



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION

May 25, 2021

Mr. Alan Decktor
Pennoni
18072 Davidson Drive
Milton, DE 19968

RE: PLUS review 2021-04-03; Terrapin Island Subdivision

Dear Mr. Decktor:

Thank you for meeting with State agency planners on April 28, 2021 to discuss the Terrapin Island Subdivision project. According to the information received you are seeking review of a proposed 42-unit residential subdivision on 32.13 acres along Camp Arrowhead Road in Level 4 in Sussex County.

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.**

Strategies for State Policies and Spending

This project represents a land development that will result in 42 residential units in an Investment Level 4 area and an Out of Play area according to the *2020 Strategies for State Policies and Spending*. Investment Level 4 indicates where State investments will support agricultural preservation, natural resource protection, and the continuation of the rural nature of these areas. New development activities and suburban development are not supported in Investment Level 4. These areas are comprised of prime agricultural lands and environmentally sensitive wetlands and wildlife habitats, which should be, and in many cases have been preserved. Out of Play reflects lands that, at the time the State Strategies were developed, were not available for private development due to public ownership and / or preservation.

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 will bring a new residential development to an area where the State has no plans to invest in infrastructure upgrades or additional services. The intended development will need access to services and infrastructure such as police, and transportation. To provide some examples, the State government funds 100% of road maintenance and drainage improvements for the transportation system, and 100% 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 cost of maintaining infrastructure and providing services increases.

In addition, this site is environmentally inappropriate. The existing plans pose both flooding risks and considerable impacts to wetlands and wildlife habitat. The entire parcel is located within both the Delaware Ecological Network and the Angola Neck Natural Area. The site plans propose the removal of significant amounts of mature forest that are a key part of these larger ecological systems. Impacts to non-tidal wetlands include proposed disturbance of wetlands, secondary impacts, and the disconnection of large expanses of contiguous habitat. Future residents will likely face flooding concerns, which will be further exacerbated by sea level rise in the near future.

The application states that you intend to remove 14.23 acres of the 23.08 acres of forest on site and will be disturbing 0.22 acres of non-tidal wetlands for road crossings. The application does not state the exact distance of disturbance from the environmental features of this site, but site plans show that growth on this site will be in close proximity to wetlands, streams and/or waterbodies.

Other environmental concerns, as noted by DNREC, include:

- The site plans show a 50-foot vegetated buffer zone along state-regulated tidal wetlands and a 25-foot wetland setback for federally regulated non-tidal wetlands. However, the proposed cul-de-sac on the eastern portion of the site abuts the estuarine wetlands, and lots lie within the 25-foot setback in areas, specifically lots 11-19. Wetlands can expand outside their existing boundaries during seasonal and localized wet weather and a wetland setback allows for the expansion during these times. If lots 11-19 remain within the 25-foot setback, future homeowners can potentially experience wet and possibly seasonably unusable backyards. In addition, setbacks contained within lot lines will be difficult to preserve over time as homeowners often are unaware of the setback requirements or ignore them.
- According to the newest Flood Insurance Rate Maps (FIRM), much of this parcel (the eastern half and a portion of the western half) is situated within a Special Flood Hazard Area, specifically within the mapped 100-year floodplain (1% annual chance of flooding). The Special Flood Hazard Area identified on the site lies within zone AE. Lots and structures are proposed within these identified areas. In lands contained within

the 100-year floodplain, the National Flood Insurance Program's floodplain management regulations must be enforced through the local floodplain ordinance, which can have higher standards. Homeowners with mortgages may be required to purchase flood insurance. Likewise, the majority of this site is vulnerable to permanent inundation from sea level rise.

- Development of this site is anticipated to displace local wildlife. Wildlife displaced by encroaching development may become a nuisance for homeowners.

Because the development is inconsistent with the *2020 Strategies for State Policies and Spending*, the State is opposed to the development of this parcel as proposed.

With that said, the comments in this letter are technical, and are not intended to suggest that the State supports this development. This letter does not in any way suggest or imply that you may receive or may be entitled to permits or other approvals necessary to build on this property.

Department of Transportation – Contact Bill Brockenbrough 760-2109

- The site access on Camp Arrowhead Road (Sussex Road 279) must be designed in accordance with DelDOT's Development Coordination Manual, which is available at <http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes>.
- Pursuant to Section 1.3 of the Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at https://www.deldot.gov/Business/subdivisions/pdfs/Meeting_Request_Form.pdf?08022017. The September 2020 meeting, when the development was known as Salt Cedars, satisfies this requirement.
- Section 1.6.1 of the Manual addresses the location of proposed entrances. In the September 2020 Pre-Submittal meeting, DelDOT determined that a left turn into the site would be warranted and would extend past the entrance to Cove Court, a small subdivision street immediately north of this site. DelDOT's preferred solution to this situation was then and still would be for this developer to relocate Cove Court's access onto the proposed Torope Lane. If that is not possible, the applicant's engineer will need to request a design deviation, in accordance with Section 4.2 of the Manual.
- Section 1.7 of the Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.
- Per Section 2.2.2.1 of the Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends

per hour in any hour of the day. From the PLUS application, the total daily trips are estimated at 468 vehicle trip ends per day. Using the 10th edition of the Institute of Transportation Engineers' Trip Generation Manual, DelDOT confirms this number and estimates the weekday morning and evening peak hour trip ends at 35 and 44, respectively. Therefore, a TIS would not normally be required.

The subject development is located in the Henlopen Transportation Improvement District (TID). Therefore, as authorized in Section 2.2.2.4, DelDOT will require that the developer participate in the TID rather than do any off-site improvements that might be warranted beyond their entrance. In accordance with Section 2.4 of the Manual, the applicant will be required to sign an agreement and pay a fee of per lot. The fee may be paid separately for each lot but is subject to a surcharge if it is not paid for the entire plan at once.

In part, the TID agreement will provide that the applicant may receive credit against their fee for construction planned as part of the TID. Entrance construction is generally not considered eligible for such credit.

DelDOT asks that the applicant contact their Subdivision Manager for this part of the county, Mr. Brian Yates, for routine matters regarding the agreement. Mr. Yates may be reached at Brian.Yates@delaware.gov or (302) 760-2151. As necessary, the applicant may also contact Ms. Sarah Coakley, a Principal Planner in DelDOT's Regional System Planning Section who manages DelDOT's TID program. Ms. Coakley may be reached at Sarah.Coakley@delaware.gov or (302) 760-2236.

There is a project planned for the TID to improve the State-maintained part of Camp Arrowhead Road to provide 11-foot lanes and 5-foot shoulders but that work is not presently scheduled for design or construction.

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Manual, DelDOT will require dedication of right-of-way along the site's frontage on Camp Arrowhead Road. By this regulation, this dedication is to provide a minimum of 30 feet of right-of-way from the physical centerline. The following right-of-way dedication note is required, "**An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat.**"
- In accordance with Section 3.2.5.1.2 of the Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby established for the State of Delaware, as per this plat.**"

- Referring to Section 3.4.2.1 of the Manual, the following items, among other things, are required on the Record Plan:
 - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.
 - Depiction of all existing entrances within 300 feet of the entrance on Camp Arrowhead Road.
 - Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted.
- Section 3.5 of the Manual provides DelDOT's requirements with regard to connectivity. The requirements in Sections 3.5.1 through 3.5.3 shall be followed for all development projects having access to state roads or proposing DelDOT maintained public streets for subdivisions. In response to the discussion at the PLUS meeting, DelDOT recommends that the plan be modified to provide a pedestrian path to Cove Court from the cul-de-sac at the end of Malaclemys Drive if a vehicular connection cannot be provided as discussed above.
- Section 3.5.4.2 of the Manual addresses requirements for Shared Use Paths (SUP) and sidewalks. For projects in Level 3 and 4 Investment Areas, installation of paths or sidewalks along the frontage on State-maintained roads is generally required only where there is an existing path or sidewalk nearby. DelDOT does not anticipate requiring the developer to build a sidewalk or path on Camp Arrowhead Road.
- In accordance with Section 3.8 of the Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 20 feet from the ultimate State right-of-way along Camp Arrowhead Road.
- In accordance with Section 5.2.9 of the Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrances and how long those lanes should be. The worksheet can be found at <http://www.deldot.gov/Business/subdivisions/index.shtml>.
- In accordance with Section 5.4 of the Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at <http://www.deldot.gov/Business/subdivisions/index.shtml>.
- In accordance with Section 5.14 of the Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

Department of Natural Resources and Environmental Control – Beth Krumrine 735-3480

Concerns Identified Within the Development Footprint

Wetlands

Maps from the Statewide Wetlands Mapping Project indicate the presence of freshwater emergent wetlands on the western central portion of the site and estuarine and marine wetlands in the southeastern corner. According to the application, there are 3.87 acres of tidal and 8.06 acres of non-tidal wetlands present on the site. The application indicates that the wetlands have been delineated, and the Army Corps of Engineers sign off is pending. Two planned wetland road crossings are anticipated to fill approximately 0.22 acres of non-tidal wetlands.

Requirements (Tidal and State Subaqueous Lands):

- It appears that no dredge or fill of state regulated tidal wetlands and subaqueous lands is proposed. If plans change and dredge or fill of these lands is proposed, a state Wetlands or Subaqueous Lands permit is required. An application for a permit must be submitted to the DNREC Wetlands and Subaqueous Lands Section for review and approval. To apply for a wetland permit online, please visit their website:
<https://dnrec.alpha.delaware.gov/water/wetlands-subaqueous/permits/>

Contact: DNREC Wetlands and Subaqueous Lands Section at (302) 739-9943.

Website: <https://dnrec.alpha.delaware.gov/water/wetlands-subaqueous/>

Requirements (Non-tidal/Federal):

- Permits or authorizations from the U.S. Army Corps of Engineers are required for fill of non-tidal wetlands, as proposed here. In certain cases, permits from the US Army Corps of Engineers require additional certifications from DNREC (Coastal Zone Federal Consistency Certification and 401 Water Quality Certification) Continue to work with the U.S. Army Corps of Engineers to determine the appropriate permitting requirements.

Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.

Vegetated Buffer Zones

Site plans show a 50-foot vegetated buffer zone along state-regulated tidal wetlands and a 25-foot wetland setback for federally-regulated non-tidal wetlands. However, the proposed cul-de-sac on the eastern portion of the site abuts the estuarine wetlands, and lots lie within the 25-foot setback in areas, specifically lots 11-19. Wetlands can expand outside their existing boundaries during seasonal and localized wet weather and a wetland setback allows for the expansion during these times. If lots 11-19 remain within the 25-foot setback, future homeowners can potentially experience wet and possibly seasonably unusable backyards. In addition, setbacks contained

within lot lines will be difficult to preserve over time as homeowners often are unaware of the setback requirements or ignore them.

Vegetated buffer zones placed adjacent to waterways and wetlands help improve water quality by reducing sediment and pollutants loads. They also provide valuable habitat and can help prevent encroachment of human activities into ecologically sensitive areas. Vegetated buffers are not equivalent to setbacks, as residential lots, walkways, and stormwater management facilities should not be contained within the vegetated buffer zone.

Requirements:

- The applicant must comply with minimum vegetated buffer widths as identified within county and municipal codes.

Special Flood Hazard Area

According to the newest Flood Insurance Rate Maps (FIRM), much of this parcel (the eastern half and a portion of the western half) is situated within a Special Flood Hazard Area, specifically within the mapped 100-year floodplain (1% annual chance of flooding). The Special Flood Hazard Area identified on the site lies within zone AE. Lots and structures are proposed within these identified areas. In lands contained within the 100-year floodplain, the National Flood Insurance Program's floodplain management regulations must be enforced through the local floodplain ordinance, which can have higher standards. Homeowners with mortgages may be required to purchase flood insurance.

Requirements:

- The applicant must comply with the local floodplain ordinance and regulations applicable to development or construction within the 100-year floodplain. In determining the boundary of the floodplain, use the most recent FIRM maps available, which can be found at <https://maps.dnrec.delaware.gov/floodplanning/default.html>.

Natural Areas

All of the parcel is located within the Angola Neck Natural Area. Natural Areas contain lands of statewide significance identified by the Natural Areas Advisory Council as the highest quality and most important natural lands remaining in Delaware.

Requirements:

- Local codes and ordinances may apply to protect areas designated as Natural Areas. Please consult with local planning agencies to see how local codes and ordinances may impact the proposed development of this site.

Stormwater Management

This project/site has met the minimum threshold of 5000 square feet of land disturbing activity under the DNREC Sediment and Stormwater Program.

Requirements:

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.
- Additionally, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically (<https://apps.dnrec.state.de.us/eNOI/default.aspx>) to the DNREC Division of Watershed Stewardship, along with the \$195 fee.
- Schedule a project application meeting with the appropriate agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

Plan review agency contact:

Sussex Conservation District at (302) 856-2105 or (302) 856-7219.

Website: <https://www.sussexconservation.org/>

General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.

Website: <https://dnrec.alpha.delaware.gov/watershed-stewardship/sediment-stormwater/>

Hydrologic Soils Group

Hydrologic Soil Group A/D (poorly drained) soils have been identified on much of the western portion and the southeastern corner of the site. These soil types are typically not conducive to utilizing infiltration stormwater Best Management Practices such as bioretention and infiltration basins, which must meet minimum infiltration requirements.

Requirements:

- Any stormwater Best Management Practices that propose the use of infiltration or natural recharge shall include a soils investigation.

Contact: DNREC Sediment and Stormwater Program at (302) 739-9921.

E-mail: DNREC.Stormwater@delaware.gov.

Website: <https://dnrec.alpha.delaware.gov/watershed-stewardship/sediment-stormwater/>

Water Quality (Pollution Control Strategies)

Pollution Control Strategies have been developed for the following watersheds in Delaware: Christina, Appoquinimink, Broadkill, Mispillion and Cedar Creek, Murderkill, Saint Jones, Inland Bays (Rehoboth Bay, Indian River Bay, and Little Assawoman Bay), Nanticoke, and Upper Chesapeake. Such strategies were created because surface water failed to meet water quality standards for nutrients and sediment.

Requirements:

- This site lies within the Rehoboth Bay Watershed. Consult with the appropriate plan review agency to determine if stricter stormwater management standards may apply for development projects in this area.

Contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219.

Website: <https://www.sussexconservation.org/>

Wildlife Displacement

Development of this site is anticipated to displace local wildlife. Wildlife displaced by encroaching development may become a nuisance for homeowners.

Requirements:

- Future residents are not permitted to discharge firearms within 100 yards (approximately 300 feet) of any occupied dwelling or building to hunt or remove nuisance wildlife.

Nutrient Management Plan

This project proposes open space of 16.14 acres, exceeding the threshold of 10 acres for nutrient management.

Requirements:

- A nutrient management plan is required for all persons or entities who apply nutrients to lands or areas of open space of 10 acres or more.

Contact: Delaware Department of Agriculture's Nutrient Management Program at (302) 698-4558. Website: <https://agriculture.delaware.gov/nutrient-management/>

Wastewater Permitting – Large Systems

Sussex County holds existing permits with the DNREC Groundwater Discharges Section's Large Systems Branch.

Requirements:

- It is the responsibility of the permittee (Sussex County) to notify the Large Systems Branch if the capacity of the rate of wastewater disposal is to be updated.

Contact: DNREC Large Systems Branch at (302) 739-9948.

Website: <https://dnrec.alpha.delaware.gov/water/groundwater/>

State Historic Preservation Office – Contact Carlton Hall 736-7400

- The Delaware State Historic Preservation Office does not recommend development in Level 4 areas. There are no known archaeological sites or known National Register listed or eligible properties on the parcel.
- Prehistoric archaeological potential is moderate. Parcel is almost perfectly half poorly drained soils, half well drained soils, and the well-drained soils are on a slight rise towards the middle according to topo maps near Dogwood Lane.
- Historic archaeological potential is low. While there does appear to be a road there that leads to Shell Landing Cove in the mid-20th century, there is no indication that historic resources have been on the parcel prior to or after.
- If any project or development proceeds, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law (Del. C. Title 7, Ch. 54).
- If there is federal involvement, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential cultural or historic resources. For further information or additional details pertaining to the Section 106 process and the Advisory Council's role; please review the Advisory Council's website at the following: www.achp.gov

Delaware State Fire Marshall's Office – Contact Duane Fox 259-7037

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):

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. (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.

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 Camp Arrowhead 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.

Gas Piping and System Information:

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

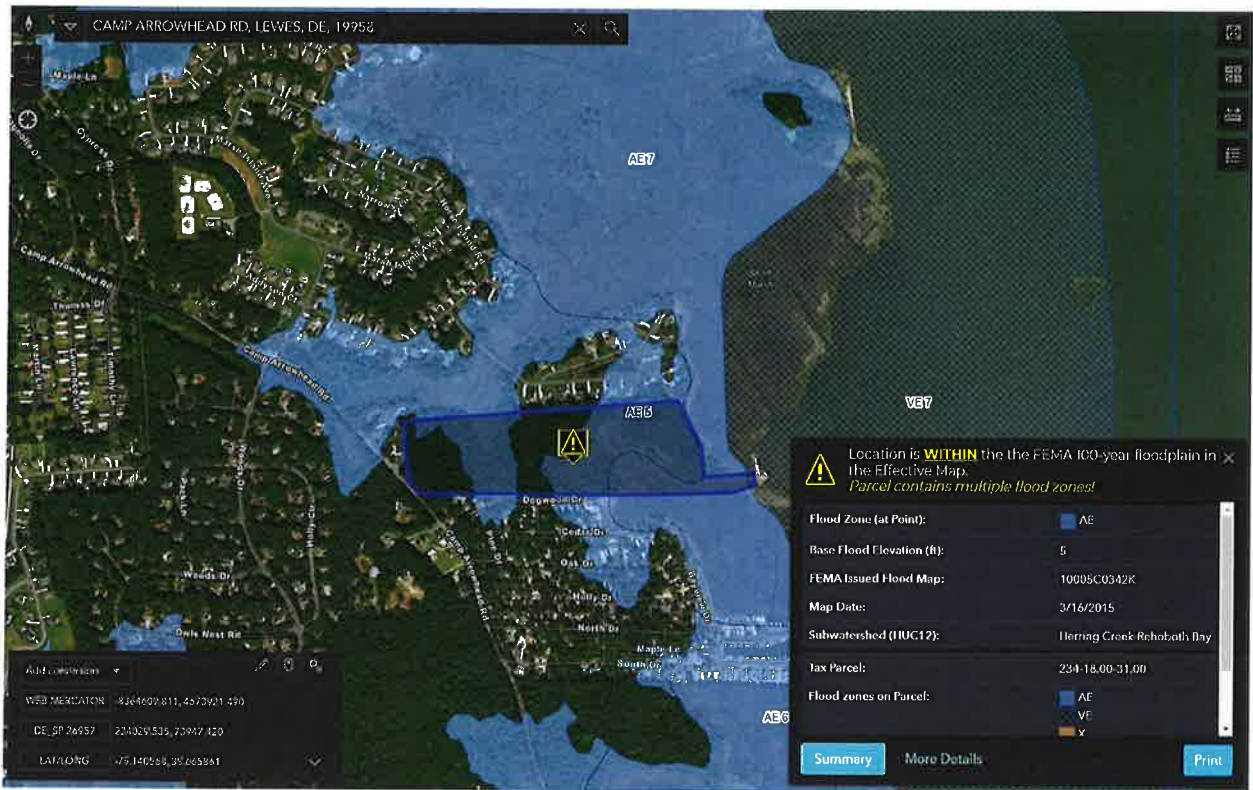
Required Notes:

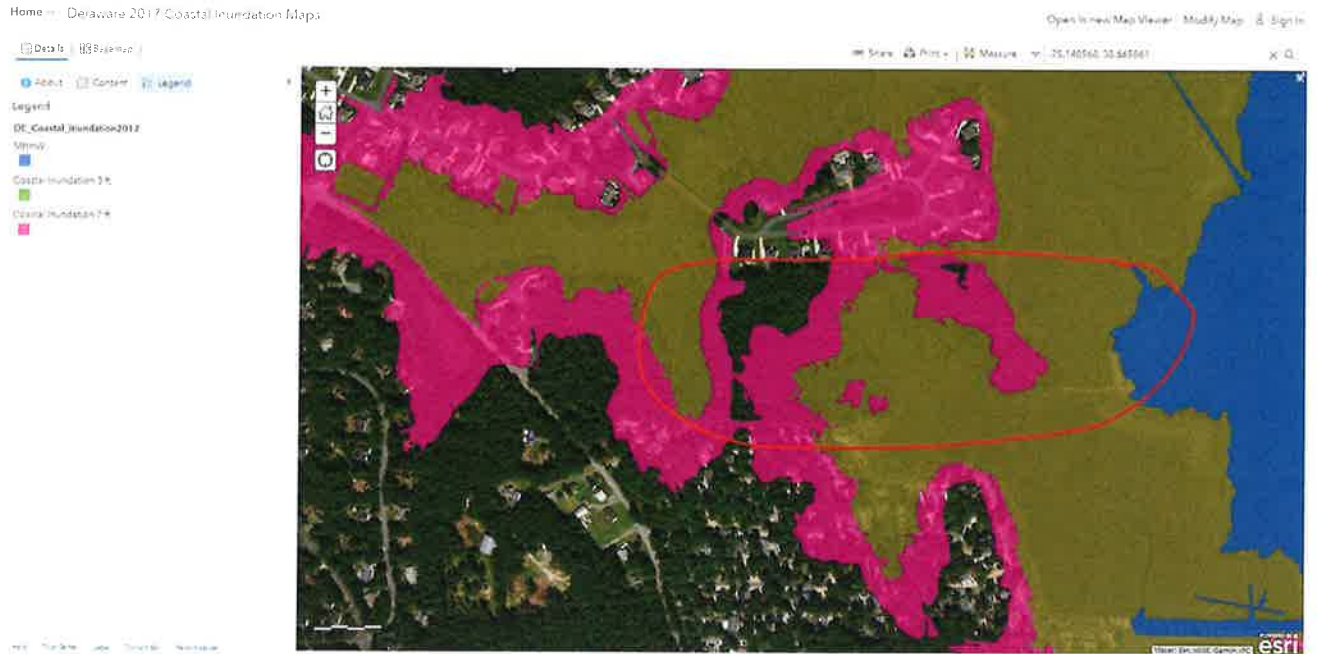
- Provide a note on the final plans submitted for review to read “All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)

- Note indicating if building(s) is/are to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Road Names, even for County Roads

Delaware Emergency Management Agency – Contact Philip Cane 659-2325

- More than 50% of the parcel is within FEMA's 100-year flood plain in zone AE, with other Zones identified as X and VE originating from the Herring Creek-Rehoboth Bay subwatershed and the Rehoboth Bay watershed as updated on March 16, 2015. The identified flood plain zones have a BFE between 5-7 feet. Further, more than 80% of the parcel falls within a flood inundation zone, half of which is at 3 feet, while the remainder is at 7 feet. DEMA cautions reliance on these figures as they are based on 2015 data and may currently be greater than estimated. Unless all homes are constructed on stilts with the first level elevated at least 7 feet in the air, DEMA **does not** agree with or will sponsor any residential construction on this parcel. Though the application does state there is open space dedicated to active and passive recreation, stormwater management, buffer zones, and non-tidal wetlands, based on the maps and the provided application illustrations, several properties will still be within the flood/inundation zones. 2018 QAP does not have complete data on the area this project is located in. However, it does border an area labeled as an Area of Opportunity. The region has a homeownership rate of approximately 92.5%, a poverty ratio of 12 to 1, with approximately 33.3% of that census block's population at the age of 65 or older.





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,

David L. Edgell, AICP
Director, Office of State Planning Coordination

CC: Sussex County