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

September 15, 2005

Kyle Faust
McCrone, Inc.
119 Naylor Mill Road
Salisbury, MD 21801

RE: PLUS review – PLUS 2005-08-08; Duneside at Baywood – Phase 12

Dear Mr. Faust:

Thank you for meeting with State agency planners on August 24, 2005 to discuss the proposed plans for the Duneside at Baywood Phase 12 project to be located on the South side of Holly Lake Road.

According to the information received, you are seeking site plan approval for 246 residential units on 123.00 acres in Level 4.

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

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office***

notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.

State Strategies/Project Location

- This project would result in 246 residential units in an Investment Level 4 area according to the *2004 Strategies for State Policies and Spending*. This project is also located outside of a designated growth area in relevant municipal and county certified comprehensive plans. For this reason, the State opposes this development.

Natural and Cultural Resources

- The northern portion and the southwestern edge of the site fall within an area of excellent groundwater recharge. While the northern section corresponds predominantly with open space, the impervious cover should be reduced along the southwestern edge. Detailed recommendations and maps are included in the "Water Resource Protection Area" section of the letter.

- PLUS materials indicate that 70 acres of forest will be removed. Large contiguous stretches of forest like this not only provide important water and air quality benefits, but also provide habitat for many wildlife species that depend on interior forest.

- The site is designated as high value Forestland and Cropland on the State's Green Infrastructure Investment Strategy.

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

Office of State Planning Coordination – Contact: Ann Marie Townshend 739-3090

This project represents a major land development that will result in 246 residential units in an Investment Level 4 area according to the *2004 Strategies for State Policies and Spending*. This project is also located outside of a designated growth area in relevant municipal and county certified comprehensive plans. 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 areas. 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 615 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% of road maintenance and drainage improvements for the transportation system, 100% of school transportation and paratransit services, up to 80% of school construction costs, and about 90% of 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.

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

The State Historic Preservation Office (SHPO) does not support the Duneside at Baywood proposed development because it is in State Investment Level 4. Delaware has a strong rural heritage and many historic resources, architectural and archaeological, exist in these areas. SHPO discourages development in Investment Level 4 because development could affect the historic context of Delaware's rural heritage by intruding on agricultural lands and open space; development could affect historic architectural resources that are historically associated with Delaware's agricultural areas and open space; development could affect prehistoric and historic archaeological sites, many of which have not been recorded or studied for the important information they can provide about Delaware's history and prehistory; and SHPO encourages preservation and redevelopment in existing communities, Investments Levels 1 and 2.

Based on the review of historic maps and other data in this office, the potential for both historic and pre-historic archeological sites to survive is significant. Burials, both marked and unmarked, are protected by Delaware law. Please refer to the following sections of the Delaware State Code: (1) Title 11 Sub-Chapter 1340, titled "Desecration of Burial Places"; and (2) Title 7 Chapter 54, known as the "Delaware Unmarked Human Remains Act". For more information about these laws and the implications for the project, contact Craig Lukesic of this office at 302-736-7400. Should the developer wish to contract to do cultural resource work, the SHPO provides a list of qualified consultants at http://www.state.de.us/shpo/PDF/Consultants.pdf.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

This development is proposed for an area designated as Level 4 under the *Strategies for State Policies and Spending*. The *Strategies for State Policies and Spending* have deemed the type of development being proposed inappropriate for this area. 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 Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-9071

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 on an excellent recharge area and the loss or fragmentation of 70 out of 103 acres of forest, leading to further degradation of water quality. 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.

Soils

According to the soil survey update, Fort Mott-Henlopen complex, Downer, and Zekiah – Longmarsh complex were mapped on subject parcel. Fort-Mott complex and Downer are well-drained soils with some limitations associated with rapidly permeable sandy subsoils that have little or no nutrient adsorptive capacity. Zekiah-Longmarsh complex is a very poorly-drained wetland associated (hydric) floodplain soil that that has the highest severity level for development.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine forested wetlands. PLUS application materials indicate that wetlands have been delineated. This delineation should be verified Corps of Engineers through the Jurisdictional Determination process.

PLUS materials indicate that wetlands will not be directly impacted by construction activities. If impacts are anticipated please note that Palustrine wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. 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) 739-4691 to schedule a meeting.

ERES Waters

This project is located adjacent to receiving waters of 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 11.5 of Delaware's "Surface Water Quality Standards" (as amended August 11, 1999), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of nutrient runoff through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 11.5(e) of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree practicable, or where attainable, a standard requiring no 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. In this area of the Inland Bays Watershed, "target-rate-reductions" of 40 percent will be required for nitrogen and phosphorus.

The proposed pollution control strategy would also require the completion of a nutrient budget for the proposed project in order to estimate how TMDL nutrient loads will change with the development of this parcel. Currently, DNREC requests that in order to verify your project's compliance with specified TMDL loading rates, a full nutrient budget be calculated. Please contact Lyle Jones of Watershed Section at 739-4590 for the acceptable protocol.

The applicant should also be made aware that the inclusion of stormwater management, wastewater treatment, buffers and wetlands as metrics for open space calculations - may understate the actual TMDL nutrient loading and, subsequently, the actual nutrient runoff as calculated from the nutrient budget protocol.

The project, as proposed, would significantly further degrade the quality of adjacent waterways. It is recommended that the nutrient protocol be applied to this project in order to inform the local government as to the estimated magnitude of the additional degradation. Not only does the project design ignore the need to reduce pollutant loadings, it promotes additional degradation.

Impervious Cover

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 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.

Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline.

Water Resource Protection Areas

The DNREC Water Supply Section has determined that the northern part and the southwestern edge of the proposed development falls within an area of excellent groundwater recharge (see following map and attached map). The proposed development would change the total impervious cover .22% to approximately 21.65% in proposed development area. The proposed development area impacts the excellent recharge area. The numbers were provided by the developer on the PLUS application.

The northern section of excellent recharge area corresponds with predominantly open space. This section of the development plan should be preserved to maintain the undeveloped nature of the excellent recharge area. The southwestern edge of recharge area is proposed to be single family home lots and some open space in the median of the development road. If possible, the amount of open space in this area should be increased to decrease the amount of excellent recharge area that is impacted by development.

According to the State law that created the Source Water Protection Program, county and municipal governments with more than 2,000 residents will be required to enact ordinances to protect Water Resource Protection Areas. Municipalities with fewer than 2,000 residents are encouraged to enact such ordinances. The following language has been excerpted from the Source Water Protection Guidance Manual for Local Governments, Supplement 1 - Ground-Water Recharge Design Methodology. While the local ordinances may not yet be in place, the developer may find the language useful in modifying the site plan to protect water resources.

Water Resource Protection Areas (WRPAs) are defined as (1) surface water areas such as floodplains, limestone aquifers, and reservoir watersheds, (2) wellhead areas, or (3) excellent recharge areas. The purpose of an impervious cover threshold is to minimize loss of recharge and protect the quality and quantity of ground and surface water supplies in WRPAs.

New development in WRPAs may exceed the 20% impervious cover threshold, but be no more than 50% impervious, provided the applicant submits an environmental assessment report recommending a climatic water budget and facilities to augment recharge. The environmental assessment must document that post-development recharge will be no less than predevelopment recharge when computed on an annual basis.

Commonly, the applicant offsets the loss of recharge due to impervious cover by constructing recharge basins that convey relatively pure rooftop runoff for infiltration to ground water.

The Department recommends the following (ranked in order of preference):

1) Preserve WRPAs as open space and parks by acquisition or conservation easement.
2) Limit impervious cover of new development to 20% by right within WRPAs.
3) Allow impervious cover of new development to exceed 20% within WRPAs (but no more than 50% impervious) provided the applicant develops recharge facilities that directly infiltrate rooftop runoff.
4) Allow impervious cover of new development to exceed 20% within WRPAs (but no more than 50% impervious) provided the applicant develops recharge facilities that infiltrate stormwater runoff from forested and/or grassed surfaces with pretreatment.

For more information, refer to:

Source Water Protection Guidance Manual for the Local Governments of Delaware at http://www.wr.udel.edu/swaphome/phase2/SWPguidancemanual.html

and

Ground-Water Recharge Design Methodology at http://www.wr.udel.edu/swaphome/phase2/Publications/swapp_manual_final/swapp_guidance_manual_supp_1_2005_05_02.pdf

Duneside Phase 12 (PLUS 2005-08-08) with excellent recharge in green and affected parcels outlined in light blue.

Water Supply

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

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

Sediment and Erosion Control/Stormwater Management

A detailed sediment and stormwater 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 **Sussex Conservation District**. Contact Jessica Watson at (302) 856-7219 for details regarding submittal requirements and fees.

As of April 11, 2005, stormwater best management practices must also consider water quality as well as quantity in impaired water bodies.

Drainage

The Drainage Section requests all existing ditches on the property be checked for function and cleaned if needed prior to the construction of homes. Wetland permits may be required before cleaning ditches.

The Drainage Section requests that all precautions be taken to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water.

The Drainage Section strongly recommends any drainage conveyance between two parcels within a subdivision be dedicated as a drainage easement and such easement be designated as passive open space, not owned by individual landowners. The easement should be of sufficient width to allow for future drainage maintenance as described below.

- Along an open ditch or swale, the Drainage Section recommends a maintenance equipment zone of 25 feet measured from the top of bank on the maintenance side, and a 10-foot setback zone measured from top of bank on the non-maintenance side. These zones should be maintained as buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these zones should be native species, selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance zone should be native species spaced to allow for drainage maintenance at maturity. Trees should not be planted within 5 feet of the top of ditch to avoid future blockages from roots.

- Along a stormwater pipe the Drainage Section recommends a maintenance equipment zone of 15 feet on each side of the pipe as measured from the pipe centerline. This zone should be maintained as buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these zones should be native species selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance zone should be spaced to allow for drainage maintenance at maturity.

  The Drainage Section recommends any drainage/utility easement owned by an individual landowner should not have structures, decks, buildings, sheds, kennels,

fences or trees within the drainage easement to allow for future drainage maintenance.

Forests

According to 2002 aerial photos forested areas exist on this parcel; site plans show that lot lines will contain portions of the forest. PLUS materials indicate that 70.27 acres will be removed for development. Large contiguous stretches of forest like this not only provide important water and air quality benefits, but provide important habitat for many wildlife species that depend on interior forest. Clearing portions of the forest within the parcel may reduce the habitat value of the entire forest stretch.

The developer is strongly encouraged to preserve, and where possible, enhance forested resources on site, particularly mature trees. This includes minimizing the impact of development by designating open space along forested areas, which will create a buffer from homeowners and their activities. These areas should be clearly marked and delineated so that residents understand their importance and so that homeowner activities do not infringe upon these areas. The developer should seriously consider placing this forest into a permanent conservation easement or other binding protection.

Open Space

To maximize the existing buffering capacity and wildlife habitat on site, it is recommended that the developer minimize the amount of forest removal by relocating infrastructure (such as storm water management ponds) to areas outside of the forest and designating community open space along the forested 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.

Rare Species

DNREC has not surveyed this parcel, so it is unknown if there are any state-rare or federally listed plants, animals or natural communities at or adjacent to this project site. Our program botanist and zoologist requests the opportunity to survey the forested and

wetland resources which could potentially be impacted by the project. Their observations would allow us to make more informed comments on this project and would allow the applicant the opportunity to reduce potential impacts to rare species. Please contact Bill McAvoy or Kitt Heckscher at (302) 653-2880 to set up a site visit.

DNREC does have records of Red-Headed Woodpecker (Melanerpes erythocephalus), as state endangered bird, in the vicinity of the project site. This species depends on mature forest habitat for breeding, roosting, and foraging and could be impacted by the level of forest removal proposed by this project.

Potential Hunting Issue

Because the project parcel is part of a larger forest block, legal hunting activities may take place on adjacent properties. Hunting within 100 yards of a dwelling is prohibited and the applicant may want to contact adjacent landowners to determine if this is going to be an issue. In effect, the adjacent landowner will be losing 100 yards of their property for hunting if there is not a buffer between lot lines and the adjacent property line.

Nuisance Waterfowl

Stormwater management ponds that remain in the site plan may attract waterfowl like resident Canada geese and mute swans. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. DNREC recommends native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Underground Storage Tanks

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

Diamond State Telephone, Facility # 5-000765, Project # S9108173
No environmental impact is expected from the above inactive/active LUST site(s). However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would be need to be

changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel in the contaminated areas.

Solid Waste

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

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 18.9 tons (37,758.4 pounds) per year of VOC (volatile organic compounds), 15.6 tons (31,261.4 pounds) per year of NOx (nitrogen oxides), 11.5 tons (23,065.3 pounds) per year of SO2 (sulfur dioxide), 1.0 ton (2,053.2 pounds) per year of fine particulates and 1,579.2 tons (3,158,444.8 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 7.6 tons (15,229.7 pounds) per year of VOC (volatile organic compounds), 0.8 ton (1,675.7 pounds) per year of NOx (nitrogen oxides), 0.7 ton (1,390.6 pounds) per year of SO2 (sulfur dioxide), 0.9 ton (1,794.5 pounds) per year of fine particulates and 30.9 tons (61,737.8 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 3.0 tons (6,036.0 pounds) per year of NOx (nitrogen oxides), 10.5 tons (20,994.6 pounds) per year of SO2 (sulfur dioxide) and 1,548.4 tons (3,096,707.0 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO_2	$PM_{2.5}$	CO_2
Mobile	18.9	15.6	11.5	1.0	1579.2
Residential	7.6	0.8	0.7	0.9	30.9

Electrical Power		3.0	10.5		1548.4
TOTAL	26.5	19.4	22.7	1.9	3158.5

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 3.0 tons of nitrogen oxides per year and 10.5 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 DNREC Energy office 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.

DNREC also recommends that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths and links to mass transport system, and fund a lawnmower exchange program for their new occupants.

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**:
- 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 Holly Lake 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, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Milton Melendez 698-4500

The proposed development is in an area designated as Level 4 under the *Strategies for State Policies and Spending*. The *Strategies* and the Sussex County Comprehensive Plan do not support this type of isolated development in this area. The intent of these plans 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 the proposed 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. Often new residents of developments like this one, with little understanding or appreciation for modern agriculture and forestry, find their own lifestyles in direct conflict with the demands of these industries. Often these conflicts result in compromised health and safety; one example being decreased highway safety with farm equipment and cars competing on rural roads. The crucial economic, environmental and open space benefits of agriculture and forestry are compromised by such development. The 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.

Furthermore, the Department of Agriculture and the Department of Natural Resource and Environmental Control, along with other partners developed the State's "Green Infrastructure" Investment Strategy. This strategy identifies high-value cropland, forestland and natural resource lands for preservation and conservation. **This proposed development site is designated as high value Forestland and Cropland on the Green Infrastructure Investment Strategy. In other words, in addition to their location in a rural area, due to their soil quality and other significant factors, these lands have been further designated by the State for conservation and preservation.**

In addition, the majority of this site is a part of a "Good Recharge" area, with portion designated as "Excellent." DNREC has mapped all ground water potential recharge areas. A "good" rating is the second highest rating and designates an area as having important groundwater recharge qualities. Maintaining pervious cover in "Excellent" and "Good" recharge areas is crucial for the overall environmental health of our state and extremely important to efforts which ensure a safe drinking water supply for future generations. Retention of pervious cover to ensure an adequate future water supply is also important for the future viability of agriculture in the First State. The loss of every acre of land designated

as "excellent" and "good" recharge areas adversely impacts the future prospects for agriculture in Delaware.

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.

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 State Housing Authority – Contact Karen Horton 739-4263

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 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. 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

Delaware Economic Development Office – Contact: Gary Smith 739-4271

The Delaware Economic Development Office (DEDO) is not in favor of this project in a Level 4 area. The Delaware Economic Development Office supports the *Delaware Strategies for State Policies and Spending* policy regarding Level 4 activities.

Department of Education – Contact: Nick Vacirca 739-4658

246 dwelling units could generate an estimated 123 additional students for the Indian River School District. Sussex County does not have school concurrence legislation at this time. We recommend that the developer submit a package to the school district for informational purposes.

State spending strategies recommend no development in level 4 areas, or if development occurred, there would be little or no State funding utilized. Development that is approved in level 4 areas will require student transportation support, a State financed program. If we are going to truly hold to the State strategies on spending, then any development approved and constructed in level 4 should not receive State funded school transportation. I don't believe this is a call the Department is in a position to make.

If the development is approved and built, please use the following information for school transportation planning. If there are homes more than 1/2 mile from the nearest public road (outside the development), developers should plan wide enough streets so that large school buses can access and turn around (without backing) from the furthest areas within the development while picking up and dropping off students. Should there not be any sites more than 1/2 mile from the nearest public road, provisions for appropriate pick-up and drop-off at the development entrance should be included. The developer should work closely with the school district transportation supervisor.

Sussex County – Contact: Richard Kautz 855-7878

Because this project is an AR-1 Cluster subdivision, the developer must include in the application a plan for the management of all open space. Also, the developer must document for the Planning and Zoning Commission how the proposed development: provides for a total environment and design which are superior to that which would be allowed under the standard lot option; preserves the natural environment and historic or archeological resources; and, will not have an adverse effect on any of the items included under Ordinance Number 1152 (County Code 99-9C). These issues can be addressed by including in the application an explanation of how the developer plans to mitigate the issues raised by the State agencies.

The Sussex County Engineer Comments:

The project proposes to develop using a private central community wastewater system. It appears likely that the project will require a conditional-use approval for the treatment system. It is recommended that the wastewater system be operated under a long-term contract with a capable wastewater utility. 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.

In addition, if Duneside at Baywood will use the existing treatment plant and other wastewater facilities serving Baywood, the Sussex County Engineering Department must be provided with a design report from a qualified engineer that shows the whole system serving Baywood has capacity for the addition of the proposed project.

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.

For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department at (302) 855-7820.

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

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

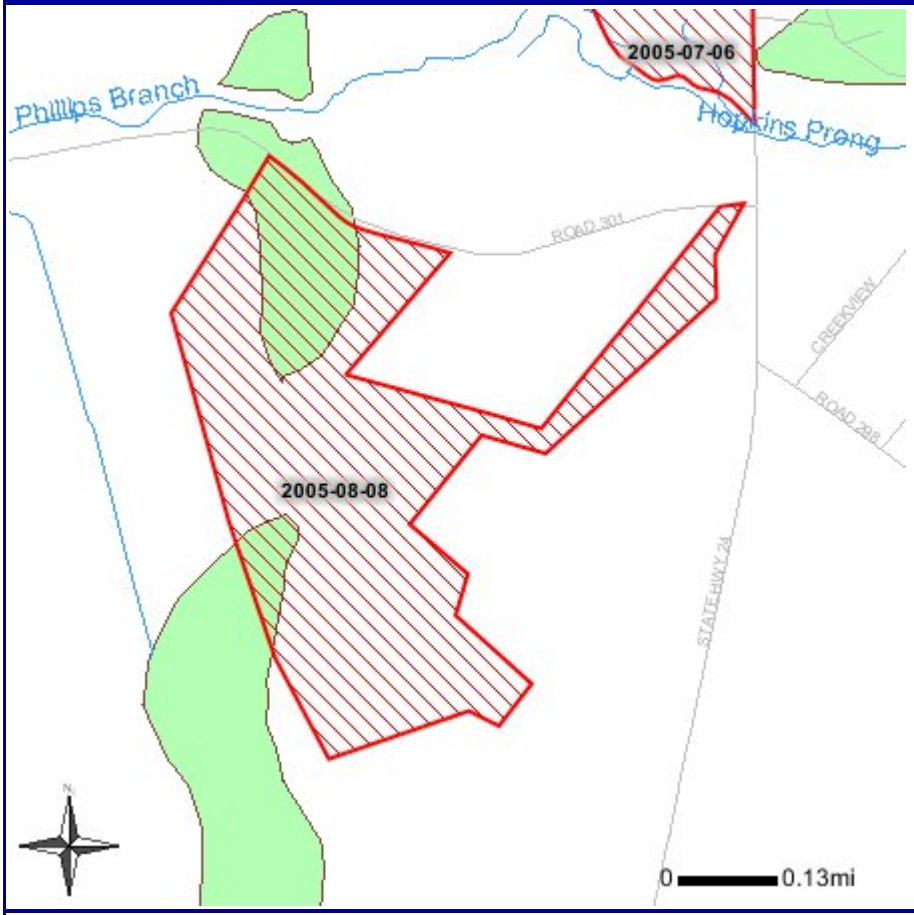
Sincerely,

Constance C. Holland, AICP
Director

CC: Sussex County

Duneside Phase 12

2005-08-08



PLUS Projects
NHDFlowLine
All Roads
Excellent Recharge Areas

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