



STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF MANAGEMENT AND BUDGET  
Budget Development, Planning and Administration  
State Planning Coordination

September 22, 2008

Mr. Zachary Crouch  
Davis, Bowen & Friedel  
23 North Walnut Street  
Milford, De 19963

RE: PLUS review – 2008-08-09; Canary Creek

Dear Mr. Crouch:

Thank you for meeting with State agency planners on August 27, 2008 to discuss the proposed plans for the Canary Creek project to be located on the north side of New Road within the City of Lewes.

According to the information received, you are seeking a rezoning of 75 acres from CFD to CFD and O/R for the purpose of 104 residential units.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as the City of Lewes is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the City.

**Executive Summary**

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. *Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.*

### **State Strategies/Project Location**

The proposed rezoning of 75 acres from CFD to CFD and O/R for the purpose of 104 residential units is located within an Investment Level 3 and 4 by the State Strategies for Policy and Spending and is within the Municipal Boundaries of the City of Lewes.

### **Street Design and Transportation**

- DeIDOT is aware of attempts to develop this property residentially since at least 2004. However, it is not clear to them when an application for the present development proposal was accepted for review by the City. If that occurred before April 1, 2008, this project is subject to DeIDOT Rules and Regulations for Subdivision Streets and does not meet the warrants for a traffic impact study (TIS) as contained in that document. If it occurred on April 1, 2008 or thereafter, this project is subject to our Standards and Regulations for Subdivision Streets and State Highway Access and does meet our warrants for a TIS as contained in that document.

### **Natural and Cultural Resources**

- According to the State Wide Wetland Mapping Project (SWMP) maps, estuarine and palustrine wetlands were mapped over much of the southern portion of subject parcel. The Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from the landward edge of all wetlands and water bodies (including all ditches).
- DNREC highly recommends that the forested buffer along this marsh be left intact. Currently, there are plans to remove approximately more than 50% of this forested area. There are also plans to develop (stormwater ponds, roadways) within 100 feet of the wetlands. Both of these actions could result in degradation of the marsh as well as impacts to those species utilizing this habitat.
- There is a potential for marsh nesting birds to utilize the wetlands for breeding. They highly recommend that project activities within proximity to the wetland area not take place from April 1st to July 31st so that nesting birds are not disturbed and abandon nesting efforts.
- If you propose to use Nationwide Permit No. 3, 13, 18, 29, 39 or 42, the State of Delaware has denied 401 Water Quality Certification (WQC) and Coastal Zone Federal Consistency Concurrence (CZM) for these Nationwide Permits in Designated Critical Resource Waters. Therefore, in order to use any of these Nationwide Permits at this site you must apply for an individual WQC and CZM from the appropriate offices at DNREC.

- The portion of the site that falls within the Great Marsh Natural Area includes the riparian buffer bordering the wetlands adjacent to Canary Creek. The Division of Parks and Recreation routinely recommends that riparian buffers of at least 100 feet in width from the edge of tidal and non-tidal wetlands be maintained to protect wetland resources and help buffer the impact to water quality of the proposed development. The riparian buffer on this site ranges in width from 50 to 175 feet. DNREC recommends in this case that the existing buffer be protected in its entirety. In addition to buffering Canary Creek and its wetlands from potential impacts from this development, protecting the buffer would also remove any direct impacts to the Natural Area lands. The Division may be interested in providing further protection to these lands through development of a conservation easement on the riparian buffer and wetland portions of the tax parcel on which this project is proposed.
- Family Homes will be placed in the 1% annual chance floodplain (100 year floodplain). This accounts for approximately 15-20 lots. The property owners of these lots would be required to purchase flood insurance if they had a mortgage, which represents an additional cost for the "first time homebuyers" this project is aimed at. Also, a large portion of the developed area is located within the 0.2% annual chance floodplain (500 year floodplain).

*Recommendations:*

- Revise the site plan to eliminate the lots in the 100 year floodplain
- Don't place fill in the floodplain to construct houses as it could have a negative impact on adjacent properties
- Mitigate for any structures that are built by elevating the lowest floor at least 1 foot above the base flood elevation

This office has received the following comments from State agencies:

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

The Office of State Planning and Coordination has no objections to the rezoning of this parcel; however, I offer the following recommendations to assist the developer as the proposed moves forward:

- The developer should work closely with the Town to address any concerns raised and to work through the required comprehensive plan amendment necessary to finalize the zoning of this parcel through our office.
- Work closely with DNREC to address concerns regarding the variety of environmental and drainage issues found within the proposed site.
- Work with the Department of Transportation to address concerns regarding New Road within Lewes.

If you have any additional questions, please contact this office.

**State Historic Preservation Office (SHPO) – Contact: Terrence Burns 739-5685**

No comments received

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

Lifetime Living, LLC seeks to develop 31 single-family detached houses and 73 townhouses on a 75.22-acre parcel (Tax Parcel 3-35-8.00-5.01) in the town of Lewes. The land is located on the north side of town and more specifically on the north side of New Road (Sussex Road 288) and the east side of Canary Creek. Access would be to New Road, by way of a road originally built as a research park street, which passes through land that is now owned by the Department of Natural Resources and Environmental Control and leased to the City as park land.

DelDOT comments are as follows:

- 1) DelDOT is aware of attempts to develop this property residentially since at least 2004. However, it is not clear to them when an application for the present development proposal was accepted for review by the City. If that occurred before April 1, 2008, this project is subject to DelDOT Rules and Regulations for Subdivision Streets and does not meet the warrants for a traffic impact study (TIS) as contained in that document. If it occurred on April 1, 2008 or thereafter, this project is subject to our Standards and Regulations for Subdivision Streets and State Highway Access and does meet our warrants for a TIS as contained in that document.
- 2) Regardless of whether a TIS is required, DelDOT does not anticipate a need for capacity-based road improvements. The streets leading to this development, including their intersection with New Road, were designed and built to serve a research park, which would have generated more traffic than the development and the present, passive, use of the park land will generate.
- 3) Because this development would access a park street, rather than New Road, DelDOT does not have jurisdiction as a permitting agency in that regard. On request, DelDOT will provide comments to the City and to the Division of Parks and Recreation. The DelDOT Subdivision Manager for eastern Sussex County, Mr. John Fiori, may be contacted in this regard. Mr. Fiori may be reached at (302) 760-2260.

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

## **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.

## **Soils**

According to the Sussex County soil survey update, Greenwich, Rumford, Ingleside, Woodstown, Hammonton, Longmarsh, and Transquaking were mapped on subject parcel. Greenwich, Rumford, and Ingleside are well-drained upland soils that, generally, have few limitations for development. Hammonton and Woodstown are moderately well-drained soils of low-lying uplands that have moderate limitations for development. Longmarsh and Transquaking are very poorly-drained wetland associated (hydric) soils that have severe limitations for development.

## **Wetlands**

According to the State Wide Wetland Mapping Project (SWMP) maps, estuarine and palustrine wetlands were mapped over much of the southern portion of subject parcel.

The applicant is responsible for determining whether any State-regulated wetlands (regulated pursuant to 7 Del.C. Chapter 66 and the Wetlands Regulations) are present on the property. This determination can only be made by contacting the Division of Water Resources' Wetlands and Subaqueous Lands Section at 302/739-9943 and consulting the State's official wetland regulatory maps, which depict the extent of State jurisdiction. The area regulated by State law may be very different from the area under federal Authority. No activity may take place in State-regulated wetlands without a permit from DNREC's Wetlands Section.

In addition, most perennial streams and ditches and many intermittent streams and ditches are regulated pursuant to the Subaqueous Lands Act (7 Del.C. Chapter 72) and the Regulations Governing the Use of Subaqueous Lands. Ponds which are connected to other waters are also regulated, while isolated ponds are not. Any work in regulated streams, ditches or ponds requires a permit from the Wetlands and Subaqueous Lands Section. An on-site jurisdictional determination is recommended in order to determine whether any regulated watercourses exist on the property. Contact the Wetlands and Subaqueous Lands Section at 302/739-9943 to schedule an on-site visit. Such appointments can usually be scheduled within 2 to 3 weeks.

The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they are subject to regulatory jurisdiction under Federal 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE, or “the Corps”) manual is the only acceptable basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware. The applicant is forewarned that the Corps views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for a field-based jurisdictional wetland delineation (i.e., 1987 USACE manual). To ensure compliance with said Corps regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation. In circumstances where the applicant or applicant’s consultant delineates what they believe are nonjurisdictional isolated (SWANCC) wetlands (as asserted by the applicant in the PLUS application), the Corps must be contacted to evaluate and assess the jurisdictional validity of such a delineation. The final jurisdictional authority for making isolated wetlands determinations rests with the Corps; they can be reached by phone at 736-9763.

Based on a review of existing buffer research by Castelle et al. (1994), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from the landward edge of all wetlands and water bodies (including all ditches).

### **Impervious Cover**

It was not clear, from the information submitted how much post-construction surface imperviousness would be generated from this project. This figure is an important variable to gauge environmental impacts from water and pollutant runoff.

The applicant should be made aware that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks, roads and open-water stormwater management structures) should be included in the impervious surface calculation; otherwise, an inaccurate

assessment of this project's true environmental impacts will result. Therefore applicant should recalculate surface imperviousness if any of the above-mentioned forms of surface imperviousness have been excluded.

Since residential development significantly increases the amount of impervious cover - leading to large volumes of contaminant-laden runoff which ultimately drain into streams or waterways - the applicant is strongly urged to pursue both natural and constructed Best Management Practices (BMPs) to reduce such impacts. Reducing the amount of impervious surfaces by retaining/planting more trees and/or the use of pervious paving surfaces ("pavers") in lieu of asphalt or concrete are examples of ways to reduce such impacts.

### **TMDLs**

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Broadkill 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. In the Broadkill watershed, "target-rate-nutrient reductions" of 40 percent will be required for nitrogen and phosphorus. Additionally, "target-rate-reductions" of 75 percent will be required for bacteria.

### **TMDL Compliance through the PCS**

As indicated above, Total Maximum Daily loads (TMDLs) for nitrogen and phosphorus have been proposed for the Broadkill watershed. The TMDL calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 75 percent reduction in bacteria from baseline conditions. A Pollution Control Strategy (PCS) 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 BMPs such as increasing the amount of passive, wooded open space (planted with native woody and herbaceous vegetation), use of pervious paving materials to reduce surface imperviousness, and the deployment of green-technology stormwater management treatment technologies. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

### **Water Supply**

The project information sheets state water will be provided to the project by the City of Lewes via a public water system. DNREC records indicate that the project is located

within the public water service area granted to the Lewes Board of Public Works under Certificate of Public Convenience and Necessity 01-CPCN-07.

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.

### **Rain Gardens and Green Roofs**

The University of Delaware Cooperative Extension <http://ag.udel.edu/extension/horticulture/raingarden/index.htm> has extensive information on rain gardens. The Penn State Center for Green Roof Research (see <http://web.me.com/rdberghage/Centerforgreenroof/Home.html>) and the Delaware Center for Horticulture (see <http://www.dehort.org/pubs/>) have additional publications which may be of assistance.

### **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. Contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. 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 plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees.
- Because of the parcel's location in an impaired watershed and the amount of impervious surface, green technology BMPs and low impact development practices should be considered a priority to reduce stormwater flow and to meet water quality goals. The Sediment and Stormwater Management Program ensures sediment and erosion control plans and stormwater plans comply with local land use ordinances and policies, including the siting of stormwater management facilities. However, we do not support placement in resource

protection areas or the removal of trees for the sole purpose of placement of a stormwater management facility/practice.

### **Drainage**

- The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the. The Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction.
- 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.

### **Floodplains**

The Project Engineer has not indicated the FEMA Floodplain on the site plan. Looking at the current effective Flood Insurance Rate Map, it appears that a majority of the Single Family Homes will be placed in the 1% annual chance floodplain (100 year floodplain). This accounts for approximately 15-20 lots. The property owners of these lots would be required to purchase flood insurance if they had a mortgage, which represents an additional cost for the "first time homebuyers" this project is aimed at. Also, a large portion of the developed area is located within the 0.2% annual chance floodplain (500 year floodplain).

#### *Recommendations:*

- Revise the site plan to eliminate the lots in the 100 year floodplain
- Don't place fill in the floodplain to construct houses as it could have a negative impact on adjacent properties
- Mitigate for any structures that are built by elevating the lowest floor at least 1 foot above the base flood elevation

### **Site Visit Request**

**In order to provide the applicant with information, our program staff respectfully requests the opportunity to survey the project area. This survey would be conducted at no cost or liability to the landowner/developer. It would allow us to provide more informed comments and add to the State's database. Information gathered would also be used in our effort to map the vegetative communities throughout the State.**

**Please note that our staff has the most experience utilizing rare species survey methods. If the landowner would allow a site visit, please contact Edna Stetzar, Environmental Review Coordinator, at (302) 653-2880 ext. 101 or at Edna.Stetzar@state.de.us or 4876 Hay Point Landing Rd, Smyrna, DE 19977.**

### **Rare Species**

DNREC program staff have never surveyed the project area; therefore, it is unknown if State-rare or federally listed plants and animals or unique natural communities are present within the project area. They do have records of State-rare plant *Carex mitchelliana* (carex sedge) in wetlands contiguous with this parcel and a State-rare fish, *Apeltes quadracus* (fourspine stickleback) which occurs within the Lewes-Rehoboth Canal. Adequate wetland buffers will be important for protecting these and other wetland dependent species that utilize this wetland area.

1. DNREC highly recommends that the forested buffer along this marsh be left intact. Currently, there are plans to remove approximately more than 50% of this forested area. There are also plans to develop (stormwater ponds, roadways) within 100 feet of the wetlands. Both of these actions could result in degradation of the marsh as well as impacts to those species utilizing this habitat.
2. There is a potential for marsh nesting birds to utilize the wetlands for breeding. They highly recommend that project activities within proximity to the wetland area not take place from April 1st to July 31st so that nesting birds are not disturbed and abandon nesting efforts.

### **State Natural Heritage Site**

Be advised that the forested and wetland areas noted above are on Delaware's Natural Areas Inventory and therefore are considered a State Natural Heritage Site. As such, this part of the project site is considered a "Designated Critical Resource Water" as defined in General Condition 19. Designated Critical Resource Waters of the Nationwide Permit Program administered by the U.S. Army Corps of Engineers ([http://www.usace.army.mil/cw/cecwo/reg/nationwide\\_permits.htm](http://www.usace.army.mil/cw/cecwo/reg/nationwide_permits.htm)).

If you propose to use Nationwide Permit No. 3, 13, 18, 29, 39 or 42, the State of Delaware has denied 401 Water Quality Certification (WQC) and Coastal Zone Federal Consistency Concurrence (CZM) for these Nationwide Permits in Designated Critical Resource Waters.

Therefore, in order to use any of these Nationwide Permits at this site you must apply for an individual WQC and CZM from the appropriate offices at DNREC. If this is an issue, application materials and information regarding WQC can be obtained by contacting DNREC's Wetlands and Subaqueous Lands Section at 302/739-9943. CZM materials and information can be obtained by contacting DNREC's Coastal Programs at 739-9283.

### **Key Wildlife Habitat**

The wetlands (including those that are forested) on this property are mapped as key wildlife habitat in the Delaware Wildlife Action Plan (DEWAP). DEWAP is a comprehensive strategy for conserving the full array of native wildlife and habitats, common and uncommon, as vital components of the State's natural resources.

This document can be viewed via our program website at <http://www.dnrec.state.de.us/nhp>. This document also contains a list of species of greatest conservation need as well as species-habitat associations.

### **State Resource Areas/Natural Areas/Habitat**

This project is proposed for lands that fall entirely within the Prime Hook State Resource Area. State Resource Areas include protected State, federal, local and private conservation organization lands and inholdings and potential additions to these areas; these lands are to be protected through a variety of means including purchase, donation and conservation easements.

The project area also contains lands of the Great Marsh Natural Area. Natural Areas as defined by the State are areas of land or water, or both land and water, whether in public or private ownership, which either retain or have reestablished their natural character (although it need not be undisturbed), or have unusual flora and fauna, or have biotic, geological, scenic or archaeological features of scientific or educational value.

The portion of the site that falls within the Great Marsh Natural Area includes the riparian buffer bordering the wetlands adjacent to Canary Creek. The Division of Parks and Recreation routinely recommends that riparian buffers of at least 100 feet in width from the edge of tidal and non-tidal wetlands be maintained to protect wetland resources and help buffer the impact to water quality of the proposed development. The riparian buffer on this site ranges in width from 50 to 175 feet. DNREC recommends in this case that the existing buffer be protected in its entirety. In addition to buffering Canary Creek and its wetlands from potential impacts from this development, protecting the buffer would also remove any direct impacts to the Natural Area lands. The Division may be interested in providing further protection to these lands through development of a conservation easement on the riparian buffer and wetland portions of the tax parcel on which this project is proposed.

### **Air Quality**

Housing developments may unnecessarily emit, or cause to be emitted, significant amounts of air contaminants into Delaware's air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

- Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
- The emission of greenhouse gases which are associated with climate change, and
- The emission of air toxics.

Air emissions generated from housing developments include emissions from:

- Area sources like painting, lawn and garden equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity needed to support the homes in your development, and
- Car and truck activity associated with the homes in your new development.

These three air emissions components (i.e., area, electric power generation, and mobile sources) are quantified below, based on a per household/residential unit emission factor that was developed using 2002 Delaware data. These emissions in the table represent the actual impact the Canary Creek development may have.

Emissions Attributable to Canary Creek Subdivision (Tons per Year)

	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO <sub>2</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )	Carbon Dioxide (CO <sub>2</sub> )
Direct Residential	3.2	0.4	0.3	0.4	13.1
Electrical Power Generation	ND*	1.3	4.4	ND *	654.6
Mobile	8.0	6.6	4.9	0.4	667.6
<b>Total</b>	11.2	8.3	9.6	0.8	1,335.3

(\*) Indicates data is not available.

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

*Recommendations:*

The applicant shall comply with all applicable Delaware air quality regulations. These regulations include:

<p><b>Regulation 6 - Particulate Emissions from Construction and Materials Handling</b></p>	<ul style="list-style-type: none"> <li>• <b>Using dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.</b></li> <li>• <b>Using covers on trucks that transport material to and</b></li> </ul>
---	--

	<b>from site to prevent visible emissions.</b>
<b>Regulation 1113 – Open Burning</b>	<ul style="list-style-type: none"> <li>• <b>Prohibiting open burns statewide during the Ozone Season from May 1-Sept. 30 each year.</b></li> <li>• <b>Prohibiting the burning of land clearing debris.</b></li> <li>• <b>Prohibiting the burning of trash or building materials/debris.</b></li> </ul>
<b>Regulation 1145 – Excessive Idling of Heavy Duty Vehicles</b>	<ul style="list-style-type: none"> <li>• <b>Restricting idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</b></li> </ul>

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

- **Constructing only energy efficient homes.** Energy Star qualified homes are up to 30% more energy efficient than typical homes. These savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of increased energy efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.
- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.
- **Providing tie-ins to the nearest bike paths and links to any nearby mass transport system.** These measures can significantly reduce mobile source emissions.
- **Funding a lawnmower exchange program.** New lawn and garden equipment emits significantly less than equipment as little as 7 years old, and may significantly reduce emissions from this new development. The builder could fund such a program for the new occupants.

Additionally, the following measures will reduce emissions associated with the actual construction phase of the development:

- **Using retrofitted diesel engines during construction.** This includes equipment that are on-site as well as equipment used to transport materials to and from site.

- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees at residential units and in vegetative buffer areas.** Trees reduce emissions by trapping dust particles and by replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development on air quality. The applicant should submit a plan to the DNREC Air Quality Management Section which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Canary Creek development. Air Quality Management Section points of contact are Phil Wheeler and Deanna Morozowich, and they may be reached at (302) 739-9402.

**State Fire Marshal’s Office – Contact: Duane Fox 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:**
  - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
  - Where a water distribution system is proposed for single family dwelling sites and townhouse type dwelling sites, the infrastructure for fire protection water shall be provided, including the size of water mains.
- b. **Fire Protection Features:**
  - For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan
- c. **Accessibility:**
  - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision must be constructed so fire department apparatus may negotiate it. . If a “center island” is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision.

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

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

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

e. Required **Notes:**

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Proposed Use
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Townhouse 2-hr separation wall details shall be shown on site plans
- 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.statefiremarshal.delaware.gov](http://www.statefiremarshal.delaware.gov), technical services link, plan review, applications or brochures.

**Department of Agriculture - Contact: Scott Blaier 739-4811**

The Delaware Department of Agriculture has no objections to the proposed project. The project is located within the City of Lewes, and the *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 2 and 3 areas.

*Right Tree for the Right Place*

The Delaware Department of Agriculture Forest Service encourages the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in 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.

### **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.

### **Delaware Division of Public Health- Health Promotion Bureau- contact Michelle Eichinger (302) 744-1011**

Ensuring that new residential and commercial development incorporates pedestrian- and bicycle-friendly features allows people to travel by foot or by bicycle and promotes physical activity as part of daily routines. Regular physical activity offers a number of health benefits, including maintenance of weight and prevention of heart disease, type 2 diabetes and other chronic diseases.<sup>1</sup> Research shows that incorporating physical activity into daily routines has the potential to be a more effective and sustainable public health strategy than structured exercise programs.<sup>2</sup> This is particularly important considering about 65% of adult Delawareans are either overweight or obese.<sup>3</sup> This current obesity crisis is also affecting children. Approximately 37% of Delaware’s children are overweight or obese<sup>4</sup>, which places them at risk for a range of health consequences that include abnormal cholesterol, high blood pressure, type 2 diabetes, asthma, depression and anxiety.<sup>1</sup>

In Delaware, as in other states across the nation, certain patterns of land use can act as a barrier to physical activity and healthy eating for children and adults alike. Examples of such barriers include neighborhoods constructed without sidewalks or parks and shopping centers with full-service grocery stores situated too far from residential areas to allow for walking or biking between them.

This proposed development is in a Level 2 area. Developing in such an area is consistent with the *Strategies for State Policies and Spending*. DPH is committed to the *Strategies* and therefore, does support development in the proposed area.

DPH supports new development in and around existing towns and municipalities where compact and mixed land use patterns facilitate physical activity. As a way to promote physical activity and access to healthy foods, we recommend that the following amenities be included in the Canary Creek plan:

### **Amenities to encourage active transportation**

- Ensure that there are sidewalks and walking paths connecting neighboring parcels and a larger walk/bike path network.
- Install bike racks in convenient locations throughout the development

These amenities would encourage patrons of the commercial development to walk between destinations within the development, and also enable local residents to travel to the development by foot or by bicycle. Studies have shown that people who have access to sidewalks are more likely to walk and also to meet the Surgeon General's recommendations for physical activity.<sup>2</sup> A recent study cited by Active Living by Design showed that integrated land use can increase the number and percentage of walking and biking trips.<sup>5</sup> Recent public opinion surveys reveal that people want more opportunities to incorporate walking into their day. A survey by the Surface Transportation Policy Project found that 55% of Americans want to walk more on a daily basis to get exercise or to travel to specific destinations, and 63% want to walk more to stores and other locations to take care of errands.<sup>6</sup>

### **Amenities to encourage walking and physical activity for recreation**

- Designate a portion of the open space area for recreational walking: for example include walking paths constructed of pervious materials affording minimal disturbance to the open space area
- Incorporate playground areas: these would offer some active recreation opportunities for children. If feasible, consider including a walking path around the playground areas.

### **Increase opportunities for healthy eating**

- Designate an area for a seasonal farm stand or mini farmer's market that will promote the sale of fruits and vegetables.

<sup>1</sup> Nemours Health and Prevention Services (2005). *Delaware Children's Health Chartbook*, Newark, DE.

<sup>2</sup> Active Living by Design. *Transportation Fact Sheet*. Retrieved May 17, 2007, from [http://www.activelivingbydesign.org/fileadmin/template/documents/factsheets/Transportation\\_Factsheet.pdf](http://www.activelivingbydesign.org/fileadmin/template/documents/factsheets/Transportation_Factsheet.pdf).

<sup>3</sup> Delaware Health and Social Services (2008), *Division of Public Health, Behavioral Risk Factor Surveillance System (BRFSS), 1990-2007*.

<sup>4</sup> Nemours Health and Prevention Services (2007). *2006 Delaware Survey of Children's Health Descriptive Statistics Summary, Volume 1*.

<sup>5</sup> Active Living by Design. *Land Use Fact Sheet*. Retrieved May 17, 2007, from [http://www.activelivingbydesign.org/fileadmin/template/documents/factsheets/LandUse\\_Factsheet.pdf](http://www.activelivingbydesign.org/fileadmin/template/documents/factsheets/LandUse_Factsheet.pdf).

<sup>6</sup> Surface Transportation Policy Project (2003). *Americans' Attitudes Toward Walking and Creating Better Walking Communities*. Retrieved February 12, 2008, from [http://www.transact.org/library/reports\\_pdfs/pedpoll.pdf](http://www.transact.org/library/reports_pdfs/pedpoll.pdf).

### **Delaware State Housing Authority – Contact Vicki Powers 739-4263**

This proposal is for a rezoning and site plan review of 104 residential units on 75 acres located on the North side of New Road within the City of Lewes. According to the *State Strategies Map*, the proposal is located in an Investment Level 2 and 3 area. DSHA supports this proposal because residents will have proximity to existing services, markets, and employment opportunities. Furthermore, the proposal targets units for first time homebuyers. For informational purposes, the most recent real estate data collected by DSHA shows the median home price in Sussex County to be \$275,000. However, households earning respectively 100% of Sussex County's median income only qualify for mortgages of \$168,646, thus creating an affordability gap of \$106,354. Households that cannot afford to live in the coastal resort area have been displaced to western Sussex County. The provision of units within reach of households earning at least 100% of Sussex County's median income would help increase their housing opportunities.

### **Department of Education – Contact: John Marinucci 735-4055**

This proposed development is within the Cape Henlopen School District boundaries. 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 52 students.
2. DOE records indicate that the Cape Henlopen School Districts' *elementary schools are very close to 100% of current capacity* based on September 30, 2007 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, 2007 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.
5. Continued development will cause significant burden to the Cape Henlopen School District without the provision for additional educational infrastructure.

6. The developer is strongly encouraged to the Cape Henlopen School District Administration to address the issue of school over-crowding that this development will exacerbate.
7. DOE requests the 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 school district.

**Sussex County – Contact: Richard Kautz 855-7878**

The site is to be entirely within the town limits and does not directly impact County services or properties outside the town limits. However, the proposed layout shows a field located flood plain different from the official FEMA mapped flood plain for this site. The area of difference should be shown on the plan with a notation stating that any dwellings located outside of the field located flood plain but within the FEMA mapped flood plain must be covered by flood insurance until the flood plain boundary is officially adjusted by FEMA.

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

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

Sincerely,



Constance C. Holland, AICP  
Director, Office of State Planning

CC: City of Lewes