing continued agricultural use in close proximity to receiving waters, two wet ponds are proposed that will help improve water quality from stormwater runoff.**

Impervious Cover

Based on a review of the PLUS application, post-development surface imperviousness is estimated to be about 35 percent. However, given the scope and density of this project, this estimate is **clearly an underestimate**. Some of the major reasons for this underestimate are the applicant's improper use of natural areas (potential wetlands and/or buffers) and/or stormwater management areas to meet the County's open space requirements. Use of natural areas and/or or stormwater management areas in this manner results in a significant underestimate of this project's calculated amount of surface imperviousness, ultimately resulting in a significant underestimate of this project's actual environmental impacts. Therefore, the parcel's calculated amount of surface imperviousness should use as its basis, a calculated open space figure that reflects the omission of all delineated wetlands (i.e., USACE-approved) and stormwater management areas. Additionally, all created forms of constructed surface imperviousness (i.e., rooftops, sidewalks, and roads) should be comprehensively accounted for an included in the calculation for surface imperviousness. The finalized calculation for surface imperviousness should reflect all of the above-mentioned concerns so that an accurate assessment of this project's impacts can be made.

- **We respectfully disagree with the above-stated method for calculating impervious cover. The Sussex County Code does not prohibit the inclusion of potential wetlands, buffers and stormwater management areas as elements of open space. In addition, with respect to impervious cover, wet ponds (unless lined – which is not a part of this proposal), wetlands, watercourses, etc. provide a valuable component in the hydrologic cycle. For example, if wetlands are not to be considered as "non-impervious" open space, then the long-standing argument that their presence alleviates flooding is invalid. Likewise, by application of similar logic one would conclude that increasing of buffers would be akin to adding impervious cover.**

  For the purposes of clarification, the estimate for impervious cover on the application included: all of the right-of-way (an over-estimate) and 35% of the lot areas (which includes anticipated rooftop, driveway and leadwalk). The total net approximates to 35% overall, which is consistent with a development of an average density of 2.3 units per acre. The pervious cover includes buffers, ponds, passive and recreational open space, the balance of lot areas and un-encumbered recharge areas and wetlands.

  If the seemingly low estimate of 35% for impervious cover includes the entire right-of-way and a conservative estimate for lot coverage, then the balance of the site includes all open space, wetlands, recharge areas and buffers. Clearly, this

is reflective of the significant open space and buffer retained as part of this project.

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its 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 preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

- **As stated in our previous response to PLUS and at the recent meeting, the Developer has committed to incorporating rain gardens into the project. This should partially offset the affect of impervious cover. Moreover, BMP's will be incorporated into the overall stormwater management for the project.**

TMDLs

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Mispillion River watershed. In addition, a TMDL for bacteria has been established for Broad Creek. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. In the greater Mispillion River watershed, "target-rate-nutrient reductions" of 57 percent will be required for nitrogen and phosphorus. Additionally, "target-rate-reductions" of 87 percent will be required for bacteria.

TMDL Compliance through the Pollution Control Strategy (PCS)

As indicated above, Total Maximum Daily loads (TMDLs) for nitrogen and phosphorus have been proposed for the Broad Creek watershed. The TMDL calls for a 57 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for an 87 percent reduction in bacteria. A pollution control strategy will be used as a regulatory framework to ensure that these nutrient reduction targets are attained. The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional nutrient reductions may be possible through the implementation of Best Management Practices

such as wider vegetated buffers along watercourses, increasing passive, wooded open space, connection to central sewer (if available), and the use of green-technology stormwater management treatment trains. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

- **The Developer has committed to follow the Pollution Control Strategies including the use of BMPs. In addition, proposed buffers will meet or exceed the current Sussex County Code requirements. Furthermore, in lieu of the existing continued agricultural use in close proximity to receiving waters, two wet ponds are proposed that will help improve water quality from stormwater runoff.**

Water Resource Protection Areas

The Water Supply Section has determined that the project falls partially within an excellent ground-water recharge area. The site plan submitted by the developer shows the sanitary sewer pumping station in the excellent ground-water recharge area (see following map and attached map). DNREC was unable to find the 'rain garden' referenced in the application on the site plan.

- **As stated in our previous response to PLUS and at the recent meeting, the Developer has committed to incorporating rain gardens into the project. They will be incorporated into the individual home packages and lot landscaping.**

Excellent Ground-Water Recharge Areas are those areas mapped by the Delaware Geological Survey where the first 20 feet of subsurface soils and geologic materials are exceptionally sandy. These soils are able to transmit water very quickly from the land surface to the water table. This map category is an "indicator of how fast contaminants will move and how much water may become contaminated" (Andres, 2004, pg 1). Land use activities or impervious cover on areas of excellent groundwater recharge potential may adversely affect the quality and quantity of ground water in these areas.

The construction phase of a sanitary sewer pumping station requires excavation, hauling, and grading. The heavy equipment used in this phase has the capacity to compact and degrade the structure of the strata that defines the area as an excellent ground water recharge area. Changes to the structural soil properties may cause significant reduction in recharge capacity. Installing the sanitary sewer pumping station in an excellent ground-water recharge area has the potential to contaminate the ground water beneath it and infiltrate into the aquifer. If a problem were to occur in the system that released contaminants, they would pose a likely threat to the quality of water in the underlying aquifer.

- Water Supply recommends relocating the sanitary sewer pumping station to an area of the site not in the excellent ground-water recharge area.

- **The Developer will explore the use of additional engineering controls to minimize risks to groundwater. In addition, the Developer will limit equipment to the identified area of disturbance and stage all construction from within the proposed subdivision, outside of the identified area of excellent recharge. The location of the pump station as proposed will offer the advantage of allowing other potential users to connect to a central collection, transmission and treatment system, rather than relying on localized septic. In addition, any future connection of tie-in will minimize disturbance within the future established community. Finally, the location or placement of pump stations in excellent recharge areas is allowed under the recent draft guidelines promulgated by the Sussex County Source Water Protection Program.**

The 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 (Kauffman, 2005). 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 proposed development would change the impervious over from 1% to approximately 35%. The developer on the PLUS application provided these numbers.

Water Supply recommends:

- Relocating any open space areas to the part of the parcel within the excellent ground-water recharge area would decrease the total impervious area.

- **This has been incorporated into the revised plan.**

- Augmenting the groundwater recharge with clean rooftop run-off systems are an alternative to maintaining the quality and quantity of water recharging the aquifer (Kauffman, 2005).

- **As stated in our previous response to PLUS and at the recent meeting, the Developer has committed to incorporating rain gardens into the project. This**

should partially offset the affect of impervious cover. Moreover, BMP's will be incorporated into the overall stormwater management for the project.

- Perform a water balance calculation to quantify the quantity of clean water recharged via a recharge basin.

- **The Developer will consider this request.**

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.

- **Storage of hazardous waste is not proposed as part of this project.**

References

Andres, A. Scott, 2004, Ground-Water Recharge Potential Mapping in Kent and Sussex Counties, Delaware: Delaware Geological Survey Report of Investigations No. 66, p. 14.
http://www.udel.edu/dgs/Publications/pubform.html#nvestigations

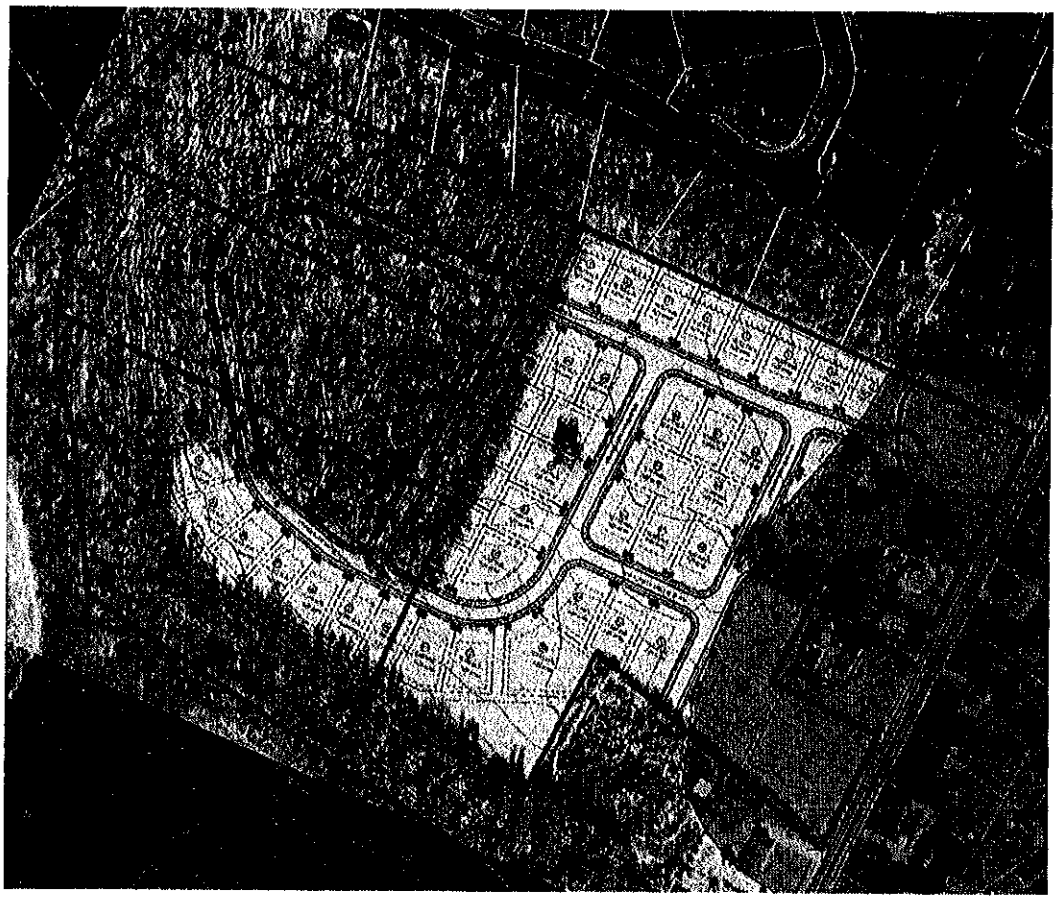
Delaware Department of Natural Resources and Environmental Control (2005): *Source Water Protection Guidance Manual for the Local Governments of Delaware*: Dover, DE, 144 p.
http://www.wr.udel.edu/publications/SWAPP/swapp_manual_final/swapp_guidance_manual_final.pdf

Kauffman, G.J., Wozniak, S.L., and Vonck, K.J., 2005, *Delaware Ground-Water Recharge Design Manual*: Newark, DE, Water Resources Agency, University of Delaware, p. 31.
http://www.wr.udel.edu/swaphome/Publications/SWPguidancemanual.html

Map of Shawnee Brook (PLUS 2007-03-09)

The excellent ground-water recharge potential area is shown in green. The sanitary sewer pumping station is, circled in black and labeled.

- **The plan presented to PLUS represents a balance of overall water management for the project site with the need to provide efficient conveyance and drainage.**



Water Supply

The information provided indicates that the City of Milford will provide water to the proposed projects through a central public water system. Our files reflect that The City of Milford 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. According to SB 135 that was signed on June 30, 2003 by Governor Minner, the municipality is required to give notice to the Public Service Commission when the annexation is complete. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-739-4247.

- **The City of Milford has agreed to provide sewer and water service to this project. We anticipate that Milford will apply for the necessary CPCN's in the near future as appropriate.**

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.

- **The Developer acknowledges these requirements.**

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 Sussex Conservation District. Contact the Sussex Conservation District at (302) 856-7219 for details regarding submittal requirements and fees.

A Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity must be submitted to the Division of Soil and Water Conservation along with the $195 NOI fee prior to plan approval.

Applying practices to mimic the pre-development hydrology on the site, promote recharge, maximize the use of existing natural features on the site, and limit the reliance on structural stormwater components, such as maintaining open spaces, should be considered in the overall design of the project as a stormwater management technique. Green Technology BMPs must be given first consideration for stormwater quality management. Each stormwater management facility should have an adequate outlet for release of stormwater.

It is strongly recommended that you contact the reviewing agency to schedule a preliminary meeting to discuss the sediment and erosion control and stormwater management components of the plan. The site topography, soils mapping, pre- and post-

development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion.

- **The Developer will contact the Sussex Conservation District to schedule a pre-application meeting. A Sediment and Stormwater Management Plan (SSMP) will be prepared for the site in accordance with all current applicable laws and regulations. BMP's will be utilized for the project where possible.**

Drainage

1. The Drainage Program 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 that 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.

- **During site design, consideration will be given to the projects' contribution of stormwater runoff. In addition, the Developer and Engineer will contact the Tax Ditch Manager to coordinate or address his concerns. Additionally, landowners within 200 feet of the project receive direct notice of the project via the notice requirements of the Sussex County Code.**

2. The Drainage Program encourages the elevation of rear yards to direct water towards the streets where storm drains are accessible for maintenance. However, the Drainage Program recognizes the need for catch basins in yards in certain cases. Therefore, catch basins placed in rear and side yards will need to be clear of obstructions and be accessible for maintenance. Decks, sheds, fences, pools, and kennels can hinder drainage patterns as well as future maintenance to the storm drain or catch basin. Deed restrictions, along with drainage easements recorded on deeds, should ensure adequate future maintenance access.

- **The plan presented to PLUS represents a balance of overall water management for the project site with the need to provide efficient conveyance of drainage. When appropriate, runoff will be directed to the street to be collected and conveyed to the stormwater ponds. If grading to the front yard or street is universally applied without regard to other site design considerations, then conditions may exist whereby rainfall runoff is impounded along the rear foundation, or collects in a small swale at the midpoint of the rear yard which would reduce the effective useable area. All proposed drainage structures in rear and side yards will be placed in easements reflected on the proposed Record**

Plan. Such easements will be called out in deeds in accordance with current standards of care for surveying and engineering and in accord with prevailing law. Restrictions on the placement of obstructions within the drainage easement will be specifically referenced in the Shawnee Brook Declaration of Covenants, Restrictions and Easements and distributed to every homeowner prior to settlement.

3. Increase the side yard setback to 15 feet on all properties with a drainage easement on the side. The increase will allow room for equipment to utilize the entire easement and maneuver free of obstructions if the drainage conveyance requires periodic maintenance or future re-construction. The side yard setback would only increase on the side with the drainage easement.

- **When feasible, consideration will be given to increase the side or rear yard setbacks for lots with drainage structures or placing the drainage structures into open space.**

4. All catch basins in rear or side yards should have a 10-foot drainage easement around them on all sides. Place restrictions on fences, sheds, and other structures within the easement to prevent obstructions from being place next to the catch basin. Record the easement on the deed.

- **All proposed drainage structures in rear and side yards will be placed in easements reflected on the proposed Record Plan. Such easements will be called out in deeds in accordance with current standards of care for surveying and engineering and in accord with prevailing law. Restrictions on the placement of obstructions within the drainage easement will be specifically referenced in the Shawnee Brook Declaration of Covenants, Restrictions and Easements and distributed to every homeowner prior to settlement.**

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

- **All easements will be reflected on the proposed Record Plan. Such easements will be called out in deeds in accordance with current standards of care for surveying and engineering and in accord with prevailing law. Restrictions on**

the placement of obstructions within the drainage easement will be specifically referenced in the Shawnee Brook Declaration of Covenants, Restrictions and Easements and distributed to every homeowner prior to settlement.

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

- **The Developer is proposing a minimum of a 50-foot riparian buffer in addition to a no clear zone at the rear of lots 17 through 31. This no clear zone ends at the back of the lots, and will subsequently create a buffer that varies between 80 and 150 feet to the wetlands and will be reflected on the proposed Record Plan and in the HOA documents. This buffer will meet or exceed the current Sussex County Code requirements. Furthermore, in lieu of the existing continued agricultural use in close proximity to receiving waters, two wet ponds are proposed that will help improve water quality from stormwater runoff. As stated in our previous response to PLUS and at the recent meeting, the Developer has committed to incorporating rain gardens into the project. This should partially offset the affect of impervious cover. Moreover, BMP's will be incorporated into the overall stormwater management for the project.**

7. The Drainage Program does not support the removal of trees for the creation of stormwater management areas. However, the Drainage Program recognizes that tree removal is unavoidable in some cases. Where practical, plant native trees and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided.

- **The Developer intends to incorporate landscaping at the entrance, along the frontage of Old Shawnee Road, as part of the home packages, as part of the rain gardens, and with street trees. The Developer will utilize native species where appropriate. The Developer will consider reforestation of the previously mentioned Open Space, provided it does not inhibit its use by the community.**

For questions or clarifications, please contact Jim Sullivan at 739-9921.

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. Doing so will provide wildlife habitat and it will create recreational opportunities for residents. 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. Natural habitat could consist of increasing tree canopy density, reforesting portions of open space or establishing meadow grasses. The developer is encouraged to review "Community Spaces, Natural Places: A guide to restoration, management, and maintenance of community open space". This document provides a reference of practical and successful open space management techniques that emphasize natural landscape alternatives other than turf grass management. The guidebook is available online at: http://www.dnrec.state.de.us/dnrec2000/Divisions/Soil/dcmp/.

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.

- **The Developer will consider using native grasses and other alternatives for passive open space to provide habitat and reduce maintenance. The Developer will consider alternatives to preserve land as a conservation area. The Developer intends to incorporate landscaping at the entrance, along the frontage of Old Shawnee Road, as part of the home packages, as part of the rain gardens, and with street trees. The Developer will utilize native species where appropriate. The Developer will consider reforestation of the previously mentioned Open Space, provided it does not inhibit its use by the community.**

Rare Species and Wetland Buffers

DNREC has never surveyed this parcel, but there is a potential for the Federally-threatened swamp pink (Helonias bullata) to occur within the forested wetlands on this property. This rare plant is very sensitive to sedimentation and changes to water quality. The project site should be surveyed for the presence of this federally protected plant by staff trained in rare species surveys. The program botanist, Bill McAvoy (302-653-2880) has extensive experience and would conduct the survey at no cost or liability to the developer/landowner. An applicant hiring their own consultant to conduct rare species surveys could be a conflict of interest. Because this is a federally listed species, the USFWS may have additional comments or requirements if this species is present on the property.

- **The wetlands delineated on-site may provide a viable habitat for swamp-pink or other endangered or protected species. We are in the process of following established protocol by requesting a Jurisdictional Determination from the**

United States Army Corps of Engineers. Accordingly, this project is not anticipated to encroach, disturb, fill, or otherwise impact the wetlands identified on-site. Moreover, the Developer is proposing a minimum of a 50-foot riparian buffer in addition to a no clear zone at the rear of lots 17 through 31. This no clear zone ends at the back of the lots, and will subsequently create a buffer that varies between 80 and 150 feet to the wetlands and will be reflected on the proposed Record Plan and in the HOA documents. This buffer will meet or exceed the current Sussex County Code requirements. Furthermore, in lieu of the existing continued agricultural use in close proximity to receiving waters, two wet ponds are proposed that will help improve water quality from stormwater runoff. As stated in our previous response to PLUS and at the recent meeting, the Developer has committed to incorporating rain gardens and related landscaping into the project and BMP's will be incorporated into the overall stormwater management for the project.

It is our opinion that all Consultants engaged in this project are qualified in experience, education and accreditation. In assisting the Developer with collecting and analyzing data and by providing guidance and recommendations, they do their very best, every day, to achieve and maintain professional and ethical standards during the execution of their charge. Suggestion of impropriety by innuendo is, in our opinion, inappropriate for this forum.

Haven Lake: A Publicly-owned Pond

There are rare plant and animal species downstream within Haven Lake that could be affected by run-off from this development. This publicly-owned, State-managed pond is used for water based recreation and is very popular with anglers. The pond also has a history of water quality problems that date back to 1993. The State has spent both staff time and funds to manage the water quality of this pond. We recommend that at least a 100-foot forested buffer be left intact along Bowman Branch and any associated wetlands. Although not currently State regulation, this request for 100-foot buffers is based on peer reviewed scientific research and is made to protect a State-owned pond, to maintain wildlife travel corridors along the riparian area, and because upland buffers around wetland areas serve as habitat for wetland dependent species. Also, cumulative impacts are a real concern considering developments downstream also do not have adequate buffers.

Allowing lot lines within a riparian buffer zone could easily result in a reduction in the width and quality of this buffer when homeowners clear for sheds, play areas, swimming pools, dog kennels, etc. Putting restrictions on clearing by homeowners may be hard to

enforce and it would be better to leave a 100-foot vegetative buffer between lot lines and the wetlands in the first place.

- **The Developer understands the Departments position and desire for vegetative buffers. However maintaining a 100-foot buffer from the wetlands is not feasible given the tight geometry of the site. The Developer is therefore proposing a minimum of a 50-foot riparian buffer in addition to a no clear zone at the rear of lots 17 through 31. This no clear zone ends at the back of the lots, and will subsequently create a buffer that varies between 80 and 150 feet to the wetlands and will be reflected on the proposed Record Plan and in the HOA documents. This buffer will meet or exceed the current Sussex County Code requirements. Furthermore, in lieu of the existing continued agricultural use in close proximity to receiving waters, two wet ponds are proposed that will help improve water quality from stormwater runoff.**

Forest Preservation

According to the current application, 12.36 acres of forest out of 18.16 acres is going to be removed by this project. This is actually an increase in the amount of forest loss estimated from the original application Old Shawnee Road Property (PLUS 2005-11-13), which stated 9.76 acres estimated forest loss. The developer's response indicates that there is a reduction in forest loss from the previous site plan but the numbers provided on the application indicate the opposite. DNREC encourages the applicant to correct these figures.

- **It is our opinion that the estimate for forest loss of 12.36 acres, based on the current proposed plan is conservative. The proposed 30-foot no clear zone at the rear of lots 17 through 31 will result in saving approximately 1.14 acres from being cleared. The clubhouse and pool have been eliminated and the stormwater pond in the wooded area has been moved to a centralized location. The area that the stormwater pond previously occupied has been replaced with lots that will require less clearing. Along with these measures, the developer will attempt to minimize the clearing of forested areas, and will practice selective/limited clearing to create wooded lots wherever possible.**

  The original application included an estimate for net forest saving resulting from selective clearing. After revising the plans, and with additional consideration, it was decided to list a worst-case scenario whereby no trees could be saved through selective clearing. Accordingly, we offer the following summary table to clarify the apparent discrepancy:

  Previous PLUS Application

WITH Selective Clearing:		**Without Selective Clearing:**
8.4 +/- Ac (46%) Forest Remaining		**4.38 +/- Ac (24%) Remaining**
9.76 +/- Ac (54%) Removal ← **Reported**		**13.78 +/- Ac (76%) Removal**
New PLUS Application		
WITH Selective Clearing:		**Without Selective Clearing:**
9.82 +/- Ac (54%) Forest Remaining		**5.8 +/- Ac (32%) Remaining**
8.34 +/- Ac (46%) Removal	**Reported** →	**12.36 +/- Ac (68%) Removal**

It was stated in the developer's response document regarding forest removal that "the project will be completed in accordance with current codes and regulations". We want to point out that there are currently no state codes or regulations protecting forests, however, cumulative forest loss throughout the state is of utmost concern to our Division. Because of this overall lack of forest protection, we have to rely on applicants and/or the entity that approves the project (i.e. counties and municipalities) to consider and implement our professional, scientific recommendations. The cumulative loss of forest has led to a corresponding loss of forest-dependent species (Environmental Law Institute. 1999. Protecting Delaware's Natural Heritage: Tools for Biodiversity Conservation. ISBN#1-58576-000-5). In addition, when forests are cleared, animal species have to disperse into surrounding areas which often results in human/animal conflicts, especially interactions on the roadways.

1. While DNREC appreciates the applicant's removal of a stormwater management pond from the forested area, they have replaced it with lots instead of leaving forested open space. Putting restrictions on clearing by homeowners may be hard to enforce and does not ensure future clearing will not occur. Consideration should be given for a reduction in the number of lots and infrastructure within the forested areas of this site to allow for a greater area of forested open space.

- **The Developer will perform selective clearing during construction. Proposed restrictions for clearing will be covered in the HOA documents and shown on the Record Plan. The Developer will consider alternatives to preserve land as a conservation area. The Developer intends to incorporate landscaping at the entrance, along the frontage of Old Shawnee Road, as part of the home packages, as part of the rain gardens, and with street trees. The Developer will utilize native species where appropriate. The Developer will consider reforestation of the previously mentioned Open Space, provided it does not inhibit its use by the community.**

2. DNREC appreciates the developer's willingness to selectively or limit clearing for the building of homes; however, this project will still result in the conversion of a forest into a residential area. To reduce impacts to nesting birds and other

wildlife species that utilize forests for breeding, we recommend that clearing not occur April 1st to July 31st. Large mature trees should be left intact. This recommendation would only protect those species for one nesting season, as once trees are cleared, the result is an overall loss of habitat.

- **To the extent permitted by construction phasing and project buildout, the Developer will be cognizant of the breeding season. Where possible, the Developer will perform selective clearing during construction.**

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 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.

- **The Developer thanks the Department for its comments. An open space management plan will be created which will include appropriate landscaping techniques to be used at these ponds. The Developer will consider using native grasses and other alternatives for passive open space to provide habitat and reduce maintenance. The Developer intends to incorporate landscaping at the entrance, along the frontage of Old Shawnee Road, as part of the home packages, as part of the rain gardens, and with street trees. The Developer will utilize native species where appropriate.**

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.

- **The Developer understands the Departments concerns and will attempt to minimize construction waste.**

Underground Storage Tanks

There is one inactive LUST site(s) located near the proposed project:

Allen's Market, Facility # 5-000804, Project # S9501026

No environmental impact is expected from the above inactive/active LUST site(s). 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.

- **The Developer thanks the Department for this information.**

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 6.1 tons (12,279.2 pounds) per year of VOC (volatile organic compounds), 5.1 tons (10,166.3 pounds) per year of NOx (nitrogen oxides), 3.8 tons (7,500.9 pounds) per year of SO2 (sulfur dioxide), 0.3 ton (667.7 pounds) per year of fine particulates and 513.6 tons (1,027,136.5 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 2.5 tons (4,952.7 pounds) per year of VOC (volatile organic compounds), 0.3 ton (545.0 pounds) per year of NOx (nitrogen oxides), 0.2 ton (452.2 pounds) per year of SO2 (sulfur dioxide), 0.3 ton (583.6 pounds) per year of fine particulates and 10.0 tons (20,077.3 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.0 tons (1,962.9 pounds) per year of NOx (nitrogen oxides), 3.4 tons (6,827.5 pounds) per year of SO2 (sulfur dioxide) and 503.5 tons (1,007,059.2 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO_2	$PM_{2.5}$	CO_2
Mobile	6.1	5.1	3.8	0.3	513.6
Residential	2.5	0.3	0.2	0.3	10.0
Electrical Power		1.0	3.4		503.5
TOTAL	8.6	6.4	7.4	0.6	1027.1

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 1.0 tons of nitrogen oxides per year and 3.4 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.

- **The developer will consider the Department's comments in evaluating and making decisions regarding the energy efficiency of the project. It should be noted that Ameri-Star Homes is a certified Master Builder. It is the intention of the developer/builder that these homes be Energy Star compliant.**

  In addition, DelDOT will most-likely require dedication of a Permanent Easement and construction of a multi-modal path along the project frontage.

State Fire Marshal's Office – Contact: R.T. Leicht 856-5298

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**:
   - 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.
   - The infrastructure for fire protection water shall be provided, including the size of water mains.

b. **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 Old Shawnee Rd 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.

c. **Gas Piping and System Information:**

- Provide type of fuel proposed, and show locations of bulk containers on plan.

d. **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"
- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- 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, technical services link, plan review, applications or brochures.

- **The project will be designed in accordance with all applicable codes and regulations, and in coordination with the State Fire Marshal's office in Sussex County.**

Department of Agriculture - Contact: Scott Blaier 698-4500

The Delaware Department of Agriculture has no objections to the proposed development application. The *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 3 areas.

Section 1. Chapter 99, Code of Sussex Section 99-6 may apply to this subdivision. The applicant should verify the applicability of this provision with Sussex County. This Section of the Code states:

> G. Agricultural Use Protections.
>
> (1) Normal agricultural uses and activities conducted in a lawful manner are preferred. In order to establish and maintain a preference and priority for such normal agricultural uses and activities and avert and negate complaints arising from normal noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations, land uses adjacent to land used primarily for agricultural purposes shall be subject to the following restrictions:
>
> (a) For any new subdivision development located in whole or in part within three hundred (300) feet of the boundary of land used primarily for agricultural purposes, the owner of the development shall provide in the deed restrictions and any leases or agreements of sale for any residential lot or dwelling unit the following notice:
>
> "This property is located in the vicinity of land used primarily for agricultural purposes on which normal agricultural uses and activities have been afforded the highest priority use status. It can be anticipated that such agricultural uses and activities may now or in the future involve noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations. The use and enjoyment of this property is expressly conditioned on acceptance of any annoyance or inconvenience which may result from such normal agricultural uses and activities."
>
> (b) For any new subdivision development located in whole or in part within fifty (50) feet of the boundary of land used primarily for agricultural purposes no improvement requiring and occupancy approval for a residential type use shall be constructed within fifty (50) feet of the boundary of land used primarily for agricultural purposes.

- **The Developer thanks the Department for this information.**

A portion of this site is located in an area designated as having "excellent" ground-water recharge potential. DNREC has mapped all ground-water recharge-potential recharge areas

for the state, and an "excellent" rating designates an area as having important groundwater recharge qualities.

Senate Bill 119, enacted by the 141st 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.

- **As stated in our previous response to PLUS and at the recent meeting, the Developer has committed to incorporating rain gardens into the project. This should partially offset the affect of impervious cover. Moreover, BMP's will be incorporated into the overall stormwater management for the project. In addition, the Developer is proposing a minimum of a 50-foot riparian buffer in addition to a no clear zone at the rear of lots 17 through 31. This no clear zone ends at the back of the lots, and will subsequently create a buffer that varies between 80 and 150 feet to the wetlands and will be reflected on the proposed Record Plan and in the HOA documents. This buffer will meet or exceed the current Sussex County Code requirements. Furthermore, in lieu of the existing continued agricultural use in close proximity to receiving waters, two wet ponds are proposed that will help improve water quality from stormwater runoff.**

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 our offices at (302) 349-5754.

- **The developer thanks the Department for their comments and will take this information into consideration while developing the proposed landscaping for the site. The Developer intends to incorporate landscaping at the entrance, along the frontage of Old Shawnee Road, as part of the home packages, as part of the rain gardens, and with street trees. In addition, the Developer will consider reforestation of the aforementioned Open Space, provided it does not inhibit its use by the community.**

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.

- **The Developer thanks the Department for this information.**

Delaware State Housing Authority – Contact Vicki Walsh 739-4263

This proposal is for a site plan review of 80 residential units on 34 acres located approximately 740 feet north of the intersection of Old Shawnee Road and Union Church Road near Milford. According to the State Strategies Map, the proposal is located in

Investment Level 3 areas. As a general planning practice, DSHA encourages residential development inside growth zones, where residents will have proximity to services, markets, and employment opportunities. Furthermore, the proposal targets units for first time homebuyers. According to the most recent real estate data collected by DSHA, the average home price in Sussex County is $260,000. However, families earning respectively 100% of Sussex County's median income only qualify for mortgages of $174,485, thus creating an affordability gap of $85,515. The provision of units within reach of families earning at least 100% of Sussex County's median income will ensure housing that is affordable for first time homebuyers.

- **It is the intent of the Developer to offer a professionally built, cost-competitive option to the existing new housing stock in Sussex County. The Developer appreciates the above information. As additional conditions are placed on development, costs will continue to escalate thereby expanding the affordability gap.**

Department of Education – Contact: John Marinucci 739-4658

This proposed development is within the Milford School District. DOE offers the following comments on behalf of the Milford School District.

1. Using the DOE standard formula, this development will generate an estimated 40 students.
2. DOE records indicate that the Milford School Districts' *elementary schools **are at or beyond** 100% of current capacity* based on September 30, 2006 elementary enrollment.
3. DOE records indicate that the Milford School Districts' *secondary schools are **not at or beyond** 100% of current capacity* based on September 30, 2006 secondary enrollment.
4. The Milford School District has communicated to the DOE the district's lack of capacity at all grade levels given the number of planned and recorded residential sub divisions within district boundaries.
5. This development will create additional elementary and secondary student population growth which will further compound the existing shortage of space.
6. The developer is strongly encouraged to contact the Milford School District Administration to address the issue of school over-crowding that this development will exacerbate.
7. DOE requests developer work with the Milford School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the local school district.

- **A letter notifying the Milford School District of the proposed project was sent on January 10, 2007. We have not heard back from the School District regarding our notice. Absent participation by the School District, sufficient set-aside reflected on the revised plans has been made to accommodate a covered stop shelter within the subdivision.**

We believe we have adequately addressed the PLUS comments for this project, and are excited to move forward. If you have any questions, please do not hesitate to contact me. I may be reached at 302-730-4600.

Sincerely,
McCrone Inc.

Keith A. Rudy, P.E.
Project Manager

CC: Sussex County
City of Milford