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October 29, 2008

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Ms. Constance C. Holland, AICP  
Director  
State Planning Coordination  
Office of Management and Budget  
The State of Delaware  
122 William Penn Street, Third floor  
Dover, DE 19901

**RE: PLUS SUBMITTAL AND RESPONSE-PLUS 2006-07-09  
KGH PROPERTIES/CARRIAGE GREENS PHASE II SUBDIVISION  
ECI Project No. 05-026**

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Dear Ms Holland:

Thank you for your coordination and compiling of agency comments, regarding Carriage Greens Phase II, to Ms. Wilma Howett of KGH Properties. Since receipt of the letter, we have reviewed the agency comments and have prepared this correspondence in answer to the agency issues brought forth within your letter.

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We note your reference to the project being located within an investment level four as determined by the 2004 Strategies for State Policies and Spending. Additionally, it is recognized that the property is located within a rural area being zoned by Sussex County as AR-1, which specifically allows development of this nature and character. A review of the site conditions indicate that the property is not being utilized in an agricultural pursuit and it is not associated with environmentally sensitive wetlands or wildlife habitats. In fact, a review of the plan as submitted indicates that the site is wooded to a large extent i.e. total site area of 74.8 acres more or less verses the approximately 67.7 acres of woodland. The intent of the plan as filed allows for retention of approximately 50.5 acres of woodland or 75 % of the woodland total. In addition, the project provides for 59 acres more or less of open space, which comprises 59% of the project area. The intent and purpose of the Carriage Green Phase II project is to provide access and limited development to an otherwise landlocked parcel. When the Carriage Greens Phase I project was introduced to the Sussex County Planning and Zoning Commission it was brought to their attention that a Phase II comprised of this parcel would be forthcoming. Of further note, it is the intention of the developer to provide public sewers and public water supply through connection to proposed Artisan Water Company connection to both sewer and water.

The Carriage Greens Phase II Plan, as amended, reflects our determination to achieve a plan that will affirmatively respond to the comments issued by the agencies associated with PLUS. Obviously, the issue related to Level 4 Investment Area cannot be affirmatively addressed, as the geographic location of the project is simply its geographic location. We can only point out to the reviewers of this document that this locale is currently under significant development pressure by numerous developers. In fact, there is sufficient development activity within an approximate 3-mile radius of Carriage Greens that Artesian Water Company has developed an off-site capability to treat and dispose wastewater for this project and numerous other projects located within close proximity of the Carriage Greens project. This significant level of

investment on the part of Artesian is indicative of the growth patterns that are currently in place, immediately surrounding the Carriage Greens project. Perhaps review of the Investment Level 4 boundaries is in order, to more fully address real world development activities, within the vicinity of Carriage Greens Phase II.

This project is unique, in that it provides a cluster type development that is gated and provides restrictive access then the Preliminary Approved Carriage Greens Phase I Project. Specifically, Carriage Greens Phase II will enjoy the same amenities to be provided to residents of the Carriage Greens Phase I Project as approved by the Sussex County Planning and Zoning Commission at a Preliminary Plan level. It must be recognized that the parcel that comprises Carriage Greens Phase II is landlocked and that the development of the project is an orderly transition of the Carriage Greens Phase I Project. The equestrian theme will continue through Phase II and a community center, swimming pool and other site amenities to include walkways, pathways, and other means of pedestrian access through the site will be provided. The trails depicted on the plan are interconnected with the walking trails made apart of the Phase I Project. Of significant note is the fact that fully 59 acres of the project site is reserved as open space. In addition, there are federally designated jurisdictional Wetlands that occur onsite. These Wetlands have been completely respected by the developer and this plan. In fact, Federal Wetlands as delineated on this plan have been buffered although there is no requirement for buffering of federal wetlands in the rules and ordinances promulgated by the Sussex County Planning and Zoning Commission. The buffer ranges in depth of 20 feet to a maximum of 150 feet.

The site's geographic location off of Route 9 will assure that vehicular traffic associated with people traveling to Carriage Greens Phase II from the Baltimore/Washington area and areas to the west, as well as areas to the north, will not be required to traverse the Route 1 corridor to the beach. But instead, will be able to travel directly to the Carriage Greens development without impacting in any significant measured traffic commonly referred to "beach traffic".

The plan seeks to implement the intent of the Community Design Element of the Sussex County Comprehensive Plan, and provide significant recreational opportunities. The plan is consistent with the concept of a cluster style development in rural areas, with extensive open space, woodland preservation and habitat preservation areas.

The plan responds to the comments for the PLUS review as follows:

#### **OFFICE OF STATE PLANNING COORDINATION**

*This project represents a major land development that will result in 66 residential units in an Investment Level 4 area according to the 2004 Strategies for State Policies and Spending. This project is also located in the rural area according to the Sussex County certified comprehensive plan. Investment Level 4 indicates where State investments will support agricultural preservation, natural resource protection, and the continuation of the rural nature of these areas. New development activities and suburban development are not supported in Investment Level 4. These areas are comprised of prime agricultural lands and environmentally sensitive wetlands and wildlife habitats, which should be, and in many cases have been preserved.*

*From a fiscal responsibility perspective, development of this site is likewise inappropriate. The cost of providing services to development in rural areas is an inefficient and wasteful use of the State's fiscal resources. The project as proposed is likely to bring more than 160 new residents to an area where the State has no plans to invest in infrastructure upgrades or additional services. These residents will need access to such services and infrastructure as schools, police, and transportation. To provide some examples, the State government funds 100 percent of school transportation and paratransit services, up to 80% of school*

*construction costs, and the cost of police protection in the unincorporated portion of Sussex County where this development is proposed. Over the longer term, the unseen negative ramifications of this development will become even more evident as the community matures and the cost of maintaining infrastructure and providing services increases.*

*Because the development is inconsistent with the Strategies for State Policies and Spending, the State is opposed to this proposed subdivision.*

**The project is in an investment Level 4 area based upon the Strategies for State Policies and Spending, and in the Sussex County Comprehensive Plan area as low density AR-1 zoning. The plan reflects AR-1 zoning, with a cluster option, to maintain low density zoning in the rural setting. It is understood that in the Level 4 Investment Areas, the State does not support infrastructure improvements. The developer of the Carriage Greens Phase II project recognizes and understands the State's position regarding Investment Levels. We encourage the State Planning Office to consider revision to the Investment Level 4 boundary. It is apparent that the Investment boundaries as currently established, disregard the current growth patterns within Sussex County. The developers recognize their responsibility to provide infrastructure to support their development and are more than willing to furnishing funding for the cost, along with their fair share of off-site impacts and costs. All central water and wastewater treatment and distribution facilities, planned for this project, will be built entirely with private funds. The wastewater disposal and treatment, for this project, will be addressed off-site, by a permitted wastewater treatment facility and disposal site, duly approved by DNREC and Sussex County. At present, the Carriage Greens Phase II project is a small portion of the total sewage flow slated for the Artesian Water Company's high-level treatment and disposal site. The same scenario holds true with the potable water supply for the project. The operation of the water and wastewater facilities will be by Artesian, a public utility, governed by the Public Service Commission, thereby insuring oversight for the safe and fiscally responsible management of the services provided. The tax revenue added to the State revenues plus real estate transfer taxes will support any additional burdens the State or County may need to address.**

**The creation of this community will increase demand for business services by residents moving into the community. This will result in private business growth and increased taxes and revenues to nearby communities, Sussex County and the State of Delaware. The increases in revenues, both to the public and private sectors, will mitigate increases in services as needed.**

#### **STATE HISTORIC PRESERVATION OFFICE DIVISION OF HISTORICAL AND CULTURAL AFFAIRS**

*The DHCA is not in favor of this project because it is in Level 4, and will further disrupt the historic agricultural landscape and woodlots of this area. However, nothing is known within this parcel, and there are no indications of any historic-period habitations here. In addition, it is mainly in an area of low potential for prehistoric archaeological resources, with one area of medium potential in the northeast corner of this parcel.*

*If this project is approved for development, the DHCA would appreciate an opportunity to check the area for a prehistoric archaeological site prior to any ground-disturbing activities.*

**Dr. Edward Otter, prepared a comprehensive assessment of cultural resources in a report prepared for Environmental Consultants International Corporation, dated September 6, 2005. The result of his investigation, contained within the conclusion of his report. A quote from Dr. Otters' report is as follows "All in all, the Carriage Green, Phase II tract is considered to have a low potential for containing any significant cultural remains, either historic or prehistoric. It is**

unlikely that graves exist on the parcel.” If desired, a copy of the report prepared by Dr. Otter can be made available to the State Historic Preservation Office upon written request.

#### **DEPARTMENT OF TRANSPORTATION**

*Because the development is proposed for a Level 4 Area, it is inconsistent with the Strategies for State Policies and Spending. As part of our commitment to support the Strategies, DelDOT refrains from participating in the cost of any road improvements needed to support this development and is opposed to any road improvements that will substantially increase the transportation system capacity in this area. DelDOT will only support taking the steps necessary to preserve the existing transportation infrastructure and make whatever safety and drainage related improvements are deemed appropriate and necessary. The intent is to preserve the open space, agricultural lands, natural habitats and forestlands that are typically found in Level 4 Areas while avoiding the creation of isolated development areas that cannot be served effectively or efficiently by public transportation, emergency responders, and other public services.*

*DelDOT strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in approved Comprehensive Plans. We encourage the use of transfer of development rights where this growth management tool is available.*

*If this development proposal is approved, notwithstanding inconsistencies with the relevant plans and policies, DelDOT will provide technical review and comments.*

**The concern of DelDOT, regarding the Strategies for State Policies and Spending, has previously been addressed elsewhere in this correspondence. All road improvement cost associated with the project will be the responsibility of the projects developer, thus mitigating the issues of State Policies and Spending Strategies. It must also be recognized that access to this parcel will be through the entrance currently under consideration by DelDOT for final plan approval for the Carriage Greens Phase I Project. With regard to any issues related to connectivity it must be noted that due to the location of a significant wetland located to the south of the proposed development of Carriage Greens Phase II it is not economically feasible to connect the project to properties located to the south.**

#### **DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL**

##### ***Investment Level 4 Policy Statement***

*This project is proposed for an Investment Level 4 area as defined by the Strategies for State Policies and Spending and is also located outside of a designated growth area in the relevant municipal and county certified comprehensive plans. According to the Strategies this project is inappropriate in this location. In Investment Level 4 areas, the State’s investments and policies, from DNREC’s perspective, should retain the rural landscape and preserve open spaces and farmlands. Open space investments should emphasize the protection of critical natural habitat and wildlife to support a diversity of species, and the protection of present and future water supplies. Open space investments should also provide for recreational activities, while helping to define growth areas. Additional state investments in water and wastewater systems should be limited to existing or imminent public health, safety or environmental risks only, with little provision for additional capacity to accommodate further development.*

*With continued development in Investment Level 4 areas, the State will have a difficult, if not impossible, time attaining water quality (e.g., TMDLs) and air quality (e.g., non-attainment areas for ozone and fine particulates) goals. Present and future investments in green infrastructure, as defined in Governor Minner's Executive Order No. 61, will be threatened. DNREC strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in certified Comprehensive Plans. We encourage the use of transfer of development rights where this growth management tool is available.*

*This particular development certainly compromises the integrity of the State Strategies and the preservation goals inherent in many of DNREC's programs. Of particular concern are the project's potential impacts to all three layers of green infrastructure (cropland, forest land, and natural resource and recreation priorities) and the loss/fragmentation of 18 out of 68 acres of forest. While mitigating measures such as conservation design, central wastewater systems instead of individual on-site septic systems, and other best management practices may help mitigate impacts from this project, not doing the project at all is the best avenue for avoiding negative impacts. As such, this project will receive no financial, technical or other support of any kind from DNREC. Any required permits or other authorizations for this project shall be considered in light of the project's conflict with our State growth strategies.*

#### **Investment Level 4**

**The developer acknowledges the Department's comments related to Investment Level 4 Strategies, within the State of Delaware. The initial comments within this correspondence, made a part of this response to the Office of State Planning comments, are relevant and fully address the concerns established within these criteria. Please note that the issues brought forth are a matter of policy, not State Regulation. The basis for Investment Level 4 comments is not supported by the current growth patterns and development activities throughout Sussex County and is not consistent with Sussex County Planning and Zoning Ordinances and the Sussex County Comprehensive Plan. As this project proposes an unheard of level of environmental stewardship it is particularly disturbing to see that the department fails to understand the preservation forwarded by the developer in the prosecution of this plan.**

#### **GREEN INFRASTRUCTURE**

*Portions or all of the lands associated with this proposal are within the Livable Delaware Green Infrastructure area established under Governor Minner's Executive Order #61 that represents a network of ecologically important natural resource lands of special state conservation interest.*

*Green infrastructure is defined as Delaware's natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, productive agricultural and forest land, greenways, cultural, historic and recreational sites and other natural areas all with conservation value. Preserving Delaware's Green Infrastructure network will support and enhance biodiversity and functional ecosystems, protect native plant and animal species, improve air and water quality, prevent flooding, lessen the disruption to natural landscapes, provide opportunities for profitable farming and forestry enterprises, limit invasive species, and foster ecotourism.*

*Voluntary stewardship by private landowners is essential to green infrastructure conservation in Delaware, since approximately 80 percent of the State's land base is in private hands. It is in that spirit of stewardship that the Department appeals to the landowner and development team to protect sensitive resources through an appropriate site design.*

The subdivision of Carriage Greens Phase II has been designed to specifically address Green Infrastructure. This statement is supported by the following:

- Over 75% of the existing woodlands, located on site, will be preserved. In addition, extensive landscaping will be undertaken as the project develops, as well so as to provide reforestation of the site as construction moves forward.
- The overall site characteristics of Carriage Greens are being preserved and respected by the development of a cluster option for the project site.

It is fully the intention of the developer of Carriage Greens Phase II to be an example of voluntary stewardship by private development, forwarding goals of Green Infrastructure through appropriate planning and site design and eventual construction methods.

***Site Plan Recommendations to Minimize Forest/Habitat Loss:***

1. *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. This clearing recommendation would only protect those species during the breeding season; once trees are cleared the result is an overall loss of habitat.*
2. *DNREC recommends that efforts to minimize the amount of clearing needed for the footprint of homes and infrastructure be employed. If feasible, mechanisms should also be put in place to reduce future clearing by landowners.*
3. *DNREC recommends that stormwater management ponds be removed from the site plan if they cannot be relocated to a non-forested portion of the parcel. Given the benefit of trees in erosion control and flood abatement, trees should not be cleared for stormwater management ponds*
4. *An alternate method of stormwater management (such as bioswales, etc.) should be employed.*
5. *According to State Wetland maps there are forested wetlands in the central portion of this parcel. To protect the function and integrity of these wetlands, a minimum 100-foot buffer should be left intact around the perimeter. Lot lines, roadways, and infrastructure should not be placed within this buffer zone. Buffers are an integral component of aquatic and wetland habitats, reducing the amount of sediments, pollutants, and other non-point source material that may affect the function and integrity of habitat and the condition and survivability of aquatic organisms. Forested buffers also serve as habitat for many terrestrial species that are dependent on aquatic and wetlands habitats for a portion of their annual life cycle.*

With regard to these comments clearing activities associated with construction onsite will be scheduled to avoid conflicts with wildlife during the breeding season. It is, however, anticipated that although project schedule is still tentative it is possible that some clearing activities will occur during the shoulder seasons depicted within this correspondence. The clearing activities onsite will be limited to clearing necessary to provide an adequate safe home site. It is the intention of the developer to preserve specimen trees as they occur on each of the lots so as to provide a wooded lot theme. With regard to stormwater it is premature at this point to specifically identify the requirements for Stormwater Management Facilities, however ECI has been involved with protracted discussions with the Soil Conservation District and DNREC regarding the Stormwater Management for this project as well as Carriage Greens Phase I

**project. It will be the intention of the developer to unify the Stormwater Management Activities for both projects in a manner completely within the rules and regulations promulgated by DNREC and the Sussex County Conservation District. A significant amount of backwater analysis within the existing watercourse has been presented to DNREC for review and comment. It will be the intention of ECI and the developer to fully comply with the recommendations promulgated by DNREC and the Sussex County Conservation District. It is entirely possible that bio-swales and other Stormwater Management techniques will be employed in the development of a comprehensive Stormwater Management Plan for this project. In addition, it must be noted that ECI has also been in contact with the Delaware Department of Transportation regarding downstream issues that effect the entire drainage basin associated with not only the Carriage Greens Phase I and Phase II projects but also other properties within the watershed. It will be the intention of ECI to address these offsite issues as they present themselves. With regards to wetlands this issue has been addressed extensively throughout this document.**

### **SOILS**

*Based on the Sussex County soil survey update Pepperbox-Rosedale complex, Klej, and Hurlock were mapped in the immediate vicinity of the proposed construction. Pepperbox-Rosedale complex is a moderately well drained to well-drained soil that has moderate to few limitations for development. Klej is a somewhat poorly drained transitional soil that is likely to contain both wetland (hydric) and upland soil components. Hurlock is a poorly drained wetland associated a (hydric) soil that has severe limitations for development.*

**A soils investigation has been conducted on the site. Although soils on site are appropriate for the disposal of wastewater, the developer of Carriage Greens has elected to participate in a regional wastewater treatment and disposal site as permitted by Artesian Water Company. Sewage will be collected centrally and pumped to the off-site Artesian wastewater treatment and disposal site. In addition, the soils on site have been tested for infiltration and it has been found that the soils are suitable for treatment and infiltration of stormwater run-off that will occur as a result of development activities on site. In order to address stormwater management, a comprehensive plan will be developed and forwarded to the Sussex County Conservation District for review and comment and approval.**

### **WETLANDS**

*Statewide Wetland Mapping Project (SWMP) maps indicate the presence of non-tidal palustrine forested riparian wetlands; associated with the headwater reaches of Bundicks Branch, bisect the central portion of subject parcel. Potential unmapped non-riparian wetlands are also likely in much of the southern one-half of this parcel. Vegetated buffers comprised of native trees, shrubs or no-mow grasses, of no less than 100 feet should be employed from the edge of the wetland complex. The developer should note that both DNREC and Army Corps of Engineers discourage allowing lot lines to contain wetlands to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.*

*PLUS application materials indicate that wetlands have been delineated (presumably a field delineation). This delineation should be verified by the Army Corps of Engineers through the Jurisdictional Determination process. Please note that impacts to palustrine wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In situations where the applicant believes that the delineated wetlands on their parcel are non-jurisdictional 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.*

*As noted previously, this parcel contains SWMP mapped headwater riparian wetlands. Headwater riparian wetlands are important for the protection of water quality and the maintenance/integrity of the ecological functions throughout the length of the stream, including the floodplain system and/or water bodies further downstream. Since such streams are a major avenue for nutrient-laden stormwater and sediment runoff their protection deserves the highest priority. In recognition of this concern, the Watershed Assessment Section strongly recommends the applicant consider preserving the existing riparian buffer in its entirety. Otherwise, a 100-foot minimum upland buffer from all water bodies (including all ditches) and wetlands is strongly recommended. Studies have shown that an upland buffer width of at least 100-foot is the minimum buffer width necessary to mitigate impacts from development.*

**A wetland delineation has been preformed and a Jurisdictional Delineation will be filed with the Army Corp of Engineers. The federal jurisdictional wetlands are not being disturbed, thereby not requiring any federal permits. There are no lots that have wetlands in the boundaries of the lots. A close review of the subdivision indicates that the jurisdictional wetlands as they occur onsite have been completely respected and in fact the wetlands although not a requirement of the Sussex County Planning and Zoning Commission are buffered with a variable with buffer ranging from approximately 20 foot in width to over a 100 foot in width.**

#### **IMPERVIOUS COVER**

*Based on a review of the PLUS application, post-development surface imperviousness is estimated to be about 17 percent. However, given the scope and density of this project, this estimate is likely to understate the actual amount of created post-development surface imperviousness. The applicant should recognize that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks and roads) should be included in the calculation. The applicant should verify whether their calculation includes all said forms of constructed surface imperviousness.*

*Since studies link increases in impervious cover to decreases in water quality, the applicant is strongly encouraged to pursue best management practices (BMPs) that can 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 preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to reduce surface imperviousness.*

**The design of Carriage Greens is developed around Best Management Practices (BMP's) to forward the reduction of impervious cover. In calculations related to the proposed impervious area that will result as a result of the completion of this project indicates that approximately 311,400 square foot of area or  $\pm$  9% of the total site will be converted to impervious area. This calculation includes rooftops, driveways, roads, and walk areas contained within the project site.**

## **ERES WATERS**

*This project is located adjacent to receiving waters of the Inland Bays designated as waters having Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 5.6 of Delaware's "Surface Water Quality Standards" (as amended July 11, 2004), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of pollutants through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 5.6.3.5 of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree achievable and, where practicable, implementation of a standard requiring no discharge of pollutants.*

**It is noted that the department recognizes the necessity to control pollutants to the greatest degree achievable. It will be the intention of the developer to utilize Best Management Practices (BMP's) to assure minimization of any discharge of pollutants.**

## **TMDLs**

*Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Inland Bays Watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. This project is located in the **low** nutrient reduction area requiring a 40 percent reduction in nitrogen and phosphorus, respectively.*

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

*As stated above Total Maximum Daily loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Inland Bays Watershed. The TMDL calls for a 40% reduction in nitrogen and phosphorus from baseline conditions. The Department developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional reductions may be possible through the implementation of Best Management Practices such as wider vegetated buffers along watercourses, increasing passive, wooded open space, reducing forest cover removal, and the use of innovative stormwater management treatment trains. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.*

**Although no Total Maximum Daily Loads (TMDLS) have been determined for the drainage basin Carriage Greens lies within, it is the plan and approach of this project to use as a general guide, the TMDL strategy from the Inland Bays Watershed as promulgated by the State of Delaware. The strategy for the Inlands Bays is most likely more restrictive than the proposed Delaware Bay Watershed. Of particular note is the strategy to establish buffers from wetlands and water bodies. Secondly, the application of best available technologies (BATS) and best management practices (BMPS) will be utilized to minimize impacts of this project in the watershed. The conversion from agricultural production to a planned community, with BAT and BMP strategies implemented, will significantly reduce nitrogen, phosphorus and sediment loads into the watershed of the Delaware Bay. Regulatory controls on the existing Wastewater Treatment Plant and the Disposal Site will assure a responsible solution to the issue.**

## **SEDIMENT AND EROSION CONTROL/STORMWATER MANAGEMENT**

### *Standard Comments:*

*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 Jessica Watson, Program Manager, at (302) 856-7219 for details regarding submittal requirements and fees.*

*It is strongly recommended that you contact the Sussex Conservation District to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan. The site topography, soils mapping, pre- and post- development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion.*

*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.*

*Each stormwater management facility should have an adequate outlet for release of stormwater. Any drainage conveyed onto this site from neighboring properties must be adequately conveyed through the site to the discharge point without interruption.*

*Clearly address how Stormwater Quality and Quantity Treatment will be provided. If this project is eligible for a Quantity Waiver, please make the request in the stormwater narrative citing the specific regulation.*

*Please indicate on the sediment and stormwater management plan who shall be responsible for maintenance of the stormwater management facilities both during construction and after. During the design of the sediment control and stormwater management plan, considerations should be made for maintenance (i.e. access, easements, etc.) of any structures or facilities.*

*If a stormwater management pond is going to be utilized as a sediment trap/basin during construction it must be designed to accommodate 3600 cubic feet of storage per acre of contributing drainage area until project stabilization is complete.*

*All ponds are required to be constructed per Pond Code 378.*

*Please note that if the stormwater facilities will impact wetlands, a permit must be provided to the District prior to receiving approval. Please address.*

*DNREC regulations require no more than 20 acres to be disturbed at more time. A phased erosion and sediment control plan and sequence of construction will be required.*

*Under the DNREC Health and Safety Memo of 2000, all wet ponds are required to have an open space depth of 3 feet or more that comprises 50-75 percent of the area of the pond. Please re-evaluate several of the proposed basins to determine compliance with the Health and Safety Memo.*

*Consideration should be made for any adjacent properties during the design of the project, including drainage and erosion/sediment control.*

**The development of this project will include detailed development of a stormwater management and erosion and sediment control plan for the entire project. The intent of the strategy for the design of the erosion and sediment control plan is to minimize runoff of nutrients and sediment into surrounding waters. The strategy for stormwater management will be infiltrating the renovated stormwater into the ground, thereby replenishing the surficial aquifer. A mixture of ponds, bio-retention swales, and open swales will be incorporated through the site and used to control and renovate the stormwater. In the areas that infiltration may not be suitable; stormwater will be routed to better soils.**

**The developer has contacted the Sussex County Conservation District and DNREC to discuss the sediment and erosion control measures necessary to address stormwater management for this project. A Notice of Intent will be filed with DNREC in accordance with applicable Delaware State Law. The ponds that are developed to provide stormwater management capability on site will be developed in accordance with the Pond Code 378.**

**During construction activities, a Certified Construction Reviewer will be assigned to this project.**

#### **OPEN SPACE**

*To maximize the existing buffering capacity and wildlife habitat on site, it is recommended that lot lines and other infrastructure (such as storm water management ponds) be pulled out of the forest and that areas of community open space be designated along the forested/riparian areas. Doing so will preserve and expand the existing buffers on site and its value for birds and wildlife and it will create recreational opportunities for residents.*

*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.*

*Site Visit Request (Please note that the following comments pertain to tax parcel 2-34-5-1.00, not 3-34-1-1 as indicated on the application form)*

*DNREC has not surveyed this property; therefore, it is unknown if there are state-rare or federally listed plants, animals or natural communities at this project site that would be affected by project activities.*

*In order to provide more informed comments and to make reasonable recommendations, the program botanist and zoologist request the opportunity to survey the forested and wetland resources which could potentially be impacted by the project. This would also allow the applicant the opportunity to reduce potential impacts to rare species and to ensure that the project is environmentally sensitive. Please contact Bill McAvoy, Kitt Heckscher, or Robert Coxe at (302) 653-2880 to set up a site visit.*

**Carriage Greens, as proposed, provides over 59 acres of open-space, exclusive of lots that is dedicated to both passive and active recreational pursuits. This equates to almost 79% of the total area of Carriage Greens Phase II. With regard to a site visit, as discussed at the original PLUS meeting any member of a regulated State or County Agency is more than welcome to conduct a field on site inspection upon written notification and request to the developer of record.**

### **FOREST PRESERVATION**

*Cumulative impacts are a real concern considering that this site is almost entirely forested, is adjacent to a development that has resulted in forest removal and is in a Level 4 area. DNREC recommends the applicant recalculate forest removal as this site contains 66 lots, roadways, stormwater management ponds, gazebos, and yet the application states just 17.8 acres of forest loss (question #27) with 64 acres of open space (question 33). It is not stated how additional clearing by residents will be prevented. We are also concerned that the remaining portion of the parcel will be slated for a future Phase III, resulting in even more forest loss unless it is preserved as community open space.*

*Developments that are designed within wooded areas significantly reduce the value of the forest in terms of wildlife due to clearing, fragmentation, and subsequent landowner activities. An estimated 5,000 acres of forest have been lost in Delaware since 1990 and the cumulative loss 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). For migratory birds, it is extremely important to conserve large tracts of forests in the State of Delaware due to its position within the Atlantic flyway.*

*This forest is also part of a larger forest block and forest fragmentation separates wildlife populations, increases road mortality, and increases "edge effects" that leave many forest dwelling species vulnerable to predation and allows the infiltration of invasive species. In addition, when trees are cleared and a forest converted into a 'residential woods', wildlife must either coexist with residents or disperse into surrounding areas. Both of these scenarios can result in human/animal conflicts and increased interactions on the roadways.*

**In the development of Carriage Greens Phase I a significant amount of attention was focused on the preservation on the woodlands, as they exist onsite. It must be recognized that the Carriage Greens Phase II project is an infill project that is directly associated with the Carriage Greens Phase I project that was approved as a Preliminary Plan by the Sussex County Planning and Zoning Commission. During the planning stage for the project, it became apparent that there existed significant woodlands onsite that would serve to enhance the over all project impact. As a result of that consideration, of the 67.7 acres of woodland that exist onsite only 17.2 acres of the site is to be impacted by the development of the Carriage Greens Phase II project. This results in a preservation of approximately 75% of the existing woodlots onsite. Combined with the future landscaping to be made apart of this project it is entirely possible that as the project develops no significant net loss of forestlands will be present, in that it is anticipated that landscaping for the proposed residences will utilize landscape material similar to or the same as what currently exists onsite. As part of the homeowners association rules and regulations restrictions on clearing will be made apart of that documentation. It is envisioned that this project will be for the most part a project containing wooded lots in an isolated buffer setting that allows significant privacy and will co-exist with the current natural habitat in existence at the project site.**

## **PLANT RESCUE**

*Since woodlands are to be destroyed or disturbed, we recommend that the developer/landowner contact the Delaware Native Plant Society to initiate a plant rescue. Selected plants from the site of disturbance will be collected by Society members and transplanted to the Society's nursery. Plants will then be used in restoration projects and/or sold at the Society's annual native plant sale. This can be done at no expense or liability to the developer/landowner". Please contact Lynn Redding at (302) 736-7726, (lynn\_redding@ml.com) or William A. McAvoy at (302) 653-2880, (william.mcavoy@state.de.us).*

**The Delaware Native Plant Society is more than welcome to review the site for plant life in the areas that are to be impacted by the development. Arrangements for plant rescue can be coordinated with the developer of record.**

## **RECREATION**

**Although not a PLUS comment, the Carriage Greens Phase II project offers unprecedented recreational opportunities. A complete equestrian center with corals, stables and riding trails will be provided, capitalizing on the existing equestrian facilities located currently on site. In addition, an extensive network of riding and walking trails is provided. A community center, with pool, tennis courts, basketball courts, and other active recreational pursuits is planned for the project, thereby presenting significant active recreational opportunity on site.**

## **NUISANCE WATERFOWL**

*The applicant indicated that plantings would be used in the vicinity of stormwater management ponds to deter resident geese and other nuisance waterfowl. We recommend a 50-foot buffer zone around the ponds comprised of tall native grasses, wildflowers, shrubs, and trees, which will also serve to protect water quality. These plantings should be completed as soon as possible as it is easier to deter geese than 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 homeowners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals).*

**It is recognized that ponds proposed as a part of this project, may result in attractive location for nuisance geese to promulgate. It is the intention of the developer to landscape areas immediately adjacent to these ponds and lakes in a manner consistent with NOT, providing habitat for nuisance geese.**

## **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.*

**As part of the Home Owner's Association's Charter efforts to minimize solid waste generated by common household refuse will be undertaken. Steps to allow for the recycling of waste materials will be provided. The estimates of solid waste generation, made a part of the Department's comments, seem to be inflated. However, as the developer of Carriage Greens, we do not have available, accurate estimates of solid waste generation from the average**

**household. It must be noted that many of the residences made a part of this proposal will be seasonally occupied, resulting in significant decreases in the production of solid waste. Additionally, Delaware does have a Solid Waste Authority that provides for disposal of solid waste in a cost effective, environmentally sensitive manner. It will be the intention of the developer of Carriage Greens to fully utilize this existing State sponsored capability.**

#### **WATER SUPPLY**

*Please note that the Parcel Identification Number (3-34-1-1) does not correlate to the proposed project. According to the aerial map given to us to review, the Parcel Identification Number should be 2-34-5.00-1.00.*

*The information provided indicates that Artesian Water Company will provide well water to the proposed projects through a central public water system. Our files reflect that Artesian Water Company does not currently hold a certificate of public convenience and necessity (CPCN) to provide public water in these areas. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site public well be needed, it must be located at least 150 feet from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.*

*Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.*

*All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications 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.*

**A CPCN has been filed with the Public Service Commission to grant Artesian Water Company, one of the major water utilities in Delaware, the right to provide public water. The procedure to determine water availability in both quantity and quality will be carried out by the water utility given the CPCN. The process will include obtaining all necessary allocation, drilling and dewatering permits through DNREC. Based upon neighboring well yields and existing distribution in and around the area, there is an adequate water supply in the area for this project.**

#### **AIR QUALITY**

*Once complete, vehicle emissions associated with this project are estimated to be 5.1 tons (10,130.3 pounds) per year of VOC (volatile organic compounds), 4.2 tons (8,387.2 pounds) per year of NOx (nitrogen oxides), 3.1 tons (6,188.2 pounds) per year of SO2 (sulfur dioxide), 0.3 ton (550.9 pounds) per year of fine particulates and 423.7 tons (847,387.6 pounds) per year of CO2 (carbon dioxide).*

However, because this project is in a level 4 area, mobile emission calculations should be increased by 118 pounds for VOC emissions for each mile outside the designated growth areas per household unit; by 154 pounds for NOx; and by 2 pounds for particulate emissions. A typical development of 100 units that is planned 10 miles outside the growth areas will have additional 59 tons per year of VOC emissions, 77 tons per year of NOx emissions and 1 ton per year of particulate emissions versus the same development built in a growth area (level 1,2 or 3).

Emissions from area sources associated with this project are estimated to be 2.0 tons (4,086.0 pounds) per year of VOC (volatile organic compounds), 0.2 ton (449.6 pounds) per year of NOx (nitrogen oxides), 0.2 ton (373.1 pounds) per year of SO2 (sulfur dioxide), 0.2 ton (481.5 pounds) per year of fine particulates and 8.3 tons(16,563.8 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 0.8 tons (1,619.4 pounds) per year of NOx (nitrogen oxides), 2.8 tons (5,632.7 pounds) per year of SO2 (sulfur dioxide) and 415.4 tons (830,823.8 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO <sub>2</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Mobile	5.1	4.2	3.1	0.3	423.7
Residential	2.0	0.2	0.2	0.2	8.3
Electrical Power		0.8	2.8		415.4
TOTAL	7.1	5.2	6.1	0.5	847.4

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 0.8 tons of nitrogen oxides per year and 2.8 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 homebuilders 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 project, as designed, is meant to facilitate compliance with applicable Energy Star guidelines. Typically, the dwellings that will be made a part of this project, by virtue of current market conditions, will be expected to meet or exceed applicable Energy Star compliance for appliances, heating and air conditioning systems, insulation and other factors that directly impact power requirements and/or energy requirements to support the residences.**

#### **STATE FIRE MARSHAL'S OFFICE**

*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 Forrest 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.*

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

**This project will comply will all State Fire Marshal regulations. The project will obtain all necessary permits to comply with the regulations, including but not limited to: Fire Protection Water Requirements, Fire Protection Features, Accessibility, Gas Piping and System Information and Required Notes. The engineer of record will conduct a preliminary meeting with the State Fire Marshal's Office prior to formal plan submittal**

**DEPARTMENT OF AGRICULTURE**

*The proposed development is in an area designated as Investment Level 4 under the Strategies for State Policies and Spending. The Strategies do not support this type of isolated development in this area. The intent of this plan is to preserve the agricultural lands, forestlands, recreational uses, and open spaces that are preferred uses in Level 4 areas. The Department of Agriculture opposes development which conflicts with the preferred land uses, making it more difficult for agriculture and forestry to succeed, and increases the cost to the public for services and facilities.*

*More importantly, the Department of Agriculture opposes this project because it negatively impacts those land uses that are the backbone of Delaware's resource industries - agriculture, forestry, horticulture - and the related industries they support. The crucial economic, environmental and open space benefits of agriculture and forestry are compromised by such development. DDA opposes the creation of isolated development areas that are inefficient in terms of the full range of public facilities and services funded with public dollars. Public investments in areas such as this are best directed to agricultural and forestry preservation.*

*Much of this site has been designated as having "good" ground-water recharge potential. DNREC has mapped all ground-water recharge-potential recharge areas for the state. A "good" rating designates an area as having important groundwater recharge qualities. Maintaining pervious cover in 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 having "good" recharge 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.*

*This site also overlaps with the State's Green Infrastructure Investment Strategy Plan. The Forest and Natural Area layers are present over the entire site. This designation identifies areas of the state that are viable and valuable agricultural cropland, as discussed in Governor Minner's Executive Order Number 61. Areas such as these should be preserved as such, and not developed for residential use.*

### *Right Tree for the Right Place*

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

### *Native Landscapes*

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

*The Delaware Department of Agriculture supports growth which expands and builds on existing urban areas and growth zones in approved State, county and local plans. Where additional land preservation can occur through the use of transfer of development rights, and other land use measures, we will support these efforts and work with developers to implement these measures. If this project is approved we will work with the developers to minimize impacts to the agricultural and forestry industries.*

**The concerns of the Delaware Department of Agriculture (DDA), related to Investment Level 4, have previously been addressed in earlier comments. The plans, where pertinent, incorporate the 30-foot forested buffer as required in the regulations. The tree plantings will be coordinated with DDA for species and spacing. A disclaimer will be added, where appropriate, to notify homeowners of the protections listed in the Delaware Code for subdivisions bordering agricultural preservation districts.**

**With regard to the "right tree for the right place", it is the intention of the developer to preserve woodlands where possible, and to provide reforestation of the project, in a comprehensive manner that addresses the overall needs of the project and approach a common sense resolution of landscape plantings. The development, as planned, positively addresses tree preservation within the project site as discussed throughout this correspondence.**

### **PUBLIC SERVICE COMMISSION**

*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 project will be under the jurisdiction of the Public Service Commission for both water and wastewater services. Artesian Water Company, the public utility selected for both water and sewer will apply for the appropriate CPCNs for the project. If the project utilizes natural or propane gas, the project will follow the Pipeline Safety Guidelines as required.**

**DELAWARE STATE HOUSING AUTHORITY**

*This proposal is to develop 66 residential units on 80 acres located at 19120 Cool Spring Road adjacent to Carriage Greens Phase I. According to the State Strategies Map, the proposal is located in an Investment Level 4 area. As a general planning practice, DSHA encourages residential development only in areas where residents will have proximity to services, markets, and employment opportunities, such as Investment Level 1 and 2 areas outlined in the State Strategies Map. Since the proposal is located in an area targeted for agricultural and natural resource protection, and therefore inconsistent with where the State would like to see new residential development, DSHA does not support this proposal.*

**With regard to the Level 4 argument raised within the Delaware State Housing Authority's comments, we feel that our comments related to this issue are contained elsewhere in this response and need not be repeated.**

**It appears that the Delaware State Housing Authority is inconsistent in its' opinion related to Carriage Greens Phase II, as the project has been designed to meet the needs promulgated by the Delaware State Housing Authority. Nowhere within the Charter of the Delaware State Housing Authority is there discussion related to Investment Level 4. We do not understand the apparent reversal of goals and policy by the Housing Authority.**

**DEPARTMENT OF EDUCATION**

*This proposed development is within the Cape Henlopen School District boundaries.*

*DOE recognizes that this development project is in level 4 of the State Strategies for Policies and Spending and as such, DOE does not support the approval of this project.*

*DOE offers the following comments on behalf of the Cape Henlopen School District.*

- 1. Using the DOE standard formula, this development will generate an estimated 33 students.*
- 2. DOE records indicate that the Cape Henlopen School Districts' elementary schools are not at or beyond 100% of current capacity based on September 30, 2005 elementary enrollment.*
- 3. DOE records indicate that the Cape Henlopen School Districts' secondary schools are not at or beyond 100% of current capacity based on September 30, 2005 secondary enrollment.*
- 4. While the Cape Henlopen School District secondary and elementary schools are not currently beyond capacity, the district does NOT have adequate student capacity to accommodate the additional students likely to be generated from this development given the number of planned and recorded residential sub divisions within district boundaries. Continued development will cause significant burden to the Cape Henlopen School District without the provision for additional educational infrastructure.*
- 5. The developer is strongly encouraged to contact the Cape Henlopen School District Administration to address the issue of school over-crowding that this development will cause.*
- 6. DOE requests developer work with the Cape Henlopen 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.*

**The concerns of the Delaware Department of Education, related to Investment 4, is duly noted. Our response to those issues is fully documented elsewhere within this response.**

**Based upon the results of the sale of homes similar in nature to those proposed for Carriage Greens Phase II, it appears that the majority of home sales are to persons contemplating**

retirement or acquiring homes as a second home scenario, thereby minimizing impacts of school as people in retirement commonly do not have children of school age.

**Sussex County**

*The Sussex County Engineer Comments:*

*The project proposes to develop using a private central community wastewater system. We recommend that the wastewater system be operated under a long-term contract with a capable wastewater utility that meets TMDL limits for Delaware's Inland Bays. In addition, we recommend they have a wastewater utility provider prior to approving the project. The proposed project is located outside of the Inland Bays Planning area where Sussex County expects to provide sewer service. Sussex County requires design and construction of the collection and transmission system to meet Sussex County sewer standards and specifications. A review and approval of the treatment and disposal system by the Sussex County Engineering Department is also required and plan review fees may apply. Disposal fields should not be counted as open space. Wastewater disposal fields should be clearly identified on recorded plots and separated from lot area.*

*If Sussex County ever provides sewer service, it is required that the treatment system be abandoned and a direct connection made to the County system at the developers and/or homeowners association expense.*

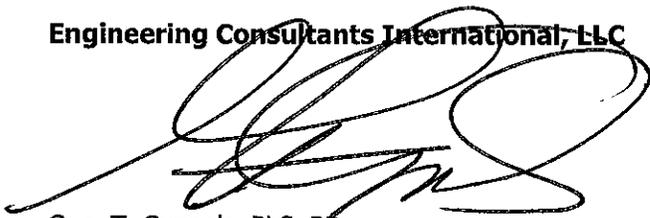
*Submission and approval of a sewer concept plan is not required.*

**The project as submitted will utilize a centrally located wastewater treatment and disposal system located in an existing subdivision that has the capacity to treat the sewage needs for the Carriage Greens Phase II project. The public community system is owned and operated by Artesian Water Company who will also supply portable water for the project. At present the system that the Carriage Greens project will connect to has been approved by Sussex County and DNREC and is currently operational.**

We wish to take this opportunity to thank you for your input, with regard to the Carriage Greens project. As you can see, we have made efforts to incorporate the comments received, into the plan, in a manner consistent with good planning and the rules and regulations promulgated by Sussex County Planning and Zoning. Should you have any comments or questions regarding our submittal and response to the PLUS Review, please feel free to contact me directly.

Sincerely,

**Engineering Consultants International, LLC**



Gary T. Cuppels, PLS, PP  
President

cc: Sussex County  
Wilma Howett, KGH Properties