Hargrave, Julie

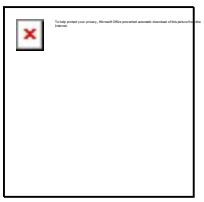
From: Katie Muether Brown <kmbrown@pinebarrens.org>
Sent: Monday, December 14, 2020 3:53 PM
To: PB Info; Carrie.Gallagher@dec.ny.gov; aguiar@townofriverheadny.gov; supervisor@townofriverheadny.gov; Edward P. Romaine; JSchneiderman@southamptontownny.gov; Dorian.Dale@suffolkcountyny.gov; andrew.freleng@suffolkcountyny.gov; Sarah.lansdale@suffolkcountyny.gov; janet.longo@suffolkcountyny.gov; mccormick@townofriverheadny.gov; epines@brookhavenny.gov; mshea@southamptontownny.gov; JScherer@southamptontownny.gov
Cc: PB Pavacic, John; Jakobsen, Judith; Hargrave, Julie
Subject: Lewis Road PRD Written Comments
Attachments: Lewis Road Non-Compliance to PB Act and CLUP.pdf

Please find the Long Island Pine Barrens Society's written comments on the Lewis Road PRD attached. We ask that you please include these comments as part of the record on the project.

The attached document is a comprehensive list of the many standards and guidelines of which the Lewis Road PRD fails to comply with. This list points to specific documentation (in the form of exhibits) to prove these claims. All exhibits can be found here: https://www.dropbox.com/sh/uxbhazgk8w0hkmh/AABaqFdzWvOqH6Gg0VB8ky6Ua?dl=0

Thank you,

Katie Muether Brown
Deputy Director | Long Island Pine Barrens Society
547 East Main Street
Riverhead, NY 11901
631-369-3300



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December 14, 2020

MEMO COVER LETTER
RE: Lewis Road PRD

The Honorable Carrie Meek Gallagher
Chairwoman, New York State Pine Barrens Commission
624 Old Riverhead Road
Westhampton Beach, NY 11978

Dear Chairwoman Gallagher & Commissioners:

In the following pages, the Long Island Pine Barrens Society outlines the standards and guidelines by which the Lewis Road PRD does not comply. We are asking that each Commission member review each of the issues outlined. Failure to work though this list and address these concerns is a failure in your responsibility as a Commissioner.

The applicant has failed to address the issues outlined in this memo. Therefore, it is your duty as Commissioners to assign Commission Staff to work through this list and make *specific* recommendations as to whether or not this project complies.

We believe that the Pine Barrens Commission is being undermined by this application. Thus far, Commissioners have appeared indifferent as to whether these matters are addressed. It is your role to determine whether or not this project complies with every single standard and guideline of the Pine Barrens Act and the Comprehensive Land Use Plan (CLUP).

The Board of Directors of the Pine Barrens Society will be prepared to bring legal action against the individual members of the Pine Barrens Commission, if they do not satisfy their role as Commissioners. The concerns outlined will also be brought to the attention of the media ahead of the January 2021 meeting.

If Commissioners conducted a thorough and complete analysis of each standard and guideline, they would be able to come to no other conclusion than that this project does not comply. You must do your job.

Respectfully,

Richard Amper, Executive Director
Long Island Pine Barrens Society

LONG ISLAND
PINE BARRENS
SOCIETY

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December 14, 2020

Re: Lewis Road PRD

The Honorable Carrie Meek Gallagher
Chairwoman
New York State Pine Barrens Commission
624 Old Riverhead Road
Westhampton Beach, NY 11978

Dear Chairwoman Gallagher & Commissioners:

Over the course of the past year, scientists, environmentalists, elected officials, and community leaders have continuously testified before the Commission to provide expert testimony on the many ways that the Lewis Road Planned Residential Development (PRD) fails to comply with the Pine Barrens Act. In addition, the Pine Barrens Commission staff has raised countless questions about the project, many of which have been left unanswered by the developer.

In the summary below, we outline the many standards and guidelines that the Lewis Road PRD fails to comply with, citing the specific documentation to prove these claims. Based on the boundless evidence before you, Commissioners have no choice but to deny the Lewis Road PRD project as it fails to meet the standards and guidelines of the Pine Barrens Act and its Comprehensive Land Use Plan (CLUP).

The Lewis Road Planned Residential District (PRD) fails to conform to the Pine Barrens Act and the Comprehensive Land Use Plan (CLUP) in the following ways:

- **Guideline 5.3.3.1.1 Suffolk County Sanitary Code Article 6 Compliance**
  - Without approval from Suffolk County Department of Health Services, conformance to this guideline cannot be demonstrated.

- **Guideline 5.3.3.1.2 Sewage Treatment Plant Discharge**
  - Without approval from Suffolk County Department of Health Services, conformance to this guideline cannot be demonstrated.
  - As per the 11/18/20 Commission Staff Report, a "Notice of Incomplete Application" has not been addressed. (Exhibit 1, Page)
- **Guideline 5.3.3.1.3 Nitrate-nitrogen goal**
  - The applicant has failed to demonstrate compliance with this guideline.
  - The applicant has removed nearly all nitrogen mitigation measures that previously existed in the "Hills PDD" application. These measures were deemed necessary to curtail the expected large nitrogen input that this project will have on groundwater and nearby surface waters. Please see Exhibit 2 – Expert testimony by Dr. Christopher Gobler from the 8/19/20 public hearing; Exhibit 3, Pages LIPBS 1-2, 4-5, and 6 – Pine Barrens Society Written Comment 2/19/20; Exhibit 4, Pages 9-12 – Pine Barrens Society Written Comment 8/19/20; Exhibit 5, Pages 5-6 – Group for the East End Written Comment 2/19/20; and Exhibit 6, Page 1 – Southampton Town Civic Coalition Written Comment 2/19/20.
  - In addition, serious questions have been raised about the specific nitrogen calculations used – Please see Exhibits 7 and 8 – Reports written by Ron Nappi.
- **Guideline 5.3.3.3.2 Private well protection**
  - Without NYSDEC approval of private wells, conformance to this guideline cannot be demonstrated.
- **Guideline 5.3.3.5.1 Stormwater Runoff**
  - Without approval of a Stormwater Pollution Prevention Plan (SWPP) by the Town and NYSDEC, the Commission is unable to determine if this project complies with this guideline.
- **Guideline 5.3.3.5.2 Natural recharge and drainage**
  - As per the 11/18/20 Commission Staff Report, a grading plan showing that the Drainage Reserve Areas (DRA) is consistent with other plans should be submitted in order to prove compliance (Exhibit 1, Page 3)
  - The area of each DRA and the total area must be submitted in order to prove compliance. (Exhibit 1, Page 3)
  - Without this information, the project does not comply with this guideline.
- **Guideline 5.3.3.5.3 Ponds**
  - As per the 11/18/20 Commission Staff Report, the total area of each pond and the total area including the pond identified as #5 in the Master Plan with Grading, as well as the unmarked pond to the east of it, must be identified in order to prove compliance. (Exhibit 1, Page 3)
  - Without this information, the project does not comply with this guideline.

- **Guideline 5.3.3.5.4 Natural topography in lieu of recharge basins and Guideline 5.3.3.5.5 Soil erosion and stormwater runoff**
  - Without approval of a Stormwater Pollution Prevention Plan (SWPP) by the Town and NYSDEC, the Commission is unable to determine if this project complies with these guidelines.
- **Guideline 5.3.3.6.2 Unfragmented Open Space**
  - As per the 11/18/20 Commission Staff Report, the many types of "open space" identified by the applicant, have not been quantified. In fact, the Commission goes as far as placing a footnote in their report stating "The term open space is used by the Applicant and its use does not imply that the open space meets the Plan's requirement." This seems to imply that the applicant use of the term "open space" is not necessarily consistent with the CLUP. (Exhibit 1, Page 1)
  - The Commission outlines countless areas present in the Master Plan that are not properly distinguished and quantified. (Exhibit 1, Pages 3-4)
  - The Pine Barrens Society has frequently expressed its concern over the potential for the fragmentation of open space. See Exhibit 3, Pages LIPBS 8-9; and Exhibit 4, Pages 4-9.
  - In addition, New York State Assemblyman Steve Englebright has expressed concern about the fragmentation of open space expected by this project – see Exhibit 9, Pages 74-77.
  - Without these areas properly outlined and quantified, the project fails to comply with this guideline.
- **Guideline 5.3.3.7.1 Special species and ecological communities**
  - The latest site plan for this project places an extensive wellfield development in the Critical Resource Area of the Pine Barrens, an area intended to protect the habitat of the threatened Coastal Buckmoth. In response to this, the applicant references a 2009 study of the Buckmoth population in the area. This is inadequate. The landscape has drastically changed within the last 11 years and the population should be re-studied. (Exhibit 4, Page 4)
  - Without a recent proper study of the Coastal Buckmoth conducted, the project fails to comply with this guideline.
- **Guideline 5.3.3.8.1 Clearing envelopes**
  - The proposed project plans to regrade 6.72 acres of naturally-vegetated steep slopes at 10% grade or greater. This includes 4.43 acres of slopes 10-15% grade and 2.29 acres on slopes of >15% grade.
  - The CLUP requires that development projects avoid grading and development on steep slopes.

- **Guideline 5.3.3.8.4 Erosion and sediment control plans**
  - The proposed project plans to regrade 6.72 acres of naturally-vegetated steep slopes at 10% grade or greater. This includes 4.43 acres of slopes 10-15% grade and 2.29 acres on slopes of >15% grade.
  - The CLUP requires that grading and development on slopes be avoided.
  - Because of this, a Town and NYSDEC Stormwater Pollution Prevention Plan (SWPPP) are required in order to determine compliance with this guideline.
  - As these plans are still pending, the Commission is unable to determine if this project will comply with this guideline.
- **Guideline 5.3.3.8.5 Placement of roadways**
  - 6.72 acres of development will occur on slopes 10% grade of greater.
  - The CLUP requires that development projects avoid grading and development on steep slopes.
  - Without the approval of a Town and NYSDEC SWPPP, the Commission is unable to determine if this project will comply with this guideline.
- **Guideline 5.3.3.8.6 Retaining walls and control structures**
  - According to the 11/18/20 Commission Staff Report, absent a Town SWPPP, conformance to this guideline cannot be determined (Exhibit 1, Page 7)
- **Guideline 5.3.3.9.2 Clustering**
  - The 11/18/20 Commission Staff Report asks "Is this project clustered to the maximum extent?" (Exhibit 1, Page 7). The answer is that it is not. There are alternative uses to the property site that cluster the project further and have a lower environmental impact – Please see Exhibit 3, Pages LIPBS 11-12; Exhibit 4, Pages 4-7; and Exhibit 10, Pages 3-4.
- **Guideline 5.3.3.11.1 Cultural resource consideration & Guideline 5.3.3.11.3 Protection of scenic and recreational resources**
  - According to the 11/18/20 Commission Staff Report, the project site is expected to be visible from public trails and public lands, particularly where a limited narrow buffer remains on the east side of the site. The Commission outlines several areas where the site is expected to visible from the public. (Exhibit 1, Page 5)
  - In addition, community and environmental advocates have expressed their concerns about the impact this project will have on the local community. The hearing records for this project is packed with these concerns.
  - Since the project fails to provide minimal buffers to provide sufficient protection of the trails and other cultural resources, this project does not comply with this guideline.

- **Guideline 5.3.3.11.4 Roadside design and management**
  - According to the 11/18/20 Commission Staff Report, the project will be visible from public view (Exhibit 1, Page 5)
  - Facilities, roads, and the sewage treatment will be close to nearby homes without appropriate buffers.
  - Community and environmental advocates have expressed their concerns about the impact this project will have on the local community. The hearing records for this project is packed with these concerns.
  - Since this project fails to provide minimal buffers, this project fails to comply with this guideline.
- **Guideline 5.3.3.12.1 Commercial and industrial compliance with Suffolk County Sanitary Code**
  - Without final approval from Suffolk County Department of Health Services, compliance to this guideline cannot be determined.
  - Assemblyman Steve Englebright expressed extreme concern over the placement of fuel storage tanks within the fire-dependent Pine Barrens ecosystem (Exhibit 10, Page 78-80)

Please see the link in our accompanied email in order to access the exhibits.

Since the applicant has consistently failed to meet the standards and guidelines of the Pine Barrens Act and Comprehensive Land Use Plan, we urge you to please protect the integrity of the Pine Barrens and the Pine Barrens Act and vote down this project, once and for all.

Submitted By:

Richard Amper
Executive Director
Long Island Pine Barrens Society

Katie Muether Brown
Deputy Director
Long Island Pine Barrens Society

DRAFT

Draft Staff Report Summary
November 18, 2020

Application:	Lewis Road Subdivision Planned Development District Assertion of Jurisdiction Application
Project:	118 seasonal single-family and 12 year-round workforce housing residences, 18-hole private golf course for residents, clubhouse, pools, other accessory uses, recreational amenities, and a Sewage Treatment Plant
Project Site Area:	608.45 acres, 176 tax parcels 468 acres in the CGA, 140 acres in the Core The Applicant defined areas of the Project Site with the names: Hills South 340.91 acres; Hills North 86.92 acres Kracke 61.26 acres; Parlato 120.40 acres
Current Zoning:	Country Residence 200 (200,000 square foot acre minimum lot area)
Clearing Limit:	171.84 acres (28.24% of the Project Site)
Open Space[1]:	437 acres including 297 acres in the CGA, 140 acres in the Core (Hills North, Hills South and Parlato, public and private open space

A. Project Status

The Applicant submitted revised plans and a narrative on October 9, 2020 to address Plan Standards and Guidelines including those regulating unfragmented open space, clearing, and development of steep slopes. These plans include:

- Master Plan with Grading dated October 10, 2020
- Master Plan with Slope Analysis dated October 10, 2020
- Slope Map dated October 6, 2020
- Clearing Plan dated October 6, 2020

The submission states that no substantive changes to the plans have been made other than minor adjustments requested by Southampton Town to improve the golf course and overall design, to increase avoidance of steep slope areas, to ensure the acreage of clearing is consistent with the Vegetation Clearance Limit Standard, to verify fertilizer dependent acreage and to enhance contiguous open space to conform with the Unfragmented Open Space Standard. Revisions were

[1] The term open space is as used by the Applicant and its use does not imply that the open space meets the Plan's requirement

made to Applicant's June 30, 2020 Master Plan, July 1, 2020 Slope Map and July 1, 2020 Clearing Plan to:

- reduce impacts on steep slopes by utilizing natural topography and minimizing disturbance to existing grade
- consolidate areas of disturbance such as carry areas and drainage reserve areas, and
- maximize contiguous open space outside of development areas (i.e., improve unfragmented open space).

B. Assertion of Jurisdiction Project Timeline

The Commission asserted jurisdiction on The Hills at Southampton Planned Development District on October 21, 2015. The Hills is/was related to and/or a predecessor of the Lewis Road Project. The Commission on May 15, 2019 asserted its jurisdiction on the Lewis Road Project. Commission events in the Lewis Road assertion include:

- December 23, 2019 received application
- January 15, 2020 scheduled public hearing for February 19, 2020
- February 19, 2020 public hearing
- Meetings of March 18, April 15, and May 20, 2020 extensions of the decision deadline occurred and information was received during the pandemic*
- June 3, 2020 submission
- June 17, 2020 scheduled public hearing for July 15, 2020
- July 1, 2020 submission
- July 15, 2020 scheduled public hearing for August 19, 2020
- August 19, 2020 public hearing
- September 16, 2020 decision deadline; extension granted to January 20, 2021
- October 21, 2020 scheduled public hearing
- January 20, 2021 decision deadline

Six requests for extension of the decision deadline have been received from the Applicant with the last dated September 17, 2020.

C. State Environmental Quality Review Act (SEQRA)

- The Southampton Town Planning Board adopted a Findings Statement in support of the Lewis Road Project on October 24, 2019.
- The Commission is an Involved Agency and must prepare a Findings Statement

D. Conformance with Plan Standards and Guidelines

The Commission has transmitted five letters, staff reports, and resolutions on the Lewis Road Project (dated 6/19/19, 10/16/19, 6/17/20, 2/19/20, and 8/19/20) addressing the Project's conformance with the Plan.

As an Assertion Application, the Project is subject to conformance with Standards and Guidelines of the Plan. Conformance questions were noted in the August 19 Staff Report and during the hearing

Applicant's October 9th submission addresses the following Standards and Guidelines. Staff annotations are included for each Standard and Guideline addressed by the Applicant See also the attachment for a complete list of the Standards and Guidelines of the Plan and preliminary conclusions.

Guideline 5.3.3.5.2 Natural recharge and drainage

- Drainage Reserve Areas (DRAs) have been reduced and consolidated. A grading plan showing the DRAs that is consistent with other plans should be submitted.
- Provide area of each DRA and the total area.
- Prior plan area was 11.5 acres.

Guideline 5.3.3.5.3 Ponds

- Provide the area of each pond and the total area including the pond identified as #5 in the Master Plan with Grading and the unmarked pond to the east of it.
- Prior plan pond area was 3.3 acres.

Standard 5.3.3.6.2 Unfragmented open space

The Project proposes three types of open space, one is north of Sunrise Highway and two are south of Sunrise Highway. The areas are as follows:

North of Sunrise Highway:

- Hills North (Contiguous block to be dedicated to Southampton Town)
- Parlato north of Sunrise Highway

South of Sunrise Highway:

- Parlato South of Sunrise Highway (to be dedicated to Southampton Town)

- Hills South, south of Sunrise Highway. This portion includes blocks of open space and corridors of trees

Each type and area of open space should be quantified.

The Master Plan with Grading dated October 10, 2020, identifies “open space all outside development” To determine whether these areas conform with the Standard, the Applicant must further distinguish and quantify them. The areas are:

- east and west of the access road and other facilities noted as 9 through 12 in the map key
- in the area south of hole 10
- in the area west of hole 11
- in the area north of hole 12
- in the area north of hole 12 and 14
- in the polygon between holes 14, 15 and 16
- on the east side of holes 17, 2, 3 and 4
- south of hole 5a and the residences in that area
- south of holes 6 and 7
- west of holes 7, 8 and 9

- Applicant must quantify the amount of area identified in light blue color in the Plan titled “Master Plan with Grading,” which appears to show areas to remain natural within the development and will not be cleared but are not counted in the total open space.

- Applicant must quantify the area identified in the key and in the legend in the Plan titled “Master Plan with Grading” that are consistent with the clearing and other plans.

Guideline 5.3.3.8.1 Clearing envelopes

- Regrading will occur on 6.72 acres of naturally vegetated steep slopes 10% grade and greater, as per Table 2, Summary of Existing Slope Values, dated October 9, 2020. This includes 4.43 acres on slopes 10 to 15% grade and 2.29 acres on slopes >15% grade.

- Prior plan regraded 17.31 acres of slopes 10% grade and greater including 11.08 acres on slopes 10 to 15% grade and 6.23 acres on slopes >15% grade.

Guideline 5.3.3.8.4 Erosion and sediment control plans

- 6.72 acres of development on steep slopes 10% grade and greater including 2.29 acres on slopes >15% grade.
- Town and DEC SWPPP pending.

Guideline 5.3.3.8.5 Placement of roadways

- Town and DEC SWPPP pending.
- 6.72 acres of development on slopes 10% grade and greater.

Guideline 5.3.3.11.1 Cultural resource consideration

- The site will be visible from public trails and public lands particularly where a limited narrow buffer remains on the east side of the site. Traveling north to south, east of hole 17, 2, 3, 4 and the housings and golf course facilities in the vicinity of holes 5 and 6, as well as on the west side, west of holes 10, 11 and 12 where the Project is expected to be visible from public view.
- Do the minimal buffers provide sufficient protection of the trails?

Guideline 5.3.3.11.3 Protection of scenic and recreational resources

- Minimal width buffers offer limited screening of the Project from Lewis Road on the west side of the Project Site in the vicinity of development of the facilities as per the Master Plan with Grading including the access road, facilities 9 through 12, holes 10 and 11 and on the east side adjacent to public lands and recreational trails where narrow strips of vegetation may remain including east of holes 17 and 2 through 4 and on the south side of holes 6 and 7.
- Do the minimal buffers adequately screen the Project?

Guideline 5.3.3.11.4 Roadside design and management

The Project will be visible from public view including where clearing will occur to develop the main access road from Lewis Road, in the area on the south side of holes 10 and 11 and on the west side of the facilities including the STP and infrastructure including roads where the Master Plan with Grading identifies facilities 9 through 12.

Attachment

Standards and Guidelines Review Summary

Yellow highlighted items are the same as in the August 19, 2020 Staff Report Project Summary that need the Commission's determination of conformance.

Comprehensive Land Use Plan Standard or Guideline	Review
Standard 5.3.3.1.1 Suffolk County Sanitary Code Article 6 compliance	Pending Suffolk County Department of Health Services (SCDHS) approval.
Standard 5.3.3.1.2 Sewage treatment plant discharge	Pending SCDHS approval. See SCDHS "Notice of Incomplete Application – Sewage Treatment Plan (STP)" dated 12/20/19, ref # C09-19-0017.
Guideline 5.3.3.1.3 Nitrate-nitrogen goal	Does the Commission have any questions on conformance with this Guidelines or require any additional information to determine conformance?
Standard 5.3.3.2.1 Significant discharges and public supply well locations	Existing water supply well fields at Spinney Road and Malloy Drive. New four acre public water supply well field will be built on Parlato.
Guideline 5.3.3.3.2 Private well protection	Pending NYSDEC approval of private wells. See NYSDEC Request for Additional Information dated 1/9/20.
Standard 5.3.3.4.1 through 5.3.3.4.4 Wetlands	Not applicable, no freshwater wetland habitat present
Standard 5.3.3.5.1 Stormwater Runoff	Town and DEC Stormwater Pollution Prevention Plan (SWPPP) pending. See Town Engineer Checklist and comments dated 1/22/20.
Guideline 5.3.3.5.2 Natural recharge and drainage	Drainage Reserve Areas (DRAs) reduced and consolidated. Need area of each DRA and total area. Prior plan total DRA was 11.5 acres.
Guideline 5.3.3.5.3 Ponds	Provide area of each pond and total area of ponds Prior plan total pond area was 3.3 acres.
Guideline 5.3.3.5.4 Natural topography in lieu of recharge basins	Town and DEC SWPPP pending.
Guideline 5.3.3.5.5 Soil erosion and stormwater runoff	Town and DEC SWPPP pending.
Standard 5.3.3.6.1 Vegetation Clearance Limits	Conforms with Plan limit of 171.93 acres (28.24%). Clarify proposed clearing/development amount: 161.81 acres, as per narrative dated 10/9/20, or 171.84 acres, as per Clearing Plan dated 10/6/20 Town clearing limit is stricter at 152 acres or 25%. Does the Applicant seek a Town clearing limit waiver? If the project can achieve a 25% limit, identify where additional natural vegetation will be protected to achieve conformance with the Town code standard for clearing.
Standard 5.3.3.6.2 Unfragmented open space	The Project proposes three types of open space: North of Sunrise Highway: • Hills North (Contiguous block to be dedicated to Southampton Town) • Parlato, north of Sunrise Highway Two types south of Sunrise Highway:

	• Parlato, south of Sunrise Highway (to be dedicated to Southampton Town) • Hills South, south of Sunrise Highway. This portion includes blocks of open space and corridors of trees. Areas of open space should be distinguished and quantified.
Standard 5.3.3.6.3 Fertilizer-dependent vegetation limit	Conforms with 15% maximum limit.
Standard 5.3.3.6.4 Native Plantings	Development design shall consider native planting suggestions.
Standard 5.3.3.7.1 Special species and ecological communities	Avoid clearing from March 1 to November 30 to protect habitat of Federal and State-listed Threatened species Northern Long Eared Bat.
Guideline 5.3.3.8.1 Clearing envelopes	145.18 acres will be developed on vegetated slopes less than 10% grade, as per Table 2 in the October 9th submission. 6.72 acres of development on naturally vegetated steep slopes 10% grade and greater, as per Table 2 in the October 9th submission. This represents 1.1% of the 608.45-acre Project Site. Prior plan impacted 17.31 acres of steep slopes 10% grade and greater
Guideline 5.3.3.8.2 Stabilization and erosion control	Town and DEC SWPPP pending.
Guideline 5.3.3.8.3 Slope analysis	Plan submitted showing slopes 0-10%,10-15% and 15+%.
Guideline 5.3.3.8.4 Erosion and sediment control plans	Town and DEC SWPPP pending. 6.72 acres of development on slopes 10% grade and greater.
Guideline 5.3.3.8.5 Placement of roadways	6.72 acres of development on slopes 10% grade and greater Town and DEC SWPPP pending.
Guideline 5.3.3.8.6 Retaining walls and control structures	Retaining walls may be necessary, cannot be confirmed unless and until the Town approves the SWPPP. Retaining wall details to come.
Standard 5.3.3.9.1 Receiving entity for open space dedications	Private covenants on 241 acres (Hills South and Kracke). Dedications on 206 acres (Hills North and Parlato).
Guideline 5.3.3.9.2 Clustering	Is the Project clustered to the maximum extent?
Guideline 5.3.3.10.1 Best Management Practices	No agricultural use(s), not applicable.
Guideline 5.3.3.11.1 Cultural resource consideration	Do the minimal buffers provide sufficient protection of the trails?
Guideline 5.3.3.11.2 Inclusion of cultural resources in applications	Southampton Town finds no impact.
Guideline 5.3.3.11.3 Protection of scenic and recreational resources	Do the minimal buffers adequately screen the Project?
Guideline 5.3.3.11.4 Roadside design and management	The Project will be visible from public view. Applicant states the Project is consistent with character of area.
Standard 5.3.3.12.1 Commercial and industrial compliance with Suffolk County Sanitary Code	SCDHS pending. See SCDHS checklist dated 12/20/19.

laws of the State New York and approve this application.

Thank you very much for giving us this opportunity today.

CHAIRWOMAN GALLAGHER: Thank you, Mitch.

And while we navigate to unmuting Dr. Gobbler, I'll just reiterate something that Mitch just said is that the only job before the Pine Barrens Commission is to determine whether this project conforms to the Standards and Guidelines. That is the only basis upon which we can make a decision whether to approve or disapprove the project, so it is very helpful to provide comments, both verbal and written, that support your position as to whether it conforms or does not conform in helping us render our decision.

All right. Chris, your up.

DR. GOBBLER: Okay. Thank you

for the opportunity to speak.

I just have a few points to make. I think we all know how important the watershed of this region is as well as the receiving waters in Shinnecock Bay.

I think that both the Town of Southampton and DEC is currently involved in the project, trying to consider ways to improve water quality in Shinnecock Bay, and we know many of the potential risks of excessive nitrogen loading from the land to sea --

CHAIRWOMAN GALLAGHER: (Interjecting) Chris, can I just interrupt you for a second?

DR. GOBBLER: Yep.

CHAIRWOMAN GALLAGHER: Just for the purposes of the stenographer, if you could formally introduce yourself; first name, last name, affiliation?

DR. GOBBLER: Chris Gobbler. Professor at Stony Brook University.

With regards to excessive nitrogen loading and the effects of both within the watershed and the receiving water bodies -- I think we are all aware of it -- I will just give a quick review of the things at stake; including potential loss of wetlands and flooding from excessive nitrogen loads, potential compromising of drinking water supply.

We know that excessive nitrogen can lead to the loss of seagrass and promote harmful algal blooms. Our greatest concern in this particular region is that the receiving water body from this region is Weesuck Creek. This has really been the epicenter of what is known as paralytic shellfish poisoning events during the past decade. There's been about a half a dozen of them, and in every case the most toxic shellfish that come up in monitoring by the DEC are found right there in

Weesuck Creek. And our current monitoring shows that where the toxic algae are. So this is an area where we really want to do everything we can to mitigate and reduce nitrogen load.

I will also mention that during the past decade, Stony Brook University has led the Shinnecock duration program in specifically focused in Shinnecock Bay. There's been over $10,000,000 investment -- mostly from independent support and philanthropic support -- for the restoration of clams, oysters and eelgrass beds and to the great positive estuaries. Since we begun, there's been a 700 percent increase in the landings of hard clams in Shinnecock Bay.

And then the DEC and Governor Cuomo has recently invested in the $10,000,000 Long Island Shellfish Restoration Program with Western Shinnecock Bay being

designated as being one of the five restoration locations. So there's a lot at stake here, obviously.

And I have monitored this program and this development through the years and have been in communication with Chick and the developers. And the through the years there's been many changes made to the plan to protect the environment and reduce nitrogen loading. I took a very careful look at the last submission; the PDD, for example. In which case -- and my independent analysis of the original version of the plan was significantly higher in the nitrogen loading as of right development. Where as with the implementation of many different mitigating approaches for reducing nitrogen loads that actually became a better project than as of right with regards to nitrogen loading.

So I think on that front, I will

just mention that within the PDD there were a series of really excellent approaches to mitigate nitrogen loading that are not currently in the current plan. I know the current plan has other things that are being considered, but I will just point out that for the PDD there were things like preserving 33 acres of land near Weesuck Creek, the purchase of 30 Pine Barren credits, building a sewage treatment plant for a local school and then also an investment of a million dollars in upgrading septic systems in the community. These all lead, collectively, to a reduction in nitrogen loading of over 1,600 pounds of nitrogen per year. And those should be obviously a great benefit going forward for the project.

And then I will just mention also -- just with regards to the groundwater nitrogen modeling -- I know that -- I think we are all aware,

that Suffolk County recently completed its sub watershed plan, with that plan being led by the modeling efforts of CDM Smith. And my estimation -- and I think probably many people or most people would agree -- this is probably one of the greatest -- or if not -- the greatest ever project for modeling groundwater and nitrogen flow and nitrogen in groundwater ever executed within Suffolk County. And this is a more than a five year effort and it went through constant revision.

And so I do just -- I do think there might be value in looking at the outcomes of that model for this particular area and with particular different scenarios with regards on how this would proceed and see how that model responds. Now it's probably of a different scale than something like the Sonir model, but I think there's no -- I don't think anybody would disagree with the fact

that it is the state of the art when it comes to modeling groundwater within Suffolk County. And when I want to have a project go forward that looks at groundwater flow, I think bring in that model that CDM Smith gives you is the Cadillac version and then give the exact information that you would want to know.

And the last thing just on that front, I do know that in some earlier modeling of groundwater on the property, there was great variability in the levels of the nitrogen in the groundwater. There were some wells that came back with literally zero nitrogen. There was another well that came back with more than 25 milligrams per liter and some -- several at two, five -- a lot of variability. So I just -- with regards to attaining the 2.5 on average and with regards to -- as what the goal is -- and with regards to the actual level being -- I

think either .25 or .5. Again, I think having a look with the CDM Smith model would be of interest. It's not clear to me if those numbers -- the .5 and the point .25 -- is the net increase or the actual concentration.

But I just will say, there already is a great amount of variability in the amount of nitrogen that has been measured on the property. So I think getting at the actual mean level is a little tricky.

So those are the main points I just wanted to make.

CHAIRWOMAN GALLAGHER: Thank you, Chris for making those comments.

I forgot to let people know who is up next, so let me give you the next three speakers in order so you can get yourselves prepped.

Pola Rapaport will be next, followed by Bob DeLuca and then Bill Kearns.

Oh, Pola is not here. Okay. So

Bob you are up, we'll just get you unmuted.

MR. DELUCA: Good afternoon, members of the Commission.

My name is Bob DeLuca.

I am the President of the Group for the East End.

In addition to holding graduate degrees -- hold a graduate degree in environmental science and 34 years of the land use professional -- I am also a member of the Pine Barrens Advisory Committee and part of administrative law in environmental policy at Long Island University for more than 15 years.

Today I want to focus your attention on a critical aspect of this proposal, which has come up, and that's the environmental review process. A process that has direct bearing on your assessment of compliance with the Standards and Guidelines of the Comprehensive Land

Use Plan and your legal responsibility over the review of this action.

The heart of the problem lies in the implementation of the State Environmental Quality Review Act, SEQRA. Which has resulted in open ended review process that is now essentially produced to distinct and competing development applications for the same 600 acres of property.

Here's what went wrong:

On January 15th, of 2020, the Commission approved a resolution to proceed with the review of the Lewis Road PRD. The resolution identified that the Southampton Town Planning Board as the lead agency under SEQRA for the Lewis Road proposal and essentially cleared the way for the Commission to proceed with the limited further coordination or obligations under SEQRA.

In fact, the Southampton Town Planning Board was never the lead

agency for the Lewis Road PRD, and its own Findings Statement of October 24th, 2019, clearly stated that it acted only as an involved agency pursuant to SEQRA.

I had previously brought this issue to the Commission's attention. This matters because -- because SEQRA requires the dedication of a lead agency. So every major application has a review, which allows approving agencies to provide and track their own concerns under the management of a single agency with the greatest jurisdictional authority over the project. This should have been done by the Southampton Town Planning Board and its initial filing of the Lewis Road application, but it didn't happen.

The goal of the process is to assure that the lead agency can address concerns and choose an alternative that best reflects

2/19/20
Hearing

An Analysis of the Lewis Road Planned Residential Development's (PRD) Compliance to the New York State Pine Barrens Act and Comprehensive Land Use Plan

LONG ISLAND
PINE BARRENS
SOCIETY

Prepared by:

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The Commission's Obligation

Per adopted resolution dated 6/19/2019, the Central Pine Barrens Commission has outlined the Pine Barrens Protection Act provisions and Comprehensive Land Use Plan standards and guidelines to be evaluated in the process of reviewing the Lewis Road Planned Development District (PRD) application. The Commission discharges this duty in order to fulfill the goals and objectives outlined in the Pine Barrens Protection Act, the founding document of the institution.

These stated goals and objectives, as listed within Section 57-0121, are as follows:

a. To protect, preserve and enhance the functional integrity of the Pine Barrens ecosystem and the significant natural resources, including plant and animal populations and communities,
b. To protect the quality of surface water and groundwater;
c. To discourage piecemeal and scattered development
d. To promote active and passive recreational and environmental educational uses that are consistent with the land use plan;
e. To accommodate development, in a manner consistent with the long term integrity of the Pine Barrens ecosystem and to ensure that the pattern of development is compact, efficient and orderly.

The review of this project, one of the biggest and most consequential to ever come before the Commission, will set a powerful precedent for other projects that are proposed for sensitive areas of the Pine Barrens in the future.

Background – An Environmental Crisis in the Town of Southampton

The Lewis Road Planned Residential Development (PRD) is comprised of nearly 600 acres of pristine Pine Barrens, which act as a natural filter for nitrogen and other contaminants deposited from the atmosphere. The site is also in a State-designated Special Groundwater Protection Area, as well as a Suffolk County-designated Critical Environmental Area. The Lewis Road PRD is also part of a group of lands which The Nature Conservancy has given top priority for permanent preservation.

There is a well-documented water quality crisis in the Town of Southampton and across Long Island. Drinking water and surface waters are compromised in almost every single hamlet in the town. Toxic chemicals such as PFOS and PFOAs have been detected in the drinking water supplies of Speonk, Westhampton, East Quogue, Hampton Bays, Bridgehampton and surrounding areas like Wainscott and Manorville. Harmful algae blooms and depleted oxygen plague the surface waters in this area.[1] These water quality issues are a public health threat, and have also resulted in beach closures, fish and turtle kills, flooding and are destroying our marine economy. Any new development is expected to increase nitrogen contamination in the area, threatening the already severely impaired waterbodies of Weesuck Creek and Western Shinnecock Bay. In fact, the recently released Draft Suffolk County Subwatersheds Wastewater Plan ranks the coastal areas around East Quogue as "priority one" for nitrogen removal and specifically lists Weesuck Creek as a priority one waterbody.[2]

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[1] Exhibit 1 – Map - Water Quality Issues Surrounding East Quogue
[2] Exhibit 2 – Draft Suffolk County Subwatersheds Wastewater Plan Figures

Nitrogen pollution from septic systems, cesspools and fertilizers entering our waters have resulted in devastating harmful algae blooms, compromising commercial fisheries and the shellfish industry. Beach closures due to harmful algae blooms or fish kills result in a decline in visitors and major loss in tourism dollars. Many Long Island businesses rely on a fresh supply of clean drinking water. Enhanced nitrogen loading will "push already high nitrate levels in public and private water supply wells for East Quogue closer to the USEPA federal limit for drinking water."[3]

We simply cannot afford to let this trend continue. The more we ignore our problems, or allow development to continue at unsustainable levels, the worse our water quality issues become and the more complicated and expensive the solutions will be.

Not only will new development stand to threaten our only source of fresh water, but it threatens the integrity of our natural environment and the Pine Barrens ecosystem. A development of this scale will have significant and long-lasting impacts to our natural resources, including plant and animal populations and communities.

Legal Concerns

After a four year battle, in December of 2017, "The Hills at Southampton" development project, proposed under Southampton's Planned Development District (PDD) zoning, was voted down by the Southampton Town Board. The PDD ordinance has since been removed from town code. Shortly after, in addition to filing a multi-million dollar lawsuit against the Town, the developer, Arizona-based Discovery Land Company, filed for a nearly identical application, renamed "The Lewis Road Planned Residential Development (PRD)." The new application was filed under the Planned Residential Development ordinance of the Town's Open Space code (§247). In order to show that they qualify for a PRD, the developer has argued that the 18-hole golf course and its clubhouse and other large structures are simply a "recreational amenity" to the 130-home development. This is in addition to the many other recreational amenities provided on site, including a baseball field, a practice fairway, a fitness center, pool, basketball court, four pickle ball courts, and a common area lawn. This point has been disputed by several leading planners, including Assemblyman Fred Thiele, who wrote the Open Space Law for the Town of Southampton.[4]

The Pine Barrens Society has joined Group for the East End in two lawsuits that have challenged this end-around by the developers and The Town of Southampton, and the clear violation of the Open Space Law. Other litigants include the East Quogue Civic Association, Assemblyman Fred Thiele, and neighbors surrounding the development site. These suits are still pending in the courts, but have fortunately resulted in a temporary restraining order over the property until they are settled.

This has been an attempt by the developer to manipulate the code to their liking, and the Town of Southampton has allowed them to do this. One must ask the simple question: If the project would have been allowed to pass through under the Planned Residential Development zoning, wouldn't the developer have proceeded with this route in the first place, instead of trying to get their project approved under the more

[3] Exhibit 3 – Analysis of Nitrogen Loading Rates from The Hills PDD (Dr. Chris Gobler)
[4] Exhibit 4 – Fred Thiele Letter to Zoning Board of Appeals 3/17/18

difficult Planned Development District zoning? In fact, the developer states in the Draft EIS for "The Hills" in section 1.3.3, "The proposed project could not be developed if the site were to remain in its existing CR-200 zoning, as its development requirements do not provide the flexibility of uses to allow for the amount and type of development that DLC proposes. A PDD was recognized in the East Quogue LUP and GEIS as a means to achieve the recommended golf course and resort development other than the recently up-zoning single-family residential use."[5] However, now, after the project was voted down by the Town Board, the developer is back-tracking and trying to push their project under the current CR-200 zoning.

Nevertheless, the Town of Southampton Planning Board and Zoning Board of Appeals have allowed this project to move forward, which is why it is before The Pine Barrens Commission today.

The Application's Compliance with the Pine Barrens Act & Its Comprehensive Land Use Plan (CLUP)
After reviewing the application of the Lewis Road Planned Residential Development for its compliance to the Pine Barrens Act and its Comprehensive Land Use Plan, we have identified the following areas of concern:

1. Permits
   Several permits from various government agencies are required to be in hand in order for this project to conform to the Act. While the applicant states that many of the required permits have been applied for, are pending and "will be obtained," only final approval and officially issued permits can ensure that the project does in fact comply with the Pine Barrens Act. Those pending include:

   - Suffolk County Sanitary Code Article 6 Compliance;
   - Suffolk County Department of Health Services Approval of Sewage Treatment Plant;
   - Suffolk County Sanitary Code Article 12 Compliance;
   - Suffolk County Department of Health Services and New York State Department of Environmental Conservation (NYSDEC) Compliance to NYS Environmental Conservation Law Article 17, re: groundwater discharge and public supply well locations;
   - Suffolk County Department of Health Services and NYSDEC approval of private well protection plan;
   - NYSDEC Stormwater Pollution Prevention Plan approval;
   - NYSDEC and Town of Southampton approval, re: protection of special species and ecological communities;
   - Sign-off by the New York State Office of Parks, Recreation & Historic Preservation;
   - Commercial and Industrial Compliance with Suffolk County Sanitary Code approval;
   - And Mining permits to be issued by the NYSDEC

   The Commission must stipulate that all approvals and permits must be complete, before this project can approved by Commission.

[5] Exhibit 5 – Excerpt from The Hills at Southampton MUPDD Application Draft EIS

2. Suffolk County Sanitary Code Article 6 Compliance *(Guideline 5.3.3.1.1)* and Nitrate-nitrogen goal *(Guideline 5.3.3.1.3)*

There are several important issues with the applicant's nitrogen calculations that need to be addressed by The Commission.

First, as part of SEQRA, the applicant was required to include a complete groundwater dispersion model. However, analysis of this dispersion modeling reveals that the applicant has focused on dispersion of the project's proposed mitigation efforts, rather than the dispersion of its impacts. The modeling, therefore, fails to show the concentrated impacts of nitrogen that are predicted within the area of the golf course, which lies within the watershed of Weesuck Creek. As part of the Town of Southampton Planning Board's preliminary review of the proposal, the body's hired consultant, Mr. Michael Bontje, reported that the applicant's groundwater models inaccurately use 10 percent as the amount of nitrogen that leech into the ground from turf grass. When inputting a more accurate figure (20 percent), along with questions over whether or not the residents of the development would be allowed to hire their own landscapers, Mr. Bontje's estimate of the project's total nitrogen loading increased to 3,100 lbs/year. In addition, the consultant's report found that the applicant's estimate of an annual 60-day occupancy average was likely low – an increase in occupancy would result in an increase in nitrogen discharge.[6]

Next, the developer conveniently touts that the DEIS/FEIS for the Hills at Southampton MUPDD demonstrates a "net-negative removal of nitrogen," and therefore complies with standard 5.3.3.1.3 of the CLUP. In addition to the "fudging" of numbers mentioned above, calculations for nitrogen discharge cannot be calculated using figures from the DEIS/FEIS for "The Hills." The Lewis Road PRD is a different project when it comes to nitrogen discharge and nitrogen mitigation, and therefore, the nitrogen calculations will not be the same. First, the Hills MUPDD included a suite of nitrogen mitigation measures, as part of the Planned Development District "community benefits" requirement. This included: the preservation of 33 acres in the headwaters of Weesuck Creek; the purchase and retirement of 30 Pine Barrens credits; a $1-million fund to support community-wide septic upgrades; and the construction of a sewage treatment plant at The Hills development *and* at the East Quogue Elementary School; and a fertilizer cap of 2 pounds of nitrogen per 1000 square feet. These measures were proposed to mitigate the nitrogen impacts of the developer's proposed project. Those mitigation measures were included in "The Hills," but are not included in the proposed Lewis Road PRD project that is currently before The Commission.

As part of the review of the environmental impact of The Hills, the developer and the Town of Southampton commissioned Dr. Christopher Gobler to study the potential nitrogen impacts of the project, including an analysis of how the proposed mitigation benefits would impact the total nitrogen load.[7] Dr. Chris Gobler of Stony Brook University is a world-renown expert in the fields of harmful algae blooms, nitrogen pollution and coastal water impairments. In Dr. Gobler's study, he mentions that the applicant, in their DEIS, has used nitrogen leaching rates that are "different than those that have been accepted by the

[6] B. Laing Consultant Report can be found on the Pine Barrens Commission website

[7] Exhibit 3 – Analysis of Nitrogen Loading Rates from The Hills PDD (Dr. Chris Gobler)

Long Island Nitrogen Action Plan (LINAP) and a fertilization rate higher than has been accepted by LINAP." He goes on to explain that LINAP, is a plan that "has been collaboratively developed by CDM Smith, NYSDEC, Suffolk County, Cornell University, USGS, US EPA, and Stony Brook University and represents a scientific consensus among these teams and contains the most up-to-date and best science available on the subject of nitrogen loading within coastal watersheds." Gobler uses these agreed upon numbers, calculations, and models, to calculate the expected nitrogen loads of the property. He also mentions that while "fertigation is a novel and innovative approach for groundwater remediation," that it is still considered an "experimental approach," without much scientific data to back it up. Thus, Gobler deems it is scientifically-responsible, to leave any proposed fertigation impacts out of his calculations, because he cannot be sure of their results.

Gobler concludes his report by stating that *any* development of the Hills property will result in an increase in nitrogen loading. He also concludes that the Hills PDD would result in the addition of 2,322 lbs. of nitrogen per year (current loading 1,210 per year). It is extremely important to note that the expected addition of 2,322 lbs. of nitrogen per year is after all of the nitrogen mitigation efforts mentioned above, were applied. While the developer plans to include a sewage treatment plant for the project, all of the other mitigation measures have been removed from the new Lewis Road PRD. Dr. Gobler, in his report, also mentions that after excluding the mitigation efforts, expected nitrogen loading would be 4,800 lbs./nitrogen per year. This nitrogen loading would be far greater than permissible by the CLUP.

The Hills project was applied for in Southampton Town under the Planned Development District (PDD) ordinance (which has since been removed from Town Code). Under the PDD law, the developer was allowed to propose nitrogen mitigation efforts in various areas across the Town, in order to compensate for the nitrogen impacts that their project would have on site. This project was voted down by the Town Board. However, the developer is trying to push this approach before the Commission – essentially saying, "We will remove nitrogen somewhere else, to compensate for the nitrogen that will enter our ground and surface waters at the development site." This type of approach may have worked at the Town, but this type of nitrogen measurement does not comply with the standards of review set forth by the CLUP. Measurements of nitrogen must be calculated on site, regardless of any promises to remove elsewhere. The Commission must review what the loading and dispersion of nitrogen will be on site only.

It is the Commission's duty to demand that the developer provide new, accurate nitrogen loading estimates, that use industry standard modeling numbers, include a dispersion model, remove untested fertigation from their calculations, and remove the mitigation benefits that are no longer in play. Any increase in nitrogen to the area, will have devastating impacts on groundwater supply wells and the already-impaired Weesuck Creek and Shinnecock Bay.

Currently, the project's expected nitrogen loads are far greater than permissible by the CLUP. The project does not comply with these standards.

3. Suffolk County Sanitary Code Articles 7 and 12 Compliance *(Guideline 5.3.3.2.1)*

   The applicant mentions that there will be the use, storage and handling of various landscaping chemicals (e.g., fertilizers, peticides, etc.). The applicant does not demonstrate how they will comply with Article 12, regarding the proper storage and handling of these chemicals. Instead, they simply state "the project will provide for proper storage and handling [...] in conformance with Article 12." As fertilizers and pesticides are a large risk factor and have the potential to severely pollute groundwater and surface waters, the applicant must elaborate on their plans to ensure proper storage and handling further, in order to comply with this standard.

   Given the vague explanation by the developer, the project does not comply with this standard.

4. Significant Discharges and Public Supply Well Locations *(Guideline 5.3.3.3.1)*

   Here, the applicant asserts that the Lewis Road PRD project has "the lowest nitrogen load of all alternative uses for the site" and that they do not expect significant discharges or damage to public supply wells. This is untrue. Dr. Christopher Gobler, as part of his nitrogen analysis[8], also determined which use of the property would have the least impact. The SEQRA process requires that the involved agencies look into site alternatives. As part of the SEQRA review for The Hills, Group for the East End hired a highly regarded planner, Lisa Liquori, to create a "Reduced Impact Alternative" (RIA).[9] This RIA would be an alternative "as of right" use for the site, that would have a lower impact on the environment. In Gobler's analysis of all of the potential uses of the site, he found that the Hills PDD without all of its nitrogen mitigation measures (aka the Lewis Road PRD), would have a higher nitrogen load impact than the the Reduced Impact Alternative.

   Once again, the Commission must demand an accurate nitrogen loading and dispersion analysis from the applicant, to determine whether or not there will be significant discharges to groundwater and impact to public supply wells.

   The project would result in significant nitrogen discharges to groundwater and has the potential to impact nearby public supply wells, and therefore, does not comply with this standard.

5. Nondisturbance Buffers *(Guideline 5.3.3.4.1)*

   The applicant has not adequately demonstrated whether freshwater wetlands exist on the project site. As mentioned in the 10-16-19 letter from the Pine Barrens Commission to the Southampton Town Planning Board[10], "stream reaches of Weesuck Creek are shown on the United States Fish and Wildlife Services wetland maps and United States Geological Survey topographic maps on the project site. The record shows the entire site is in the Weesuck Creek watershed. Weesuck Creek reaches traverse the site. The project site contains at least two swales, which are described in the record as 'normally dry.'" The

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[8] Exhibit 3 – Analysis of Nitrogen Loading Rates from The Hills PDD (Dr. Chris Gobler)

[9] Exhibit 6 - Reduced Impact Alternative Comparisons submitted as part of SEQRA by Group for the East End

[10] Exhibit 7 – Commission Letter to Southampton Town Planning Board

Commission goes further to state that the "presence or absence of vernal pond(s) and forested wetland habitat, especially in the southern portion of the project site, should be verified on site."

As part of the DEIS for The Hills, the applicant includes a non-jurisdiction letter from the NYSDEC, received in December of 2007. The letter states that proposed project to "construct single family residences" is located more than 100 feet from regulated freshwater wetlands. However, since 2007, the project has changed in size and shape several times. This letter also fails to mention the golf course entirely. We cannot rely on an assessment from 13 years ago to determine if the applicant complies with this standard. A more recent and adequate assessment needs to be prepared and it needs to be verified on site.

The applicant has failed to prove that there are not wetlands on site, and therefore, does not comply with this standard.

6. Natural Recharge and Drainage (*Guideline 5.3.3.5.2)* and Natural Topography in Lieu of Recharge Basins *(Guideline 5.3.3.5.4)*
In order to create stormwater and drainage structures, the applicant is proposing to remove 48,500 cubic yards of materials from the site. In addition, 200,000-300,000 cubic yards of materials will need to be removed to create the golf course. This project does not comply with this standard, as it does not cause minimal disturbance to native vegetation. The applicant must demonstrate why they have ruled out utilizing the existing natural low points and natural topography on site, and are instead choosing to clear and construct 43 drainage areas.

   The applicant has failed to explain why they will be clearing and constructing 43 drainage areas, and therefore the project does not comply with these standards.

7. Ponds *(Guideline 5.3.3.5.3)*
Ponds should only be constructed if they are to accommodate stormwater runoff, not solely for aesthetic purposes. While the applicant states that one pond will be used to accommodate stormwater runoff, they state that the other is to blend well water for reuse as irrigation on the golf course (fertigation). The CLUP does not provide for the creation of ponds for fertigation. This pond would be experimental in nature, as fertigation is considered a promising but un-tested nitrogen mitigation technique. There is no proof that this second pond would work as intended.

   Since the proposed fertigation pond would be experimental, and would not be used for stormwater purposes, it does not comply with this standard.

8. Soil Erosion and Stormwater Runoff Control During Construction *(Guideline 5.3.3.5.5),* Stabilization and Erosion Control *(Guideline 5.3.3.8.2)* and Erosion and Sediment Control Plans *(Guideline 5.3.3.8.4)*
The applicant has predicted the removal of 200,000 to 350,000 cubic yards of soil during the five years of the project's construction. The removal of soils has an impact on erosion and site stability. The applicant must provide information pertaining to erosion control as well as a sediment control plan.

The developer also plans to create a large underground parking garage, but does not explain how they plan to construct this. What impact will this have on the soil? Will this underground garage hit the water table? Will this impact groundwater flow and nitrogen dispersion? Is de-watering required? If so, does the developer have a plan for this and the required permits? These questions need to be answered so that the Commission can determine the impact this garage will have on soil erosion and our drinking water supplies.

The applicant has failed to detail the extent of the expected mining to occur on site, and therefore, does not comply with this standard.

9. Vegetation Clearing Limits *(Guideline 5.3.3.6.1)*

The applicant has not provided accurate documentation that existing cleared areas are accounted for in the overall clearing limit. Cleared areas must include haul roads, paper roads, construction roads, parking lots, drainage reserve areas, bioswales, raingardens, stormwater management structures, ponds, expansion area for the sewage treatment plant, trailhead parking lot, well field, and any other development and infrastructure. The applicant has also failed to explain how the Smith Ave right of way and Spinney Road segment traversing the project site will be incorporated to the Project and affect the clearing standard.

The applicant lists a clearing limit of 28.24-percent for the entirety of their site. This limit would translate to approximately 166.18 acres of allowable clearing. Table 2-3 in the preliminary application presents the method by which the applicant calculated this allowable clearing estimate. It is apparent that the applicant reached this estimate by taking the average of each individual parcel's maximum allowable clearing.[11] This methodology is inaccurate based upon the provisions of this standard (5.3.3.6.1), which states "... These percentages shall be taken *over the total site* and shall include, but not limited to, roads, building sites and draining structures." As the project is located within the CR-200 zoning district, the site is limited to the 5-acre zoning clearing limit included within Figure 5-1 of the CLUP. With this zoning, a 25-percent clearing limit should be applied to the project site. The current figures listed in the preliminary subdivision application will, therefore, exceed CLUP standards by 2.33 percent or 13 acres. In this case, the allowable clearing for the site would be 147 acres.

The applicant fails to meet the vegetation clearing limits on the project site, and therefore, does not comply with this standard.

10. Unfragmented Open Space *(Guideline 5.3.3.6.2)*

The majority of the proposed open space 241 acres or 55% in the project (located within the Hills South and Kracke sites) does not appear to be unfragmented. The developer has placed "slivers" of land across

[11] Exhibit 8 - Table 2-3 of Lewis Road PRD Preliminary Application

the project site.[12] As the Commission staff points out in their 10-16-19 letter, this proclaimed open space consists of "more than 17 separate and discrete islands and corridors comprised of woody vegetation, ranging in size from approximately 11,000 square feet to an average of approximately two acres, which fragments open space." The Commission even goes so far as to provide suggestions, to avoid fragmentation, protect open space, greater cluster the development and avoid some development on steep slopes.[13] The applicant has chosen to ignore this recommendation.

The applicant has continuously pointed to the East Quogue Land Use Plan (EQLUP) and its recommendation for a golf course in the area of East Quogue. However, the Town Board rejected this proposal of the EQLUP when they voted down The Hills PDD in December 2017, therefore making the recommendation for a golf course irrelevant.

The applicant also points to a previous Hardship Resolution approved by the Commission in 2010, "Willow Wood at Coram," and attempts to draw comparisons between their project and Willow Wood. Willow Wood is 24.5 acre development site that constructed 140 duplex condominium units. The development required the clearing of 5.31 acres of natural vegetated areas. Based on zoning and the CLUP standard, the developer was authorized to clear up to 70% of the project site. Willow Wood is located in a densely developed area, surrounded by commercial, industrial and residential land uses. In studying the development, the Commission found that the project could clear more than proposed to provide a tighter cluster of developed areas in the eastern portion of the project site and provide a buffer to the adjoining open space. In this very particular case, the Commission determined that the CLUP's Vegetation Clearing Limits Standard and Unfragmented Open Space Standard were at odds with one another. This was determined after all alternatives for the site were analyzed.

In comparison, The Lewis Road PRD is 588.39 acre development site, that includes 130 residential units, a professional 18-hole golf course, a massive clubhouse with underground parking garage, baseball field, a practice fairway, a fitness center, pool, basketball court, four pickle ball courts, and a common area lawn. 131.29 acres of existing natural vegetation are expected to be cleared. This type of development is not consistent with other development in the area. In addition, alternatives provided by the Commission and by others during the SEQRA process, demonstrate ways that the Vegetated Clearing Limits and Unfragmented Open Space guidelines could both be achieved. The applicant is trying to argue, by comparing their project to Willow Wood, that they cannot meet the both the clearing limits and unfragmented open space guideline. This is simply untrue. The developer must adhere to both these guidelines in order to comply with the CLUP.

The developer, in their application, argues that the Unfragmented Open Space Standard is "subjective," however, its intentions are very clear – to avoid the clearance of natural vegetation in large unbroken blocks. The developer fails to do this and therefore, does not comply with this standard.

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[12] Exhibit 9 – Unfragmented Open Space and "Slivers" Map
[13] Exhibit 7 – Commission Letter to Southampton Town Planning Board

11. Fertilizer-Dependent Vegetation Limit *(Guideline 5.3.3.6.3)*

The applicant acknowledges the Pine Barrens Comprehensive Land Use Plan's 15 percent limit on fertilizer-dependent vegetation detailed by this standard. Based upon this 15 percent limit, the applicant has an allowable limit of 88.2 acres of fertilized vegetation. As the applicant does not explain how much of the 109.8 acres of landscaping is fertilizer-dependent, it is difficult to ascertain the applicant's compliance with this CLUP provision. The applicant does explain that 78 acres of the golf play surface will be fertilized "greens, tees, fairways and primary rough." With this in mind, more information will be needed to explain how the applicant will limit fertilized vegetation to just the remaining allowable 10.2 acres. In terms of information, specific acreage figures for the baseball fields, practice fairway, and separate lawn outlined in the application's "Site Plan Details" as well as any fertilizer-dependent vegetation lying within residential unit areas will greatly aid the review process.

The developer does not explain how several amenities on site will be maintained and therefore, does not comply with this standard.

12. Special Species and Ecological Communities *(Guideline 5.3.3.7.1)*

As the Lewis Road PRD's physical configuration mirrors that of the predecessor Hills PDD, the Commission's on-site study of endangered and threatened species in the Summer of 2016 and Fall of 2016 remain relevant. The study found linum medium (S2), sericocarpus linifolus (S2), pityopsis falcate (G3), lespedeza frutescens (S3), lespedeza stuevei (S2), spiranthes tuberosa (S3), terrapene Carolina (S3), and baptisa tinctoria (G3), present on site. In addition, a number of species listed in the applicant's environmental impact statement are designated as Species of Greatest Conservation Need by New York State. These include:

High Priority

- Little brown myotis
- Eastern pipistrelle
- Barn Owl
- Brown Thrasher
- Grasshopper sparrow
- Northern bobwhite
- Prethonotory warbler
- Whip-poor-will
- Yellow-breasted chat
- Eastern hog-nosed snake

Potential Conservation Need

- North American least shrew

Species of Greatest Conservation Need

- Hoary bat
- Eastern red bat
- Silver-haired bat
- American kestrel
- American woodcock
- Black-billed cuckoo
- Blue-winger warbler
- Northern goshawk
- Northern harrier
- Scarlet tanager
- Wood thrush
- Worm-easting warbler
- Common ribbon snake
- Eastern spadefoot toad
- Fowler's toad

The applicant states that "the project is not expected to impact these species." A more extensive explanation about how these species will be protected needs to be provided, to insure compliance with this standard.

In addition, both the Cooper's Hawk and Eastern Box Turtle have been sighted and confirmed to reside on the Hills South Parcel, where development is proposed to occur. The project site also lies within Henry Hollows' Critical Resource Area, which received its designation due to the presence of buck moth habitats. To comply with this standard, the applicant must detail the mitigation measures expected to minimize the impacts to these vulnerable species. A more current and accurate survey for the NYS-listed Species of Special Concern Buck Moth, within the scrub oak area of the property, must be taken. The last survey occurred in 2014 and is outdated.

The applicant has failed to demonstrate how important species of concern will be protected during construction and after, and therefore, the project does not comply with this standard.

13. Clearing Envelopes *(Guideline 5.3.3.8.1)*

This project does not appear to comply with this standard, because it does not maximize the development of lots, roads, and the golf course and other facilities on slopes of less than 10%. The applicant has vaguely stated that they will "minimize the grading of natural slopes that are in excess of 10% to the maximum extent practicable." The applicant must clarify this further.

The applicant does not detail how they will minimize the grading of natural slopes in excess of 10%, and therefore, does not comply with this standard.

14. Slope Analyses *(Guideline 5.3.3.8.3)*

As part of the Commission's 10-16-19 letter to the Town of Southampton Planning Board, detailing a brief review of the project's compliance to the CLUP[14], the Commission states that the amount of steep slope area to be removed must be provided in order to determine whether or not the project complies with this standard. The applicant responds to this request with denial by stating "the quantity and amount of steep slopes to be removed is not required to comply with this guideline." A proper slope analyses ensures that the Commission can review the project's compliance with several other guidelines, including 5.3.3.8.2, 5.3.3.8.4, and 5.3.3.8.5 and 5.3.3.8.6. If the applicant can comply with these guidelines, they should have no problem providing the slope analyses that the Commission has previously asked for and requires to complete their assessment.

The applicant has failed to supply a slope analysis deemed necessary for the Commission's review, and therefore, does not comply with this standard.

15. Clustering *(Guideline 5.3.3.9.2)*

The project, as it stands today, does not maximize clustering to enhance open space or provide contiguous open space connections with adjacent public lands. As mentioned in the 10-16-19 letter from the

[14] Exhibit 7 – Commission Letter to Southampton Town Planning Board

Commission to the Southampton Town Planning Board[15], "The majority, 240 acres (55%) are in an unclustered pattern because the golf course and residential development create narrow buffer strips and islands of vegetation among developed areas within the Project Site."

The applicant argues that the "design of the golf recreational amenity is to use existing cleared areas to the maximum extent, while also achieving clustering for contiguous open space." However, the golf course is what causes the fragmented open space. The Commission also points out in their 10-16-19 letter, that "The record contains a cluster plan prepared by NP&V, Fazio and Vita titled 'As-of-Right Plans' dated March 5, 2014 for the development absent the golf course. Absent the golf course, the site demonstrated clustering to the maximum extent." The Commission later goes on to state that "If [the] layout could be examined to cluster more tightly to create significantly fewer acres of fragmented open space and connect open space to adjoining public lands, the Applicant may be able to demonstrate conformance."

As mentioned above, under point four, there are other as-of-right alternatives that were presented during the SEQRA process for The Hills, like the Reduced Impact Alternative submitted by Group for the East End, that show a more-clustered, lower impact alternative for the site. The developer does not want to develop a golf course because it is the best use of the property to maximize open space; they want to develop a golf course because it aligns with their business plan and interests.

The applicant has failed to cluster their application and therefore, does not comply with this standard.

16. Cultural Resource Consideration *(Guideline 5.3.3.11.1)* and Inclusion of Cultural Resources in Application *(Guideline 5.3.3.11.2)*

In the 10-16-19 Commission review letter to the Southampton Town Planning Board, Commission staff points out that there are existing trails running through the easterly project site boundary and that the developer has not provided a buffer to protect trail corridors. The applicant argues that these existing trails are a result of past unauthorized ATV use. The Commission would be able to determine whether or not this is true and must investigate this. However, no matter how these trails were created, if they are being utilized by people for recreational purposes such as hiking, they are considered trail corridors and Guideline 5.3.3.11.1 requires that there be adequate buffers in place.

We are also concerned about the inadequate review of cultural and archeological resources on the project site. As part of the Hills review before the Town of Southampton, David Martine, the designated Tribal Historic Preservation Officer for the Shinnecock Nation, mentioned serious concerns about the review of the site. The Shinnecock Nation argued that they were "not consulted in the development of a scope of work, nor apprised on the original research design for data recovery." In the February 7, 2017 letter, Martine goes on further and states that "the importance of this site relevant to Shinnecock history and

[15] Exhibit 7 – Commission Letter to Southampton Town Planning Board

identity is not dependent on the survival of above-ground structures of facilities." Martine also outlines several federal mandates that should have been covered in a review of the project site.[16]

While these concerns were largely ignored by the Town of Southampton, it is our hope that the Commission will require a more comprehensive review of the site for cultural, historic and archeological resources, in order to determine the application's compliance with these guidelines.

The applicant has failed to follow federal mandates for the review of historical, cultural and archeological resources on site, and therefore, does not comply with this standard.

17. Protection of Scenic and Recreational Resources *(Guideline 5.3.3.11.3)*
As mentioned above, the developer has failed to add the required buffer to the easterly adjoining open space properties. We also agree with the Commission Staff's observation from their 10-16-19 letter that, "no buffer is identified in the Record between the proposed golf course and the adjacent Town open space and significant grading and disturbance is proposed to occur in order to develop the golf course immediately adjacent to this existing open space." In order to comply with this guideline, the applicant must provide appropriate buffers to protect existing scenic and recreational resources.

The applicant has failed to provide required buffers and therefore, does not comply with this standard.

18. Roadside Design and Management *(Guideline 5.3.3.11.4)*
We agree with Commission Staff's assessment that the "development on the project site is expected to be visible from Lewis Road on the west side, from public lands and open space on the east side, and potentially from the coastal area." The developer must provide an adequate assessment of the visual impacts of the project from public lands, public roads, and the coastal zone area, in order to comply with this standard.

Without an adequate assessment of the potential visual impacts of this project, it does not comply with this standard.

19. Development of Regional Significance
The Hills project was a Development of Regional Significance because of impacts identified in a traffic study analyzing summer and fall peak traffic. Another traffic study was prepared in May 2018, for the Lewis Road PRD, which was collected in March of 2018 over the course of a single month. The new traffic study was not taken during the busy summer and fall peak periods and therefore, is not an accurate depiction of the potential impacts that this project will have on localized traffic. Without an accurate traffic study, the Commission is unable to ascertain if this project will be a Development of Regional Significance (DRS). There are separate standards for DRS projects that the applicant will need to abide by. A longer traffic study, taken during peak times, must be provided.

[16] Exhibit 10 – Shinnecock Letter to Southampton Town

Although the developer claims that this golf-course will be for members only and their guests, there are no details outlined about how they plan to enforce this. Many questions still remain: Who will be considered a member? Will members of Dune Deck[17] be allowed to use the golf course? Will they be allowed to have guests as well? Will a homeowner need to be present for guests to play? If just homeowners and their guests are allowed to play the course, why is a 10,000 square foot locker room needed? What about the two-story parking garage? Who will enforce all of this?

These questions remain unanswered by the developer. These answers are important because the number of golf players impacts the type and size of amenities that are needed and the traffic into and out of the area. A clear plan must be outlined by the developer.

The Lewis Road PRD closely mirrors a proposed project from 2008 that came before the Pine Barrens Commission – *Tall Grass Village* in Shoreham. Tall Grass proposed 352 single family units, a 125,000 square feet Village Center, an on-site 120,000 gallon per day sewage treatment plant, a 12,200 square foot community recreation center, a golf course and a 9,197 square foot clubhouse. The project was deemed a Development of Regional Significance and the Commission ruled that it did not comply with two standards and one guideline of the CLUP. The developer did not provide a reasonable alternative to scale the project down below DRS thresholds or to comply with the CLUP and was ultimately, denied by the Commission.[18]

The Lewis Road PRD project would likely be deemed a DRS if an adequate traffic study was provided and as outlined in this document, violates numerous guidelines of the CLUP.

Conclusion

Given the serious legal concerns that surround this project, the failure to meet at least 28 guidelines of the Comprehensive Land Use Plan (CLUP) and the failure to demonstrate reasonable alternatives that would comply with the CLUP, it is clear that this project cannot be approved by the Pine Barrens Commission.

A project of this magnitude will undoubtedly have significant and long-lasting impacts on the Pine Barrens and our drinking water supply and surface waters. We hope the Commissioners work hard to protect the integrity of our natural environment, as set forth by the Pine Barrens Act.

[17] Dune Deck is a nearby oceanfront beach club owned by Discover Land, in the Village of Westhampton.
[18] Exhibit 11 – Tall Grass Village Denial Resolution by Commission

Exhibit 1 – Water Quality Issues Surrounding East Quogue

Exhibit 2 – Draft Suffolk County Subwatersheds Wastewater Plan Figures

Subwatershed Name	PWL_ID	Rank
Old Town Pond	1701-0118	1
Pardees, Orowoc Lakes, Creek, & Tribs	1701-0094+0341+0338	1
Patchogue Bay	1701-0326	1
Patchogue River	1701-0099+0018+0055+0327	1
Peconic River Middle, and Tribs	1701-0261+0262+0269	1
Peconic River Upper, and Tribs	1701-0108+0265+0266+0269	1
Peconic River, Lower, and Tidal Tribs	1701-0259+0263	1
Penataquit Creek	1701-0092+0338	1
Penniman Creek and Tidal Tribs	1701-0300	1
Phillips Creek, Lower, and Tidal Tribs	1701-0299	1
Quantuck Bay	1701-0042+0303	1
Quantuck Canal/Moneybogue Bay	1701-0371	1
Quantuck Creek and Old Ice Pond	1701-0303-QC+0304	1
Quogue Canal	1701-0301	1
Red Creek Pond and Tidal Tribs	1701-0250	1
Sagaponack Pond	1701-0146+0286	1
Sampawams Creek	1701-0090+0372+0343	1
Sans Souci Lakes	1701-0336+0335	1
Santapogue Creek	1701-0016+0372	1
Scallop Pond	1701-0354	1
Seatuck Cove and Tidal Tribs	1701-0309-SC+0306+0311	1
Shinnecock Bay West	1701-0033-W	1
Speonk River	1701-0306-SR	1
Stillman Creek	1701-0329-SC	1
Swan River, Swan Lake, and Tidal Tribs	1701-0100+0332+0329+0327	1
Terry's Creek and Tribs	1701-0256-TC	1
Tuthills Creek	1701-0098+0327+0329+0334	1
Wading River	1702-0099+0243	1
Wainscott Pond/Fairfield Pond	1701-0144	1
Weesuck Creek and Tidal Tribs	1701-0111-rev	1
West Creek and Tidal Tribs	1701-0246	1
West Neck Bay and Creek	1701-0242-WB	1
Wickapogue Pond	1701-0119	1
Willets Creek	1701-0091+0175+0372	1
Priority Rank 2		
Big Reed Pond	1701-0281	2
Centerport Harbor	1702-0229	2
Crab Meadow Creek	1702-0232-CMC+0234	2
Flanders Bay, East/Center, and Tribs	1701-0030+0255+0273	2
Forge River Cove and Tidal Tribs	1701-0316-FRC+0312	2
Fort Pond	1701-0122	2
Goose Neck Creek	1701-0272-GNC	2

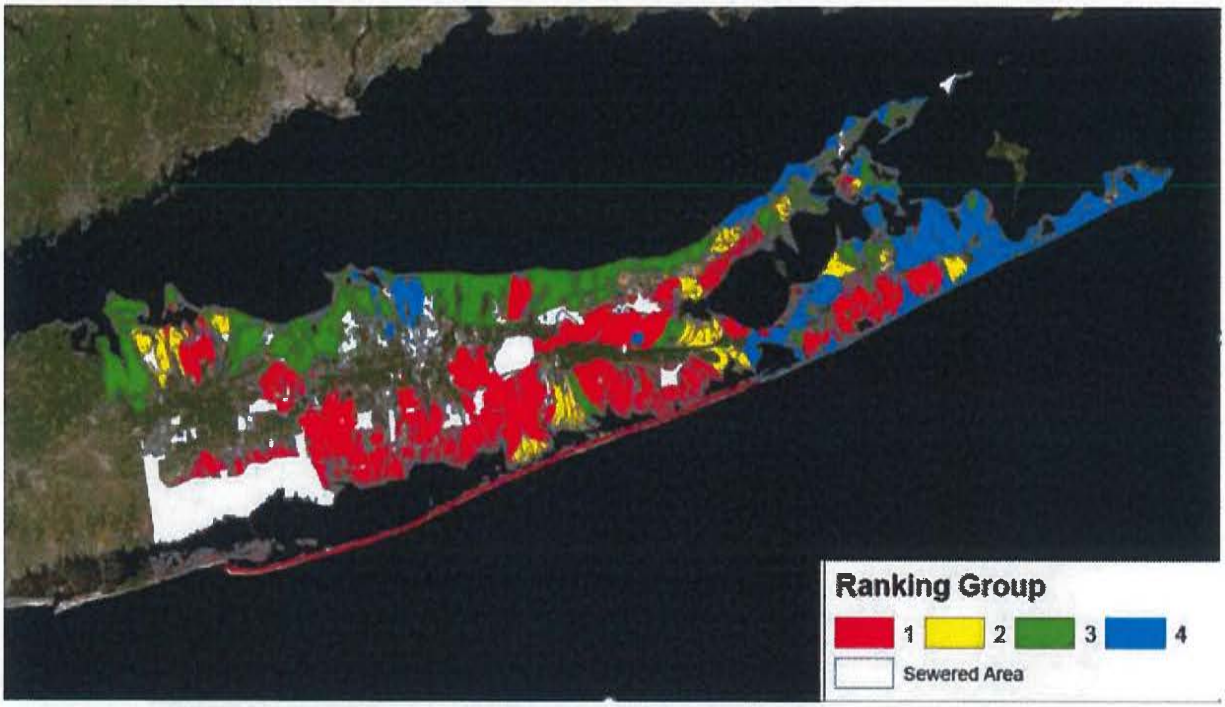

Figure 4-1 Priority Areas for Nitrogen Load Reduction

ANALYSIS OF NITROGEN LOADING RATES FROM THE HILLS PDD BASED ON THE FINAL ENVIRONMENTAL IMPACT STATEMENT

CHRISTOPHER J. GOBLER, PHD

AUGUST, 2017

Stony Brook University
School *of* Marine and
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Executive Summary:

The Hills is a Planned Development District (PDD) proposed by Discovery Land Corporation (DLC) to be built in East Quogue. The Hills property is currently comprised of 591 acres of Pine Barrens, open space, and farmland and has been proposed by DLC via the PDD to be made into a seasonal resort with a golf course. The Hills property lies within the watershed of western Shinnecock Bay which has experienced significant losses of seagrass and bivalves in recent years due to increasing nitrogen loads, harmful algal blooms, and low oxygen events. Increases in nitrogen loading to this region is expected to worsen these conditions. For this evaluation, a dynamic nitrogen loading model was constructed using information generated by the NYS Department of Environmental Conservation's Long Island Nitrogen Action Plan (LINAP) as well as standard practices used to determine nitrogen loading rates across Long Island this decade. Using this model, the nitrogen loading rates currently delivered to this property and expected from multiple development scenarios were quantified using information provided by the PDD Final Environmental Impact Statement (FEIS) for The Hills, specific guidance from the Town of Southampton, information from LINAP, and the most up-to-date science available. The series of nitrogen mitigation measures proposed in the FEIS, that did not appear in the DEIS, considered in this report for the Town of Southampton included the preservation (or development) of 33 acres at the headwaters of Weesuck Creek within East Quogue, the purchase of 30 Pine Barrens credits and the associated potential increase housing density, community septic system upgrades, the installation of a sewage treatment plant (STP) to treat wastewater on the PDD property, and the installation of a STP for East Quogue Elementary School with both STPs treating wastewater to 10 mg/L. Calculations demonstrated that the Hills PDD as described within the FEIS yielded a lower nitrogen loading rate compared to a higher and lower impact, as of right development on the property. After accounting for updates within the FEIS, as of right development is estimated to yield 2,500 to 5,100 lbs of nitrogen per year, depending on the level of occupancy, fertilization rates, and the extent of clearing, and the size of lawns on properties. The lower bound of this estimate primarily uses many of the details of the PDD without a golf course as well as the low impact development as proposed by The Group for the East End. The PDD nitrogen load was found to be ~2,300 lbs of nitrogen per year. All of these scenarios provide a greater nitrogen loading rate than the current, undeveloped property (1,200 lbs per year). A planned use of fertigation on the proposed golf course could reduce net nitrogen loading for the PDD further, although uncertainties and unknowns prohibit such reductions from currently being quantified. It should be noted that if the nitrogen mitigation measures added since the DEIS were made to the lower impact, As of Right scenario, this would yield lower nitrogen levels than the PDD. All of these calculations are, of course, theoretical and the extent to which the actual nitrogen yields on the Hills property match these calculations will be partly a function of the extent to which the characteristics of development matches the details and practices outlined in the PDD. As such,

careful monitoring of any potential development, the watershed, groundwater, surface waters, and surrounding ecosystems will be required to assure optimal environmental outcomes.

Preface:

Christopher J. Gobler is a professor within the School of Marine and Atmospheric Sciences (SoMAS) at Stony Brook University. He received his M.S. and Ph.D. from Stony Brook University in the 1990s. He began his academic career at Long Island University (LIU) in 1999. In 2005, he joined Stony Brook University as the Director of Academic Programs for SoMAS on the Stony Brook – Southampton campus. In 2014, he was appointed as the Associate Dean of Research at SoMAS and in 2015, he was named co-Director of the New York State Center for Clean Water Technology. In 2016, he was given the Environmental Champion Award by the US Environmental Protection Agency for his research efforts and was named the 40th most influential person on Long Island by the Long Island Press. In 2017, he was awarded the Endowed Chair in Coastal Ecology and Conservation within SoMAS. The major research focus within his group is investigating how anthropogenic activities such as climate change, eutrophication, and the over-harvesting of fisheries alters the ecological functioning of coastal ecosystems. He has been researching these topics on Long Island for 25 years and has published more than 150 peer-reviewed manuscripts in international journals on these subjects. He has been calculating nitrogen loads to water bodies across Long Island for more than 20 years.

Background on regional groundwater and surface waters:

Current conditions

'The Hills in Southampton' is comprised of nearly 500 acres of undisturbed Pine Barrens in the town of East Quogue. Beyond the intrinsic value of open space and the ecosystem services and benefits of the Long Island Pine Barrens, this property has numerous benefits to water quality in the region. The natural vegetation on this property acts as a natural filter for nitrogen and other contaminants deposited from the atmosphere. This is clear from the levels of nitrogen and general contaminant currently present in the Suffolk County Water Authority's groundwater wells on Malloy Drive which show exceedingly low levels of nitrogen (< 0.5 mg per liter) and undetectable levels of pesticides and other organic compounds[1]. In contrast, other groundwater in the region has been contaminated by various land use processes. For example, the upper glacial aquifer in regions away from the Hills such as the SCWA Spinney Road well field is already contaminated with high levels of nitrate and perchlorate to the point Suffolk County Water Authority has stopped using these wells to deliver drinking water.[1]. Unfortunately, more than 100 families in East Quogue with private wells rely on upper glacial aquifer for drinking water.[1]

The proposed development in The Hills is located 1,500 feet from Weesuck Creek and western Shinnecock Bay and groundwater travels times from land to bay in this region are less than five years[2] meaning that land use changes on the Hills such as adding homes or a golf course will quickly impact the nearby coastal ecosystems. This being the case, it is important to clearly understand and document the current and recent conditions of these ecosystems. During Hurricane Sandy, the waters of Shinnecock Bay crossed Montauk Highway in East Quogue, flooded the three major communities on the East Quogue peninsula (Shinnecock Shores, Pinesfield, Pine Neck Landing) and approached Main Street[3]. East Quogue has been fortunate to still have lush stands of salt marsh along the east and west sides of Weesuck Creek. During Sandy, those salt marshes protected East Quogue from a significantly worse flooding scenario than it would have experienced without these marshes[4].

In 2010, NYSDEC declared Shinnecock Bay an impaired waterbody due to excessive wastewater nitrogen loads[5]; total nitrogen levels in the Bay exceed guidance levels set by USEPA[6]. Impairments brought about by high nitrogen loading to western Shinnecock Bay include: Annual toxic brown tides[6], dissolved oxygen levels in summer dangerously low for marine life[6,7], the near complete loss of seagrass beds[8], a critical habitat for fisheries[8], and low densities of hard clams and conditions under which baby shellfish cannot survive[9] . Brown tides in Shinnecock Bay continue to worsen. The brown tide in 2016 was the most intense on record and excessive nitrogen loading will make such events worse in the future. Brown tides have a cascading effect on the marine ecosystem, killing off remaining seagrass and shellfish, which in turn makes the ecosystem

more vulnerable to additional brown tides[6]. Western Shinnecock Bay is one of five places in NYS that experiences paralytic shellfish poisoning (PSP) caused by saxitoxin and was closed by NYSDEC to due to this toxin in 2011, 2012, and 2015.[10] In fact, every year the epicenter of PSP during these events has been in Weesuck Creek in East Quogue. And the PSP event in 2015 was three-fold more toxic than any measurement made to date[10] suggesting that conditions are worsening.

Future threats

Any additional nitrogen loading from land in East Quogue will worsen existing conditions in the bay. Enhanced nitrogen loading will push already high nitrate levels in public and private water supply wells for East Quogue closer to the USEPA federal limit for drinking water[1]. In conducting a state-wide assessment of coastal flooding, NYSDEC released a report in April 2014 that concluded that salt marsh habitats provide critical flood protection to New York coastal communities and that increases in land-to-sea delivery of nitrogen degrades, erodes, and eventually destroys salt marshes[4]. Given the progression of sea level rise, there could be an intensification of flooding risk in East Quogue coastal communities associated with storms, hurricanes, and/or extreme tides with more nitrogen loading. Furthermore, the numerous impairments in Shinnecock Bay including toxic brown tides, low oxygen levels, the loss of eelgrass, and the loss of shellfish will all worsen in Shinnecock Bay with additional nitrogen loads[8,13,14]. Increasing nitrogen loading has been shown to increase the intensity and toxicity of PSP on Long Island.[15] More nitrogen loading in East Quogue could intensify PSP in and around Weesuck Creek leading to larger and/or longer shellfish bed closures. This also creates the risk that citizens of Southampton could become seriously sickened or worse from eating contaminated shellfish. Due to diffusive groundwater flow and tidal exchange, the impacts of enhanced nitrogen loads on surface water will be experienced in regions to the east and west including Hampton Bays, Quogue, and Westhampton Beach. Finally, all of these worsened conditions have serious economic repercussions on tourism, fisheries, restaurants, and even home values[16].

References

1: Suffolk County Water Authority, Spinney Road Well Head tests, 2010-2104; 2. Suffolk County Comprehensive Water Resources Management Plan. 2010. Draft report; 3: USGS Hurricane Sandy Storm Tide mapper. 4: NYSDEC 2014. Nitrogen Pollution and Adverse Impacts on Resilient Tidal Marshlands Technical Briefing Summary. 5: NYSDEC 2010. 303-d List. 6: Suffolk County Department of Health Services 1976-2013. Annual reports of surface water quality. 7: News 12 Water Quality Index Reports, 2014. 8: New York State Department of Environmental Conservation 2009. Seagrass Task Force Final Report. 9: Shinnecock Bay Restoration Project Final report 2013. Stony Brook University. 10: NYSDEC 2011 – 2014. Marine Division annual monitoring of PSP on Long Island. 12: Bowen, J. L., et al. 2007. NLOAD: an interactive, web-based modeling tool for nitrogen management in estuaries. Ecological Applications, 17(sp5), S17-S30. 13: Valiela, I. 2006. Global Coastal Change, Blackwell Publishing. 14: Gobler CJ, Sunda WG. 2012. Ecosystem disruptive algal blooms of the brown tide species, Aureococcus anophagefferens and Aureoumbra lagunensis. Harmful Algae. 14: 36–45; 15: Hattenrath TK, Anderson DA, Gobler CJ. 2010. The influence of nutrients and climate on the dynamics and toxicity of *Alexandrium fundyense* blooms in a New York (USA) estuary. *Harmful Algae* 9: 402–412. 16: Johnston RJ et al. 2002. Valuing Estuarine Resource Services Using Economic and Ecological Models: The Peconic Estuary System Study. Coastal Management, 30:47–65.

Scope of this analysis

This document has been prepared to solely consider the potential impacts of the Hills PDD on groundwater and surface water in the region. Within this realm, the overwhelming majority of this document considers the loading rates of nitrogen that will be a consequence of differing potential land uses of the property given the sensitivity of surface water and habitats to nitrogen loading rates. The author has created a dynamic nitrogen loading model that uses the loading rate constants and assumptions that have been developed as part of the NYSDEC's Long Island Nitrogen Action Plan (LINAP). This plan has been collaboratively developed by CDM Smith, NYSDEC, Suffolk County, Cornell University, USGS, US EPA, and Stony Brook University and represents a scientific consensus among these teams and contains the most up-to-date and best science available on the subject of nitrogen loading within coastal watersheds. The tables and constants used in calculations appear in Table 1. This document comments on the actual contents of the FEIS only. The author acknowledges there are many other very important aspects of the project beyond nitrogen loading that are not considered here.

Current use of properties

Presently, the 591 acres of land that comprise the Hills PDD include open space, Pine Barrens forest, and farmland. My analyses indicate the nitrogen loading rate is 1,200 lbs per year if the farm fields within the property are actively being fertilizer (Gobler, March 2017). If they are not actively being fertilizer, the loading drops to ~660 lbs per year (Gobler, March 2017). Local observations have indicated that the singular farm field on the Parlato property is not used every year and thus not always fertilized. Similarly, it is not clear if the Kracke property under consideration is actively managed and fertilized. Further, the area contains shrubs and ornamentals which are typically fertilizer at a lower rate than row crops and thus at a lower rate than used in the DEIS. Differences between my calculated nitrogen loads and those of the DEIS also arise from the use of a leaching rates for nitrogen different than those that have been accepted by LINAP and a fertilization rate higher than has been accepted by LINAP.

Changes from the DEIS to the FEIS

The FEIS differed from the DEIS with regard to nitrogen impacts of the PDD in five material ways:

1) The FEIS now includes preserving an additional 33 acres of land located at the headwaters of Weesuck Creek. The zoning associated with the parcel is R-40 which would result in an as-of-right yield of 30 homes.

2) The purchase and abandonment of 30 Pine Barrens Credits consistent with the objectives of Central Pines Barrens Program, which eliminates potential nitrogen load associated with 30 single family homes that could be otherwise constructed with these credits.

3) An On-Site Wastewater Treatment System that would remove nitrogen at a level at or below 10mg/L compared to allowable County standard of 19mg/L.
4) The construction of a Sewage Treatment Plant for the local school in addition that would remove nitrogen at a level at or below 10mg/L
5) A fertilizer cap of 2 pounds per year per 1000 square feet for the entire property cleared property.
6) A $1M fund to support community-wide septic upgrades. This final approach had been mentioned in the DEIS but was not part of the analysis provided by the author to the Town of Southampton. For completeness, this is now included here.

Changes to nitrogen loading due to additional nitrogen reducing measures in the FEIS

The analysis of the DEIS indicated the nitrogen loading rates of the PDD would be 4,128 lbs per year (Gobler, March 2017). For consideration of the 'As of Right' development, two scenarios were previously considered: One that included nearly all of the default assumptions made by the DLC consultants and a second considering considered a 'reduced impact' alternative, using some information proposed by the PDD as well as many of these assumptions and conditions within the 'reduced impact' alternative proposed by The Group for the East End for the property. The As of Right development using the DLC default assumptions would yield 3,454 lbs of nitrogen per year a level similar to the level determined by the DLC consultants in the DEIS (3,288 lbs). The reduced impact alternative provides a nitrogen loading rate (~1,700 lbs nitrogen per year) that is roughly half of the As of Right conditions but highly similar to the PDD without the golf course.

Preserving 33 acres of land located at the headwaters of Weesuck Creek

Following the guidance of Southampton Town, the zoning associated with the parcel is R-40 and would result in an as-of-right yield of 30 homes. The nitrogen loading model was used to include a development on this parcel with 30 homes and the associated changes in nitrogen loading to that land that would emanate from wastewater, fertilizer use, and land clearing. The model was run using parameters that were consistent with a higher and lower impact development as outlined within the analyses provided for the DEIS. As pristine, undeveloped forest, this land presently yields < 40 pounds of nitrogen per year. It is assumed any development would include advanced septic systems to treat wastewater to 19 milligrams of nitrogen per liter. If developed with the maximal allowable amount of clearing, above average acreage of lawns, and a mostly year-round residency, such a development would yield 823 pounds of nitrogen per year. If developed more realistically, with a normal amount of clearing (based on Town averages), normal acreage of lawns (based on Town averages), and a realistic mix of seasonal and year-round residency (based on U.S. census data), such a development would yield 384 pounds of nitrogen per year. These totals must be added to the expected 'As of Right' scenarios as they are not part of the Hill PDD plan. This would bring the total nitrogen yield from the maximal As of Right scenario to 4,278 pounds of

nitrogen per year and the yield from the more conservative / realistic development scenario to 2,122 pounds of nitrogen per year.

The purchase and abandonment of 30 Pine Barrens Credits

It has been proposed that DLC will purchase 30 Pine Barrens Credits within the Central Pines Barrens Program, which would eliminate potential nitrogen load associated with 30 single family homes that could be otherwise constructed with these credits. This is a challenging scenario to evaluate given the precise location of the additional homes that could be developed is not fully known. In one scenario, these homes were hypothetically sites on the Hills site as an additional 30 units build in a manner similar to the other units as proposed in the DEIS and FEIS. In this case, if developed to with the maximal allowable amount of clearing, above average acreage of lawns, and a mostly year-round residency using scenarios suggested by DLC consultants within the DEIS, the 30 additional units would yield 852 pounds of nitrogen per year. If developed with lesser impact including a lower amount of clearing, smaller acreage of lawns, and a realistic mix of seasonal and year-round residency, such a development would yield 362 pounds of nitrogen per year. These yields are similar to the hypothetical 33 acres scenarios run above, indicating that if these credits were placed elsewhere, the yields would likely be somewhat similar if the lot sizes were similarly small. More homes or larger lot sizes would yield more nitrogen. Regardless, using the scenarios described here would bring the total nitrogen yield from the maximal As of Right scenario to 5,130 pounds of nitrogen per year and the yield from the more conservative / realistic development scenario to 2,484 pounds of nitrogen per year. It is noted that if the PDD is not approved by the Town of Southampton and if the DLC desired to land the PBC on the Hills property (i.e. the scenario used here), this action would need to be approved by the Town Board and would not be an As of Right alternative without such approval.

An On-Site Wastewater Treatment System for Hills PDD

The FEIS states that the Hills development will be outfitted with a Baswood sewage treatment facility that would remove nitrogen at a level at or below 10 milligrams of nitrogen per liter, lower than the allowable County standard of 19 milligrams of nitrogen per liter. It was estimated in the DEIS that the Hills development would produce 562 pounds of wastewater nitrogen per year using technology that treated to 19 milligrams of nitrogen per liter. Treatment to 10 milligrams of nitrogen per liter would remove an additional 330 pounds of nitrogen per year from the development.

The construction of a Sewage Treatment Plant East Quogue Elementary School

East Quogue elementary school is comprised of ~400 students, ages 5 – 12, and ~100 adults including faculty and staff. The school year is 180 days of the year and the building is fully

occupied by people for approximately six hours per day. Faculty and staff work longer days and some staff are present all year. There are daily activities in the afternoons and evenings as well as special events such as sports, concerts, cub scouts, community meetings, plays, graduation, etc. It is estimated that the collective activities of the school releases 400 pounds of nitrogen from wastewater per year with standard septic tanks and leaching rings to the aquifer. The construction of a sewage treatment facility that treated wastewater to 10 mg N per liter would reduce the wastewater-based nitrogen output from the school to 65 pounds per year, removing 335 pounds of nitrogen per year. It is noted that sewage treatment plant operation can be expensive and that it is not clear who would be responsible for the operation and maintenance of this system.

A fertilizer cap of 2 pounds per year per 1000 square feet

This change effects the nitrogen load of the PDD in two ways. Firstly, it eliminates the possibility of additional nitrogen fertilizer being added to the proposed golf course beyond 2 pounds per year per 1000 square feet in the event that the proposed fertigation approach does not yield the expected level of nitrogen needed, a possibility acknowledged within the DEIS. This removes 500 lbs of nitrogen per year that had been added in the prior analyses given that the ability of fertigation to deliver a set level of nitrogen seems uncertain. This change also reduces the total amount of fertilizer added to the property by 257 lbs given a higher rate that had been planned for the golf course in the DEIS.

A $1M fund to support community-wide septic upgrades

Presently, there is great interest in reducing nitrogen loading from wastewater across Suffolk County and the resent renewal and update of the Community Preservation Funds within the Town of Southampton to include funds for upgrading septic systems will provide funds to convert standard septic systems to new, innovative and alternative systems that remove greater amounts of nitrogen, specifically to levels below 19 milligrams per liter as per the recently approved Article 19 of the Suffolk County health code. The Hills PDD proposed to spend $1M on upgrading septic systems within the East Quogue watershed. While off-the-shelf septic systems that remove large amounts of nitrogen approved by Suffolk County can cost $20,000 installed (e.g. South Fork Septic Services, East Hampton, NY) additional costs may include landscaping, marking out utilities, pump out and abandonment of older systems, and electrical updates / installations. Hence, a cost of $25,000 per septic upgrade was used for the purposes of this analyses, which would result in 40 homes in East Quogue being upgraded as a result of the PDD. Given the known rates of seasonal occupancy for East Quogue as reported by Suffolk County's Department of Planning, 40 East Quogue homes with standard septic systems produce ~562 pounds of nitrogen annually, but would release 178 pounds of nitrogen annually with a system reducing down to 19 milligrams of nitrogen per liter, resulting in 384 pounds of nitrogen removed

annually. It is notable that the upgrading of septic systems is presently voluntary and the extent to which associated nitrogen reductions are achieved will be a function of how many homeowners in the East Quogue watershed take advantage of this program. Even if this program along, with any programs developed by Suffolk County and/or the Town of Southampton, cover the full cost of installation, installing such systems require annual maintenance and inspection fees. How this may impact program participation is unknown.

Fertigation:

Fertigation is a novel and innovative approach for groundwater remediation and holds promise to be one of many potential mitigation strategies used on Long Island to reduce the loading of nitrogen from land to sea. If this experimental approach is successful for The Hills, it would a project benefit, reducing the net nitrogen release from this project further than documented here.

Summary:

Collectively, the additional nitrogen mitigation measured included in the FEIS as interpreted by the Town of Southampton would yield nitrogen loads of 2,500 to 5,100 pounds of nitrogen per year for lower and higher As of Right development scenarios whereas the proposed Hills PDD would yield 2,300 pounds of nitrogen per year. This equates to a lower yield than the lower impact As of Right development but is still more than double the current yield of the forest and farmland. It should be noted that if the changes since the DEIS were made to the lower impact, As of Right scenario, this would yield lower nitrogen levels than the PDD.

The total calculation of nitrogen impacts and mitigation for this project are complicated by the challenge of attempting to quantify several inexact variables under differing regulatory requirements, while simultaneously making judgments about effective implementation, voluntary program participation, long-term enforcement, and site management over time. There are uncertainties in this analysis with regard to where the Pine Barrens Credits to be purchased would 'land'. Further, it is not known how many homeowners will participate in the septic upgrade program within the watershed. It is notable that full execution of all six changes in the FEIS considered in this analysis are needed to provide a nitrogen yield for the PDD that was lesser than the lower impact, As of Right development, meaning that the loss of any one of these changes would change the final outcome of this analysis.

Future considerations:

All of these calculations are, of course, theoretical and the extent to which the actual nitrogen yields on the Hills property match these calculations will be partly a function of the extent to which the characteristics of development matches the details and practices outlined in the PDD. Moreover, as more detailed information of the manner in which the Hills PDD may be developed

and operated become available and as actual data is collected, these hypothetical scenarios and calculations could and probably should be refined. If the Hills PDD is approved and The Hills at Southampton is developed, stringent enforcement along with careful monitoring of the development, watershed, groundwater, surface waters, and surrounding ecosystems will be required to assure optimal environmental outcomes.

Table 1. Nitrogen yields for the Hills property for the DEIS, as well as specific changes made to the FEIS and considered in this report for the Town of Southampton. Values are in pounds of nitrogen per year.

	Existing	Hill PDD	As of right, maximu	As of right, lower	Comment
DEIS	1,210	4,128	3,455	1,738	Reported in March
Fertilizer cap	1,210	3,371	3,455	1,738	2 lbs/1000 sq. ft. cap on applied fertilizer
Hills STP	1,210	3,041	3,455	1,738	STP for the PDD treating to 10 mg/l.
School STP	1,210	2,706	3,455	1,738	STP for the school treating to 10 mg/l.
Community septic upgrades	1,210	2,322	3,455	1,738	Using new technologies that treat to 19 mg/l.
33 acres with 30 homes	1,210	2,322	4,238	2,122	Build out of 30 homes on 33 acres
Pine Barrens Credits, 30 homes	1,210	2,322	5,130	2,484	30 additional units via purchase of Pine Barrens credits
FINAL	**1,210**	**2,322**	**5,130**	**2,484**	Total yields

Exhibit 4 – Fred Thiele Letter to Zoning Board of Appeals 3/17/18

LONG ISLAND
PINE BARRENS
SOCIETY

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March 19, 2018

Southampton Town Planning Board
Southampton Town Hall
116 Hampton Road
Southampton, NY 11968

To: Members of the Southampton Town Planning Board
Re: Lewis Road Planned Residential Development (PRD) Pre-Application Submission Comments
From: Richard Amper, Executive Director

Please include the enclosed letter from New York State Assemblyman Fred Thiele in the record. Thank you.

Richard Amper

From: Fred Thiele [fwt1953@yahoo.com]
Sent: Saturday, March 17, 2018 2:01 PM
To: Richard Amper
Subject: Lewis Road PRD
Attachments: Amper letter.docx

Dick:

Attached is the response to your letter.

Hard copy will be mailed on Monday.

F

March 17, 2018

Richard Amper
Executive Director
Long Island Pine Barrens Society
547 East Main Street
Riverhead, NY 11901

Re: Southampton Open Space Law (Chapter 247, Section 247-9)

Dear Dick:

Thank you for your letter of March 14, 2018 regarding the above-referenced local law and inquiring whether a golf course would constitute "open space" under the provisions of Section 278 of the State Town Law and Chapter 247 (Open Space) of the Southampton Town Code.

I have a unique perspective on this particular issue. Before 1981, mandatory open space subdivisions were not permitted in New York State. An open space subdivision required the consent of the landowner and could not be mandated on the landowner by a Town.

In 1981, as counsel to Assemblyman John Behan, I drafted a special act of the State Legislature for the Town of East Hampton that permitted the Town to mandate open space subdivisions. The legislation was approved. The Town of Southampton quickly requested the same legislative authority, which I also drafted. Soon after, the State Town Law was amended so that every Town in the state was authorized to mandate open space subdivisions.

As the Southampton Town Attorney between 1982 and 1987, I drafted the Open Space Law for the Town of Southampton. It was enacted in 1982 and updated in 1984 as part of the 1984 Comprehensive Plan Update. I was also the East Hampton Town Planning Board and Zoning Board of Appeals Attorney between 1982 and 1987.

In both towns, I was asked to opine whether or not a golf course constituted "open space" under their respective Open Space laws. The

issue arose in the context of whether land devoted to a golf course use could be used to meet the various percentage requirements for open space, mandated under the statute. It was my opinion that in both towns a golf course did not constitute open space and that the statute prohibited golf courses from being included in the open space calculation. To my knowledge, both towns have followed that interpretation to this day.

Under Section 278 of the State Town Law, the Planning Board "may establish such conditions on the ownership, **use**, and maintenance of such open lands.....to assure the **preservation** of the **natural and scenic qualities** of such open lands. The Town Board may require approval of those conditions. Chapter 247 of the Southampton Town Code enacted by the Southampton Town Board constitutes the approval of conditions for the use of open space.

Section 247 of the State General Municipal Law further defines open spaces and areas as follows: "'open space' or 'open area' is any space or area characterized by (1) **natural** scenic beauty or, (2) whose **existing openness, natural condition, or present state of use, if retained**, would enhance the present or potential value of abutting or surrounding urban development, or would maintain or enhance the **conservation of natural** or scenic resources. For purposes of this section natural resources shall include but not be limited to agricultural lands defined as open lands actually used in bona fide agricultural production.

Consistent with state law, Section 247-9 of the Southampton Town Code defines what uses may be approved for open space. Section 247-9 provides as follows:

The Planning Board may approve uses for open space, and these uses will be clearly indicated on the final map.
A. The Planning Board may approve recreational use, such as wooded park areas, bridle paths, hiking trails, beach areas, etc.
B. The Planning Board may approve conservational uses, such as open woodland, wetlands, dune areas or farm fields.
C. The Planning Board may approve cultural aspects, such as historic places, buildings and works of art and paleontological and archaeological sites and such open spaces which will assure that each of the above cultural aspects are adequately protected in the public interest.
D. Areas for active recreation which are to contain substantial improvements, structures, impervious surfaces and other alteration from their natural state shall not constitute open space hereunder or for the purpose of § 247-7 hereof.

In the early 1980's as Southampton Town Attorney, it was my opinion that a golf course was "active recreation" which required substantial improvements to the land, structures, and alterations from the natural state of the land. My opinion has not changed.

The statute does permit minor uses of land to enhance the use of the land for **passive** recreation such as bridle paths, hiking trails, beaches, wooded parks. In conclusion, the proper use of open space areas, pursuant to an open space subdivision, is clearly outlined in state law, as well as, Southampton Town local law implementing the state law. These lands are to remain in their natural state, with minor improvements to foster public access for passive recreational purposes.

Golf courses simply don't constitute such a use. This is clear from both the legislative history and the clear meaning of the language used in the statutes. A contrary interpretation would torture the meaning of the English language beyond all recognition.

I trust this responds to your inquiry.

Sincerely,

Fred W. Thiele, Jr.
Member of Assembly

Exhibit 5 – Excerpt from The Hills at Southampton MUPDD Application Draft EIS

The project will be clustered on 166.86 acres (28.23%)[3] on the central and southern parts of the Hills South Parcel and on the Kracke Property (hereafter, when discussing this portion of these combined sites in reference to the proposed development, this area will be referred to as the *"Hills South Parcel/Kracke Property"*), so that the project can provide 424.14 acres of retained natural open space (71.77%). It should be noted that the project will clear only 122.80 acres of existing natural vegetation, and will revegetate 33.17 acres of existing disturbed land to create additional natural open space. This is achieved by:

- revegetating 15.78 acres of agricultural land on the Parlato Property; and
- revegetating the 17.39 acres of combined unvegetated, agricultural and brushy cleared land on the Hills South Parcel/Kracke Property.

Access to the site will be gained from an existing mapped but not constructed road associated with the Subdivision Map of Kijowski Family Farm which is immediately west of and abuts the Kracke Property (see Figures 1-2 and 1-3). As discussed in Section 1.6.3, this roadway is designated "Old Field Road."

1.3.2 Architecture and Aesthetics

The project will feature attractive, coordinated architectural styling for the clubhouse, residential structures, and common areas (see Appendices B-1 and B-2). It is intended and expected that the project's architecture would, in coordination with landscaping, create a visually interesting and desirable environment for occupants and visitors. The development areas of the subject property are distant from Lewis Road and will not be readily visible from most of the community; however, the intent is that the project will blend with the natural environment and contribute positively to the character of the community in general through quality architectural design, pleasing and sustainable landscape design and significant retention of natural features of the site. Quality-of-life and respect for the natural environment will be the central tenets of the project, and this emphasis will be evident in the use of thoughtful building design, appropriate landscaping, well-equipped private residential recreational spaces and installation of attractive site entrances and external appearance. The materials in Appendix B-3 exemplify the types of building character, street furniture and amenities (e.g., lighting fixtures, signage, benches, trash receptacles, kiosks, etc.) and overall aesthetic effect to which the Proposed Project will aspire.

1.3.3 Yield Analysis

Although the proposed project is not requesting an increase in yield or density from the current zoning yield, the proposed project could not be developed if the site were to remain in its existing CR-200 zoning, as its development requirements do not provide the flexibility of uses to allow for the amount and type of development that DLC proposes. A PDD was recognized in the East Quogue LUP and GEIS as a means to achieve the recommended golf course and resort development other than the recently up-zoned single-family residential use.

[3] Includes existing cleared areas that are not used for development.

Exhibit 6 – Reduced Impact Alternative Comparisons submitted as part of SEQRA by Group for the East End

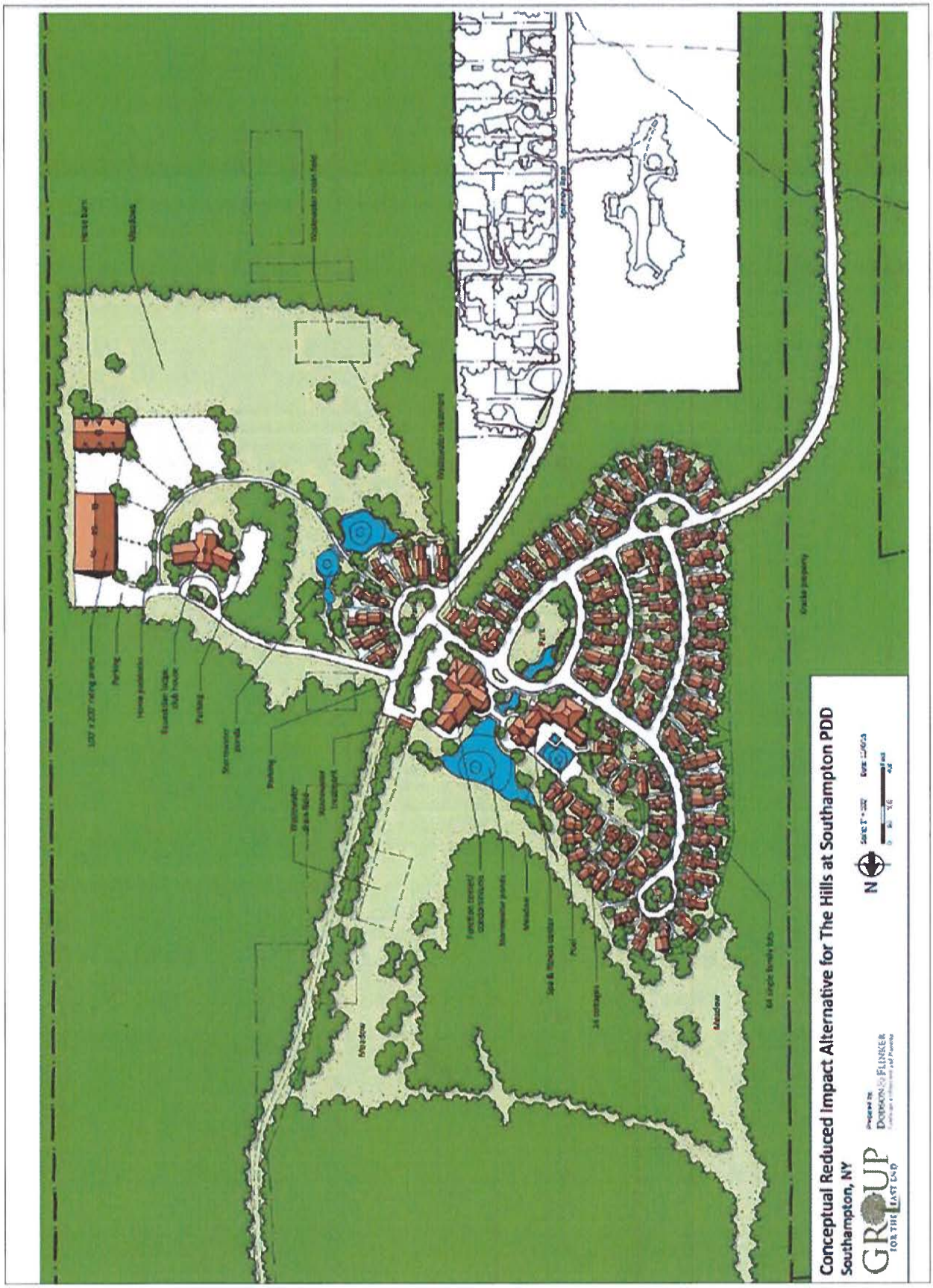

Exhibit 6 – Reduced Impact Alternative Comparisons submitted as part of SEQRA by Group for the East End

Exhibit 6 – Reduced Impact Alternative Comparisons submitted as part of SEQRA by Group for the East End

Comparison of Impacts: Discover Land Company PDD vs. Conceptual Reduced Impact Alternative

Impacts	Discovery PDD		Reduced Impact Alternative		Comparison: Reduced Impact Alternative vs. Discovery PDD
	Acres	% of Site	Acres	% of Site	
Site Development Total Area	166.86	28.23	23.53	4	86% less developed area
Cleared Areas	166.86	28.23	45	7.61	74% less clearing
Fertilized Turf	88.53	15%	0	0	100% less fertilized turf
Preserved Contiguous Open Space	276	48%	546	92	100% more preserved contiguous open space
Preserved Open Space incl. fragmented areas	424	72%	546	92	29% more open space incl. fragmented areas
		Units		Units	
Water Usage-	53,810,179	gallons per year	11,961,650	gallons per year	78% less water usage
Sewage Flow - bldgs. only	41,814	gallons per day	31,770	gallons per day	25% less sewage flow from buildings
Design flow including turf	65,214	gallons per day	31,770	gallons per day	51% less overall wastewater flow
Nitrogen loading					
Turf	655.1	pounds/year	0	pounds/year	100% less nitrogen loading from turf
Sewage from buildings	Variable by computation model				72 % to 88% less nitrogen loading buildings
Residences total number	118	residences	88	residences	25% fewer residences
Total size of residences	435,800	square ft.	532,800	square ft.	22% greater combined sf of residences
Traffic wkdy PM/Sat peak	103/125	trips per hour	23/31.5	trips per hour	78% to 75% less peak hour traffic

GROUP FOR THE EAST END

Protecting the nature of the place you love

GroupfortheEastEnd.org

Prepared by Fine Arts Sciences for Group for the East End, November 2016

DRAFT

CENTRAL PINE BARRENS JOINT PLANNING & POLICY COMMISSION

October 16, 2019

Jacqui Lofaro, Chairperson
Town of Southampton Planning Board
116 Hampton Road
Southampton, NY 11968

RE: Lewis Road Planned Residential Development (PRD) Subdivision

Dear Chairperson Lofaro:

This letter provides the Central Pine Barrens Commission's comments on the Preliminary Application for the Lewis Road Planned Residential Development Subdivision.

Review of Comprehensive Land Use Plan Standards and Guidelines

This review is based on the information and material referred to the Commission by the Town and is subject to change if additional information is received and/or if the Project elements change. Nothing herein shall serve to limit the Commission's review of the Project under its Assertion of Jurisdiction.

The SEQRA Record consists of the materials analyzing the impacts of this Project and its predecessor, the Hills at Southampton.

Standard 5.3.3.1.1 Suffolk County Sanitary Code Article 6 compliance

All development proposals subject to Article 6 of the Suffolk County Sanitary Code shall meet all applicable requirements of the Suffolk County Department of Health Services. Projects which require variances from the provisions of Article 6 shall meet all requirements of the Suffolk County Department of Health Service's Board of Review in order to be deemed to have met the requirements of this standard.

- Compliance to be demonstrated upon Suffolk County Department of Health Services approval. Absent such approval, the Project does not conform.

Standard 5.3.3.1.2 Sewage treatment plant discharge

Where deemed practical by the County or State, sewage treatment plant discharge shall be outside and downgradient of the Central Pine Barrens. Denitrification systems that are approved by the New York State Department of Environmental Conservation or the Suffolk County Department of Health Services may be used in lieu of a sewage treatment plant.

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11978

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- Compliance to be demonstrated upon Suffolk County Department of Health Services approval. Absent such approval, the Project does not conform.
- The Applicant has not demonstrated the practicability or impracticability of locating the STP discharge outside and downgradient of the Central Pine Barrens.

Guideline 5.3.3.1.3 Nitrate-nitrogen goal

A more protective goal of two and one half (2.5) ppm may be achieved for new Projects through an average residential density of one (1) unit per two (2) acres (or its commercial or industrial equivalent), through clustering, or through other mechanisms to protect surface water quality for Projects in the vicinity of ponds and wetlands.

- The Project does not appear to comply because the Applicant has not demonstrated that the Project will conform with the 2.5 ppm nitrate-nitrogen goal as measured over the entire Project Site.

- The Record contains apparent discrepancies between projected sewage effluent nitrogen concentrations and treatment technologies potentialities. The Applicant should provide the amount of nitrate-nitrogen that will be recharged by the Project.

Standard 5.3.3.2.1 Suffolk County Sanitary Code Articles 7 and 12 compliance

All development projects must comply with the provisions of Articles 7 and 12 of the Suffolk County Sanitary Code, including any provisions for variances or waivers if needed, and all applicable state laws and regulations in order to ensure that all necessary water resource and wastewater management infrastructure shall be in place prior to, or as part of, the commencement of construction.

- Compliance to be demonstrated upon Suffolk County Department of Health Services approval. Absent such approval, the Project does not conform.

Standard 5.3.3.3.1 Significant discharges and public supply well locations.

The location of nearby public supply wells shall be considered in all applications involving significant discharges to groundwater, as required under the New York State Environmental Conservation Law Article 17.

- Compliance to be demonstrated upon Suffolk County Department of Health Services and New York State Department of Environmental Conservation (NYSDEC) approval. Absent such approvals, the Project does not conform.

Guideline 5.3.3.3.2 Private well protection

The Suffolk County Department of Health Services' guidelines for private wells should be used for wellhead protection.

- Compliance to be demonstrated upon Suffolk County Department of Health Services and NYSDEC approval. Absent such approvals, the Project does not conform.

Standard 5.3.3.4.1 Nondisturbance buffers

Development proposals for sites containing or abutting freshwater or tidal wetlands or surface waters must be separated by a nondisturbance buffer area which shall be no less than that required by the New York State Tidal Wetland, Freshwater Wetland, or Wild, Scenic and Recreational Rivers Act or local ordinance. Distances shall be measured horizontally from the wetland edge as mapped by the New York State Department of Environmental Conservation, field delineation or local ordinance. Projects which require variances or exceptions from these state laws, local ordinances and associated regulations, shall meet all requirements imposed in a permit by the New York State Department of Environmental Conservation or a municipality in order to be deemed to have met the requirements of this standard.

- The Project does not appear to comply because the Applicant has not demonstrated whether freshwater wetlands exist on the Project Site.

  Stream reaches of Weesuck Creek are shown on United States Fish and Wildlife Services wetland maps and United States Geological Survey topographic maps on the Project Site. The Record shows the entire site is in the Weesuck Creek watershed. Weesuck Creek's reaches traverse the site. The Project Site contains at least two swales, which are described in the Record as "normally dry." The Applicant should provide information as to whether water ponds seasonally or after significant rain events in the reaches of Weesuck Creek or in the two swales on the Project Site. If so, appropriate buffers should be provided.

- The presence or absence of vernal pond(s) and forested wetland habitat, especially in the southern portion of the Project Site, should be verified on site.

- The Planting and Lighting Plans prepared by N&P dated December 18, 2018 identify "wetlands." Explain if the proposed ponds will be considered wetlands or if other wetlands were identified or are proposed.

Standard 5.3.3.4.2 Buffer delineations, covenants and conservation easements

Buffer areas shall be delineated on the site plan, and covenants and/or conservation easements, pursuant to the New York State Environmental Conservation Law and local ordinances, shall be imposed to protect these areas as deemed necessary.

- The Project conforms to the Standard, but efficacy can be enhanced through the requirement that buffer areas be protected under conservation easement rather than by covenants and restrictions.

Standard 5.3.3.4.3 Wild, Scenic and Recreational Rivers Act compliance

Development shall conform to the provisions of the New York State Wild, Scenic and Recreational Rivers Act, where applicable. Projects which require variances or exceptions under the New York State Wild, Scenic and Recreational Rivers Act shall meet all requirements imposed by the New York State Department of Environmental Conservation in order to be deemed to have met the requirements of this standard.

- Not applicable.

Guideline 5.3.3.4.4 Additional nondisturbance buffers

Stricter nondisturbance buffer areas may be established for wetlands as appropriate.

- Same comment as under Standards 5.3.3.4.1 and 5.3.3.4.2 above.

Standard 5.3.3.5.1 Stormwater recharge

Development Projects must provide that all stormwater runoff originating from development on the property is recharged on site unless surplus capacity exists in an off site drainage system.

- Compliance to be demonstrated upon approval of a Stormwater Pollution Prevention Plan by the NYSDEC. Absent such approval, the Project does not conform.

Guideline 5.3.3.5.2 Natural recharge and drainage

Natural recharge areas and/or drainage system designs that cause minimal disturbance of native vegetation should be employed, where practical, in lieu of recharge basins or ponds that would require removal of significant areas of native vegetation.

- The Project does not appear to comply because the Project does not cause minimal disturbance of native vegetation in creating natural drainage recharge areas and/or drainage system designs since up to 200,000 cubic yards of materials will be removed to create the golf course and 48,500 cubic yards of materials will be removed to create stormwater and drainage structures.

- The Applicant has not demonstrated whether the Project can utilize existing natural low points and natural topography for drainage where feasible to avoid clearing, excavation and construction of 43 drainage areas on the Project Site.

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Guideline 5.3.3.5.3 Ponds

Ponds should only be created if they are to accommodate stormwater runoff, not solely for aesthetic purposes.

- The Project does not appear to comply because the applicant states that "[i]n addition to golf play and drainage functions, the two ponds will provide an aesthetic and functional role for visual interest in proximity to the clubhouse and residential units."

Guideline 5.3.3.5.4 Natural topography in lieu of recharge basins

The use of natural swales and depressions should be permitted and encouraged instead of excavated recharge basins, whenever feasible.

- The Project does not appear to comply because the Applicant failed to demonstrate that it is not feasible to use natural swales and depressions for this purpose.

- The Project Site contains natural knob and kettle topography and benefits from significant topographic features, with elevations of 25 feet in the southerly portions of the site to 230 feet in the northerly portions of the Project Site. The Project should utilize existing natural topography, swales and depressions for drainage where feasible rather than clearing more than seven acres for drainage reserve areas and an additional area of approximately seven acres of ponds for stormwater management purposes.

Guideline 5.3.3.5.5 Soil erosion and stormwater runoff control during construction

During construction, the standards and guidelines promulgated by the New York State Department of Environmental Conservation pursuant to state law, which are designed to prevent soil erosion and control stormwater runoff, should be adhered to.

- Compliance to be demonstrated upon approval of a Stormwater Pollution Prevention Plan by the NYSDEC. Absent such approval, the Project does not conform.

Standard 5.3.3.6.1 Vegetation Clearance Limits

The clearance of natural vegetation shall be strictly limited. Site plans, surveys and subdivision maps shall delineate the existing naturally vegetated areas and calculate those portions of the site that are already cleared due to previous activities.

Areas of the site proposed to be cleared combined with previously cleared areas shall not exceed the percentages in Figure 5-1. These percentages shall be taken over the total site and shall include, but not be limited to, roads, building sites and drainage structures. The

clearance standard that would be applied to a Project site if developed under the existing residential zoning category may be applied if the proposal involves multi-family units, attached housing, clustering or modified lot designs. Site plans, surveys and subdivision maps shall be delineated with a clearing limit line and calculations for clearing to demonstrate compliance with this standard.

To the extent that a portion of a site includes Core property, and for the purpose of calculating the clearance limits, the site shall be construed to be the combined Core and CGA portions. However, the Core portion may not be cleared except in accordance with Section 5.2 of the Plan.

- The Project does not appear to comply based on the information provided. The Project Site consists of 178 separate tax map parcels. The applicant should provide a table containing information on each parcel including its area, its 1995 zoning, and its current clearing status and whether the parcel will be cleared and, if the parcel is to be developed, with what. This information should include the percentage and acreage to be cleared and percentage and acreage to remain natural on the Project Site.

- The Applicant must confirm that existing cleared area is accounted for in the overall clearing limit. Cleared areas must include haul roads, paper roads, construction roads, parking lots, drainage reserve areas, bioswales, raingardens, stormwater management structures, ponds, expansion area for the sewage treatment plant, trailhead parking lot, well field, and other development and infrastructure.

- Explain how the Smith Avenue right of way and Spinney Road segment traversing the Project Site will be incorporated into the Project and affect the clearing standard.

Standard 5.3.3.6.2 Unfragmented open space

Subdivision and site design shall support preservation of natural vegetation in large unbroken blocks that allow contiguous open spaces to be established when adjacent parcels are developed. Subdivision and site designs should also be configured in such a way so as to prioritize the preservation of native pine barrens vegetation to the maximum extent practicable.

For the purpose of this paragraph, native pine barrens vegetation shall include pitch pines and various species of oak trees, understory and ground cover plants such as blueberry, wintergreen, bearberry and bracken fern, grasses and sedges such as little bluestem, Pennsylvania sedge and indian grass as well as those ecological communities listed in sections 5.6 and 5.7 in Chapter 5, Volume 2 of the Plan.

It is recognized that the preservation of nonnative but ecologically important habitats may be consistent with the intent and goals of the Plan when such action would result in

the creation of large contiguous natural open space areas and or the protection of rare, threatened or endangered species or their habitat.

- The Project does not appear to comply. The majority of the proposed open space, 241 acres or 55%, in the Project (located within the Hills South and Kracke sites) does not appear to be unfragmented. Rather, it consists of more than 17 separate and discrete islands and corridors comprised of woody vegetation, ranging in size from approximately 11,000 square feet to an average of approximately two acres, which fragments open space. Some areas are long and narrow and some are circular. This fragmented open space is interspersed among the developed and natural areas in between housing units, the golf course, roads, and other buildings, facilities, structures, infrastructure and disturbance.

- To increase the amount of unfragmented open space and better align with the Standard, the Applicant may wish to consider moving the proposed northerly three golf course holes to a more southerly portion open space. The holes could be moved further southward in the rear of units on the Kracke property (Lots 1 through 7, HOA 3 in the map, and in the area of proposed HOA 5 in the southerly area of the Project). This would avoid fragmentation of open space in the northerly area, provide a greater cluster of development and open space, and avoid some development on steep slopes.

Standard 5.3.3.6.3 Fertilizer-dependent vegetation limit

No more than 15% of an entire development Project site shall be established in fertilizer-dependant vegetation including formalized turf areas. Generally, nonnative species require fertilization therefore, planting of such nonnative species shall be limited to the maximum extent practicable. The use of the nonnative plants in Figure 5-2 is specifically not recommended.

- The Project demonstrates compliance with this Standard

Standard 5.3.3.6.4 Native Plantings

Development designs shall consider the native planting suggestions contained in Figure 5-2 of the Central Pine Barrens Comprehensive Land Use Plan.

- The Project demonstrates compliance with this Standard. The Project provides the opportunity to transplant and reuse existing native plants and seeds as the Project develops. Clearing and grading activity will result in the removal of 167 acres of vegetation and soil resources containing native seeds and plants that could be reused to some extent.

- Strive to utilize native genotypes and transplant and reuse existing cleared material where feasible.

DRAFT

Standard 5.3.3.7.1 Special species and ecological communities

Where a significant negative impact upon a habitat essential to those species identified on the New York State maintained lists as rare, threatened, endangered or of special concern, or upon natural communities classified by the New York State Natural Heritage Program as G1, G2, G3 or S1, S2 or S3, or on any federally listed endangered or threatened species is proposed, appropriate mitigation measures as determined by the appropriate state, county or local government agency shall be taken to protect these species.

- Compliance to be demonstrated upon approval by the NYSDEC and the Town of Southampton of the Applicant's plan to mitigate impacts to protected species present on the Project Site.

- Please confirm if and how the habitat of the Federally-listed and New York State-listed Threatened Species, the Northern Long-Eared Bat (NLEB), will be protected. NLEB habitat for roosting and foraging is present on the Project Site. The Record states, "There is potential for this species to utilize the site for maternity roosting and foraging activities."

- The Record identified New York State Listed plant species on the Project Site. Please confirm if State-listed species defined as rare and threatened plant species will be protected and, if so, describe how.

- The Record identified New York State Listed wildlife species including species defined as Special Concern on the Project Site, as well as wildlife identified in the State list of Species of Greatest Conservation Need. Please confirm if State-listed wildlife species will be protected and, if so, how.

- The Scrub Oak Map in the Record identified scrub oak habitat for the coastal barrens buck moth, a NYS-listed Species of Special Concern present on the Project Site. However, buck moth surveys performed in 2008, 2009, and 2014, which are outdated, did not identify individuals of this species. It is unknown if the species has populated the site at this time in 2019.

Guideline 5.3.3.8.1 Clearing envelopes

Clearing envelopes should be placed upon lots within a subdivision so as to maximize the placement of those envelopes on slopes less than ten percent (10%).

- The Project does not appear to comply because it does not maximize the development of lots, roads, and the golf course and other facilities on slopes of less than 10%, as per the maps titled "Map of Property, Location Plan and Key Map Preliminary Plan" Sheet C101 and "Overall Development Plan Preliminary Plat" Sheet C102, prepared by Nelson & Pope dated December 18, 2018.

Guideline 5.3.3.8.2 Stabilization and erosion control

Construction of homes, roadways and private driveways on slopes greater than ten percent (10%) may be approved if technical review shows that sufficient care has been taken in the design of stabilization measures, erosion control practices and structures so as to mitigate negative environmental impacts.

- The Project may not comply with this Guideline because construction will occur on slopes greater than 10%; however, it is not clear if the development was designed to take sufficient care to mitigate negative environmental impacts. A SWPPP will be submitted to NYSDEC for review and approval. Input from NYSDEC staff reviewing the SWPPP may provide guidance on this matter.

Guideline 5.3.3.8.3 Slope analyses

Project review is facilitated if submissions contain a slope analysis showing slopes in the ranges 0-10%, 11-15% and 15% and greater. In areas with steep slopes, slope analysis maps should be required. This can be satisfied with cross hatching or shading on the site plan for the appropriate areas.

- The Project does not appear to comply because the materials provided to the Commission do not provide the required information.

- Please quantify and provide the amount of steep slope area to be removed.

Guideline 5.3.3.8.4 Erosion and sediment control plans

Erosion and sediment control plans should be required in areas of fifteen percent (15%) or greater slopes.

- Compliance to be demonstrated upon approval of a Stormwater Pollution Prevention Plan by the NYSDEC. Absent such approval, the Project does not conform.

Guideline 5.3.3.8.5 Placement of roadways

Roads and driveways should be designed to minimize the traversing of slopes greater than ten percent (10%) and to minimize cuts and fills.

- The Project does not appear to comply based on the information provided.

- The Project's roads and driveways traverse slopes greater than 10%. The Applicant must demonstrate that the traversing of slopes greater than 10% has been minimized by quantifying the amount of steep slopes to be disturbed.

Guideline 5.3.3.8.6 Retaining walls and control structures

Details of retaining walls and erosion control structures should be provided for roads and driveways which traverse slopes greater than ten percent (10%).

- The Project does not appear to comply based on the information provided.

Standard 5.3.3.9.1 Receiving entity for open space dedications

Applications must specify the entity to which dedicated open space will be transferred.

- The Project demonstrates compliance with the Standard, but efficacy can be enhanced through the requirement that buffer areas be protected under conservation easement rather than by covenants and restrictions. The dedication of 188 acres of open space to the Town complies.

Guideline 5.3.3.9.2 Clustering

Municipalities are strongly urged to maximize the use of the clustering technique where its usage would enhance adjacent open space or provide contiguous open space connections with adjacent open space parcels.

- The Project does not appear to comply. The Project's design can be reconfigured to maximize clustering of the development areas to enhance open space and provide connectivity to the adjoining public lands on the east and north sides of the Project Site.

- Notwithstanding that the Applicant characterizes 428 acres of the Project Site as open space, the majority, 240 acres (55%) are in an unclustered pattern because the golf course and residential development create narrow buffer strips and islands of vegetation among developed areas within the Project Site. The remaining 188 acres (44%) are clustered.

- The Record contains a cluster plan prepared by NP&V, Fazio and Vita titled "As-of-Right Plans" dated March 5, 2014 for the development absent the golf course. Absent the golf course the site demonstrated clustering to the maximum extent.

The golf course fragments open space and if its layout could be examined to cluster more tightly to create significantly fewer acres of fragmented open space and connect open space to adjoining public lands, the Applicant may be able to demonstrate conformance.

Guideline 5.3.3.9.3 Protection of dedicated open space

Proposed open space should be protected with covenants, conservation easements or dedications that specify proper restrictions on its use and contingencies for its future management.

- The Project demonstrates conformance with the Guideline, but efficacy can be enhanced through the requirement that buffer areas be protected under conservation easement rather than by covenants and restrictions.

Guideline 5.3.3.10.1 Best management practices

Any existing, expanded, or new activity involving agriculture or horticulture in the Compatible Growth Area should comply with best management practices, as defined herein, and relevant requirements including local law. Best management practices are, for purposes of this CLUP, the same practices stated in the most recent version of Controlling Agricultural Nonpoint Source Water Pollution in New York State (Bureau of Technical Services and Research, Division of Water, New York State Department of Environmental Conservation, 1991 and as later amended).

- Not applicable since the agricultural use will be abandoned in the Project.

Guideline 5.3.3.11.1 Cultural resource consideration

Development proposals should account for, review, and provide protection measures for:

1. *Established recreational and educational trails and trail corridors, including but not limited to those trail corridors inventoried elsewhere in this Plan.*
2. *Active recreation sites, including existing sites and those proposed as part of a development.*
3. *Scenic corridors, roads, vistas and viewpoints located in Critical Resource Areas, and along the Long Island Expressway, Sunrise Highway, County Road 111 and William Floyd Parkway.*
4. *Sites of historical or cultural significance, including historic districts, sites on the State or National Registers of Historic Places, and historic structures listed on the State or National Registers of Historic Places, or recognized by local municipal law or statute.*

DRAFT

5. *Sensitive archaeological areas as identified by the New York State Historic Preservation Office or the New York State Museum.*

- The Project does not appear to comply with subpart 1 of this Guideline.
    - Existing trails run adjacent to the easterly Project Site boundary. However, no buffer is provided to protect trail corridors.
    - Identify and confirm if public access to the portion of Spinney Road running through the Project Site will be eliminated. Will this portion also be abandoned?
- The Project does not appear to comply with subpart 5 of this Guideline because the New York State Office of Parks, Recreation and Historic Preservation (SHPO) sign off is required.
    - An archaeological survey was performed for the Project. The Record states, "Based upon soil type, topography, distance to water, an Indian foot trail and prehistoric sites, the property is seen as having an above average potential for the recovery of prehistoric archaeological sites. Based upon similar environmental characteristics, and proximity to Indian trails and/or wigwams and historic map documented structures, the property is seen as having a moderate potential for the recovery historic archaeological sites." The SHPO letter dated October 10, 2017 did not conclude its review of this Project; no sign off has been submitted on the potential impacts to cultural, archaeological or historic resources. The Record contains a Phase IA and Phase IB study, but SHPO stated that the "submitted materials hinder our ability to review the project." The matter appears unresolved. The SHPO has not provided a conclusive letter regarding the results of the Applicant's Phase IB survey, findings, and potential cultural resources impacts of the Project.

Guideline 5.3.3.11.2 Inclusion of cultural resources in applications

Development proposals should note established recreation and educational trails and trail corridors; active recreation sites; scenic corridors, roads, vistas and viewpoints located in Critical Resource Areas and undisturbed portions of the roadsides of the Long Island Expressway, Sunrise Highway, County Road 111 and William Floyd Parkway; sites on the State or National Register of Historic Places, and historic structures and landmarks recognized by municipal law or statute, or listed on the State or National Registers of Historic Places; and sensitive archaeological areas as identified by the New

York State Historic Preservation Office or the New York State Museum within a five hundred (500) foot radius of the outside perimeter of the Project site, including any Project parcels which are physically separate from the bulk of the proposed development area.

A development proposal may be disapproved or altered if the local municipality determines that the development proposal, in its current form, may have a significant negative impact on any of the above resources.

- The Project does not appear to comply because the October 10, 2017 SHPO letter is not conclusive about the impacts of the Project on the resources protected by this Guideline.

Guideline 5.3.3.11.3 Protection of scenic and recreational resources

Protection measures for scenic and recreational resources should include, but not be limited to, retention of visually shielding natural buffers, replacement of degraded or removed natural visual buffers using native species, use of signs which are in keeping in both style and scale with the community character, and similar measures.

- The Project does not appear to comply.

- The Project Site adjoins public nature preserve and open space properties. However, no buffer to the easterly adjoining open space is provided. No buffer is identified in the Record between the proposed golf course and the adjacent Town open space and significant grading and disturbance is proposed to occur in order to develop the golf course immediately adjacent to this existing public open space. Identify measures to buffer and protect adjoining public lands and land not under the Applicant's ownership, particularly minimally sized old filed map lots, paper streets, and other areas that cannot be disturbed as part of the Project.

- The Project's Visual Assessment fails to show the Project in the landscape so as to provide a means to evaluate its impacts.

Guideline 5.3.3.11.4 Roadside design and management

Undisturbed portions of the roadside should be maintained in a manner that protects the scenic features of these areas. Clearing (including that for aisles, driveways, access and parking) is not precluded within these roadside areas, provided that appropriate buffers are maintained, and that manmade structures meet standards consistent with the character of the area.

- The Project does not appear to comply.

- Development on the Project Site is expected to be visible from Lewis Road on the west side, from public lands and open space on the east side, and potentially from the coastal area. The Record contains an inadequate assessment of visual impacts and opportunities to visually shield the project from public lands, public roads, and the coastal zone area.

- The Record contains a visual assessment, but it is deficient because it does not illustrate the Project in the landscape to adequately evaluate potential visual impacts of the project.

Standard 5.3.3.12.1 Commercial and industrial compliance with Suffolk County Sanitary Code

All commercial and industrial development applications shall comply with the provisions of the Suffolk County Sanitary Code as applied by the Suffolk County Department of Health Services, and all other applicable federal, state or local laws. Projects which require variances from the provisions of the Suffolk County Sanitary Code shall meet all requirements of the Department of Health Service's Board of Review in order to be deemed to have met the requirements of this standard.

- Compliance to be demonstrated upon Suffolk County Department of Health Services approval. Absent such approval, the Project does not conform.

Other Comments

Development of Regional Significance

- The Hills Project was a Development of Regional Significance because of impacts identified in a traffic study analyzing summer and fall peak traffic. Another traffic study was prepared in May 2018 after the Project changed with, among other elements, the elimination of the non-resident golf course membership. This study did not analyze seasonal traffic impacts including seasonal, summer and fall, peak periods. In addition, the study was based on counts recorded in March 2018, not representative of seasonal traffic including summer and fall peak periods to analyze traffic impacts.

Mining

- The Project requires Mining Permits from the NYSDEC for activities in the Project including:
    - Net removal of 350,000 cubic yards of soil to be exported to East Coast Mines.

- Development of two (2) ponds with a total area of approximately four to seven acres and maximum depth of approximately 10 feet.

- Coordinate with and obtain input from NYSDEC on the feasibility of issuing new Mining Permits.

- Confirm if Town Mining Permits are required for the Project.

Pine Barrens Credits

- Confirm if Pine Barrens Credits will be retired for the Project, and if not, should the Project retire PBCs.

Thank you.

Sincerely,

Julie Hargrave
Principal Environmental Planner

Exhibit 8 – Table 2-3 of Lewis Road PRD Preliminary Application

Table 2-3
MAXIMUM CLEARING ALLOWED UNDER CPB CLUP
Prior Zonings and Acreages

	Prior (1995) Zoning District	Acreage (acres)	Estimated Yield (lots)*	Maximum Allowed Clearing Under CLUP	
				%	acres
Hills North Parcel	CR-200	86.92	14	25	21.73
Hills South Parcel	CR-80	58.14	24	35	20.35
	CR-120	130.32	35	30	39.10
	CR-200	149.84	24	25	37.46
Kracke Property	CR-80	10.32	4	35	3.61
	CR-120	50.93	14	30	15.28
	CR-200	0.01	0	25	0.0025
Parlato Property	CR-120	58.96	16	30	17.69
	CR-200	33.61	5	25	8.40
Parlato Road Abandonment Area	CR-120	4.43	1	30	1.33
	CR-200	4.91	1	25	1.23
Total Property		**588.39**	**128**	---	**166.18****

* Calculated as: (acreage x 43,560 x 0.75)/lot size under zoning.
** Up to 28.24% clearing is allowed; based on 166.18 acres of allowable clearing.

Exhibit 9 – Unfragmented Open Space and "Slivers" Map

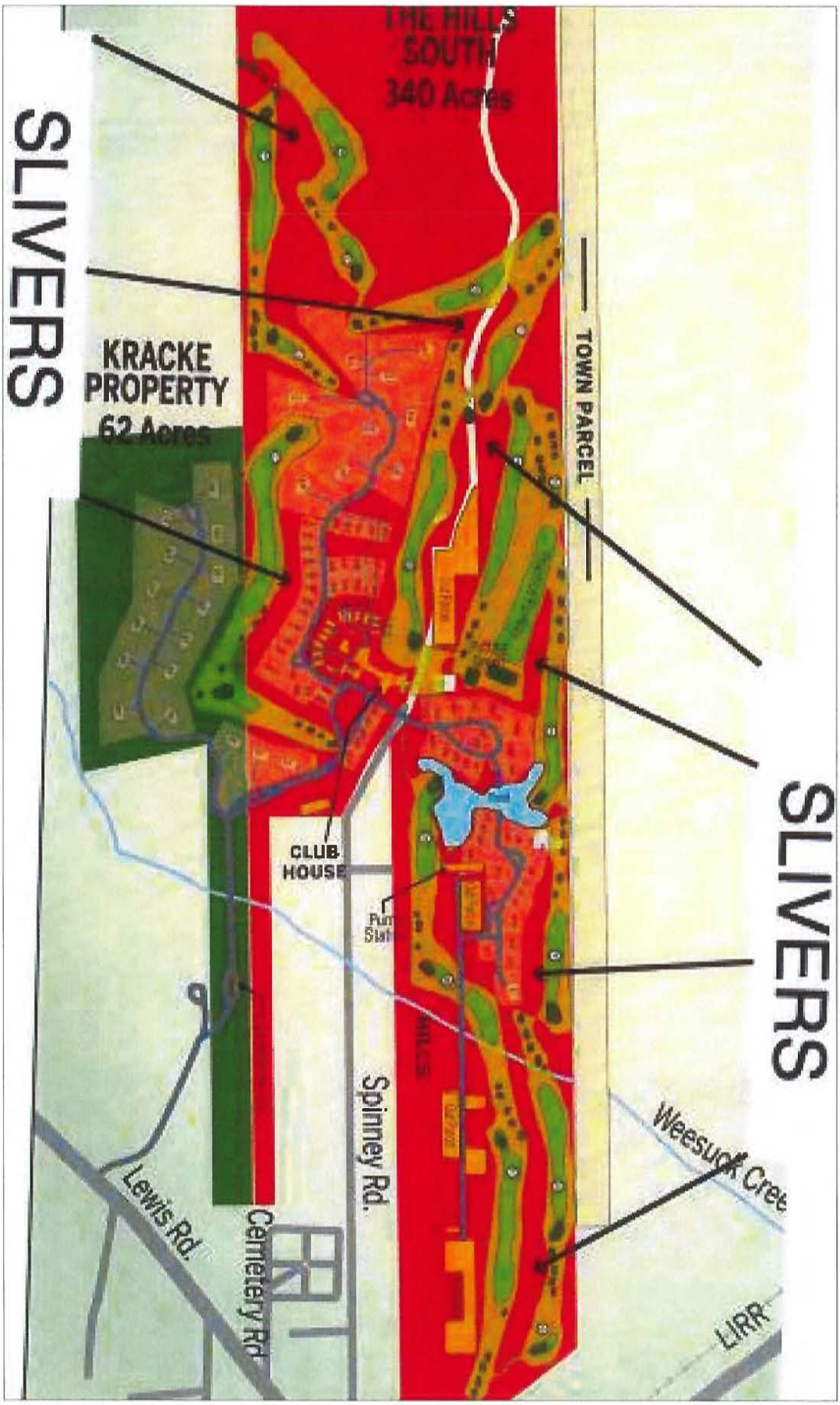

Exhibit 10 – Shinnecock Letter to Southampton Town

Appendix F-6
Shinnecock Nation Letter

February 7, 2017

NELSON POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

SP Town Board Meeting 2/7/17
Pet. #1

106

SHINNECOCK INDIAN NATION
Shinnecock Indian Territory
P.O. Box 5006 Southampton, New York 11969-5006
Phone (631) 283-6143 Fax (631) 283-0751

The oldest self governing Tribe of Indians in the United States

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SUPERVISOR'S OFFICE

February 7, 2017

Mr. Jay Schniederman, Supervisor
Town of Southampton
Town Board
Southampton Town Planning Dept
Hills Development Corp.
116 Hampton Road
Southampton, NY 11968

This letter is a follow up to my presentation at the previous hearing before last regarding The Hills project in East Quogue and the concerns of the Shinnecock Nation. I, David Martine am designated Tribal Historic Preservation Officer. Our mandate is to implement consultation processes on behalf of the Nation as they relate to the Section 106 process of the National Historic Preservation Act as well as other Federal statutes which affect the preservation of Shinnecock historical/cultural resources, based on consultation and remediation as far as possible to mitigate adverse effects to Shinnecock cultural resources wherever necessary.

The Shinnecock Nation is vitally concerned with the protection and preservation of our cultural resources encompassing the lands and waters surrounding the areas of Long Island and New York City as designated by the New York State Dept. of Historic Preservation. Our area of interest primarily is under the Tribal Consultation Process as set forward in the Section 106 of the National Historic Preservation Act and other acts as they relate to the East Quogue project and that has not been fulfilled under the mandates of several Federal Statutes.

We were not included as a consulting party in this project as is mandated by Federal law and should have been a party to all pertinent consultations regarding this project with the same consideration as the EPA and HUD. As I mentioned in my presentation to the board, the Area of Potential Effects (APES) in regard to this particular development effects bear on the Nation. Our interest is related to Environmental aspects and Archaeological/cultural resource protection. We were not formally consulted in the development of a scope of work, nor apprised on the original research design for data recovery. The importance of this site relevant to Shinnecock history and identity is not dependant on the survival of above-ground structures or facilities. The places themselves are part of a traditional landscape affirmed by the presence of archaeological contexts and content that document Shinnecock occupation. F-6.1 Sec. 3.5

While it is possible that significant parties were not aware of the Federal consultation mandate required under Federal law, following is a list of Federal statutes that have bearing on the interest of the Shinnecock Nation on our traditional lands encompassing our areas of interest. Because of the seriousness of this matter, we are considering informing the State Historical Preservation Office as well as the Advisory Council on Historic Preservation in Washington to mediate on our behalf because of the serious nature and number of non-compliance issues involved with the Quogue project. F-6.2 Sec. 3.5

In addition to Section 106 issues of the National Historic Preservation Act following is a list of other statutes that bear on this parcel:

1. The Tracker arch. Survey only surveyed 160 of the 596 acre area. In addition there are not enough test pits performed for the area that was surveyed. Consideration was not given to the fact that resources (Shinnecock flint cache) had been found, proximity to footpath (Shinnecock historic trade routes) infusion of waste-water into Shinnecock Bay,(which effects the quality of the Shinnecock Bay waters surrounding the reservation; infusion of waste-water in Weesuck Creek, (same problem as previously mentioned; and possible location of Shinnecock prehistoric and historic habitation and or human burials within area of potential effects (APES) around Weesuck Creek. We know that Shinnecock habitation and burials may be located near water sources as was demonstrated by the Hotel St. James site in Bridgehampton years ago. Survey report indicates "higher than average potential for recovery of prehistoric sites" then immediately contradicts that finding by saying that the likelihood of materials being found is not there or not sufficient of impact the project. We strenuously disagree.
2. **NHPA** - National Historic Preservation Act 16 U.S.C. 470f]
3. **NAGPRA** - Native American Graves Protection and Repatriation Act 25 U.S.C. 3002 (a)] If human remains are unearthed during construction because these things were not found before construction began, all construction would cease, a Federal zone would be established and Shinnecock Nation will fully exert is rights under NAGPRA to its fullest extent.
4. **ARPA** – Archeological Resource Protection Act 16 U.S.C.470aa (b)]
5. **NEPA** - National Environmental Policy Act (EPA and HUD agencies have not consulted with the Shinnecock Nation relative to the reports involved with environmental impacts to the environment. Which bring **Title 33 – Clean Water Management** issues and **Coastal Resource Management Council**, and **National Ocean and Atmospheric** issues into play as they impinge on the interests of the Shinnecock Nation relevant to the possible effects on Shinnecock water resource and resource management issues.

If lack of consultation with the Shinnecock Nation was based on the N.Y. State Dept. of State, Office of Planning and Development, Office of Planning and Development (Land Use Solutions – Geographic Information Gateway Maps online which supposedly shows Shinnecock Coastal Tribal Lands Shinnecock Nation Offshore use areas relative to Shinnecock Bay and the Atlantic Ocean not impinging on the area around East Quogue, that would be inaccurate. That Offshore use areas map is not based on Shinnecock Federal use jurisdiction based on Section 106 issues not even close to applicable jurisdictions.

6. **1790 – Indian Non-Intercourse Act** (Collective name for 6 Congressional statutes from 1790 to 1834) Pertains to the fact that none of that land was approved by Congress to be transferred away from the native people to start with;
7. **UN Declaration For Indigenous Rights** pertain to all indigenous people rights to fight for restitution of their resources
8. **Coastal Zone Management Act or Coastal Resource Management** – CRM, – 1972 1452 or (Title 16- USC-1451) refers to another applicable Federal statute to the Nations interest ant this projects impact on the wetlands and sea-coast eco-systems.
9. The Southampton Town's Archaeological sensitivity map is also not adequate as it relates to the Federal cultural resources interests of the Shinnecock Nation that exist today. That whole area of East Quogue is covered as an area of archaeological/cultural sensitivity as far as that is concerned, one reason because of the proximity to "Good Ground" which was a very active location for Shinnecock settlement up through the late 19th century going back to Rev. Paul Cuffee, Azariah Horton as well as hunting, whaling, trading, occupation, as well as other forms of traditional activity.

The agenda consultation should address is all of the foregoing concerns and should not be limited to discussion of the treatment of human remains, should they be recovered, but the full extent of Shinnecock cultural resource interests at the Federal level.

Please contact me directly to discuss these issues further. I look forward to the development of a more equitable and respectful consultation process.

Respectfully,

David Martine
Tribal Historical Preservation Officer

Eugene Cuffee II
Sachem, Council of Trustees

CENTRAL PINE BARRENS
JOINT PLANNING & POLICY COMMISSION

Peter A. Scully
Chair

Philip J. Cardinale
Member

Brian X. Foley
Member

Linda A. Kabot
Member

Steve A. Levy
Member

P.O. Box 587
3525 Sunrise Highway
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Great River, NY
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Resolution on the Tall Grass Village Planned Development District Application

East side of Randall Road, on the south side of NYS Route 25A, and on both the north and south sides of Cooper Street, in an area west of the William Floyd Parkway in the hamlet of Shoreham, Town of Brookhaven, New York. Suffolk County Tax Map Parcel Numbers: 200-104-2-14.3,14.4, 15.1,16.1, & 21.3, 200-126-2-1.5 & 2, 200-127-1-3, 200-148-2-6

Central Pine Barrens Commission Meeting of May 21, 2008
Brookhaven Town Hall, Farmingville, NY

Commission members present:
Mr. Scully (for New York State),
Mr. Isles (for Suffolk County),
Mr. Foley (for Brookhaven Town),
Mr. McCormick (for Riverhead Town),
Mr. Shea (for Southampton Town).

Whereas, Tallgrass Properties, LLC and TGC Operating Co. (the "Applicant") by their attorneys Farrell Fritz, submitted an amended Compatible Growth Area Development of Regional Significance application for Tall Grass Village Center at Shoreham Planned Development District, (the "Project") to the Commission on November 30, 2007, and

Whereas, the Project is for a change of zone of 320 acres from A-1 Residence to Planned Development District to construct a large scale, mixed use development project that consists of: 352 single family and detached residential units, a 125,000 square feet Village Center, an on site 120,000 gallon per day sewage treatment plant, a 12,200 square foot community recreation center, and the retention and reconfiguration of the Tallgrass Golf Course with a 9,197 square foot clubhouse, as more fully described in the Commission's Findings Statement and Decision dated May 21, 2008, and

Whereas, the Commission is required to review Developments of Regional Significance compliance with the Standards and Guidelines contained in the Central Pine Barrens Comprehensive Land Use Plan (the "CLUP"), and

Whereas, the Project is a Development of Regional Significance as set forth in the CLUP because the Project exceeds the DRS threshold for traffic impacts because the Project will result in traffic impacts that will reduce service at seven (7) intersections by two levels of service or more below existing conditions and will cause a drop in the level of service at eight (8) intersections

to D or below, and

Whereas, the Project is a Development of Regional Significance because the Project exceeds the CLUP's DRS threshold of 200 single family residences, and

Whereas, the Commission's Findings Statement and Decision details the Project's procedural history and environmental review performed by the Town of Brookhaven, including the Town's October 16, 2007 conditional approval of the Project, and by the Commission's review of the Project, and

Whereas, the Project does not comply with two Standards and one Guideline of the CLUP, and

Whereas, the Applicant's CGA-DRS application includes the request that the Commission grant the Applicant a CGA hardship waiver from strict compliance with two of the CLUP Standards, and

Whereas, the Commission held two public hearings on the Application, and

Whereas, the Commission further discussed the Project at its March 19, 2008 meeting attended by the Applicant's representatives, and

Whereas, during the March meeting, the Commission at the request of the Applicant granted the Applicant until March 31, 2008 to provide additional information to the Commission, and

Whereas, the Applicant requested at the April 16, 2008 Commission meeting for the Commission to extend the deadline for making a determination on the Project for 30 days in order to submit information and rationale for offering additional Pine Barrens Credits for the project, and

Whereas, the Applicant submitted additional information on the Project and site plans on April 23, 2008, and

Whereas, the decision deadline was later extended to coincide with the May 21, 2008 Commission meeting, and

Whereas, the Commission has considered all information submitted by the Applicant for this Project, and

Whereas, the Applicant has not adequately demonstrated that there are no reasonable alternatives available, which would conform with the CLUP standards, including, among others, the possible reduction of the scale of the Project to a level or intensity below the DRS thresholds,

to address traffic impacts and reduce the number of residential units, as well as the possible incorporation of other mitigation measures, which could offset or compensate for the potential for substantial impairment of the resources of the Central Pine Barrens area, related to the project's non-compliance with those CLUP standards and guidelines for which a hardship waiver request is being sought, and

Whereas, the public record is insufficient with respect to adequately demonstrating that the CLUP's Standards and Guidelines cause an unnecessary hardship; and

Whereas, the Commission as an involved agency under SEQRA §617.11(c), has prepared the attached Findings Statement and Decision to satisfy its requirements as an Involved Agency under the New York State Environmental Quality Review Act and which also contains the Commission evaluation and denial of the Applicant's hardship waiver application, now therefore be it

Resolved that the Commission adopts and issues the attached Findings Statement and Decision, and be it further

Resolved, the Commission finds that Project neither complies with nor conforms to two CLUP Standards and one CLUP Guidelines, and be it further

Resolved, that the Commission denies the hardship waiver request and the Project's DRS application for the reasons set forth in the Findings Statement and Decision.

Motion by: Mr. Scully
Second by: Mr. Shea

Vote:
Yes: Mr. Scully, Mr. Isles, Mr. McCormick, Mr. Shea
No: Mr. Foley
Abstain: None

LONG ISLAND
PINE BARRENS
SOCIETY

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RIVERHEAD, NEW YORK 11901
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August 19, 2020

Re: Lewis Road PRD

The Honorable Carrie Meek Gallagher
Chairperson
New York State Pine Barrens Commission
624 Old Riverhead Road
Westhampton Beach, NY 11978

Dear Chairperson Gallagher & Commissioners:

In addition to our comments submitted at the public hearing on February 19, 2020, and after reviewing the developer's several sets of response papers, we would like to submit the following comments to the record.

Our Background

The Long Island Pine Barrens Society was created in 1977 and has been an active champion of Pine Barrens preservation ever since. We have been attending meetings of the Central Pine Barrens Commission since its inception. The Society works actively in the community and throughout Long Island to advocate for the preservation of Long Island's open space and the protection of our underground drinking water supply and surface waters. Our leadership has been essential in the creation of the Pine Barrens Protection Act, Drinking Water Protection Program, Environmental Protection Fund, Community Preservation Fund, Long Island Nitrogen Action Plan, Suffolk County Subwatersheds Plan and countless other important pieces of environmental legislation. We also represent thousands of members across the metropolitan region, who are concerned about the future of Long Island's environment and the Pine Barrens in particular.

We have been following the Discovery Land Company proposal since 2013 and have testified before the numerous different government bodies that this project has come before. We have

consulted with scientists, planning experts, lawyers, local elected officials, and even scientists that have studied other Discovery Land Company projects across the world.

Compatible Growth Area

The applicant, Discovery Land Company, and its proponents like to point to the fact that this project is in the Compatible Growth Area (CGA) of the Pine Barrens and that the development will not take place in the Core Preservation Area. However, this project is still proposed for the Pine Barrens and even its placement in the CGA requires strict environmental review and adherence to the standards and guidelines of the Comprehensive Land Use Plan (CLUP). The Commission's sole purpose is to add an extra layer of review over projects in the Pine Barrens, as their impacts go far beyond the town level and instead, have a regional impact.

Environmental Review

We have serious concerns about the applicant's and the Town of Southampton's clear violation of the New York State Environmental Quality Review Act (SEQRA). The Southampton Town Planning Board never coordinated review of the Lewis Road PRD proposal as required by SEQRA, nor did it ever establish a lead agency, or adopt a determination of significance. Moreover, the Southampton Town Planning Board did not have the legal authority to approve the proposed project.

The applicant has come before you and argued that the original Hills Planned Development District (PDD) application was not denied because the PDD legislation required a super-majority approval. They argue that the project was not denied, it just didn't move forward – it had a majority approval, but not the required super-majority approval. There is no such thing as a non-denial denial. The Hills project was filed for under the PDD legislation. The PDD law that required a super-majority approval by the Board was approved by a majority of voters, at referendum, in 2001. The applicant knew when they submitted their application and during the SEQRA review process, that a super-majority approval was required. When The Hills proposal failed to gain Town Board approval, the project ceased to exist as an open or active application.

The applicant immediately filed a $100-million lawsuit against the Town of Southampton, because of this denial. In fact, in the opening paragraph of their Verified Complaint filed with the courts, they state, "This litigation challenges the unlawful and unconstitutional denial of DLV "Project" Quogue's proposed seasonal golf resort development (the "Project") by the Town Board of the Board" Town of Southampton (the "Town Board")."

When the applicant sues for $100-million, they acknowledge that The Hills project was denied. When they come before the Commission asking for approval, they claim The Hills simply "failed to be approved."

The Lewis Road PRD is a completely new project and the Town Board no longer has any approval authority over the subject or any PRD subdivision proposal. As a result, the Planning Board had an obligation to reestablish Lead Agency for the current project, and then conduct a thorough SEQRA review, but it failed to do so.

Since SEQRA was never conducted at the Town level, the Commission is unable to review the project and must deny the application.

We encourage the Commissioners to please review the papers supplied by Group for the East End, to seek further clarification on this matter.

More Changes, New Project

The developer has continued to argue that the Lewis Road PRD is the same as the previously proposed and denied project, The Hills. In December 2019, the developer submitted the Lewis Road PRD project to the Commission for review. This project was an entirely new project than what was reviewed by the Town Board and during the SEQRA process. Most notably, the Lewis Road PRD was missing many of the nitrogen mitigation measures included in the original PDD Hills application. These mitigation measures were deemed essential in order to curtail (not eliminate) the nitrogen pollution that would be produced by this project.

Now, once again, the developer has come through with yet another rendition of the Lewis Road PRD, as proposed by their July 1, 2020 submission. Changes include: the addition of the Tipperman property, the placement of the wellfield within the Critical Resource Region of the Pine Barrens, the development of a new mining plan, the removal of roads, and shifting the development southward (closer to nearby homes and waterbodies). These are vast changes that require an extensive environmental review. New nitrogen analysis and dispersion models must be done. The placement of development within the Critical Resource Area requires an additional, expansive review. These are significant changes that were never analyzed during the SEQRA process, nor by the Southampton Town Planning Board.

To sum it up: The map and plan before you today is not the same plan that was originally supplied at the time of application in December 2019. The map and plan before you is not the same as what was reviewed by and preliminarily approved by the Southampton Town Planning Board. The plan that the Town Planning Board reviewed was not the same plan that was reviewed via the SEQRA process and was ultimately denied by the Town.

Each time this applicant comes before the Commission, they submit changes. Even at the February 2019 hearing, they submitted changes to their mining plan *the day of the hearing*.

How many times will we allow this developer to keep changing their project without a thorough review of said changes? The project keeps changing with each board that they present to. This

entire review process has become "Let's make a deal," rather than a review based on sound environmental planning.

New Wellfield Location

The latest rendition of the Lewis Road PRD places the wellfield within the Critical Resource Area. The Henrys Hollow Critical Resource Area protects the habitat for the rare and endangered Coastal Buckmoth. The applicant references a 2009 study of the Buckmoth population in the area (appendix M-7 of the DEIS) – this is inadequate. The landscape has dramatically changed within the last 11 years. Habitat fragmentation and climate change have greatly altered our landscape and such, the population for this endangered species has likely changed a lot over the years. This new wellfield location is placing extensive development into an otherwise undisturbed area. It is also placing development into an area that is deemed essential to protect the habitat of an endangered species. This cannot be allowed.

Fragmentation of Open Space & Clustering

Alternatives

There are other alternative uses of the site, allowable under current zoning that would avoid fragmentation of open space and cluster the development further. Since the SEQRA review for the Lewis Road PRD project was not performed by the Town of Southampton Planning Board, we were unable to submit an alternative project for their review – a process that is provided for by SEQRA. However, Group for the East End did create a "Reduced Impact Alternative" that should be considered as a viable alternative by the Commission.

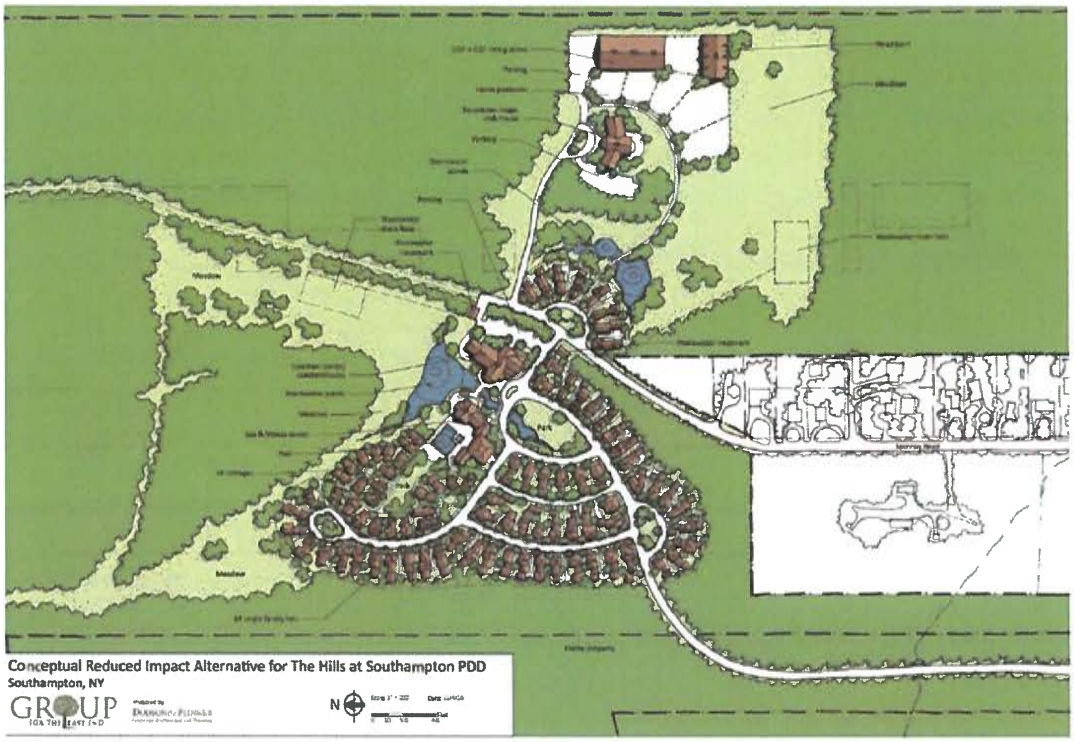
The Reduced Impact Alternative was prepared by Lisa Liquori on behalf of Group for the East End. Lisa Liquori is an environmental planner with over 35 years of experience and served as East Hampton's Planning Director for over 15 years. The Reduced Impact Alternative is a resort-style development, with equestrian facilities, rather than a golf course, and is consistent with other properties that Discovery Land Company owns and operates. Discovery Land Company operates other properties with equestrian facilities.

The Reduced Impact Alternative would have a far less environmental impact than the Lewis Road PRD. A comparison between the Reduced Impact Alternative and the Hills PDD is included below:

Comparison of Impacts: Discover Land Company PDD vs. Conceptual Reduced Impact Alternative

Impacts	Discovery PDD		Reduced Impact Alternative		Comparison: Reduced Impact Alternative vs. Discovery PDD
	Acres	% of Site	Acres	% of Site	
Site Development Total Area	166.86	28.23	23.53	4	86% less developed area
Cleared Areas	166.86	28.23	45	7.61	74% less clearing
Fertilized Turf	88.53	15%	0	0	100% less fertilized turf
Preserved Contiguous Open Space	276	48%	546	92	100% more preserved contiguous open space
Preserved Open Space incl. fragmented areas	424	72%	546	92	29% more open space incl. fragmented areas
		Units		Units	
Water Usage-	53,810,179	gallons per year	11,961,650	gallons per year	78% less water usage
Sewage Flow - bldgs. only	41,814	gallons per day	31,770	gallons per day	25% less sewage flow from buildings
Design flow including turf	65,214	gallons per day	31,770	gallons per day	51% less overall wastewater flow
Nitrogen loading					
Turf	655.1	pounds/ year	0	pounds/year	100% less nitrogen loading from turf
Sewage from buildings	Variable by computation model				72 % to 88% less nitrogen loading buildings
Residences total number	118	residences	88	residences	25% fewer residences
Total size of residences	435,800	square ft.	532,800	square ft.	22% greater combined sf of residences
Traffic wkdy PM/Sat peak	103/125	trips per hour	23/31.5	trips per hour	78% to 75% less peak hour traffic

And as you can see, in the images included on the next page, it clusters the development on site, to the fullest extent possible:


Conceptual Reduced Impact Alternative for The Hills at Southampton PDD
Southampton, NY
GROUP
FOR THE EAST END
N


Pallotti Property
Town Parcel
Hills North Parcel
Hills South Parcel
Spinney Road
Cemetery Road
Wacke Property
Sand Mine
Conceptual Reduced Impact Alternative for The Hills at Southampton PDD
Southampton, NY
GROUP
FOR THE EAST END
N

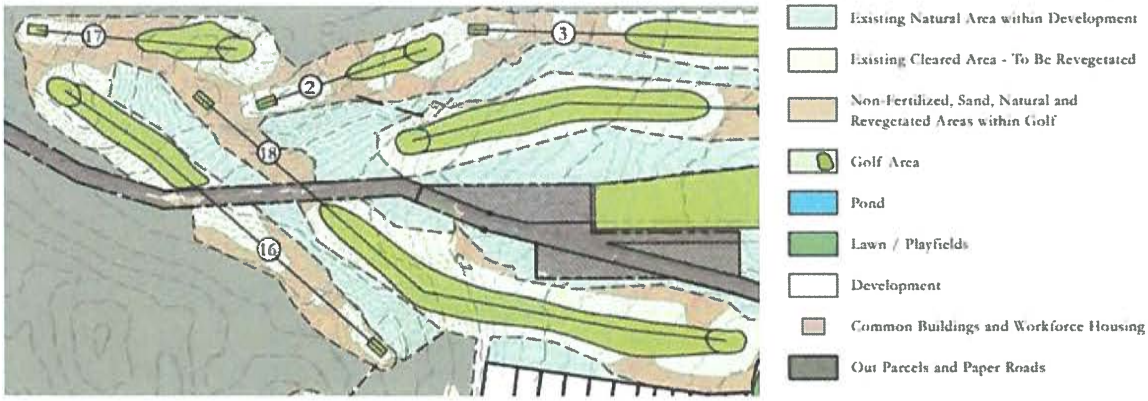
The Comprehensive Land Use Plan requires that development projects maximize the use of clustering and prevent unfragmented open space by supporting preservation of natural vegetation in large unbroken blocks. The Lewis Road PRD fails to cluster the development and severely fragments open space. The Commission has the right to demand alternative uses of the site that meet the standards of the CLUP. Alternative designs with a tighter cluster are available and should be considered.

Golf Course Design

According to *Golf Week* magazine, the rough area of a golf course takes up about 60% of the total space of a course. The average area needed for the rough areas is 66.8 acres. According to the Hills PDD Master Plan, the developer states that rough areas for their course are 36.76 acres. This rough design is about one-third to one-half smaller than Sebonack Golf Club and Golf at the Bridge, two similar courses in the area.

In addition, it appears that there is only one tee box per hole. This is extremely unusual. Golf courses today have 3-5 tee boxes per hole (to accommodate different types of players, such as women and seniors). Discovery Land Company's Bakers Bay property has four tees per hole.

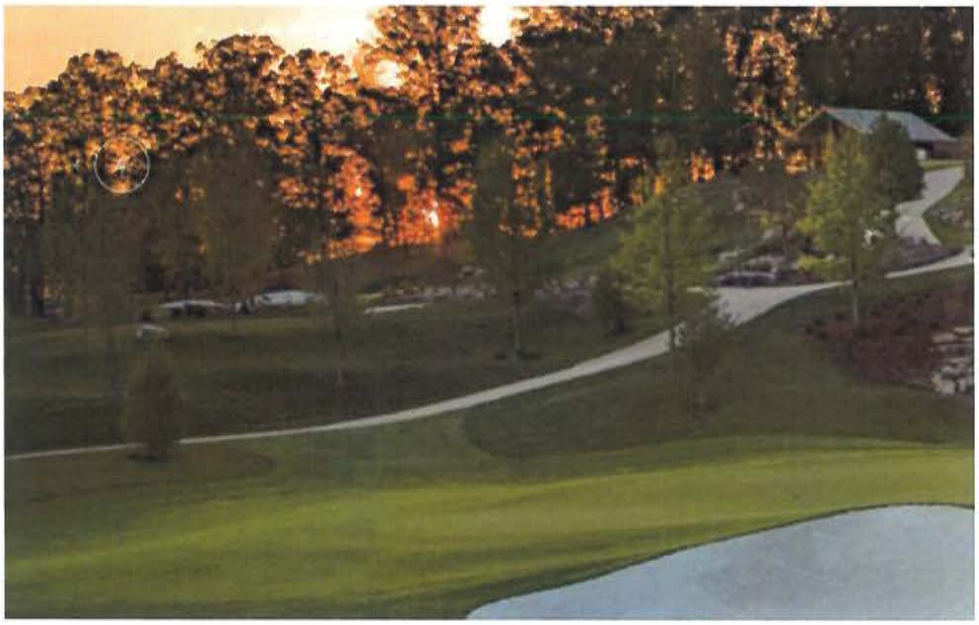
There is no clear quantifiable delineation between the golf area, existing cleared area "to be revegetated," existing natural area, and the non-fertilized sand, natural and revegetated areas within the golf course. Here's just a snippet of the site plan:



How are these delineations even remotely enforceable? These little narrow delineations that were created by the developer in order to meet the clearing standard are not realistic. This is something that looks like it works on paper, but is not realistic for real life application. This project was designed by a computer model to meet compliance, but it is simply not realistic or enforceable.

There are also other golf design questions that remain unanswered. On the site plan, the developer states that there are "natural and revegetated areas." What will these areas be revegetated with? They have made the distinction between natural and revegetated. Will areas be re-vegetated with grass instead of native plants? The developer has also stated that there will be paths made through the woods for the golf course and that this will not require clearing. This seems unlikely and should be examined closer. Will these paths require paving? It is extremely unlikely that clearing will not need to take place. If you take a look at Discovery Land Company's other sites, their golf cart pathways are fully cleared and paved.

1 Silo Ridge - Amenia, New York



2 Troubadour - Nashville, Tennessee

The applicant has likely narrowed the size of the fairways and rough in their submitted site design, in order to minimize clearing and limit the amount of fertilizer-dependent vegetation. However, it is suspected that the course, as currently proposed, is unplayable. We are worried that if approved, under construction, the fairways and roughs will be expanded to meet the acreage of standard golf courses. Any increase in the size of fairways and roughs will increase the amount of land cleared and the amount of fertilizer-dependent vegetation on site.

Unfortunately, Discovery Land Company has a history of not sticking with their original plans. Dr. James M. Cervino, a marine scientist from New York City who has traveled to the Bahamas and completed independent studies of the water and a reef situated near Discovery Land's Bakers Bay Golf and Ocean Club in the Bahamas, presented his findings to the public in East Quoge in 2016. That development, on which ground was broken nearly a decade ago, currently features 125 homes, 240 buildable estate lots, and an 18-hole golf course on 585 acres located on the island of Great Guana Cay.

When interviewed, Dr. Cervino said he believes, based on his research, that nitrogen and phosphorous from Discovery Land's golf course down there has damaged a nearby reef. "They managed to destroy a 1,000-year-old reef in the matter of two years," Dr. Cervino said.

He added that his findings have been backed up by other scientists, including Dr. Thomas Goreau, president of Global Coral Reef Alliance, a nonprofit dedicated to growing, protecting and managing coral reef, and Brian Lapointe, principal investigator and research professor at Florida Atlantic University.

Dr. Cervino added that he and his colleagues decided to speak out on Long Island because they believe that Discovery Land, which is proposing a similar-type development in East Quogue, is again making promises that it cannot keep, and that its development could further threaten our already-impaired water supply.

Nitrogen Impacts

Mitigation & Alternatives

The Lewis Road PRD project will *not* have a net-negative nitrogen load, as the developer claims. While the Lewis Road PRD has a similar footprint to the Hills PDD, it is very different in many ways, especially with respect to water quality impact mitigation.

The Lewis Road PRD project lacks the full benefit of an extensive nitrogen mitigation package that was included in the Hills PDD. The Southampton Town Board's science consultant, Dr. Christopher Gobler, argued that these nitrogen mitigation efforts were necessary to limit the potential harm from the proposal's anticipated nutrient loading to the surrounding environment.

The chart below is from Dr. Gobler's 2017 report (which we submitted to the Commission at the 2/19/20 hearing) analyzes the potential nitrogen impacts of the project and the Hills' proposed mitigation efforts.

	Existing	Hill PDD	As of right, maximu	As of right, lower	Comment
DEIS	1,210	4,128	3,455	1,738	Reported in March
Fertilizer cap	1,210	3,371	3,455	1,738	2 lbs/1000 sq. ft. cap on applied fertilizer
Hills STP	1,210	3,041	3,455	1,738	STP for the PDD treating to 10 mg/L
School STP	1,210	2,706	3,455	1,738	STP for the school treating to 10 mg/L
Community septic upgrades	1,210	2,322	3,455	1,738	Using new technologies that treat to 19 mg/L
33 acres with 30 homes	1,210	2,322	4,278	2,122	Build out of 30 homes on 33 acres
Pine Barrens Credits, 30 homes	1,210	2,322	5,130	2,484	30 additional units via purchase of Pine Barrens credits
FINAL	**1,210**	**2,322**	**5,130**	**2,484**	Total yields

The only nitrogen mitigation effort that appears to remain in the revised Lewis Road PRD application, before The Commission, is the on-site Sewage Treatment Plant (STP). As you can see, the other mitigation efforts were included to bring the expected nitrogen loading down to 2,322 pounds of nitrogen per year. *This is not a negative number*. Without the other mitigation measures in place, this project will likely result in the addition of 3,800 lbs. of nitrogen to the environment, each year.

Something else can be ascertained from these calculations by Dr. Gobler. The "As of Right, Lower" column in the above chart, represents the "Reduced Impact Alternative" (RIA) design presented by Group for the East End, as mentioned in this report above. Dr. Gobler shows the calculations for the RIA, without the addition of any of the nitrogen mitigation measures proposed by Discovery. If you apply any of the nitrogen mitigation measures to the RIA, you produce a site design with a far lower environmental impact.

If you added a sewage treatment plant to the RIA, you get a nitrogen loading of 1,408 lbs. of nitrogen per year. If you add a fertilizer cap to the RIA design, you get a nitrogen loading of 651 lbs. of nitrogen per year. If you add a sewage treatment plant at the local school, you get a nitrogen loading of 316 lbs. of nitrogen per year. It goes down from there. As you can see, when you apply Discovery's proposed nitrogen mitigation measures to the alternative design, you get a much lower nitrogen impact. The Reduced Impact Alternative design can be expected to have a far lower environmental impact than the Lewis Road PRD.

Discovery has continuously dodged the tough questions about the important differences between The Hills MUPDD and the Lewis Road PRD, mainly because they are incorrectly asserting that it is the same project. They have not addressed how the absence of nearly all of these nitrogen mitigation measures, impacts their potential nitrogen loading calculations. In fact, in response to our comments on this important subject, the developer writes the following in response, "Analyses conducted during the SEQRA review conducted by the Town Planning Board and by the Commission Staff for the Lewis Road PRD application establish that the project complies to the requirements of CLUP Guidelines 5.3.3.1.1 and 5.3.3.1.3."

This does not answer the question. The Commission must ask (1) if all of the neccessary nitrogen mitigation measures that were included in the Hills MUPDD are included in the Lewis Road PRD. And (2) if they are not, how will their nitrogen calculations change?

Suffolk County Department of Health Services

It is important for the Pine Barrens Commission to inquire with the Suffolk County Department of Health Services about the status of Discovery's applications for its sewage treatment plant, compliance with Article 6 and protection of public and private supply wells. The applicant has only stated that "approvals are to be expected." This is not good enough. As the potential for nitrogen pollution is of great concern, the Commission must seek guidance from a regulatory authority to assure that the applicant's wastewater management plans are feasible and accurate.

Fertigation

Fertigation & Nitrogen

Fertigation cannot responsibly be included in nitrogen mitigation calculations. While fertigation holds promise, its exact benefits cannot be quantified and therefore, have no place being included in final nitrogen loading measurements.

Here's what Dr. Chris Gobler has to say about the use of fertigation in nitrogen loading estimates, "A planned use of fertigation on the proposed golf course could reduce net nitrogen loading for the PDD further, although uncertainties and unknowns prohibit such reductions from currently being quantified." Please note that Dr. Gobler was chosen by the Town of Southampton to provide his expert opinion on this matter, during the SEQRA process for the Hills PDD.

Fertigation & Legacy Contaminants

The applicant plans on drawing nitrogen-laden groundwater from nearby contaminated wellfields and using that to irrigate and fertilizer their greens. However, there needs to be further groundwater testing done to ensure that there are no other legacy contaminants in the groundwater that the developer would pull up and spread around.

In fact, the Suffolk County Planning Commission, listed this concern as a condition in their staff report, "The Petitioner, with the Suffolk County Department of Health Services, shall address potential legacy agricultural chemicals other than nitrogen in any fertilizer management program associated with fertigation." There very well may be pesticides in the groundwater and soils, that have been long been banned for use due to the public health threat they pose.

There are several other contaminated sites in the area, many of which have become Superfund Sites. This is a serious concern. The Commission must require further testing for legacy contaminants.

Pesticides

The Commission must evaluate the impact of the potential use of pesticides on site on the Pine Barrens ecosystem and especially our groundwater and surface waters. During the SEQRA review process for the Hills PDD, we solicited the scientific input of Dr. Arthur Goldberg. Dr. Goldberg is a year round resident of Southampton Town and holds a PhD in Organic Chemistry with an emphasis in Pharmacology. He has taught chemistry at LIU for over thirty years. Dr. Goldberg determined that ten pesticides were documented as highly toxic out of the 42 pesticides proposed to be used by Discovery Land Company. Three of the pesticides proposed for use are known carcinogens. And four of the pesticides are highly toxic to aquatic organisms. The Commission must consider the impact that these toxic pesticides will have on both the health of the environment and the residents of Suffolk County, who rely on our sole source drinking water aquifer.

Ponds

The Comprehensive Land Use Plan states that ponds can only be created to accommodate stormwater runoff. While the applicant states that the two 10 feet deep ponds will be developed for irrigation purposes, they have not provided evidence to substantiate this claim. It is more likely that these ponds will be created for aesthetic and recreational purposes. The applicant plans to build a 500 square-foot "Pond House" that will "store recreational items including kayaks, life jackets and with a restroom." It appears that these ponds are solely for recreational purposes and therefore, are not permitted under the law.

Stormwater Runoff & Erosion

The applicant plans to grade and create 63 drainage reserves areas. The CLUP requires that natural swales and depressions to be used for stormwater runoff where feasible instead of excavating recharge basins. The developer has not substantiated their claim that the use of natural swales and depressions is not feasible and they have not received an approved Stormwater Pollution Prevention Plan (SWPPP) by the NYSDEC. In addition, the applicant has not provided a plan to control stormwater pollution and soil erosion during and after the construction phase. Absent a completed SWPPP, the applicant fails to comply with the CLUP.

Wetlands

The development (including golf tees, the sewage treatment plant, and wellfield) has shifted southward, closer to nearby waterbodies. Therefore, the study of the development's proximity and potential impacts to nearby waterbodies must be reevaluated. Previous determinations that the development site was not close enough to impact nearby waterbodies are now invalid. A new evaluation must be completed in order for the Commission to ascertain the potential impact that this development will have on nearby waterbodies.

Climate Change

In looking at the long-term effects of this project on the environment, climate change needs to be accounted for. First, nitrogen pollution impacts our salt marshes. Excess nitrogen that enters our waterways severely weakens our salt marshes that serve as an important buffer from storm surge. An increase in development and nitrogen loading will most certainly decimate whatever natural buffer exists along the Weesuck Creek corridor. With an increase in the frequency and magnitude of large storms, along with degraded shorelines, we can expect significant coastal flooding in the future.

In addition, if we do not control our nitrogen loading now, we can expect climate change to create a situation where remediation will be too late. According to a recent study in *Science* journal, shows that the northeast can expect a 71% increase in precipitation. Because of that increase in precipitation, we will also see an increase in eutrophication or nitrogen pollution. On Long Island, the more it rains, the more runoff there will be and the stronger groundwater flow will be. Just accounting for climate change alone, we should expect to have to remediate nitrogen 33% or more. That is to remediate existing nitrogen pollution by 33%. New development and increased nitrogen pollution, will only stand to degrade our drinking and surface waters further.

As of January 2020, SEQRA now requires that Environmental Impact Statements include climate change assessments. The Commission must demand that the Lewis Road PRD proposal go through a comprehensive environmental review, including a climate change assessment, as provided by SEQRA.

Development Amenities

<u>This Project is the Subject of Pending Litigation</u>

The applicant has argued that its 18-hole professional golf course should be considered a recreational amenity to their 130 home development project. This amenity would be in addition to thousands of square feet of other recreational amenities, like pools, recreational 10 foot deep ponds, tennis courts, basketball courts, baseball field, fitness center, and more. The Planned Residential Development ordinance falls under the Town's Open Space Law (§247). The Open Space Law was designed to *prevent* large-scale development like the Lewis Road project.

One could argue that this is not a development project with a recreational amenity, but instead, a country club, which is not allowable under zoning.

We have joined Group for the East End, the East Quogue Civic Association, Assemblyman Fred Thiele and local homeowners, in two lawsuits that challenge the preliminary approval of this project by the Zoning Board of Appeals and Southampton Town Planning Board and the clear violation of the Town's Open Space Law. We argue that the Zoning Board has exceeded its authority and re-zoned the property under the guise of an interpretation. The 130 home development and the 18-hole golf course are two primary uses of the property. The golf course is not an accessory use. While these suits play out in the courts, this project has moved on to the Commission.

The Pine Barrens Commission has this very same question before them – Does the Town's Open Space Law provide for this type of resort-style development? Does it belong in the Pine Barrens? The Commission's answer and response to these questions will permanently set a precedent for other projects proposed in the future. If an 18-hole golf course can be considered a recreational amenity, what else can?

<u>Specific Questions Regarding Amenities</u>
The applicant states that the changing room/showers/restroom facilities are 12,000 SF. Is this common for other residential golf course communities? One would think that most homeowners and their guests would shower and change at home.

The applicant has still failed to specifically outline what a "owner" will be. They state that "owners" and their guests will be able to play the golf course. The term owner needs to be outlined specifically so that the Commission can ascertain what the overall impact of the development will be. Discovery Land Company has a nearby property in Westhampton called "Dune Deck." Will owners of "lodging memberships" at Dune Deck be permitted to play on this nearby East Quogue golf course? The developer has continuously dodged this question, as its answer has the potential to impact their nitrogen calculations and make most of their application moot.

In addition, the Commission should look into the potential impacts of the artificial turf that the developer is planning to use on its ball fields. Artificial turf is a petroleum-based product. Most artificial grass is created using SBR rubber from recycled tires. Many of the chemicals found in artificial turf have been determined to be toxic and potentially even carcinogenic. The Commission should assess the environmental impact of the use of artificial turf within the Pine Barrens.

Mining

The applicant states in their 7/1/20 response papers that "the proposed project plan will be revised to balance the site in terms of cut and fill, such that no off-site excavation of soil is necessary." Why is this not outlined for the Commission today? An excavation plan must be outlined and provided to the Commission before they can make a determination about how large of an impact will occur from their disruption of soils. Will the sand mine right next door be considered as part of the development site and be utilized as part of their excavation plan?

The grading and excavation plan must be finalized, in order for the Commission to assess whether or not this project conforms to the standards and guidelines of the CLUP. We cannot wait for even more proposed future changes.

Traffic

The Hills project was a Development of Regional Significance because of impacts identified in a traffic study analyzing summer and fall peak traffic. Another traffic study was prepared in May 2018, for the Lewis Road PRD, which was collected in March of 2018 over the course of a single month. There was also no traffic counter placed at the busy intersection in and out of the East Coast Sand Mine. The new traffic study was not taken during the busy summer and fall peak periods and therefore, is not an accurate depiction of the potential impacts that this project will have on localized traffic. Without an accurate traffic study, the Commission is unable to ascertain if this project will be a Development of Regional Significance (DRS). There are separate standards for DRS projects that the applicant will need to abide by. A longer traffic study, taken during peak times, must be provided.

Higher traffic levels in the area both alter community character and provide an evacuation hazard during a wildfire emergency.

Placement of Roadways

The applicant plans to develop 17.31 acres of roads and driveways on slopes 10% grade or greater. The CLUP requires that developments avoid this to the fullest extent possible. The applicant has not provided any evidence why it is not possible to avoid this, and therefore does not comply with the CLUP.

Community Character

This project will completely disrupt the community character and the integrity of the Pine Barrens. The development site will be seen from roadways, from local trails, and from neighbors. The revised site plan has placed golf tees directly behind neighboring homes on Spinney Road. The Sewage Treatment Plant will be 300 yards away from nearby homes. Construction will completely disrupt neighbors' everyday life for years during construction – there will be terrible noise and air pollution.

This project is not consistent with other development in the area. It is not consistent with the type of development that should be placed within the Compatible Growth Area of the Pine Barrens nor the Critical Resource Area.

Unanswered Questions

As you can see from the supplied Draft Staff report, the applicant has still failed to supply the Commission with the relevant information they need to evaluate this project. Many questions still remain.

It is not unlike the developer to withhold information from the Commission. The Commission sent ten letters to the Town and the applicant requesting more information about the project during the review by the Town Board and the Town Planning Board – all remained unanswered. The Town did not have the benefit of full input from the Pine Barrens Commission, because the Commission staff could not properly review the project based on the information they had.

During this review process, the applicant has either failed to answer most of the Commission's questions or answered with circular reasoning. Commissioners must ask themselves why that is.

The Developer is Playing a Game

Discovery Land Company Chairman and CEO, Mike Meldman, was featured in CSQ Magazine recently, talking about how he develops the "world's most exclusive private clubs and resort communities." His key to success when starting out was purchasing up unentitled land rather than the more expensive entitled land. The very first property that he bought "had every environmental constraint you could think of," and ultimately took Meldman 18 years to build 28 homes on those 300 acres. Meldman found that experience to be extremely valuable as he "learned how to develop through every possible environmental roadblock." Meldman also brags that he has a "PhD in development."

Meldman continues on to talk about how he would win over the volunteers on planning committees who would be deciding the fate of his projects.

Discovery Land Company's business model is to build slow-moving, time-consuming residential developments. This is exactly what we are seeing in East Quogue. This review process has been carrying on for over a decade.

Long Island's environment and our public health is not a game of chess. Long Island has the most contaminated water in the state. Long Island has some of the highest concentrations of nitrogen in our groundwater, in the country. The fate of the water supply is not a game. The public health of 1.8 million Long Islanders is not something we should be placing bets on.

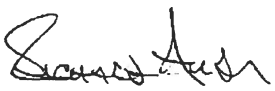
In Conclusion

The review of this project, one of the biggest and most consequential to ever come before the Commission, will set a powerful precedent for other projects that are projects that are proposed for sensitive areas of the Pine Barrens in the future.

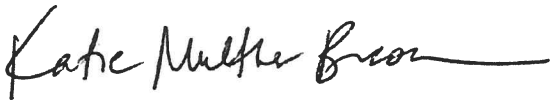
As Commissioners your job, as provided by Section 57-0121 is as follows: To protect, preserve and enhance the functional integrity of the Pine Barrens ecosystem and the significant natural resources, including plant and animal populations and communities; To protect the quality of surface water and groundwater; To discourage piecemeal and scattered development; To promote active and passive recreational and environmental educational uses that are consistent with the land use plan; and to accommodate development, in a manner consistent with the long term integrity of the Pine Barrens ecosystem and to ensure that the pattern of development is compact, efficient and orderly.

We urge you to please protect the integrity of the Pine Barrens and the Pine Barrens Act and vote down this project, once and for all.

Submitted By:



Richard Amper
Executive Director
Long Island Pine Barrens Society



Katie Muether Brown
Deputy Director
Long Island Pine Barrens Society

GROUP FOR THE EAST END

February 17, 2020

Carrie Meek Gallagher, Chairwomen
Central Pine Barrens Joint Planning and Policy Commission
624 Old Riverhead Road
Westhampton Beach, New York 11978

RE: Compatible Growth Area Application:
Lewis Road Planned Residential Development Subdivision (PRD)
Town of Southampton, Hamlet of East Quogue
STATEMENT OF OPPOSITION

Dear Ms. Gallagher,

I write on behalf of Group for the East End (the Group) in opposition to the of the above-referenced application.

Summary Statement:
If approved, the Lewis Road PRD would authorize two substantial primary uses (an expansive 130-unit full-service resort/residential complex and an 18-hole golf club/course) on a site consisting largely of intact pine barrens forest, which is currently zoned only for low-density residential use (1 unit/5 acres).

At nearly 600 acres, this proposal is the largest single development application considered in the Southampton Town Pine Barrens in decades and we have significant concerns about the precedent it may set.

As designed, the project will unnecessarily fragment contiguous pine barrens forest, require significant consumptive use of water resources, and fail to adequately mitigate nutrient loading from site operations and grounds management.

P.O. Box 1792
Southold, NY 11971

P.O. Box 569
Bridgehampton, NY 11932

631.765.6450
GroupfortheEastEnd.org

Nutrient loading impacts from this proposal are a particularly important to this review, not only due to the project's location within the Central Pine Barrens, but because the project site also falls within the watershed of Weesuck Creek, which the New York State Department of Environmental Conservation (NYSDSEC) has classified as an impaired waterbody.

Weesuck Creek also serves as a tributary to the Shinnecock Bay, which according to the NYSDEC, is significantly impaired due to nutrient contamination.

In addition to the specific environmental concerns related to this project, we believe that the environmental review afforded the Lewis Road PRD pursuant to the State Environmental Quality Review Act (SEQRA) has been significantly mishandled by the Southampton Town Planning Board, and we look to the Commission to help assure proper compliance for this proposal.

To date, the public record indicates that the Southampton Town Planning Board issued a preliminary subdivision approval for an action that (despite its Type I classification) was never subjected to a coordinated review, never had a lead agency determination, never had a determination of significance, nor ever benefited from the full consideration of environmental mitigation measures, or from the detailed consideration of design alternatives.

Additionally, the Commission should be aware that the planning board's review of the Lewis Road PRD proposal largely failed to incorporate many elements of an extensive nitrogen mitigation package deemed necessary by the Town of Southampton's science advisor (Dr. Christopher Gobler of Stony Brook University) for a very similar resort/golf club proposal (The Hills at Southampton Planned Development District -PDD), which was to be located on the subject property. Even with this additional mitigation, the Southampton Town Board denied The Hills PDD application in 2017.

Unfortunately, the Southampton Town Planning Board has failed to fulfill both the procedural and substantive requirements of SEQRA. Given the regional significance of this project however, we must look to the Commission to remedy these problems and assure an environmental review and outcome that is in the best interest of the Pine Barrens and all the resources it provides for Long Island.

Further details of our comments and concerns are provided below:

Groundwater Protection:
If approved, the Lewis Road PRD resort/golf club development would provide for a significant intensification of allowable use within a low-density residential zone that is also recognized as a New York State-designated Special Groundwater Protection Area, a Suffolk County-designated Critical Environmental Area, a Critical Resource Area pursuant to the Central Pine Barrens Comprehensive Land Use Plan (CLUP), and a Southampton Town-designated Aquifer Protection Overlay District (APOD).

The APOD, and its attendant low-impact zoning, was established based on scientific research (Porter & Hughes 1983) and designed to protect water quality as well as the unique ecosystem within the Southampton Town Pine Barrens.

The goals of the APOD align closely with the Commission's responsibility to properly manage land use within the Central Pine Barrens and protect the region's groundwater, surface water and vast natural and cultural resources for the public's benefit.

The Commission should be aware that there is no comparable example of a large undeveloped parcel of pine barrens within the low-density residential zoning of the APOD that has ever been granted permission to operate an expansive mixed-use resort development complex under the rules governing PRD subdivisions in the Town of Southampton. Should this project be approved, other similar applications are sure to follow.

In fact, PRD subdivisions are only allowed under the Town of Southampton's "Open Space Law", which is primarily intended to "cluster" development proposals in an effort to maximize protection of natural and cultural resources. The law was never intended to confine development areas so as to permit a second primary use of the property that largely negates the value of clustered development in the first place.

Environmental Review:
We believe the environmental review process undertaken by the Southampton Town Planning Board for the Lewis Road PRD proposal is seriously flawed because the Southampton Town Planning Board never coordinated review of the Lewis Road proposal as required by SEQRA, nor did it ever establish a lead agency, or adopt a determination of significance.

Instead of immediately classifying the proposal as a Type I Action pursuant to SEQRA [see **6NYCRR 617.4 (B)(6)(i)**, **6NYCRR 617.4 (B)(10)** and **Southampton Town Code § 157.11(3)**], and initiating a coordinated review of the Lewis Road PRD application when it was received, the planning board relied upon a prior SEQRA review that was conducted several years ago for a change of zone application on the same 600-acre property known as The Hills at Southampton, PDD. After review, The Hills proposal failed to gain Town Board approval and no longer exists as an open or active application.

Notably, The Hills PDD was denied by the Town in 2017 based largely on unresolved environmental concerns and other uncertainties raised by Town Board members at the time.

Regarding the Lewis Road PRD, the fundamental mistake made by the planning board was its failure to recognize that the Southampton Town Board simply could not be the lead agency for the Lewis Road PRD application. The Lewis Road PRD is a completely new application and the Town Board no longer has any approval authority over the subject or any PRD subdivision proposal. As a result, the planning board had an obligation to reestablish Lead Agency for the current project, and then conduct a thorough SEQRA review, but it failed to do so.

Impact Mitigation:
It is important for the Commission to recognize that despite a similar project "footprint", the Lewis Road PRD is also different in many ways especially with respect to water quality impact mitigation.

The Lewis Road PRD has a different unit density, a different building configuration, and is being reviewed under a different set of local regulatory requirements, but most importantly, it lacks the full benefit of an extensive nitrogen impact mitigation package that the Town Board's science consultant (Dr. Christopher Gobler) argued was necessary to limit potential harm from the proposal's anticipated nutrient loading to the surrounding environment. Dr. Gobler's 2017 report to Southampton Town is attached as **Exhibit A** (see pp.6-11).

Among the nutrient mitigation measures supported by Dr. Gobler were:

- A 33-acre land purchase within the Weesuck Creek watershed,
- The dedication of a drinking water well site,
- The purchase and abandonment of 30 Pine Barrens Credits,
- The creation of a million-dollar septic replacement fund,
- A waste treatment plant for the East Quogue School,
- A waste treatment plant for the project, and
- A fertilizer limitation and groundwater monitoring program.

With respect to the current Lewis Road PRD application, a substantial number of nitrogen reducing recommendations endorsed by Dr. Gobler, and outlined in the prior PDD application's Final Environmental Impact Statement, have been removed without explanation, despite Dr. Gobler's clear conclusion that all such measures would be needed to offset the anticipated nitrogen impacts of the previously proposed PDD.

Notably, the nitrogen impacts associated with the current PRD application can be expected to be very similar to the prior Hills PDD proposal as the overall resort/golf course usage, amenities and building envelope remain largely the same as the prior application.

This is a major substantive shortcoming of the planning board's environmental review process and it reflects the general lack of required due diligence that characterized the entire SEQRA review for the Lewis Road PRD as handled by the Southampton Town Planning Board.

Conclusions and Recommendations:
Given that SEQRA demands strict procedural and substantive compliance, the Commission will need to carefully determine how best to manage its forthcoming environmental review obligations for the Lewis Road PRD.

In the absence of a coordinated review, or a viable Lead Agency, the Commission may need to conduct its own coordinated review, assume lead agency status, and thereafter render its own determination of significance for the Lewis Road PRD proposal.

We leave it to the Commission to determine how best to handle this matter, but the courts have made it clear that SEQRA's procedures must be strictly complied with. A recent New York Law Journal article on the importance of strict compliance with SEQRA is attached as **Exhibit B**.

The Commission may also find that the Lewis Road PRD is simply too inconsistent with the approval standards of the Central Pine Barrens CLUP to move forward and deny the project in its current form. If the project is denied, then it might not require any further SEQRA action by Commission.

We have long felt that the best outcome for this parcel would be a purchase for public preservation. However, we remain committed to providing professional planning and design input (including the development and submission of specific professionally designed alternatives) that would reflect the project-sponsor's development objectives, while still providing for the highest level of conservation design.

We greatly appreciate the opportunity to comment on this proposal and remain available to provide additional information or answer any questions you may have.

Sincerely,

Robert S. DeLuca
President

cc: Central Suffolk Pine Barrens Commission

Attachments (Exhibits A & B)

Standing:
Group for the East End was founded in 1972 and is a professionally staffed environmental protection organization representing the conservation and community planning interests of several thousand member-households, individuals and businesses from across the five towns of eastern Long Island. Group for the East End is also a statutorily appointed member of the Central Pine Barrens Advisory Committee established under the Long Island Pine Barrens Protection Act of 1993.

For nearly five decades, the Group has been extensively involved in the professional review of complex development applications proposed throughout eastern Long Island, and has extensive working knowledge of local, regional, and state procedures governing the review of development applications in our region including SEQRA.

We are fully familiar with the above-referenced application and have been involved as a reviewer and commenter on the subject PRD proposal and the applicant's similar preceding application known as The Hills at Southampton PDD for nearly seven years.

Credentials of the Author:
Bob DeLuca has served as the President and CEO of Group for the East End since 1992. DeLuca holds a B.S. in Environmental Science from Fordham University and an M.S. in Environmental Science from the State University's College of Environmental Forestry at Syracuse. DeLuca also served as a Biologist and Sr. Environmental Analyst with the Suffolk County Office of Ecology for nearly a decade. In these positions, DeLuca conducted field research, prepared detailed environmental assessments and prepared extensive testimony regarding hundreds of development applications that were annually coordinated with Suffolk County through the New York State Environmental Quality Review Act (SEQRA) . DeLuca has also taught state and local environmental policy, planning, zoning and SEQRA as an adjunct professor at Long Island University for more than 15 years.

GROUP FOR THE EAST END

EXHIBIT A

Report of
Dr. Christopher J. Gobler PhD
October 2017

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UPDATED ANALYSIS OF NITROGEN LOADING RATES FROM THE HILLS PDD BASED ON THE FINAL ENVIRONMENTAL IMPACT STATEMENT

CHRISTOPHER J. GOBLER, PHD

OCTOBER, 2017

Stony Brook University
School *of* Marine and Atmospheric Sciences

Executive Summary:

The Hills is a Planned Development District (PDD) proposed by Discovery Land Corporation (DLC) to be built in East Quogue. The Hills property is currently comprised of 591 acres of Pine Barrens, open space, and farmland and has been proposed by DLC via the PDD to be made into a seasonal resort with a golf course. The Hills property lies within the watershed of western Shinnecock Bay which has experienced significant losses of seagrass and bivalves in recent years due to increasing nitrogen loads, harmful algal blooms, and low oxygen events. Increases in nitrogen loading to this region is expected to worsen these conditions. For this evaluation, a dynamic nitrogen loading model was constructed using information generated by the NYS Department of Environmental Conservation's Long Island Nitrogen Action Plan (LINAP) as well as standard practices used to determine nitrogen loading rates across Long Island this decade. Using this model, the nitrogen loading rates currently delivered to this property and expected from multiple development scenarios were quantified using information provided by the PDD Final Environmental Impact Statement (FEIS) for The Hills, specific guidance from the Town of Southampton, information from LINAP, and the most up-to-date science available. The series of nitrogen mitigation measures proposed in the FEIS, that did not appear in the DEIS, considered in this report for the Town of Southampton included the preservation (or development) of 33 acres at the headwaters of Weesuck Creek within East Quogue, the purchase of 30 Pine Barrens credits and the associated potential increase housing density, community septic system upgrades, the installation of a sewage treatment plant (STP) to treat wastewater on the PDD property, the installation of a STP for East Quogue Elementary School with both STPs treating wastewater to 10 mg/L, and a conservative estimate of the impacts of fertigation on the site. Calculations demonstrated that the Hills PDD as described within the FEIS yielded a lower nitrogen loading rate compared to a higher and lower impact, as of right development on the property. After accounting for updates within the FEIS, as of right development is estimated to yield 2,500 to 5,100 lbs of nitrogen per year, depending on the level of occupancy, fertilization rates, and the extent of clearing, and the size of lawns on properties. The lower bound of this estimate primarily uses many of the details of the PDD without a golf course as well as the low impact development as proposed by The Group for the East End. The PDD nitrogen load was found to be ~2,000 lbs of nitrogen per year or more than 20% lower than the lowest As of Right scenario. Each scenario provides a greater nitrogen loading rate than the current, undeveloped property (1,200 lbs per year). All of these calculations are, of course, theoretical and the extent to which the actual nitrogen yields on the Hills property match these calculations will be partly a function of the extent to which the characteristics of development matches the details and practices outlined in the PDD. As such, careful monitoring of any potential development, the

watershed, groundwater, surface waters, and surrounding ecosystems will be required to assure optimal environmental outcomes.

Preface:

Christopher J. Gobler is a professor within the School of Marine and Atmospheric Sciences (SoMAS) at Stony Brook University. He received his M.S. and Ph.D. from Stony Brook University in the 1990s. He began his academic career at Long Island University (LIU) in 1999. In 2005, he joined Stony Brook University as the Director of Academic Programs for SoMAS on the Stony Brook – Southampton campus. In 2014, he was appointed as the Associate Dean of Research at SoMAS and in 2015, he was named co-Director of the New York State Center for Clean Water Technology. In 2016, he was given the Environmental Champion Award by the US Environmental Protection Agency for his research efforts and was named the 40th most influential person on Long Island by the Long Island Press. In 2017, he was awarded the Endowed Chair in Coastal Ecology and Conservation within SoMAS. The major research focus within his group is investigating how anthropogenic activities such as climate change, eutrophication, and the over-harvesting of fisheries alters the ecological functioning of coastal ecosystems. He has been researching these topics on Long Island for 25 years and has published more than 150 peer-reviewed manuscripts in international journals on these subjects. He has been calculating nitrogen loads to water bodies across Long Island for more than 20 years.

Background on regional groundwater and surface waters:

Current conditions

'The Hills in Southampton' is comprised of nearly 500 acres of undisturbed Pine Barrens in the town of East Quogue. Beyond the intrinsic value of open space and the ecosystem services and benefits of the Long Island Pine Barrens, this property has numerous benefits to water quality in the region. The natural vegetation on this property acts as a natural filter for nitrogen and other contaminants deposited from the atmosphere. This is clear from the levels of nitrogen and general contaminant currently present in the Suffolk County Water Authority's groundwater wells on Malloy Drive which show exceedingly low levels of nitrogen (< 0.5 mg per liter) and undetectable levels of pesticides and other organic compounds[1]. In contrast, other groundwater in the region has been contaminated by various land use processes. For example, the upper glacial aquifer in regions away from the Hills such as the SCWA Spinney Road well field is already contaminated with high levels of nitrate and perchlorate to the point Suffolk County Water Authority has stopped using these wells to deliver drinking water.[1]. Unfortunately, more than 100 families in East Quogue with private wells rely on upper glacial aquifer for drinking water.[1]

The proposed development in The Hills is located 1,500 feet from Weesuck Creek and western Shinnecock Bay and groundwater travels times from land to bay in this region are less than five years[2] meaning that land use changes on the Hills such as adding homes or a golf course will quickly impact the nearby coastal ecosystems. This being the case, it is important to clearly understand and document the current and recent conditions of these ecosystems. During Hurricane Sandy, the waters of Shinnecock Bay crossed Montauk Highway in East Quogue, flooded the three major communities on the East Quogue peninsula (Shinnecock Shores, Pinesfield, Pine Neck Landing) and approached Main Street[3]. East Quogue has been fortunate to still have lush stands of salt marsh along the east and west sides of Weesuck Creek. During Sandy, those salt marshes protected East Quogue from a significantly worse flooding scenario than it would have experienced without these marshes[4].

In 2010, NYSDEC declared Shinnecock Bay an impaired waterbody due to excessive wastewater nitrogen loads[5]; total nitrogen levels in the Bay exceed guidance levels set by USEPA[6]. Impairments brought about by high nitrogen loading to western Shinnecock Bay include: Annual toxic brown tides[6], dissolved oxygen levels in summer dangerously low for marine life[6,7], the near complete loss of seagrass beds[8], a critical habitat for fisheries[8], and low densities of hard clams and conditions under which baby shellfish cannot survive[9] . Brown tides in Shinnecock Bay continue to worsen. The brown tide in 2016 was the most intense on record

and excessive nitrogen loading will make such events worse in the future. Brown tides have a cascading effect on the marine ecosystem, killing off remaining seagrass and shellfish, which in turn makes the ecosystem more vulnerable to additional brown tides[6]. Western Shinnecock Bay is one of five places in NYS that experiences paralytic shellfish poisoning (PSP) caused by saxitoxin and was closed by NYSDEC to due to this toxin in 2011, 2012, and 2015.[10] In fact, every year the epicenter of PSP during these events has been in Weesuck Creek in East Quogue. And the PSP event in 2015 was three-fold more toxic than any measurement made to date[10] suggesting that conditions are worsening.

Future threats

Any additional nitrogen loading from land in East Quogue will worsen existing conditions in the bay. Enhanced nitrogen loading will push already high nitrate levels in public and private water supply wells for East Quogue closer to the USEPA federal limit for drinking water[1]. In conducting a state-wide assessment of coastal flooding, NYSDEC released a report in April 2014 that concluded that salt marsh habitats provide critical flood protection to New York coastal communities and that increases in land-to-sea delivery of nitrogen degrades, erodes, and eventually destroys salt marshes[4]. Given the progression of sea level rise, there could be an intensification of flooding risk in East Quogue coastal communities associated with storms, hurricanes, and/or extreme tides with more nitrogen loading. Furthermore, the numerous impairments in Shinnecock Bay including toxic brown tides, low oxygen levels, the loss of eelgrass, and the loss of shellfish will all worsen in Shinnecock Bay with additional nitrogen loads[8,13,14]. Increasing nitrogen loading has been shown to increase the intensity and toxicity of PSP on Long Island.[15] More nitrogen loading in East Quogue could intensify PSP in and around Weesuck Creek leading to larger and/or longer shellfish bed closures. This also creates the risk that citizens of Southampton could become seriously sickened or worse from eating contaminated shellfish. Due to diffusive groundwater flow and tidal exchange, the impacts of enhanced nitrogen loads on surface water will be experienced in regions to the east and west including Hampton Bays, Quogue, and Westhampton Beach. Finally, all of these worsened conditions have serious economic repercussions on tourism, fisheries, restaurants, and even home values[16].

References

1: Suffolk County Water Authority, Spinney Road Well Head tests, 2010-2104; **2.** Suffolk County Comprehensive Water Resources Management Plan. 2010. Draft report; **3:** USGS Hurricane Sandy Storm Tide mapper. **4:** NYSDEC 2014. Nitrogen Pollution and Adverse Impacts on Resilient Tidal Marshlands Technical Briefing Summary. **5:** NYSDEC 2010. 303-d List. **6:** Suffolk County Department of Health Services 1976-2013. Annual reports of surface water quality. **7:** News 12 Water Quality Index Reports, 2014. **8:** New York State Department of Environmental Conservation 2009. Seagrass Task Force Final Report. **9:** Shinnecock Bay Restoration Project Final report 2013. Stony Brook University. **10:** NYSDEC 2011 – 2014. Marine Division annual monitoring of PSP on Long Island. **12:** Bowen, J. L., et al. 2007. NLOAD: an interactive, web-based modeling tool for nitrogen management in estuaries. Ecological Applications, 17(sp5), S17-S30. **13:** Valiela, I. 2006. Global Coastal Change,

Blackwell Publishing. **14:** Gobler CJ, Sunda WG. 2012. Ecosystem disruptive algal blooms of the brown tide species, Aureococcus anophagefferens and Aureoumbra lagunensis. Harmful Algae. 14: 36–45; **15:** Hattenrath TK, Anderson DA, Gobler CJ. 2010. The influence of nutrients and climate on the dynamics and toxicity of *Alexandrium fundyense* blooms in a New York (USA) estuary. *Harmful Algae* 9: 402–412. **16:** Johnston RJ et al. 2002. Valuing Estuarine Resource Services Using Economic and Ecological Models:The Peconic Estuary System Study. Coastal Management, 30:47–65.

Scope of this analysis

This document has been prepared to solely consider the potential impacts of the Hills PDD on groundwater and surface water in the region. Within this realm, the overwhelming majority of this document considers the loading rates of nitrogen that will be a consequence of differing potential land uses of the property given the sensitivity of surface water and habitats to nitrogen loading rates. The author has created a dynamic nitrogen loading model that uses the loading rate constants and assumptions that have been developed as part of the NYSDEC's Long Island Nitrogen Action Plan (LINAP). This plan has been collaboratively developed by CDM Smith, NYSDEC, Suffolk County, Cornell University, USGS, US EPA, and Stony Brook University and represents a scientific consensus among these teams and contains the most up-to-date and best science available on the subject of nitrogen loading within coastal watersheds. The tables and constants used in calculations appear in Table 1. This document comments on the actual contents of the FEIS only. The author acknowledges there are many other very important aspects of the project beyond nitrogen loading that are not considered here.

Current use of properties

Presently, the 591 acres of land that comprise the Hills PDD include open space, Pine Barrens forest, and farmland. My analyses indicate the nitrogen loading rate is 1,200 lbs per year if the farm fields within the property are actively being fertilizer (Gobler, March 2017). If they are not actively being fertilizer, the loading drops to ~660 lbs per year (Gobler, March 2017). Local observations have indicated that the singular farm field on the Parlato property is not used every year and thus not always fertilized. Similarly, it is not clear if the Kracke property under consideration is actively managed and fertilized. Further, the area contains shrubs and ornamentals which are typically fertilizer at a lower rate than row crops and thus at a lower rate than used in the DEIS. Differences between my calculated nitrogen loads and those of the DEIS also arise from the use of a leaching rates for nitrogen different than those that have been accepted by LINAP and a fertilization rate higher than has been accepted by LINAP.

Changes from the DEIS to the FEIS

The FEIS differed from the DEIS with regard to nitrogen impacts of the PDD in five material ways:

1) The FEIS now includes preserving an additional 33 acres of land located at the headwaters of Weesuck Creek. The zoning associated with the parcel is R-40 which would result in an as-of-right yield of 30 homes.
2) The purchase and abandonment of 30 Pine Barrens Credits consistent with the objectives of Central Pines Barrens Program, which eliminates potential nitrogen load associated with 30 single family homes that could be otherwise constructed with these credits.
3) An On-Site Wastewater Treatment System that would remove nitrogen at a level at or below 10mg/L compared to allowable County standard of 19mg/L.
4) The construction of a Sewage Treatment Plant for the local school in addition that would remove nitrogen at a level at or below 10mg/L
5) A fertilizer cap of 2 pounds per year per 1000 square feet for the entire property cleared property.
6) A $1M fund to support community-wide septic upgrades. This final approach had been mentioned in the DEIS but was not part of the analysis provided by the author to the Town of Southampton. For completeness, this is now included here.

Changes to nitrogen loading due to additional nitrogen reducing measures in the FEIS

The analysis of the DEIS indicated the nitrogen loading rates of the PDD would be 4,128 lbs per year (Gobler, March 2017). For consideration of the 'As of Right' development, two scenarios were previously considered: One that included nearly all of the default assumptions made by the DLC consultants and a second considering considered a 'reduced impact' alternative, using some information proposed by the PDD as well as many of these assumptions and conditions within the 'reduced impact' alternative proposed by The Group for the East End for the property. The As of Right development using the DLC default assumptions would yield 3,454 lbs of nitrogen per year a level similar to the level determined by the DLC consultants in the DEIS (3,288 lbs). The reduced impact alternative provides a nitrogen loading rate (~1,700 lbs nitrogen per year) that is roughly half of the As of Right conditions but highly similar to the PDD without the golf course.

Preserving 33 acres of land located at the headwaters of Weesuck Creek

Following the guidance of Southampton Town, the zoning associated with the parcel is R-40 and would result in an as-of-right yield of 30 homes. The nitrogen loading model was used to include a development on this parcel with 30 homes and the associated changes in nitrogen loading to that land that would emanate from wastewater, fertilizer use, and land clearing. The model was run using parameters that were consistent with a higher and lower impact development as outlined within the analyses provided for the DEIS. As pristine, undeveloped forest, this land presently yields < 40 pounds of nitrogen per year. It is assumed any

development would include advanced septic systems to treat wastewater to 19 milligrams of nitrogen per liter. If developed with the maximal allowable amount of clearing, above average acreage of lawns, and a mostly year-round residency, such a development would yield 823 pounds of nitrogen per year. If developed more realistically, with a normal amount of clearing (based on Town averages), normal acreage of lawns (based on Town averages), and a realistic mix of seasonal and year-round residency (based on U.S. census data), such a development would yield 384 pounds of nitrogen per year. These totals must be added to the expected 'As of Right' scenarios as they are not part of the Hill PDD plan. This would bring the total nitrogen yield from the maximal As of Right scenario to 4,278 pounds of nitrogen per year and the yield from the more conservative / realistic development scenario to 2,122 pounds of nitrogen per year.

The purchase and abandonment of 30 Pine Barrens Credits

It has been proposed that DLC will purchase 30 Pine Barrens Credits within the Central Pines Barrens Program, which would eliminate potential nitrogen load associated with 30 single family homes that could be otherwise constructed with these credits. This is a challenging scenario to evaluate given the precise location of the additional homes that could be developed is not fully known. In one scenario, these homes were hypothetically sites on the Hills site as an additional 30 units build in a manner similar to the other units as proposed in the DEIS and FEIS. In this case, if developed to with the maximal allowable amount of clearing, above average acreage of lawns, and a mostly year-round residency using scenarios suggested by DLC consultants within the DEIS, the 30 additional units would yield 852 pounds of nitrogen per year. If developed with lesser impact including a lower amount of clearing, smaller acreage of lawns, and a realistic mix of seasonal and year-round residency, such a development would yield 362 pounds of nitrogen per year. These yields are similar to the hypothetical 33 acres scenarios run above, indicating that if these credits were placed elsewhere, the yields would likely be somewhat similar if the lot sizes were similarly small. More homes or larger lot sizes would yield more nitrogen. Regardless, using the scenarios described here would bring the total nitrogen yield from the maximal As of Right scenario to 5,130 pounds of nitrogen per year and the yield from the more conservative / realistic development scenario to 2,484 pounds of nitrogen per year. It is noted that if the PDD is not approved by the Town of Southampton and if the DLC desired to land the PBC on the Hills property (i.e. the scenario used here), this action would need to be approved by the Town Board and would not be an As of Right alternative without such approval.

An On-Site Wastewater Treatment System for Hills PDD

The FEIS states that the Hills development will be outfitted with a Baswood sewage treatment facility that would remove nitrogen at a level at or below 10 milligrams of nitrogen per liter, lower than the allowable County standard of 19 milligrams of nitrogen per liter. It was estimated in the DEIS that the Hills development would produce 562 pounds of wastewater nitrogen per year using technology that treated to 19 milligrams of nitrogen per liter. Treatment to 10 milligrams of nitrogen per liter would remove an additional 330 pounds of nitrogen per year from the development.

The construction of a Sewage Treatment Plant East Quogue Elementary School

East Quogue elementary school is comprised of ~400 students, ages 5 – 12, and ~100 adults including faculty and staff. The school year is 180 days of the year and the building is fully occupied by people for approximately six hours per day. Faculty and staff work longer days and some staff are present all year. There are daily activities in the afternoons and evenings as well as special events such as sports, concerts, cub scouts, community meetings, plays, graduation, etc. It is estimated that the collective activities of the school releases 400 pounds of nitrogen from wastewater per year with standard septic tanks and leaching rings to the aquifer. The construction of a sewage treatment facility that treated wastewater to 10 mg N per liter would reduce the wastewater-based nitrogen output from the school to 65 pounds per year, removing 335 pounds of nitrogen per year. It is noted that sewage treatment plant operation can be expensive and that it is not clear who would be responsible for the operation and maintenance of this system.

A fertilizer cap of 2 pounds per year per 1000 square feet

This change effects the nitrogen load of the PDD in two ways. Firstly, it eliminates the possibility of additional nitrogen fertilizer being added to the proposed golf course beyond 2 pounds per year per 1000 square feet in the event that the proposed fertigation approach does not yield the expected level of nitrogen needed, a possibility acknowledged within the DEIS. This removes 500 lbs of nitrogen per year that had been added in the prior analyses given that the ability of fertigation to deliver a set level of nitrogen seems uncertain. This change also reduces the total amount of fertilizer added to the property by 257 lbs given a higher rate that had been planned for the golf course in the DEIS.

A $1M fund to support community-wide septic upgrades

Presently, there is great interest in reducing nitrogen loading from wastewater across Suffolk County and the resent renewal and update of the Community Preservation Funds within the Town of Southampton to include funds for upgrading septic systems will provide funds to convert standard septic systems to new, innovative and alternative systems that remove greater

amounts of nitrogen, specifically to levels below 19 milligrams per liter as per the recently approved Article 19 of the Suffolk County health code. The Hills PDD proposed to spend $1M on upgrading septic systems within the East Quogue watershed. While off-the-shelf septic systems that remove large amounts of nitrogen approved by Suffolk County can cost $20,000 installed (e.g. South Fork Septic Services, East Hampton, NY) additional costs may include landscaping, marking out utilities, pump out and abandonment of older systems, and electrical updates / installations. Hence, a cost of $25,000 per septic upgrade was used for the purposes of this analyses, which would result in 40 homes in East Quogue being upgraded as a result of the PDD. Given the known rates of seasonal occupancy for East Quogue as reported by Suffolk County's Department of Planning, 40 East Quogue homes with standard septic systems produce ~562 pounds of nitrogen annually, but would release 178 pounds of nitrogen annually with a system reducing down to 19 milligrams of nitrogen per liter, resulting in 384 pounds of nitrogen removed annually. It is notable that the upgrading of septic systems is presently voluntary and the extent to which associated nitrogen reductions are achieved will be a function of how many homeowners in the East Quogue watershed take advantage of this program. Even if this program along, with any programs developed by Suffolk County and/or the Town of Southampton, cover the full cost of installation, installing such systems require annual maintenance and inspection fees. How this may impact program participation is unknown.

Fertigation:

Fertigation is a novel and innovative approach for groundwater remediation and holds promise to be one of many potential mitigation strategies used on Long Island to reduce the loading of nitrogen from land to sea. This concept employs turf-remediation by allowing vegetation to absorb nitrogen from groundwater. This "pump-and-fertilize" concept proposed is a primary mitigating measure for the PDD. Since this report was completed, the Town's consultant, AKRF, in developing the SEQRA findings statement attributed substantial nitrogen reduction to this methodology. The applicant indicated that some 1,800 pounds of nitrogen per year will be removed from the ground water due to the pumping of 20 million gallons of groundwater for irrigation per year and groundwater testing in the western portion of the subject property revealed nitrogen levels averaging 14 mg N per liter.

The largest uncertainty with regard to the success of the fertigation approach stems from the groundwater nitrogen concentrations which vary strongly both horizontally and vertically in the region where the groundwater is to be pumped, being as high as 28 mg per liter and as low as 1 mg per liter. Suffolk County Water Authority wells on Spinney Road have consistently produced high levels of nitrogen (7 – 14 mg per L) for many years, but there are currently no concrete plans to use this water source for fertigation.

Since my original report was written, fertigation has been implemented on the Indian Island golf course in Riverhead and I have become aware of its use in other locations including a golf course in Massachusetts. While the precise level of nitrogen in groundwater that will be used for fertigation remains an unknown, it seems highly likely that any nitrogen in solution that is applied to a turf will be absorbed at a significant rate. Being conservative and consistent with the on-going NYSDEC-led LINAP study as well as my prior evaluations, a 20% leaching rate of nitrogen by turf could be considered. Regarding actual concentrations of nitrogen in groundwater, 2 mg N per liter is substantially lower than the levels considered by the Hills consultants (14 mg per L) but is within the range of what is present near the proposed well to be used for fertigation. If an application rate of 20 million gallons per year is used by the golf course as proposed, this would result in the removal of 281 pounds of nitrogen per year (Table 1).

Summary:

Collectively, the additional nitrogen mitigation measured included in the FEIS as interpreted by the Town of Southampton would yield nitrogen loads of 2,500 to 5,100 pounds of nitrogen per year for lower and higher As of Right development scenarios whereas the proposed Hills PDD would yield 2,000 pounds of nitrogen per year. This equates to a lower yield than the lower impact As of Right development but is still more than the current yield of the forest and farmland.

The total calculation of nitrogen impacts and mitigation for this project are complicated by the challenge of attempting to quantify several inexact variables under differing regulatory requirements, while simultaneously making judgments about effective implementation, voluntary program participation, long-term enforcement, and site management over time. There are uncertainties in this analysis with regard to where the Pine Barrens Credits to be purchased would 'land'. Further, it is not known how many homeowners will participate in the septic upgrade program within the watershed.

Future considerations:

All of these calculations are, of course, theoretical and the extent to which the actual nitrogen yields on the Hills property match these calculations will be partly a function of the extent to which the characteristics of development matches the details and practices outlined in the PDD. Moreover, as more detailed information of the manner in which the Hills PDD may be developed and operated become available and as actual data is collected, these hypothetical scenarios and calculations could and probably should be refined. If the Hills PDD is approved

and The Hills at Southampton is developed, stringent enforcement along with careful monitoring of the development, watershed, groundwater, surface waters, and surrounding ecosystems will be required to assure optimal environmental outcomes.

Table 1. Nitrogen yields for the Hills property for the DEIS, as well as specific changes made to the FEIS and considered in this report for the Town of Southampton. Values are in pounds of nitrogen per year.

	Existing	Hill PDD	As of right, maximu	As of right, lower	Comment
DEIS	1,210	4,128	3,455	1,738	Reported in March
Fertilizer cap	1,210	3,371	3,455	1,738	2 lbs/1000 sq. ft cap on applied fertilizer
Hills STP	1,210	3,041	3,455	1,738	STP for the PDD treating to 10 mg/L
School STP	1,210	2,706	3,455	1,738	STP for the school treating to 10 mg/L
Community septic upgrades	1,210	2,322	3,455	1,738	Using new technologies that treat to 19 mg/L
Fertigation, conservative estimate	1,210	2,041	3,455	1,738	Considers 2mg N / L groundwater
33 acres with 30 homes	1,210	2,041	4,278	2,122	Build out of 30 homes on 33 acres
Pine Barrens Credits, 30 homes	1,210	2,041	5,130	2,484	30 additional units via purchase of Pine Barrens credits
FINAL	**1,210**	**2,041**	**5,130**	**2,484**	Total yields

GROUP FOR THE EAST END

EXHIBIT B

New York Law Journal
"Strict Compliance With SEQRA"
September 2018

P.O. Box 1792
Southold, NY 11971

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Bridgehampton, NY 11932

631.765.6450
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ZONING AND LAND USE PLANNING

Strict Compliance With SEQRA: A Mandate Courts Enforce

By Anthony S. Guardino

Several years after the State Environmental Quality Review Act (SEQRA) was enacted in 1975, Rye's town board granted a permit to a property owner to construct an office building on close to 18 acres of town land. The board acted despite the fact that the town had not prepared an environmental impact statement (EIS) as described in SEQRA. On several occasions when considering the property owner's application, however, the town had carefully examined environmental factors such as traffic volume, parking capacity, drainage, soil, vegetation, noise, and aesthetics.

A number of community members challenged the town board's decision, seeking to have the construction permit set aside. They argued that the town had failed to adhere to the mandates of SEQRA.

The trial court dismissed their petition, concluding that "substantial, not strict compliance with SEQRA" was required and observing that the town had "closely examined the environmental impact factors" even without an EIS.

The Appellate Division, Second Department, reversed in *Matter of Rye Town/King Civic Association v. Town of Rye*, 82 A.D.2d 474 (2d Dept. 1981), where the court ruled that the town had not discharged its duties under SEQRA because it failed "to adhere to the literal requirements" of the statute, notwithstanding that it carried out extensive environmental review procedures in harmony with the spirit of the law.

According to the Second Department, substantial compliance with the "spirit" of SEQRA did not constitute adherence to its policies "to the fullest extent possible," as provided by SEQRA itself in Environmental Conservation Law (ECL) 8-0103(6). The law, and the accompanying regulations, the court emphasized, required "literal compliance."

That courts have reached the same conclusion many times since the Second Department's decision in *Town of Rye* may seem surprising, given that the "literal compliance" standard is clear and well accepted. Yet local governments all too often fail to literally abide by SEQRA's requirements, at the risk of having their decisions overturned.

This column explains the essential features of SEQRA, reviews a recent case that illustrates the risks of failing to strictly comply with SEQRA's requirements, and concludes by reiterating the importance of literal compliance with this law.

SEQRA's Rules

As many courts have observed, SEQRA represents an attempt by the New York State Legislature to strike a balance between social and economic goals and concerns about the environment. *See, e.g., Matter of Jackson v. New York State Urban Development Corp.*, 67 N.Y.2d 400 (1986). SEQRA's primary purpose is to inject environmental considerations directly into governmental planning and decision making at the

ANTHONY S. GUARDINO *is a partner with Farrell Fritz in the firm's Hauppauge office.*

earliest possible time, so that social, economic, and environmental factors are considered together when reaching decisions on proposed activities that may have a significant effect on the environment. *See, e.g., Matter of Neville v. Koch*, 79 N.Y.2d 416 (1992).

To promote the Legislature's goals and to assist agency officials in their assessment of environmental factors, SEQRA requires that an EIS be prepared for such government-sponsored or government-approved projects or actions. ECL 8-0109(2). Described by the New York Court of Appeals as the "heart of SEQRA," *Matter of Jackson, supra,* the EIS is a detailed statement setting forth, among other things, a description of the proposed action and its environmental setting; the environmental impacts of the proposed action, including both long-term and short-term effects; any adverse environmental impacts that cannot be avoided if the action is implemented; alternatives to the proposed action; and mitigation measures proposed to minimize the environmental impact.

The lesson is clear: local governments that fail to strictly comply with SEQRA risk having their decisions overturned, even if they considered environmental and other issues and reached the result that they would have reached if they had complied with SEQRA.

SEQRA groups the "actions" subject to review into three distinct categories: "Type I," "Type II," and "Unlisted." Type I actions are those projects directly undertaken, funded, or approved by a government agency that are considered likely to require the preparation of an EIS. Type II actions are activities that the New York State Department of Environmental Conservation (DEC) has determined will not have a significant impact on the environment or are otherwise precluded from environmental review by the ECL and, therefore, are not subject to SEQRA review. Unlisted actions are all actions not identified as Type I or Type II.

The initial step for a government agency that receives an application for approval or funding, or that proposes to directly undertake an action, is to determine whether the proposed action falls within the scope of SEQRA. The statute and regulations mandate that as early as possible in an agency's formulation of an action it seeks to undertake, or as soon as an agency receives an application for funding or for approval of an action, the agency must determine whether the proposed action qualifies as a Type I, a Type II, or an unlisted action for purposes of SEQRA review.

If a proposed project is classified as a Type II action, the agency has no further responsibilities under SEQRA. If not, the agency must make a preliminary classification of the action as either Type I or Unlisted, and begin the process of environmental review by determining, among other things, whether an environmental assessment form (EAF) or a draft EIS should be prepared and, if more than one agency is involved, which agency should act as the lead agency.

The lead agency then must determine the environmental significance of the proposed action by comparing the information contained in the EAF or draft EIS with criteria established by the DEC as indicators of significant adverse impacts on the environment. The lead agency may determine either that the proposed action will not have any adverse environmental impacts or that the identified adverse environmental impacts will not be significant, or that the action "may include the potential for at least one significant adverse environmental impact."

A written determination by the lead agency that a proposed action will not have a significant adverse impact on the environment, known as a "negative declaration," ends the SEQRA process. Conversely, if the lead agency determines that the proposed action may have a significant environmental impact, it must issue a "positive declaration" and direct the preparation of an EIS.

A local government's failure to literally comply with SEQRA can happen at any stage of this process, as illustrated by *Pickerell v. Town of Huntington*, 45 Misc.3d 1208(A) (Sup.Ct. Suffolk Co. 2014).

'Pickerell'

The case arose after 7-Eleven, Inc., sought a special use permit and an area variance for a proposed demo-

lition and construction project on commercial property in the Long Island town of Huntington. Before the Huntington zoning board of appeals (ZBA) conducted a public hearing on 7-Eleven's proposal, the company submitted various maps, photographs, site plans, and reports to the ZBA, including a traffic impact study, an engineering report, a planning study, and an appraisal report on impact on real property values of the convenience store it proposed.

> A local government's failure to literally comply with SEQRA can happen at any stage of this process, as illustrated by 'Pickerell v. Town of Huntington.'

At the opening of the hearing, the chair entered into evidence a "Convenience Store Study" prepared by the town's Department of Planning and Environment.

The ZBA held 7-Eleven's application open for comment, and it retained an engineering firm to review the proposed project. In addition to a report prepared by that firm, the ZBA received numerous supplemental reports, expert affidavits, and other documents from 7-Eleven.

The ZBA classified the project as a Type I action and voted in favor of issuing a negative declaration. After it granted 7-Eleven's application, community members and a local civic association challenged the decision in court. The petitioners maintained that the ZBA had failed to literally comply with SEQRA's requirements in determining that the proposed project, a Type I action, would not have any significant adverse effects on the environment and by failing to require the preparation of an EIS.

The court agreed with the petitioners, holding that the ZBA failed to meet procedural and substantive obligations under SEQRA when ruling on 7-Eleven's application. In particular, the court ruled that the ZBA violated SEQRA by failing to promptly make its own preliminary classification of the proposed project as a Type I, Type II, or Unlisted action, and by failing to verify the accuracy of the information 7-Eleven provided in Part I of the EAF. The court added that the ZBA also failed to have 7-Eleven, the project sponsor, complete Part I of a full EAF, which is required for Type I actions.

Although the negative declaration stated that the ZBA had conducted a coordinated SEQRA review of the proposed project, the court found "no evidence in the record" that any of the involved or interested agencies were notified that the proposed project had been classified as a Type I action. The court also ruled that the ZBA's decision to classify the project as a Type I action and issue a negative declaration was made "without a deliberative consideration of the various environmental issues."

The court concluded that the ZBA failed to meet the obligations SEQRA imposed on a lead agency, and it annulled the ZBA's decision granting 7-Eleven the special use permit and area variance it sought.

Conclusion

Other courts also have recently rejected local government land use decisions upon finding that the municipality failed to literally or strictly comply with SEQRA. *See, e.g., Matter of Dawley v. Whitetail 414, LLC*, 130 A.D.3d 1570 (4th Dept. 2015) ("SEQRA's procedural mechanisms mandate strict compliance"); *Matter of Healy v. Town of Hempstead Board of Appeals*, No. 3214/2017 (Sup.Ct. Nassau Co. Aug. 28, 2018) (board's decision was "fatally flawed" as it failed to "strictly follow" SEQRA requirements).

The lesson is clear: local governments that fail to strictly comply with SEQRA risk having their decisions overturned, even if they considered environmental and other issues and reached the result that they would have reached if they had complied with SEQRA. Since the failure to comply with SEQRA can doom a municipality's zoning and land use decisions, both the project sponsor and the reviewing agency should meticulously comply with their respective obligations under SEQRA.

2/19/20
Hearing

SOUTHAMPTON TOWN CIVIC COALITION

February 19, 2020

Carrie Meek Gallagher, Chairperson
Central Pine Barrens Joint Planning and Policy Commission
624 Old Riverhead Rd, Westhampton Beach, NY 11978

RE: Lewis Road Planned Residential Development (PRD)

Dear Chairperson Gallagher and Pine Barrens Commissioners:

I am submitting these written comments on the Lewis Road PRD to support our longstanding opposition to the proposed Golf resort in this sensitive, zoning protected location on behalf of the Southampton Town Civic Coalition, and its member organizations including the East Quogue Civic. My comments will cover a range of issues, including concerns with traffic, pesticide use, and potential flooding as well as areas that the Town's consultants, B. Laing Associates/Kimley Horn indicated require further review when evaluating this application for the Planning Board.

Further Review is needed to examine:

- **The applicant's Nitrogen Loading and the SONIR modeling lack a dispersion analysis**. The developer's nitrogen loading models used numbers that were considerably low and failed to consider that the majority of the development would be located at the southern end of the parcel, closest to the already impaired Weesuck Creek and Shinnecock Bay. Weesuck Creek is now priority 1 in the Suffolk County Subwatershed Wastewater Plan (see attached). Should a golf resort with 130 homes, a mega clubhouse with several out parcels be allowed in this location? Is there a better layout of this property or another alternative to protect the water?

- **Their nitrogen remediation plan, including the use of Fertigation lacks sufficient data** to ensure that this would be beneficial and most importantly would cause no further harm to the waters and the health of the community.

- **More information is needed regarding the definition of a member allowed to use the recreational facilities - i**ncluding the 18-hole golf course and the ball field. In applying to build this development under the Open Space Law and defining the golf course as a "recreational amenity" the developer has agreed that no outside memberships will be allowed. This is not Discovery's usual business plan so that ownership/membership needs to be clearly defined.

  How a member is defined could have a tremendous impact on traffic – which is already problematic, especially when you consider that each "member" can bring 3 guests to play golf. Can time-share, corporate or fractional use be allowed? Will members of Discovery's "Dune Deck" beach club in Westhampton Beach be allowed to use the golf course? Will they be allowed to have

guests as well? In addition, I would hope that the Commission considers the possibility of a proposed future change in the development if the private golf course is NOT viable.

- **Climate change needs to be considered when looking at the long-term effects of this project on the environment.** Excess nitrogen severely weakens our salt marshes that serve as an important buffer from storm surge. An increase in development and nitrogen loading will decimate whatever natural buffer exists along the Weesuck Creek corridor. During Hurricane Sandy, East Quogue was flooded up to Montauk Hwy by storm surge. With an increase in the frequency and magnitude of large storms, along with degraded shorelines, we can expect significant coastal flooding in the future. Where will the flooding extend to in the future?

- The consultants to the Planning Board mentioned concerns about the **developer's EIS as it relates to required SEQRA alternatives for the property.** I have attached a copy of the Group for the East End's submission to the Town Board for a reduced impact alternative. This alternative was prepared by Lisa Liquori a well-respected planning consultant and former Planning Director to the Town of East Hampton. It's important to remember too, that even with all of the "community benefits" offered by Discovery as part of their PDD application, the Town denied the project. **Now without the community benefits mitigating the impact of the mega golf resort, what's the best alternative for the project?**

  The developer has indicated that construction will take approximately 5 years. **Construction of this magnitude will greatly impact the quality of life of those surrounding the project site** as well as folks travelling the already congested Lewis Road and the school children and summer campers at the East Quogue School nearby. Construction trucks and vehicles entering and exiting the site will only worsen traffic. 300,000 cubic yards of soil will need to be removed and will also change the topography of a large portion of the property. That's about 30,000 dump truck trips in and out of the site (or about 40 truck trips per day, every day over a two-year period). Discovery hopes to arrange for these trucks to go directly to the East Coast Sand mine through an interior road. However, there is no guarantee and regardless, ultimately, ½ of these truck loads will eventually leave the sand mine once again turning onto Lewis Road.

  In addition to the traffic, noise and dust, you can expect road repairs to be needed. Neighbors and children in the area will suffer air and noise pollution for over five years. There needs to be a review of the developer's plan to mitigate these impacts on the public. As well as the unintended impact on the slope and potential runoff from the site?

  Keep in mind that Discovery estimates that there will be between 10,000 and 17,000 truckloads needed to remove the soil to create the golf course and that 6,000 cubic yards of topsoil will be brought onto the site during the construction phase. What kind of topsoil will be added and where will it come from? Will the topsoil be tested to make sure that additional pollutants are not being

added to the property? Contaminated topsoil has the potential to impact the water supply of the area. This will need to be outlined fully and monitored carefully.

- The **developer plans to create a large underground parking garage but does not explain how they plan to construct this.** Will this underground garage hit the water table? Will this impact groundwater flow and nitrogen dispersion? Is de-watering required? If so, does the developer have a plan for this and the required permits? These questions need to be answered so that the Commission can determine the impact this garage will have on our drinking water supplies. East Quogue residents have already expressed concerns about the impact to the water table of the adjacent East Coast mine.

- The Planning Board consultants stressed **the need for Discovery to update it's March 2018 traffic study to include summer months.** The consultants noted that traffic studies should almost always cover two months and given the current traffic impairments already present in the area, one of those months should be during the summer – the busiest time for both the golf resort and the community. An updated traffic study should be completed before this project can go forward – although I believe that the current conditions warrant denial of a golf course in this location (see below).

  I have been concerned about the **traffic impact of this project** since its inception as the Hills PDD. The roads are narrow (only 10-11 ft. wide often with no shoulder or just one very narrow shoulder), about a dozen children are on the street waiting for buses (or perhaps walking to school) and the road is clogged with trade parade traffic. Locating a golf resort of this size and scale in close proximity to the East Quogue School and given the surrounding road structure will have a very detrimental impact on traffic in the area especially when you add in all of the employees and golfing/recreational guests who will be arriving daily, especially during the peak summer months.

  Anyone entering or leaving the resort must turn onto Lewis Road. I worry that the golf resort will create a safety hazard, and an evacuation nightmare. The LIRR runs between the proposed development and the EQ School and has added additional trains to help with congestion on Sunrise Hwy. **Traffic along Lewis Road is already problematic** – it has become an alternate to Sunrise Hwy with drivers now getting off in East Quogue (rather than Hampton Bays) to avoid the back up.

  I have attached a copy of the **map of the roads in the area**. The red dots on the map indicate the locations of Discovery's traffic counters. The Level of service (LOS) at the intersection of Quogue Riverhead Rd (CR 104) and Lewis Rd already has "D" level traffic flow, as does the intersection of Old Country Rd/Boxtree and Lewis Road. To make matters worse, traffic will be concentrated during the peak summer months when traffic in the area is already the busiest.

  The **map does NOT indicate a counter to determine the truck traffic entering and leaving the adjacent East Coast Mine** throughout the year. Both during and after

construction is complete, the neighboring East Coast Mine will continue to have trucks entering and leaving their facility onto Lewis Road. Should Discovery be required to update the traffic study there needs to be a count taken on Lewis Road at the entrance to the East Coast Mine.

Since 2003, **I have been volunteering as a community advocate** on a variety of issues impacting the region, working closely with local environmental organizations and Town and County officials to preserve the quality of life in the area. I've worked hard to ensure that the community is represented in the decision-making process and in 2012 I was honored to be named a Woman of Distinction for the Second Legislative District. I have served as President of the Southampton Town Civic Coalition for the last 15 years.

The Coalition is an umbrella organization for most of the civics west of the Shinnecock Canal and their members. At this time, the Coalition includes the following organizations: Hampton Bays Civic Association, East Quogue Civic Association, Flanders/Riverside/Northampton Community Association, CAC- West (covering Westhampton, Remsenburg, Speonk and Eastport) and the Speonk/Remsenburg Civic Association. I also serve as a conduit and support for many of the civic organizations East of the Canal. In addition to zoning/planning efforts I have worked closely with community leaders, Town officials and the developer to reach a compromise solution for the 38-unit affordable housing development in Speonk and along with Town Board Member Julie Lofstad, created an ad hoc Housing Opportunity Committee designed to create small scale affordable housing projects in each of the hamlets (this committee is no longer as necessary). I have been working with local civic leaders, the community and politicians at the Town, County and State level, to pressure LIPA/PSEG to bury the oversized metal poles recently installed in Eastport and Riverside. Most recently, I was appointed to serve on the Suffolk County Committee on Environmental Quality (CEQ).

A golf course in this sensitive location should never be allowed.

Thank you.

Andrea Spilka
Andrea Spilka
President, Southampton Town Civic Coalition

4 Pages/3 Attachments

From: Suffolk County Draft Subwatersheds Wastewater Plan

Subwatershed Name	PWL_ID	Rank
Old Town Pond	1701-0118	1
Pardees, Orowoc Lakes, Creek, & Tribs	1701-0094+0341+0338	1
Patchogue Bay	1701-0326	1
Patchogue River	1701-0099+0018+0055+0327	1
Peconic River Middle, and Tribs	1701-0261+0262+0269	1
Peconic River Upper, and Tribs	1701-0108+0265+0266+0269	1
Peconic River, Lower, and Tidal Tribs	1701-0259+0263	1
Penataquit Creek	1701-0092+0338	1
Penniman Creek and Tidal Tribs	1701-0300	1
Phillips Creek, Lower, and Tidal Tribs	1701-0299	1
Quantuck Bay	1701-0042+0303	1
Quantuck Canal/Moneybogue Bay	1701-0371	1
Quantuck Creek and Old Ice Pond	1701-0303-QC+0304	1
Quogue Canal	1701-0301	1
Red Creek Pond and Tidal Tribs	1701-0250	1
Sagaponack Pond	1701-0146+0286	1
Sampawams Creek	1701-0090+0372+0343	1
Sans Souci Lakes	1701-0336+0335	1
Santapogue Creek	1701-0016+0372	1
Scallop Pond	1701-0354	1
Seatuck Cove and Tidal Tribs	1701-0309-SC+0306+0311	1
Shinnecock Bay West	1701-0033-W	1
Speonk River	1701-0306-SR	1
Stillman Creek	1701-0329-SC	1
Swan River, Swan Lake, and Tidal Tribs	1701-0100+0332+0329+0327	1
Terry's Creek and Tribs	1701-0256-TC	1
Tuthills Creek	1701-0098+0327+0329+0334	1
Wading River	1702-0099+0243	1
Wainscott Pond/Fairfield Pond	1701-0144	1
Weesuck Creek and Tidal Tribs	1701-0111-rev	1
West Creek and Tidal Tribs	1701-0246	1
West Neck Bay and Creek	1701-0242-WB	1
Wickapogue Pond	1701-0119	1
Willets Creek	1701-0091+0175+0372	1
Priority Rank 2		
Big Reed Pond	1701-0281	2
Centerport Harbor	1702-0229	2
Crab Meadow Creek	1702-0232-CMC+0234	2
Flanders Bay, East/Center, and Tribs	1701-0030+0255+0273	2
Forge River Cove and Tidal Tribs	1701-0316-FRC+0312	2
Fort Pond	1701-0122	2
Goose Neck Creek	1701-0272-GNC	2

Weeksuck Creek and Tidal Tribs is listed as a rank #1 priority for nitrogen load reduction.

Comparison of Impacts: Discover Land Company PDD vs. Conceptual Reduced Impact Alternative

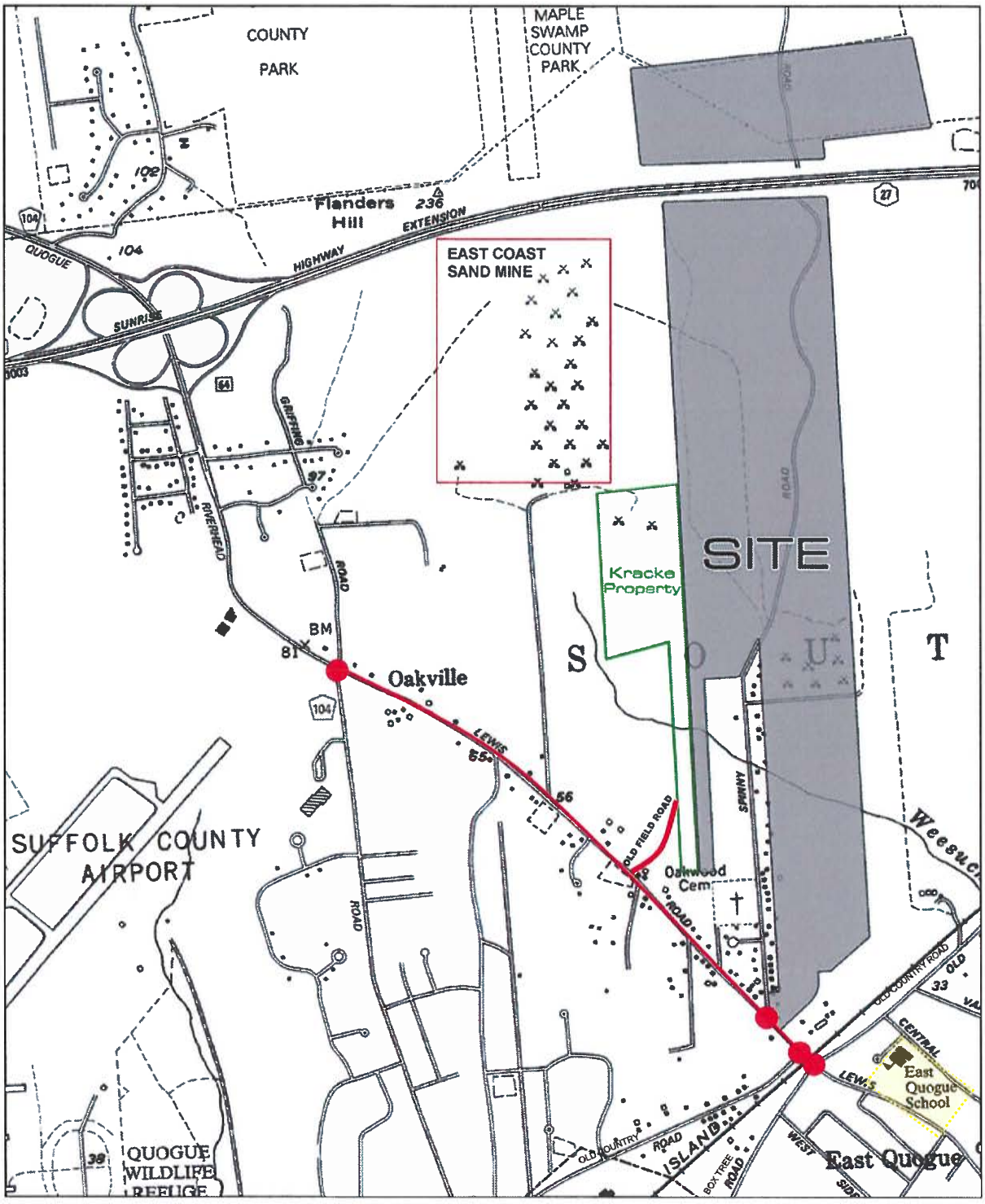
Impacts	Discovery PDD		Reduced Impact Alternative		Comparison: Reduced Impact Alternative vs. Discovery PDD
	Acres	% of Site	Acres	% of Site	
Site Development Total Area	166.86	28.23	23.53	4	86% less developed area
Cleared Areas	166.86	28.23	45	7.61	74% less clearing
Fertilized Turf	88.53	15%	0	0	100% less fertilized turf
Preserved Contiguous Open Space	276	48%	546	92	100% more preserved contiguous open space
Preserved Open Space incl. fragmented areas	424	72%	546	92	29% more open space incl. fragmented areas
		Units		Units	
Water Usage-	53,810,179	gallons per year	11,961,650	gallons per year	78% less water usage
Sewage Flow - bldgs. only	41,814	gallons per day	31,770	gallons per day	25% less sewage flow from buildings
Design flow including turf	65,214	gallons per day	31,770	gallons per day	51% less overall wastewater flow
Nitrogen loading					
Turf	655.1	pounds/ year	0	pounds/year	100% less nitrogen loading from turf
Sewage from buildings	Variable by computation model				72 % to 88% less nitrogen loading buildings
Residences total number	118	residences	88	residences	25% fewer residences
Total size of residences	435,800	square ft.	532,800	square ft.	22% greater combined sf of residences
Traffic wkdy PM/Sat peak	103/125	trips per hour	23/31.5	trips per hour	78% to 75% less peak hour traffic

GROUP FOR THE EAST END

Protecting the nature of the place you love

GroupfortheEastEnd.org

Prepared by Fine Arts Sciences for Group for the East End, November 2016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SAND MINE
SITE
Kracke
Property
ROAD
RIVERHEAD
GRIFFING
BM
81
Oakville
LEWIS
55
56
OLD FIELD ROAD
SUFFOLK COUNTY
AIRPORT
Oakwood
Cem
SAWMS
Weesuc
OLD COUNTRY ROAD
CENTRAL
East
Quogue
School
LEWIS
East Quogue
ISLAND
BOX TREE
ROAD
QUOGUE
WILDLIFE
REFUGE
39
33

From: Ron Nappi <grantad9@gmail.com>
Sent: Tuesday, June 02, 2020 9:05 PM
To: PB Info <info@pb.state.ny.us>
Subject: Comment: Lewis Road Planned Residential Development (PRD)

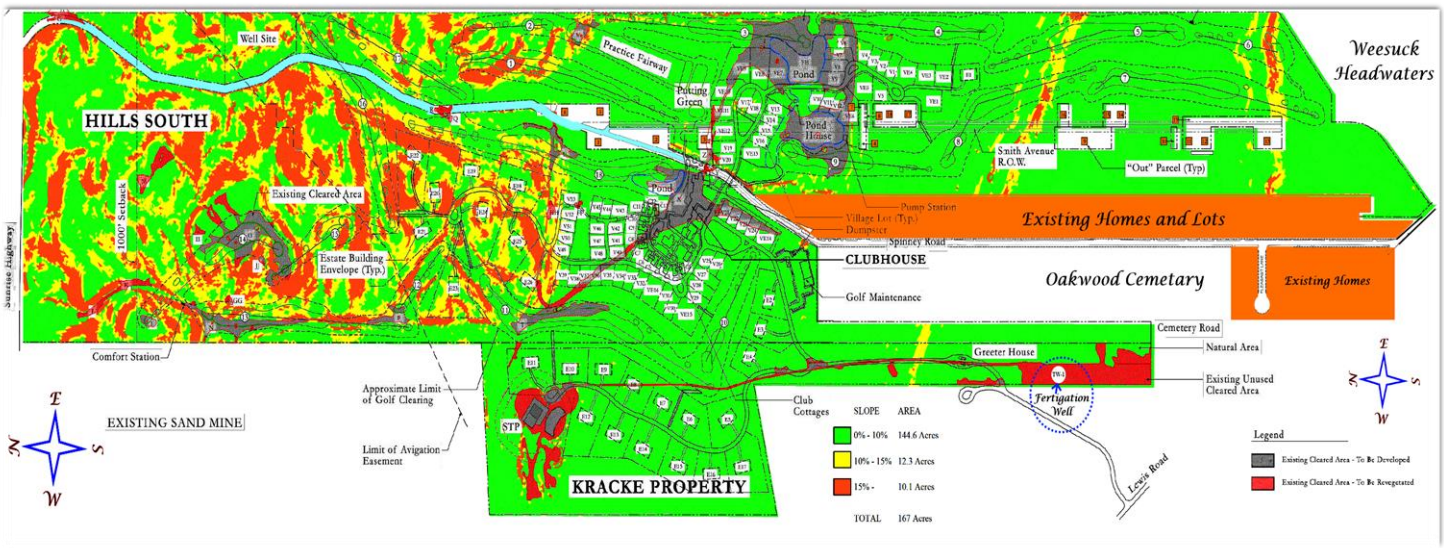
Dear Ms. Carrie Meek Gallagher, Chairwoman & Commission Members,

Attached is a PDF document with concerns for the environmental impact of the Lewis Road PRD.
This document has been scanned for viruses and is safe to download.

Thank you for allowing public comment.
Ron Nappi
Spinney Road, East Quogue, NY

Impact of Lewis Road Planned Residential Development on the Spinney Hills Compatible Growth Area of the Central Pine Barrens Overlay District and Aquifer Protection Overlay District

1 **Figure 1 - PRD Property**



Ron Nappi
115 Spinney Road
East Quogue, NY 11942
631-653-6543
Grantad9@gmail.com

The Table of Contents and Table of Figures are hyperlinked in the PDF for easy navigation. The images in this document are in high-resolution JPG format and can be zoomed up to 400% magnification in the PDF format.

Contents

Figures

The Suffolk County Central Pine Barrens Joint Planning & Policy Commission's Mission Statement:

"To manage land use within the Central Pine Barrens to protect its vital groundwater and surface water and the region's vast and significant natural, agricultural, historical, cultural and recreational resources for current and future Long Island residents."

The effects of Lewis Road PRD currently under consideration are contrary to the charter, goals, and objectives of the Commission. The PRD development is not in the Core Preservation Area. However, it is unfeasible to manage the complex matrices of inevitable environmental effects intrinsic to a large-scale development in proximity to the Spinney Hills Pine Barrens natural resource. The antiquity, topology, geography, and hydrology of the Spinney Hills section of the Core Pine Barrens Preserve Area are globally unique. The PRD will initiate a cascading assimilation of this irreplaceable resource and constitute an avoidable transgression to our environmental values.

Summary: Impact of Lewis Road Planned Residential Development

1. **34M** gallons of water will be needed **annually** to maintain the seasonal 200-day irrigation schedule for the PRD's **88.05** [1] acre managed fertigation and irrigation water budget.
2. **33M** [2] **additional** gallons of moisture from Irrigation and Ponds will be **annually** released into the atmosphere from PET (***P***)otential (***E***)vapo(***T***)ransporation].
3. **2.5M gallons @15.79mg/l** [3] of nitrogen mist will be released through sprinkler fertigation.
4. **334** [4] pounds of nitrogen will be released **annually** within these micro-mist water droplets.
5. **2,039** pounds of Nitrogen are required **annually** to maintain the 46.81-acre golf course rough.
6. **4,448** pounds of Nitrogen are required annually to maintain the 41.24-acre golf course Play area.
   Go to [Figure 13] Reference Calculations

With the construction of 7.3 acres of ponds filled with millions of gallons of fortified irrigation water, the naturally sparse arid biota of the Spinney Pine Barrens will be subjugated to intrusion of aggressive indigenous ground plants, sub canopy species, forest pines, and deciduous species. There is a potential for harmful flora and fauna vectors to "hitchhike" on various bird species that will frequent this new aquatic environment during seasonal migration.

During an irrigation event, this precisely blended mixture nitrogen supplement will then be pumped to the golf course's sprinkler heads. Misting is an unavoidable consequence.

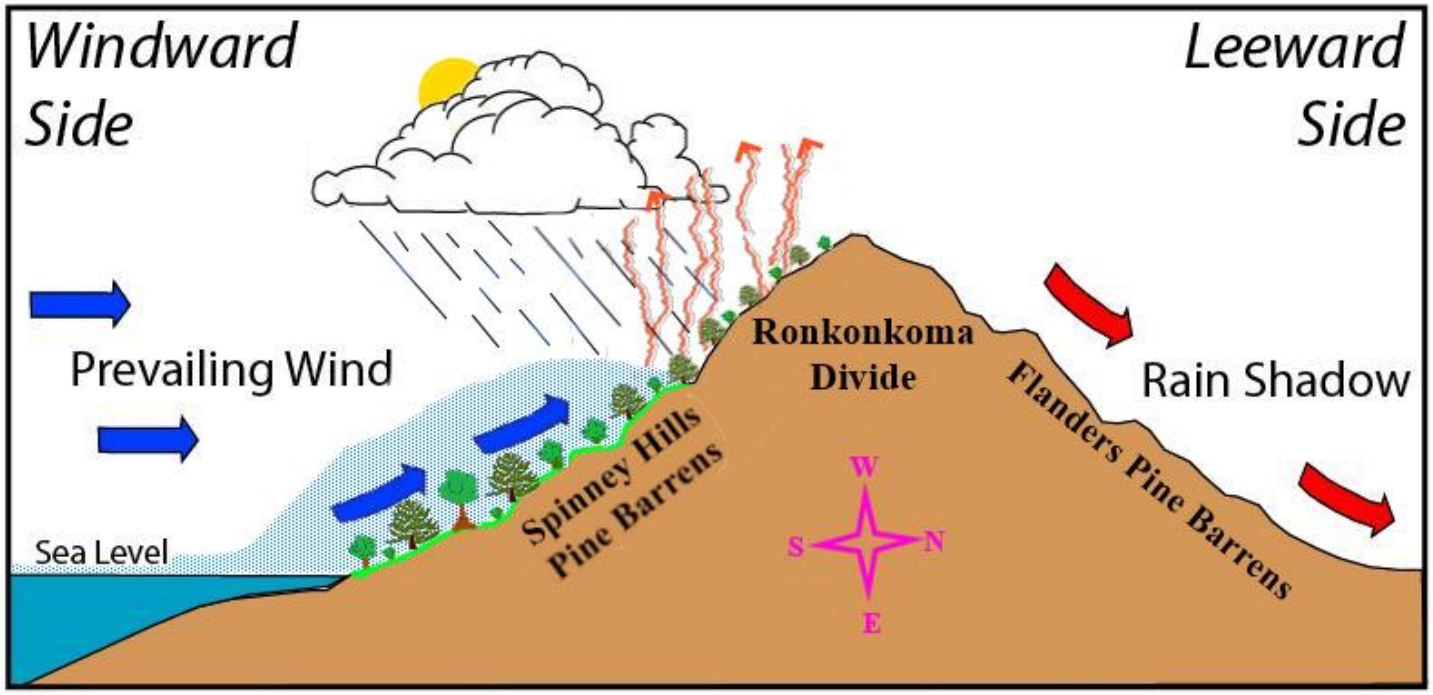
The PRD declaration of negative nitrogen groundwater impact pivots on the sustainability of a 10 mg/L well source for golf turf fertigation. However, evidence suggests a sustainable source of 10mg/L does not exist. Consequently, the PRD goal of negative nitrogen impact cannot be achieved. As point source nitrogen concentration inevitably diminishes, it will necessitate systematic supplementation with a reciprocal amount of applied chemical fertilizer. This additional soil amendment is in an inverse ratio to mitigation. This increased supplemental nitrogen amendment results in a greater mass of leached nitrogen and simultaneously reduces the pivotal mass of mitigation. With the data and modeling available, the likelihood of achieving the "Negative Nitrogen Load" objective is not possible from any point source available on the PRD property. As designed, sustained negative nitrogen load by fertigation cannot be accomplished.

Impact of the Lewis Road PRD on the Spinney Hills Pine Barrens

Existing Conditions:

The Spinney Hills Pine Barrens are a combination of unique topographical, geological, and hydrological features. This narrow strip of land is the southeastern portion of the vast stretch of CENTRAL PINE BARRENS AREA from Rocky Point to Hampton Bays. It was formed as a glacial moraine, which peaks at an altitude of 236ft *ASL* just north of Sunrise Highway at the crest of the Ronkonkoma Divide. The terrain gradually descends one mile south to 30ft *ASL* at the base of the southern glacial outwash plain. The topology propagates a constant on-shore breeze from the ocean and bay. This moisture-laden air flows three miles through the buffering pine and oak forest, which intercept the tropospheric moisture as mist and condensate. Spinney Hills is the windward side of the glacial moraine, trapping moisture and creating a "rain shadow" effect on the moraine's Flanders Pine Barrens leeward side north of the Ronkonkoma Divide. The "barren" Pine Barrens is a direct consequence of this natural moisture barrier and breezes created by constant solar radiation convection. This intricate hydro cycle is a critical evolutionary dynamic in the formation and stability of the Spinney Hills Pine Barrens.

Figure 2 - Spinney Hills Environmental Conditions



The soil under the Pine Barrens is classified as Plymouth/Carver, Class V-VII excessively drained, and with high porosity. Only a few species of dwarf Oaks, Pines, low profile brush, and indigenous ground species of ferns, fungi, and grasses can survive in this environment. A phenomenon known as "soil catena" restricts the depth of topsoil to a very thin layer. This lack of loam creates a persistent cycle of moisture and nutrient leaching that restricts the vigor of vegetation. Sparse foliage, undergrowth, and high porosity obstruct the formation of essential detritus, which is necessary to form substantive topsoil. Precipitation and nutrients are drained into the sandy sub-soil within minutes. This deprivation cycle and evapotranspiration perpetuates the arid conditions of the Spinney Hills.

Proposed Lewis Road PRD Environmental Concerns:

The primary concern for the Lewis Road PRD is the environmental consequences to the Spinney Hills Aquifer. The developer has delineated an annual nitrogen and irrigation budget that will be necessary to maintain the viability of the project. To minimize the impact, the PRD calculates the nitrogen 0.31 mg/L leaching over the entire 588 acres of the property but if only the fertilized acres are used in the calculations, the leach rate becomes 2.2mg/L. The perspective of 588 acres contradicts the Law of Conservation of Mass which states: "*Mass can neither be created nor destroyed in a chemical reaction*". Thus, the amount of matter cannot change. If 10 pounds of nitrogen is released into the aquifer, the area of distribution is irrelevant. Ten pounds spread over one sqft or a million sqft still equals 10 pounds. The actual total mass of nitrogen that will be released into the aquifer is the concern. *The concentration by volume is irrelevant*. A tangential impact will be to the additional acres that will be cleared, developed and partially fertilized. This combined 168 acres sits directly on top of the soul source Upper Glacial Aquifer that is the top layer of the Spinney Hills Watershed. The undeveloped 420 acres is a "wash" as the environmental effects will be nominal.

PRD Nitrogen and Irrigation Budget:

The PRD documentation gives a fairly accurate allocation of the dynamic aspects of nitrogen and irrigation needs to meet the "*INTEGRATED TURF HEALTH MANAGEMENT PLAN (***ITHMP***)*". Extrapolating data from these documents provides a method of precise calculations on the projected nitrogen budget. The two primary areas of applied nitrogen are the 46 acres of rough and landscaping and the 41 acres of managed turf. Since these two areas will receive different concentrations of applied nitrogen, they are independently examined.

Golf Course Rough and Landscaping:

Figure 3 – Annual Pounds Rough Applied Nitrogen

Manage Turf	Acres in Area
Rough	35
Res	8.3
Club	3.51
Total Acres	46.81

Annual Pounds Turf Maximum Nitrogen					
Rough Fertilizati	Limit Lbs N/1000	Total Fertilizer Lbs N /yr	Supplement mg/L @ Solution		
46.81	1.00	2,039	30		
Month	Applied Chemical Fertilizer Lbs N per month	Applied Supplemental Lbs N per 1000sqft per month	Blended Gallons Supplement @30 mg/L Solution	Monthly N Load @ Solution mg/L	N Load @ 0.1 Lbs N per 1000sf minus Rain or 22 Weeks
April	0.143	291.29	1,164,236	30.0	26.86
May	0.143	291.29	1,164,236	30.0	26.86
June	0.143	291.29	1,164,236	30.0	26.86
July	0.143	291.29	1,164,236	30.0	26.86
August	0.143	291.29	1,164,236	30.0	26.86
September	0.143	291.29	1,164,236	30.0	26.86
October	0.143	291.29	1,164,236	30.0	26.86
Totals	1.00	2,039	8,149,655	Average 30mg/L	Average 27mg/L

The PRD documentation clearly indicates that the Rough, Residential and Clubhouse landscaping will be fertilized at the annual rate of 1.00 pound per 1000/sqft. However, there is no indication of delivery method other than it will not be through a sprinkler system. Independent of method, 2.039 pounds of supplemental nitrogen fertilizer will be diluted in a solution of 8 million gallons of water.

Golf Course Turf (Tees, Greens, and Fairways):

Figure 4 - Annual Pounds Turf Fertigation & Supplemental Nitrogen

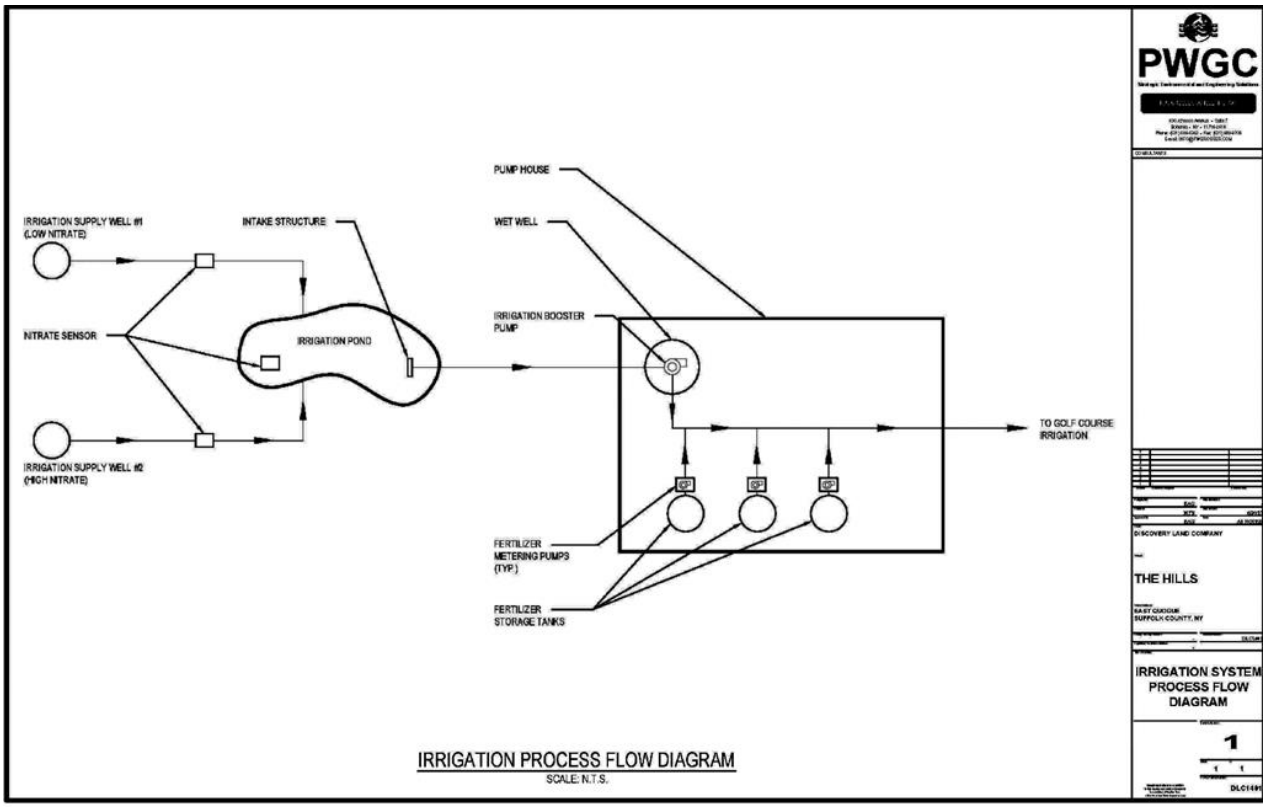
Manage Turf	Acres in Area
Tees	2.62
Greens	3.62
Fairways	35
Total Acres	41.24

Annual Pounds Turf Maximum Nitrogen		
Managed Turf Fertigation Acres	Limit Lbs N/1000 sqft /yr	Total Fertigation Lbs N /yr
41.24	2.48	4,448

Month	Fertigation Lbs N from Groundwater per month	Fertigation Lbs N per 1000sqft per month	Ferigation Well Nitrogen mg/L 10 Gallons from Fertigation Well @10 mg/L Solution	Applied Chemical Fertilizer Lbs N per month	Applied Supplemental Lbs N per 1000sqft per month	Supplement mg/L @ Solution 30 Fertigation Gallons + Blended Gallons Supplement @30 mg/L Solution	Percent N from Fertigation Well	Percent N from Fertilizer Blending	Total Lbs N per Month @ 41.24 Acres	Monthly N Load @ Solution mg/L
April	0.037	66	796,970	0.317	568.95	3,340,711	5.00%	95.00%	635	22.8
May	0.111	199	2,390,911	0.243	436.02	4,934,652	15.00%	85.00%	635	15.4
June	0.111	199	2,390,911	0.243	436.02	4,934,652	15.00%	85.00%	635	15.4
July	0.148	266	3,187,882	0.206	369.55	5,731,623	20.00%	80.00%	635	13.3
August	0.148	266	3,187,882	0.206	369.55	5,731,623	20.00%	80.00%	635	13.3
September	0.148	266	3,187,882	0.206	369.55	5,731,623	20.00%	80.00%	635	13.3
October	0.037	66	796,970	0.317	568.95	3,340,711	5.00%	95.00%	635	22.8
Totals	0.74	1,329	15,939,408	1.74	3,119	33,745,594	Average 14%	Average 86%	4,448	Average 16.6

As per the PRD, [Figure 3] shows the monthly breakdown of nitrogen and irrigation necessary to meet the ITHMP minimum requirements for healthy turfgrass. To achieve optimum results the Fertigation well must supply 1,329 pounds of nitrogen @10 mg/L in combination with 3,119 pounds of supplemental nitrogen fertilizer diluted in a solution of 34 million gallons of irrigation water. The PRD details the delivery system for ITHMP maintenance.

Figure 5 - PRD Irrigation/Fertigation Blending System Proposed Design



The PRD's irrigation water resources will rely on two supply wells screened in the Upper Glacial Aquifer. The primary well will provide 34 million gallons of groundwater to maintain a constant volume of water to the irrigation pond. The second well will be the TW-1 fertigation well that will supply 16 million gallons of water to the second "feeder" pond with a proposed nitrogen concentration of 10mg/L. Based in ITHMP requirements, the feeder pond water will be blended with the nitrogen supplemented irrigation pond water at precise nitrogen concentrations. As per daily irrigation requirements, the principle method of fertigation water delivery will be through a network of sprinkler heads strategically placed throughout the course play area managed turf.

Course Nitrogen Budget Summary:

The PRD documentation clearly indicates that the Rough, Residential, and Clubhouse landscaping fertilization will be an annual total, 2.039 pounds of supplemental nitrogen fertilizer that will be diluted in a solution of 8 million gallons of water. As documented in the PRD, annual fertilization of Turf will constitute 4,448 pounds of nitrogen diluted into 34M gallons of water to maintain the seasonal 200-day sprinkler irrigation schedule for the PRD's 41.24 acres managed turf. Thus, the total annual nitrogen budget for the 88.05 fertilized acres will be **6,487** pounds.

Concern #1:

Effects on Spinney Hills Pine Barrens of Nitrogen Enriched Mist from Sprinkler System

With reference to the current conditions of the Spinney Hills Watershed, the dispersing of 34M gallons of **sprinkler water** laden with 4,448 pounds of nitrogen in a semiarid environment will have unintended consequences.

Average Temp 70°F, Humidity 50%, Wind 7mph=Mist Rate 7.5%				
Annual Irrigation Gallons	N Lbs /Yr	Gallons Mist @7.5%	Total Lbs N @ 7.5% Mist Rate	Mist mg/L
33,745,594	4,448	2,530,920	334	15.79

In statement attributed to a spokesperson for RAIN BIRD™, under typical weather conditions and water pressure for a Long Island golf course, the average mist rate is 7.5% by volume for commercial sprinkler heads. Based on the PRD figures, 334 pounds of atomized 16mg/L nitrogen particulate will be annually dispersed into the atmosphere of the Spinney Hills Watershed. Other academic studies report even higher rates of misting [Figure 15].

Figure 6 - Irrigation Sprinkler System

Photo Credit - PRD Appendix J, ITHMP, Page 936

The 16mg/L nitrogen-loaded mist will aggregate onto the surface of sensitive Central Pine Barrens plants and soil. The effects are insidious. Over decades, the resulting inevitable increase of detritus and topsoil. The moisture and enrichment will encourage intrusion by "Compatible Zone" border species. The sparse arid biota of the Spinney Pine Barrens will be subjugated to intrusion of aggressive indigenous ground plants, sub canopy species, forest pines, and deciduous species. This augmentation will accelerate the eventual assimilation of the Core Pine Barrens ecology. These changes will occur over decades. Thus, there is a tendency to marginalize these effects.

Concern #2

Golf Course Irrigation Ponds, Swimming Pools, and Other Freestanding Water:

Figure 7 - Ponds

Within the PRD, 7.26 Acres of functional Ponds and Pools will be created to provide irrigation, recreation, and drainage. The volume of water in each receptacle varies from a foot to eight feet with the greatest volume of water being the fertigation and irrigation ponds. In addition, the water vapor from all irrigation will be considerable.

Source	PRD Gallons	SONIR ETO	Gallons Evapo
Ponds & Pools	16,559,770	60%	9,955,773
Irrigation	33,745,594	60%	20,247,357
Mist = Irr. Gal x Rate		7.5%	2,530,920
Total	50,305,364	PET-Total	32,734,049

Based on figures provided by the PRD & SONIR Modelling, 33M additional gallons of moisture will be annually released into the atmosphere from PET [(P)otential (E)vapo(T)ransporation].

Even without nitrogen augmentation, the unmistakable micro environmental effects of existing ponds and irrigation vapor on Pine Barrens can be observed at Quogue Wildlife, Sears Bellows Park, and Maple Swamp. While new ponds may be beneficial to indigenous and migratory species, this new aquatic habitat will potentially expose the Spinney Hills Pine Barrens to excessive moisture, invasive species, and harmful vectors. The fertigation mixing pond will contain millions of gallons of nitrogen enriched water and could become a breeding ground for aquatic bacteria and plants that are harmful to both animals and humans.

The introduction of new hydro dynamics to the Spinney Hills Water Shed will have detrimental environmental repercussions. The Spinney Hills Pine Barrens has not had a source of freestanding water for centuries. The proximity new water sources will short-circuit the distance by three miles from the current moisture sources of Western Shinnecock Bay and the Atlantic Ocean. The existing compatible growth forest acts as a natural buffer that is critical to preserve the Spinney Hills Pine Barrens. This essential evolutional protection will be negated by free standing water. The introduction of continual irrigation vapor will migrate to the Pine Barrens Core Preservation Area altering the delicate ecosystem that is dependent on seasonal atmospheric moisture constants.

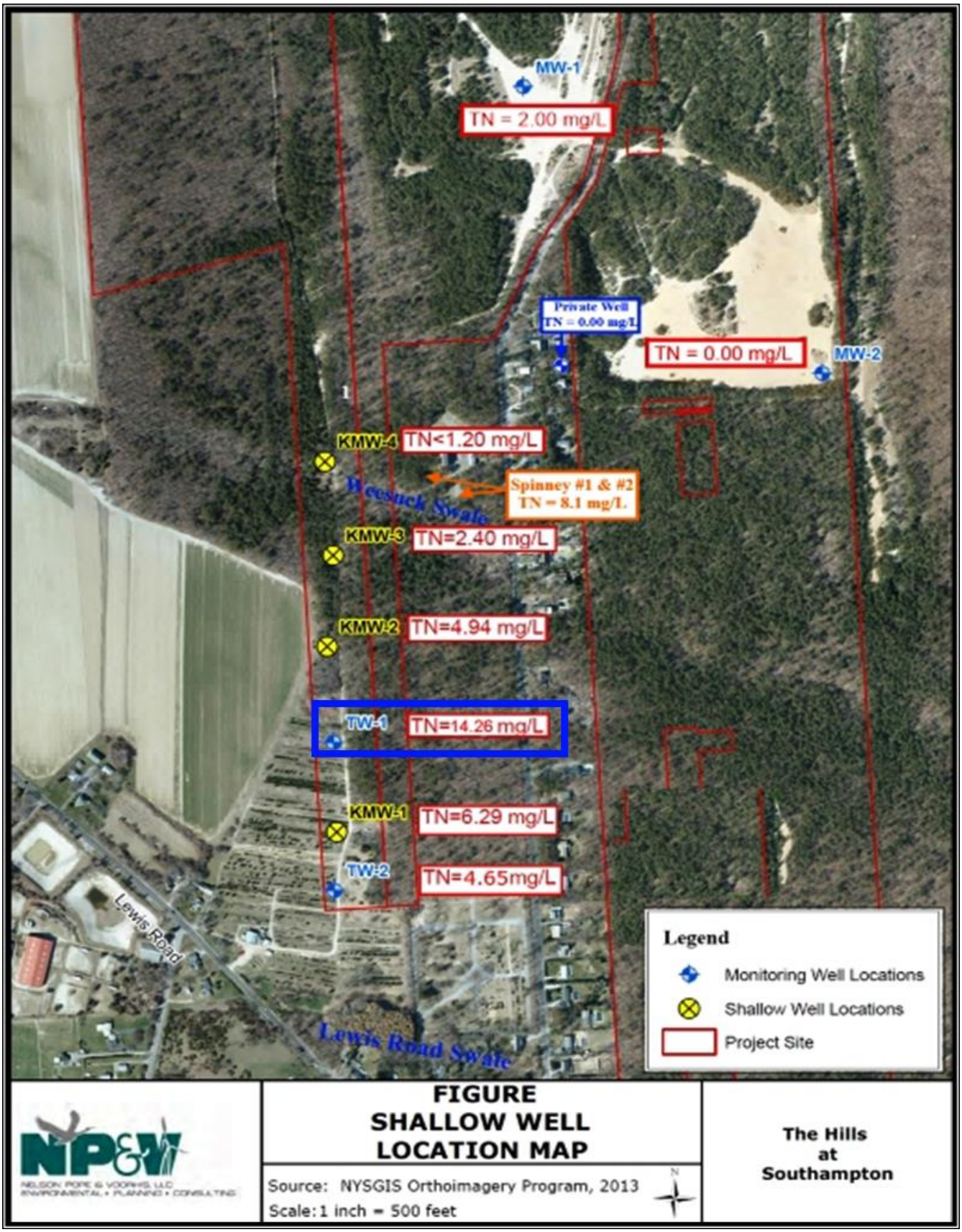
Concern #3

Availability of Sustainable Groundwater Nitrogen source for Fertigation

Fertigation captures nutrients in groundwater from a point source and uses this water to fertilize plants through an irrigation system. Quantitative evidence suggests that the groundwater on and around the "Lewis Road PRD" project site has high nitrogen levels. The "Lewis Road PRD" project has designed a theoretical fertigation method that is efficient in recycling the background nitrogen and therefore reduces the volume of applied fertilizer. This level of fertigation nitrogen mitigation is the basis for the developers claim that the PRD project will have a negative nitrogen impact on the already imperiled aquifer by reducing the down gradient nitrogen concentrations. As designed, the point source must continually supply 100,000 gallons of water per day at 10 mg/L nitrogen. The Weesuck Water Shed is composed of three major swales, the Lewis Road, Weesuck Creek, and Malloy Drive swales. Two of these swales are within the proposed PRD property.

The PRD has offered specifics on the location of the 10 mg/L fertigation well. Therefore, all available test well locations were verified by field observation and documentation from both the SCWA and the December 2019 PRD submission. The nitrogen levels from each known point source site were plotted on the PRD project FEIS maps. Included with the test well finding were plots of other wells that, while not on property accessible to the PRD, did have documented nitrogen concentration results. The aggregate plotting of nitrogen concentration created a Spinney Hills watershed nitrogen map. The only well location on the PRD property that could potentially meet the fertigation requirement is referred to a "TW-1" or Test Well #1. This well is located on a ridge parallel to the northern boundary of the Lewis Road Swale. The wellhead is situated at the southwest corner of the Kracke property, just off the PRD access road and a few hundred feet from the proposed 10 Workforce Housing units.

Figure 8 - Test Well Location Plot and Nitrogen mg/L Levels



TW-1 nitrogen concentrations were tested at different depths to determine a contaminant profile [Figure 16] According to the results, the well will be screened at approximately 100 feet into the Upper Glacial aquifer. The Zone of Contribution at this depth will provide the necessary level of nitrogen to meet the 10mg/L requirement. While TW-1 may appear to meet the fertigation requirements, further examination of this location manifests doubts as to whether this well is truly viable.

The TW-1 well in [Figure 3] is the proposed site of the fertigation well. All the well test-plotting locations form a discernable pattern in the groundwater nitrogen plume. With two anomalous exceptions, the average level of **5.14 mg/L** is within the accepted standards for leach rates (~20%) of agricultural related fertilization. The first anomaly is the 8.1 mg/L average reading for the SCWA Spinney #1 & #2 wells. However, this site must be eliminated since the point source is on the SCWA public land and inaccessible.

The more pertinent anomaly is the averaged results of **14.24 mg/L** nitrogen from the TW-1 test well. The problem: **Why is the background nitrogen higher at this location than any other test site?** The precise location of this well provides substantive evidence that the high Nitrogen levels at this particular location was influenced by anecdotal history. The 14.24 mg/L is consistent within the context of this history. This area of the Kracke property is defined by a 20-acre nursery that has been continually operating for at least 40 years. By empirical observation over 35 years, debris, leaves, potting soil, and other detritus were dumped into a 0.5-acre compost heap located on the north nursery border. The overhead view in Figure ***#9*** shows this location and point of reference.

Figure 9 – Location of Compost Heap and TW-1 Fertigation Well

Over years, tons of organic material have been dumped in this refuse pile. Occasionally the heap was aerated and compost was removed. Reason would suggest that the compost was used for organic fertilizer. Over the observed 35-year period, the leach cone for a half acre in sandy subsoil would be narrow, deep, and bulging down gradient. This is supported by the **6.29 mg/L** result of the down gradient KMW-1 well [Figure 8]. Based on this history, the 14.26 mg/L point source is not an anomaly but the reasonably expected output from a high nitrogen leach source. Arguably, this location apparently meets the requirements necessary to achieve the PRD's groundwater needs. There is one caveat to this solution. Sections of the nursery, including part of the compost heap, will be assimilated when the PRD project is initiated. The deposits of nitrogen rich detritus and debris have ceased. The levels of groundwater nitrogen in the TW-1 wellfield are static. Even without pumping, the levels of nitrogen would dissipate as the plume nitrogen level reliability is compromised by intrusion of surrounding groundwater of lesser nitrogen concentration (5.14mg/L) and by down gradient drift.

Figure 10 – TW-1 with Compost Heap in Background

A real-world analogy would be a carnival snow cone (ZOC) with a straw (Well Pipe). As fluid is removed by the straw, the surface ice color begins to fade as the colored flavoring mixture (N concentrate) draws up through the straw. Due to gravity, volume, and mass, the bottom contributes less mixture then the top above the straw's opening (well screen). As the narrow bottom point of the cone reaches the point of diminished returns, only the upper part of the cone will supply more flavoring. If you do not add more flavoring, the top feed will be exhausted and the entire snow cone is just ice (sand) surrounded by plain water. There is not enough nitrogen in the groundwater within and/or surrounding the TW-1 capture zone to maintain the 10 mg/L source integrity. At the risk of banality, the entire fertigation scenario is based on ***compost***.

This issue presents an insidious enigma that will have an extremely detrimental impact on the groundwater beneath the Pine Barrens. The PRD clearly states that in order to meet ITHMP recommendations, a minimum of 4,448 pounds nitrogen fertilizer is required to maintain the health of the 41.24 acres of turf. If fertigation nitrogen concentration from the well draw falls below 10mg/L, the difference will be equalized by additional applied fertilizer. Thus, there is an inverse correlation between the nitrogen level of the fertigation well and the mass of applied nitrogen that must be added to maintain turf health. However, more to the point, ***any additional applied nitrogen will reduce the proportional amount of mitigation.*** Less nitrogen in the fertigation well means more applied fertilizer and an increase to nitrogen entering the aquifer. As stated in the previous section; there is considerable doubt that the fertigation well can supply a sustained level of 10mg/L nitrogen concentration. Figure 11 below shows the critical impact to the Aquifer of this regression correlation.

Figure 11 – 41.24 Acre Turf Applied Nitrogen Mitigation Regression Data

Description	Estimated Annual Gallons Fertigation Well	Fertigation Well mg/L	Fertigation Lbs N Mitigated @mg/L	Fertilizer Supplement Lbs N to Equal Lbs / Year	Lbs After Credit for Fertigation & Liners Mitigation	Lbs AFTER Applying Global Leach Rate of 10%	Annual Irrigation 13.5M Gallons after EvapoTrans to Aquifer @mg/L"
Results @mg/L	15,939,408	**15**	***1,995***	**2,453**	250	24.98	0.22
Results @ mg/L	15,939,408	**14**	***1,862***	**2,586**	516	51.58	0.46
Results @ mg/L	15,939,408	**13**	***1,729***	**2,719**	782	78.19	0.69
Results @ mg/L	15,939,408	**12**	***1,596***	**2,852**	1,048	104.79	0.93
Results @ mg/L	15,939,408	**11**	***1,463***	**2,985**	1,314	131.40	1.17
PRD Target @ mg/L	15,939,408	***10***	***1,330***	***3,118***	1,580	***158.00***	1.40
Results @ mg/L	15,939,408	**9**	***1,197***	**3,251**	1,846	184.60	1.64
Results @ mg/L	15,939,408	**8**	***1,064***	**3,384**	2,112	211.21	1.87
Results @ mg/L	15,939,408	**7**	***931***	**3,517**	2,378	237.81	2.11
Results @ mg/L	15,939,408	**6**	***798***	**3,650**	2,644	264.42	2.35
Average @ mg/L	15,939,408	**5.14**	***684***	**3,764**	2,873	287.30	2.55
Results @ mg/L	15,939,408	**4**	***532***	**3,916**	3,176	317.63	2.82
Results @ mg/L	15,939,408	**3**	***399***	**4,049**	3,442	344.23	3.06
Results @ mg/L	15,939,408	**2**	***266***	**4,182**	3,708	370.83	3.29
Results @ mg/L	15,939,408	**1**	***133***	**4,315**	3,974	397.44	3.53
Results @ mg/L	15,939,408	**0**	***0***	**4,448**	4,240	424.04	3.76

Anomalies in the PRD SONIR Modeling

The project FEIS uses the **SONIR** (**S**imulation **O**f **N**itrogen **I**n **R**echarge) model to determine the total nitrogen budget by collectively calculating the recharge in all 588 acres. Ideally, SONIR is a Mass-Balance Model that objectively calculates the annual Nitrogen Load that will intrude into the ground water of Spinney Hills Watershed. However, there are omissions of other nitrogen sources such as employees and detailed calculations of all Workforce Housing septic effluence. Over the past five years, the convoluted calculations for total nitrogen impact seem to have "evolved" by modifying constants, parameters, or ignoring accepted research. Some changes were a response to criticisms, but ultimately these "tweaks" never significantly impacted the instrument's outcomes. [Figure 12] below takes an "Occam's Razor" approach to Nitrogen Impact with simplified calculations and a global 10% leach rate. While numbers reflect portions of the detailed SONIR results, the aggregate is not within acceptable tolerances.

Figure 12 – N Regression 88.05 Course + Residential Acres & Other Sources

Description	Estimated Annual Gallons Fertigation Well	Fertigation Well mg/L	Fertigation Lbs N Mitigated @mg/L	Fertilizer Supplement Lbs N to Equal 4,448 Lbs / Year	All Play Area + 3,797 Lbs from Other sources*	Lbs After Credit for Fertigation & Liners Mitigation	Lbs N AFTER Applying Global Leach Rate of 10%	16,373,750 Gallons* to Acres of Aquifer @mg/L Annually
Results @ mg/L	15,939,408	20	2,660	1,788	8,245	5,377	537.67	3.93
Results @ mg/L	15,939,408	19	2,527	1,921	8,245	5,510	550.97	4.03
Results @ mg/L	15,939,408	18	2,394	2,054	8,245	5,643	564.27	4.13
Results @ mg/L	15,939,408	17	2,261	2,187	8,245	5,776	577.57	4.23
Results @ mg/L	15,939,408	16	2,128	2,320	8,245	5,909	590.87	4.32
Results @mg/L	15,939,408	15	1,995	2,453	8,245	6,042	604.18	4.42
Results @ mg/L	15,939,408	14	1,862	2,586	8,245	6,175	617.48	4.52
Results @ mg/L	15,939,408	13	1,729	2,719	8,245	6,308	630.78	4.62
Results @ mg/L	15,939,408	12	1,596	2,852	8,245	6,441	644.08	4.71
Results @ mg/L	15,939,408	11	1,463	2,985	8,245	6,574	657.38	4.81
PRD Target @mg/L	15,939,408	10	1,330	3,118	8,245	6,707	670.69	4.91
Results @ mg/L	15,939,408	9	1,197	3,251	8,245	6,840	683.99	5.01
Results @ mg/L	15,939,408	8	1,064	3,384	8,245	6,973	697.29	5.10
Results @ mg/L	15,939,408	7	931	3,517	8,245	7,106	710.59	5.20
Results @ mg/L	15,939,408	6	798	3,650	8,245	7,239	723.89	5.30
Average @ mg/L	15,939,408	5.14	684	3,764	8,245	7,353	735.33	5.38
Results @ mg/L	15,939,408	4	532	3,916	8,245	7,505	750.50	5.49
Results @ mg/L	15,939,408	3	399	4,049	8,245	7,638	763.80	5.59
Results @ mg/L	15,939,408	2	266	4,182	8,245	7,771	777.10	5.69
Results @ mg/L	15,939,408	1	133	4,315	8,245	7,904	790.41	5.78
Results @ mg/L	15,939,408	0	0	4,448	8,245	8,037	803.71	5.88

*Annual SONIR Other Pounds Nitrogen	
Pet Waste	161
STP Septic (130 Units)	1,493
Rough,Res,Club @1 lb/Ksf	2,039
Turf Maint Staff (21)	103
Total Other	3,797

Total Applied Nitrogen Supplement for 88.05 arces of Golf Course.			
Area	Lbs N /1000sf	Acres	Lbs N/yr
Turf	2.476	41.24	4,448
Rough	1.000	46.81	2,039

Turf Maint Staff Sanitary Waste	Value
All Staff on Site @ Peak Season	103.00
Percent of Staff Turf Maint	20%
Turf Staff = 20% of Total Staff	21
Annual Lbs of Nitrogen per Person	10
Total N 21 Persons @183 Day Season	103

Sanitary Nitrogen Clubhouse Building @183 Day Operation		
CF = Commercial/STP Flow	3,757	gal/day
CF = Commercial/STP Flow	2,602,587	liters/yr
N = Nitrogen (1)	50	mg/l
N = Nitrogen (1) Influence	287	Lbs

Nitrogen Water Source	PRD Gallons	SONIR ETO	*Annual Gals to Aquifer
Irrigation	51,492,460	75%	12,795,722
STP	3,578,029	0%	3,578,029
		Total	16,373,750

Sanitary Nitrogen 118 Residential Units @60 Day Occupancy		
CF = Commercial/STP Flow	300	gal/day
CF = Commercial/STP Flow	8,040,211	liters/yr
N = Nitrogen (1)	50	mg/l
N = Nitrogen (1) Influence	886	Lbs

Sanitary Nitrogen 12 Workforce (10x150+2x300) @365 Days		
CF = Commercial/STP Flow	2,100	gal/day
CF = Commercial/STP Flow	2,901,509	liters/yr
N = Nitrogen (1)	50	mg/l
N = Nitrogen (1) Influence	320	Lbs

ENDNOTES:

All values for variables used in the calculations for this document are transcribed directly form the Applicants PRD Submission. The "Specific Concern" section is a subjective supposition based on the results of simple mathematical calculation, systems analysis, and empirical observation. The document is for personal use only and not intended for publication. The contents are simply the author's opinions. This document is not to be represented and/or quoted as fact. The contents herein are logical and reasonable interpretation of sources and are not to be construed as accredited research. The author holds no certifications or degrees in Environmental or related Science and Arts.

There is no intent of animosity or hostility towards the developer. Their corporate values demonstrate a willingness to adapt to needs and individuality of the community they wish to join at the sacrifice of profit. The developer's officers, employees, and consultants, are dedicated to the company and devoted to their belief in the benefits to the community this project could realize. On the surface, the design and scope of this development are commensurate with the Town's vision of future fiscal stability and aesthetic values. Unfortunately, the environmental impact to the Pine Barrens is significant**. This is a great project in the wrong place.**

Thank you for your time.

Respectfully,

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Figure 13 - All Referenced Calculations

Referenced Calculations

Acres of Fertigated (Irrigated) Managed Turf				Lbs N /Year
Tees	Greens	Fairways	Total Acres	
2.62	3.62	35	41.24	4,448
Acres of Irrigated Landscape				
Golf Rough	Residential	Clubhouse		
35	8.3	3.51	46.81	2,039
		Total Irrigated Acres	88.05	6,487
			Ref# ①	

Gallons of Water in Ponds & Pools			
Gallons/1 acre-ft	Acres	Depth/Feet	Gallons
325,851	7.26	7	16,559,770

Source	PRD Gallons	SONIR ETO	Gallons Evapo
Ponds & Pools	16,559,770	60%	9,955,773
Irrigation	33,745,594	60%	20,247,357
Mist = Irr. Gal x Rate		7.5%	2,530,920
Total	50,305,364	PET-Total	32,734,049
			Ref# ②

Annual Limit 2.5 Lbs of N per 1000 SF		
LBS N/1000sqft /yr from Fertigation Well @10mg/L*	N/1000 sqft /yr Supplement	Limit Lbs N @ 41.24 Acres/yr
0.74	1.74	2.48

** Note:*
Should the Well's N output fall below 10mg/L, the supplement will increase in an inverse proportion to maintain the 2.48 Lbs limit. See table on last page and Appendix A

Average Temp 70°F, Humidity 50%, Wind 7mph=Mist Rate 7.5%				
Annual Irrigation Gallons	N Lbs /Yr	Gallons Mist @7.5%	Total Lbs N @ 7.5% Mist Rate	Mist mg/L
33,745,594	4,448	2,530,920	334	15.79
		Ref# ③	Ref# ④	

Total Evapotranspiration in Gallons Per Year			
Mist = Irr. Gal x Rate	33,745,594	7.5%	2,530,920
Ponds & Fertigation			32,734,049
Gallons Annual Evapotranspiration Vapor			32,734,049
			Ref# ⑤

Return to Summary: Impact of Lewis Road Planned Residential Development

1

Figure 14 - PRD Data Sources

Table I-1a
SITE AND DEVELOPMENT CHARACTERISTICS and IMPACTS
Updated Master Plan

Parameter	Parlato Property	Hills North Parcel	Hills South Parcel & Kracke Property*	*Totals*
Use & Yield	Open Space	Open Space	118 resort units & golf	---
Coverages (acres):	---	---	---	---
Unvegetated	1.15	0	2.30	*3.45*
Agriculture	0	0	0	*0*
Freshwater Wetland	0	1.40	0	*1.40*
Natural Vegetation	84.98	85.52	252.24	*422.74*
Brushy Cleared Land	0	0	0	*0*
Revegetated	15.78	0	17.39	*33.17*
Landscaped	0	0	101.15	*101.15* (1)
Ponds & Pools	0	0	5.84	*5.84*
Buildings	0	0	8.43	*8.43*
Paved/Impervious	0	0	14.81	*14.81*
Totals	101.91	86.92	402.17	*591.00*
Water Resources:	---	---	---	---
Domestic Use (gpd) (2)	0	0	41,514/6,574	*41,514/6,574*
Irrigation, golf (gpy)	0	0	30,050,978	30,050,978
Irrigation, non-golf (gpy)	0	0	4,680,704	4,680,704
Total Water Use (gpy)	0	0	34,738,256	34,738,256
Recharge Volume (MGY) (3)	449.56			*474.27*
Nitrogen Conc. (mg/l) (3)	0.45/0.37 (assumes advanced wastewater system)			*0.59/0.34*

(1) Total fertilized landscaping is 88.53 acres (14.98% of the site), as: 78.00 acres of Golf Course Play Area, 2.31 acres Clubhouse Landscaping, and 8.22 acres of Residential Area Landscaping.
(2) Assuming SCDHS design flow rates for wastewater systems/flow reduction due to seasonal occupancy.
(3) See **Appendix R-2**.
(4) Will not attend East Quogue UFSD due to restrictive covenant.
(5) Per applicant.

Appendix J ITHMP DEIS Final
Integrated Turf Health Management Plan for the Hills at Southampton, East Quogue, NY.
Page 83

"The Hills at Southampton Monthly Nitrogen Nutrient Projection:
An estimate of maximum applied nitrogen was determined by calculating the amount of nitrogen applied through the groundwater supply of irrigation water (I) plus the amount of supplemental nitrogen applied as fertilizer (S). The annual maximum amount of nitrogen applied from groundwater is 0.74 pounds and is based on groundwater nitrogen concentration of 15 mg/L. Monthly irrigation is estimated from the percentage of annual irrigation applied each month.The maximum allowable amount of monthly applied nitrogen (irrigation and supplemental) was set at 0.248 pounds per month based on an annual limit of 2.5 pounds of nitrogen per 1000 SF of managed turf per year excluding roughs."

April: 0.74# N x 05% = 0.037# N(I) + 0.211# N(S) = 0.248 pounds
May: 0.74# N x 15% = 0.111# N(I) + 0.137# N(S) = 0.248 pounds
June: 0.74# N x 15% = 0.111# N(I) + 0.137# N(S) = 0.248 pounds
July: 0.74# N x 20% = 0.148# N(I) + 0.100# N(S) = 0.248 pounds
August: 0.74# N x 20% = 0.148# N(I) + 0.100# N(S) = 0.248 pounds
September: 0.74# N x 20% = 0.148# N(I) + 0.100# N(S) = 0.248 pounds
October: 0.74# N x 05% = 0.037# N(I) + 0.211# N(S) = 0.248 pounds
Total N(I) = 100% = .74#N(S) = 2.476 #N/1000 SF/year

The numbers in RED in this table are mistaken. They represent a calculation for 183 days but the 0.248 pounds per month is based on an annual formula. The annual limit of 2.5 pounds must be factored (prorated) into 183 days. The "*Applied Chemical Fertilizer Lbs N per month*" column in Figure #4 calculates this correction.

2

3

Go to Figure 4

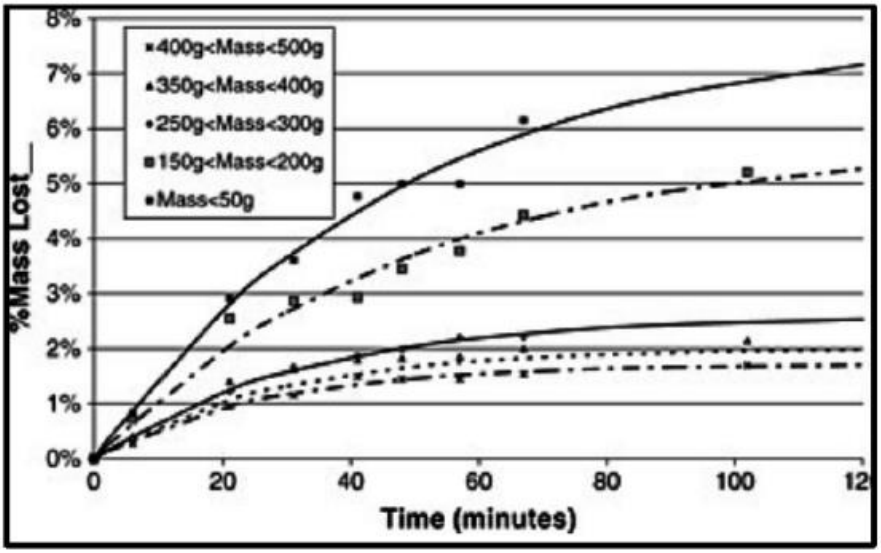
1 **Figure 15 – Abstract Evaporation and Drift Losses Sprinkler Irrigation**

UF IFAS Extension

BUL290

Evaporation Loss During Sprinkler Irrigation[1]

Fedro S. Zazueta[2]



Agricultural Water Management
Volume 8, Issue 4, February 1984, Pages 439-449

Evaporation and drift losses from sprinkler irrigation systems under various operating conditions

Attila Yazar

https://doi.org/10.1016/0378-3774(84)90070-2

Abstract

Quantitative determinations of evaporation and drift losses from sprinkler systems were carried out under different operating conditions.

Evaporation losses determined by an electrical-conductivity method ranged from 1.5 to 16.8% of the total sprinkled volume. Wind velocity and vapor pressure deficit were the most significant factors affecting the evaporation losses. Exponential relationships between the evaporation losses and both wind velocity and vapor pressure deficit have been found. For the operating pressures used in this study the least effect on evaporation was found.

Drift losses measured by the magnesium-oxide method varied from 1.5 to 15.1%. Drift losses increased with the second power of the wind velocity, and decreased with increasing distance in the downwind direction.

Combined losses from a sprinkler system for a given set of operating conditions have been estimated by using the results obtained from the experiments. Combined losses ranged from 1.7 to 30.7% of the applied water.

Figure 16 – Vertical Profile of TW-1 Capture Zone & N mg/l Levels

Hills Vertical Profile Well Results	
Depth Interval (ft)	**Total Nitrogen (mg/L)**
40	28.7
65	13.20
75	9.92
85	8.85
95	10.60
105	14.30
115	4.00
125	1.71
135	11.20
145	3.52
155	4.06
165	3.29
175	5.13
Average* =	14.26

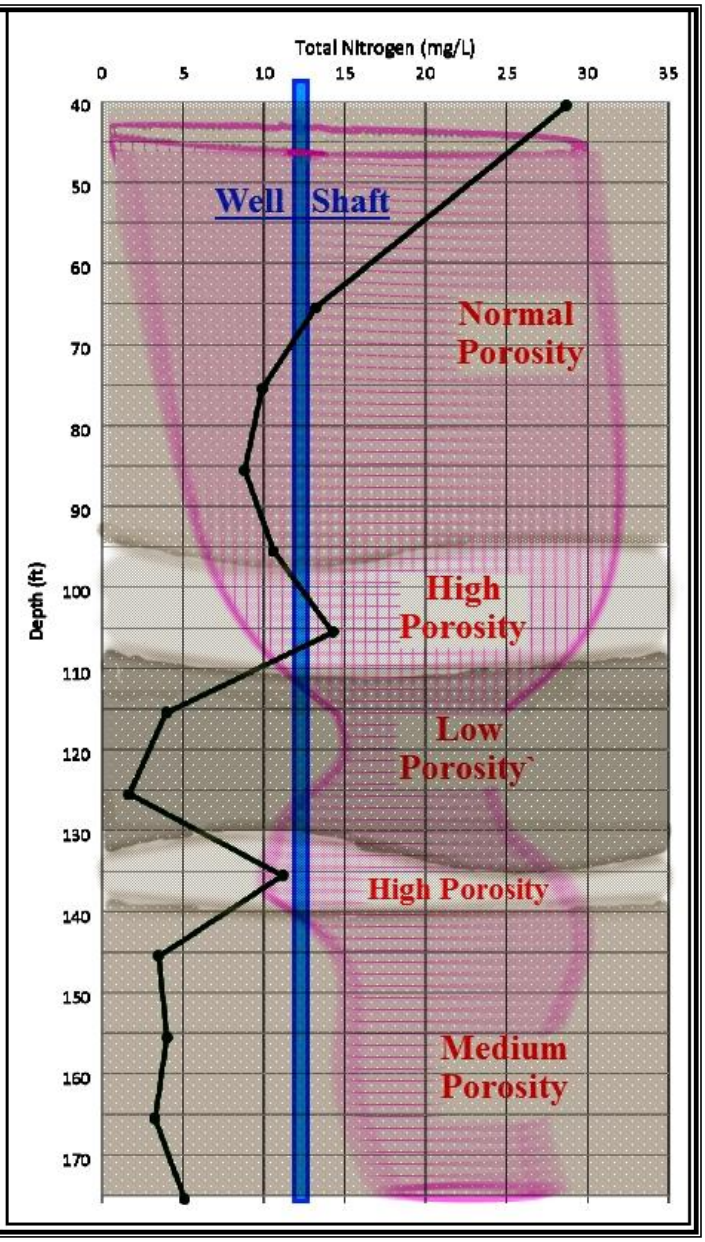
*Based on depths of 40-105 ft.

TW-1 Hypothetical ZOC Contamination

Area of N Concentration

Profile Result Vectors
1. Soil Porosity
2. Sample Depth
3. Contaminant Dispersion
4. Borehole Location
5. Horizontal/Vertical Flow

ZOC - Zone of Contribution (Pump Draw)



This edited profile is consistent with a well location that draws groundwater directly beneath an established active compost heap. The problem is whether an annual pump volume of 20 M gallons can persistently produce a 10 mg/L level from such a narrow, skewed area of nitrogen concentration. The 38 gpm 24/7/365 pump rate generates a narrow **Z**one **O**f **C**ontribution for the well. The primary nitrogen source will be continually tapped. Grosser acknowledges there will only be a slight deflection of nitrogen particulate from surrounding groundwater. The FIES defines a 200-day/season irrigation period. At 20 M gallons for 24/7/200, the pump rate becomes ~70 gpm. This will expand the **ZOC** beyond the narrow cone of particulate concentration due to the increased draw radii. The surrounding groundwater outside the catchment of TW-1's original contribution zone will also be captured. However, the adjacent test wells [Figure 8] average half (5.14mg/L) the nitrogen concentration of TW-1. The **ZOC** expansion into the low nitrogen contribution area will effectively dilute the nitrogen concentration in the source point. In addition, the **static** TW-1 compost

nitrogen source will inevitably reach a point of diminishing returns. The TW-1 well's high nitrogen particulate will eventually be exhausted.

There is not enough nitrogen in the groundwater within and/or surrounding the TW-1 capture zone to maintain 10 mg/L source point integrity at either a 38-gpm or a 70-gpm pump rate scenario.

The environmental consequences of a drawdown in sustained nitrogen levels will be significant. In order to maintain turf health, it will be necessary to inject more chemical nitrogen fertilizer into the irrigation water. There is a direct proportional relationship between the amount of additive fertilizer and the amount of nitrogen mitigation. The more chemical nitrogen fertilizer needed for fertigation, the less nitrogen is mitigated. The result is the entire premise of negative nitrogen load is instantaneously nullified. The impact is dependent on the available mass of nitrogen levels, the volume of water pumped, and, most significant, the length of time before the nitrogen levels become insufficient for the design. With a ZOC diameter of 200 feet and a depth of draw of 150 feet, a completely empty cylindrical vessel would contain ~36M gallons of water. However, only 10% of the total volume in the sandy soil aquifer is water. That equals 3.6 M gallons. At a pump rate of 20M gallon/year, the levels of groundwater nitrogen would drop well below 10mg/L within a year. The **[**Figure 12**]** documents the interrelationship of background nitrogen levels vs supplemental nitrogen injection.

-30-

Comments on the Lewis Road PRD 08/18/2020 Pine Barrens Commission's Public Zoom Session

August 25, 2020

Figure 1: - PRD Property

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The Suffolk County Central Pine Barrens Joint Planning & Policy Commission's Mission Statement:

"To manage land use within the Central Pine Barrens, to protect its vital groundwater and surface water and the region's vast and significant natural, agricultural, historical, cultural and recreational resources for current and future Long Island residents."

The following comments may address issues that are contrary to **Suffolk County Central Pine Barrens Joint Planning & Policy Commission** interests.

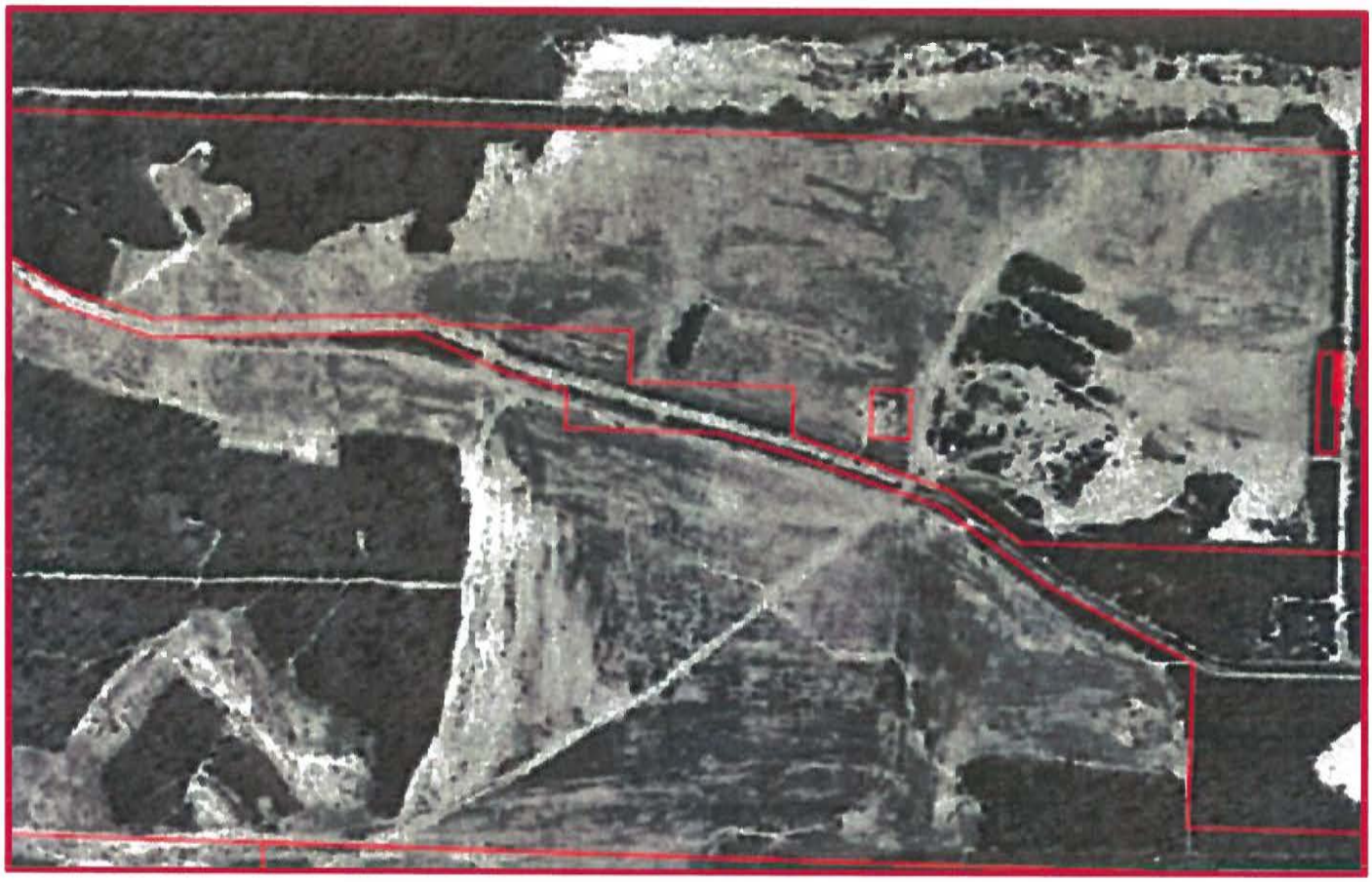
Table of Contents

Table of Figures

Issue #1: Geographic Hydrology

During the meeting, the Developer indicated that 31.50 acres of existing cleared area is within the property and will be used by the project.

Figure 2: - Cleared Land Within the PRD



The developer correctly indicated the current character of the cleared areas of this site. Before municipal waste management, garbage disposal was burning and/or dumping in the woods. Easy access and relative isolation made Spinney Hills a convenient dumping ground periodically utilized by the State, County, Town, Hamlet, local contractors, and residents. Abandoned vehicles, tires, construction waste, appliances, furniture, yard waste, and household garbage have since deteriorated or been removed. For decades, Spinney was extensively used for target practice, hunting, recreational vehicular activities, and as a "party" site. However, the inference that these cleared areas were caused by this destructive activity is armchair empiricism.

The hydrogeology of Spinney Hills is very complex and has evolved over eons. Perched on the southern slope of the Ronkonkoma Divide that crest at Sunrise Highway, Spinney Hills collects millions of gallons of Atlantic moisture and, due to the average 30-degree slope, adsorbs millions of watt-hours of solar energy. Spinney Hills "proper" from Sunrise Highway south to Lewis Road measures about five square miles.

East Quogue receives approximately 49 inches of precipitation per year. Adjusting for seasons, trans evaporation reclaims approximately 50% of that precipitation. Thus, 24.5 inches of precipitation enters Spinney soil layers. One inch of rain equals 3630 cubic feet of water per acre. There are 3,200 acres in five square miles. This amounts to 11.6 million cubic feet of water in one inch of rain. At 24.5 inches of rain, that totals 285 million cubic feet of water annually entering the Spinney Hills Aquifer. That is equal to 2,128,896,148 gallons. This is a "big" number but to put it in a better perspective, this is the amount of water that flows over the crestline of Niagara Falls in 48 minutes.
(http://www.niagaraparks.com/media/geology-facts-figures.html)

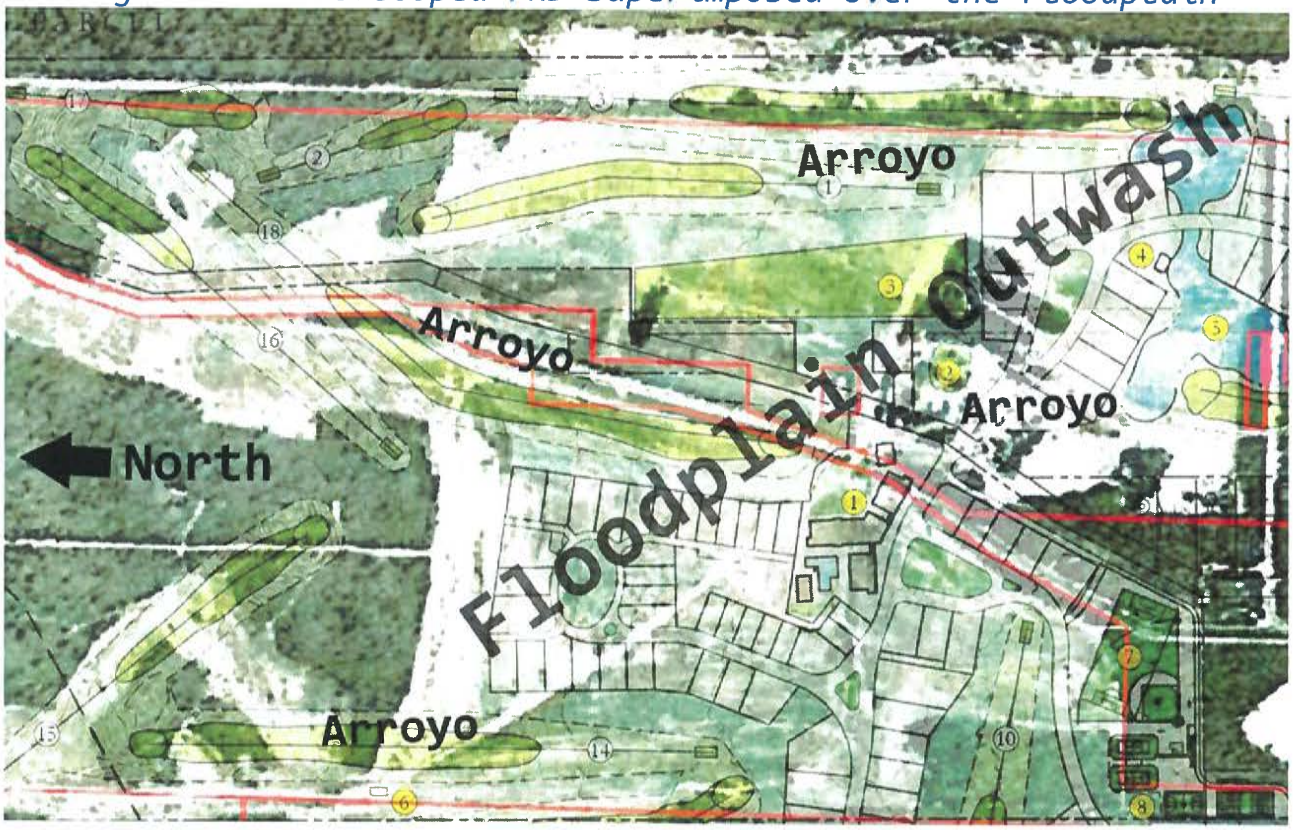
This volume of water will cause erosion. However, the soil composition of most of Spinney Hills is highly porous and sandy. Most of this water is absorbed even during episodic 2-4" rain events. So, why the concern for the Lewis Road PRD? Well it turns out that there is a very dangerous event that occurs once every decade of so that one must empirically witness to understand its significance.

Every 10 years this area experiences and unusual Winter/Spring climate episode. Ocean temperatures drop suddenly, and the weather changes early in fall with the first hard frost coming before Halloween. The ground freezes by Thanksgiving. All the leaves and detritus on the Spinney Hills forest floor form a dense blanket over the moist winter ground. This acts as an insulating blanket to keep the ground in a semi-permafrost state. Then it snows or rains. The Solar energy thaws the snow and the water seeps into the detritus but cannot effectively penetrate the frozen ground. It forms rivulets and tributaries that meander through the hills finding small level bare spots and puddling. Simultaneously, the constant freezing and thawing becomes a breeding ground for cold adapted slime molds. These species begin to feed on the detritus and form a dense mat of impenetrable fibers a few inches deep. Then it snows, one of those occasional snow

coverings and ice that last for six or eight long weeks. The snow and ice compress the "mat" and make it an impassible crusty plate. Now comes the problem. Sometimes, in early March when the conditions are just right for a Nor'easter and before the thaw there is an episodic rain event of 3-4". Without boring you with the math, that is 304 million gallons of water in a period of 3-5 hours falling on Spinney Hills. There is no place for this water to go because the detritus "mat" covers most of the sandy soil. The rivulets established over the winter become streams and the streams converge into rivers in the ancient arroyos in Spinney Hills. These torrents can be five feet deep and 15 feet wide. All these arroyos transverse the residential area of the PRD property.

These "cleared" areas are not anthropomorphic scares but are part of the vast floodplain that begins at the edge of the northern residential area of the project and extends all the way beyond the SCWA and into Weesuck Creek where it crosses Spinney Road. The cascade of millions of gallons of Spinney Hills episodic runoff empties into this vast myrieteris outwash. Despite municipal agency and private storm water runoff claims, nothing can stop, divert, or channel this much water.

Figure 3: - Developed PRD Superimposed Over the Floodplain

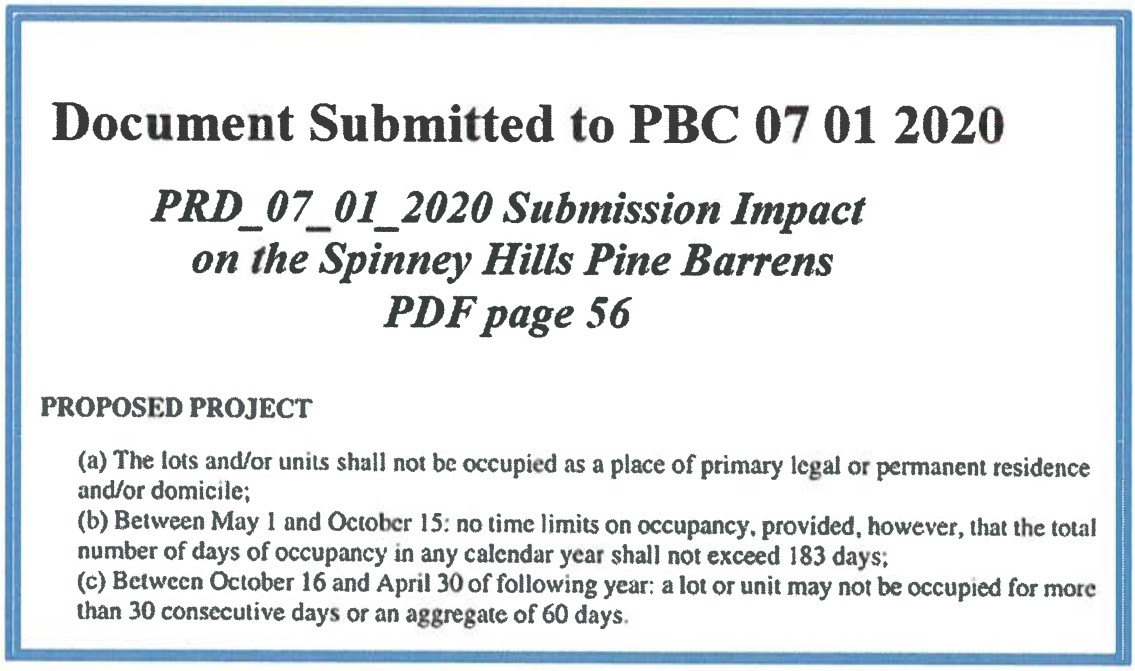


This is the reason for the sparse vegetation in the sandy soil of the "cleared" areas. That is why, for centuries, the indigenous peoples only used this land for late summer/early fall camping. Early settlers only used it for hunting or as an "ice route" to the Peconic River. Similarly, no housing was built in this area in the post WWII era because the locals all knew the land was subject to severe periodic flooding. The recreational and dumping use of this land did not cause this geological feature, it was just exacerbated by abuse.

The PRD is directly in the path of an outwash plain that is a 10,000-year-old vestige of the last Ice age which forged Long Island. While the current water table may be 42 feet below the surface, the USGS shows the depth varying from 24 feet to 56 over the past 20 years. Several homes and structures will be at peril based on the fluctuating water table and when these episodic events occur. Episodical flooding of the PRD will cause critical contamination of the groundwater.

Issue #2: Occupancy

Figure 4: - Occupancy Statement Image from PRD



Document Submitted to PBC 07 01 2020

PRD_07_01_2020 Submission Impact on the Spinney Hills Pine Barrens PDF page 56

PROPOSED PROJECT

(a) The lots and/or units shall not be occupied as a place of primary legal or permanent residence and/or domicile;
(b) Between May 1 and October 15: no time limits on occupancy, provided, however, that the total number of days of occupancy in any calendar year shall not exceed 183 days;
(c) Between October 16 and April 30 of following year: a lot or unit may not be occupied for more than 30 consecutive days or an aggregate of 60 days.

Impact:

All PRD calculations on Recharge, Septic, Gallons/Day, Traffic, Parking, etc. are based on 60 Days occupancy rate. The SONIR Model is flawed by this assumption and it has not been changed.

Issue #3: Revised Master Plan

A comparison of these two boundaries shows the shift of proposed development on the northern part of the development area in a southerly direction, to reduce impact to the steeper slopes in this area, as sought by the Town and Commission. This shift was mandated by statutes that prohibit building on steep grades. This was also requested by PBC. The golf course holes in the northern part of the developed area were shifted to the south and west. The Course Maintenance building was moved South. The STP was moved southward to the southern end of the "panhandle" area, on the west side of Spinney Road. This was promoted by the Planning Board to locate the STP near the East Quogue Cemetery. This location is downgradient of the SCWA Spinney Road well field and the historic/present farm fields.

Figure 5: - Old PRD Plan

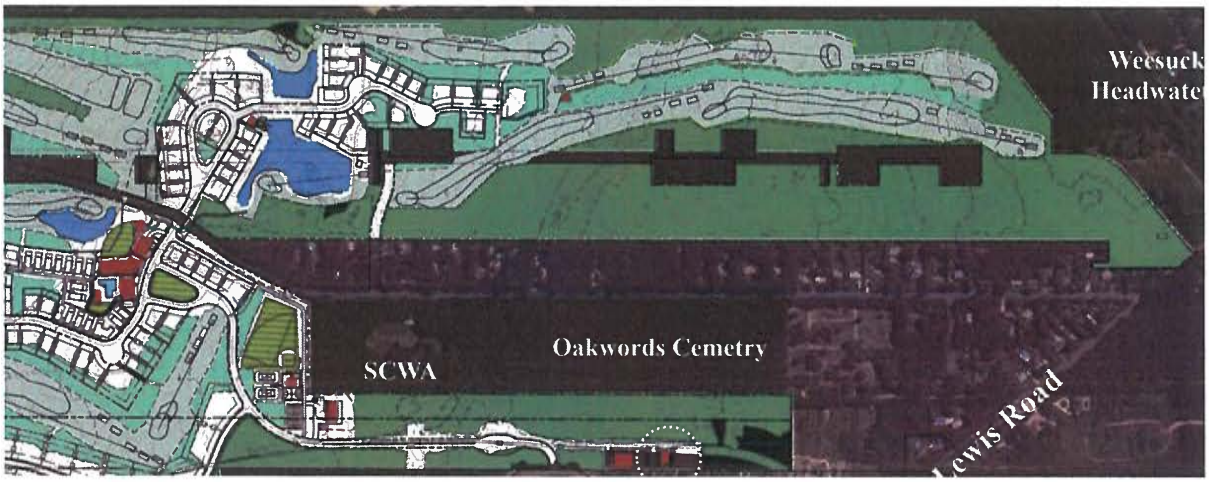
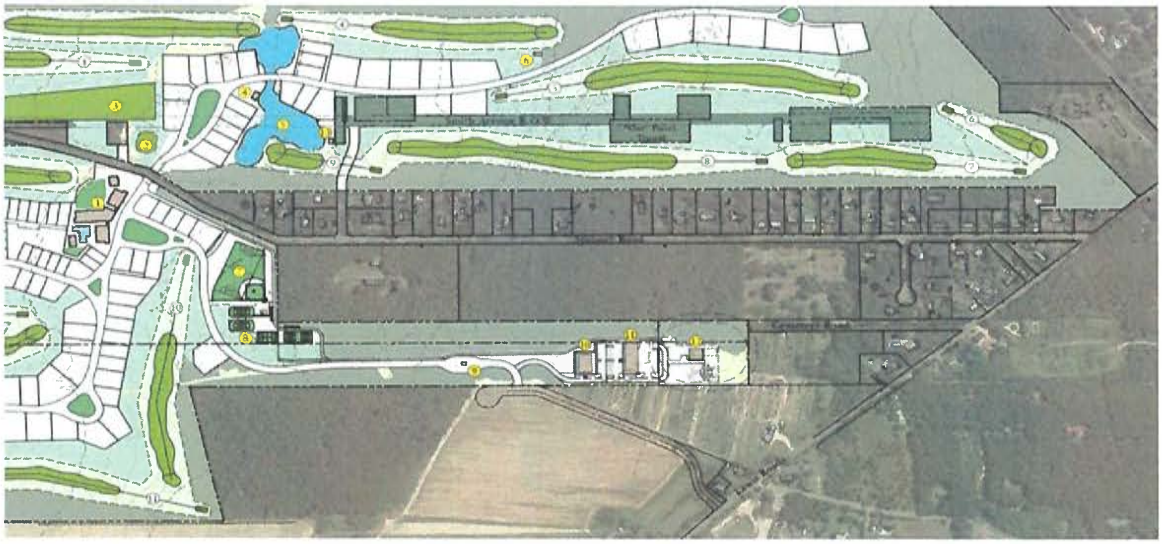


Figure 6: - Revised PRD Plan



Impact:

The shift of golf course holes results in a loss of 75 Contiguous Acres of Open Space.

The shift in the Golf Course Maintenance Building to the South places it closer to Spinney #3 and # 4 SCWA Pumping Stations. This building will house 1,000 gallons of gasoline, 500 gallons of diesel fuel and thousands of pounds of fertilizer containing Ammonium Nitrate. Accidental mixing of these components will cause a catastrophe like Beirut or the Oklahoma City bombing. This is a disaster that would eliminate the Spinney Wellfield as a viable public water resource.

While the shift of the STP seems like a reasonable environmental move, there is an ulterior motive. It has been proven the proposed fertigation well sits over a compost site pumping 20M gallon of water a year. The nitrogen in the ground water is finite since the composting site is no longer active. Once that well "plays-out" the nitrogen levels will reduce to background levels. This will destroy the PRD's nitrogen recovery calculations. **The STP and proposed leach fields are adjacent to this compost heap.** The STP leach field will provide a steady flow of 10% nitrogen leaching for fertigation.

Issue #4: Adjusted Acreage

The gross acreage of the project went from the original 588.39 acres to 608.45 acres. This was accomplished by additional land purchases and right-of-way (ROW) abandonments. It should be noted that the subsequent acquisition of property to increase the developer's holdings to 608 acres allowed for the increase in fertilized acres from 88.53 to 91.21 acres.

Impact:

This small change of 2.58 fertilized acres adds 120 pounds of addition gross nitrogen supplement to the project. [((2.78*sqft_in_Acre_43560)/1000)*1.0 lbs/1000sf]

Issue #5: Course Play Area

Rough and/or non-course area was **increased** to 58.05 acres from 46.81 acres. Play area (Tees, Green, and Fairways) was **decreased** to

33.16 acres from 41.24 acres. These changes resulted in a reduction in gross applied nitrogen to 6,105 pounds from 6,487 pounds of applied nitrogen for turf maintenance. Thus, the new PRD achieved a Delta of 382 pounds in nitrogen savings. This change was reflected in the SONIR model outcome.

Impact:

Rough and/or non-course area is fertilized at 1.0 lbs/1000sf. Course play area is fertilized at 2.5 lbs/1000sf. While the total 91.21 acres will be fertilized, there is no breakdown of which acres will receive **fertigation** and how and if the fertilizer will be applied to the non-play areas (fertigation?). This may seem trivial but it is critical to factoring the amount of nitrogen mitigated by the Fertigation Well which, in turn, significantly impacts the overall nitrogen budget of the project. It is also important when determining leach rate totals.

In addition, the reduction in the play area by 25% also reduces the total gallons of fertigation required. In turn there is a direct correlation between fertigation and aggregate yearly nitrogen mitigation. Less mitigation means higher nitrogen in total ground water recharge. Change was **NOT** reflected in the SONIR model outcome.

Issue #6: Long Island Nitrogen Action Plan (LINAP)

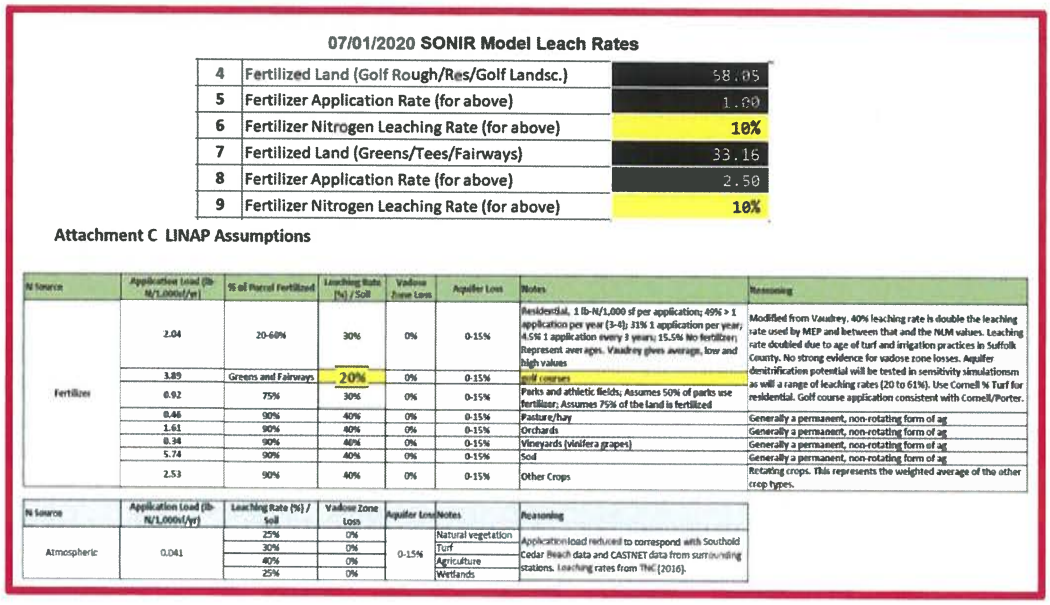
Response to Pine Barrens Commission Staff Review and Public Comments 07/01/2020 Lewis Road PRD, East Quogue, Town of Southampton:

"With respect to the SONIR model, accuracy of data is critical to the results of the model. In addition, understanding of the model and the input/output data is equally critical. It is noted that during the Town Draft/Final EIS process, the Long Island Nitrogen Action Plan (LINAP) emerged, and through further research the SONIR Model was updated for LINAP assumptions as explained in the SONIR Model User's Guide. As a result, the SONIR model and that data and assumptions used to complete the model can be relied upon for decision-making".

Impact:

This statement is not accurate according to published LINAP Assumptions. Despite this reference, SONIR used the 10%:

Figure 7: - SONIR MODEL LEACH RATE vs LINAP Assumptions



07/01/2020 SONIR Model Leach Rates

4	Fertilized Land (Golf Rough/Res/Golf Landsc.)	58.05
5	Fertilizer Application Rate (for above)	1.00
6	Fertilizer Nitrogen Leaching Rate (for above)	10%
7	Fertilized Land (Greens/Tees/Fairways)	33.16
8	Fertilizer Application Rate (for above)	2.50
9	Fertilizer Nitrogen Leaching Rate (for above)	10%

Attachment C LINAP Assumptions

N Source	Application Load (lb-N/1,000sf/yr)	% of Parcel Fertilized	Leaching Rate (%) / Soil	Vadose Zone Loss	Aquifer Loss	Notes	Reasoning
Fertilizer	2.04	20-60%	30%	0%	0-15%	Residential, 1 lb-N/1,000 sf per application; 49% > 1 application per year (3-4); 31% 1 application per year; 4.5% 1 application every 3 years; 15.5% No fertilizer; Represent aver ages. Vaudrey gives average, low and high values	Modified from Vaudrey. 40% leaching rate is double the leaching rate used by MEP and between that and the NUM values. Leaching rate doubled due to age of turf and irrigation practices in Suffolk County. No strong evidence for vadose zone losses. Aquifer denitrification potential will be tested in sensitivity simulationsm as will a range of leaching rates (20 to 61%). Use Cornell % Turf for residential. Golf course application consistent with Cornell/Porter.
	3.89	Greens and Fairways	20%	0%	0-15%	golf courses	
	0.92	75%	30%	0%	0-15%	Parks and athletic fields; Assumes 50% of parks use fertilizer; Assumes 75% of the land is fertilized	
	0.46	90%	40%	0%	0-15%	Pasture/hay	Generally a permanent, non-rotating form of ag
	1.61	90%	40%	0%	0-15%	Orchards	Generally a permanent, non-rotating form of ag
	0.34	90%	40%	0%	0-15%	Vineyards (vinifera grapes)	Generally a permanent, non-rotating form of ag
	5.74	90%	40%	0%	0-15%	Sod	Generally a permanent, non-rotating form of ag
	2.53	90%	40%	0%	0-15%	Other Crops	Retating crops. This represents the weighted average of the other crop types.

N Source	Application Load (lb-N/1,000sf/yr)	Leaching Rate (%) / Soil	Vadose Zone Loss	Aquifer Loss	Notes	Reasoning
Atmospheric	0.041	25%	0%	0-15%	Natural vegetation	Application load reduced to correspond with Southold Cedar Beach data and CASTNET data from surrounding stations. Leaching rates from THC (2016).
		30%	0%		Turf	
		40%	0%		Agriculture	
		25%	0%		Wetlands	

Issue #7: SONIR Modeling

On the next section are a series of SONIR outcomes that reflect potential real-world changes that affect the annual Adjusted Total Site Nitrogen. The yellow boxes compare the change in Adjusted Total Site Nitrogen. The left side yellow box shows the calculations for the change(s) with the black boxes showing the modifications. For comparison, the right-side yellow and black boxes do not change.

Left Side Yellow Box Results are cumulative.

As discussed previously, adjust for the reduction in Fertigation for the 25% reduction in Course Play area to 33.16 acres:

Figure 8: - 25% reduction in Course Play area to 33.16 acres

		Changeable Variables
Calculation Method	SONIR	Acres Rough
Mitigation Summary	Pounds	58.05
M1 Reuse of Irrigation Water	1,292.89	Rough Lbs/ Ksf
M2 Lined Greens	199.72	1.00
M3 Rain Gardens	4.96	Rough Leach Rate
Total	1,497.57	10%
		Acres Fertigated
Total Nitrogen		33.16
Site Nitrogen (No Mitigation)	1,204.34	Turf Lbs/ /Ksf
Migration Nitrogen	1,497.57	2.5
Adjusted Total Site Nitrogen	-293.24	Turf Leach Rate
		10%
Total Anthropogenic		Residential Units
Site Nitrogen (No Mitigation)	937.02	130
Mitigated Nitrogen	1,497.57	Occupancy Days
Adjusted Total Site Nitrogen	-560.55	60
		Well N mg/L
		10

PRD SONIR RESULTS as of 07/01/2020		Locked Variables
Calculation Method	SONIR	Acres Rough
Mitigation Summary	Pounds	58.05
M1 Reuse of Irrigation Water	1,668.90	Rough Lbs/ Ksf
M2 Lined Greens	199.72	1.00
M3 Rain Gardens	4.96	Rough Leach Rate
Total	1,873.58	10%
		Acres Fertigated
Total Nitrogen		33.16
Site Nitrogen (No Mitigation)	1,204.42	Turf Lbs/ /Ksf
Migration Nitrogen	1,873.58	2.5
Adjusted Total Site Nitrogen	-669.16	Turf Leach Rate
		10%
Total Anthropogenic		Residential Units
Site Nitrogen (No Mitigation)	937.10	117
Mitigated Nitrogen	1,873.58	Occupancy Days
Adjusted Total Site Nitrogen	-936.48	60
		Well mg/L
		10

Next, set the LINAP 20% Leach Rate into the SONIR Model

Figure 9: - LINAP 20% Leach Rate

		Changeable Variables
Calculation Method	SONIR	Acres Rough
Mitigation Summary	Pounds	58.05
M1 Reuse of Irrigation Water	1,292.89	Rough Lbs/ Ksf
M2 Lined Greens	199.72	1.00
M3 Rain Gardens	4.96	Rough Leach Rate
Total	1,497.57	20%
		Acres Fertigated
Total Nitrogen		33.16
Site Nitrogen (No Mitigation)	1,818.32	Turf Lbs/ /Ksf
Migration Nitrogen	1,497.57	2.5
Adjusted Total Site Nitrogen	320.74	Turf Leach Rate
		20%
Total Anthropogenic		Residential Units
Site Nitrogen (No Mitigation)	1,551.00	130
Mitigated Nitrogen	1,497.57	Occupancy Days
Adjusted Total Site Nitrogen	53.43	60
		Well N mg/L
		10

PRD SONIR RESULTS as of 07/01/2020		Locked Variables
Calculation Method	SONIR	Acres Rough
Mitigation Summary	Pounds	58.05
M1 Reuse of Irrigation Water	1,668.90	Rough Lbs/ Ksf
M2 Lined Greens	199.72	1.00
M3 Rain Gardens	4.96	Rough Leach Rate
Total	1,873.58	10%
		Acres Fertigated
Total Nitrogen		33.16
Site Nitrogen (No Mitigation)	1,204.42	Turf Lbs/ /Ksf
Migration Nitrogen	1,873.58	2.5
Adjusted Total Site Nitrogen	-669.16	Turf Leach Rate
		10%
Total Anthropogenic		Residential Units
Site Nitrogen (No Mitigation)	937.10	117
Mitigated Nitrogen	1,873.58	Occupancy Days
Adjusted Total Site Nitrogen	-936.48	60
		Well mg/L
		10

This change has a major impact and shifts the PRD from nitrogen negative to nitrogen positive. As will be discussed in another Issue, new turf has a much higher leach rate due to lack of established thatch and the increased porosity of new soil.

With the restriction of 60 days occupancy lifted, look what happens when you go from 60 days to 124 days (a typical season of May 01 to September 01):

Figure 10: - 124 Day Occupancy

		Changeable Variables
Calculation Method	SONIR	Acres Rough
Mitigation Summary	Pounds	58.05
M1 Reuse of Irrigation Water	1,292.89	Rough Lbs/ Ksf
M2 Lined Greens	199.72	1.00
M3 Rain Gardens	4.96	Rough Leach Rate
Total	1,497.57	20%
		Acres Fertigated
Total Nitrogen		33.16
Site Nitrogen (No Mitigation)	2,037.07	Turf Lbs/ /Ksf
Migration Nitrogen	1,497.57	2.5
Adjusted Total Site Nitrogen	**539.49**	Turf Leach Rate
		20%
Total Anthropogenic		Residential Units
Site Nitrogen (No Mitigation)	1,769.75	130
Mitigated Nitrogen	1,497.57	Occupancy Days
Adjusted Total Site Nitrogen	**272.18**	124
		Well N mg/L
		10

PRD SONIR RESULTS as of 07/01/2020		Locked Variables
Calculation Method	SONIR	Acres Rough
Mitigation Summary	Pounds	58.05
M1 Reuse of Irrigation Water	1,668.90	Rough Lbs/ Ksf
M2 Lined Greens	199.72	1.00
M3 Rain Gardens	4.96	Rough Leach Rate
Total	1,873.58	10%
		Acres Fertigated
Total Nitrogen		33.16
Site Nitrogen (No Mitigation)	1,204.42	Turf Lbs/ /Ksf
Migration Nitrogen	1,873.58	2.5
Adjusted Total Site Nitrogen	**-669.16**	Turf Leach Rate
		10%
Total Anthropogenic		Residential Units
Site Nitrogen (No Mitigation)	937.10	117
Mitigated Nitrogen	1,873.58	Occupancy Days
Adjusted Total Site Nitrogen	**-936.48**	60
		Well mg/L
		10

This result in significant positive Nitrogen in groundwater.

One more change. What if the Fertigation Well "plays-out" and it begins pumping background Nitrogen?

Figure 11: - Fertigation at 5.4 mg/L

		Changeable Variables
Calculation Method	SONIR	Acres Rough
Mitigation Summary	Pounds	58.05
M1 Reuse of Irrigation Water	698.16	Rough Lbs/ Ksf
M2 Lined Greens	199.72	1.00
M3 Rain Gardens	4.96	Rough Leach Rate
Total	902.84	20%
		Acres Fertigated
Total Nitrogen		33.16
Site Nitrogen (No Mitigation)	2,037.07	Turf Lbs/ /Ksf
Migration Nitrogen	902.84	2.5
Adjusted Total Site Nitrogen	**1,134.22**	Turf Leach Rate
		20%
Total Anthropogenic		Residential Units
Site Nitrogen (No Mitigation)	1,769.75	130
Mitigated Nitrogen	902.84	Occupancy Days
Adjusted Total Site Nitrogen	**866.91**	124
		Well N mg/L
		5.4

PRD SONIR RESULTS as of 07/01/2020		Locked Variables
Calculation Method	SONIR	Acres Rough
Mitigation Summary	Pounds	58.05
M1 Reuse of Irrigation Water	1,668.90	Rough Lbs/ Ksf
M2 Lined Greens	199.72	1.00
M3 Rain Gardens	4.96	Rough Leach Rate
Total	1,873.58	10%
		Acres Fertigated
Total Nitrogen		33.16
Site Nitrogen (No Mitigation)	1,204.42	Turf Lbs/ /Ksf
Migration Nitrogen	1,873.58	2.5
Adjusted Total Site Nitrogen	**-669.16**	Turf Leach Rate
		10%
Total Anthropogenic		Residential Units
Site Nitrogen (No Mitigation)	937.10	117
Mitigated Nitrogen	1,873.58	Occupancy Days
Adjusted Total Site Nitrogen	**-936.48**	60
		Well mg/L
		10

This is an annual rate of 1,134 pounds of <u>additional</u> Nitrogen into the Weesuck Headwaters. Within a few years, Western

Shinnecock Bay will be dead. These scenarios illustrate the tenuous nature of the PRD's projected nitrogen budget and the potential impacts.

That is the inherent problem with the SONIR Model. It is "perfect." The Model generates outcome from selective data the achieves the desired results under optimum conditions. The SONIR instrument has no algorithms, parameters, or variables for real-world data like episodic rain, new turf, or any seasonal environmental variables. SONIR assumes the PRD can control the weather, divine groundwater contents, flawlessly operate several critical complex systems, control human nature, and eliminate intervening episodic events. Good luck with that! There can be no tolerance for error. The disastrous environmental impact of failures or miscalculations in the myriad of changes the PRD will make in the Pine Barrens are simply not worth the inevitable risk.

Issue #8: Soil

Originally the project was to remove an estimated 300,000 to 402,254 cubic yards of soil and export material off site. A haul access road is proposed to transport material from the site to East Coast Sand Mine. This strategy was changed and as of 07/01/2020, all soil will be retained on-site. Grading, excavating, and leveling for the approximate 171 developed acres will be accomplished by reallocating existing on-site soil as needed to comply with project design. This supposedly will reduce the volume of disturbed soil. To give the benefit of the doubt, approximately 300,000 cubic yards or 450,000 tons of Spinney Hills Pine Barrens soil will be distressed.

Impact:

The method of excavation involves, limited removal of indigenous trees and scrubs and scraping off the top soil layer for preservation and reapplication. The subsoil layer is then excavated and leveled to the acceptable grade. Next, the depth of excavation is determined by structural requirements. Lawn and driveway areas would amount to minimal subsoil intrusion while roads and recreation areas require

several feet. The deepest intrusion to the subsoil layer will be in grade compliance, foundations, basements, DRAs,' Ponds, and storm drainage systems. Due to the inherent depth of the subsoil layer, these deeper systems will intrude into the wet sand later. It is estimated that excavation will eventually affect 171 acres.

Notwithstanding the disruption of the established aquifer flow characteristics, heavy metal and organic compounds that have been accumulating for centuries will become unbound and exposed. There is no realistic way to calculate the mass of this unlocked subsoil material since the concentration varies by location, elevation, and temporal accumulation. Inevitably a few tons of construction debris also will blend with the soil material.

When the tons of top soil, subsoil, and sand are used as backfill, the natural filtering dynamics, built up for thousands of years, will be compromised. Backfill is conglomerate, aerated, and permeable. In addition, the placement of deep intrusion structures breaches the sand layer and short-circuit filtration. During development, and upon completion, fertilizers and insecticides are used to enhance the landscaping and control pests. Herbicides and fungicides are applied to control the hyper accumulators and other nuisance plants and fungi. In addition, defoliants are introduced to remove unwanted plant growth. These chemicals exacerbate the issue and inherently introduce more complex compounds into the surface soil. Since the natural filtration process of the soil is compromised, these contaminates, unbound heavy metal compounds, and organic waste byproducts pass uninhibited into the aquifer. This is just during the construction phase.

Issue #9: Turf Leach Rates

Nitrogen Fertilizer Management of Turfgrass in Suffolk County

Prepared by R. Portmess and A.M Petrovic
Cornell University
College of Agriculture and Life Sciences,
Department of Horticulture, Ithaca, New York.
2010

"*Testing has also probed the aquifers to assess contamination. The average concentration of nitrates in the Upper Glacial and the Magothy aquifers has increased from 3.12 to 4.34 and 1.14 to 3.43 mg L-1, respectively, from 1987 to 2005. (SCWA 2020 Supplemental Spinney Wells report now put Magothy from 4.38 to 11.0 mg L-1. My note). It is reasonable to assume that the intensity and duration of any precipitation or irrigation event*

can increase the "washing out" of fertilizers. Easton and Petrovic (2004) already identified factors such as hill slope position and infiltration rates on saturation levels, runoff and leaching. Climate data records for Riverhead Station listed average annual precipitation of 46.8 inches (National Climatic Data Center). This is equivalent to 1,270,732 gals acre-1 of which an average of 50% is groundwater recharge (Steenhuis et al. 1985). So, on average, a fertilizer applied at 4 lbs N M-1, (=1.22 lbs/foot) that leaches 10%, will generate an average leaching concentration of 3.3 (6.7) mg N L-1 in the recharge water. However, an "Episodic" leaching event that generated 0.5 inches of rainfall on already saturated ground or high infiltration soils, such as those well-to-excessively drained sands of Suffolk County, could generate concentrations levels of 77 mg N L-1 at the same leaching rate after fertilizing at a rate of 1 lb N M-1. The climate history for Riverhead shows there are 31.8 days per year with rainfall in excess of 0.5 inches. (National Climatic Data Center) The magnitude of 27,164 gals acre-1 at 77 mg N L-1 is great cause to examine our practices carefully. Newly established turf poses a very high risk for leaching and runoff losses. Numerous reports have noted this condition: Nutrient concentrations and losses were the highest in the 20 week period following establishment (Easton and Petrovic 2004). Nitrogen losses varied by fertilizer source during this period and were reported as high as 77.8% N in leachate and 70.6% N in runoff. Soldat et al.(2009) also observed leaching losses of 7-18.2% of the N applied during establishment. Even in tests of buffered and unbuffered fairway plots, Stier and Kussow (2009) had leaching concentrations of 15-35 mg N L-1 in the first year."

Thus, newly create porous topsoil under the newly established fertilized turf and rough is going to leach way more nitrogen that the SONIR Model predicts. The leach rate can be over 50% during episodic rain events. Approximately 40% of applied nitrogen is absorbed by the thatch layer beneath the growth shoots and grass leaves. However, newly established turf has a nominal thatch layer which takes several years to stabilize and mature. While the PRD plans address closely monitoring and controlling the fertigation nitrogen content, there is a conundrum. New turf requires 30% nitrogen for healthy growth and establishment. There will be a conflict between the amount of nitrogen needed to maintain the new turf and the amount that will leach through the immature thatch into the aquifer.

Observations:

In the previous response document, the developer/author(s) used and interesting technique to respond to negative comments. The developer ignored the fact that many of the responses were based on the information and data published at the time the criticism was raised. However, when the developer responded to the issue, they did so for the advantage of the new information that was just released and/or modified because of the criticism. This tended to marginalize the validity of the critical comment. In addition, if some parts of the criticism were valid, they were completely ignored by the developer's response. By address on the "challengeable" points of the critical comment, the developer created the desired illusion that all the parts of the criticism were invalid.

Another effective tactic used by the developer was to employ circular references. When a criticism was too complex to explain, the response referred to sections in previous documentation. In turn, this second level of referenced documentation referred to older documentation. This gave the illusion that the response was "fact" when, in truth, the reference was simply based on suppositional conclusions proposed in the previously referenced documents.

Conclusions:

It is redundant to delineate a list of the obvious negative environmental compromises that will manifest with the construction of a residential golf community adjacent to heart of the Spinney Hills Pine Barrens. What is most fascinating is that there is only a singular advantage to this PRD project; economics. That this PRD's future hinges on the decision of the Suffolk County Central Pine Barrens Joint Planning & Policy Commission's Mission seems fitting since the Commission, as a governmental agency, will in no way benefit from the economics. This is by design. The Commission must weigh their mandate to protect the Pine Barrens against the weight of the future viability of the communities within the Pine Barrens.

Behind the Commission's decision are hundreds of environmental laws and statues enacted to protect and preserve our precious natural resources and groundwater. These laws are backed by millions of dollars in funding, fiscal reserves, and donations. The Commission's stewardship of the legal and financial obligations to ensure future access to our environment represents the idealism of the citizens.

The developer also rests their arguments on hundreds of legal considerations and precedents that achievement profit from the use of our precious natural resources and groundwater to pave the way to viable economic growth. They too are backed by laws and fiscal investments. They have a comparable obligation to maximize the return on their investments.

Here in lies the conflict. Do the legally entitled economic benefits outweigh the immorality of the environmental costs? While the fiscal impact is enormous, it is transient. Within a measure of time, the economic effects will be absorbed into the community and the wave of influence will flatten. On the other hand, the environmental damage is in perpetuity and can never be remediated. The object of the Commission's protection is lost to all future generations. This is a high cost to pay for a marginally conforming project that benefits a comparative few.

ENDNOTES:

All values for variables used in the calculations for this document are transcribed directly form the Applicants PRD Submission. The "Issues" raised are subjective supposition based on the results of simple mathematical calculation, systems analysis, and empirical observation. The document is for personal use only and not intended for publication. The contents are simply the author's opinions. This document is not to be represented and/or quoted as fact. The contents herein are logical and reasonable interpretation of sources and are not to be construed as accredited research. The author holds no certifications or degrees in Environmental or related Science and Arts.

There is no intent of animosity or hostility towards the developer. Their corporate values demonstrate a willingness to adapt to needs and individuality of the community they wish to join at the sacrifice of profit. The developer's officers, employees, and consultants, are dedicated to the company and devoted to their belief in the benefits to the community this project could realize. On the surface, the design and scope of this development are commensurate with the Town's vision of future fiscal stability and aesthetic values. Unfortunately, the environmental impact to the Pine Barrens is significant. This is a great project in the wrong place.

Thank you for your time.

Respectfully,

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-30-

Commission members, any last questions, comments, thoughts before I move into the public comment portion of the public hearing?

All right. Hearing none, we will move onto the live public comments section.

At this time, we will review public verbal comments. If you submitted a request to speak, we have done our best to put everyone in order in which their request was received. Once your microphone has been unmuted and your video enabled, you will be invited to provide comments to five minutes. I know John earlier said three, but given that this is the public's last chance to provide verbal input, I wanted to give everyone the chance for five minutes. You do not need to take the entire five minutes, but certainly if you need to, you have that opportunity as previously mentioned. When you introduce

yourself, please make sure that you clearly state your first name, your last name, spell your last name for the stenographer. And if appropriate, provide your affiliation. And I did just want to mention that we are joined by two of our State Assemblyman today. Assemblyman Fred Thiele whose project is proposed as well Assemblyman Steven Englebright who is the chair of the Environmental Assembly Committee.

So I did want to give them the opportunity to speak first before we jump to the rest of the public speakers.

Fred jumped off? Oh, I guess Fred couldn't stay.

All right. So Steve -- Assemblyman Englebright, would you like to speak now?

ASSEMBLYMAN ENGLEBRIGHT: Can you hear me?

CHAIRWOMAN GALLAGHER: Yes.

We no longer can see you.

ASSEMBLYMAN ENGLEBRIGHT: Count that as an advantage.

CHAIRWOMAN GALLAGHER: Now we can see you.

ASSEMBLYMAN ENGLEBRIGHT: Good afternoon distinguished members of the Pine Barrens Commission and other distinguished participants.

My name is Steven Englebright and I live in Setauket in Brookhaven Town, which is part of Long Island, where I have the privilege of representing the people of the Fourth Assembly District.

I am an original cosponsor of the Pine Barrens Protection Act and I am currently -- as you pointed out -- Chair of the Environmental Conservation Committee of the New York State Assembly.

I will try to not be overly repetitive. This is the, I believe, the fourth time that I communicated to

you regarding this project. And I don't think it's necessary to review all of my previous objections, but I do object to this project on several levels.

I would like today to speak primarily to some of the considerations regarding the land use issues relating to ecology. I have some thoughts in that regard.

Specifically, the Land Use Plan both the previous and current revised master plan is in considerable variance with the expectations of the Pine Barrens Protection Act of New York State.

Specifically, the Pine Barrens Protection Act requires protection for all of the characteristics of the Pine Barrens that define this as a unique and special area that was worthy of the specific action of the legislature to protect it and to identify it as being very special.

That character includes water, air, land and, yes, ecology. The absence of meaningful clustering in this proposed plan is really a big problem. In deed, what we have -- because of the golf course -- is a rather extravagant fragmentation of this large ownership in the Pine Barrens, and the fragmentation effect of spreading out the housing, almost indifference to the presence of the golf course, so that you have as many units of housing near different fairways as possible.

It becomes the tail that wags the dog. The golf course becomes a primary controller of the land use that we see in the proposal.

I should point out, that golf courses are very problematic in terms of water chemistry and the predictability of how chemicals are used. It's very difficult to monitor, very difficult to regulate the

application of chemicals to an 18 hole golf course.

And so I would just indicate that the very presence of a golf course in the Pine Barrens is at variance to the recommendations of hydrogeological zone 3 and the 1978 plan from the original Planning Board. And I just would point out again that we have not approved since we past the Pine Barrens Preservation Act any golf courses in the core area or even areas such as this one, which straddles the core area.

So I am very concerned that the fragmentation brought by the golf course creates a basic unclustered pattern, direct habitat destruction and the loss of species carrying capacity due to the creation of an island effect from fragmenting the forest into islands of trees and islands of natural areas separated by development, is very problematic.

Instead of contiguous and connected open space, what we would have instead is habitat fragmentation and the result of the loss of species. This is predicted by the Robert McArthur and Edward O. Wilson model of biodiversity, which is also sometimes referred to as the McArthur/Wilson principle of island biogeography equilibrium.

This model, which is demonstrated both in marine as well as in terrestrial ecosystems situations basically concludes that the number of species that an island is able to carry is based upon the size of the island.

So by fragmenting this presently pristine or largely vegetated -- not entirely -- but largely vegetated area into permanent separations of islands of native vegetation, we will lose species. And that is a variance and in contradiction with the requirements

of the Pine Barrens Preservation Act which requires that we try to preserve the character, including the ecological character of the Pine Barrens.

So the nine clustered design of the proposal that is before you will predictably create local extinctions of native species because the fragmentation will create ecologic disequilibrium that is avoidable as your staff analysis points out. There are other alternatives for the design of this proposed development.

We should be trying to avoid and minimize that kind of disequilibrium. Specifically, the 18 hole golf course which sprawls the development and spreads out to proposed housing.

Because the Pine Barrens Preservation Act intends to preserve the natural ecology of the Pine Barrens and because the proposal is so poorly responsive to this

legislative imparity, I believe that it should be rejected even only on this point alone.

There are many other shortcomings that are pointed out in the analysis done by the staff of the Commission. I think those are also good points, but this is a nontrivial matter. So I just want to point out that the sprawling nonclustering is problematic from another perspective that also has a bearing on ecology.

And I am talking about fire management. This is a fire climax ecosystem. Meaning that the species composition requires fire. Now I say this at the time we have witnessed a similar forest in California that is a fire climax ecosystem, that catastrophic fires that have resulted from mismanagement of the fire climax context. They have built in a sprawling kind of way in those forests. The result, the loss of

lives and the loss of property. It's going on in today's news. Just tune it in. It's in today's news as well, that California is on fire. In its fire climax forests.

So what we are looking at here? A sprawl that is something that could be avoided with the clustering. That would reduce the likelihood of human loss of life and property. And it would also protect your first responders in the community that would have to respond to the inevitable fires. That will happen here.

And I would point out that one of the things that really caused me to scratch my head as I read through this again, was the proposed and placement of a 1,000 gallon diesel storage tank and a 500 gallon gasoline storage tank. What a great idea. I say that not meaning those words. Why should we have storage of fuel in a fire climax ecosystem setting that is

supposed to be residential? That is a formula for severe catastrophic results.

So putting these thoughts together with those that I previously submitted we my colleague Fred Theile, I would ask that you return this proposal to the developer and ask that they do a couple of things.

Number one: Remove the golf course.

Number two: Cluster.

And number three: Remove fire prone fuel from being part of their plan.

And I urge you to reject the plan before you. It is ill conceived. It is in variance and the requirements and the expectations of the state law that we passed now many years ago.

And I hope that the Commission stays consistent with the precedence that have been set in its earlier, very thoughtful determinations and

protection of this important region of New York.

Thank you for your consideration at this time.

CHAIRWOMAN GALLAGHER: Thank you, Assemblyman Englebright for your thoughts.

Obviously, if you -- there will be -- we will remind folks again -- five days of written comments will be accepted, so if anyone needs to submit additional written comments to part of the record, you will have time to do so.

Next up is Mitchell Pally. Who will be followed by Dr. Chris Gobbler.

Do we have Mitch?

MR. PALLY: Thank you very much. Thank you for giving me the opportunity to testify again today on this very important project. And thank you to the Commission for the extensive hearings on this project.

The project, as I indicated in

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August 17, 2020

John W. Pavacic, Executive Director
Central Pine Barrens, Joint Planning and Policy Commission
624 Old Riverhead Road
Westhampton Beach, New York 11978

- via email transmission

RE: Lewis Road Planned Residential Development (PRD)
Vicinity of Spinney Road, East Quogue, New York
Assertion of Jurisdiction Review
Public Comment - Review of Applicant's 6/3 & 7/1 Submissions

Dear Mr. Pavacic:

I. Introduction:
I write on behalf of the Group for the East End (GFEE) to offer comments regarding the above-referenced proposal.

For the record, GFEE is a professionally staffed, nonprofit, environmental advocacy and education organization founded in 1972 and dedicated to the protection and restoration of eastern Long Island's fragile natural resources. Our work is supported by several thousand member households, individuals and businesses from across the five towns of Eastern Long Island. We also serve as a member of the Central Pine Barrens Advisory Committee.

For more than 45 years, we have worked in partnership with private interests, government agencies, elected officials and numerous community-based and environmental organizations to protect and sustain the Long Island Pine Barrens and the vital drinking water resources that intact pine barrens protect.

Because this application represents the largest and most significant single development project proposed in the Southampton Pine Barrens in decades, and because the subject parcel lies in a designated Critical Resource Area, a New York State-designated Special Groundwater Protection Area (SGPA), a Suffolk County-designated Critical Environmental Area (CEA) and the Town of Southampton's Aquifer Protection Overlay District, we continue to ask that the Commission apply its most stringent level of review to this application and that such review be fully informed by all the available information and policy guidance at your disposal.

II. Summary Statement:

Throughout the course of this project review we have been significantly concerned about the extent of project's proposed consumption of water resources, its fragmentation of undeveloped pine barrens habitat, its overall intensity of use (as both a residential subdivision and full-service golf resort with extensive built and managed amenities), the environmental fate of its potential nitrogen and pesticide generation, its lack of nitrogen mitigation deemed necessary by Southampton Town's own independent science advisor (who reviewed the prior zone change application on the subject parcel) and its overall compliance with the standards, guidelines and goals of the Commission's Comprehensive Land Use Plan (CLUP).

Based on a review of most recent submissions (July 1, 2020) by the applicant, it is clear that there have been several modifications to the project design that received preliminary approval from the Southampton Town Planning Board. We assume that such modifications were intended to improve the project's conformity with the Standards and Guidelines of the CLUP, but the value of such modifications appear minimal at best and are clearly worse than the prior design in some areas. We hope the Commission will carefully consider what value if any, these changes will actually have on the long-term policy objectives of the CLUP in conjunction with its assessment of the specific standards and guidelines.

More specifically, it is absolutely clear that the proposed relocation of the project's sewage treatment plant and large maintenance building (to an area directly adjacent to the proposal's affordable housing, and in close proximity to nearby residences and closer to the already-impaired surface waters of Weesuck Creek) is simply poor planning and should never be permitted. Likewise, the relocation of several golf holes to the intact woodlands behind the residential development on Spinney Road (and closer to Weesuck Creek) is in direct conflict with the Town of Southampton's efforts to protect these woodland areas, concerns about future contamination of Weesuck Creek, and the community character that this existing open space presently provides for Spinney Road residents.

What is clear from the current proposal is that the subject application remains a highly intensive and consumptive land use in an area recognized by every level of government as being critical for the future protection of drinking water and the living resources of the Central Suffolk Pine Barrens.

Absent significant modification, we do not believe the proposed dual use golf resort development application can conform to the standards and guidelines established in the Central Pine Barrens Comprehensive Land Use Plan, or achieve the Commission's vital and broader mission to protect ground and surface waters as well as the vulnerable natural and recreational resources that define the Long Island's Central Pine Barrens.

In addition to our overall concerns about the intensity of the currently proposed site development, we remain highly concerned that the Commission remains at risk of failing in its responsibilities to properly implement the review requirements of the State Environmental Quality Review Act (SEQRA).

Specifically, the Lewis Road PRD is an independent application for which a new SEQRA review is required. The prior application on this site, known as The Hills at Southampton Planned Development District (PDD) was formally "defeated" by Southampton Town Board Resolution 2017-1123 on December 5, 2017 **(Exhibit A)**. Thus, the change of zone application is formally over and the requirements governing its approval no longer apply to the Lewis Road PRD.

In fact, the Town Board's action on the prior proposal was so unambiguously final that it served as the basis for a lawsuit brought by the applicant seeking $100 million dollars in damages from the Town, for its "denial" of the Hills at Southampton PDD application. The lawsuit was filed on April 4, 2018 and is readily available for review.

To be clear, the SEQRA issues facing this application are not simply a concern for Southampton Town. Strict SEQRA compliance is a statutory responsibility of the Commission. As such, the Commission must carefully and independently consider how it proceeds to review the subject Type I Action in the absence of a coordinated review, a Lead Agency determination, or a Determination of Significance. Should it choose to follow Southampton Town's lead, the Commission will be complicit in the issuance of an Involved Agency Findings Statement for the environmental review of a denied project, which is vastly different in project detail, unit density, and mitigation than the present application, and under the jurisdiction of a designated Lead Agency that no longer has any approval authority of the present application.

III. Revised Master Plan

The revised master plan for the Lewis Road PRD demonstrates that the effort to redirect some areas of development (golf holes, sewage treatment plant, maintenance buildings, lot configuration) from the northern and western portions of the site to areas further to the south has resulted in creating more habitat fragmentation in other areas of the site and the location of polluting uses closer to Weesuck Creek and adjacent neighbors.

The current plan also results in a development design that wedges the proposal's affordable housing alongside a large maintenance building and a sewage treatment plant, and constricts the access along the western side of the property by eliminating the spur road leading to over a dozen lots on the former Kracke property.

The Commission should know that early in the prior Southampton Town review process for the former Hills PPD application, GFEE hired the award-winning design firm of Dodson and Flinker, which has worked extensively on Eastern Long Island and across the country to develop a resort-style conservation design alternative for the subject property. In addition to Dodson and Flinker, we also retained the services of Lisa Liquori who served as the longtime director of the Town of East Hampton's Planning Department and reviewed the proposal for consistency with the CLUP and the duly adopted zoning for the surrounding area.

Though rejected by the applicant, the design alternative developed by these professionals provided considerable residential resort and recreational amenities alongside a significant reduction in consumptive water usage, an improved pine barrens protection plan, and a reduced reliance on fertilizers and pesticides. We continue to believe that many of the design elements of the conservation alternative we provided have merit and that a proper SEQRA review of the Lewis Road proposal would have allowed the full consideration of such design elements in the best long-term interest of the Pine Barrens and drinking water resources.

For the Commission's consideration, we have provided a copy of this conservation design alternative to demonstrate the creative design potential that could have been put to use on this parcel. Should the Commission wish to further consider this alternative or something like it, we would happily provide additional details and technical specifications for agency and public consideration. The conservation design alternative is attached as **Exhibit B**.

IV. SEQRA Compliance - Applicant's Response to Prior Hearing Testimony

In an effort to clearly respond to a majority of the statements offered by the applicant with respect to the SEQRA review for the subject action, we have addressed specific statements offered, indicated where these comments occur in the applicant's most recent (July 1, 2020) response-to-comments document, and provided our response to applicant's statements below.

Page 3-1: Applicant's Statement: The applicant suggests that commenters were *"alleging that the Commission has no authority to consider the Lewis Road PRD Application because the Town Board did not approve the Planned Development District (PDD) Application."*

GFEE Response:
The Commission's authority to review the Lewis Road PRD application has never been in question. In fact, the record on this matter clearly reflects that commenters specifically urged the Commission take up the project and conduct a full review.

What is in question, is the current project's substantive and procedural compliance with SEQRA.

SEQRA requires that a Lead Agency be established for every action that is subject to a Type I or Unlisted Action review classification under the law. The Lewis Road PRD is a Type I Action, and a completely new subdivision application that is subject to SEQRA review. As demonstrated by the Southampton Town Board's resolution "defeating" the proposal, it is not a continuation of any ongoing zone change application. The Lewis Road PRD had to be submitted as a new application to the Town of Southampton Planning Board. Once the application was for a subdivision of land, the Southampton Town Board, no longer had any jurisdiction over the project.

Page 3-1: Applicant's Statement: *"Specifically, opponents contend that the Town Board's decision on the PDD application constitutes a total denial of the subdivision of the property and that the Lewis Road PRD subdivision application is a completely new application requiring re-establishment of a Lead Agency. The opponent's allegation is not supported by any legal authority and rests on a misunderstanding of facts and SEQRA requirements, particularly relating to the re-establishment of lead agency under 6 NYCRR § 617.96(b)(6), which provides that the re-establishment of lead agency may occur by agreement of all involved agencies in the following circumstances:*

(a) for a supplement to a Final EIS (FEIS) or Generic EIS (GEIS)

(b) upon failure of the lead agency's basis for jurisdiction, or

(c) upon agreement of the project sponsor, prior to acceptance of a Draft EIS (DEIS)."

GFEE Response:

1. Subdivision Review: We are unaware of any testimony presented to the Commission suggesting that Southampton Town's denial of the prior PDD application somehow constituted an automatic denial of any subsequent subdivision application pursued on this parcel.

What is accurate, is the fact that the Lewis Road PRD is a new application requiring the initial establishment of a Lead Agency pursuant to the most basic requirements of SEQRA. It is not a matter of Lead Agency re-establishment, which neither the Southampton Town Board nor Planning Board ever pursued.

The record clearly documents that a new proposal for the subject property (known as the Lewis Road PRD), which included differing design features, differing environmental mitigation measures, differing unit density, differing building location, differing building size, differing design alternatives, and differing "community benefits" from the prior PDD application was submitted to the Southampton Planning Board by the applicant on or about November 1, 2018.

Thus, the applicant's further statement on p.3-2 of its July 1, 2020, submission that *"[t]he proposed action since 2005 has been a subdivision of the property in the form of a Planned Unit Development ("PRD", aka cluster)...."* is simply not consistent with the facts.

The record demonstrates that a PDD change of zone application was accepted by the Southampton Town Board in January of 2015 as a new action. It was thereafter reviewed for two years, and subsequently denied by a vote of the Town Board in early December of 2017.

Subsequent to the PDD denial, and after a pre-application residential subdivision review by the Southampton Planning Board, a new PRD subdivision application was submitted in November of 2018. Whatever concepts, ideas, pre-application discussions or preliminary submissions that may have been advanced by the applicant or its predecessors in 2005 have long since been overtaken by a decade of subsequent applications, project reviews and tangible administrative decisions.

By any measure, the Lewis Road PRD application constituted a new action, which was submitted as such to the Southampton Town Planning Board and processed through the Town's relevant subdivision and site plan review procedures in 2018.

2. SEQRA Compliance:

There is no misunderstanding of the implementing rules governing SEQRA.

The Southampton Town Planning Board failed in meeting its statutory obligations under SEQRA with respect to the review procedures for a new action. As a Type I Action, the Lewis Road PRD should have been subjected to a coordinated review among involved agencies, a Lead Agency determination, and a Determination of Significance (which would mandate the level of environmental review required for the subject action).

Unfortunately, during its review of the Lewis Road PRD, the Southampton Town Planning Board continued to operate as if the Southampton Town Board's Lead Agency designation (established under the SEQRA review for prior PDD application) was still binding on the newly submitted Lewis Road PRD proposal. This was a mistake and it is a mistake the leaves the Commission in the position of having to address it now.

According to SEQRA an agency must have an approval authority over a particular project to serve in the capacity of either an Involved Agency or a Lead Agency.

Specifically, pursuant 6 NYCRR 617.2 (t, v)
(t)* Involved agency *means an agency that has jurisdiction by law to fund, approve or directly undertake an action. If an agency will ultimately make a discretionary decision to fund, approve or undertake an action, then it is an "involved agency" notwithstanding that it has not received an application for funding or approval at the time the SEQR process is commenced. The lead agency is also an "involved agency".

(v)Lead agency means an involved agency principally responsible for undertaking, funding or approving an action, and therefore responsible for determining whether an environmental impact statement is required in connection with the action, and for the preparation and filing of the statement if one is required.

In the case of the Lewis Road PRD, the Southampton Town Board no longer has any approval authority over the subject PRD, so it is neither an Involved Agency nor is it capable of serving as a Lead Agency for the proper administration of the SEQRA review process.

Moreover, in its July 1, 2020 submission (p. 3-1) , the applicant states that pursuant to SEQRA *"re-establishment of lead agency may occur by agreement of all involved agencies in the following circumstances:*
(a) for a supplement to a Final EIS (FEIS) or Generic EIS (GEIS);
(b) upon failure of the lead agency's basis for jurisdiction; or
(c) upon agreement of the project sponsor, prior to the acceptance of a Draft EIS (DEIS)"

The applicant goes on to state that none of the above-referenced conditions existed, so the re-establishment of a Lead Agency for the Lewis Road PRD is essentially a moot point. We strongly disagree for the following reason.

Simply stated, the subject application is a new proposal, under the review of a new administrative review board, for a different land use approval, and which must be subjected to, and complete a SEQRA review on its own merits. This is particularly true, given that the prior lead agency no longer has any authority to approve the proposal and that the approval criteria for the prior PDD application are essentially for a mixed-use density-incentive project, and not a clustered residential "open space" subdivision.

As a result, when confronted with a new application, the Southampton Town Planning Board's responsibility was not to assume the role of lead agency by taking it away from another involved review board, but rather to undertake the required coordinated review and subsequent lead agency determination required for any new project review submission, which it simply failed to do.

Even if one assumes for the sake of argument, that the Southampton Town Board somehow contemplated its denial of the earlier PDD application was only a partial denial, or a minor component of the overall action (which there is no evidence to support), the Southampton Town Planning Board should have availed itself of the above-stated procedures, which provide for the re-establishment of lead agency "upon failure of the lead agency's basis for jurisdiction", but it never did that either. Instead, the Town Planning Board was presented with a new application and it simply failed to conduct a proper SEQRA review.

Page 3-1: Applicant's statement: In its July 1, 2020 submission, and referring to its action on the prior PDD application, the applicant states that *"upon completion and filing of the FEIS by a unanimous 5-0 vote, the Town Board fulfilled its obligations as the Lead Agency for the project under SEQRA."*

GFEE Response:
The completion of the Town Board's obligations under SEQRA for the prior PDD that it subsequently denied does not extend to the current PRD application over which it has no approval authority and cannot serve as a Lead Agency pursuant to SEQRA.

Page 3-1 : Applicant's statement: In its July 1, 2020 submission, the applicant states that the Southampton Town Board's vote on the prior PDD application failed, but that *"no decision or findings to deny the application was ever offered."*

GFEE Response:
The record established by members of the Southampton Town Board who voted against the prior PDD proposal is extensive and part of the record of the public meeting where the matter was decided. For the Commission's benefit, and in light of the above-cited challenge to the existence of substantive findings upon which the application was rejected, we have attached the ten-page (heavily referenced) statement of Southampton Councilman John Bouvier as evidence that members of the Southampton Town Board who opposed the project did so with thoughtful and extensive comment **(See Exhibit C)**.

Page 3-2: Applicant's statement: In its July 1, 2020 submission, the applicant states that *"[c]ontrary to opponent's allegations, the Town Board's decision is not a complete denial of the Applicant's right to subdivide the property as PRD with customary recreational accessory uses in the 35% allowable development area."* The applicant further states that *"[t]hus, the Town Board fulfilled its obligations as Lead Agency by providing a SEQRA record that each agency could rely on in making its decision."*

GFEE Response:
As stated previously, to our knowledge, there has never been an assertion that the applicant is not entitled to pursue a PRD development proposal on its property.

Moreover, that the Southampton Town Board carried out a SEQRA review for a prior change of zone application which (if approved, which is wasn't), would eventually require a site-specific review by the Southampton Town Planning Board, (and over which it now has no significant approval authority) does not negate the obligation that the Southampton Town Planning Board or the Commission still has to conduct a thorough SEQRA review for a new PRD application when it was submitted for a planning board review.

An applicant can certainly include any relevant information from the prior PDD review in its environmental assessment for a subsequent subdivision application before a planning board, but SEQRA is clear in its direction that agencies strictly follow both the law's procedural and substantive requirements.

P. 3-3: Applicant's statement: In its July 1, 2020 submission, the applicant states that the Southampton Town Planning Board was guided by consultants to arrive at a decision that no supplemental environmental impact statement (SEIS) was needed which therefore *"eliminated the need and the Planning Board's ability to re-established lead agency..."*

GFEE Response:
As outlined earlier in this assessment, the Planning Board needed to establish a lead agency for the subject application as the site's earlier review for a change of zone has been formally denied by the Southampton Town Board and a new application was required and submitted.

Sadly, the guidance offered by the Town's outside consultants is inexplicable in its assertion that the Planning Board (as an Involved Agency) could even require an SEIS, which is a decision reserved for Lead Agencies pursuant to 6 NYCRR 617.9 (7)(i).

Simply put, if the Planning Board were an involved agency, it could not as a matter of regulation require an SEIS under any circumstance. If it sought to consider requiring an SEIS, it would have had to re-establish Lead Agency (something never mentioned by its consultants), or assume Lead Agency status for the new proposal, and it did neither.

V. Summary and Conclusions:

The failings of the Southampton Town's environmental review of the Lewis Road PRD are unfortunate and compromise the environmental review of this entire proposal. The fact that the current Lewis Road PRD Master Plan is now significantly redesigned from the proposal that gained preliminary approval from the Town of Southampton Planning Board is clear evidence of the problems created by a piece-meal review, especially when that review involves a major development proposal in an area of local, county and statewide environmental significance.

Unfortunately, these errors are not simply a matter of local administrative failing that can be ignored as they now directly impact the current SEQRA obligations and actions of the Pine Barrens Commission, which is why we detail them here.

Should the Pine Barrens Commission choose to follow Southampton Town's lead and adopt a SEQRA Findings Statement for the subject proposal, as an involved agency subordinate to the Southampton Town Board as Lead Agency (despite the fact that the Town Board has no approval to give on the subject application), it will do so with a substantial record of evidence that the underlying SEQRA review process is fatally defective and implicate itself in the procedural failings and legal exposures of Southampton Town.

Because we believe there is a significant and avoidable legal exposure for the Commission, and the necessity for further environmental review, we strongly recommend that the Commission either deny the subject action, assert its own coordinated review consistent with the implementing rules and regulations for SEQRA (as the present application has not been formally coordinated with other agencies pursuant to SEQRA), or remand the application back to Southampton Town for an adequate and fully coordinated SEQRA review process as should have occurred from the outset.

Given the magnitude, complexity and controversy surrounding the future development of this substantial Pine Barrens parcel, we implore the Commission to remember and fulfill its critical obligation:

To manage land use within the Central Pine Barrens to protect its vital groundwater and surface water and the region's vast and significant natural, agricultural, historical, cultural and recreational resources for current and future Long Island residents.

This essential mission has long been the guiding policy directive for the Commission, and we urge each member to seriously consider the long-term implications of allowing a highly intensive, water consumptive, dual use facility to be constructed on one of the largest remaining tracts of unprotected Pine Barrens forest on Long Island. If the most stringent level of natural resources protection cannot be achieved for a parcel of this significance, what are the chances it will ever be achieved elsewhere.

In the simplest of terms, sometimes there just isn't any viable way to fit every aspect of a developer's desired proposal onto a given piece of property when it is highly constrained or subject to required natural resources protection in the public interest. The Lewis Road PRD is just such a proposal, and other alternatives exist.

We appreciate your time and attention to our comments and remain available to respond to any questions you may have or provide any additional information you may need.

Sincerely,

Robert S. DeLuca
President

Exhibits
A: Southampton Town Resolution 2017-1123
B: Conservation Design Alternative (Dodson & Finkler)
C: Statement of Councilman John Bouvier - The Hills PDD denial

Credentials of the Author:
Bob DeLuca has served as the President and CEO of Group for the East End since 1992. DeLuca holds a B.S. in Environmental Science from Fordham University and an M.S. in Environmental Science from the State University's College of Environmental Forestry at Syracuse. DeLuca also served as a Biologist and Sr. Environmental Analyst with the Suffolk County Office of Ecology for nearly a decade. In these positions, DeLuca conducted field research, prepared detailed environmental assessments and prepared extensive testimony regarding hundreds of development applications that were annually coordinated with Suffolk County through the New York State Environmental Quality Review Act (SEQRA) . DeLuca has also taught state and local environmental policy, planning, zoning and SEQRA as an adjunct professor at Long Island University for more than 15 years.

Group for the East End
Lewis Road Planned Residential Development (PRD)
Vicinity of Spinney Road, East Quogue, New York
Assertion of Jurisdiction Review
Public Comment - Review of Applicant's 6/3 & 7/1 Submissions
August 17, 2020

EXHIBIT A

Motion to: Amend Resolution No. 2017-906

✓ Vote Record - Amend Resolution No. 2017-906						
			Yes/Aye	No/Nay	Abstain	Absent
☑ Adopted	Jay Schneiderman	Mover	☑	☐	☐	☐
☐ Defeated	Julie Lofstad	Voter	☑	☐	☐	☐
☐ Withdrawn	Christine Preston Scalera	Seconder	☑	☐	☐	☐
	John Bouvier	Voter	☑	☐	☐	☐
	Stan Glinka	Voter	☑	☐	☐	☐

2. Town Board Resolution 2017-906

Acceptance of Findings Statement in Connection with the Zone Change Application Entitled "The Hills at Southampton Mixed Use Planned Development District," East Quogue

✓ Vote Record - Town Board Resolution RES-2017-906						
☐ Adopted			Yes/Aye	No/Nay	Abstain	Absent
☑ Adopted as Amended	Jay Schneiderman	Mover	☑	☐	☐	☐
☐ Defeated	Julie Lofstad	Voter	☐	☑	☐	☐
☐ Tabled	Christine Preston Scalera	Voter	☑	☐	☐	☐
☐ Withdrawn	John Bouvier	Voter	☐	☑	☐	☐
☐ Failed To Move	Stan Glinka	Seconder	☑	☐	☐	☐

3. Statement

COMMENTS - Current Meeting:

Each Town Board member read a statement into the record and provided their intended vote on the proposed local law.

4. Town Board Resolution 2017-1123

Notice of Adoption of a Local Law to Change the Zoning District of Certain Parcels from CR200 to 'The Hills at Southampton Mixed Use Planned Development District (HSMUPDD)' for a Residential Golf Course Development, East Quogue

COMMENTS - Current Meeting:

This resolution was defeated as it required Supermajority approval to be adopted.

✓ Vote Record - Town Board Resolution RES-2017-1123						
☐ Adopted			Yes/Aye	No/Nay	Abstain	Absent
☐ Adopted as Amended	Jay Schneiderman	Mover	☑	☐	☐	☐
☑ Defeated	Julie Lofstad	Voter	☐	☑	☐	☐
☐ Tabled	Christine Preston Scalera	Voter	☑	☐	☐	☐
☐ Withdrawn	John Bouvier	Voter	☐	☑	☐	☐
☐ Failed To Move	Stan Glinka	Voter	☑	☐	☐	☐

V. Closing

Motion to: Motion to Adjourn

COMMENTS - Current Meeting:

Group for the East End
Lewis Road Planned Residential Development (PRD)
Vicinity of Spinney Road, East Quogue, New York
Assertion of Jurisdiction Review
Public Comment - Review of Applicant's 6/3 & 7/1 Submissions
August 17, 2020

EXHIBIT B

Reduced Impact Alternative

for

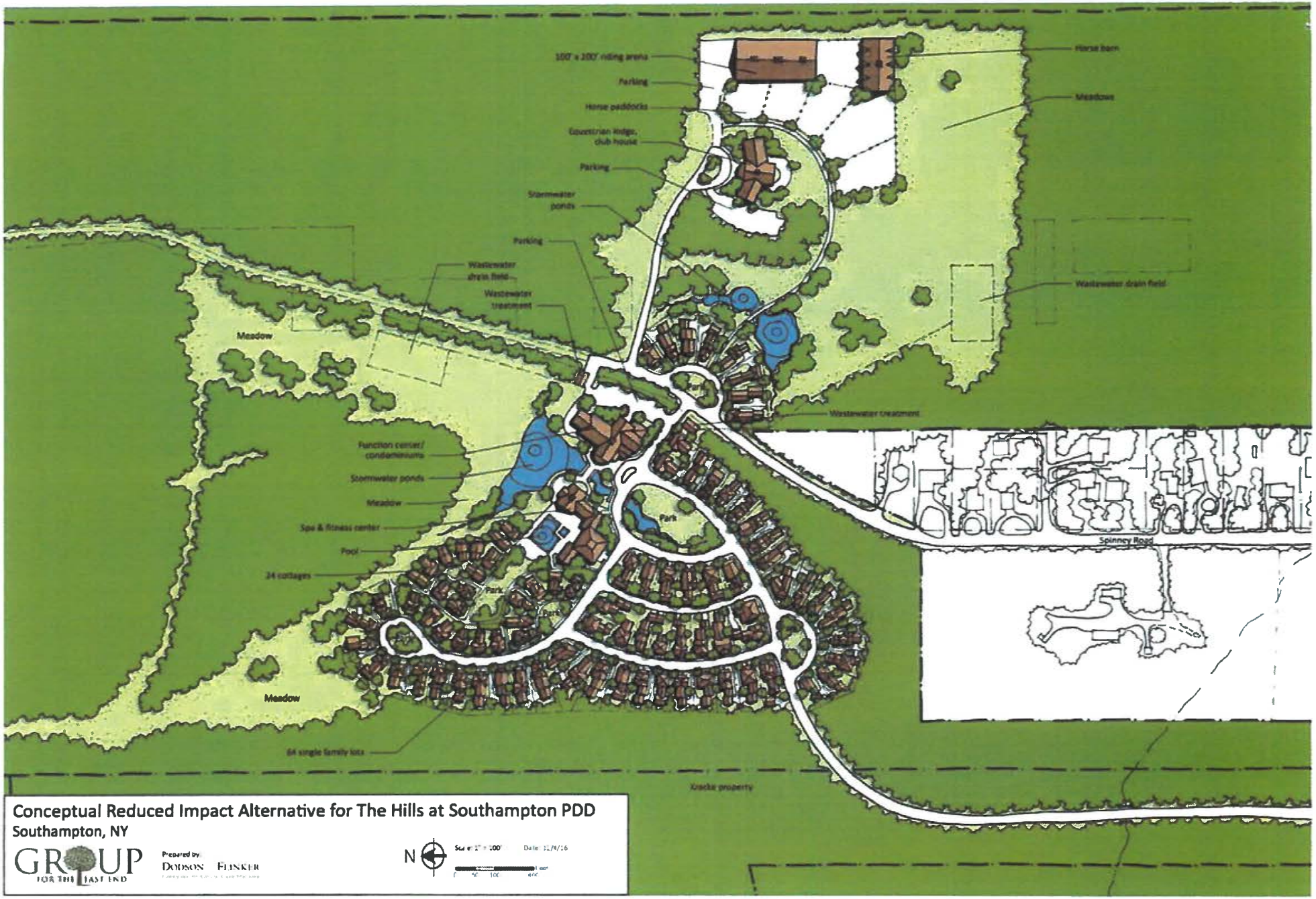
The Hills at East Quogue Planned Development District

December 2016

GROUP FOR THE EAST END

Protecting the nature of the place you love

GroupfortheEastEnd.org



Conceptual Reduced Impact Alternative for The Hills at Southampton PDD
Southampton, NY

GROUP FOR THE EAST END

Prepared by:
DODSON FLINKER

N

Scale: 1" = 100' Date: 11/4/16

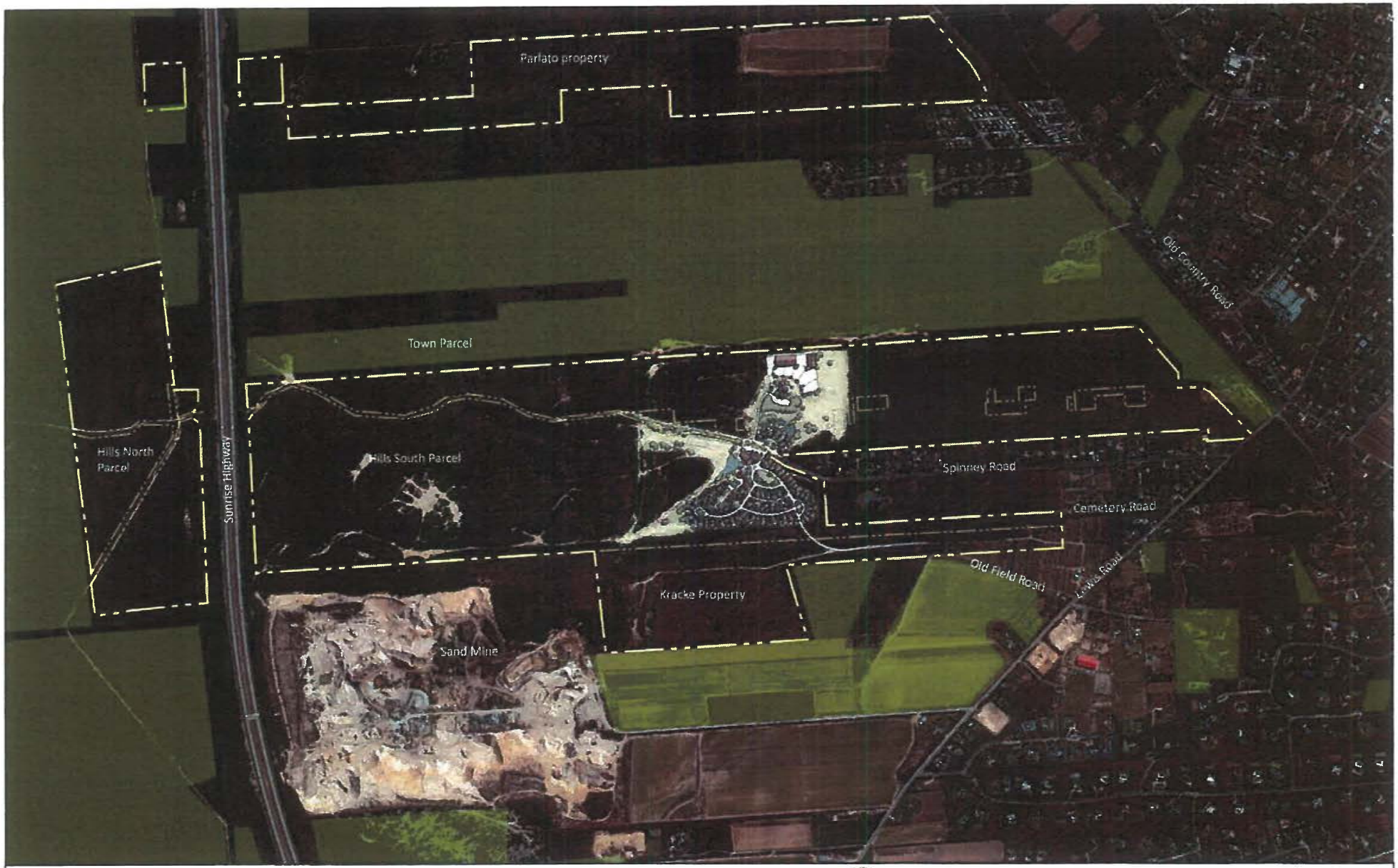
Comparison of Impacts: Discover Land Company PDD vs. Conceptual Reduced Impact Alternative

Impacts	Discovery PDD		Reduced Impact Alternative		Comparison: Reduced Impact Alternative vs. Discovery PDD
	Acres	% of Site	Acres	% of Site	
Site Development Total Area	166.86	28.23	23.53	4	86% less developed area
Cleared Areas	166.86	28.23	45	7.61	74% less clearing
Fertilized Turf	88.53	15%	0	0	100% less fertilized turf
Preserved Contiguous Open Space	276	48%	546	92	100% more preserved contiguous open space
Preserved Open Space incl. fragmented areas	424	72%	546	92	29% more open space incl. fragmented areas
		Units		Units	
Water Usage-	53,810,179	gallons per year	11,961,650	gallons per year	78% less water usage
Sewage Flow - bldgs. only	41,814	gallons per day	31,770	gallons per day	25% less sewage flow from buildings
Design flow including turf	65,214	gallons per day	31,770	gallons per day	51% less overall wastewater flow
Nitrogen loading					
Turf	655.1	pounds/ year	0	pounds/year	100% less nitrogen loading from turf
Sewage from buildings	Variable by computation model				72 % to 88% less nitrogen loading buildings
Residences total number	118	residences	88	residences	25% fewer residences
Total size of residences	435,800	square ft.	532,800	square ft.	22% greater combined sf of residences
Traffic wkdy PM/Sat peak	103/125	trips per hour	23/31.5	trips per hour	78% to 75% less peak hour traffic

GROUP FOR THE EAST END

Protecting the nature of the place you love

Prepared by Fine Arts Sciences for Group for the East End, November 2016



Conceptual Reduced Impact Alternative for The Hills at Southampton PDD
Southampton, NY

GROUP FOR THE EAST END

Prepared by:
DODSON & FLINKER

Legend:
Public Open Space

N

Scale: 1" = 400'
Date: 11/4/16
0 0.05 0.1 0.2
Feet
0 200 400 800

Group for the East End
Lewis Road Planned Residential Development (PRD)
Vicinity of Spinney Road, East Quogue, New York
Assertion of Jurisdiction Review
Public Comment - Review of Applicant's 6/3 & 7/1 Submissions
August 17, 2020

EXHIBIT C

The Hills" MUPDD application, has consumed much time and effort in both the review of the merits, the technicalities of the process, research into claims and statements of both science, community benefits, environmental law, land use and history, zoning and planning, use alternatives and the lengthy public hearings and meetings with those who oppose and support this proposed project.

This process formally began with Town Board Resolution 2014-120, entitled "Elect to Consider DLV Quogue, LLC Development MUPDD Application for The Hills at Southampton Properties in the Hamlet of East Quogue". This Resolution emerged out of two pre application hearings on August 27, 2013 and was offered on January 14th, 2014. I will enter this Resolution into this record with my comments, but I would like to read portions of what that Board had, at that time, elected to consider:

....requesting a Zone change from CR200 to a Mixed Use Planned Development District (MUPDD)

WHEREAS...2 pre application public hearings were held either for or against said proposal for the 82 residential unit, 18 hole golf course and Club House on 71 separate lots in East Quogue were heard; and.....

WHEREAS, the applicant has proposed a number of purported community benefits, which include: an increase in tax revenue with no potential impact to the school district, wastewater treatment, construction of sidewalks to access the school where no such sidewalks exist, an unspecified donation of open space preservation, dedication of lands which could be used for the relocation of an historic structure, fire district substation, affordable housing opportunities and/or a well field, the Applicant needs to include further detailed information about these community benefits so as to determine if they warrant the requested zone change;...

Clearly, to me, what the previous Town Board elected to consider then is not comparable to what this Town Board has in front of it to consider now. This set in motion the expenditure of massive amounts of funds, time and Town resources that have resulted in thousands of pages of supporting documentation and formal and informal documents that have filled volumes, the review of which can only be imagined in terms of time. For me, this has included consultation with experts, testimony of and conversations with members of other municipalities, regarding similar developments constructed in other communities, conversations with scientific and other related discipline experts, advocacy groups, residents and the very lengthy review of relative literature including researching and discovering related intellectual property, in addition to the formal documentation itself. I have studied many of the methods involved with the actual construction and design methodologies of golf courses, management and practices of comparable development and the practical and real world results. In the context of land preservation, I must also note the clearing of over 166 naturally vegetated acres and the impacts on wildlife habitats and water recharge and the removal of the estimated 350,000 cubic yards of natural surface soil material as part of the proposed golf course development construction. I have reviewed the methods of characterizing wastewater treatment and the resultant empirical data versus modeling and simulation and the validation history of such methods, including the confounding variables that cannot be controlled. In short, I believe that I have approached my review with an open mind and have attempted to be as comprehensive in my review and analysis as much as is possible within my expertise.

It has been stated that Long Island will approach its capacity to build out by the 2020's.[1] It is my opinion that not all land is equal and that this land being contemplated for development is one of the last large tracts of essentially virgin land that has been characterized and studied and generally found to be important to the protection of our water and ecosystems contributing to the health of both our environment and economy. The area of Weesuck Creek is considered to be one of the most impaired water bodies in the Town of Southampton and lies over a watershed system that directly contributes to it. Given that the best scientific analyses cannot offer conclusive and definitive results regarding nutrient contribution overall, largely because many of the stated conclusions rely on model simulation and broadly qualified variables, and in part, because both the hydrology and geology of the area cannot be sufficiently defined and are also variable in their nature. Expert opinions offered or commissioned have been generally broadly qualified because it is clear that no definitive conclusions can be made based on partial and less than empirical evidence. In my opinion, this has resulted in clear differences of opinions between experts in relevant fields and I am compelled to be conservative in my review and give the greater weight in my decision to those opinions that suggest a greater impact of those practices that could potentially and negatively affect both human health and the environment. Past recommendations by venerable institutions such as Cornell University, independent institutions and organizations and studies conducted by Stony Brook University personnel all suggest the importance of preserving this land. Additionally, any comprehensive review must consider the Federal Statutes pertaining to the archaeological protections and rights of Indigenous People and the heritage of the Shinnecock Nation. To that end, over past decades, attempts to preserve these lands have been conducted including Suffolk County and the Town of Southampton in recognition of these very real considerations. In fact, this current Board offered to purchase this property for 35 million dollars, which is significantly higher than the applicants original purchase price, with the goal of preservation, a number that represents a third of the average yearly CPF fund balance, in recognition of the importance that this particular area, partially within the Pine Barrens core area and the role it plays in consideration of water quality as a contributory source of safe drinking water. This offer was rejected by the applicant. In this context, I have to consider the potential future use and management of any construction and use of this property and must note that human activity and history is a related concern and, given that history, is very relevant to future generations and, subsequently, to my decision.

While there have been numerous offers of implementation of mitigating technologies some of which carry with them good and provable histories, the applicant identified the Baswood Biovare Wastewater treatment system as the system they will use in wastewater treatment for the proposed project as proposed in the FEIS presented by the applicant. The application notes that the technology proposed was patented under US Patent 7387733. After reviewing this patent, I find that the system patent was filed in 2006 and also filed under patent WO 2007076187 internationally and lists Baswood as the Assignee. I could find no third party verification of the systems stated performance in the application. I subsequently contacted our County Legislator, Bridget Fleming who, in turn, contacted the Suffolk County Department of Health Services to verify if the system had been reviewed and authorized and to inquire about it. I have included it here and it will be part of the record:

On Jun 6, 2017, at 3:53 PM, Capobianco, Christina <Christina.Capobianco@suffolkcountyny.gov> wrote:
Legislator Fleming,

SCDHS has not received an application for this proposed project, known as The Hills at Southampton (East Quogue). Despite our requests, at this point in time, SCDHS does not have the minimum basic details for the new technology, which would be required to review potential applicability of the technology for a development in Suffolk County.

The applicant (developer), engineer, and an equipment manufacturer met on January 18, 2017, with Tanima Adhya of the Office of Wastewater Management, to conceptually discuss wastewater treatment for the proposed project. The manufacturer described a new wastewater treatment technology which was to be utilized for the proposed development. The Office of Wastewater Management requested details of the process kinetics, data, and supporting documents for a review.

Wastewater Management clarified that a thorough review of the technology and associated design documents and supporting data would be performed prior to acceptance of the technology. Review of the proposed development would be done under a formal application.

On May 3, 2017, SCDHS received an email with a one-page attachment showing the footprint of the system from the applicant's engineer. No details of the technology were provided. The applicant's engineer wanted to know whether the configured footprint would satisfy the Department's requirement. The SCDHS Office of Wastewater Management responded to the email indicating that the proposal, as submitted, would not meet the Department's requirements (e.g., sketch only with insufficient details; expansion area not shown, etc.).

The Office of Wastewater Management has not yet received the requested details for the technology or an application for the proposed development. We are happy to review the technology in advance of any formal application, and await a submission package from the applicant's engineer.

Let us know if you need additional information or would like to discuss further.

Thanks,

Christina

Christina Capobianco, CPA, Deputy Commissioner **Tel: 631-854-0098**

S.C. Department of Health Services

3500 Sunrise Hwy., Suite 124

Great River, NY 11739-9006

I must question why the applicant did not apply its full attention to this issue, central and critical to the issues surrounding water quality and certainly one of the most divisive within the community. While it is within the Town Boards purview to require use of SCDHS permitted commercial alternatives[2.] including, as per the SCDHS June 2013 Task IX report, NitrexTM System, Aqua Point – Bioclere®, WesTech's STM-AerotorsTM, and BESST Technologies, Cromaglass, SBR, and MBR technologies, only one (NitrexTM) was found to discharge consistently at less than 10Mg/l , however, the SCDHS also noted that alkalinity and

BOD5 (Biochemical Oxygen Demand) break through from the denitrification module are two issues that may require further examination. I should also note that the EPA and the SCDHS have stricter discharge maximums when discharging into impaired water bodies. No amount of community benefit, whether offered or implied can distract from this.

While I find the phrase community benefit to be a completely subjective term, I find little community benefit in a private membership golf resort. Given the extent of actual local benefits derived by similar projects, I find little economic benefit, particularly commensurate, over the long term either within the Hamlet of East Quogue or the broader areas within the Town of Southampton, particularly when considered against the potential environmental impacts, which contribute directly to the broader economy of the Town of Southampton.

Both the impacts of the actual construction and an uncertain nutrient waste and chemical pesticide (particularly organophosphates) and chemical vegetation control contribution in terms of actual daily human load both from guests and members, as well as property operational staff, I consider the potential health of our citizens paramount and having the greater weight in my decision. I also find that, while public opinion is very important, I cannot conclude that there is overwhelming support or opposition to this proposal numerically and I find both the sources and methodologies used on both sides questionable enough to suggest that neither give greater weight over the other.

The concerns regarding nutrient loading are numerous, but for my review, contribution to increasing levels of nitrates to drinking water sources and the subsequent human health impacts as well as the impacts on our surface waters and resultant impacts on the health of our eco systems and economy at large are of primary concern. Congress passed the Federal Safe Drinking Water Act in 1974. The U S. Environmental Protection Agency was given responsibility for setting drinking water standards for all the states, and each state became responsible for enforcing these standards. In New York State, the Department of Health regulates all public water supplies serving 25 or more people. Because potential health risks are often unknown or hard to predict, many drinking water standards are set at some fraction of the level of "no-observed adverse-health effects." In general, the greater the uncertainty about potential health effects, the greater the margin of safety built into the standard. The current standard for safe drinking water containing nitrate as nitrogen is 10mg/l. A 1977 report by the National Academy of Science concluded that "available evidence on the occurrence of methemoglobinemia [Blue Baby Syndrome] in infants tends to confirm a value near 10 mg/l nitrate as nitrogen as a maximum no-observed adverse-health-effect level, *but there is little margin of safety in this value."* [3].Ten years later, during their review of the proposed 10 Mg/l standard, the Science Advisory Board of the Reagan Administration EPA had an even harsher assessment, finding that: *"The Agency selects a margin of safety that excludes, for all practical purposes, protection of sensitive members of the population." (Carlson 1987)* This assessment was subsequently ignored by that commission and maintained the current standard we have today. Health authorities in several other countries have set significantly lower standards between 4-6 Mg/l. [4] Nitrate may be removed from water using treatment processes such as ion exchange, distillation, and reverse osmosis among others, but is costly, particularly starting with higher concentrations. Almost 70 percent of Suffolk County community supply wells were rated as high, or very high, for susceptibility to nitrate, with the lower population density accounting for reduced

contaminant prevalence ratings in the central and eastern parts of the county[5]. In fact, the Suffolk County Water Authority itself, states that it sponsored the bill that protected the Central Pine Barrens. These measures have resulted in the preservation of over 100,000 acres of land in central Suffolk, which overlies one portion of Long Island's federally designated sole source aquifer and that they continue to provide resources to protect this unique resource[6]. I also note that one of the original rationales for establishing this entire property under 5 acre zoning was substantially based on the adopted Cornell study that strongly considered nitrogen contribution and its sources, as it relates to water quality protection. I find that it is well within reasonable action, to impose sufficient restrictions for use under current zoning to meet those recommendations. It is my opinion that given these uncertainties and the uncertainties of actual and confirmable nitrate and other contaminant contribution as estimated must be carefully considered and weighed heavily.

I think it is important to note that the LONG ISLAND SOUTH SHORE ESTUARY RESERVE EASTERN BAYS PROJECT: NITROGEN LOADING, SOURCES, AND MANAGEMENT OPTIONS, a report prepared by Stony Brook University School of Marine and Atmospheric Sciences in 2017, [7]. Noted that modeling determined that the relative contribution of land-based nitrogen load to the three eastern bays study areas was generally 65% wastewater, 20% fertilizer, and 15% atmospheric deposition. It was shown that groundwater was responsible for the transport of more than 90% of the nitrogen load in all sub watersheds except western Moriches Bay and Quantuck Bay were two watersheds with the largest nitrogen loads on a per volume basis, the longest water residence times, and poorest water quality with regard to harmful algal blooms, dissolved oxygen, and water clarity; estimating the Nitrogen load yield of the general contributing watershed to be 17-25 kilograms (~40-55lbs.) of Nitrogen per 1 Hectare (~2.5 acres) surface area.

In a more recent report prepared by the Stony Brook University School of Marine and Atmospheric Sciences, an analysis of Nitrogen loading rates specific to the Hills MUPDD[8], concluded the following under Future Considerations:

"All of these calculations are, of course, theoretical and the extent to which the actual nitrogen yields on the Hills property match these calculations will be partly a function of the extent to which the characteristics of development matches the details and practices outlined in the PDD. Moreover, as more detailed information of the manner in which the Hills PDD may be developed and operated become available and as actual data is collected, these hypothetical scenarios and calculations could and probably should be refined. If the Hills PDD is approved and The Hills at Southampton is developed, stringent enforcement along with careful monitoring of the development, watershed, groundwater, surface waters, and surrounding ecosystems will be required to assure optimal environmental outcomes."

I recently received an email from Mr. Edward Devita, Partner, Discovery Land Company, after a meeting I had with him earlier this week, while we were comparing issues and professions involved with simulation modeling. He recalled work his father had conducted, while employed with JPL working on the Voyager Program. I also had worked at NASA during my professional career and we found this in common. I had spoken about model predictability during that meeting. In his email, Mr. Devita recalled some conversations he had with his father regarding the Voyager Program, writing: "...Their models were never perfect, nor were the predictions perfect....."

Mr. Devita further wrote "My father and I discussed in some detail how the overuse of Nitrogen fertilizer is a big problem and our teams have an opportunity to do something to improve that." Mr. Devita went on to write: "I sent him the attached paper (Steffen et[]al 2015) showing that Nitrogen is currently a high-risk control variable, and beyond its planetary boundary..... I explained to my father that I'm personally committed to having a role in reducing the value of biogeochemical flow of Nitrogen. I want to start at the Local Scale (The Hills) and use that work to link to regional and global scales (residential and golf projects on Long Island, agriculture on Long Island, residential and golf projects worldwide, agriculture worldwide)."

During our meeting, I had spoken of the scale of the Hills project and how I was heartened to hear that Discovery may be purchasing a preexisting golf course to validate their statements regarding water quality on a property that could serve as a baseline to prove those statements, largely because it had been already built upon and had a history of monitoring and data of its current condition. I further noted that it was a far better scientific method to build upon land already altered, than land that is a natural environment that has never been built upon. Mr. Devita denied that Discovery had purchased a preexisting golf course, despite some press articles quoting otherwise.

In my opinion, this seems to be the cart before the horse. Should we conduct a grand experiment with our drinking water sources and environment, considering these uncertainties? While I applaud and support Mr. Devita's vision, I also note that while he considers the Hills Project to be a local scale project, to me and I believe to many of our Town's residents, we recognize both the enormity of the scale of this project to Southampton Town and the potential of non-recoverable harm to both our natural resources, health and economy.

In fact, the author of both the above referenced reports, in response to a local press article, Dr. Christopher Gobler, wrote, in part, in a letter to the Editor, dated September 21st:

"1. While the headline of the article regarding my report was titled "Gobler's Latest Assessment States "The Hills' PDD Would Generate Least Amount Of Nitrogen" [27east.com], this does not accurately represent my findings." After Dr. Gobler's intense study of this subject, his review of the science clearly leaves him without a clear conclusion. In my review, I believe that the public should be made aware of this contradiction.

I also feel it important to bring to the public's attention a quote from Mr. Mark Hissey, a Vice President with Discovery Land Company that appeared in the Independent Newspaper October 4th, 2017, pg. 15 entitled "Kick In The Teeth": **Hissey said the project will "absolutely move forward," even if the pending application is denied. Discovery can build up to 160 homes, by right. Hissey said his company will buy a nearby golf course if need be. "All the benefits we were prepared to provide will be off the table," Hissey warned.**

While some may interpret this as an implied threat, Mr. Hissey should be aware that any project proposed under this scenario must and will be required to be permitted under the laws of Southampton and the County of Suffolk as well as the State of New York and that it is well within those authorities purview to require strict environmental controls. I am encouraged that Discovery is willing to buy, or may already have bought, an already existing golf course, at least according to Mr. Hissey, and would

only hope that they recognize the importance of preserving this land that has never been built on and is within our aquifer overlay district. One can only expect that a company that insists it would be a good neighbor will recognize that doing the right thing will go a long way to demonstrating that they are indeed willing to be such neighbors.

It is this uncertainty that I must consider with the utmost seriousness. I find that the risks imposed by the unpredictability of the impacts to both the environment and water quality and the uncertainty of actual Nitrogen loading and restrictions and subsequent enforcement of mandated restrictions and controls, do not offer a satisfactory probability of predictable outcome.

In regard to opinions offered regarding review of relevant case law and analysis provided by counsel that it is likely that the covenants proposed asserting occupancy restrictions for seasonal use only would be upheld as both valid and enforceable, I note that counsel also states that there is no certainty in litigation.

The applicant relied on 2 Appellate Division cases to support their proposal to limit occupancy to no more than 183 days per year. Both cases were decided in the 3rd Judicial Department and because Southampton and all of Long Island (Nassau and Suffolk Counties) are within the 2nd Judicial Department, these cases are NOT controlling and cannot be considered as case law as a matter of law. Even if Ruback'sGrove Campers Association Inc. V Moore were decided in the 2nd Judicial Department, it is distinguishable from the applicant's proposal on the facts. That case, Ruback, involved leases and not fee ownership. As a result, a landlord/tenant relationship was addressed and decided on the basis of landlord/tenant statute.

In Turner V Caesar, decided in the 3rd Judicial Department, the trial court decided in favor of the neighbor who wanted the restrictive covenant upheld. These neighbors held title from original deeds drafted in 1923 by the same grantor, Norwich Water Works. These deeds contained language restricting residences on these lots to "summer residences." The challenge to this restriction was begun in 1997 when Mr. Turner sued to prevent Mr. Caesar from using his residence (next door), year round. The trial court sided with Mr. Caesar, the defendant, holding that the word "summer" referred to time of use. Here, the court stated that there were triable issues of fact and reversed on that basis returning the case back to the trial court. So the second case is distinguishable on the law because the decision of the trial court as to the interpretation of an ambiguous term is not known. Thus this cannot be precedent. ***(96 A.D. 3rd 1180, Supreme Court, Appelate Division, Third Department, New York. RUBACK'SGROVE CAMPERS ASSOCIATION, INC. Respondent v. Robert MOORE et al, Appellants. June 14, 2012) & (291 A.D. 2nd 650 Supreme Court, Appellate Division, Third Department, New York. John B. TURNER Jr., Appellant, et al., Plaintiff, v. Douglas R. CAESAR, Respondent., Feb. 14, 2002)***

Given this uncertainty, I must consider all potential outcomes in my decision.

Most of the state's more than 700 school districts distribute their taxes among segments of several municipalities, many of which have different levels of assessment. The number of municipal segments in a school district can range from one to fifteen or more. The current equalization rate within the Town of Southampton is 100%, meaning that assessments equal market value. As it is the state that impacts tax distribution among all public schools, there is no certainty that any one school district will substantially benefit or lose revenue from local assessments.[9] I should also note that the Southampton Town

Conservation Board, that has offered opinions regarding the Hills MUPDD, states: While the applicant is offering to purchase Pine Barrens credits, as part of its impact mitigation and public benefit strategies, there are not sufficient remaining Pine Barrens credits in the East Quogue School District to achieve this goal. Consequently, any transfer of credits across school district boundaries would not have the intended benefits of offsetting the effect of the greater intensity of development within the affected school district boundaries.

Recently, there has been some discussion regarding the use of fertigation. Simply put, this is a proposed method of using waste water collected and chemically conditioned in containment reservoirs to irrigate vegetation and applied generally by spray or drip processes. The process is sometimes associated with [10]Phytoremediation which can be defined as "the efficient use of plants to remove, detoxify or immobilize environmental contaminants in a growth matrix (soil, water or sediments) through the natural biological, chemical or physical activities and processes of the plants". It is important to note that the type of vegetation employed in this technique is important in that not all plants fix Nitrogen, in particular, most turf grasses, from atmospheric deposition and that other contaminants held by the root systems are still retained in the leaching cycle without removal from the discharge area. The addition of utilizing high N concentration ground water, either pre-conditioned or additive, is unproven. In many cases there are a number of harmful chemical issues which are brought into play when this type of water is to be utilized. It is often high in Sodium Salts, which poison the soil and damages plants. It is often high in Bicarbonates, sealing upper layers of soil, hindering water penetration and it is usually high in pH, preventing nutrients from becoming soluble and utilized by plants. The mitigation of this problem often involves a system injection process utilizing sulfuric or other acid and is particularly impactful when [11]sulfuric fertilizers (typically used with liquid fertilizers) are employed. Additionally the control and mitigation of accumulated scale throughout the delivery mechanisms require maintenance that includes other chemical additives.

Dr. Gobler recently updated his original report referenced previously to offer estimates on nitrogen contributions in the context of fertigation. Given this information and the wide variation of effectiveness of any particular fertigation system, I asked him what specific system he based his estimate upon and whether he considered both manual and computer controlled systems reactive to changing environmental conditions and zone irrigation. His response follows.

Hi John,

I did not base my calculation on a specific system, but rather based it on a generalized approach using the most conservative calculations possible. I assumed that the source water of application would be groundwater containing 2 mg / L and that 20 million gallons of groundwater would [be]applied to the surface of the turf and a 20% leach rate. This retention rate is half of what the consultants used and this nitrogen levels is ~10% of what the consultants used, and hence, my nitrogen removal calculation is about 15% of what the consultants determined. Obviously, this approach [is] very conservative, but my feeling is given the unknowns (some of which you are eluding to in your email), this level of caution is warranted. Conversely, given the preponderance of evidence now available, I think that some level of removal will occur and thus the complete disregard of the approach, as I had done in my last calculation, is not appropriate.

Let me know if I can answer any further questions.

Sincerely,
Christopher J. Gobler, Ph.D.

SOMAS, Stony Brook University

I find the applicant has not well defined either the fertigation system or methodologies they propose to use and, given the wide disparity between what the consultants determinations are as a percentage of Nitrogen removal and the estimate Dr. Gobler offers in contrast as only 15% of that determination, significantly different enough (281 Lbs versus. 1,800 Lbs) that I cannot conclude that, in real world practice, that the actual stated outcome will be realized.

Most of the problems encountered in the use of fertigation relate to the quality of the fertilizers used. A large part of the problems revolve around phosphorus fertilizers and their solubility. Depending on formulation, phosphorus-fertilizer solubility may range from 30 percent to almost 100 percent. Most potassium and inorganic nitrogen (N) fertilizers are almost 100 percent soluble. Blending fertilizer materials can induce another set of problems. A poorly blended fertilizer material may not stay in solution. It can precipitate, settling to the bottom of the tank to form a messy sludge. This can result in a fouled system and incorrect fertilization rates. (Prime Turf Company, pg.8)[12.]

Both the Town of Southampton Planning Board and Conservation Board, have both expressed serious concerns regarding the Hills MUPDD over a broad range of topics. In particular the Conservation Board stated in an opinion dated 10/25/17, that it does not support the proposal; subsequently, the Conservation Board issued a revised opinion, dated November 18, 2017 citing non-jurisdiction with regard to wetlands regulation specifically under Chapter 325. Among the 12 statements they make, I will include two and will enter the full document into the record:

1. The Conservation Board is concerned with regards to the enormity of The Hills project particularly with respect to its possible effects on wetlands, Pine Barrens and ground water quality.

3. Given the soils types, topography and hydrology, the Board is concerned that the proposed golf course may contaminate the drinking water supply, as well as Weesuck Creek and the greater Shinnecock Bay.

I should also note that the Town of Southampton does not currently have a representative sitting on the Suffolk County Planning Commission. The SCPC has recently reversed its previous opinion, yet they continue to require the applicant to address their environmental concerns and suggest the applicant report all of the potential agricultural chemicals that might be used on the golf course; not just nitrogen. The commission also requests that the developer continue discussions with Suffolk County's public works and health departments about potential issues with sanitary flow at the development. I have discussed these issues previously above, but I find that, regardless, the fact that no Town representation sits on that Board, particularly in the course of its review of this application, is of great concern to me. In my decision, I must weigh these contractions in opinions by our local Boards and the qualified opinion of the SCPC.

My decision concerning this application was arrived at after a very long review of the science, the law and the intangible, unpredictable and uncertain criteria of potential future outcome. I did not take my responsibility lightly, nor did I approach my task with pre-conceived opinion. My primary concern remains regarding both the preservation of our land and drinking water sources. My responsibility is to all residents and future generations to preserve and protect the environment which is the primary driver

of our economy, both aesthetically and in the often unseen complexity of impacts on the quality of our water. These are the confounding variables that cannot be controlled with any certainty. My duty is to protect the health and welfare of all our citizens to the best of my ability. After the hundreds upon hundreds of hours invested in arriving at my decision, I have no question that my decision is correct and impartial.

I do not vote in favor of this application.

John Bouvier, Councilman, Town of Southampton

(631) 287-5745

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