



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

February 21, 2007

Gejza Csoltko
57 Hillary Circle
New Castle, 19720

RE: PLUS review – PLUS 2007-01-08; Stopyra Lands

Dear Mr. Csoltko:

Thank you for meeting with State agency planners on January 24, 2007 to discuss the proposed plans for the Stopyra Lands project to be located at the northwest corner of Kirkwood Highway and Possum Park Road near Newark.

According to the information received, you are seeking annexation into the City of Newark with a rezoning from residential to residential and commercial for a 249 unit subdivision and approximately 400,000 sq. ft. of commercial development on 54 acres.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that at this time New Castle County the governing authority over this land; if it is annexed, Newark will become the governing authority over the property. In either case, 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 proposed project is located primarily within an Investment Level 2 and 3 areas according to the *2004 Strategies for State Policies and Spending*. For Level 2 areas, State policies support development activities. Level 3 areas reflect areas where growth is anticipated by local, county, and state plans in the longer term, or areas that may have environmental or other constraints to development. In this case, there are environmental constraints as the level 3 portion is a State designated Natural Area and is recognized as a part of the State's White Clay Creek Natural Area Inventory. As such, any development should be sensitive to environmental and other considerations as noted in this letter.
- We understand that you will pursue annexation into the City of Newark for this project. According to Mr. Lopata, Planning Director for the City, in his January 10, 2007 letter on this matter, as proposed, the project is inconsistent with the current Adjacent Areas Plan and would necessitate a comprehensive plan amendment in order for the project to proceed. Thus, at present, we cannot support this project if it is to be done in accordance with the City of Newark's land use regulations because of its inconsistency with the City's Comprehensive plan.

Street Design and Transportation

- Kirkwood Highway is a divided principal arterial highway and Possum Park Road is a collector road. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 50 feet from the inside edge of the travelway on divided principal arterial highways and 40 feet from the centerline on collector roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.
- The residential and commercial components of this development are each, separately large enough to warrant a traffic impact study. Therefore DelDOT will require one. DelDOT asks that the City withhold plan approvals and consider withholding commercial zoning pending the results of the study and the developer's agreement to provide any needed off-site improvements.

Natural and Cultural Resources

- If the County's Historic Review Board does not require any archaeological testing of this development, the DHCA would like the opportunity to examine the area prior to any ground-disturbing activities, to see if there are in fact any archaeological sites on the parcel and to learn something about their location, nature, and extent. They would also like the opportunity to document the existing houses prior to any demolition activities.
- A review of the database has revealed that there is a fairly large area that may be suitable habitat for the federally listed bog turtle (*Glyptemys muhlenbergii*) within the proposed project area. Because the bog turtle is a federally listed species, protected under the Endangered Species Act, its presence can affect the scope of work. To ensure that the project will not impact bog turtles or their habitat, Phase I surveys for bog turtle habitat should be conducted.
- In order to provide more informed comments and to make recommendations, the DNREC program botanist and ecologist request the opportunity to survey the forest and wetland areas that could potentially be impacted by the project.
- DNREC recommends that the developer consider downsizing the current plan so that a larger area of forested open space is preserved. This would entail omitting lots and infrastructure in the portion of the parcel which is forested.
- DNREC asks that trees not be cleared to create stormwater management ponds. Trees function in flood abatement and erosion control and it does not make sense to remove them to create a pond with the same purpose. There are no stormwater management ponds depicted on the site plan, but yet the application states that ponds are going to be used (question #32).
- The current site plan does not have adequate buffers as there are lots and infrastructure well within 100ft of tributaries of the White Clay Creek and associated wetlands.
- In addition, the stream should not be considered part of the buffer zone (see question #30 which states "no disturbance from within 50ft from center line of the stream". A riparian buffer zone should start from the edge of the stream and extend 100ft inland. It makes no sense to consider the water of the stream as part of the buffer zone, because the buffer is supposed to consist of vegetation that filters run-off from entering the stream.

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

Office of State Planning Coordination – Contact: Herb Inden 739-3090

This proposed project is located primarily within an Investment Level 2 and 3 areas according to the *2004 Strategies for State Policies and Spending*. For Level 2 areas, State policies support development activities. Level 3 areas reflect areas where growth is anticipated by local, county, and state plans in the longer term, or areas that may have environmental or other constraints to development. In this case, there are environmental constraints as the level 3 portion is a State designated Natural Area and is recognized as a part of the State's White Clay Creek Natural Area Inventory. As such, any development should be sensitive to environmental and other considerations as noted in this letter.

We understand that you will pursue annexation into the City of Newark for this project. According to Mr. Lopata, Planning Director for the City, in his January 10, 2007 letter on this matter, as proposed, the project is inconsistent with the current Adjacent Areas Plan and would necessitate a comprehensive plan amendment in order for the project to proceed. Thus, at present, we cannot support this project if it is to be done in accordance with the City of Newark's land use regulations because of its inconsistency with the City's Comprehensive plan.

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

This parcel includes the Roseville Mill (N-1471) and Roseville/the D. Chillas House (N-10080) as noted on Beers Atlas of 1868. Roseville/Chillas House appears to have been demolished recently. The stone race walls related to the mill still exist on the property. Beers Atlas also shows six workers houses along Capitol Trail and two mills on either side of the race in the Roseville tract, and the W. M. Peters House in the western tip of the parcel. There are probably historic-period archaeological remains associated with all of these resources. The Meeteer House (N-206), listed in the National Register of Historic Places, is located just east of this parcel on Old Possum Park Rd. There are a number of other historic houses and bridges in the area. There are areas of high potential for prehistoric-period archaeological sites.

Small, rural, family cemeteries often are found in relation to historic farm complexes, such as the Chillas and Peters houses, usually a good distance behind or to the side of the house. There may also be a cemetery related to the workers houses. The developer should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is

carried out, and the developer may want to hire an archaeological consultant to check for the possibility of one or more cemeteries here if this development is approved. The DHCA would have to have a copy of any archaeological report done for this purpose. They will be happy to discuss these issues with the developer.

If the County's Historic Review Board does not require any archaeological testing of this development, the DHCA would like the opportunity to examine the area prior to any ground-disturbing activities, to see if there are in fact any archaeological sites on the parcel and to learn something about their location, nature, and extent. They would also like the opportunity to document the existing houses prior to any demolition activities. The DHCA requests that there be sufficient landscaping around this development to block any noise or visual intrusions on the nearby historic houses, especially along the south and east sides of the development.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) New Castle County tax maps show four parcels on Last Lane. These four parcels (Tax Parcels 08-059.20-003, 004, 005 and 006) are not mentioned on the PLUS application or shown on the plan, but the plan would appear to require their development or redevelopment. According to County records, three of the four parcels are owned by Mr. Acierno, so their omission may be trivial, but the one that fronts on Kirkwood Highway is owned by someone else.
- 2) Kirkwood Highway is a divided principal arterial highway and Possum Park Road is a collector road. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 50 feet from the inside edge of the travelway on divided principal arterial highways and 40 feet from the centerline on collector roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.
- 3) The residential and commercial components of this development are each, separately large enough to warrant a traffic impact study. Therefore DelDOT will require one. DelDOT asks that the City withhold plan approvals and consider withholding commercial zoning pending the results of the study and the developer's agreement to provide any needed off-site improvements. Because traffic impact studies typically take about one year from the initial scoping meeting to the completion of DelDOT's review of the completed study, we recommend that the developer have their traffic engineer contact

- Mr. Todd Sammons of my office to schedule a scoping meeting as soon as possible. Mr. Sammons may be reached at (302) 760-2134.
- 4) DelDOT offers the following comments regarding the residential portion of the plan. Because the development streets would be City streets, these comments are only advisory.
 - a) Most of the proposed lots are accessible only by a single street, presumably because a stream crossing is needed to reach the west part of the development. We would recommend that the developer either provide a second street connection across that stream or be prepared to show why that is not feasible. If a street connection is not feasible a bicycle and pedestrian bridge should be considered.
 - b) Contrary to the response to item 42 on the PLUS application, our mapping shows a stub street in the adjoining Chapel Hills subdivision that abuts the subject land. The streets in the proposed development should tie into it.
 - c) The development should include a bicycle and pedestrian connection to the proposed shopping center. The connection should be accompanied by sufficient open space to make it attractive to users and to buffer adjoining parcels from those users. It should be located toward the middle of the development, from east to west, so that it provides a shorter route to the shopping center for residents of the west section of the development.
 - 5) Similarly, DelDOT offers the following advisory comments regarding the commercial portion of the plan:
 - a) On the shopping center side, bicycle and pedestrian connection just mentioned should be well lit and designed to provide easy access to the fronts of the stores. Bicycle parking should be provided near the storefronts.
 - b) The plan presented does not appear to provide for truck access. Separate truck accesses on Kirkwood Highway and Possum Park Road may or may not be permitted, but in any case the site design must provide clear routes by which tractor-trailers can readily reach the rear of each building and then exit the site. These routes should be readily apparent to drivers unfamiliar with the site, relatively free of parking.

Providing designated truck routes through the site provides safety for patrons, convenience for tenants and allows the developer to use a lighter, less expensive pavement design on the rest of the parking lot.

- c) The proposed bank and restaurants are isolated from the rest of the development by a large parking lot. Safe walkways should be provided to connect them so that store patrons and employees can reasonably walk to the bank and restaurants.
 - d) The parking lot layout shown could encourage drivers on southbound Possum Park Road to cut through the lot to reach westbound Kirkwood Highway during peak hours. DeIDOT recommends that the lot be reconfigured to discourage that movement. If necessary, traffic calming measures such as speed humps should be considered.
- 6) Bicycle and pedestrian facilities will be addressed in more detail in DeIDOT's review of the traffic impact study and the plans for the development, but the developer should be aware that the school and church complex and the Little League ballfields on the east side of Possum Park Road could be significant sources of pedestrian traffic. That traffic will need to be accommodated in the design of both site entrances.
- 7) The developer should contact the DeIDOT Subdivision Manager for New Castle County, Mr. Pao Lin, regarding specific requirements for access. Mr. Lin may be reached at (302) 760-2157.

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

Office of Nature Preserves

The Office of Nature Preserves opposes the annexation of these lands into the City of Newark limits. A majority of the site is comprised of State designated Natural Area and is recognized as a part of the State's White Clay Creek Natural Area Inventory. The New Castle County Unified Development Code recognizes such lands and provides natural resource protections appropriately. The City of Newark has no such natural resource protections in its development code. In fact, the White Clay Creek and its associated watershed have been nationally recognized as a wild and scenic river and should be afforded protections accordingly. Again, the City of Newark's development code has a dearth of protections for such resources. Moreover, the state has spent millions of dollars to protect lands in and around the White Clay Creek watershed. Allowing such a

high density of development in a watershed that already experiences flooding problems is irresponsible planning and should not be permitted.

Additional lands on the site have been identified as State Resource Area lands. State Resource Area (SRA) lands include any open lands characterized by great natural scenic beauty, or whose existing openness, natural condition or present state of use, if retained, would maintain important recreational areas and wildlife habitat, and enhance the present or potential value of abutting or surrounding urban development, or would maintain or enhance the conservation of natural or scenic resources, including environmentally sensitive areas.

There is a high probability of state and federally listed rare species on the site and the landowner should be required to allow state surveys to be initiated to ensure such rare species are not present.

For these reasons the Office of Nature Preserves strongly opposes the annexation of these lands into the City of Newark limits.

Soils

Based on the New Castle County soil survey Chester, Elsinboro, Delanco, Kinkora, and Hatboro were mapped on subject parcel. Chester and Elsinboro are well-drained upland soils that, generally, have few limitations for development. Delanco is a moderately well-drained soil of low-lying uplands that have moderate limitations for development. Kinkora is a poorly-drained wetland associated (hydric) soil that has severe limitations for development. Hatboro is a very poorly-drained wetland associated (hydric) floodplain soil that has the highest severity level for development. About 20-30% of the soils on this parcel are likely to be wetland associated (hydric) soils.

According to the Statewide Wetland Mapping Project (SWMP) mapping, palustrine forested riparian wetlands along the headwater reaches of the White Clay creek bound much of the southern boundary of subject parcel(s). Additionally, the presence of unmapped wetlands is likely in some of the other forested areas of the parcel(s).

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) manual is only acceptable basis for making a jurisdictional wetland determination. The applicant is forewarned that the USACE views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands

Mapping Project (SWMP) mapping as an unacceptable substitute for making such delineations. To ensure compliance with said USACE 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 USACE 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 - the USACE must be contacted to evaluate and assess the jurisdictional validity of such a delineation. In other words, the final jurisdictional authority for making isolated wetlands determinations ultimately rests with the USACE, not a privately-paid wetlands consultant. The USACE can be reached by phone at 736-9763.

As noted previously, this parcel contains SWMP mapped wetlands associated with the headwater reaches of the White Clay creek bound much of the southern boundary of subject parcel(s). Headwater or near headwater riparian wetlands are important for the protection of water quality and the maintenance/integrity of the ecological functions throughout the length of the stream, including the floodplain system and/or waterbodies further downstream. Since such streams are a major avenue for nutrient-laden stormwater and sediment runoff, their protection deserves the highest priority. In recognition of this concern, the Watershed Assessment Section strongly recommends the applicant consider preserving the existing natural riparian buffer adjacent to the White Clay creek in its entirety. Otherwise, a 100-foot upland buffer the edge from the edge of the delineated wetlands (planted in native woody and/or herbaceous vegetation), is the minimum buffer width recommendation. Studies have consistently shown that an adequately-sized buffer that effectively protects wetlands and streams is - in most circumstances - at least 100-foot in width.

As mentioned previously, a significant portion of the land area of subject parcel (est. 20-30%) contains wetland associated hydric soils. Hydric soils typically have a seasonal high water table at or near the soil surface (within one-foot of soil surface or less). Building in such soils is likely to leave prospective residents of this and adjoining properties susceptible to future flooding problems from groundwater-driven surfacewater ponding - especially during extended periods of high-intensity rainfall events such as tropical storms/hurricanes or "nor'easters." This is in addition to increased flooding probabilities from surfacewater runoff emanating from future created forms of structural imperviousness (roof tops, roads, and sidewalks). It is strongly recommended that the applicant avoid these soils.

Fish and Wildlife

DNRE C is opposed to the current site plan which has highly inadequate wetland and riparian buffers. Development of this parcel will result in a large amount of forest loss, and could impact rare species. The applicant indicates in question 27 that the 'environmental impact will be the most positive under a development scenario'. DNEC disagrees. This site certainly could be developed in a more environmentally sensitive way, with adequate wetland buffers (at least 100ft), and a larger, connected area of preserved forested open space.

Rare Species

DNREC has never surveyed this site, therefore, it is unknown if there are state-rare or federally listed plants, animals or natural communities at or adjacent to this project site. However, the following State-rare birds nest in the vicinity and because suitable habitat exists, these species could occur within the project area:

Buteo lineatus (Red-Shouldered Hawk), *Buteo platypterus* (Broad-Winged Hawk), *Coccyzus erythrophthalmus* (Blackbilled Cuckoo), *Dendroica cerulea* (Cerulean Warbler)-State-endangered, *Lanius ludovicianus* (Loggerhead Shrike)-State-Endangered, *Riparia riparia* (Bank Swallow), *Vermivora pinus* (Blue-Winged Warbler)

Bog Turtle

A review of the database has revealed that there is a fairly large area that may be suitable habitat for the federally listed bog turtle (*Glyptemys muhlenbergii*) within the proposed project area. Because the bog turtle is a federally listed species, protected under the Endangered Species Act, its presence can affect the scope of work. To ensure that the project will not impact bog turtles or their habitat, Phase I surveys for bog turtle habitat should be conducted.

Phase I surveys can be conducted any time of year when snow cover is not present. If potential habitat is found, however, please note there is a time of year restriction during which Phase II surveys for bog turtles must be conducted. A Delaware approved bog turtle surveyor must be used to conduct the surveys. Please contact Holly Niederriter (302-653-2880) to obtain a list of contacts to conduct Phase I and, if necessary, Phase II surveys.

If potential bog turtle habitat is found during Phase I surveys, you are required to either:

1. Completely avoid all direct and indirect project impacts to the wetland, in consultation with the U.S. Fish and Wildlife Service and Delaware Division of Fish and Wildlife;
2. Have Phase II surveys conducted to determine if bog turtles are present. In accordance with Delaware's bog turtle site survey procedures, surveys must be conducted by a State-approved bog turtle surveyor between April 15 and June 15.

Unique Wetland type

According to our GIS database, interpretation of aerial photographs and topography, a unique wetland type could occur on this property. A Piedmont streamside seepage wetland appears to occur on the western half of the project area. This community type is typically small, diverse and fed by groundwater year-round and tends to occur at the base of steep slopes. The species composition is highly variable, but dominant species typically include *Carex stricta*, *Impatiens capensis*, *Onoclea sensibilis*, *Polygonum arifolium*, and *P. sagittatum*. Other frequent associates include scattered woody species, such as *Acer rubrum*, *Alnus serrulata*, and *Salix nigra*, and herbaceous species *Typha latifolia*, *Leersia oryzoides*, *Acorus americanus*, *Thelypteris palustris*, *Boehmeria cylindrica*, *Carex lupulina*, *Polygonum hydropiperoides*, *Scirpus cyperinus*, *Glyceria striata*, *Agrostis hyemalis*, and *Cuscuta* spp.

Site visit request

In order to provide more informed comments and to make recommendations, the DNREC program botanist and ecologist request the opportunity to survey the forest and wetland areas that could potentially be impacted by the project. This would also allow the applicant the opportunity to reduce potential impacts to rare species and unique habitats and to ensure that the project is environmentally sensitive. In addition, a survey of the project site will give staff an opportunity to document the biodiversity of the property before project activities begin. Please contact Bill McAvoy or Robert Coxe at (302) 653-2880 to set up a site visit.

Plant Rescue

Because woodlands and wetlands are to be destroyed, filled, or disturbed, DNREC recommends that the developer/landowner contact the Delaware Native Plant Society to initiate a plant rescue. Selected plants from the site of disturbance will be collected by Society members and transplanted to the Society's nursery. Plants will then be used in restoration projects and/or sold at the Society's annual native plant sale. This can be done at no expense or liability to the developer/landowner". Please contact Lynn Redding at

(302) 736-7726, (lynn_redding@ml.com) or William A. McAvoy at (302) 653-2880, (william.mcavoy@state.de.us).

Forest Loss

According to information presented in the Plus application, the applicant intends to remove about 41 of the existing 70 acres (approx.58% removal) of this parcel's forested acreage to accommodate subject development. The Watershed Assessment section strongly believes that this is an excessive amount of forest cover removal and should be reduced. Since deforestation has cumulative water quality impacts at the watershed scale, efforts to protect the remaining forest remnants is critical for maintaining or preserving the watershed's environmental integrity. The Watershed Assessment section strongly recommends that the applicant consider revising and/or redesigning this project with a greater emphasis on forest cover preservation than they are currently proposing.

There is a large amount of forest loss being proposed and when forested areas are converted by development, wildlife must either co-exist with new residents or disperse into surrounding areas. Either scenario can result in an increase in human/animal conflicts, including interactions on the roadways. It also puts greater pressure on nearby Wildlife Areas, Nature Preserves, and other protected lands. It is estimated that 20,000 acres of forested land has been converted by development since 2003, and it is imperative that forest loss be minimized. For migratory birds, it is extremely important to conserve large tracts of forests in the State of Delaware due to its position within the Atlantic flyway. This portion of forest is part of a larger forest block and forest fragmentation resulting from development separates wildlife populations, increases road mortality, and increases "edge effects" that leave many forest dwelling species, particularly songbirds, vulnerable to predation. In addition, forests provide environmental services that benefit humans directly such as water quality protection (erosion control and sediment, nutrient, biological and toxics removal), climate moderation, aesthetic value and recreational opportunities.

DNREC strongly encourages the developer to consider preservation of a larger area of forest. Many new incentive-based programs for wildlife management are available to private landowners through our agency. Please contact 302-653-2880 if the landowner(s) is interested in more information.

DNREC highly recommends:

1. The developer consider downsizing the current plan so that a larger area of forested open space is preserved. This would entail omitting lots and infrastructure in the portion of the parcel which is forested.

2. Trees not be cleared to create stormwater management ponds. Trees function in flood abatement and erosion control and it does not make sense to remove them to create a pond with the same purpose. There are no stormwater management ponds depicted on the site plan, but yet the application states that ponds are going to be used (question #32). DNREC would like to know where they intend to place these ponds. Are they going to place them in the space currently set aside as 'private open space'?

Inadequate wetland buffers

The current site plan does not have adequate buffers as there are lots and infrastructure well within 100ft of tributaries of the White Clay Creek and associated wetlands. In addition, the stream should not be considered part of the buffer zone (see question #30 which states "no disturbance from within 50ft from center line of the stream". A riparian buffer zone should start from the edge of the stream and extend 100ft inland. It makes no sense to consider the water of the stream as part of the buffer zone, because the buffer is supposed to consist of vegetation that filters run-off from entering the stream.

Wild and Scenic River

This project is within the area designated as the White Clay Creek Wild and Scenic River as administered by the National Park Service (NPS). Contact Charles Barscz, Program Leader at NPS for more information: (215) 597-6482 or (charles barscz@nps.gov); 200 Chestnut St, 3rd Floor, Philadelphia, PA 19106.

Nuisance Geese

Stormwater management ponds (although as mentioned above, it is unclear where these are to be located) may attract waterfowl like resident Canada geese and mute swans. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. We recommend native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50ft) 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.

Sediment and Stormwater

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through the local delegated agency. It is strongly recommended that you contact the reviewing agency and the DNREC Sediment and Stormwater Program to schedule a preliminary meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as possible. The site topography, soils mapping, pre and post development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion.
- A Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity must be submitted to DNREC Division of Soil and Water Conservation along with the NOI fee prior to plan approval.

Water - Ricardo Rios - (302) 739-9945, Ricardo.Rios@state.de.us

The information provided indicates that The City of Newark will provide water to the proposed projects through a central public water system. DNREC files reflect that The City of Newark does not currently hold a certificate of public convenience and necessity (CPCN) to provide public water in these areas. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already.

Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site public well be needed, it must be located at least 150 ft. from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

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

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

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

Impervious Surfaces and BMPs

Based on a review of the PLUS application, post-development surface imperviousness is estimated to be about 43 percent. However, given the scope and density of this project, this projection is likely an **underestimate**. The applicant's apparent use of natural areas (wetlands or buffers) and stormwater management areas for purposes of meeting the County's open space requirements, results in an artificially low estimate of this project's actual amount of post development surface imperviousness – ultimately resulting in an artificially low estimate of its actual environmental impacts. Therefore, wetlands and stormwater management areas should be excluded from the open space and surface imperviousness calculations. Open space was originally intended to provide residents with convenient access to lands amenable to active recreation, not a “catchall” land type for meeting the county's open space requirements to maximize “buildable” acreage. Finally, the applicant should realize that all created forms of constructed surface imperviousness (i.e., rooftops, sidewalks, and roads) and their extent should be comprehensively accounted for when calculating surface imperviousness. It is strongly recommended that the applicant address all of the above-mentioned concerns in the finalized calculation for surface imperviousness.

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials (“pervious pavers”) in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings – are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

TMDL reduction requirements

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the White Clay creek watershed. A TMDL is the

maximum level of pollution allowed for a given pollutant below which a “water quality limited waterbody” 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 White Clay creek watershed, a post-development TMDL reduction level of 62 and 77 percent will be required under high flow conditions for nitrogen and phosphorus, respectively. Additionally, a TMDL reduction level of up to 95 percent may be required for bacteria.

TMDL compliance through the PCS

As stated above Total Maximum Daily loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the White Clay creek watershed. The TMDL calls for nitrogen and phosphorus reduction levels of 62% and 77% from baseline conditions. The TMDL also calls for up to a 95% reduction in bacteria from baseline conditions. The Department developed an assessment tool to evaluate how your proposed development may reduce nutrients and bacteria to meet the TMDL requirements. Additional reductions may be possible through the implementation of Best Management Practices such as wider vegetated buffers along watercourses, increasing or preserving passive, wooded open space, and the use of stormwater management treatment trains. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

Site Investigation and Restoration Branch

One SIRB site exists within a one half mile of this project site. Windy Hills (DE-162) exists north of this site. After an investigation in 1987, it was decided that no further action was needed there. No salvage yards exist within a one half mile radius of this site. For further information, contact Babatunde Asere at 302-395-2600.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 19.1 tons (38,218.9 pounds) per year of VOC (volatile organic compounds), 15.8 tons (31,642.7 pounds) per year of NO_x (nitrogen oxides), 11.7 tons (23,346.5 pounds) per year of SO₂ (sulfur dioxide), 1.0 ton (2,078.2 pounds) per year of fine particulates and 1,598.5 tons (3,196,962.4 pounds) per year of CO₂ (carbon dioxide)

However if 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 NO_x; 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 7.7 tons (15,415.4 pounds) per year of VOC (volatile organic compounds), 0.8 ton (1,696.2 pounds) per year of NOx (nitrogen oxides), 0.7 ton (1,407.6 pounds) per year of SO2 (sulfur dioxide), 0.9 ton (1,816.4 pounds) per year of fine particulates and 31.2 tons (62,490.7 pounds) per year of CO2 (carbon dioxide)

Emissions from electrical power generation associated with this project are estimated to be 3.1 tons (6,109.6 pounds) per year of NOx (nitrogen oxides), 10.6 tons (21,250.7 pounds) per year of SO2 (sulfur dioxide) and 1,567.2 tons (3,134,471.8 pounds) per year of CO2 (carbon dioxide).

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

<http://www.energystar.gov/>

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

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

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

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

State Fire Marshal's Office – Contact: R.T. Leicht 302-323-5365

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):

- ❖ *If this project gets annexed into the City of Newark the City Fire Marshal would provide all technical review and assistance.*
 - a. **Fire Protection Water Requirements:**
 - Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Mercantile)
 - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly and Business)
 - Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required. (One & Two- Family Dwelling)
 - Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.
 - b. **Fire Protection Features:**
 - All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
 - Buildings greater than 10,000 sq.ft., 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
 - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
 - Show Fire Lanes and Sign Detail as shown in DSFPR

c. **Accessibility**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Possum Park Road and Kirkwood Hwy must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

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

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

e. **Required Notes:**

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered

- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Scott Blaier 698-4500

The Delaware Department of Agriculture has no objections to the proposed application, the developer intends to annex the property into the City of Newark, and the *Strategies for State Policies and Spending* encourages environmentally responsible development in areas in Investment Levels 2 and 3.

This site overlaps with the State's Green Infrastructure Investment Strategy Plan. The Natural Areas layer is present over the entire site. This designation identifies areas of the state that have valuable environmental benefits, as discussed in Governor Minner's Executive Order Number 61. Areas such as these should be preserved as such, and not developed for residential use.

Right Tree for the Right Place

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

Native Landscapes

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

Tree Mitigation

The Delaware Forest Service encourages the developer to implement a tree mitigation program to replace trees at a 1:1 ratio within the site and throughout the community. This will help to meet the community's forestry goals and objectives and reduce the environmental impacts to the surrounding natural resources. To learn more, please contact our offices at (302) 349-5754.

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 Vicki Walsh 739-4263

This proposal is for a rezoning of 171 acres from residential to residential and commercial for 249 residential units and 401, 487 sq. ft. commercial located on the northwest corner of Kirkwood Highway and Possum Park Road near Newark. According to the *State Strategies Map*, the proposal is located in an Investment Level 2 area. As a general planning practice, DSHA encourages residential development inside growth zones, where residents will have proximity to services, markets, and employment opportunities. Furthermore, DSHA encourages residential development in Level 2 areas that are affordable to first time homebuyers. DSHA supports the fact that this proposal targets the full range of incomes including first time homebuyers. According to the most recent real estate data collected by DSHA, the average home price in New Castle County is \$251,000. However, families earning respectively 100% of New Castle County's median income only qualify for mortgages of \$237,474, thus creating an affordability gap of \$13,526. The provision of units within reach of families earning at least 100% of New Castle County's median income will ensure housing that is affordable for first time homebuyers.

Department of Education – Contact: John Marinucci 739-4658

1. This proposed development is within the Christina School District boundaries.
2. DOE offers the following comments on behalf of the Christina School District.
3. Using the DOE standard formula, this development will generate an estimated 125 students.
4. DOE records indicate that the Christina School Districts' *elementary schools are not at or beyond 100% of current capacity* based on September 30, 2006 elementary enrollment.

5. DOE records indicate that the Christina School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2006 secondary enrollment.
6. The developer is strongly encouraged to contact the Christina School District Administration to address the potential student population growth that this development will likely generate.
7. DOE requests developer work with the Christina School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the local school district.

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: City of Newark