EPCAL 8-Lot Major Subdivision Map
Town of Riverhead Community Development Agency
200 Howell Avenue
Riverhead, Suffolk County, NY 11901

March 26, 2020

SEQRA CONSISTENCY ANALYSIS UPDATE
OCTOBER 12th, 2020
*Note, all revisions in red type for ease of review and comparison

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Environmental Analysis
Map of Enterprise Park at Calverton
Riverhead, NY
"EPCAL Preliminary 8-Lot Major Subdivision Map & Conceptual Plan"
SCTM # 0600-135-1-7.1, 7.2, 7.33 & 7.4

Applicant/Owner:
Town of Riverhead Community Development Agency
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Riverhead, Suffolk County, NY 11901
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Date:
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*Note, all revisions in red type for ease of review and comparison

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Introduction

This October 12, 2020 Updated Consistency Analysis is submitted as part of the Riverhead Community Development Agency's (the CDA) application to the NYSDEC for a WSSR subdivision permit for an 8-Lot subdivision of the property owned by the CDA at EPCAL to provide updated information requested by the NYSDEC to supplement the 4/1/19 SEQRA Consistency Analysis prepared pursuant to 8 NYCRR 617.10 by Jeffrey R. Seeman, CGCS/CEP/REC already submitted to the NYSDEC as Exhibit 6 to the CDA's application for a WSSR subdivision permit and supplementing the subsequent March 26, 2020 Updated Consistency Analysis. Note, all updates from the most recent March 26, 2020 Updated Consistency Analysis appear in red font for ease of review and comparison to March 26th Update and NYSDEC's most recent communication, to wit: Notice of Incomplete dated July 20, 2020. The 4/9/19 Consistency Analysis had been prepared for the evaluation and comparative analysis of the 50-Lot Subdivision Map, known as "Subdivision Map for Enterprise Park at Calverton," prepared by VHB, dated June 6, 2014 (2,323.9 acres) to an 8-Lot Subdivision Map (2,106.69 acres) located in Calverton, NY on land commonly known and referred to as EPCAL dated April 1, 2019.[1] A map of the 8-Lot Subdivision providing lot lines in bold is annexed hereto as Exhibit "A" to provide ease in identifying the area/acreage and lots included in the 8-Lot Subdivision.

Unlike the 50-Lot subdivision which created actual lots for development with associated subdivision infrastructure, the 8-Lot Subdivision creates five lots that will remain as public-purposed lots (Lots, 1, 2, 3, 4, and 5) with Lots 6, 7, and 8, comprising approximately 1,600 acres to be sold for sale, future development and habitat protection. The approximately 1,600 acres are currently under contract for sale to an entity known as Calverton Aviation & Technology (CAT).

This Updated Consistency Analysis shall respond to New York State Department of Environmental Conservation Region One request for additional information, including but not limited to, updating field work, studies, and mitigation measures referenced in the "Final Supplemental Generic Environmental Impact Statement (FSGEIS): Comprehensive Plan for the Development of EPCAL (EPCAL Reuse & Revitalization Plan), including Amendment to the Town of Riverhead Comprehensive Master Plan, Subdivision of the EPCAL Property, Creation and Adoption of a Planned Development (PD) Zoning District, Amendment to the Zoning Map of the Town of Riverhead to Rezone the EPCAL Property to the PD District, and Amendment to the Calverton Enterprise Park Urban Renewal Plan," (VHB, March 2016) in the "Comprehensive Habitat Protection Plan Proposed Redevelopment of EPCAL Property at Calverton" (VHB, revised February 2016).

More specifically, this update provides clarification and demarcation of location of existing habitat areas on the 8 -Lot Subdivision used by Threatened, Endangered and Special Concern. This Update will also provide additional information related to sewer and water

[1] Note, the difference in acreage between the two subdivision maps reflects that United States Department of Navy parcels described as "Parcel A" and "Parcel B" totaling approximately 216.7 acres are under a remedial action program to address groundwater contamination and are not part of the proposed 8-Lot Major Subdivision Map. In addition, 4.9 acres and 12.69 aces proposed for Burman Boulevard right of way and dedication for highway purposes for Rt. 25 and Grumman Boulevard respectively are not included in the acreage for the 8 Lot subdivision.

infrastructure, detail sanitary design upgrades and planned improvements, provide clarification regarding potential aviation uses, address mitigation measures related to the potential for aviation use and discuss a "concept plan" that had been circulated by CAT during its "due diligence" period provided under the Contract of Sale with the CDA. Note, while it is the intent of this Updated Consistency Analysis to provide comprehensive and detailed analysis responsive to the DEC's request for additional information and supplement the original Consistency Analysis, it is necessary to re-recite some of the evaluations and comparative analysis set forth in the original Consistency Analysis, as well as information and analysis set forth in the FSGEIS, as same provides the foundation necessary to respond to the DEC's requests for clarification, expound and provide greater detail regarding study and mitigation measures, and highlight the Town's desire and intent to fully and comprehensively provide the DEC with the demanded information.

Description of the Property

As noted above, the property sought to be subdivided into 8 lots consists of 2,106.69 acres. It surrounds the off-site Calverton Camelot industrial subdivision to the west, north and east, the lots of which are owned by private entities. The Calverton Camelot industrial development consist of manufacturing and industrial use of some of the former buildings and supporting infrastructure owned by the Department of Navy and leased to the Grumman Corporation, together with recent development i.e. Riverhead Building Supply and Peconic Care Rehabilitation and Research Center.

The majority of the subject property includes two runways, 7000 ft westerly runway and 10,000 ft. easterly runway, with associated taxiways, Town of Riverhead Community Center (known as the Henry Pfeifer Community Center and former Grumman facility guard house), Grumman Memorial Park, Town of Riverhead Veterans Memorial Park, Sewage Treatment Plant and a portion of the rail spur.

The subject property is located within the Long Island Central Pine Barrens with approximately 292 acres within the Central Pine Barrens Core Preservation Area and the remainder of the EPCAL property within the Compatible Growth Area. A portion of the property lies within the boundaries of the New York State Department of Environmental Conservation designated Wild, Scenic and Recreational Rivers System. See more detailed discussion and mapping detailed below.

Description of the 50-Lot Subdivision and the SEQRA review undertaken with respect to that subdivision map

The EPCAL site is owned by the Riverhead Community Development Agency (CDA). The site is designated an Urban Renewal Area, an Opportunity Zone, and was subjected to numerous studies, reports, SEQRA reviews and decisions.

In coordination with the New York State Department of Environmental Conservation (NYSDEC), and other involved and interested parties, the CDA undertook a comprehensive environmental review of the proposed 50-Lot Subdivision and zone change pursuant to the State Environmental Quality Review Act (SEQRA) which included, among other things, the

preparation of a Draft Supplemental Generic Environmental Impact Statement (DSGEIS); conducting public hearings; the preparation and adoption of the Final Supplemental Generic Environmental Impact Statement (FSGEIS); and the adoption of a Findings Statement pursuant to SEQRA.[2]

The prior application for the 50-Lot subdivision, and zone changes was initiated by the Community Development Agency and Riverhead Town Board. The Planning Board, as an Involved Agency under SEQRA, began its initial review of the EPCAL subdivision map(s) in the spring of 2015. This latest map iteration, the revision of the 50-Lot Subdivision Map to an 8-Lot Major Subdivision Map, is part of an ongoing subdivision review process. Since the Planning Board's Public Hearing of January 5, 2017, the CDA and Town Board have entered into an Agreement of Sale with a private entity (i.e. Calverton Aviation and Technology aka: CAT), which requires amendment of the 50-Lot Subdivision Map to a proposed 8-Lot Major Subdivision Map.

The EPCAL SEQRA process undertaken by the Town Board with respect to the 50-Lot Subdivision consisted of a number of components related to the proposed redevelopment of the subject property. The Town Board completed the SEQRA process when it issued a Supplemental Findings Statement, adopted on July 19, 2016 for the Supplemental Draft and Final Generic Environmental Impact Statement. The Supplemental Findings Statement is Exhibit 4 to the WSRR application. The following were components of that SEQRA process:

- Creation and adoption of the Reuse and Revitalization Plan for the EPCAL Property
- Amendment to the Town of Riverhead Comprehensive Master Plan
- Amendment to the Calverton Urban Renewal Plan
- Creation and adoption of a Planned Development (PD) Zoning District
- Amendment to the zoning map of the Town of Riverhead to rezone the EPCAL Property to the PD Zoning District
- Subdivision of the EPCAL Property into 50 lots, all but 10 of which would be for ultimate redevelopment with a mix of uses (e.g., business [commercial and retail], industrial, government, energy park, recreation, utilities, residential.

After the Town Board issued its SEQRA Supplemental Findings Statement, the application for a 50-Lot subdivision was submitted by the CDA to the Planning Board in November 2016. The Planning Board initiated its review of the Preliminary 50-Lot Subdivision Map and held a Public Hearing on January 5, 2017. As an Involved Agency, the Planning Board reserved its Findings Statement on the proposed 50-Lot Subdivision Map, pending its further review.

Page 5 of the FSGEIS states: "The proposed Subdivision Map contains a total of 50 lots. Development could occur on Lots 1 through 41 and 50 (excluding Lots 21 and 38), which comprise a total of 697.4± acres, including roadways/rights-of-way (ROWs)[3] (44.6± acres) and drainage reserve areas (DRAs) (56.2± acres). Lot 27 (111.7 acres), which is included in the 697.4±-acre total, encompasses the western runway, on which development could occur (including the placement

[2] The FGEIS, the DSGEIS and the Finding Statement are Exhibit 2, 3 and 4 respectively to the CDA's application

[3] Includes internal road rights-of-way, rights-of-way for highway purposes, and Town rights-of-way for walkway/bike trail.

of solar panels). Therefore, the total developable area of the lots, including the western runway, was 596.6± acres. The other lots are comprised of the following:[4]

1) Lot 21 – To be Retained by the Town of Riverhead for Grumman Park and future community service facilities (9.4 acres)
2) Lot 38 – Northern Area to be preserved and managed in accordance with a Habitat Protection Plan (to be approved by the NYSDEC) (154.7 acres) *(The HPP was approved by the NYSDEC).*
3) Lot 42 – STP Recharge Parcel (23.9 acres)
4) Lot 43 – Eastern Runway (127.4 acres)
5) Lot 44 – Eastern Area to be preserved and managed in accordance with a Habitat Protection Plan (to be approved by the NYSDEC) (423.1 acres). *(The HPP was approved by the NYSDEC).*
6) Lot 45 – Town of Riverhead Parcel (16.7 acres)
7) Lot 46 – Community Center (9.4 acres)
8) Lot 47 – Western Area to be preserved and managed in accordance with a Habitat Protection Plan (to be approved by the NYSDEC) (276.3 acres) *(The HPP was approved by the NYSDEC).*
9) Lot 48 – Pine Barrens Core Area (to be preserved) (293.1 acres)
10) Lot 49 – Town Park (93.0 acres)

Included in the FSGEIS for the 50-Lot Subdivision was a Comprehensive Habitat Protection Plan (CHPP). The CHPP provided for preserving the following acreage of habitat:

1) Existing woodland to remain: 787.3 +/- acres (including 447.9 acre wetland buffer area)
2) Existing grassland to be created; 512.4 +/- acres
3) Grassland to be created: 70.6 +/- acres to replace existing grassland areas that would be destroyed due to the location of proposed development
4) Other meadow/brush-land to remain: 117.6 acres (including 66.1 areas in wetland buffer area).
5) Wetlands: 16.4 +/-acres
6) McKay Lake: 9.3 +/-acres

Pursuant to the CHPP, after full development of the 50-Lot Subdivision a total of +/- 583 acres of grassland would exist and be maintained going forward as grassland.

Under the 50-Lot Subdivision plan an additional 367.4 +/- acres of the overall site are proposed to comprise lawn/landscaping (e.g., however, in no case shall fertilizer-dependent lawn/landscaping exceed 15 percent of any individual lot). The proposed subdivision provided for preservation/creation of 65 percent of the site as natural area/open space, including wetlands and water bodies.

[4] All acreages have been rounded to the nearest tenth.

The aforementioned provides a general description of the 50-Lot Subdivision Map, with anticipated development based upon limitations stated in the Lead Agency's Findings Statement imposed as mitigation to protect human health, welfare and the environment from potential future development impacts.

Upon the completion of the SEQRA process, the Town Board adopted the Reuse and Revitalization Plan for EPCAL, together with the required amendments to the Town's Comprehensive Master Plan, the Calverton Urban Renewal Plan and the Town's Zoning Code and Zoning Map. These plans and Code provisions are currently in full force and effect and control the future development of EPCAL.

The 8-Lot Subdivision

Subsequently, the Town Board determined to alter the proposed subdivision map by eliminating the initial 50 lots with attendant interior roads, drainage areas and other infrastructure, and create an 8- Lot Major Subdivision. Five (5) of the lots on the new map are the same areas that were being retained by the Town under the original 50- Lot plan. The proposed 8-Lot Subdivision Map is depicted on the "Map of Enterprise Park at Calverton, Riverhead, NY", prepared by L.K. McLean Associates, P.C, last dated March 26, 2019. The 8 Lot-Preliminary Subdivision Map is annexed as Exhibit 1 to the CDA's application submittal.

The revised 8-lot plan is described as:

1. Lot # 1 (292.7 acres and formerly Lot #48 of 50 Lot Subdivision) is located in the area defined as "Core Preservation Area" pursuant to the Long Island Pine Barrens Protection Act ("Act"), adopted in 1993, contained in Article 57 of the New York State Environmental Conservation Law and shall be preserved in accordance with the Act.

2. Lot # 2 (98.9 acres and formerly Lot # 49 of 50 Lot Subdivision) is known as the Veterans Memorial Park (ball fields, dog park, picnic area, and parking) owned by the Town and impressed with New York State's longstanding common law public trust doctrine.

3. Lot # 3 (11.2 acres and formerly Lot# 21 of 50 Lot Subdivision) is known as Grumman Memorial Park (memorial to Grumman employees and advances in aerospace and aviation technology that took place at EPCAL) is owned by Town and reserved for future public emergency service.

4. Lot # 4 (34.1 acres and formerly Lot # 42 of 50-Lot Subdivision) will be used as the recharge parcel for Calverton District's upgraded sewer treatment plant.

5. Lot # 5 (25.5 acres and formerly Lots # 45 and 46 of 50-Lot Subdivision) will continue to be used as a Town of Riverhead Community Center. Since on or about the time of the transfer from the United States to the Community Development Agency, the Town has improved and maintained the former guard house and in exchange the Community Development Agency has permitted the Town to utilize the former guard house, now referred to as "Henry Pfeiffer Community Center" for a host of Town and community related uses, Town, County and State

recreational and educational classes and workshops and LIPA (now PSE&G) emergency response center.

The remaining 44 lots, roads, and drainage areas of the original 50- Lot Subdivision Map have been replaced by three new lots:

6. Lot # 6 comprised of 727.3 acres, constituting a new parcel not depicted on the former 50-Lot map.

7. Lot # 7 comprised of 898.4 acres, constituting a new parcel not depicted on the former 50-Lot map.

8. Lot # 8 comprised of 18.1 acres, constituting a new parcel not depicted on the former 50-Lot map with development yield of Lot-8 to be applied to Lot 6 and no development shall be permitted on Lot #8.

In order to be developed, Lots 6 and 7 shall be subject to all required New York State, Suffolk County and local (Riverhead Town) approvals.

Note, a portion of Lot #1, Lot#4, Lot #5, Lot #6, Lot #7 and Lot #8 are located within the boundary of the Wild, Scenic and Recreational Rivers Act. The acreage of the 50-Lot Subdivision (2323.9 acres) and 8-Lot Subdivision (2106.69 acres) located within the boundary of the Wild, Scenic and Recreational Rivers Act are identical and include approximately 282.58 acres or 12.15 % and 13.41 % respectively. A copy of the boundary of the Wild, Scenic and Recreational Rivers Act is plotted and highlighted on the 50 Lot-Subdivision and 8-Lot Subdivision annexed hereto as Exhibits "B" and "C". It should be noted that of the 282.58 acres within the Wild, Scenic and Recreational Rivers boundary approximately 82 acres lie within the protected 1000' Tiger Salamander Buffer Non Disturbance Area. See Exhibit D annexed hereto. In addition, Lot #1 containing 54.60 acres and Lot #5 containing 25.50 acres of the 282.58 acres situated within the Wild Scenic Recreation Rivers shall be retained by the Town. See Exhibit E annexed hereto. In addition, the amount of acreage within the Wild Scenic Recreational Rivers Boundary for Lot #s 6, 7, and 8 and not subject to the non-disturbance tiger salamander buffer area is 157.88 acres or 7.49 % of the total acreage of 2106.69. See Exhibit "F" annexed hereto. It must be noted that the Town's application for a permit required pursuant to 6 NYCRR Part 666, Wild, Scenic and Recreational Rivers Act ("WSRR") to subdivide the EPCAL property into 8 Lots does not seek to disturb or develop property within the Wild Scenic Recreational Rivers Boundary. Notwithstanding same and as will be addressed in greater detail below and highlighted during analysis of one of Calverton Aviation Technology (CAT) conceptual sketch plans for proposed development dated July 30, 2019, the Town shall require that any application for future development adhere to the Wild Scenic Rivers Restrictions Act or seek appropriate permit application and relief to the New York State Department of Environmental Conservation.

Finally, due to the environmental constraints on Lot # 8, development yield from Lot #8 shall be transferred to Lot # 6 with a prohibition of development of Lot #8 by restrictive covenant in favor of the Town and New York State Department of Environmental Conservation.

The subject property is located within the Long Island Central Pine Barrens with approximately 292 acres within the Central Pine Barrens Core Preservation Area (designated as Lot 1 on the 8-Lot Subdivision Map) and the remainder of the EPCAL property within the Compatible Growth Area. A portion of the property lies within the boundaries of the New York State Department of Environmental Conservation designated Wild, Scenic and Recreational Rivers System. See more detailed discussion and mapping detail below.

The subject property includes two runways, the 7000 ft. westerly runway located on Lot 7 and the 10,000 ft. easterly runway located on Lot 6. Both runways have associated taxiways.

It should also be noted that former Navy Parcel "D" comprised of 144.8 acres and formerly identified by SCTM #0600-135-1-7.4 was retained by the Navy for required remediation and thereafter transferred by Quitclaim deed dated August 10, 2007 to the Town of Riverhead and Town of Riverhead to Town of Riverhead Community Development Agency by Quitclaim Deed dated March 8, 2019 such that this parcel is merged and included in Lot #7 described above. As reflected in the Updated Comprehensive Habitat Protection Plan, the 144.8 acres of Lot #7 are protected as part of the Town's Habitat Protection Area. A copy of the map identifying Areas under Supervision of the Habitat Protection Plan included in the CHPP and made part of FSGEIS for the 50-Lot Subdivision is annexed hereto as Exhibit "G" and a map identifying Areas under Supervision of the Habitat Protection Plan for the 8-Lot Subdivision is annexed hereto as Exhibit "H". Note, Exhibits "G" and "H" illustrate that the areas and acreage designated for preservation, monitoring and maintenance have not deviated from the 50-Lot subdivision to the 8-Lot Subdivision.

The subject 8-Lot subdivision does not include the acreage associated with the previously approved Camelot Subdivision, the two US Navy parcels undergoing USEPA remedial actions known as Parcels A and B, the Stony Brook University Business Incubator at Calverton, the Island Water Park Corp. property, the Town of Riverhead Water District property and the 0.5-acre Wells Family Cemetery.

SEQRA Consistency Analysis Update

One purpose of this Updated Consistency Analysis is to compare the original 50-Lot map and Lead Agency's adopted Findings Statement to determine if any significant changes have occurred with respect to potential for significant adverse environmental impact(s) generated by the amended 8-Lot map configuration. It is noteworthy to recognize that since the adoption of the FSGEIS the following approvals and projects have proceeded at EPCAL pursuant to SEQRA, NYSDEC, Suffolk County and local municipal approvals:

- Construction of approximately nine mile or approximately 47, 520 linear foot paved/unpaved recreational walkway/bikeway.
- Construction of the Calverton Sewer District's wastewater collection/conveyance system and discharge/recharge improvements.
- Runway use permission by way of temporary license/use agreements with the Town of Riverhead CDA.

None of these approvals and projects are deemed to have created any new potential for significant adverse environmental impacts not already fully evaluated in the FSGIES and Findings Statement.

Environmental Analysis Review & Comments

The CDA proposes to subdivide 2,106.69 acres to form eight (8) new parcels described as Lots 1 through 8. The CDA proposes to sell to CAT Lots 6, 7 and 8, totaling 1,643.998 acres of land. The balance of Lots 1 through 5 is 462.66 acres and will be retained and controlled by the Town of Riverhead CDA.

There are minor changes in the acreages between several parcels the Town will retain under the revised subdivision map compared to the 50-Lot map. These alterations are cited below:

1. Lot # 1 Pine Barrens Core Area, to be preserved, (formerly Lot # 48 of 50 Lots), comprised of 292.7 acres. Lot #48 was formerly 293.1 ac on the 50-Lot map and now is 292.7 reflecting a minor decrease of 0.40 acres.

2. Lot # 2 Town of Riverhead Veterans Memorial Park (formerly Lot # 49 of 50 Lots) comprised of 98.9 acres. Lot # 49 was formerly 93.0 acres on the 50-Lot map and is now 98.9 acres on the 8-Lot map, an increase of 5.9 acres.

3. Lot # 3 (formerly Lot# 21 of 50 Lots) to be retained by the Town of Riverhead for Grumman Park and future community service facilities comprised of 11.2 acres. Lot # 21 was formerly 9.4 acres on the 50-Lot map and is now 11.2 acres on the 8-Lot map, an increase of 1.8 acres.

4. Lot # 4 STP Recharge Parcel (formerly Lot # 42 of 50 Lots) comprised of 34.16 acres. Lot # 21 was formerly 23.9 acres on the 50-Lot map and is now 34.16 acres, an increase of 11.2 acres.

5. Lot # 5 Town of Riverhead with Community Center (formerly Lots # 45 and 46 of 50 Lots) comprised of 25.5 acres. Lots # 45 and 46 totaled 26.1 acres on the 50-Lot map and are now 25.5 acres, a decrease of 0.6 acres.

6. Navy Parcels A & B: Excluded from the 8-Lot Subdivision Map are Parcel A (SCTM # 600-135-01-007.1) comprised of 30.559 acres and Parcel B (SCTM # 600 135-01-007.2) comprised of 168.902 acres. Each of these lots are retained by the US Navy and once these parcels are environmental suitability of a parcel for transfer to nonfederal agencies or to the public, the parcels will be transferred to the Town of Riverhead Community Development Agency (CDA) and in turn, preserved as open space and managed in accordance with the Comprehensive Habitat Protection Plan.

The proposed uses of Lots # 1, 2, 3, and 4 depicted on the 8-Lot map are the same as the proposed use described for Lots # 48, 49, 21, and 42 on the 50-Lot map and the Supplemental DGEIS, FGEIS and Lead Agency's Findings Statement.

Lots # 6, 7 and 8 are new parcels created by revising the previous lot lines depicted on the 50-Lot map. The transfer of the development yield from Lot # 8 to Lot # 6 requires a determination of yield of Lot # 8 and mechanism by which proposed development can be transferred to Lot # 6.

The minor changes in the individual lot acreages are not considered significant.

Proposed Subdivision Map Changes during SEQR and Impacts Related to potential aviation use of the Two Runways

While a more detailed narrative and analysis will be provided in the Updated Comprehensive Habitat Protection Plan, the 8-Lot Subdivision does not in any way alter the acreage or ecological communities for preservation of habitat identified and made part of the FSGEIS and Finding Statement. The Department of Environmental Conservation has requested that the applicant highlight in the Consistency Analysis Update the evolution of changes made to the 50-Lot subdivision from the DSGEIS to FSGEIS and potential impact such change may have related to aviation use of the property.

The DSGEIS included a proposed 50-Lot Subdivision that, due to the location of proposed lots and infrastructure, would require the removal of 188.1 acres of the existing 646.2 acres of grassland habitat in areas located primarily in the area to the north of the two runways. The draft Comprehensive Habitat Protection Plan (the Draft CHPP) in the DGEIS proposed conversion of 59.5 acres (consisting of the existing western runway with taxiway area and the southern most portion of the eastern runway with taxiway) to grasslands. It also proposed creation of an additional 78.8 acres grassland by conversion of wooded habitat to grasslands. As a result, the Draft CHPP called for the creation of 138.3 new acres of grassland habitat by converting existing infrastructure and woodlands to (manmade) grassland habitat. Thus, under the Draft CHPP, a total of 596.4 acres of grassland habitat would be preserved once the 50-Lot development was fully built out. A copy of DSGEIS Subdivision Map and Map of Habitat Protection Plan is annexed to the DSGEIS as Exhibits "I" and "J". As part of the SEQR process, the Town did receive and evaluate comments and criticism related to all aspects of the Reuse & Revitalization Plan, including the proposed 50-Lot subdivision. The North Fork Environmental Council and other conservation groups were critical of creation of grassland over concrete runways reciting that the planned conservation was not practical, ineffective and waste of valuable and limited resources. The North Fork Environmental Council recited that experts opined that conversion of concrete runways with soil and seeding would not provide the ability for grasses and plants to create meaningful deep root systems, the lack of deep soils with layering of concrete base would serve to reduce ability to absorb and hold moisture and dry out soils during exposure to heat due to radiation from concrete structures, and finally, likely result in runoff of dirt/sand during rain falls with potential negatively impact immediate surrounding grasslands. In addition to the above criticisms, the Group for the East End and the Coalition for Open Space at EPCAL criticized the lot configuration complaining that several lots slated for development (Lots 10, 11, 15, 16, 23, 24, 27, 30, 31 and 35 were identified by the Coalition for Open Space at EPCAL) where situated on the most vulnerable grassland habitat. Other comments and criticisms recited that the runways were a valuable resource and removal severely limited the ability to market and use the property

for aviation use. The above comments and criticisms together with several other comments, tasked the Town, through its retained experts, to reconfigure the proposed 50-Lot subdivision. While the 50-Lot subdivision made part of the FSGEIS did not accept or incorporate all of the above comments and proposed reconfigurations, it did address the criticism related to runway/taxiway conversation to grasslands (comments by North Fork Environmental Council) and reconfigured several lots and proposed infrastructure (roadway and drainage improvements) to preserve a greater amount of existing grasslands (East End Environmental Group and Coalition for Open Space at EPCAL)[5]. The FSGEIS revised the 50-Lot subdivision map eliminated the proposed conversion/creation of grasslands on and over the existing runways and taxiways and reconfigured several lots, including Lots 10, 15, 16, 27, and 35, such that the size (acreage) was reduced and location of lots were moved west of the existing grassland and/or eliminated in favor of drainage reserve areas. See FSGEIS Section 2 and 2.4, together with Appendix D "Subdivision Map" and Appendix G "Ecological Data and Updated CHPP". The revised 50-lot subdivision map resulted in an increase of preservation of existing grasslands from 458.1 acres to 512.4 acres (79.3 percent of existing grassland on site), with a reduction in the amount of grassland to be created from 52.8 on runways and 78.8 from woodlands to 70.6 acres north of the eastern runway. While the revisions to the 50-lot subdivision did result in a reduction of net grassland habitat, 596.4 acres to 583.0 acres, this new plan proposed to limit removal of existing grassland to 133.8 acres versus the original proposed 50-Lot subdivision plan effecting a removal of 188.1 acres of existing grasslands. A consequence of the above changes, is that the western runway and taxiway and the southern portion of the eastern runways and taxiway reverted to their original potential for aviation related uses. A copy of the FSGEIS 50-Lot revised subdivision map and map of Area Under Supervision is annexed hereto as Exhibits "K" and "G" for ease of review and comparison.

The DSGEIS also included proposed Planned Development District (PDD) Zoning District. Just as the proposed 50-lot subdivision map was amended to address comments, concern, and criticisms, so too was the PDD Zoning District. Briefly, and as more fully detailed in the FSGEIS Section 2.3, the PDD Zoning was amended to include renewable and alternative energy resources (including generation and distribution of such energy resources, storage and demand response resources) and limited commercial uses described as retail, personal service and restaurant unless said uses were deemed supportive to a principal use and limited the size (square footage for each such use) and maximum floor area to 500,000 within the EPCAL property; limited attached residential housing units to lots greater than ten acres; and most significantly prohibited the following industrial, manufacturing and commercial uses: garbage disposal dumps, landfills, incinerators or transfer stations; gas stations and gas manufacture from coal, coke, or petroleum; petroleum and/or kerosene distillations or refining and storage facilities; sand, gravel, mineral quarrying and mining; motor vehicle, boat, and equipment dismantling, wrecking, and compacting; outdoor sale or storage of motor vehicles, boats, and equipment except by special permit of the town board and subject to minimum identified standards more fully set forth in the adopted PDD Zoning District.

[5] FSGEIS, pp 27-30; 37 and 38 (Lead Agency response to substantive comments to the DSGEIS).

In addition, as the Town has represented to the New York State Department of Environmental Conservation, the Town's contract of sale prohibits use of the EPCAL property for operation of a passenger airport or listed on aviation charts or maps as a location at which aeronautical services such as fueling, hangaring, tie-down and parking, aircraft rental, aircraft maintenance, and flight instruction are provided to the general public and the Town shall require a covenant in favor of the Town and New York State Department of Environmental Conservation.

While aviation use is a permitted use on the property, such use shall be subject to the restrictions set forth in the PDD Zoning District and Contract of Sale. Moreover, aviation use shall be subject to all constraints and mitigation measures set forth in the FSGIES and attendant Findings Statement, including but not limited to, Chapter 81 "Noise Ordinance" of the Town Code adopted to protect both residential and non-residential properties within the Town (this code provision defines industrial and commercial property and sets limits, 65 dBA, on sound levels and characterizes unreasonable noise), air and water pollution standards and permitting processes set forth by federal and state agencies i.e. Title V of the Air Pollution Control Program, State Pollution Discharge Elimination System, Hazardous Waste Management facility (*note this shall also apply to increased vehicle traffic and vehicle emissions.) and deicing standards (formate based), together with deicing mitigation measures more fully set forth below. In addition to the above, pursuant to Title 14 Code of Federal Regulations, any activation of the runways shall require application and adherence to airport safety and standards and approval by State Department of Transportation/Aviation Bureau.

It is beyond cavil that aviation use of the EPCAL property shall never rise to the level of the aviation uses during the Cold War and NWIRP/Grumman era. During the NWIRP/Grumman era, the Congressional approved defense spending soared from 4.7 billion dollars in 1942 to 153.5 billion in 1961, 178.2 billion in 1981 and 251.2 billion in 1987 (Note, these figures are recorded in 1982 dollar value- Cato Institute Policy Analysis No. 114: U.S. Military Spending in the Cold War Era: Opportunity Costs, Foreign Crises, and Domestic Constraints November 30, 1988 Robert Higgs). It is well known that shortly after acquiring the property in 1950, the Department of Navy leased a portion of the property, EPCAL, to the Grumman Corporation. The Grumman Corporation secured military contracts to build, assembled, retrofitted, and tested the following military fighter aircraft at EPCAL:A-6 Intruder, E-2 Hawkeye, EA-6B Prowler and F-14 Tomcat. It should be noted that over 700 F-14 Tomcats were assembled and tested at EPCAL and nearly all E-2C Hawkeye aircraft were either assembled, retrofitted or tested at EPCAL. In addition, the U.S. Navy and U.S. Marine Corps used the EPCAL site to test the F9F Panther, F-9 Cougar, and F-11 Tiger . Perhaps not a well-known fact, in addition to military related aviation operations at EPCAL, American Airlines and other carriers used the runways at EPCAL for jet training, with maneuvers, including full-stop landings, high-off set approaches, and simulated engine out landings. In addition to all of the above, during the Space Race, Grumman built several mock ups of the lunar roving vehicle. It was reported that the tower logged over 19,000 flights per year at EPCAL with test flights beginning at dawn. See Exhibit "L" Grumman News annexed hereto and see also F-14 Tomcat first flight at EPCAL: aviationist.com "tomcat-first-flight".

In addition, the land use in terms of the number of acres designated for potential for aviation use shall never rise to the level or intensity of the original reuse plan, a plan adopted on

or about 1998 by the Department of Navy after environmental study funded and undertaken by the Department of Navy and adopted pursuant to National Environmental Protection Act/FEIS, known as the Calverton Enterprise Park Reuse Plan. A copy of the NWIRP FEIS Map of Calverton Enterprise Park Reuse Plan is annexed hereto as Exhibit "M". That Plan designated 853 acres to aviation uses. The Calverton Enterprise Park Reuse Plan not only designated 853 acres to aviation use, but the entire 2,323 acres (that acreage of the NWIRP leased to Grumman) was slated for a variety of uses, including but not limited to, 282 acres designated for industrial park, 191 acres for commercial recreational facility with golf course and stadium, 434 acres for theme park, 63 acres for hotel/conference center, subject to or more accurately made part thereof, that the lands used and referred to as buffer areas or often referred to as "outside the fence" be transferred to the New York State Department of Environmental Conservation (3,137 acres legislatively mandated to remain in natural state for conservation and recreational purposes) and Department of Veterans Affairs (150 acres, together with 1977 transfer of over 900 acres for a national cemetery). It is important to note that hundreds of acres slated for development under the Calverton Enterprise Park Reuse Plan, are now designated for preservation, monitoring and maintenance pursuant to the Comprehensive Habitat Protection Plan. As analyzed in the Grassland Birds and Aviation Use Study annexed hereto and made part hereof, the role of preservation, maintenance and monitoring of these areas have proven to be critical to preservation of grassland bird populations and potentially shall serve to increase populations of grassland birds as well as increase diversity of population.

The DSGEIS, together with the proposed 50-Lot Subdivision and PDD Zoning annexed and made part of the DSGEIS, and the FSGEIS, together with revised 50-Lot Subdivision and revised PDD Zoning did include aviation as a potential use of the property. It is important to note that while the revisions to the proposed subdivision map from the DSGEIS to the FSGEIS did restore the western runway with taxiway and the southern end of the eastern runway for possible aviation use, the land area for development, be it aviation, commercial, office etc., was reduced from 654.3 acres in the DSGEIS to 593.2 acres in the FSGEIS in sharp contrast to the over 1,800 acres proposed under the Navy's Calverton Enterprise Park Reuse Plan. In addition, the acreage of the runways are included as developable area, thus while the possibility or aviation related use of runways increased, the propensity for overall development of the property not already improved (runways and taxiways), be it aviation, commercial, decreased by more than fifty acres.

Based in part by the findings of the Market Study conducted by RKG, the PDD Zoning restrictions particularly the following prohibitions: gas stations and gas manufacture from coal, coke, or petroleum; petroleum and/or kerosene distillations or refining and storage facilities; outdoor sale or storage of motor vehicles, boats, and equipment. In addition, potential aviation use at EPCAL is further restricted by the contractual provisions set forth in the CAT contract which prohibit the use of the EPCAL property for operation of a passenger airport or listed on aviation charts or maps as a location at which aeronautical services such as fueling, hangaring, tie-down and parking, aircraft rental, aircraft maintenance, and flight instruction to the general public and the plethora of typical aviation uses readily available at Long Island MacArthur Airport, Brookhaven Airport, and Gabreski Airport. Any aviation use at EPCAL is further restricted by Federal Aviation Administration and New York State Aviation Bureau regulations and requirements (including development and approval by federal, state, and local agency of an

Airport Master Plan by the National Plan for Integrated Airport Systems, New York State Airport Systems Plan), and by geographical location since it is anticipated that aviation use will not be used for cargo or freight transportation but instead be limited to businesses engaged in high technology avionics, be it navigation equipment, solar or electric energy integration to aviation and other modes of transportation. It should also be noted that while the 853 acres had been designated for aviation use under the 1998 Calverton Enterprise Park Reuse Plan (described as aviation related uses, hangar, and tie-down storage area, for turbo prop and small corporate jets with several flights per week and potential special/limited cargo use), and some 239.3 acres permitted to be used for research and development uses, aircraft and aircraft component design, manufacturing, maintenance and testing facilities under the later adopted Planned Industrial Park Zoning District with 239.3 zoning permitting research and development uses, aircraft and aircraft component design, manufacturing, maintenance and testing facilities, the aviation use at EPCAL under the Reuse & Revitalization Plan are limited by the PDD and Contract of Sale and restricts use of the property for many of the aforementioned described uses including aircraft maintenance, hangaring, tie die etc.

The mitigation measures set forth in the DSGEIS and FSGEIS, including noise, air pollution, and traffic would continue to dictate the scope of aviation use. In addition, all aviation use shall comply and adhere to the deicing restrictions and mitigation measures set forth in the Updated Comprehensive Habitat Protection Plan. The Updated Comprehensive Habitat Protection Plan is attached to Applicant's Supplemental Statement In Support as Exhibit "14".

Concept Sketch Plan prepared by CAT

CAT's conceptual sketch plan dated July 30, 2019 was presented to the Town Board during a general public work session and posted on the Town's website on or about August 1, 2019. A copy of CAT's conceptual sketch plan is annexed hereto as Exhibit "N". CAT's counsel explained that it was not intended as a development plan but instead a plan depicting CAT's commitment to the preservation of grassland and woodland to support Threatened, Endangered and Species of Special Concern. As explained to the Town, the sketch was merely part of CAT's due diligence study allowed under its contract with the CDA to enable it to determine the interplay between potential site development and habitat conservation. CAT made it very clear that the sketch was conceptual only and not reflective of how it would develop the acreage it was purchasing. Without additional details it is only possible to evaluate the CAT and aviation uses in a generic manner. Therefore the environmental analyses of this Updated Consistency Analysis is limited by the specific information available from CAT's proposed sketch and its attendant references and exhibits.

Notwithstanding same and in order to adhere to the request of the New York State Department of Environmental Conservation, the Town will analyze the conceptual plan and highlight issues and concerns and opine regarding consistency with the totality of the Town's environmental review and findings (DSGEIS, FSGEIS, and Final SEQRA Finding Statement), and potential for additional environmental study and approval requirements related to this conceptual plan should CAT ever proceed with actual implementation of that plan.

At the outset, CAT's conceptual sketch plan is not for lack of a better word "engineered" and fails to include metes and bounds to verify the accuracy of the lots or areas/acreage depicted on the sketch plan (no acreage is recited or depicted on the sketch plan except for the tables in the upper right hand corner of Figures 2 and 3A). The sketch fails to contain infrastructure detail (roadway design width, no drainage structures); and/or appropriate legends to describe detail (lines) on the plans. CAT's conceptual sketch plan is one dimensional and purports to demonstrate total build-out with 10,000,000 square feet of new buildings, with roadways but no drainage or other infrastructure, all located on one parcel. The conceptual sketch plan locates the buildings in two distinct areas within Lots 6 and 7, to wit: northwest corner of Lot 6 and the southeast corner of Lot 7. The conceptual plan proposes to remove and/or convert the existing taxiways, western and eastern, and reconstruct these taxiways on the opposite side of the existing 7,000 ft. runway and 10,000 runway west and east of the respective existing locations. The conceptual plan provides for two access points along Grumman Boulevard, one near the southern end of the western runway and the second near just east of the end of the eastern runway. The plan also creates two internal roadways, one at the northern most point of each runway traversing Burman Boulevard and a second along the northern portions of the property crossing Burman Boulevard essentially running parallel with Route 25. The proposed use of the 10,000,000 square feet of new construction is not identified, however, according to CAT counsel and representatives testimony and/or recorded comments, the property will not be used for cargo or freight operations and instead the runways and buildings will be used for aviation technology companies for new and innovative aerospace design of aircraft, electric and solar related avionics etc.

While this plan eliminates proposed future access along Route 25 (the FSGEIS 50-Lot subdivision reserved two potential access points to Route 25 one westerly portion of the property east of the Veterans Memorial Park and a second at the westerly portion of property adjacent to the Grumman Memorial Park), the conceptual plan proposes two entrances along Grumman Boulevard. The DSGEIS and FSGEIS identify Route 25 (a New York State mapped, designed, improved and maintained roadway) as a major west-east arterial roadway and Grumman Boulevard as a local (maintained by Town of Riverhead Highway Department) west-east roadway. CAT's plan for three entrances along Grumman Boulevard would essentially direct all vehicle traffic generated from the 10,000,000 square feet onto this local, two lane roadway since it provides access to the Long Island Expressway. This rural local road traverses through residential corridors east and west of the site and is located within the WSRR boundary. The sketch plan's increased usage of Grumman Boulevard would likely create significant adverse impacts on the existing residential neighborhoods. If, upon preparation of an actual rather than conceptual development plan, the applicant seeks to increase the ingress and egress over Grumman Boulevard, the traffic analysis in the FSGEIS and the traffic findings in the Finding Statement will have to be updated to address this change. It must also be noted that the interior roadways depicted on the conceptual plan traverse existing grassland areas. However the sketch plan purports to preserve and create a total of 616.4 acres of grassland – more than the 583 acres of grassland to be preserved and created under the final Comprehensive Habitat Protection Plan (page 21) adopted as part of the FSGEIS and incorporated into the Finding Statement for the 50-Lot Subdivision (page 48).

The proposed areas for development (labeled "new buildings") are located within areas of existing woodlands. Most significantly, the proposed development just east of the eastern runway is located within one of the largest existing areas of woodland with the development slated to

remove nearly 50% of this existing woodland. In addition, this proposed area of development including relocation of the taxiway are located within the boundary of the Wild, Scenic and Recreational Rivers Act. A review of historical information and site inspection conducted in March 2020 determined the woodland area east of the 10,000 LF runway (i.e. eastern runway) remains largely undisturbed. There are minor areas of clearing that provide a small network of unpaved paths and roadways. Existing density of the tree canopy will inhibit re-growth along these roadways, which serve to provide controlled access for forest maintenance and fire protection.

The Town's 8-Lot Subdivision, admittedly referred to as land division without development by Town staff, does not seek to develop the property but to the extent development must be considered the Town has made clear, through its consistency analysis and application documents to the Town of Riverhead Planning Board, Suffolk County Department of Health, and New York Department of Environmental Conservation, that the Town shall adhere to all aspects of the FSGIES, and in particular the areas designated for habitat protection for the benefit of Threatened, Endangered, and Special Concern and the totality of those areas/acreage for grassland and woodland habitat and conversely limited acreage for development detailed in the Habitat Protection Plan. A Map depicting the areas of the 8-Lot Subdivision under Supervision of the Comprehensive Habitat Plan are annexed hereto as Exhibit "H". At all times commencing on or about 2011 through to completion and adoption of the FSGEIS, the Town, including retained experts and staff members, did consult and work with staff at the New York State Department of Environmental Conservation (local and regional level) on the Reuse & Revitalization Plan for EPCAL, and in particular areas slated for development and areas slated for preservation. The identification of areas and acreage to be protected and preserved set forth and made part of the Habitat Protection Plan were the result of hard work, dedication and commitment of the Town, again through experts and staff, and New York State Department of Environmental Conservation staff. That said, and as will be discussed below, CAT's conceptual sketch plan seeks to make significant revisions to the Habitat Protection Plan. First, as noted above, CAT's conceptual sketch seeks to create two new taxiways and designate the existing taxiways as grassland. It is unclear if the western and eastern taxiways will be converted to grasslands similar to that set forth in the DSGEIS (cover with soil and seed) and revised as reflected in the FSGEIS by the Town to address criticisms by environmental and conservation groups or convert the taxiways to grassland by the removal of the concrete, soil rehabilitation and seeding. Obviously, the Town does not support conversion of taxiways by soil and seed over and on top of the runways, but, perhaps of more paramount concern is proposed conversion of the two taxiways by removal of the concrete taxiways with plans for soil rehabilitation and seeding. The taxiways are located in the center of existing grasslands along the western and eastern runways. The removal of the concrete is a serious construction endeavor requiring heavy equipment, excavators, pay loaders, and dump trucks with activity focused on the center of existing grassland areas. Similarly, the restoration/rehabilitation of soils and seeding will require heavy equipment to traversing these areas. Soil disturbance will release dormant seed that will likely include non-grassland species (rag weed, thistle, golden rod, etc.) and may result in the generation of habitat more closely resembling "old field." It is likely that grasslands adjacent to the taxiways will be negatively impacted i.e. destruction of native grasses and plants, soil compaction, storm water, as a result of

this truck traffic and land disturbance. Moreover, the areas proposed for relocation of the taxiways are within existing grassland areas. The proposed construction of the taxiways will remove existing grassland and the construction of same will generate more disturbance to surrounding grasslands as the construction will require additional equipment over and above the volume and type to remove and rehabilitate the taxiways. It should be noted that Figure 3A of CAT's conceptual sketch labels the areas of the existing and proposed taxiways as existing prime quality grasslands.

In addition, as recited above, 282.58 acres of the 8-Lot Subdivision lie within boundary of the Wild, Scenic and Recreational Rivers Act. The amount of acreage within the Wild Scenic Recreational Rivers Boundary for Lot #s 6, 7, and 8 is 202.48 acres, however, 44.6 acres of the 202.48 lie within the non-disturbance tiger salamander buffer area reducing any potential for development within the Wild Scenic Recreational Rivers Boundary for Lot #s 6, 7, and 8 to 157.88 acres or 7.49 % of the total acreage of 2106.69. See Exhibit "F "annexed above. That said and as recited above, CAT sketch plan proposes development of industrial office space, relocation of taxiway and construction of a roadway within the boundary of the Wild, Scenic and Recreational Rivers Act. This proposed area of development deviates from the Reuse & Revitalization Plan. The Town shall require that any application for future development adhere to the Wild Scenic Rivers Restrictions Act or seek appropriate permit application and relief to the New York State Department of Environmental Conservation.

In addition to the above, CAT's proposed conceptual plan labels different areas "prime quality" and "subprime quality" grasslands without detail or scientific support for such designation. Within the EPCAL site it must be recognized that normal ecological transition from grassland communities to shrub-land communities should not be interpreted as resulting in a "subprime" grassland habitat. For the protected grassland areas at EPCAL it is intended to restore and manage these habitats as set forth in the CHPP, including but not limited to routine mowing and haying to promote renovation of the desired prairie grassland, warm season grasses (big bluestem, little bluestem Indian-grass, switchgrass).

CAT's conceptual plan does contain a table that recites the habitat acreage that CAT claims would be preserved on Lots 6, 7 and 8 – the lots it is acquiring. While just a sketch plan, if ever developed, will require much more substantial study, CAT's sketch plan does propose to significantly increase preservation of woodland and grassland, particularly existing grassland, on Lots 6, 7 and 8 that called for in the DSGEIS, FSGEIS, Findings Statement, CHPP and Updated CHPP.

At the time CAT submitted the sketch plan, CAT identified the anticipated and desired uses for property, including research and development for satellite systems and communications, renewable energy and electric technology for transportation and transit type industry, and other similar innovative technology research and development, be it related to aviation or general transportation. CAT made clear that use of the runways would not include cargo use and instead be limited to use accessory to the on-site research and develop companies locating and occupying the proposed industrial square footage depicted in the sketch plan. The uses described above are consistent with the PDD zoning use code and Contract of Sale subject to all requirements, thresholds and mitigation measures set forth in DSGEIS, FSGEIS, Findings Statement, this

Consistency Analysis Update of course all SEQR requirements. It is anticipated that at the time CAT submits a development plan, the Town, together with all interested and involved agencies, shall be able to analyze the plan, including, use of each building(s) i.e. standard industrial classification/SIC, wet versus dry use(s), manufacturing versus warehouse, etc., anticipated number of employees and job classifications or similar descriptions associated with the plan necessary to thoroughly evaluate the precise intensity of a proposed aviation/technical park impact potential, proposed use of runways, including, type of use and frequency, and the environmental conditions meet the Generic Supplemental FEIS Findings Statement of July 19, 2016 and this Consistency Analysis update.

Based on the foregoing, while the Sketch Plan lacks sufficient engineering detail to make an informed and complete determination as to its consistency with the existing FGEIS and Finding Statement, the Town is confident that CAT will formally submit a development plan for review by all interested and involved agencies that shall conform to the goals of the Reuse & Revitalization Plan; all findings and mitigation measures set forth in DSGEIS, FSGEIS, Findings Statement, and Consistency Analysis Update; and meet the goals, acreage, management and monitoring recited in the updated CHPP. A development plan that is not consistent with the DSGEIS, FSGEIS, Findings Statement, Consistency Analysis Update, and updated CHPP shall be subject to supplemental review under SEQRA and likely require additional study and mitigation.

Full Build Out Analysis for EPCAL Reuse & Revitalization Plan

As the Town of Riverhead, on behalf of and together with Town of Riverhead Community Development Agency, owner and applicant, has made the NYSDEC aware in its original application and supporting documents, and the Town's two subsequent submissions (November 2019 and April 2020) and repeated in this submission, the Town is seeking to divide the EPCAL property into 8 lots, five of which will be retained by the Town and three lots to be made available for sale or transfer with one of the three lots (Lot 8) sterilized or non-developable by offer of covenant. The Town, pursuant to the Article 70 of the Environmental Conservation Law (ECL) and its implementing regulations contained in 6 NYCRR Parts **621 and 624**, and its application requirements did provide a detailed description of the regulated activity, a description of the planned use of the subject property, to wit: sale with development consistent with Reuse & Revitalization Plan, and study addressing feasible alternatives which do not affect river resource values or on a site not regulated by the Wild Scenic and Recreational Rivers Act in accordance with the State Environmental Quality Review Act.

The Town has expressed, both orally and in writing, that the Community Development Agency is the owner of the subject property and neither the CDA nor Town has granted or bestowed, legally or informally, any entity or individual the right to act in place of the CDA or Town with respect to the Town's application for WSRR permit nor did the Town authorize any entity or individual to present a plan for proposed use of the property in place and instead of the

plan studied and presented by the Town. The Town's future plan for development and permitted use of the property, be it by and through sale or lease, has not changed from the FSGEIS/Reuse & Revitalization Plan, albeit Lots 1-41 and Lot 50, excluding Lot 21 and Lot 38, set forth in the proposed 50 Lot land division are now Lots 6, 7, and 8 of the proposed 8 Lot land division. While the Town entered into a contract for the sale of the subject property with CAT, the contract of sale did not authorize CAT to act in place of the Town in any matter related to EPCAL. Instead and quite the opposite, the contract makes clear that the Town is the sole entity authorized to make application for subdivision of the subject property. Moreover, the Town has rights under said contract that may or may not result in the sale to CAT. Hence, while the Town did accede to the DEC's directive to review and comment CAT's pictorial non engineered sketch plan, the Town has not and will not authorize CAT to act in place of the Town with respect to this application and consequently the Town will not substitute CAT's plan for the Town's plan which has been the subject of a FSGEIS and Findings Statement; Consistency Analysis; updates to Consistency Analysis; Comprehensive Habitat Protection Plan and updates to Comprehensive Habitat Protection Plans.

In response to the DEC's request that the Town recite the full-build out analysis in this updated Consistency Analysis same shall be reiterated and provided based upon the Town's Reuse and Revitalization Plan for EPCAL. It must be noted that the EPCAL Reuse and Revitalization Plan did include amendment to the Town of Riverhead Comprehensive Master Plan, amendment to the Calverton Urban Renewal Plan, creation and adoption of a Planned Development Zoning District, amendment to the zoning map of the Town of Riverhead to rezone the subject property to the Planned Development Zoning District all noticed and adopted pursuant to requirements of pertinent provisions of applicable law.

The Town shall require all applications seeking to develop property on Lots 6, 7, and 8 to comply with the Reuse & Revitalization Plan. The Reuse & Revitalization Plan recites and makes abundantly clear that any and all applications for development shall comply with a plethora of federal, state, and local laws, rules, regulations, and codes, including but not limited to, SEQRA requirements and regulations, site-specific SWPPP coverage under the State Pollutant Discharge Elimination System (SPDES) General Permit, New York State Energy Conservation Construction Code, Suffolk County Department of Health Services. Moreover, and in addition to compliance with the Reuse & Revitalization Plan, all applications shall comply with "An Act in relation to a plan for the development of the Enterprise Park at Calverton" signed into law October 23, 2013, and a plethora of provisions set forth in Town Law and Town Code of the Town of Riverhead and of course, the matter presently pending before the DEC, to wit: 8 Lot subdivision. Finally, any and all applications seeking development of Lots 6 and 7 shall comply with the myriad of covenants existing on the subject property, including the applicant's offer of covenants annexed and made part of the application for WSRR permit. As and for an example and in response to DEC inquiry regarding the areas identified and designated as an Area of Cultural Resource, the covenant requires that any site plan approval issued for individual lot development must require that if development is proposed in the area of the identified Cultural Resource Area and any cultural resources are encountered during demolition and/or construction as part of individual lot development, the developer must notify the Town of Riverhead CDA and in turn, the Town of

Riverhead CDA must then notify OPRHP, in accordance with the MOA, and mitigation, as identified by OPRHP and the Town based on the specific circumstance, shall be employed to protect and preserve the resource.

In addition, and more fully recited in the FSGEIS, all new or renovated construction shall require the use of energy efficient products; provide greenhouse gas mitigation measures, which may include (at the discretion of the Town Board) but not be limited to, use of highly-reflective (high albedo) roofing materials, use of green roofs, installation of high-efficiency heating, and ventilation and air conditioning systems incorporating motion sensors and lighting and climate control. In addition, all new or renovated construction shall demonstrate that water conservation measures, which may include low-flow fixtures, low-flow toilets, and/or drip irrigation are incorporated into design and construction; provide for site-specific SWPPP coverage under the State Pollutant Discharge Elimination System (SPDES) General Permit for the individual lots, and demonstrate that runoff from a two-inch storm will be collected and stored on the individual lots using drywells, on-site drainage reserve areas, or other drainage features acceptable to the Town, in accordance with Town and NYSDEC regulations. In addition, development of the EPCAL property must provide site-specific details regarding erosion and sedimentation control for each lot, demonstrate conformance to the Town's regulations regarding exterior lighting and incorporation of low-maintenance vegetation into landscape design based upon the requirement in the PD District that no more than 15 percent of any individual lot can consist of fertilizer-dependent vegetation.

As studied and fully set forth in the DSGEIS, FSGEIS, Finding Statement and supplemented in the Consistency Analysis; updates to Consistency Analysis; Comprehensive Habitat Protection Plan and updates to Comprehensive Habitat Protection Plans, said updates referenced herein addressing DEC's request for such items as deicing measures, impacts of deicing, bird study related to aviation use, sewer supply, water supply, updated grassland analysis etc., the subdivision of the EPCAL property is for ultimate redevelopment with a mix of uses (e.g., business [commercial and retail], industrial, government, energy park, recreation, utilities, residential), including the two runways, which would be available for limited redevelopment and/or historical use (aviation). The Reuse & Revitalization Plan require natural open space to be retained/created (1,514± acres) of 2323.9 acres is as follows: existing woodland to remain 787.3± acres (including 447.9 acres in wetland buffer area), existing grassland to remain: 512.4± acres, grassland to be created 70.6± acres, other meadow/brush land to remain 117.6 acres (including 66.1 acres in wetland buffer area), wetlands 16.4± and McKay Lake: 9.3± acres, plus an additional 367.4± acres of the overall site proposed to comprise lawn/landscaping, and Navy Parcel "A" and Navy Parcel "B," (approx. 200 acres) which are still owned being remediated by the U.S. Navy shall upon completion, pursuant to transfer (FOST), outlining the environmental suitability of a parcel for transfer to nonfederal agencies or to the public, the parcels will be transferred to the Town of Riverhead Community Development Agency (CDA) and in turn, preserved as open space and managed in accordance with the Comprehensive Habitat Protection Plan. The total developable area of lots 6, 7, and 8 is 593.2± acres. The remainder of the lots are described and identified as follows: Lot # 1 (292.7 acres and formerly Lot #48 of 50 Lot Subdivision) shall be preserved pursuant to the Long Island Pine Barrens Protection Act ("Act Article 57 of the New York State

Environmental Conservation Law; Lot # 2 (98.9 acres and formerly Lot # 49 of 50 Lot Subdivision) is impressed with New York State's longstanding common law public trust doctrine and shall be retained by the Town as and for public recreation. Lot # 3 (11.2 acres and formerly Lot# 21 of 50 Lot Subdivision) is known as Grumman Memorial Park (memorial to Grumman employees and advances in aerospace and aviation technology that took place at EPCAL) is owned by Town and reserved for future public emergency service, Lot # 4 (34.1 acres and formerly Lot # 42 of 50-Lot Subdivision) will be used as the recharge parcel for Calverton District's upgraded sewer treatment plant, and Lot # 5 (25.5 acres and formerly Lots # 45 and 46 of 50-Lot Subdivision) will continue to be used as a Town of Riverhead Community Center.

The Town pursuant to 6 NYCRR 617.10 prepared a supplemental generic environmental impact statement (supplementing the study performed by the Navy a decade or more ago) to access the environmental impacts of the revitalization plan, EPCAL Reuse & Revitalization Plan necessary to address the development plan and its zoning rather than a site or project specific EIS. The Town did analyze a theoretical mixed-use development for property described as Lots 6, 7 and 8 consistent with the Reuse & Revitalization Plan and PDD Zoning occurring over two time horizons to wit: 1) a near-term build-out in 2025; and 2) the full build-out in 2035.

Projected Development in 2025

The following interim mixed-use theoretical development program with a horizon year of 2025 said development program is generally consistent with that included in RKG's Absorption Analysis for NWIRP/EPCAL, although it examines less residential development than considered in that study:

289,606 SF of industrial/research and development (R&D)/flex space

1,330,305 SF of office/medical office/flex or institutional space

358,785 SF of commercial/retail space

150 Residential Units (supportive of commercial/industrial development at the EPCAL Property).

Potential Maximum Development Full Build-Out

In order to ensure comprehensive environmental review in accordance with SEQRA and its implementing regulations at 6 NYCRR Part 617, a theoretical mixed-use, full build-out development program has been identified, which reflected the potential ultimate development of the subject property in accordance with the Reuse and Redevelopment Plan, the PD District and the Subdivision Plan. The Theoretical Mixed-Use Development Program would consist of the following components:

6,886,836 SF of industrial/research and development (R&D)/flex space

2,927,232 SF of office/flex and 740,520 SF of medical office space (3,667,752 SF total)

805,860 SF commercial/retail space

300 Residential Units (supportive of commercial/industrial development at the EPCAL Property).

It must be noted that these uses were identified in the market study as a means to better position EPCAL in the marketplace to compete with the vacant land supply that is more centrally located, already subdivided, with utilities and infrastructure already in place. The market study urged the Town to implement that is flexible enough to support a variety of uses and enact a streamlined development review/approval process. Specifically, the study recommended a mixed use planned unit developments (PUD) at the site with identification of uses such as biomedical research and laboratory and manufacturing facilities, electronics and imaging, information technology and green technologies, including renewable energy and energy efficiency green technologies, reciting that these areas have are emerging as a focus for governmental and institutional organizations with available tax incentives, grants, and the like. The EPCAL sites proximity to Stony Brook University (SBU) and the Brookhaven National Laboratory (BNL), both participating in these emerging fields, increase EPCAL's ability to create a high-tech cluster that will potentially attract some of the region's high-tech and/or green technology businesses to the EPCAL facility. The market study reported that allowing a mix of uses would provide incentives for development on a speculative basis given the predicted relatively low demand anticipated for office and industrial space. The market study also recommended allowing development of commercial services or retail uses to support development uses and uses existing in businesses in the industrial core of the site. As to residential uses, the market study opined that since the EPCAL property was transferred to the town to restore the lost economy and stimulate/reenergize economic development, residential uses should be limited to no more than one third of any planned unit development project and possibly associated with workforce housing, assisted living and/or skilled nursing facilities to support the increasing percentage of seniors in the area. The Town is confident that the Reuse & Revitalization Plan, An Act in Relation to EPCAL and of course, the adoption of the PD Zoning District reflect the recommendations of the market study.

While prior use of the EPCAL property during the 1960s through and until late 1980s - early 1990s did include active airport use, including manufacture and testing of A-6 Intruder, E-2 Hawkeye, and F-14 Tomcat, plus jet training for commercial airlines with the tower logging over 19000 flights per year and the remnants of the taxiways and runways exist, the market study identified numerous impediments, including but not limited to, substantial investment to upgrade to at least one of the runways so it is navigable, establishment of fueling facilities, development of one or more hangars, installation of navigation aids, , upgrades to perimeter fencing, and vehicle parking facilities projected to cost millions of dollars. In addition, while some funding could be available from the FAA for projects of this type, the Town would have to apply to the FAA to have this former private airport included in the National Plan for Integrated Airport Systems (NPIAS), a long arduous process, and compete on a national and local level for this funding. In addition, the Town would require approval from the State of New York's Aviation Bureau, inclusion in the State Airport System Plan (SASP), and necessitate the development of an Airport Master Plan (AMP) by the Town (to plan the future development of the facility), which includes a five to ten year plan as and for a Capital Improvement Plan (CIP) and require maintenance in perpetuity. The study highlighted that a general aviation airport, one that

typically serves recreational fliers who own and operate personal aircraft and business aircraft used by companies to move personnel or products to areas not served by commercial airlines will likely be unable to compete with existing airports in the region, including Brookhaven, Gabrieski Airport, and MacArthur Islip Airport. The study ranked the quality, condition and capacity of the facilities at Gabrieski Airport as far superior to those available at EPCAL and the facilities at MacArthur Airport considerably superior as those at EPCAL, plus MacArthur also enjoys a superior location with better access to population and employment centers. This is likely more true today, as will be highlighted below, as the airports proximate to EPCAL, to wit: Gabrieski Airport, MacArthur Airport and Republic Airport have been approved and undergone not one but perhaps two or three expansions in the recent past, with yet another expansion "Stratosphere Development Plan " at Republic Airport under review and possible federal funding for another expansion at MacArthur touted in the near future, while the EPCAL site sits idle and remains idle and vacant.

Air Quality

Again, while prior use of the EPCAL property during the 1960s through and until late 1980s - early 1990s did include active airport use, including manufacture and flight testing, with possible presence of some level of greenhouse gas emissions associated with airplane use/activity at the site , such as carbon dioxide (CO2), carbon monoxide, nitrogen oxides, sulfur oxides, and lead, the existing conditions at the time of the air quality analysis up to and including the present reflect predominantly vacant land with minimal occupancy, minimal energy use and no direct source of greenhouse gas emissions operating at the site. The Environmental Facilities Navigator, an interactive online map utility maintained by the NYSDEC identifies various facilities of environmental interest and air emissions sources. According to a review of the Environmental Facilities Navigator (accessed back in October 2011), reported that there were no air emissions sources identified at, or proximate to (i.e., within one-half-mile of) the subject property and since that date there has been little to no change of the vacant undeveloped status of the site.

The DSGEIS and FSGEIS did evaluate the potential impacts of air emissions associated with full build out, be it generated by construction, traffic and permitted uses in the PD Zoning District. The evaluation of air emission with be highlighted below. Note, the sanitary discharge and capacity, as well as water demand and well capacity have been addressed in the SEQR record and are highlighted and updated under the headings Sewer Improvements, Ongoing and Proposed Future and Water Supply at EPCAL within this Consistency Analysis.

The air quality analysis evaluated existing conditions, the local air quality impacts from the proposed action, construction activity, and air toxins. The Air Quality Analysis appended to the DSGEIS consisting of attachments A through E approximately 118 pages of data demonstrated that the development of the proposed full-build out would not result in adverse air quality impacts. Specifically, the analysis demonstrated that all existing and future carbon monoxide concentrations were below the National Ambient Air Quality Standards (NAAQS) and none were expected to exceed NAAQS. The DSGEIS reported that all the one-hour CO concentrations ranged from 3.3 to 3.6 ppm and all the eight-hour CO concentrations ranged from 2.3 to 2.6 ppm, both below the CO NAAQS of 35 ppm and CO NAAQS of 9 ppm, respectively. Note, additional

detail regarding impacts from proposed action, construction, traffic and mitigation will be more fully detailed below.

As the DEC is aware based upon participation and review of the environmental submissions and SEQR records related to Gabrieski Airport Planned Development District Westhampton, New York, Long Island MacArthur Expansion (2005 and 2017 but not including the $70 million FAA funded expansion to alleviate traffic and improve air quality at NY's larger airports), and Proposed Safety, Infrastructure and Tenant Improvement Projects at Republic Airport, the environmental studies related to each of the above identified development projects followed a similar type of modeling for air emissions as recited in the EPCAL Reuse & Revitalization Plan, except that these projects all boasted the predominate use as an airport and as such segregated and studied emissions related to airport use as follows: aircraft, auxiliary power units (APUs), ground support equipment, stationary sources, and included an overlap of vehicular traffic analysis related to projected increase in traffic due to airport expansion. The analysis of above emissions for the projects at Gabrieski Airport, MacArthur Airport, and Republic Airport necessarily included types of aircraft operating at the site; additional aircraft to be operated at the site related to the development plan, operating time of each aircraft type during takeoff, climb out, approach, and idle (where idle is defined as taxi and departure queue), number of annual aircraft operations etc. These studies also included analysis of the landing to take off based upon the airport's physical characteristics, including location/distance of hangars, terminals, taxiway travel distance etc.; auxiliary power units on board specific aircraft during boarding and deboarding, length of boarding, and weather impacts to APUs; and emissions associated with ground support equipment (GSE) were determined by an inventory of equipment, fuel use, number of hours operating, and estimated emission related to equipment. Finally, the air quality analysis for the studies evaluated existing uses on the site relative to emissions. While the NYSDEC is requesting air emissions data with respect to aviation use at the EPCAL site related to applicant's request for a permit under the Wild Scenic Recreation Rivers Act, the Town and the attendant SEQR record demonstrate that there is no existing aviation use at the site and the site is predominantly vacant land. Moreover, the Town lacks the ability to forecast if any aviation use will occur at the site, the type of aviation use, type of airplane propeller vs jet engine, or the level or intensity of such use especially in light of the market analysis, difficulty to compete in this area of the market particularly due to recent expansions at Gabrieski Airport, MacArthur Airport, and Republic Airport, and cost prohibitions to finance the infrastructure to compete in the aviation market.

Notwithstanding the above and as the Town has acceded in the past to the NYSDEC's request for additional information, the Town shall provide the air emission parameters for which any aircraft or any aviation use at EPCAL shall be required to adhere to and provide an illustrative comparison with air emissions associated with Proposed Safety, Infrastructure and Tenant Improvement Projects at Republic Airport. Note, it shall not include the Stratosphere Development Plan which includes development of an addition 54 acres of the 530 acre site that is in the DSGEIS phase of environmental review. In addition, the Town shall detail the federal and state air emission standards, including aviation use, and restrictions set forth in the PDD Zoning District, DSGIES, and FSGEIS all applicable to aviation use.

Republic Airport consists of approximately 530 acres with 277.67± acres, or approximately 52 percent (*note 277. 67 acres is the calculation prior to the proposed improvements totaling 48. 29 acres of the at Republic Airport and prior to the Stratosphere Development Plan of five parcels totaling approx. 54 acres under environmental review) impervious surface (buildings and improvements). The Proposed (at present most if not all construction complete) Safety, Infrastructure and Tenant Improvement Projects at Republic Airport include an increase in impervious surfaces by 48.29 acres with a total impervious surface area of 325.96 acres or approximately 60 percent of the site. http://www.republicairport.net/pdf/feis/Vol I through V_FEA_050815[1].pdf. (See also two page pictorial of proposed improvements: Exhibit " AA " annexed to updated Consistency Analysis). Republic Airport is located in a densely populated area, boasting industrial uses and residential uses. (See Exhibit "BB" annexed to updated Consistency Analysis). At the time of the Proposed Safety, Infrastructure and Tenant Improvement Projects at Republic, the following entities operated at the site: Atlantic Aviation; Talon Air/Stratosphere; Air East; Northeastern Management: New York State Police; FAA Control Tower; Specialty Restaurants; Molloy College; Suffolk BOCES; Long Island Hotels/Marriott; SUNY Farmingdale Aviation; FQ Enterprises; SheltAir Aviation/ and American Airpower Museum. At the time of the airport operations analysis for the Proposed Safety, Infrastructure and Tenant the 2012 actual operations measured from the tower logs were at 100, 288 and projected to reach 125,522 in 2020. According to FAA data recited in AirNav.com, for the 12 months ending December 31, 2018, the following aircraft were based at Republic: 238 single engine planes; 47 multi engine airplanes; 54 jet airplanes; and 11 helicopters with aircraft operations averaging 543 per day with 49% local general aviation; 45% transient general aviation, 6% air taxi, 1% military, and 1% commercial. http://www.republicairport.net/pdf/feis/Vol I through V_FEA_050815[1].pdf. In contrast, the EPCAL site consists of approximately 2323 acres undeveloped pervious surface, except for the remnants of taxiways and runways left by the owner United States Navy and tenant Grumman Corporation. Pursuant to the Reuse & Revitalization Plan for EPCAL, the impervious surface percentage of the site shall never reach Republic Airport's 60 percent impervious area and likely not ever exceed 30 percent, as the acreage for development is limited to 593 acres with the remainder subject to non-development and managed under the Comprehensive Habitat Protection Plan. EPCAL is not located in a densely populated area and instead is surrounded by Calverton Cemetery, one of the largest in US and donated by the US Navy; approximately 3000 acres donated to the NYS DEC by the US Navy, agricultural land, some industrial and residential land. (See Exhibit "CC" annexed to updated Consistency Analysis). In addition, unlike Republic Airport with fueling abilities, the PD Zoning District prohibits the following industrial, manufacturing and commercial uses: garbage disposal dumps, landfills, incinerators or transfer stations; gas stations and gas manufacture from coal, coke, or petroleum; **petroleum and/or kerosene distillations or refining and storage facilities,** sand, gravel, mineral quarrying and mining; motor vehicle, boat, and equipment dismantling, wrecking, and compacting; outdoor sale or storage of motor vehicles, boats, and equipment except by special permit of the Town Board and subject to the following minimum standards: outdoor storage must be incidental and supportive to the principal use and building(s); outdoor storage may not exceed one third the size of the principal building(s); outdoor storage must be located on the same lot as the building(s) for principal use; outdoor storage areas shall be visually screened and landscaped

from public view, roadways, and adjacent properties; manufacture, warehousing, wholesaling, sale and storage of hazardous, dangerous, explosive material, including ammunition, acids, and any use which generates offensive noise, vibration, dust, smoke, gas or other nuisances shall be prohibited. In addition, the PD Zoning District requires all applications for development to follow a definitive procedure and process, including submission of a site plan application that conforms to the requirements of the Reuse and Revitalization Plan and is subject to Town Board site plan approval pursuant to Town Code of the Town of Riverhead, Chapter 301 and as part of site plan review and approval process by the Town Board, the Town shall refer the application to all relevant state and local agencies within 10 days of a complete application as required pursuant to § 5(2) of "An Act in relation to a plan for the development of the Enterprise Park at Calverton," signed into law October 23, 2013. In addition, to the extent required, the applicant seeking to develop property at EPCAL shall obtain all approvals, licenses, and/or permits required from other governmental agencies having jurisdiction over the proposed **development.** At present, there are no aircraft operating at the site.

The Safety, Infrastructure and Tenant Improvement Projects at Republic, the Reuse & Revitalization Plan for EPCAL, and for that matter all development projects and proposed uses made part of said projects, must comply with federal and state air quality requirements, including the Clean Air Act. While the Air Pollution Control Act of 1955 was the first federal legislation involving control of air pollution, this federal law was amended numerous times to expand the role of the federal government in air pollution control. For example, the Clean Air Act of 1970 authorized the development of comprehensive federal and state regulations to limit emissions from both stationary (industrial) sources and mobile sources. Four major regulatory programs were initiated with expanded enforcement authority, to wit: the National Ambient Air Quality Standards (NAAQS, pronounced "knacks"), State Implementation Plans (SIPs), New Source Performance Standards (NSPS), and National Emission Standards for Hazardous Air Pollutants (NESHAPs). At the time of the Clean Air Act of 1970, the federal government adopted the National Environmental Policy Act that established the U.S. Environmental Protection Agency (EPA) to implement the various requirements included in the Clean Water Acts. The Clean Water Act has been modified several times and the amendments in 1990 substantially increased the authority and responsibility of the federal government. New regulatory programs were authorized for control of acid deposition (acid rain) and for the issuance of stationary source operating permits. The NESHAPs were incorporated into a greatly expanded program for controlling toxic air pollutants. The provisions for attainment and maintenance of NAAQS were substantially modified and expanded. Other revisions included provisions regarding stratospheric ozone protection, increased enforcement authority, and expanded research programs. These laws and the relationship and regulatory authority of the Safety, Infrastructure and Tenant Improvement Projects at Republic, the Reuse & Revitalization Plan for EPCAL, be it existing or proposed future development/use, type of use, regulation of aircraft, vehicle, and a plethora of other emissions are set forth below.

Pursuant to the requirements of the CAA, the EPA establishes, enforces, and periodically reviews the NAAQS. The NAAQS are set to safeguard public health and environmental welfare against the detrimental effects of ambient air pollution and are defined as primary and/or

secondary standards. Primary NAAQS provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. Secondary NAAQS provide public welfare protection, including protection against decreased visibility and damage to animals, vegetation, and physical structures.

The EPA identified six common air pollutants, referred to as criteria pollutants: sulfur dioxide (SO2), carbon monoxide (CO), photochemical oxidants (ozone), nitrogen dioxide (NO2), total suspended particulates (TSP), and lead (Pb). Note, the EPA reported that aircraft contribute 12 percent of U.S. transportation emissions, and account for three percent of the nation's total greenhouse gas production. Globally, aviation produced 2.4 percent of total CO2 emissions in 2018. Airplanes emit particles and gases such as carbon dioxide (CO2), water vapor, hydrocarbons, carbon monoxide, nitrogen oxides, sulfur oxides, lead, and black carbon which interact among themselves and with the atmosphere. The National Ambient Air Quality Standards (NAAQS) have been established for these pollutants. In addition, New York State established a set of standards NAAQS, equal to or more strict than the NAAQS. The NAAQS are listed in the table below. The NYSDEC has adopted these same air quality standards.

The 1990 U.S. Clean Air Act Amendments resulted in states being divided into attainment and non-attainment areas, with classifications based upon the severity of their air quality problems. Air quality control regions are classified and divided into one of three categories: attainment, unclassified, or non-attainment depending upon air quality data and ambient concentrations of pollutants. Attainment areas are regions where ambient concentrations of a pollutant arc below the respective NAAQS; non-attainment areas are those where concentrations exceed the NAAQS. An unclassified area is a region where data are insufficient to make a determination. An unclassified area is generally considered as an attainment area for administrative purposes, and a single area can be in attainment of the standards for some pollutants while being in non-attainment for others. Areas that are in transition back to attainment are designated as maintenance areas. Ozone nonattainment areas are further classified as extreme, severe, moderate, or marginal. An area is designated as attainment/unclassifiable when there is a lack of sufficient data to form the basis of an attainment status determination.

In 2004, the EPA designated the five boroughs of New York City as well as Nassau, Suffolk, Rockland, Westchester and Orange counties as PM2.5 nonattainment areas under the CAA. Presently, Suffolk County is designated as a moderate nonattainment area for the 2008 8-hour O3 standard and a maintenance area for the 2006 PM2.5 standard.

National Ambient Air Quality (NAAQ) Standards

Pollutant [links to historical tables of NAAQS reviews]		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		primary and secondary	Rolling 3 month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb (2)	Annual Mean
Ozone (O_3)		primary and secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM)	$PM_{2.5}$	primary	1 year	12.0 µg/m^3	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m^3	annual mean, averaged over 3 years

Pollutant [links to historical tables of NAAQS reviews]		Primary/ Secondary	Averaging Time	Level	Form
		primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)		primary	1 hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Source: EPA, NAAQS at http://www.epa.gov/air/cflteria.htnnl. April 2017.

Notes: ppb = parts per billion, ppm - parts per million, and ug/m} = micrograms per cubic meter of air.

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m3 as a calendar quarter average) also remain in effect.

(2) The level of the annual NO2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O3 standards and

transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

(4) The previous SO2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2)any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO2 standards or is not meeting the requirements of a SIP call under the previous SO2 standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

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EPA-Designated Nonattainment/Maintenance Status for Project Area

County, State	Area Name	Pollutant	Classification	Part/Whole?(1)
Suffolk County, New York	New York-N. New Jersey-Long Island	8-hour Ozone (2008 Standard)	Nonattainment (Moderate)	Whole
		PM-2.5 (2006)	Re-designated to Maintenance on	

Source: EPA, Green Book at http://www.epa.gov/airqualtty/greenbook/, April 2017.

Notes: (1) The column "County NA Part/Whole" indicates whether only a part of the county or the whole county is designated nonattainment.

Obviously, the Safety, Infrastructure and Tenant Improvement Projects at Republic, the Reuse & Revitalization Plan for EPCAL, and for that matter all development projects and proposed uses made part of said projects, be it at the projected pre-development stage, development or post development stage, aviation use or other uses, must be evaluated and comply with the above air quality requirements. The Safety, Infrastructure and Tenant Improvement Projects at Republic Airport are now complete. It is not surprising that the air quality and emissions analysis, together with mitigation measures related to the Safety, Infrastructure and Tenant Improvement Project, aircraft existing and operating on site and projections for new aircraft as the type (the FEA described the inability to predict type of aircraft, aircraft engine type or use of the aircraft and reported that same could not be ascertained until after build out), construction, traffic and potential increased traffic related to full build out closely mirrored the EPCAL Reuse & Revitalization Plan albeit at EPCAL there is presently no aviation use on site and future aviation use, type of aircraft, engine is speculative at best based upon market study and other factors recited above as both air quality analysis were performed by VHB Engineering, Surveying and landscape Architecture, PC. The air emissions analysis for the full-build out of the Reuse & Revitalization Plan at EPCAL was equally thorough and detailed as the Republic Airport

project, and the analysis for each used similar models and data bases, including USEPA publicly-accessible electronic database of air emissions sources, NYSDEC monitoring data and monitoring sites, the NYSDEC's GHG policy for reporting and accessing GHG emissions associated with a project and inventory of mitigation measures, NYSDOT monitoring data and monitoring sites. The air analysis for the EPCAL Reuse & Revitalization Plan evaluated mobile source hotspot, air toxics, and stationary source GHG, and construction emissions from the proposed action.

The air quality analysis for Safety, Infrastructure and Tenant Improvement Projects at Republic Airport (evaluation included existing airport use and expansion of aviation use, to wit: 2012 actual operations measured from the tower logs were at 100,288 and projected to reach 125,522 in 2020 with 350 aircraft operating at site, together with existing uses i.e. Marriott Hotel, BOCES, Molloy College etc. existing traffic and projected traffic) concluded that that construction and implementation of the Proposed Action would not cause an increase in air emissions above the applicable *de minimis* thresholds established by the General Conformity Rule in 40 CFR Part 93, §93.153 and that no further analysis with respect to General Conformity is needed and the Proposed Action conforms to the New York SIP and the Clean Air Act (CAA) and the development would not: cause or contribute to any new violation of any standard in any area; increase the frequency or severity of any existing violation of any standard in any area; or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area. http://www.republicairport.net/pdf/feis/Vol_I through V_FEA_050815[1].pdf.

Briefly, as all of the above is fully set forth in the environmental record for the EPCAL Reuse & Revitalization Plan, the mobile source modeling followed the USEPA's hotspot modeling guidelines, NYSDOT's Project Environmental Guidelines and emissions date, plus USEPA's mobile source models. The traffic data was evaluated and the intersections that are currently the most congested and expected to experience an increase in project-generated traffic were identified. The vehicle traffic and the study of air emissions represented the worst-case conditions, which includes the increase in traffic volumes due to specific projects proposed for the study area, projected traffic growth over time, and future traffic associated with the redevelopment. The air quality study evaluated the potential for impacts due to air toxics based the Federal Highway Administration (FHWA) guidance documents. The air quality evaluation demonstrated that the development of the proposed project would not result in adverse air quality impacts. The air quality analysis evaluates existing conditions, the local air quality impacts from the proposed action, construction activity, and air toxics. The microscale analysis evaluated site-specific impacts from the vehicles traveling through congested intersections in the study area. This analysis demonstrates that all existing and future carbon monoxide concentrations are below the NAAQS. Specifically, all the one-hour CO concentrations ranged from 3.3 to 3.6 ppm and are well below the CO NAAQS of 35 ppm and all the eight-hour CO concentrations ranged from 2.3 to 2.6 ppm and are below the CO NAAQS of 9 ppm. The air quality study demonstrated that the proposed project conforms to the CAAA and the SIP because: No violation of the NAAQS would be expected to be created; no increase in the frequency or severity of any existing violations (none of which are related to this development) would be anticipated to occur; no delay in attainment of any NAAQS would be expected to result due to the implementation of the proposed action.

Based upon the analysis presented in the EPCAL Reuse & Revitalization air quality analysis no significant adverse air quality impacts were anticipated from the proposed full-build out.

The proposed mitigation with respect to air quality impacts during the construction period include but are not limited to, emission controls for construction vehicles, machinery and equipment (proper maintenance of manufacturer's muffler equipment or other regulatory-required emissions control devices); construction vehicles and equipment to include and properly maintain emission control equipment and, where appropriate, vehicles will reduce idling on-site; appropriate methods of dust control would be determined by the surfaces affected (i.e. roadways or disturbed areas) and would include, as necessary, the application of water, the use of stone in construction entrances and roads, and temporary and permanent vegetative cover. The proposed project is being designed to minimize air quality impacts as future development will be designed to meet or exceed the New York State Energy Conservation Construction Code, which requires use of energy efficient products in all new and renovated construction, and with respect to stationary sources, during the proposed project's design phase, the following greenhouse gas mitigation measures will be considered: use of highly-reflective (high albedo) roofing materials; use of green roofs; installation of high-efficiency heating, ventilation and air conditioning systems; supplementation with self-generated energy (e.g., on-site renewable energy sources).

Sewer and Water

The proposed 8-Lot Major Subdivision Map will require approval from the Suffolk County Department of Health Services under Article 12 (necessary to establish method(s) for the proposed subdivision's compliance for its wastewater disposal). The County Health Department will also review the application for potable water supply, which shall be via the Riverhead Water District. An application for subdivision approval is presently pending before the Suffolk County Department of Health Services. The Sewer Improvements, Ongoing And Proposed Future Improvements and Water Supply At EPCAL will be described separately below.

Sewer Improvements, Ongoing And Proposed Future Improvements

The Town of Riverhead, and in particular EPCAL, is at the western end of the Peconic Estuary System. In 1987, the Clean Water Act was amended to provide for creation of a National Estuary Program with its goal to promote long term planning and management in nationally significant estuaries threatened by overuse, development and pollution. The Peconic Estuary is one of 28 estuaries in the National Estuary Program (NEP) administered by the U.S. Environmental Protection Agency (EPA) and was accepted into the program as an "Estuary of National Significance" in 1992. The Peconic Estuary Program (PEP) is part of the NEP and is sponsored by the EPA, the State's Department of Environmental Conservation (DEC), and the Suffolk County Department of Health Services (SCDHS). On or about July 2001, after years of study by the EPA, DEC and SCDHS, together with input from a group of citizens, technical experts, and federal, state, and local officials (PEP Management Conference) a Comprehensive Conservation and Management Plan (CCMP) designed to protect and preserve the Peconic Estuary system was completed and presented to the then Governor Pataki for approval and forward to the EPA, with the hope that the federal agency would allocate funding to help

implement the plan. On October 30, 2002, County Executive Robert Gaffney joined with representatives from state, local and federal government approved the CCMP.

The CCMP recommended a host of pollution abatement strategies be pursued in the Peconic Bay area, including a recommendation that all of the wastewater treatment facility outfalls be relocated to ground water recharge. (Note, "all" refers to and includes the Brookhaven, Riverhead, and Calverton (EPCAL) wastewater treatment facilities). Specifically, as to the Calverton Sewer District, the CCMP recommended upgrade the existing Calverton Sewerage Treatment Plant from secondary to tertiary treatment (design and construction detail provide for existing wastewater treatment tanks used for equalization and the installation of membrane bio reactors (MBRs) required for treatment of 200,000 gallons per day "gpd") and relocation of the effluent discharge north of the groundwater divide (a theoretical line that identifies the location of the break in the direction of groundwater flow essentially bisects the property in half with groundwater to the south of the line flowing towards the Peconic River and groundwater to the north of the line flowing towards the Long Island Sound).

The DSGEIS and FSGEIS recited the projected the sanitary waste at 200,000 gallons per day of sanitary waste at full build out, and, as detailed below, fully embraced the recommendations of the Environmental Protection Agency, New York State Department of Conservation and Suffolk County Health Department and the CCMP.

A Sewage Treatment Plant (also referred to as "Central Sewage Treatment Plan") was constructed at the NWIRP and operated by Grumman Corporation to treat sewage generated by the site improvements, including but not limited to, Flight Emergency Center; Transportation/Ground Support Building/Plant Six, Plant Seven, Paint Shop, and Warehouse (essentially buildings and improvements made on the NWIRP site and later described as the "core" area of NWIRP). The NWIRP/Grumman collection system was comprised of approximately 7,650 linear feet of gravity sewer main with the system collecting flow from the then existing industrial properties connected to the sewer district via gravity sewers with flow collected by the gravity sewers drains towards either an intermediate pumping station or directly to the influent pumping station of the wastewater treatment facility. Three pumping stations, referred to as the Hangar Pump Station, Ball Field Pump Station and Office Pump Station, together with the main pumping station at the wastewater treatment plan comprised the conveyance system for the wastewater.

Shortly after closure of all operations at the NWIRP and at or near the time of transfer of the EPCAL property from the Department of Navy to the Town of Riverhead Community Development Agency, the Town of Riverhead formed the Calverton Sewer District to maintain the central wastewater collection and infrastructure originally constructed to service the NWIRP. Note, there are two non-contiguous parcels located within the Calverton Sewer District, one located on the south side of Grumman Boulevard and described as SCTM # 0600-141-2-2.1 with treatment via an on-site septic system and a parcel of property located on the south side of Middle Country Road owned by the State University of New York SCTM # 0600-135-1-7.3 included in Calverton Sewer District Extension No. 2.

In 2002, the Town approved Sewer District Extension No. 1 to include the Burman Subdivision to accommodate planned development outside of the original sewage treatment core area. In 2004, the Town approved Sewer District Extension No. 2 to accommodate the Stony Brook University Incubator and projects outside the eastern boundary of the core area. The project included the addition (installation) of approximately 2,290 linear feet of dry 6-inch diameter piping was installed during a sewer district improvement project that included a gravity sewer extension along Jan Way. It should be noted that the 6-inch pipe was installed with the foresight that it could be used as part of the force main needed for the future diversion of treated effluent from McKay Lake to a groundwater recharge location north of the groundwater divide.

At present, the average daily sanitary flow being treated by the District is 25,000 gallons per day "gpd"). A development project within the Berman Subdivision known as Peconic Care Rehabilitation and Research Center (also known as "EDBK at Calverton, LLC") is under construction and it is anticipated that upon completion EDBK at Calverton, LLC will generate 16,200 gpd and increase the flow to the treatment facility from 25,000 gpd to 41,200 gpd.

As will be discussed below and more fully detailed in the Map & Plan for Calverton Sewer District Extension No. 3, the recent and ongoing upgrades and construction of improvements to the Calverton Sewage Treatment Plant, will provide additional capacity that will accommodate the increase flow related to EDBK at Calverton, LLC and provide capacity for a projected five year built out at EPCAL studied in the DSGEIS and made part of the FSGEIS. A copy of the Map & Plan for Calverton Sewer District Extension No. 3 is annexed hereto as Exhibit "O"-Note, due to the length of this document only the first 25 pages are annexed hereto and the full document is available on the flash drive made part of and included as part of Applicant's Supplemental Submittal Documents/Exhibits.

On or about September of 2019, the Town completed plans, let bid documents, awarded contracts and issued the requisite Notice to Proceed to begin Module No. 1. Module No. 1 is the upgrade to the existing treatment facility to an advanced wastewater treatment facility plant including elimination of the surface water outfall to the Peconic Estuary and relocation for disposal on land of EPCAL north of the ground water divide, all in conformance with the recommendations of the CCMP and the Total Maximum Daily Load (TMDL) set by the EPA. The Module No. 1 upgrade, the first of three upgrades/modules with each module to increase capacity by 100,000 gpd, will increase permitted capacity to 100,000 gpd or 58,000 gpd (100,000 gpd less 41,000 gpd) available for capacity expansion dictated by development with a capacity sufficient to accommodate approximately 1,000,000 square feet of industrial build-out with an estimated increased flow of 40,000 gpd.

Briefly and as stated above, Module No. 1 requires the existing wastewater treatment plan to be upgraded and expanded to an advanced wastewater treatment facility with an average daily design flow of 100,000 gpd. As the design and bid documents referenced above reflect, after research and evaluation it was determined that the upgrade to the wastewater system upgrade would utilize Membrane Biological Reactor treatment processes. The MBR process is designed to provide carbonaceous BOD removal, nitrification and denitrification in the same way as a traditional activated sludge process. Aeration and mixing are carried out in both treatment processes. One of the benefits of the MBR process, over traditional activated sludge processes, is

that the MBR can provide effluent clarification within the aeration tank and does not require separate equipment for effluent filtration. Another benefit is reduced footprint requirements for MBR systems when compared to traditional activated sludge processes. The advancements in (MBR) technology enables a maximum process flow of 300,000 gpd to be treated within the existing waste water treatment plant tankage; additional tankage is required only for waste sludge holding under the 300,000 gpd flow scenario when the flow exceeds the 100,000 gpd mark. The 100,000 gpd (Module No. 1) design flow will be completely installed within the existing process tankage footprint to support the installation of an equalization basin, MBR basins, sludge holding tanks, anoxic basins and an effluent pumping station. The numerous and voluminous bid documents made public and posted on the Town's website provide all construction detail for each and every phase, including mechanical, plumbing, electric of Module No. 1 and may be accessed at TownofRiverheadny.gov scroll to "Popular Pages" click "Bid Results" and Scroll to Calverton Sewer District Module No. 1.

While it is anticipated that Module No. 1 will be completed on or before March 6, 2021, the timeline below provides some projected construction/completion milestones related to the project:

- 3/1/2020 – Complete all major equipment submittal approvals
- 4/15/2020 – Effluent force main and recharge bed construction 100% complete
- 5/1/2020 – Contract S – Force Main and Recharge Bed Construction contract completion date
- 12/1/2020 – Complete process upgrade with new MBR and ancillary systems online
- 2/1/2021 – complete new effluent pump station for diverting treated flow to new recharge bed outfall 023 and abandon existing outfall 001 to McKay Lake
    - Based on existing process remaining online during MBR installation, this pump station can only be built after new process proves out and existing process is taken offline
- 3/1/2021 – Complete STP upgrade including all demolition and site restoration
- 3/6/2021 – Contract completion date for the following contracts
    - Contract G – General and Mechanical Construction
    - Contract E – Electrical Construction
    - Contract P – Plumbing Construction

The Town Code Chapter 265, consistent with the Clean Water Act of 1972, prohibits discharge of industrial waste, including liquid or liquid-carried solid, liquid and/or gaseous wastes from industrial manufacturing processes, and such other pollutants which will interfere, pass through, or otherwise be incompatible with its operation of the Calverton Sewer District wastewater treatment plant. As fully set forth in Chapter 265 Part 4 (Sections 265-51 through 265-99), this prohibition extends to discharge of industrial waste into any well, discharge to any natural outlet, or in any area under the jurisdiction of the district, any wastewater or other polluted waters. A copy of Chapter 265 is annexed hereto as Exhibit "P".

Pursuant to Chapter 265, all industrial users are required to obtain a wastewater discharge permit and shall complete and file with the Superintendent an application which shall include but not be limited to, the SIC code of both the industry and any categorical processes, wastewater

constituents and characteristics as determined by a reliable analytical laboratory approved by the New York State Department of Health; time and duration of the discharge; average daily peak wastewater flow rates, including daily, monthly and seasonal variations, if any; site plans, floor plans, mechanical and plumbing plans and details to show all sewers, sewer connections and appurtenances; description of activities, facilities and plant processes on the premises, including all materials which are or could be discharged to the public sewer; each product produced by type, amount, process or processes and rate of production; type and amount of raw materials processed (average and maximum per day); nature and concentration of any pollutants in the discharge which are limited by any county, state or federal standards, and a statement whether or not the standards are being met on a consistent basis and, if not, whether additional operation and maintenance (O&M) and/or additional pretreatment is required for the user to meet all applicable standards; any other information as may deemed by the Superintendent to be necessary to evaluate the permit application. A determination requiring pre-treatment of pollutants shall be at the user's sole cost and expense. All pre-treatment shall comply with federal, state, and local provisions of law, including, Article 7 "Water Pollution Control" and Article 12 "Toxic and Hazardous Materials Storage and Handling Controls" of the Suffolk County Sanitary Code, together with requirement for a SPDES permit with standards and regulation for monitoring and sampling by local, state and federal agencies.

While the primary and initial focus of the Clean Water Act referenced above and incorporated into Town Code 265 was the concern for pollutants in industrial process wastewater discharges into public sewage plants and discharge of pollutants into our waters, it became evident that more diffuse sources (occurring over a wide area) of water pollution, including agricultural and urban runoff and airport deicing operations. The identification of airport deicing operations as a potential source of pollution and negative impact on water quality was set forth in the Environmental Protection Agency published the National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges adopted in 1990. (55 FR 47989; codified in 40 CFR 122). As the Planned Development Zoning District adopted as part of the Reuse & Revitalization Plan for EPCAL provides for the potential for aviation use, the Town recognizes the importance to address deicing procedures required for aviation activity at the site.

Aviation Use Stormwater Management and Deicing

With regard to aviation deicing activities, the Administrator of the U.S. Environmental Protection Agency (EPA) has signed for publication in the Federal Register technology-based effluent limitations guidelines and new source performance standards to control discharges of pollutants from airport deicing operations. The requirements generally apply to wastewater associated with the deicing of airfield pavement at primary airports. The rule also establishes new source performance standards for wastewater discharges associated with aircraft deicing for a subset of new airports. EPA expects this regulation to reduce pollutant discharges by at least 16 million pounds per year, at an annual cost of about $3.5 million.

Airlines and airports conduct deicing operations on aircraft and airfield pavement to ensure the safety of passenger and cargo flights. In the absence of controls, deicing chemicals are widely dispersed causing pollutants to enter nearby rivers, lakes, streams, and bays.

Effluent guidelines are national regulations that control the discharge of pollutants to surface waters and to publicly owned treatment works. EPA issues effluent guidelines for categories of existing sources and new sources under Title III of the Clean Water Act to control pollution from these sources. The guidelines are based on the performance of treatment and control technologies. These guidelines are implemented in discharge permits issued by states and EPA regional offices under the National Pollutant Discharge Elimination System. Existing and new primary airports with 1,000 or more annual jet departures ("non-propeller aircraft") (i.e. 1,000 departures equals four (4) departing flights per day/per (5) five-weekdays per year) that generate wastewater associated with airfield pavement deicing are to use non-urea-containing deicers, or alternatively, meet a numeric effluent limitation for ammonia.

New airports with 10,000 annual departures located in cold climate zones are required to collect 60 percent of aircraft deicing fluid after deicing.

Airports that discharge the collected aircraft deicing fluid directly to waters of the U.S. must also meet numeric discharge requirements for chemical oxygen demand. The rule does not establish uniform, national requirements for aircraft deicing discharges at existing airports.

(Source: United States Office of Water EPA-821-F-12-002 Environmental Protection Agency 4303T April 2012).

Aviation use operators will comply with the **State Pollution Discharge Elimination System (SPDES) Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity** (GP-0-17-004) (issued pursuant to Article 17, Titles 7,8,and Article 70 of the Environmental Conservation Law, effective July 23, 2020) for discharges to surface waters.

Water quality necessary to avoid disruption of eastern tiger salamander populations as well as other amphibians sensitive to changes in surface water chemistry will be determined during the permit application and review process. Operations of air transportation is described under Sector S in Part III of GP-0-17-007 (updated CHPP Exhibit "H"). As required, water quality effluent limits will conform to Sector S "Air Transportation" for specific SPDES permit requirements.

Example: Denver Airport Summary:

- DEN has 5 centralized deice pads with a total of 27 deicing spaces, and four deicing contractors.
- The overall average time to deice an aircraft is less than 16 minutes. Individual times vary greatly though, based on the size of the aircraft and other factors.
- Individual queue times vary greatly as well, but the average is between 5-7 minutes.
- About 48-64 aircraft can be deiced per hour. Deicing throughput can't exceed the runway capacity at any given time. Runway capacity is dictated by the FAA based on weather conditions.
- Aircraft Deicing Fluid (ADF) is made up of a chemical called propylene glycol blended with water and additives to allow it to effectively remove ice and snow from aircraft

before departure. The cost of fluid varies widely due to market conditions, but is generally $8-$12 per diluted gallon.

- Glycol is collected at the airport and is recycled into windshield washer fluid and other consumer products. DEN has one of the most comprehensive deicing fluid collection and recycling systems in the world, boasting an average collection rate of about 70 percent of all fluid applied to aircraft in a typical winter season.
- DEN has 70 million gallons of storm water retention capacity across 13 ponds. On-site storage infrastructure allows for efficient operation near departure runways and helps keep ADF out of the storm water system.

EPCAL Proposed Aircraft Deicing Procedures

The proposed aviation or airport use will include a diked deicing pad, where aircraft will be undergo deicing procedures. These procedures typically involve a tanker truck with a discharge pump and spray equipment to apply the deicing fluids. The deicing fluids are applied to the aircraft with overspray and runoff collected within the diked pad and discharged through a closed system designed for stormwater/deicing product wastewater collection. The diked deicing containment pad directs surface flow to stormwater collection inlets that discharge by gravity or a force main to underground (UST) or above ground storage tanks (AGST). For example this would include a series of three (3) interconnected 20,000 gallon AGST, where Tank-1 includes an overflow device to Tank-2 and Tank-2 can overflow to Tank-3. The collection system includes double walled tanks and piping similar to UST systems approved for Suffolk County gas stations. The actual engineering designs will be prepared by the developer/aviation operator and shall require review by the Town of Riverhead and likely the Suffolk County Department of Health Services. In 2011, the Town of Islip Mac Arthur Airport, Ronkonkoma, NY upgraded its UST fuel storage system to above ground storage tanks. The former fuel storage USTs were cleaned, coated with epoxy and used as stormwater control devices. In much the same way aircraft deicing effluents will be collected and stored in tanks, then removed and disposed of at an approved recycling facility.

A vacuum truck is used to empty the tanks and transport the effluent to an approved industrial waste water disposal facility, or to a recycling facility where the mixture is refined and typically resold as windshield washing fluid. As noted earlier, this wastewater will not be disposed into the Calverton Sewer District's treatment plant.

Common liquid aircraft deicing products include mixtures of methylene glycol or propylene glycol (anti-freeze). Each of these compounds contain 1,4-Dioxane, an emerging groundwater contaminant.

The USEPA has determined 1,4-Dioxane is a likely human carcinogen and has been found in groundwater at sites throughout the United States. The physical and chemical properties and behavior of 1,4-dioxane create challenges for its characterization and treatment. It is highly mobile and does not readily biodegrade in the environment.

The US Navy has been conducting groundwater monitoring and remediation programs at the 2,900-acre former Grumman facility for two decades at parcels it retains.

Recently, test wells have detected the presence of emerging contaminants: 1,4 dioxane and PFAS in proximity to several Navy remediation sites. The Navy remediation sites are located west of the eastern runway. While shown on the subdivision map as Navy Parcels A & B, both parcels are not within the boundaries of the 8- Lot Subdivision. The subject lots are described as Parcel A (SCTM # 600-135-01-007.1) comprised of 30.559 acres and Parcel B (SCTM # 600 135-01-007.2) comprised of 168.902 acres. Each of these lots are retained by the US Navy.

Based on the foregoing, aircraft deicing products be properly managed and controlled. It is recommended that deicing products be stored indoors, in a secured facility that is designed for spill containment. Application to aircraft must avoid sensitive habitat areas located along the 10,000 foot taxiway/runway. Emergency spill containment kits, proper personnel training, and installation of groundwater monitoring wells along a diked aircraft deicing pad will provide both emergency response and long term monitoring.

EPCAL Proposed Runway/Taxiway Deicing Procedures

Formate salt-based deicers are used in areas where strict controls are in place to minimize negative impacts on the environment. It is presumed that runway and taxiway areas will be deiced using formate salt (potassium formate KHCO2) based deicers, beet juice and brine. The runway and taxiway sheet runoff generated during de-icing, snow melt and rainfall events will be conveyed to the Drainage Reserve Areas. The concentration of salts in this stormwater may have minor impact on the grasses located immediately adjacent to the paved areas. Within these existing grass areas, phyto-toxicity is expected to be a temporary impact. Minor impacts are expected because the dominant grass plants (big bluestem, little bluestem, panicium, and fescue) are dormant during the winter months, have deep roots that aid in protection from salts concentrated in the runoff, and will likely recover in the mid-to-late spring as increased precipitation "flushes" the salt through the sandy and sandy-loam soil profile. Therefore no long term adverse impact to local vegetation is expected.

In the past, urea was used as a deicing agent for airport tarmacs. Because urea has a significant negative impact on the environment, it was replaced with chloride and acetate deicers. Now formate based deicers are considered better for the environment and have become the deicer of choice for many airports globally.

Advantages of formic acid for runway deicing:

- Readily biodegradable
- Lower Chemical Oxygen Demand (COD) compared to acetates
- Ice-melting even at very low temperatures
- Can be formulated to meet the AMS 1435 for runways

<u>10,000 LF Runway/Taxiway: Potential Impacts of De-icing on Eastern Tiger Salamander Ponds and Freshwater Wetlands</u>

There are four (4) known freshwater wetlands are located in the Camelot II Subdivision (filed map no. 11500 dated March 9, 2007). The wetlands are inclusive of eastern tiger salamander habitat protection areas that lie within Lot 7 and are located along the west side of the 10,000 LF taxiway. At least one of these wetlands is a small breeding pond for eastern tiger salamander. The habitat protection areas (Non-disturbance Buffer Areas A and B) overlap the 10,000 LF taxiway/runway area and may be impacted by taxiway/runway deicing programs.

Field inspections of the wetlands had been conducted previously by this environmental analyst and others including NYSDEC staff biologists. During March 5-11, 2020 multiple field inspections were conducted by Jeffrey Seeman, CEP to record existing conditions and record observations relevant to potential deicing impacts on freshwater wetlands and known eastern tiger salamander habitat areas. (One of the previously identified freshwater wetlands was not accessible due to construction activities and fencing). Surface water was observed in three wetlands, and photographs were taken of each. The wetlands are receiving areas for stormwater runoff generated by the existing onsite conveyance system. The drainage areas include the paved runway and taxiway, along with grassland areas that separate the runway from the taxiway.

Field observations noted that ground surface elevations of the paved taxiway/runway are higher than the ground elevation of the median area grassland and higher than the ground elevation grassland area located east of the runway. It is expected that sheet flow from the crowned runway is distributed towards the east grassland, the median grassland and conveyed toward the wetlands via discharge outlets. This discharged stormwater flows along manmade (now naturalized) vegetated swales (approximately 15-foot wide), with final discharge to the freshwater wetlands.

Groundwater elevations in the area recorded from soil borings indicate these wetlands are also supported by groundwater. Seasonal variations in wetland/surface water elevations (ecologically defined as seasonally flooded freshwater emergent wetlands and freshwater forested wetlands) are attributed to groundwater and stormwater discharge. The conditions observed are indicative of eastern tiger salamander habitats and breeding areas. These freshwater wetlands are typical of coastal plain ponds and vernal pools.

According to studies **(updated CHPP Exhibit "I")** amphibians are sensitive to water body salinity variation, particularly sensitive to acetate based de-icing agents, and to variations in water pH. The deicing agents can damage adult amphibians, and severely damage egg masses and young development stages of offspring (tadpoles). In addition to deicing for runway/taxiway areas, an expected increase in the EPCAL's impervious surface areas from post development (buildings, internal roadways and parking fields) infrastructure will increase surface runoff, decrease existing natural vegetated detention areas and potentially generate greater stormwater volumes and flow rates.

During engineering reviews of any proposed development for EPCAL, the stormwater control designs must account for the existing freshwater wetland systems (i.e. stormwater receiving areas), and mitigation must be employed to avoid impacts from stormwater discharges containing sediments, urban generated pollutants, maintenance and industrial products.

The actual influence on the wetlands and eastern tiger salamanders generated by runway/taxiway deicing can, at this time only be theoretical. There is significant natural vegetation within the drainage ways to detain and remediate stormwater quality. The existing drainage system behaves as a large bio-swale or rain garden, and may result in its own from of deicing agent mitigating measures.

10,000 LF Runway/Taxiway: Mitigating Measures for Potential Deicing Impacts **and Stormawater Management Impacts** on Eastern Tiger Salamander Ponds and Freshwater Wetlands

The mitigating measures are recommended to avoid or minimize impacts to stormwater discharge receiving waters that support EPCAL's freshwater wetlands and or support eastern tiger salamander habitat and breeding areas. The proposed mitigation is offered in order of hierarchy with the most intensive method listed as item 6. The key component of this mitigation is water quality monitoring. The monitoring shall include establishing a baseline for existing conditions for specific chemical compounds and physical components at each of EPCAL's surface water resources. Albeit generic in nature these mitigating measures will require aviation use operators comply with the State Pollution Discharge Elimination System (SPDES) Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity (GP-0-17-004) (issued pursuant to Article 17, Titles 7,8,and Article 70 of the Environmental Conservation Law, effective July 23, 2020) for discharges to surface waters. Water quality necessary to avoid disruption of eastern tiger salamander populations as well as other amphibians sensitive to changes in surface water chemistry will be determined during the permit application and review process. Operations of air transportation is described under Sector S in Part III of GP-0-17-007 (updated CHPP Exhibit "H"). As required, water quality effluent limits will conform to Sector S Air Transportation as cited below and to specific SPDES permit requirements:

Industrial Activity	Parameter	Effluent Limit
Urea as deicing from airfield:	Ammonia as Nitrogen	14.7 mg/L
100,000 gal. gycol based & Deicing/anti-icing chemicals:	Benchmark Monitoring Requirements (deicing outfalls: Table VII S-12)	
	BOD	30.0 mg/L
	COD	120.0 mg/L
	Total N	6.0 mg/L
	pH	6.0-9.0 s.u.

The Water Quality Monitoring Program will include sample points within the stormwater collection system which to date is undefined, with no formal engineered design plan. Sample collection locations are recommended to include upstream leaching pools and lysimeters for "first flush" samples, and downstream stormwater sample collection points (swales, diversion channels, rain gardens, culverts, etc.) to assess water quality. Groundwater monitoring wells are located throughout the EPCAL site and may provide additional information regarding water quality, however the focus of monitoring must be on the discharge of stormwater. Once water

quality thresholds are established; if a parameter exceeds the threshold, protocols will define required action. Examples of responses may include additional water sampling to qualify laboratory results, continued monitoring, re-direction of stormwater discharge to avoid adverse impacts to receiving waters. In lieu of a more detailed and comprehensive plan based on specific stormwater control designs and a CAT "engineered site plan" the following are listed as actions that will be undertaken if deicing compounds in stormwater runoff exceed an established threshold or by design, discharge to receiving waters can be shown to avoid the potential for impact. If no actions taken result in protecting water quality from deicing applications to an acceptable level, then use of the eastern runway/taxiway (10,000 LF) will be temporarily suspended due to ice. This procedure will protect aircraft, aircraft crew, and water quality. Once the runway is determined safe for use and no deicing is required, the runway will be reopened.

1. Water Quality Monitoring Program ~~if future developer intends to permit deicing~~: It is recommended that water samples be collected from the wetland areas to establish existing water quality. As a minimum, laboratory analyses should include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, pesticides, electric conductivity, turbidity, ammonia as nitrogen, total nitrogen, BOD, COD and pH. This information can be used to establish a pre-development water quality baseline. Additional water quality samples should be collected and analyzed quarterly as a long term stormwater/freshwater wetland water quality monitoring program. The monitoring program will provide necessary information on what impacts general development and deicing may or may not have on the freshwater wetlands and eastern tiger salamander habitats, and mitigating measures introduced to minimize or avoid adverse impacts. Guidance thresholds, action levels and required responses will be determined for specific EPCAL development, use(s) and locations within the site to avoid and or minimize impacts to receiving water that support freshwater wetlands and eastern tiger salamander breeding. Discharges to all surface water shall conform to specific requirements under the State Pollution Discharge Elimination System (SPDES) Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity (GP-0-17-004) and for aviation related uses as specified under Section S-Air Transportation.
2. Prepare and Implement Best Management Plan: The operator/owner of the site shall develop a plan of best management practices including to the maximum extent practicable prescribed recommendations of the Best Management Practices Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States, Calhoun, A. et al. The BMP shall be submitted to the Town of Riverhead to demonstrate how surface water quality and aquatic habitat protection will be implemented. The BMP shall be reviewed by the Town with coordinated review by NYSDEC prior to site plan approval and construction permit procurement by the applicant for proposed development activities.

3. Infrastructure Design: Infrastructure design shall comply with the NYSDEC guidance document for protection of eastern tiger salamander, especially engineered stormwater control and management systems along with parking field and roadway designs and their attendant drainage systems. These drainage designs require mitigating measures to control water quality that is discharged via the existing EPCAL infrastructure to surface

waters and freshwater wetlands. Additional Best Management and House Keeping programs listed in the SPDES MSGP (GP-0-17-004) and Sector S-Air Transportaion, control structures including sediment basins and diversion channels are anticipated along with bioengineered drainage swales and rain gardens. Emergency response plans must be included with engineered stormwater control/stormwater quality management plans to address potential for spills of industrial/commercially used compounds that may result in water quality impairment. Spill containment and diversion of stormwater to prevent conveyance to freshwater wetland habitats must be required.

4. Emergency Response Plans (ERP) must be included with engineered stormwater control/stormwater quality management plans to address potential for fuel spills and industrial/commercially used compounds that may result in water quality impairment. Spill containment and diversion of stormwater to prevent conveyance to freshwater wetland habitats must be required. The ERP shall be included with all site plan applications proposed at EPCAL with coordinated reviews conducted by the Town of Riverhead Fire Marshall, Planning Department, Suffolk County Department of Health Services and NYSDEC.

5. Infrastructure Maintenance: During future stages of EPCAL's proposed development related stormwater control systems, an infrastructure maintenance plan must be implemented. The plan shall describe inspection and maintenance of the site's stormwater control system.

6. Runway/Taxiway Winter Maintenance: Snow removal and placement of sand (for traction) at the 10,000 LF runway/taxiway areas would be permitted, but deicing by chemical treatments would cease.

7. Alfalfa Pellets: Alfalfa pellets can be used as deicing agents. It provides low concentrations of nitrogen, (similar to use of urea), with less environmental impact.

8. Runway/Taxiway Closure: To minimize and/or avoid adverse impacts to freshwater wetland and amphibians, especially tiger salamander breeding periods, protection of eggs and young offspring development: restrict use of the 10,000 LF runway and taxiways during ice events. The airport manager would provide a notice to aircraft that the runway is closed.

If a future developer intends to use deicing, but none of the above actions (or other actions adopted by the developer during the approval process) result in protecting water quality from deicing applications to an acceptable level, then use of the eastern runway/taxiway (10,000 LF) would be temporarily suspended due to ice. This procedure will protect aircraft, aircraft crew, and water quality. Once the runway is determined safe for use and no deicing is required, the runway would be reopened.

Impacts of Deicing on Birds and General Wildlife

Birds tend to confuse deicing pellets with seeds and through ingestion can suffer severe impacts of toxicity. General wildlife at the site active during the winter (deer, fox, rabbit, etc.) may also ingest the deicing pellets or more frequently ingest water from puddles that contain deicing chemicals. Alternatives to de-icing pellets include spreading sand along the runways to increase friction, and the use of liquid based deicing applications.

The aforementioned mitigating measures for eastern tiger salamander and freshwater wetland protection can be employed throughout the EPCAL site for general protection of bird species together with general wildlife. The site's development will include undisturbed areas where onsite and offsite water resources will not be impacted by development. These water resources will provide opportunities for birds and general wildlife to access undisturbed surface water.

Water Supply At EPCAL

During operation of the NWIRP and prior to transfer to the Town of Riverhead Community Development Agency, all potable and process water needs of the NWIRP were supplied via three wells located on site and within the core area (also described as within the fence). There are three major aquifers that underlie NWIRP Calverton: Upper Glacial Formation aquifer, widely used as a source of groundwater in Suffolk County; Magothy aquifer, widely used as a source of groundwater in Suffolk County; and Lloyd Sand aquifer., a potentially excellent aquifer, not widely exploited because of its depth and the abundant water available in the overlying aquifers. (SCDHS, 1987; McClymonds and Franke, 1972). Historical data reports that the water table at NWIRP Calverton is at an elevation of between 40 and 50 ft (12 to 15 m) above msl, being deeper towards the west (SCDHS, 1987). Based on soil borings in the NWIRP Calverton fenced area, the depth to water table is estimated to range from about five (two m) beneath the south-central part of the fenced area to approximately 20 ft (6 m) beneath the northeastern part (NUS, 1995). A groundwater divide cuts across the NWIRP Calverton fenced area. Groundwater in the shallow aquifer zones (upper Glacial and upper Magothy aquifers) beneath the north buffer zone and the northern half of the fenced area flows to the northeast, and shallow aquifer zone groundwater beneath the southwest and southeast buffer zones and beneath the southern half of the fenced area flows to the southeast. The NWIRP/Grumman Corporation constructed three on-site wells in the upper glacial aquifer. During the late 1980's and early 1990's, testing of Well No. 2 revealed volatile organic contamination and as a result Well No. 2 was temporarily shut down. (US Navy, 1986 and Smith, 1991). Grumman added a carbon filtration unit to treat all water prior to use and Well No. 2 was restored to service with alternative pumping meeting the federal MCLs for VOCs.at the three well sites. Note, two additional off-site wells were constructed to serve Plants 8 and 78 at the Grumman facility.

At the time of transfer of the property to the Town of Riverhead Community Development Agency and similar to transfer of NWIRP sewage treatment plant and sewage system infrastructure to Calverton Sewer District, the Riverhead Water District was given ownership, custody and control of the water supply at NWIRP. The FEIS for the transfer of the property from the Department of Navy to the Town of Riverhead Community Development Agency studied existing water supplies noting the proximity of the Riverhead Water District with two of nine wells within a four mile radius of the site and plans for extensions in Calverton north of the site and Suffolk County Water Authority with two wells within a four mile radius and plans to extend within the

Town of Brookhaven west of the site. Note, there was a third water private non-municipal system, Shorewood Water Company, that provided water service proximate to the NWIRP, however this private water supplier was not considered for water supply to NWIRP. In 1995, the United States Economic Development Administration awarded grant monies to the Riverhead Industrial Development Agency and Riverhead Water District to extend water mains into the EPCAL property to replace the water system previously owned and operated by NWIRP/Grumman. This former system was replaced with a 12-inch transmission main which was installed along Route 25 and runs from the north side of the EPCAL property south to River Road and along Grumman Boulevard. The FEIS recited that Riverhead Water District would be the entity responsible to provide water to the site and, in order to accommodate development under the Calverton Enterprise Park Reuse Plan, the Riverhead Water District would expand and integrate extensions with the existing water distribution network. The DSGEIS and FSGEIS follow the edict of the Department of Navy set forth in the FEIS, and describe the Riverhead Water District supply well pumping capacity projected and sufficient to meet the demands of proposed development, be it 50-Lot Subdivision or 8-Lot Subdivision.

Based upon the above, including but not limited to, Department of Navy determination in favor of Calverton Enterprise Park Reuse Plan with transfer of ownership of water supply to Riverhead Water District; National Environmental Protection Act Review with consideration of water supply to NWIRP/EPCAL; US Economic Development Administration allocation of funding to Riverhead Water District for extension to EPCAL; DSGEIS/FSGEIS; Riverhead Water District ongoing improvements, planned extension applications completed for Lots 2,3,5,6 and 7 and pending before the New York State Department of Environmental Protection, and funding of 10 year capital project improvement programs; and cooperative agreements between Riverhead Water District and Suffolk County Water Authority for shared water supply and mutual acknowledgment between Riverhead Water District and Suffolk County Water Authority that both entities play an important role in observing and managing resources and protecting the health, safety and welfare of all residents and businesses within Suffolk County, together with no objection or proceeding to challenge the declarations or funding of the agencies by the federal or local government, the Riverhead Water District will continue to supply water to the EPCAL site, including all future development projects at EPCAL.

The Riverhead Water District has made significant improvements and invested considerable funds to update and improve its water supply system with reciprocal benefits to quality and capacity at EPCAL. Some of those improvements are described as follows: WSA 11249 three supply wells at Plant 15 (2008) with modification of pumping restrictions (2017) and 2 million gallon ground storage tank added and in service (2019); WSA 11411 permit for Well 17 (2010) see discussion below regarding elevated chlorides and reduction in capacity; WSA 11367 permit for Well 16 (2010) elevated perchlorate in well required resin treatment and actual capacity has been reduced to 1300gpm. The information below will focus on some of the improvements, projects, and capital project planning tailored to address present water demands and anticipated increased supply demands related to development at EPCAL.

It is important to note that may of the planned improvements will include expert study and analysis i.e. geological surveys and time-domain electromagnetics to provide subsurface measurements of electrical conductivity and resistivity useful for the evaluation of aquifer salinity to assist in well site selection, groundwater modeling with consideration of water supply, groundwater storm-water etc. and ongoing monitoring of test wells sites strategically located with existing well capture zones.

The Riverhead Water District will take the following actions to increase supply to the system and increase its ongoing ability to manage the District's water resources necessary to accommodate development and for long term future needs.

The Riverhead Water District's Wells 11-1 and 11-2, located immediately north of Lot 2 on Route 25, are screened within the Magothy Aquifer. The Magothy Aquifer is hydraulically disconnected from the Upper Glacial Aquifer with respect to groundwater flow. The Riverhead Water District has monitored water levels within on-site ponds and observed that there were no significant adverse impacts to water levels within on-site ponds during operation of those two wells. The Riverhead Water District installed two shallow monitoring wells within the capture zone of these wells and continued to monitor these test wells for more than two years. After more than two years of monitoring, no impacts other than seasonal fluctuation in static water levels have been observed.

It should be noted that there are no perched water bodies or lakes other than a man-made water ski park in the area. It should also be noted that static water levels in the area are 10' below grade or deeper so there is no reason to expect adverse impacts on eastern tiger salamander habitat from the operation of Wells 11- and 11-2. The Riverhead Water District retained CDM Smith to utilize CDM's groundwater modeling as a test to confirm the accuracy of field observations and actual ground water level monitoring performed by the District within the capture zone of the Wells. It is the intent to make application to modify the existing well permit for Plant 11 (Wells 11-1 and 11-2, permit modifications WSA 10247/WSA1078 respectively) to permit the Riverhead Water District to run both wells at the same time during peak demand. The completion of this work and a report describing the findings are anticipated to be submitted to the NYSDEC within one year. Pursuant to the DSGEIS and FSGEIS, the water demand projections for development at EPCAL based on SCDHS sanitary flow criteria for estimated a peak water use of 350,000 gallons per day or 243 gallons per minute and at peak 1,990,000 gpd (1,382 gpm) (five year build out/126 acres estimated 252,000gpd of sewage effluent and ultimate buildout 1,137,000gpd). The permits for Plant 11 will provide sufficient capacity, 2,650 gpm, to meet the potential hydraulic load demands anticipated for EPCAL during five and ten year buildout. It is likely that due to Riverhead Water District wide demands and additional wells will be required to meet full/ultimate build out.

In addition to the above, the Riverhead Water District will seek to obtain a permit to replace Well 2. As set forth above, Well 2 is one of the three original wells installed at the NWIRP/Grumman and was constructed in 1957-the oldest of the three wells. Well 1 and 3 have been abandoned and not in use. At present, Well 2 is removed from service during the winter season. The proposed Well 2A (to replace Well 2 Permit s7261 with an authorized capacity of

1000 gallons per minute (gpm)) would provide increased capacity of 1200 gpm. The plan to replace Well 2 included not only monitoring but sampling of water quality data from nearby Wells 1A (250') and 3A (265') which indicated that if replacement of Well 2A were to be deepened to similar depth as Wells 1A and 3A, significant improvement in water quality would be expected. Contingent upon approval to develop Well 2A and improved water quality, the Riverhead Water District would not remove this replacement Well 2A from service during the winter season. This replacement Well 2A would not only provide more water than Well 2, but the plan is to rotate its operation Wells 1A and 2A. This will allow the District to run Wells 1A and 2A less and the system would thereby be more resilient to complications in the event Well 1A or 2A fail standards or experience operational issues. The initial Well 2A deepening permit was not approved by the NYSDEC due to concerns of potential salt water intrusion because the fresh water/salt water interface is not clearly defined in this area. After discussion with the NYSDEC, the Riverhead Water District agreed to retain expert analysis i.e. a TDEM survey in the vicinity of the well. USGS completed the survey on December 16, 2019 and reported that fresh water existed beneath the area to a depth of 700'-USGS reported that it was not possible to see any deeper during this survey. The Riverhead Water District will resubmit its application for Well 2A and if required or requested, USGS will present this data to the NYSDEC verbally or in presentation format (USGS has informed the Riverhead Water District that it is anticipated that a written report requiring the peer review process will take a year or more).

In addition to the permits above, the Riverhead Water District would like to obtain a permit to operate Well 12-1. Well 12-2 has been abandoned as per NYSDEC requirements. As Well 12-1 has not been abandoned and has potential to be operational, the Riverhead Water District has continued to monitor and sample Well 12-1 and the data collected indicates excellent water quality at this well site. That said, the Riverhead Water District will seek to obtain a permit to operate Well 12-1 and agree to accept special conditions related to capacity/pumping limits or such other restrictions deemed appropriate by the NYSDEC.

The Riverhead Water District detected elevated chloride levels in Well #17 and took immediate action of throttling the wells capacity to reduce the pumping stress on the aquifer. The production well capacity was throttled to approximately 450 gpm and resulted in reduction of chlorides to below 50 mg/l. The Riverhead Water District believes this flow rate can be sustained indefinitely with no further degradation of the aquifer. The Riverhead Water District contracted with USGS to fully investigate the elevated chloride levels detected in Well #17. Initial investigation revealed a unique condition of lateral salt water intrusion that has impacted this well. A large wedge of salt water appears to be present in the vicinity of Well #17 and reported to have existed prior to the installation of Well 17#. The elevated chlorides do not appear to be related to up coning of the salt water interface within the aquifer. The Riverhead Water District, working with USGS, is exploring the possibility of drilling an additional shallow well on this site, however, past test boring water quality and geophysical data indicate very few viable options on this site. The Riverhead Water District believes the current active well will never be able to provide any more than 450 gpm and we would be willing to amend the wells permit to reflect the capacity limit set forth above. The USGS has offered to provide all data in presentation format or verbally to town and DEC leadership upon request. A formal report will be provided but the

internal review procedures with in the USGS make it difficult to put an exact date on the release of the report but anticipate a year or more is required for USGS to complete the written report.

The Riverhead Water District realizes the importance of actively observing and managing our water resources. In furtherance of methods to improve management and monitoring our water resources, the Riverhead Water District entered into an agreement with U.S. Geological Survey USGS in 2017. The USGS has provided TDEM measurements at numerous locations throughout the Town to gain a stronger understanding of problems that have occurred in the past and to gain a stronger understanding of reginal aquifer conditions for planning and management purposes going into the future. The District and USGS are willing to present these finding to the NYSDEC as they are developed. A formal report will be issued when the investigations are complete. The internal review process within the USGS makes it difficult to put an exact timeline on the release of this data in a formal report.

The Riverhead Water District has also committed approximately $700,000 for future test wells and the installation of four deep monitoring wells so that continued monitoring of aquifer can be done by the USGS moving forward. The locations of these wells have been determined by the USGS based on prior TDEM investigations with additional input from the NYSDEC and the District. A contract for the construction of these wells has been prepared and after permits are obtained for the selected test well monitoring sites the Riverhead Water District anticipates that the contract will be posted for bid and awarded as soon thereafter as practicable. The Riverhead Water District will rely heavily on the USGS, the CDM groundwater model and existing groundwater data to determine future test well and production well locations.

As the EPCAL property develops, the Riverhead Water District will routinely evaluate the demand of the entire district and the proposed developments that will increase the demand to ensure that sufficient capacity is available before the demand is in place. The District has invested heavily in new sophisticated water metering that allows for very accurate tracking of water use throughout the entire district including EPCAL. The most important tool used for accessing and planning for future demand with in the district is our Key Money Program. This program requires all new development projects that take place within the district to be accessed for potential hydraulic load based on predetermined usage rates established by the county. Once the potential hydraulic load calculation for a new development is determined the district then charges the developer a fee of $9.10 per gallon of usage per day. This allows the district to capture and plan for future potential hydraulic load due to increased development prior to the loading taking place. The fee charged allows the district to have money on hand to invest in future supply development when needed. It should also be noted that approximately two months ago and without a rate increase for nearly five years, the Water District adopted a rate increase designed to generate an additional $1,600,000.00 per year which shall increase the ability to undertake repair and improvement of its existing facilities. In addition, the Water District implemented conservation measures: odd/even days and hours of watering, for yard and landscape watering in an effort to reduce demand and preserve resources. The Town Board, with the support of the Water District also implemented Water Conservation in Landscaping requiring new development, be it residential or commercial and expansion of such uses, to implement water conservation measures,

ie. Xeriscape, drought tolerate planting, low-flow or smart watering devices to reduce demand, protect infrastructure and the environment. In addition, the Planning Department, Planning Board and Town Board have expressed commitment to the Water District and shall devote greater emphasis and evaluation of proposed project demands, site plans and subdivisions, upon the Water District supply and infrastructure and if appropriate require location of well sites and/or fees related to not only on site but off-site to address the demands of the project. The Town and Water District are actively reviewing and pursuing available well sites on lands owned by the Town and will enlist the aid of technologies already under contract with the Town to determine suitable well sites. In the past, the Water District has relied on outside expert consultants with respect to various matters, including construction and permitting, and as the NYSDEC is aware and recited above, the present administration of the Water District has taken a pro-active approach and is diligently working to resolve issues related to outstanding non-finalized permits. It is the intention of the district to make the investments when it is necessary to meet these future demands. The Riverhead Water District is also working closely with town leadership to put additional programs in place to encourage more aggressive water conservation. Modern tools like the districts new water meters are used to communicate accurate water usage data to our customers and other tools like irrigation system smart controllers and rain sensors will be utilized by the town on its properties and incorporated into new development within the town and the Water District is presently participating in a grant program for smart controlled water devices with the Town's Environmental Committee (test project includes RHSD water usage will be evaluated and steps recommended to reduce usage, monitor, and install smart controlled water devices).

Finally, as stated above, at the time of transfer of the property to the Town of Riverhead Community Development Agency the Riverhead Water District was given ownership, custody and control of the water supply at NWIRP, including the land area which is the subject of the 8 Lot Subdivision. It is undisputed that the 8 Lot subdivision is within the Town of Riverhead and within the boundary of the Riverhead Water District. While the NYSDEC issued a demand and directive that the Town obtain consent of Suffolk County Water Authority to supply water to the EPCAL property ("must demonstrate that the SCWA has no objection to the Town serving this area"), the Public Utilities Authorities Law Section 1078 clearly recognizes the right of municipalities such as the Town of Riverhead to own and operate a water district and in expressing the powers of the Suffolk County Water Authority states that "in exercising the powers granted by this title, the authority, SCWA, shall not sell water in any area which is served by a water system owned or operated by a municipality unless the governing board of such municipality shall adopt a resolution requesting the authority to sell water in such area". NY Public Authorities Law Section 1078. That said, the Riverhead Water District believes that its relationship with Suffolk County Water Authority is important and invaluable. The Riverhead Water District and Suffolk County Water Authority currently share four interconnections and these shared interconnections are critical tools to address emergencies and provide supplemental supply. In addition, both Riverhead Water District and Suffolk County Water Authority have recently added large ground storage tanks in critical areas that have increased resiliency to meet peak demand pumping and the coordination related to filling of these tanks between the agencies

ensures that no unnecessary stresses to either systems. In addition and as evidence of Riverhead Water District's desire to continue to work with and assist the Suffolk County Water Authority, in the last three years, the Riverhead Water District has supplied far more water to Suffolk County Water Authority than that provided by Suffolk County Water Authority to the Riverhead Water District: 2017- 29.4% ;2018-58.8%; and, 2019- 34.5% . Finally, it is equally important to both the Riverhead Water District and Suffolk County Water Authority not to be adversarial and instead as expressed in discussions on Monday, October 5, 2020 between Riverhead Water District and Suffolk County Water Authority there is no claim of right or desire by SCWA to service EPCAL and instead and more importantly a renewed goal to work together to assist and allow each utility to meet water demands and provide quality water to its customers.

Sensitive Habitat Areas and Select Species of Protected Status:

The EPCAL site and primarily the "non-core areas" (areas that lie outside the fence, and buffer areas) provide excellent habitat for a number of plant and animal species that are protected in New York State. The EPCAL site includes a variety of ecological communities, including grassland, Pitch Pine-Oak Forest, Pitch Pine-Oak-Heath Woodland and wetlands. A copy of the ecological communities are mapped/color coded and annexed hereto as Exhibit "Q". The habitats and conditions have been identified in the SGDEIS/SGFIS along with the Comprehensive Habitat Protection Plan (CHPP). A copy of a map identifying areas under Supervision of the Comprehensive Habitat Plan with underlying/underscoring of existing and to be created ecological communities for Threatened or Endangered Species i.e. Tiger Salamander is annexed hereto as Exhibit "R". A discussion of selected species and the supporting habitats are provided below along with recommendations for preservation and protection.

Frosted Elfin (*Callophrys irus*) Status: Threatened

New York State the Frosted Elfin is listed as Threatened. The following is from the New York State Heritage website. A complete version is included as Exhibit "S".

The key habitat feature is an abundance of the food plant or, perhaps, many moderate-sized patches of the food plant within a few hundred acres or more, and associated with remnant pine barrens, oak savannas, or dry oak forest.

The grassland/herbaceous checkoff refers only to right of ways and airports not natural grasslands. There are two varieties of Frosted Elfins, one that feeds mostly on the flowers or seed pods of Wild Blue Lupine (*Lupinus perennis*), and another that feeds on leaves and stems of Wild Indigo (*Baptisia spp.*), primarily the native *Baptisia tinctoria* in New York.

Populations will feed on only of these plants or the other, even when both types of plants are present. Lupine feeders occur in the Albany area, western New York, and on Long Island, while Wild Indigo feeders occur on Long Island. Frosted elfins are not likely to be found in stands of foodplants that have been isolated for a long period of time. This species nearly always occurs in clusters of populations that function as metapopulations and small habitat patches may be unoccupied in some years.

Females disperse within the habitat and larvae can turn up in appropriate habitat where adults are not usually seen. The most typical habitats are utility right-of-ways and, at least in neighboring states, airport approach zones. A few populations of the lupine feeders occur partially in more natural settings in the Albany Pine Bush and the Rome Sand Plains.

Populations of the Wild Indigo (*Baptisia spp.*) feeders are known to occur in natural settings in New York. Typical habitat features include a shrubby or partially open aspect and a high density of the food plant, although the observations of Albanese et al. (2006) may not apply fully to the lupine feeders which seem more capable of using open grassland with no tall shrubs or trees. Nectar might also be an important habitat feature.

Associated Ecological Communities
Coastal oak-heath forest
Hempstead Plains grassland
Pitch pine-heath barrens
Pitch pine-oak forest
Pitch pine-oak-heath woodland
Pitch pine-scrub oak barrens

The site's large population of White Tail Deer may be responsible at least in part, to the lack of host plants necessary to support the breeding of the Frosted Elfin. Deer will feed on Wild Indigo and Wild Blue Lupine.

On July 12, 2016 representatives from the NYSDEC (Robert Marsh, Biologist) and Town of Riverhead (Jeffrey Seeman, CEP) conducted field surveys to assess habitat conditions that would identify and or support host plants. The survey found suitable conditions but did not confirm presence of Wild Indigo or Wild Blue Lupine. The 2016 NYSDEC letter prepared by Robert Marsh, NYSDEC is included in the "Frosted Elfin Appendix."

Although not within the recommended months to conduct field inspections for Wild Indigo and Wild Blue Lupine (generally late May through August), Seeman again conducted a field survey on February 18, 2020 to verify existing conditions, and document physical changes since the July 12, 2016 survey. No significant changes were noted beyond the natural transition from grassland to shrubland. One area of particular interest, which demonstrated environmental conditions could support Wild Blue Lupine and Wild Indigo was located during the July 12, 2016 survey. This area is located along the northern portions of a shrub edge habitat at the south side of the 7,000-ft. taxiway, and south of its adjacent grassland. This area has remained largely unchanged.

As was recommended after the July 12, 2016 survey, it is further recommended that field surveys be conducted by qualified persons to inspect presence or absence of Wild Blue Lupine and Wild Indigo prior to any physical land development activity. The 2016 recommendation also included that if present within developable lot areas, transplanting Wild Indigo and/or Wild Blue Lupine to "Non-Disturbed Areas" (providing such areas have suitable conditions to support successful transplanting efforts) would serve as mitigating measures. The 2016 recommendation

for mitigation is also recommended as mitigation as per this 2020 Environmental Analysis in order to support and encourage protection of the Frosted Elfin.

It is further suggested, the large White Tail Deer population at EPCAL may have significant adverse impacts on long term establishment of Wild Indigo and Wild Blue Lupine. One future consideration for restoration of Frosted Elfin habitat is the construction of a "sanctuary" enclosed in "deer fencing" and planted with Wild Indigo and Wild Blue Lupine. A pilot program with along with field surveys and monitoring may offer opportunities to expand restoration efforts.

Northern Long-eared Bat (*Myotis septentrionalis)* Status: Threatened

Northern long-eared bats (NLEB), also known as Northern myotis, are primarily forest-dependent insectivores. They utilize a diversity of forest habitats for roosting, foraging and raising young. In general, any tree large enough to have a cavity or that has loose bark may be utilized by NLEB for roosting or rearing young. Prior to 2006, NLEB were frequently detected in the forests of every county of New York State with the exception of the 5 counties of New York City. Since they feed predominantly on flying insects, they hibernate through the late fall and early spring to save energy when food is not available. Most known hibernation sites are caves or abandoned mines.

NLEB were listed as "threatened" by the United States Fish and Wildlife Service (USFWS) under the federal Endangered Species Act on April 2, 2015. In New York, all federally threatened species that occur in the state are afforded threatened status under the New York Endangered Species Law and its implementing regulations. The New York Natural Heritage Program website provides a comprehensive description, including habitat and preferred foraging for NLEB-See Exhibit "T" annexed hereto.

As recently as 2005, the NLEB was New York State's third most common bat species with populations estimated at or above 500,000 animals. The federal listing was the result of a dramatic population decline throughout most of the species' range. These declines have been caused by white-nose syndrome (WNS), a disease caused by an invasive fungus that ultimately causes affected hibernating bats to starve to death over the winter. Since WNS was first discovered in New York in 2006, a 98% decline in the abundance of NLEB has been observed. Successful recovery of the species will require the development of some form of treatment for exposure to WNS, and the DEC is actively working with researchers from around North America to develop a treatment. In the meantime, legal protections afforded by the listing status of the bat are focused on minimizing and avoiding direct loss of the remaining individuals by protecting the known hibernation sites and limiting forest management activities where NLEB are most likely to be present to certain times of the year.

The Pitch Pine-Oak Forest community and other forested portions of the subject property represent potentially suitable summer foraging and/or roosting habitat for the NYS- and federally-Threatened northern long-eared bat. Correspondence dated July 20, 2020 to the Town of Riverhead from the NYSDEC indicates that agency records currently exist for mapped summer occurrence of northern long-eared bat hibernacula or roost trees at, or within 1.5 miles of the

vicinity of the site. The approximately 787 acres of Pitch Pine-Oak Forest and other forested habitat at the subject property to be preserved under the CHPP represents potentially suitable summer foraging and/or roosting habitat for this species.

While correspondence from the NYNHP indicates that no agency records currently exist for northern long-eared bat hibernacula or roost trees at or in the vicinity of the EPCAL site, the FSGEIS, Findings Statement and CHPP preserve approximately 787 acres of existing Pitch Pine-Oak forest and other forested habitat, with large contiguous blocks located to the north of the eastern runway, to the south of both runways and also within the lands comprising the CPB Core Preservation Area at the western portion of the EPCAL site, all representing potential summer roosting, breeding and foraging habitat for this species.

In addition, in its earlier letter to the Town of Riverhead, dated April 13, 2016 the NYSDEC stated, "The inclusion of correspondence from the NY Natural Heritage Program (NYNHP) indicting that no agency records currently exist for the northern long-eared bat (NLEB) hibernacula or roost trees at or near the vicinity of the EPCAL site is inadequate to determine the impacts the project might have on the northern-long eared bat" This remains applicable to the portions of the EPCAL site that are not currently mapped as being within 1.5 miles of a summer occurrence. As no updated Town or new surveys have or shall be conducted, the potential impacts to NLEB habitat loss as generated by future development is unknown. Consequently, until demonstrated otherwise, the entire EPCAL site is considered to be located within 1.5 miles of a summer occurrence of the NLEB and as mitigation, all tree cutting shall be restricted to December 1 through February 28th of any calendar year.

Moreover, any proposed clearing of forested habitat on the individual lots proposed for development would ultimately require updated NYNHP record requests in order to determine if on site records exist for northern long-eared bat hibernacula or roosts. Should such records exist, consultations and/or permitting with the USFWS regarding the proposed clearing would be necessary if prohibited incidental take of northern long-eared bat would occur.

As defined in the USFWS final 4(d) rule, incidental take of northern long-eared bat includes tree removal activities that occur within 0.25 mile of a known, occupied hibernacula or cutting or destroying a known, occupied maternity roost tree or other trees within a 150 foot radius from a maternity roost tree during the pup season from (June 1 through July 31). Any proposed activity that would result in prohibited incidental take of northern long-eared bat, as described above, would require USFWS consultation and/or permitting.

The NYSDEC provides on its website guidelines regarding clearing of trees used as habitat by the Northern Long Eared Bat

Added to these protective guidelines, specific to the EPCAL site, in order to protect NLEB from unintentional harm, the NYSDEC has required implementation of all its standard listed forest management activities, including restricting tree cutting to December 1 through February 28 of any calendar year.

Based upon this guideline, a covenant will be placed on Lots 6 and 7 that states: "For habitat protection of the Northern Long-eared Bat all tree clearing shall be restricted to the dates between December 1 and February 28 any calendar year. Any tree clearing outside of the winter hibernation period will require a separate Part 182 permit."

Short-eared owl (*Asio flammeus*) Status: Endangered

Short-eared owls are found on every continent except Australia and Antarctica. New York is the southern edge of this owl's breeding range. Northern populations are believed to be highly migratory,, and there is a noticeable increase in the number of short-eared owls in New York in the fall and spring, but they are more common in New York in winter.

Short-eared owls are Endangered in New York State. Their conservation depends on protecting relatively large, opens sites that support small rodents. Doing so will likely have the added benefit of protecting other imperiled grassland birds with similar habitat requirements. The New York Natural Heritage Program website provides a comprehensive description, including habitat and preferred foraging for the Short-eared owl-see Exhibit" U".

Eastern Tiger Salamander (*Ambystoma tigrinum*) Status: Endangered

The preferred habitat of the salamanders is mature oak-pine woodlands. DEC urges developers to minimize adverse impacts to tiger salamanders by conforming with both of the following when designing projects that would occur on lands within 1,000 feet of known tiger salamander breeding ponds (measurements should be taken from average water level based on water marks, rack lines and vegetation):

a) Preserving 100% of the existing upland forest habitat within 535 feet of the breeding pond.

b) Preserving a minimum of 50% of the adjacent upland area within 1,000 feet of breeding ponds in contiguous blocks of suitable habitat, while allowing for the preservation of wooded corridors which provide connections to adjacent tiger salamander upland habitats.

The exact configuration of this habitat is subject to the particular site history and habitat features of a project site.

In general, the habitat closest to the wetland is given a higher priority, with a secondary priority being the preservation of intact corridors of habitat that will allow animals to move off of the subject parcel to other suitable habitat if they choose to do so. Where possible, development is encouraged within existing disturbed areas.

The preferred habitat of the salamanders is mature oak-pine woodlands. In general, the preserved area should contain as much oak pine woodland as possible, with development occurring on existing footprints of previous buildings, parking areas, roadways or tilled fields. Therefore, the optimal layout for any particular site can vary depending on site specific features such as historic land use, habitat coverage, and adjacent land cover. In addition, preserved areas should remain undisturbed with no grading, excavation, clearing or similar physical activity

allowed except as noted below. DEC may request that additional measures be undertaken to protect preserved upland areas including installation of fencing, signage, supplemental plantings of native woody species, and closure of existing pathways that currently provide access to such preserved areas. See Exhibit V- The New York Natural Heritage Program website for a comprehensive description.

Grasshopper Sparrow *(Ammodramus savannarum)* Status: Special Concern

A late-spring migrant, the grasshopper sparrow returns to breeding grounds in the northeastern states in mid to late May. Because it is a nocturnal migrant, it is rarely seen during migration. Males arrive on breeding grounds 3 to 5 days before females. Once females arrive, pair bonds form and nest construction by the female begins immediately. The nest is built on the ground at the base of a clump of vegetation and consists of a deep cup of stems and grasses with over-hanging vegetation creating a dome with a side entrance. Pairs will raise 2 to 3 broods per year and will construct a new nest each time. Incubation is carried out by the female while the male defends the nest from predators and the territory from intruders. See full description at The New York Natural Heritage Program website Exhibit "W".

A common local breeder throughout much of the United States and southern Canada. Breeding range extends from southern Maine and New England south to northern Georgia, west to Texas and north to Montana, Idaho, and eastern Washington. The grasshopper sparrow depends on dense grasses for foraging and nesting cover. In New York it remains locally common where grassland habitat is available. Upland meadows, pastures, hayfields, and croplands are primary habitats for the grasshopper sparrow.

Maintenance of grassland habitat is critical to support this ground nesting bird. Periodic mowing after the bird's breeding cycle is complete will provide mitigation providing a schedule of mowing offers an undisturbed grassland area. The approved CHPP for the 50-Lot Subdivision, prepared in conjunction with the NYSDEC, provides a comprehensive grassland management program.

The proposed subdivision is located within the Peconic River watershed. The subdivision incorporates the following measures to improve and further protect the Peconic Headwaters and the Peconic River:

- Wetland and adjacent upland habitats associated with the Peconic Headwaters and the Peconic River WSRRS corridor would remain as undeveloped/preserved lands following implementation of the proposed action.

- The proposed subdivision provides for the relocation of the sewage disposal area to north of the groundwater divide (and away from the Peconic River). This would also have a positive impact on the ecological resources within the Peconic Headwaters and WSRRS corridor.

- Much of the area along Grumman Boulevard will remain undisturbed thereby providing natural screening from the road.

EPCAL Grasslands

During the months of February and March 2020, field surveys, not including botanical complex, were conducted evaluate the existing conditions of grasslands and inspect areas for anthropogenic disturbance and natural transition to shrub-land/woodland habitat. Conditions were photographed and depicted in Exhibit X.

Field surveys conducted on February 18, 2020 revealed that along the western taxiway/runway areas the grasslands have not been disturbed by development activity. There is clearly ecological indicators that transitional succession is underway, especially at the north side and northwest areas of the 7,000 LF taxiway/runway and within the "median area, l at the pavement edge. Pitch pine and juniper at heights varying between 2-feet and 15-feet are invading the grassland. Further west along the north side the grasslands are better established, with only incidental woody species occurring.

Field surveys conducted on February 18, 2020 revealed that along the eastern taxiway/runway areas the grasslands have been disturbed by development activity. This activity was limited to the installation of the sanitary sewer infrastructure and recharge area.

There is clearly ecological indicators that transitional succession is also underway at eastern runway, especially at the north side and northeast area adjacent to the 10,000 LF taxiway/runway. Transition is occurring within the "median area, especially at the pavement edge. Pitch pine and juniper at heights varying between 2-feet and 15-feet are invading these grassland areas as well. The area east of the runway and adjacent to the mature woodlands is far less impacted by succession.

It is noteworthy that grasslands at EPCAL do require anthropogenic intervention, if these areas are to remain grassland. As outlined in the approved CHPP, scheduled mowing and haying are necessary to control invasive wood species. As maintenance is deferred, Successional growth will continue, and result in a higher density of shrubland/woodland habitat intrusion. Natural history reviews of the area indicate the EPCAL grasslands were (prior to development) originally woodland habitat. Grasslands were the result of the Navy's contractor/owner's (Grumman) need to construct runways and buffer areas along with runway safety areas. A return to aviation use will necessitate these areas be managed to avoid incursions and to maintain unobstructed areas. Loss in grassland areas generated by proposed development and structures may occur, however the approved CHPP and SEQRA Findings Statement has fixed a minimum total amount of grassland acreage of 583 acres, whether existing or to be created to be preserved on the land area now comprised of Lots, 6, 7 and 8. A developer of these lots will either have to comply with the CHPP or, through supplemental SEQRA review, comply with a revised CHIPP adopted to reflect then existing conditions as determined by the NYSDEC.

EPCAL Freshwater Wetlands

Since the filing of the EPCAL Supplemental Findings Statement and the VHB February 2016 Comprehensive Habitat Protection Plan, each of the freshwater wetlands depicted on the proposed 8-Lot Subdivision Map were field surveyed by a qualified individual to assess existing conditions. The field work was conducted on March 5, 7, 8, 10 and 11, 2020.

The field conditions were recorded by photographs-See Exhibit "Y". A jurisdictional freshwater wetland delineation was not conducted because the field observations found no significant disturbance within the wetlands or their adjacent areas, with exception of Freshwater Wetland # 6 (aka North Pond). A Town of Riverhead Recreational Trail consisting of an asphalt paved walking and bikeway path was constructed in proximity to Wetland # 6 in accordance with NYSDEC Freshwater Wetland Permit and Wild & Scenic Recreational Rivers Permit # 1-4730-00013-00053 dated November 8, 2016.

EPCAL wetlands support eastern tiger salamander habitat and breeding. During the field surveys conducted in early March 2020, standing water was recorded in all wetlands except Wetland # 12 (located west of the RR Spur at Eastern Fence); however no egg masses were located.

EPCAL freshwater wetlands most closely meet the following descriptions pursuant to the Ecological Communities of New York State (2nd edition):

Ditch/artificial intermittent stream:
The aquatic community of an artificial waterway constructed for drainage or irrigation of adjacent lands. Water levels either fluctuate in response to variations in precipitation and groundwater levels, or water levels are artificially controlled. The sides of ditches are often vegetated, with grasses and sedges usually dominant. Non-native or weedy species are common. Purple loosestrife (*Lythrum salicaria*), European common reed (*Phragmites australis*), and reed canary grass (*Phalaris arundinacea*) often become established and may form dense, monospecific stands. Reed canary grass is often planted along ditches for erosion control. Other plants that are characteristic include sedges (*Carex* spp.) and cattails (*Typha* spp.). Algae indicative of eutrophic conditions may be abundant.

Coastal plain pond:
The aquatic community of the permanently flooded portion of a coastal plain pond with seasonally and annually fluctuating water levels. These are shallow, groundwater-fed ponds that occur in kettle-holes or shallow depressions in the outwash plains south of the terminal moraines of Long Island, and New England. A series of coastal plain ponds are often hydrologically connected, either by groundwater, or sometimes by surface flow in a small coastal plain stream. Water is typically acidic, darkly stained, and has low transparency. However, coastal plain ponds in adjacent states typically have high transparency (P. Swain *pers. comm.*). The substrate is typically sand to muck.

Aquatic vegetation may be abundant; characteristic plants include water-shield (*Brasenia schreberi*), white water-lily (*Nymphaea odorata*), bayonet-rush (*Juncus militaris*), Robbins spikerush

(*Eleocharis robbinsii*), bladderworts (*Utricularia purpurea, U. fibrosa*), water milfoil (*Myriophyllum humile*), naiad (*Najas flexilis*), waterweed (*Elodea* spp.), pondweed (*Potamogeton oakesianus*), pipewort (*Eriocaulon aquaticum*), brown-fruited rush (*Juncus pelocarpus*), golden-pert (*Gratiola aurea*), water bulrush (*Schoenoplectus subterminalis)*, Small's yellow-eyed-grass (*Xyris smalliana*), horse-tail spikerush (*Eleocharis equisetoides*), and various peat mosses (*Sphagnum torreyanum, S. lescurii, S. cuspidatum,* and *S. macrophyllum*). See coastal plain pond shore for pond margins dominated by emergent vegetation after water drawdown.

Characteristic fishes include chain pickerel (*Esox niger*), banded sunfish (*Enneacanthus obesus*), and eastern mudminnow (*Umbra pygmaea*). Some coastal plain ponds are breeding ponds for tiger salamander (*Ambystoma tigrinum*). Other characteristic fauna may include painted turtle (*Chrysemys picta*), wood duck (*Aix sponsa*), and muskrat (*Ondatra zibethicus*). More data on this community are needed.

Distribution: in the Coastal Lowlands ecozone on Long Island.
Rank: G3G4 S2 *Revised:* 2001

Examples: Crooked Pond, Suffolk County; Scoys Pond, Suffolk County; Kents Pond, Suffolk County; Weeks Pond, Suffolk County.
Sources: Muenscher 1939; Theall 1983; R. Zaremba *pers. comm.*; NYNHP field surveys.

Red maple-swamp white oak swamp:
A hardwood swamp typically found in small, isolated basins on sandy soils that are underlain by a clay layer. The swamp floods seasonally and draws down in most years exposing a leaf litter substrate. The swamp is co-dominated by red maple (*Acer rubrum*) and oaks, such as swamp white oak (*Quercus bicolor*) and/or pin oak (*Q. palustris*). Typically, swamp white oak is either dominant or codominant with red maple along with several other canopy trees with lower abundance, such as blackgum (*Nyssa sylvatica*), green ash (*Fraxinus pennsylvanica*), swamp cottonwood (*Populus heterophylla*), and elms (*Ulmus americana, U. rubra*). Pin oak can be an associate canopy tree or replace swamp white oak as the codominant. Trees from the surrounding uplands can occur in low abundance within the swamp on drier hummocks, such as pignut hickory (*Carya glabra*) and American beech (*Fagus grandifolia*).
Characteristic shrubs include winterberry (*Ilex verticillata*), highbush blueberry (*Vaccinium corymbosum*), buttonbush (*Cephalanthus occidentalis*), and arrowwood (*Viburnum dentatum*). Associated shrubs with low abundance include sweet pepperbush (*Clethra alnifolia*) and spicebush (*Lindera benzoin*). Multiflora rose (*Rosa multiflora*) is an invasive shrub in some examples.

Characteristic vines with low abundance include poison ivy (*Toxicodendron radicans*), greenbrier (*Smilax rotundifolia*), and wild grapes (*Vitis* spp.).

Herb cover is typically sparse. Characteristic herbs include various sedges (*Carex* spp.), such as *C. crinita C. grayi C. lupulina,* and *C. tuckermanii.* Other characteristic herbs include ferns, such as cinnamon fern (*Osmunda cinnamomea*), royal fern (*Osmunda regalis*), marsh fern (*Thelypteris palustris*),

netted chain fern (*Woodwardia areolata*). Associated herbs with low abundance include lady fern (*Athyrium filix-femina*), sweet woodreed (*Cinna arundinacea*), spinulose wood fern (*Dryopteris carthusiana*), soft rush (*Juncus effusus*), marsh seedbox (*Ludwigia palustris*), northern bugleweed (*Lycopus uniflorus*), and blunt-leaved sandwort (*Moehringia lateriflora*).

The unvegetated layer is dominated by leaf litter that typically covers about three-quarters of the swamp basin. Swamp white oak dominated or co-dominated swamps on hilltops, or on steps in slopes, over bedrock rather than sandy soil are classified as perched swamp white oak swamps.
Rank: G3G4 S2 *Revised:* 2014

Examples: Saratoga Spa State Park, Saratoga County; North Fork Preserve, Suffolk County; Arshamomaque Wetland, Suffolk County.
Sources: NYNHP field surveys.

Vernal pool:
An aquatic community of small, shallow depressions that are intermittently to ephemerally flooded. These small depressions typically occur within an upland forest, but may be surrounded by a narrow fringe of red maple-hardwood swamp that quickly transitions to upland forest. The pools generally lack trees, but are classified here as forested wetlands because of their position in the forested landscape. Vernal pools are typically flooded in spring or after a heavy rainfall, but usually dry during summer. Many vernal pools are filled again in autumn. The uppermost substrate is typically dense leaf litter over hydric soils. The leaf litter is the predominant source of food energy and organic matter in the pool, and derived from the surrounding forest (*i.e.*, these are allochthonous pools). The substrate under the leaf litter is known to vary from deep sands to loam to sandstone pavement. Vernal pools typically occupy a confined basin (*i.e.*, a standing waterbody without a flowing outlet), but may have an intermittent stream flowing out of it during high water. Several hydrologic types of vernal pools have been identified including marsh pools, floodplain basins, in-stream basins, and swamp pools (Barbour 1999). In this classification, these types are treated as embedded microhabitats within related communities (*e.g.*, shallow emergent marsh, floodplain forest, intermittent stream, and various swamp communities).

This community includes a diverse group of invertebrates and amphibians that depend upon temporary pools as breeding habitat. Since vernal pools cannot support fish populations, there is no threat of fish predation on amphibian eggs or invertebrate larvae. Characteristic vernal pool fauna include species of amphibians, reptiles, crustaceans, mollusks, annelids, and insects. Vernal pool species can be categorized as either *obligate* (species that depend upon vernal pool habitat for reproduction), or *facultative* (species that are often found in vernal pools, but are not dependent on them and can successfully reproduce elsewhere) (Commonwealth of Massachusetts, Division of Fisheries & Wildlife 2001, Colburn 1997, 2004).

Obligate vernal pool amphibians include spotted salamander (*Ambystoma maculatum*), blue-spotted salamander (*Ambystoma laterale*), Jefferson's salamander (*Ambystoma jeffersonianum*), marbled salamander (*Ambystoma opacum*) and wood frog (*Rana sylvatica*).

Vernal pools on Long Island are important breeding habitat for tiger salamander (*Ambystoma tigrinum*). Fairy shrimp (Anostraca) are obligate vernal pool crustaceans, with *Eubranchipus* spp. being the most common.

Facultative vernal pool amphibians include four-toed salamander (*Hemidactylium scutatum*), red-spotted newt (*Notophthalmus viridescens*), northern spring peeper (*Pseudacris crucifer*), gray tree frog (*Hyla versicolor*), green frog (*Rana clamitans*), American toad (*Bufo americanus americanus*), and Fowler's toad (*Bufo woodhousii fowleri*).

Facultative vernal pool reptiles include painted turtle (*Chrysemys picta*), spotted turtle (*Clemmys guttata*), and snapping turtle (*Chelydra serpentina*). Facultative vernal pool mollusks include freshwater fingernail clams (*Sphaerium* spp., *Musculium* spp.), pea clams (*Pisidium* spp.), and amphibious snails (*Physa* spp., *Lymnaea* spp., and *Helisoma* spp.). Facultative vernal pool insects include water scorpions (Nepidae, *Nepa* sp.), predacious diving beetles (Dytiscidae), whirligig beetles (Gyrinidae), dobsonflies (Corydalidae), caddisflies (Trichoptera), dragonflies (Anisoptera), damselflies (Zygoptera), mosquitoes (Culicidae), springtails (Collembola) and water striders (*Gerris* spp.). Leeches (Hirudinea) are a facultative vernal pool annelid.

Plants are predominantly hydrophytic, typically with a combination of obligate and facultative wetland species. Floating and submergent plants may be common, but emergent plants should be sparse or lacking. Characteristic vascular plants may include mannagrasses (*Glyceria* spp.), spikerush (*Eleocharis acicularis*), water purslane (*Ludwigia palustris*), naiad (*Najas* spp.), duckweed (*Lemna minor*), and water-hemlock (*Cicuta maculata*). Characteristic bryophytes may include *Brachythecium rivulare*, *Calliergon* spp., and peat mosses (*Sphagnum* spp.). Rare plants of some examples on the coastal plain and Hudson Highlands include featherfoil (*Hottonia inflata*) and false hop sedge (*Carex lupuliformis*) in the Hudson Valley. A few trees, such as red maple (*Acer rubrum*), blackgum (*Nyssa sylvatica*), and swamp white oak (*Quercus bicolor*) may occur along the margin of some pools before transitioning to one of the upland forest communities.

Five to seven ecoregional variants (including Northern Appalachian, Great Lakes, Lower New England, Allegheny Plateau and North Atlantic Coast types) are suspected to differ in characteristic and dominant vascular plants, amphibians and invertebrates, as well as water chemistry, water temperature, substrate type, and surrounding forest type. More data on regional variants are needed.

Distribution: throughout New York State.
Rank: G4 S3S4 *Revised:* 2001

Examples: Urbana State Forest, Steuben County; Minnewaska State Park, Ulster County; Mohonk Preserve, Ulster County; Peebles Island State Park, Saratoga County; Muttontown Preserve, Nassau County; Saratoga National Historic Park, Saratoga County.
Sources: Barbour 1999; Colburn 1997, 2004; Commonwealth of Massachusetts, Division of Fisheries & Wildlife 2001; Huth and Smiley 1981; Swain and Kearsley 2000; Williams 2001; NYNHP field surveys.

FW Wetland No.	Lot/Location	Ecological Description
1	Camelot adjacent to Lot 7 40°54'53"N/72°47'24"W	Coastal Plain Pond
2	Camelot adjacent to Lot 7 40°54'48"N/72°47'11"W	Coastal Plain Pond
3	Lot 1 40°54'54"N/72°49'54"	Ditch/artificial intermittent stream
4	Lot 7 40°55'31"N/72°46'56"W	Coastal Plain Pond
5	Lots 1 & 8 40°54'22"N/72°49'12"W-North Pond	Coastal Plain Pond
6	Lot 1 40°54'45"N/72°49'33"W	Coastal Plain Pond
7	Navy Parcel B swamp 40°54'23"N/72°47'26"W	Red maple-swamp white oak
8	LI Sports Park 40°55'00"N/72°45'39"W	Coastal Plain Pond
9	Camelot/Lot 6 40°54'27"N/72°47'54"W	Ditch/artificial intermittent stream
10*	Inaccessible 40°54'38"N/72°46'42"W	Vernal Pool

*Location approximated via Google Earth/area restricted due to construction/fencing

The potential impact generated by aviation use on the EPCAL freshwater wetlands is most directly associated with quarter quality. The wetlands provide excellent habitat resources for eastern tiger salamander. Amphibians are extremely sensitive to water quality changes. The EPCAL wetlands are hydrologically supported by surface runoff and groundwater. The former Grumman Facility developed a stormwater control system that future uses at EPCAL must adapt to preserve existing surface and groundwater quality. As recommended previously in this impact assessment report, a water quality monitoring program is necessary to establish existing water quality and an on-going water quality monitoring program must be implemented to avoid impacts on wetland habitat areas.

Sabin funded a study, February 2017, and annexed hereto as Exhibit "Z" to assess impacts on major roadways on Long Island's eastern tiger salamanders. The study, which is similar to a published research paper ("Lethal Effects of Water Quality on Threatened California Salamanders but Not on Co-Occurring Hybrid Salamander," Ryan, M. et al., July 9, 2012) conducted in California on a similar species of tiger salamander ("California Tiger Salamander/*Ambystoma californienese*), discovered that genetic diversity of the amphibian is linked to geography. Hence natural and manmade barriers that segregate populations and breeding habits (eastern tiger salamanders return to the same breeding ponds for reproduction as do their offspring once juveniles become reproductively mature) result in separate gene pools, and slight variations in the populations. If for example water quality is altered, it may affect the specific population utilizing a particular pond and that genetic diversity may be disrupted over future generations. The California study found hybridized tiger salamanders (genetic cross overs from the native species) were resistant and better adapted to changes in breeding pond water quality. This favorable adaptation allowed the hybrid population to out compete the native species for common habitat occupancy. Therefore, each of the EPCAL known eastern tiger salamander breeding ponds may support organisms with specific genetic makeups that support survival rates adapted to a very specific type of water quality (physical and chemical) found in each breeding pond.

Additionally the NYSDEC outlines its suggestions for eastern tiger salamander habitat protection, which EPCAL development scenarios will need to apply. With exception to applications of the pesticide Methoprene, it is noted the NYSDEC guidance for protection of eastern tiger salamander habitat does not specifically address water quality of freshwater wetlands, vernal pools or coastal plain ponds (i.e. breeding habitat) but is more specific to protect organism migration pathways. It is recommended a surface water quality monitoring protocol be developed during proposed development site plan review phase(s) and said water quality monitoring be specific for protection of eastern tiger salamander habitat protection and made part of the site plan approval process. The proposed 8-Lot subdivision and its attendant Comprehensive Habitat Protection Plan depicts the recommended Non-Disturbance Buffer areas recommended by the NYSDEC. The NYSDEC guidance is cited below:

NYSDEC: Guidance for Land Cover Set Asides for Conservation of the Eastern Tiger Salamander and Suggested Methods to Avoid, Minimize, and Mitigate Impacts

In the discharge of its authority and responsibility to protect and conserve endangered species under ECL Article 11-0535 and associated regulations 6 NYCRR § 182.6, and as a general matter, DEC urges developers to minimize adverse impacts to tiger salamanders by conforming with both of the following when designing projects that would occur on lands within 1,000 feet of known tiger salamander breeding ponds (measurements should be taken from average water level based on water marks, rack lines and vegetation):

a) Preserving 100% of the existing upland forest habitat within 535 feet of the breeding pond.

b) Preserving a minimum of 50% of the adjacent upland area within 1,000 feet of breeding ponds in contiguous blocks of suitable habitat, while allowing for the preservation of

wooded corridors which provide connections to adjacent tiger salamander upland habitats. The exact configuration of this habitat is subject to the particular site history and habitat features of a project site.

In general, the habitat closest to the wetland is given a higher priority, with a secondary priority being the preservation of intact corridors of habitat that will allow animals to move off of the subject parcel to other suitable habitat if they choose to do so. Where possible, development is encouraged within existing disturbed areas. The preferred habitat of the salamanders is mature oak-pine woodlands. In general, the preserved area should contain as much oak pine woodland as possible, with development occurring on existing footprints of previous buildings, parking areas, roadways or tilled fields. Therefore, the optimal layout for any particular site can vary depending on site specific features such as historic land use, habitat coverage, and adjacent land cover. In addition, preserved areas should remain undisturbed with no grading, excavation, clearing or similar physical activity allowed except as noted below. DEC may request that additional measures be undertaken to protect preserved upland areas including installation of fencing, signage, supplemental plantings of native woody species, and closure of existing pathways that currently provide access to such preserved areas.

Additional requirements:

Roadways: For all newly constructed roadways within 1,000 feet of known tiger ponds, at least one culvert suitable for the passage of migrating tiger salamanders must be placed under the roadway for every 100 feet of roadway within 1,000 feet of known breeding ponds. All curbing installed within 1000 feet must have a minimum height of 8" above grade on the side facing out from the roadbed to prevent tiger salamanders from inadvertently crossing the road and being killed. This curbing should also be sloped (1:3) on the side facing in from the roadbed to allow salamanders the ability to exit the road back to their natural habitat. Another approved curb design is also called Cape Cod Curbing (see Figure 1). Curbing must also be placed around leaching pools, catch basins and similar storm water drainage structures to prevent inadvertent entry of tiger salamanders into these structures.

Pools: All pools within 1,000 feet of tiger salamander breeding ponds must be surrounded by a steeply-sided curb of no less than 8" above grade and which also extends well below the surface.

Other Created Bodies of Surface Water (e.g. recharge or decorative ponds, etc.): All other created (man-made) bodies of surface water within 1,000 feet of tiger salamander breeding ponds must be surrounded by a steeply-sided curb of no less than 4" above grade and which also extends well below the surface.

Window wells: All window wells must be constructed so that either the lip of the well is a minimum of 4" above grade or else a steeply-sided curb of no less than 4" above grade is constructed around the area enclosing the window well.

Lighting: New lighting shall be directed away from Tiger Salamander ponds and should be of a spectrum that does not interfere with the biological activity of this species.

Public Water Supply Wells and Other Groundwater Wells: New groundwater wells for potable water supply, irrigation, firefighting and other purposes should be placed at a distance sufficient from any tiger salamander breeding pond so as to ensure that operation of the well does not result in significant adverse drawdown of surface water levels in the pond.

Use of the preserved area for drainage: The breeding pond must not be utilized as a catch basin for drainage. However, water may be directed into the preserved area as long as the area receiving water does not drain into the breeding pond, the area of upland habitat will not be significantly impacted or altered (e.g. covered with rip-rap), the area of upland habitat receiving storm water is sufficiently small in size so as not to represent a significant percentage of upland tiger salamander habitat and significant quantities of sediment are not introduced into the area.

Mosquito Control and Pesticides: No application of larvicides containing Methoprene shall be made to tiger salamander breeding ponds. No predatory fish such as Gambusia or other finfish may be introduced into Tiger Salamander breeding ponds. Applications of other pesticides or implementation of other mosquito control techniques may require DEC approval.

Management of Preserved Upland Habitat Areas: Appropriate and adequate management plans will be developed and implemented for the management of upland tiger salamander habitat areas preserved as a result of this policy. Said management plans will identify the owner of the preserved area and procedures undertaken to protect and preserve the area. Such measures may include but shall not be limited to frequent patrols of the preserved area; closing of access points to motorized vehicles including cars, trucks, ATVs, motorbikes as well as horses and mountain bikes; restrictive covenants; maintenance and preservation of existing vegetation; planting of supplemental vegetation in denuded areas; fencing; etc.

Grassland Birds and Aviation Use

Introduction

This study is prepared by Applicant to address the request by New York State Department of Environmental Conservation Region I for a study of grassland birds and potential effects of aviation use on grassland bird species. The preparation of this study required hundreds of hours of research and analysis of books, journals, articles, thesis papers prepared and authored by the federal, state government departments and agencies, conversation organizations, scientists and biologists, including but not limited to, Federal Aviation Administration; United States Department of Defense; Department of Agriculture; Department of Natural Resources Conservation Service; Department of Fish and Wildlife; Department of Transportation; New York State Department of Environmental Conservation; Northeast Upland Habitat Technical Committee Massachusetts Division of Fisheries & Wildlife; Northeast Regional Coordinator Cornell Lab of Ornithology; University of Nebraska Prevention and Control of Wildlife Damage; Texas A&M University Wildlife Research Institute; Connecticut College Habitat Management Wildlife; Greene Land Trust; New York Audubon Society; and New Jersey Audubon Society.

It should be noted that efforts were made to locate studies more proximate to the EPCAL site i.e. Francis S. Gabreski Airport (1,451 acres owned and operated by the County of Suffolk-

Gabreski Airport Master Plan and Airport Planned Development Zoning District which includes existing Air National Guard, with proposed expansion of aviation uses to include private, corporate and air taxi services, together with Hampton Business and Technology Park proposing 400,000 square feet of industrial and office space); Islip Mac Arthur Airport expansion of terminal and expansion of aviation use to include Frontier Airlines in 2017 approx.. 38 roundtrips flights per week and expansion in 2019); and, Republic Airport (Stratosphere Development and Talon Air Plan seeking to increase the terminal, taxiways, and include development of aviation-use businesses), unfortunately the research failed to locate or gain access to analysis or study dedicated or focused on aviation use effects on grassland bird species for such projects. Notwithstanding same, the applicant is confident that this study, which includes analysis of numerous studies of active airports, government and commercial, located in the northeast region of the United States, together with study and review of regional bird studies and comprehensive and scholarly works recited herein, demonstrate its commitment to this task and fully and comprehensively provides information desired by the New York Department of Environmental Conservation Region I.

History Of The EPCAL Site

While it is generally known that EPCAL was once part of the former government owned contractor operated "GOCO" military facility known as Naval Weapons Industrial Reserve Plant ("NWIRP"), approximately 10,0000 acres, additional and more detailed history provides critical and essential information relevant to this application and the Town's goal for redevelopment, historical use and reuse, including, aviation uses at EPCAL by Northrop Grumman; aviation uses identified and made part of Calverton Enterprise Park Reuse Plan; and potential for aviation use included in the Reuse & Revitalization Plan and Planned Development District made part of the Reuse & Revitalization Plan; federal environmental review and state environmental review for the above recited reuse plans, respectively, and finally, aviation use impacts to grassland birds.

The period between 1918 and 1939 is known as the "Golden Age" of aviation. Long Island situated at the eastern edge of the United States and western edge of the Atlantic Ocean played a dramatic role in the golden age of aviation. (Stoff, J., The Aviation Heritage of Long Island) Interesting, the central area of Nassau County, known as the Hempstead Plains, was the only natural prairie, flat and treeless, east of the Allegheny Mountains and proved to be an ideal for of intense aviation activity. During World War I, Hazelhurst Field, Mitchel Field, Fairchild, Sperry, College Point, and other areas in Farmingdale and Baldwin served as military aviation training grounds and aircraft manufacturing sites. (Stoff, J., The Aviation Heritage of Long Island) During World War II, Republic Airport in Bethpage, founded in 1931, was the site for Grumman manufacture and assembly of the Wildcat, Hellcat and Avenger military aircraft. Grumman built over 15000 P-47 Thunderbolts during World War II. At the end of World War II, Grumman continued to secure government contracts to manufacture and develop the jet powered Panther, Tiger, and Intruder.

The end of World War II, signaled the beginning of the conflicts between the United States and the Soviet Union known as the Cold War, including the Korean War, Bay of Pigs Invasion, and Cuban Missile Crisis. During the Cold War, Congressional approved defense spending soared from 4.7 billion dollars in 1942 to 153.5 billion in 1961, 178.2 billion in 1981 and

251.2 billion in 1987-note, these figures are recorded in 1982 dollar value. (Higgs, R., U.S. Military Spending in the Cold War Era: Opportunity Costs, Foreign Crises, and Domestic Constraints)

At or near the end of World War II and with the advent of jet engine technology, Grumman secured government contracts for aircraft manufacture developing the jet powered Panther, Tiger and Intruder. During this period of time Grumman (later known as Grumman Aerospace then Northrop Grumman) ranked 22 among United States corporations in wartime production contracts. (Peck, M. J. and Scherer, F.M., The Weapons Acquisition Process)

In the early 1950's, the Department of Navy and Grumman determined that the Bethpage site was too limited to accommodate production and failed to provide adequate space or buffer areas needed to meet production/manufacture demands and safely test the new jet aircraft designs. The Department of Navy located and purchased a 3000 acre site (known as the "NWIRP" and later referred to as the Government Owned Contract Operated "GOCO" portion of the NWIRP and also referred to as the "core" or "area inside the fence") along the Peconic River in Calverton. This property was densely wooded with small ponds, streams, and wetlands, sparsely populated and surrounded by lands cleared for agricultural production. See Exhibit "1" -Suffolk County GIS Aerial Photograph of the EPCAL site in 1947. After the initial purchase of land, the Navy purchased additional lands to the north, southeast and southwest described as "buffer zones" to serve as noise mitigation and flight safety zones. The development plan for the NWIRP was extensive and construction of the NWIRP took place over the span of more than a decade. Some of the construction milestones are recited below: March 1952 Department of Navy begins to clear the property and begins construction of runways; October 1952 construction begins of the manufacturing plants; June-August 1953 Navy completes construction of two runways (10,000 ft. runways and 7000 ft. runway labeled on topographical maps as Grumman Peconic River Airport FAA code of CTO) and rail spur; March 1954 Assembly Plant Six completed with aircraft assembly launched just 30 days later; May 1954 Plant 7 Hangar #4 (flight test) completed and operational; June 1954 Plant 7 Hangar #1 completed and operational; August 1954 the gate house, paint shop, warehouse and steam plant completed and operational; 1956 the Firing-In area (gun butts) and the Engine Test House was completed; March 1958 Fuel System Lab Building was completed; August 1959 the Incinerator (Destructor) Building completed; January 1960 Avionics Service Building was completed; June 1961 the Nucleonics Lab Building completed; September 1961 the Rotodome Test Area was completed; January 1966 Nucleonics Lab Building was completed; October 1967 the Flight Emergency Center was completed; and in 1968 the construction of the Transportation/Ground Support Building. (Grumman Memorial Park, Calendar of Major Events: Navy/Grumman Calverton Facilities) A diagram depicting the improvements to the property, together with a list of structures is annexed hereto as Exhibit "2". Town of Riverhead Planning Department Blue Print of NWIRP GOCO Site Improvements) The intense transformation of this wooded property to a major military aircraft manufacturing plant and flight test center is reflected in 1964 and 1974 aerial photographs annexed hereto as Exhibits "3" and "4" Suffolk County GIS Aerial Photographs 1962 and 1978.

The Grumman Corporation used the site to build, assembled, retrofit, and test the following military fighter aircraft at EPCAL: A-6 Intruder, E-2 Hawkeye, EA-6B Prowler and F-14 Tomcat. It should be noted that over 700 F-14 Tomcats were assembled and tested at EPCAL and nearly all E-2C Hawkeye aircraft were either assembled, retrofitted or tested at EPCAL. In

addition, the U.S. Navy and U.S. Marine Corps used the EPCAL site to test the F9F Panther, F-9 Cougar, and F-11 Tiger . (Cohen, LS, Five Times Long Island Made Aviation History). See photographs of Plant Six Assembly Line annexed hereto as Exhibit "5". Perhaps not a well-known fact, in addition to military related aviation operations at EPCAL, American Airlines and other carriers used the runways at EPCAL for jet training, with maneuvers, including full-stop landings, high-off set approaches, and simulated engine out landings. See copy of Exhibit " 6 " Flight Safety Foundation/Aviation Safety Network: Aviation Safety Database August 15, 1959 Boeing 707-123 Flight #AA514. In addition to all of the above, during the Space Race, Grumman built several mock ups of the lunar roving vehicle. It was reported that the tower logged over 19000 flights per year at EPCAL with test flights beginning at dawn. See Exhibit "7" Grumman Plane News, Calverton: 25 years of Progress, Volume 38, April 27, 1979; See photograph of flight immediately over EPCAL annexed hereto as Exhibit "8"; and see also F-14 Tomcat First Flight at EPCAL: aviationist.com "tomcat-first-flight".

The end of the Cold War in the1990's, signaled a drastic decline in defense spending leading to a wave of aerospace mergers and closures. In 1994, Northrop purchased Grumman Aerospace (renamed "Northrop Grumman Corporation") and shortly thereafter Northrop Grumman Corporation terminated its lease for the EPCAL site and closed nearly all operations on Long Island. Northrop Grumman vacated the site on February 14, 1996 and all military operations ceased at the EPCAL site. (Shaman, Diana, Planners Ponder 2,900-Acre Northrop Grumman Site")

It is well known and documented that the termination of operations at EPCAL caused severe and crippling economic dislocation to Riverhead and the entire County of Suffolk with the loss of approximately 4,000 jobs and over a million dollars in lost property tax revenue. The Department of Navy, without intention of revitalization of the site for military use and to address the devastating economic impacts set forth above, and as required by various laws including Public Law 103-C337 and 104-106, Section 102(2)C of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4331 et seq.) and the Council on Environmental Quality Regulations for implementing NEPA procedures (40 CFR 1500-1508), undertook a comprehensive study of potential environmental impacts that would result from the transfer and reuse of the NWIRP property. The Department of Navy studied several alternate development plans, including a no development alternative, and determined that the "Calverton Enterprise Park Reuse Plan" was the preferred alternative. The Calverton Enterprise Reuse Plan called for the following uses: 887,500 square feet industrial facilities and newly constructed buildings on 282 acres; aviation use described as a limited industrial air park with several flights per day encompassing approximately 853 acres; theme park use (approximately 434 acres proposed for the northwest portion of the site consisting of a single park or a set of attractions, with parking, a campground, and a 63-acre hotel/conference center area planned as complementing facilities; 32-acre service retail use with about 100,000 sq. ft. of build-out; commercial recreation uses on a 191-acre parcel in the northeastern portion of the site which would accommodate i.e. skating rinks, and 6000 seat sports stadium; and finally a public golf course and a range of active and other passive recreational uses on approximately 884 acres. See Exhibit "9" Map of Calverton Enterprise Park Reuse Plan. The Calverton Enterprise Reuse Plan also called for the preservation of the Pine Barrens Core Preservation Area; 137 acres of natural undisturbed lands; 27-acre natural area in the northeast sector to serve as an endangered species habitat, a 183-acre Community Park; buffers along NYS 25; and a 27-acre passive

recreational park at the center of the industrial core. (United States Department of Navy Final Environmental Impact Statement Transfer and Reuse of Naval Weapons Industrial Reserve Plant, Calverton, NY December, 1997)

On or about, 1996, the Department of Navy completed an FEIS and thereafter, did determine, pursuant to Public Law 103-C337 and 104-106, Section 102(2)C of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4331 et seq.) and the Council on Environmental Quality Regulations for implementing NEPA procedures (40 CFR 1500-1508),to donate 2,923 acres to the Town of Riverhead Community Development for reuse consistent with the Calverton Enterprise Reuse Plan and an additional 3, 137 acres to be donated to New York State Department of Environmental Conservation for preservation and 150 acres be donated to the Department of Veterans Affairs (*note, in 1978, 902 acres were transferred to the Veterans Administration with 150 acres slated to be included as part of the Calverton National Cemetery-now one of the largest national cemetery in the United States). A copy of Federal Register / Vol. 63, No. 182 / Monday, September 21, 1998 is annexed hereto as Exhibit "10". It is important to note that determination to transfer to the Town of Riverhead Community Development Agency and New York State Department of Environmental Conservation set forth in the provisions of Public Law set forth above, made such transfers conditioned upon Community Development reuse of the property for economic development and New York State Department of Environmental Conservation retaining the acres donated to it in natural state for conservation and recreational purposes.

While the Town of Riverhead and its Community Development made diligent effort to market, redevelop, and bring to fruition economic development of the EPCAL site, success was limited. In 2011, the Town and Community Development Agency, re-dedicated its efforts and invested significant funds to update, develop and implement reuse and development of approximately 2,323.9+/- acres of the original 2,923+/- acres to meet the current economic, market and site conditions to achieve long standing goal of economic development.

The Reuse & Revitalization Plan for EPCAL included a 50-Lot Subdivision Plan and Zone Change. The Reuse & Revitalization Plan was the subject of a comprehensive SEQRA Supplemental Generic Environmental Impact Statement. Upon the completion of the SEQRA process, the Town Board adopted the Reuse and Revitalization Plan for EPCAL, together with the required amendments to the Town's Comprehensive Master Plan, the Calverton Urban Renewal Plan and the Town's Zoning Code and Zoning Map. These plans and Code provisions are currently in full force and effect and control the future development of EPCAL.

After commencement of review by the Planning Board of the 50-Lot Subdivision, the Town Board received an offer to purchase the entire acreage of EPCAL, excluding Town -purposed acreage and Core Pine Barren acreage, without being further subdivided. As a result, the CDA and Town Board entered into an Agreement of Sale with a private entity Calverton Aviation and Technology (CAT). The 50-Lot subdivision concept was abandoned, replaced by the present proposed 8-Lot subdivision of 2,106.69 acres, with the Town retaining Lots 1,2,3,4, and 5 (total of 462.66 acres) and proposed sale of Lots 6, 7, and 8 (total of 1,643.99 acres) to CAT. The Reuse & Revitalization Plan and the 8-Lot subdivision seeks to preserve over 583 acres for grassland birds and an additional 787 acres for forested wildlife communities. More importantly, the Reuse &

Revitalization Plan shall not only preserve over 583 acres of grassland but require restoration, monitoring and management of the grasslands to ensure suitable habitat for not only existing grassland bird species but anticipated increases in population and even new grassland species habitat.

Grassland Birds & Aviation Land Use Evaluation

Grassland birds, or those birds that rely on grassland habitats for nesting and other habitat functions, are found in each of the 50 United States and worldwide. (U.S. Department of Agriculture Natural Resources Conservation Service Fish & Wildlife Habitat Management "Grassland Birds" October 1999). Grassland birds are bird species that rely upon and thrive on open treeless spaces which provide a balanced of grasses at interval/mixed height, plant species, and thatch for food, nesting and reproduction. Grassland habitats are critical to a host of bird species, including the Upland Sandpiper (prefers and requires short grasses); Henslow's sparrows (prefers and requires taller vegetation with a mix of forbs); Bobolinks and Savannah Sparrows (less stringent habitat requirements with intermediate vegetation heights, grassland, cultivated field and meadows) and the endangered Short-eared Owl (open habitats that support large numbers of voles such as both fallow and cultivated grasslands, marshlands).

The northeast region of the United States was mostly forested, and areas of grasslands were sparse and fragmented throughout the landscape with small areas of sandplains, barrens, floodplains, beaver meadows and sparsely inhabited by Native American settlements. (U.S. Department of Agriculture Natural Resources Conservation Service Fish & Wildlife Habitat Management "Grassland Birds" October 1999)The Hempstead Plains, a vast, flat, open natural prairie of approximately 24,000 ha grassland, located in Nassau County, New York was one of the few natural prairies east of the Allegheny Mountains. (US Geological Survey: Quaternary History of the New York Bight; Friends of Hempstead Plains "History of the Plains") In 1643, there were thirteen different Indian Tribes settled on Long Island, including, Manhasset, Seatauket, Pachoag, and Corcaug. (Krooss, W., A Peek At Richmond Hill Throughout the Keyhole of Time) It has been reported that many of the grasslands were created by Indians who burned large areas of forest to improve hunting and to clear land for farming. (Day, G.M., 1953). The fields were abandoned when soil fertility declined with other wooded and forested areas cleared to create new fields resulting in a landscape of open fields and forest. (Day, G.M., 1953) Beginning in the 1600s through the late 1800s, with first European settlements in Long Island occurring in the 17th century, much of the forested land was cleared for agriculture and development and grasslands dominated the former forested lands of the northeast.. (U.S. Department of Agriculture Natural Resources Conservation Service Fish & Wildlife Habitat Management "Grassland Birds" October 1999) These grasslands, most particularly the Hempstead Plains, attracted grassland bird species to the northeast region of the United States. In the past one hundred years, the grasslands in the northeast significantly declined and were replaced by forests due to succession (succession is the process of grassland, absent mowing, burning, or other type of disturbance, that turn into upland meadows and upland meadows that revert to old field which eventually climax to forest), intensive agriculture (crop production with frequent tilling and mowing), commercial and residential development.

While many species of grassland birds were once regarded as abundant and common, there has been a widespread decline in grassland bird population throughout North American. (Shriver, G., et al., The Distribution and Abundance of Obligate Grassland Birds Breeding in New

England and New York) The North American Breeding Bird Survey ("BBS"), a primary source for critical quantitative data on bird species is an annual roadside count conducted by citizen scientists skilled in avian identification of birds and bird species throughout the United States and Southern Canada, with its inception in 1966, provides reliable data and evidence of declining bird populations, particularly grassland birds throughput the US during the late 19th and mid twentieth centuries. In the region of the Northeast, particularly New England and New York, the population of grassland bird species declined dramatically throughout the late 19th century to the mid twentieth century. (U.S. Department of Agriculture Natural Resources Conservation Service Fish & Wildlife Habitat Management "Grassland Birds" October 1999) The BBS indicates that between 1966 and 1994, 14 of the 19 species of grassland and savanna birds in eastern North America declined significantly and reported that the population of Eastern Meadowlarks decreased at a rate of 3% per year, Grasshopper Sparrows decreased at a rate of 6% per year, Henslow's Sparrows decreased at a rate of 9% per years, and Vesper Sparrows decreased at a rate of 3% per year. (U.S. Department of Agriculture Natural Resources Conservation Service Fish & Wildlife Habitat Management "Grassland Birds" October 1999) It is interesting to note that the population decline of grassland birds contrasted with the decline of forest dwelling migratory birds during the same period of time, mid 1960's to early 1990's, with only 2 of 40 species of forest-dwelling migratory birds decreasing at a rate of more than 2% per year likely due to the succession of grasslands to shrubs and forest. (Askins, R.A., Population Trends in Grassland, Shrubland, and Forest Birds in Eastern North America)

As will be discussed in greater detail below and with emphasis on New England (Including Maine, New Hampshire, Vermont, Massachusetts and Rhode Island) and New York (including southern New York and Long Island), there is no one factor causing the decline, but instead, a cumulative set of factors, including succession, agricultural conversion, development, conversion of native grasses with non-native grasses, fire suppression and climate change/global warming. (Wilsey, C.B., et al, North American Grasslands, 2019) The factors for decline of grassland recited above, often include many other related and contributing factors for the decline of grasslands, including, pesticide use, removal of native vegetative grasses in favor of non-native vegetative grasses (lawns/landscaping); fragmentation (even isolation), fire suppression (during the colonial period burning was widespread and used to maintain open areas, together with natural fires, have been suppressed due to property and human safety concerns).

There is some criticism and debate that the decline of grassland birds garnered little attention or concern from governments and wildlife conservation agencies in the 1980s and 1900s. During that period of time some botanists and historians suggested that our ecosystem, at least in the northeast, simply returned to pre-European settlement times and only active management could maintain that which did not exist, to wit: "grassland is inappropriate as an equilibrium community". (Askins, R.A., History of Grassland Birds In Eastern North America citing Whitcomb, R.F., North American Forests and Grasslands, pp 163-176) Notwithstanding the above, in the past two decades studies have been conducted that challenged the non-existence of grassland in the Northeast during pre-European times and acknowledge that while the Northeast was predominated forested, it did contain parcels of open grassland and instead directed the focus to preservation of grassland and grassland bird species. In addition, these studies highlight the important role that diverse grassland landscapes provide to our ecosystem. Grassland vegetation provide airsheds and watersheds not simply providing habitat for wildlife but serve to purify our air (pull carbon dioxide and release oxygen), filtrate our water and reduction of runoff. (Wilsey,

C.B. et al, North American Grasslands; Kim, J. H., et al, Trade-Offs In Water And Carbon Ecosystem Services With Land-Use Changes In Grasslands; Wilsey, C., C. et al, Quantifying Avian Relative Abundance And Ecosystem Service Value To Identify Conservation Opportunities In The Midwestern U.S. ; Wilcox, B. P., et al. Ecohydrology: Processes And Implications For Rangelands)

Grasslands also filter agricultural runoff (potential pesticides, phosphorus), reducing soil erosion and concentrations of nitrogen, phosphorus, and carbon. (Wilcox, B. P., et al. Ecohydrology: Processes And Implications For Rangelands) .This helps recharge aquifers critical for drinking water and irrigated agriculture. (Wilsey, C.B. et al, North American Grasslands; Kim, J. H., et al, Trade-Offs In Water And Carbon Ecosystem Services With Land-Use Changes In Grasslands; Wilsey, C., C. et al, Quantifying Avian Relative Abundance And Ecosystem Service Value To Identify Conservation Opportunities In The Midwestern U.S. ; Wilcox, B. P., et al. Ecohydrology: Processes And Implications For Rangelands).Today, the importance of this ecosystem, together with widespread decline of bird population, particularly grassland birds, have become a prominent focus of wildlife conservation and highlighted the need to preserve manage and restore grasslands.

As recited above, due to the concern for declines in grassland bird populations and desire to understand the regional distribution and relative abundance of grassland birds in New England and New York, together with the need for guidance for conservation plans, numerous surveys of breeding grassland birds were conducted in late 1990s to the present. As will be discussed in greater detail below, federal, state, and local governments, together with national, regional and local conservation groups have identified active airports as habitat for grassland birds and proposed management plans for these active airfields throughout the northeast, including EPCAL with aviation as a permitted use (note, commercial passenger airport is prohibited as are other aviation uses detailed more fully below) and a Comprehensive Habitat Protection Plan for the non-development areas.

While there are hundreds of active airfields in the northeast, with over a hundred located within the State of New York, it is surprising that little study has been done regarding the potential impacts aviation use may have on grassland birds. Yet, and in spite of the lack of study, or more likely due to stabilization and even increase in grassland bird populations at active airports as highlighted below, active airfields/airports are recognized and regarding as playing a pivotal role in the preservation of grassland birds.

As will be reported below, the studies, thesis and articles which focus on noise disturbances created by aircraft and its possible effects on mating, nesting, food resources and predation risk, provide conflicting opinions and evidence, at times within the same study or thesis, regarding grassland birds and impacts of aviation use and offer little if any conclusive evidence that aviation use has a negative impact(s) upon grassland birds. Notwithstanding the above, these studies, thesis and articles do provide information that may prove very useful for reduction of aircraft strikes and perhaps more importantly, for the improvement and maintenance of grasslands.

While there are some conflicting opinions related to noise disturbance effects on grassland birds, there is evidence and ample studies to support use of grasslands located at and made part

of active airports as habitat for grasslands birds, including the species identified to exist at EPCAL. A study conducted by the Department of Defense provides the most detailed and comprehensive information regarding the importance and key role grasslands at high traffic airports play in preservation, even population increases, in grassland birds. The Department of Defense study will also highlight the acceptance of active airports as suitable grassland habitat and importance of management and monitoring activities to secure the population of grassland birds.

Studies Regarding Aviation Noise

Some of the earliest studies regarding grassland and woodland birds attempted to evaluate vehicular traffic impacts on nesting, breeding and foraging of these birds (referred hereinafter as "highway noise studies"). These early highway noise studies attempted to correlate noise to species distribution and population density in grasslands and woodlands proximate to highways. A series of highway noise studies conducted in the Netherlands reported the following: some species, Lapwing (Vanellus vanellus) and Black-tailed Godwit (Limosa limosa), had reduced nest density yet there was no similar effect on the Oystercatcher (Trina tetanus) and wooded areas along major highways (30,000-40,000 trips per day) showed a significant decline in breeding birds concluding that highway noise had a negative impact on breeding and population. (Veen, J., De verstoring van weidevogelpopulaties; van der Zande, A.N., et al, The impact of roads on the densities of four bird species in an open field habitat- evidence of a long distance effect). Unfortunately, there was no measurement of noise levels and measurements were not conducted at or along the right of ways for these studies but instead these studies were conducted a locations farther or more remote from the highway. Other studies and articles reported that grassland birds appear to avoid areas near roads with heavy traffic (Forman, R.T.T., et al, Road Ecology: Science and Solutions), human-induced disturbance can directly reduce fitness in breeding bird colonies through displacement or increased nest predation and American Kestrels are more likely to experience nest failure in noisier environments (Strasser, E.H. and Heath, J.A. Reproductive Failure of a human-tolerant species). Yet, other highway noise studies contradict the findings recited above and reported an increase of birds and bird species along highway right of ways. A study in Denmark found that a greater number of birds foraged in grasslands along the highway than adjacent fields. (Warner, R.E., Nest ecology of grassland passerines on road rights-of-way in central Illinois) The study down by Warner measured grassland birds on rural interstate and secondary roads with a surprising greater density of nests along the more heavily traveled interstate and that the number of nests and number of species increased with road width. (Warner, R.E., Nest ecology of grassland passerines on road rights-of-way in central Illinois). Yet, another Highway Noise study reported that some nine species become less common near roadways while nine others became more common. (Adams, L.W. and A.D. Geis., Effects of highways on wildlife). There is a wide variety of opinion and analysis regarding the differences in these highway noise studies, some reciting that noise in and of itself negatively impact nesting and population density, others reporting that noise is not have a significant effect and instead the availability and quality of food sources (insects, plants, and small mammals) and size/width of the right of way and fragmentation or lack thereof have a greater and more positive impact on nesting, population density and diversity of grassland bird species.

In a report prepared by the United States Department of Transportation (hereinafter "DOT Study") as part of an ongoing study of the effect of road noise (i.e. the background sound that accompanies varying volumes of traffic) on wildlife (mammals, birds, reptiles, and amphibians), the DOT Study recited conclusions from Memphis State University "Effects of Noise on Wildlife and other Animals". (United States Department of Transportation, Federal Highway Administration, Office of Planning, Environmental & Realty, Noise Effect on Wildlife) This 1971 Study preformed and included in United States Environmental Protection Agency Office of Noise Abatement Document NTID300.5 reported that there is no evidence of noise having a significant impact on cattle (milk production), swine, poultry (egg hatching) or mink (kits produced). (Bond, J., Noise: its effect on the physiology and behavior of animals).The DOT Study also differentiated roadway noise which is typically constant versus aircraft noise with sounds louder and more acute but for limited and shorter durations. The DOT Study included the bird studies recited above, as well as report from a study of California Gnatcatchers.

The California Gnatcatchers study traced the effects of background traffic noise on rate of calling and masking distance (average calls of this species are recorded between 3 and 6 kHz with a sound level of about 50 dB and the noisiest field location with a sound level of 69 dB) finding that there was no significant effect of background traffic noise on the rate of calling. (Awbrey, F.T., et al., Acoustical Responses Of California Gnatcatchers To Traffic Noise) As related to aviation, Awbrey. Hunsaker and Church, the authors of the study referenced immediately above, included reports from a study near Lindbergh Field Airport, a commercial airport in San Diego California, which had frequent background levels of noise about 70 dB and reported successful nesting directly under the flight path at Lindbergh Field. The Lindbergh Field Airport Study concluded that habitat quality was as important as noise in having an effect on the species. (Awbrey, F.T., et al., Acoustical Responses Of California Gnatcatchers To Traffic Noise). The United States Fish and Wildlife Service also conducted studies of the Gnatcatcher, one "on-site" at the Marine Corps Air Station "MCAS" at EL Toro and a second "off-site" 905 acre area proposed for Gnatcatcher habitat as part of the Natural Communities Conservation Plan (NCCP) proximate to the MCAS. (United States Department of Navy, Final Environmental Impact Statement for Disposal and Reuse of Marine Corps Air Station El Toro) The study of these two sites were conducted in 1992, 1994 and 1996 and it was reported that despite the continued exposure to noise associated with aircraft flights at MCAS El Toro, the on-site habitat of Gnatcatchers remained consistent and healthy and found that the distribution of Gnatcatchers were influenced by quality and patch size rather than noise and proximity to airport operations. (United States Department of Navy, Final Environmental Impact Statement for Disposal and Reuse of Marine Corps Air Station El Toro). Similarly, an even earlier study conducted in the late 1960's by the US Department of Interior Report on the Environmental Impact of the Big Cypress Swamp Jetport recited that no bird flushing and no disturbances from B-720 jet flyovers with noise levels ranging from 75db (with plane at 3000 ft.) to 96.5 dB (with planes at 500 ft.), however, it would be remiss not to include that the US Department of Interior cautioned that at the time of report few birds were observed in the area and wind may have effected proper sound recordings. (United States Department of Interior, Environmental Impact of the Big Cypress Swamp Jetport). There are other studies that report that military activity did not affect nest site selection or nesting success in Eastern Meadowlark or Grasshopper Sparrow on Fort

Riley, a 101, 733 acre United States Army Installation including Marshall Army Airfield known for helicopter operations for the Combat Aviation Brigade, located in North Central Kansas (Hubbard, R.D. et al, Nest Site Characteristics of Eastern Meadowlarks and Grasshopper Sparrows in Tallgrass Prairie at the Fort Riley Military Installation, Kansas). A 1996 study by Kershner and Bollinger found that Eastern Meadowlarks were attracted to Illinois airfields and recited that mandated mowing were responsible for 44% of nest failures compared to 23% related to nest predation. (Kershner, E.L. and Bollinger, E.K., Reproductive Success of Grassland Birds at East-central Illinois Airports).

A more recent study was conducted at Manchester International Airport to address the impact of aircraft noise on avian communities by comparing community dissimilarity, species diversity and species abundance among sites with all sites having varied average and maximum noise levels caused by aircraft. (Wolfenden, Andrew, The Effects Of Aircraft Noise On Avian Communities And Communication). Manchester International Airport, is one of the busiest airports, ranking fourth busiest, in the United Kingdom with average of 450 aircraft movements per day estimated at two minute intervals (approximately 20-50 per hour) and maximum noise levels generated by aircraft ranging from 61.6 dB to 91.0 dB. The study provided limited information and failed to include concrete data identifying and describing type of habitats made part of study area that are necessary to compare and contrast grasslands typical of airports located in the northeastern portion of the United States and more particularly the EPCAL, nor did the study include grasslands bird species listed as threatened, endangered or of special concern in this region, and finally, the study did not address aircraft noise effects on nesting and population of grassland birds. The study did provide some, albeit limited, information regarding aviation noise effects on song, including change in times of song, frequency, timing and length of song. The study also did a comparison of the songs of the chiffchaff and reported that airport birds use lower frequency songs than control birds-the control birds being the common airport birds and hypotheses that these findings may be explained by birds that are found close to airports are suffering from Noise Induced Hearing Loss (NIHL). (Wolfenden, Andrew, The effects of aircraft noise on avian communities and communication). The study also suggested that noise effects on signal masking, and reduction in feeding activities and foraging efficiency but no evidence was reported to bolster this presumption except a recitation that noise can distract brain attention favoring one stimulus over another such that noise may distract from feeding and foraging. (Wolfenden, Andrew, The effects of aircraft noise on avian communities and communication). In addition to the presumption that noise may distract brain attention from feeding, the study suggests that noise may reduce visual response to predatory risks and at the same time, the thesis suggested that noise may result a decrease in predatory risk as predators that rely on sound to locate nests avoid noisy areas. (Wolfenden, Andrew, The effects of aircraft noise on avian communities and communication). Of particular interest and relevant to this study, the study reported that species diversity was not affected by aircraft noise with no difference in the total number of species between different noise categories with the most commonly detected species (wrens) with density and abundance estimated to be higher in the intermediate and noisy sites as opposed to robins where higher abundance and density in quieter sites and finally, the abundance of the five most common bird species (wren, robin, blackbird, blackcap and blue tit) were not affected by increasing noise exposure. (Wolfenden, Andrew, The effects of aircraft noise on avian communities and communication). Finally, the study attempted to monitor and measure physiological stress induced by aircraft noise and reported that "[t]here were no differences in

corticosterone levels, a proxy for measuring stress levels, between 11-day old blue tit chicks exposed to noise treatments and control chicks" suggesting that anthropogenic noise is not an environmental stressor in fledging blue tit chicks. (Wolfenden, Andrew, The Effects Of Aircraft Noise On Avian Communities And Communication).

A recent article, December of 2019, focused on the importance of emerging science of bioacoustics to shape and understand animal communications and impacts of pervasive anthropogenic sources of sounds. (Vyawahare, Malavika, Do Birds Try to Shout Down Airplanes? The Evidence Suggest They Do). The author, Vyawahare, M., is quoted "birds rely more on visual cues than sound; their sense of sight is more developed than that of humans, while their hearing is just about as good". Vyawahare noted that while sound is critical for birds to monitor and map their surroundings due to the abundance of diversity of bird species it is difficult to generalize about how they react to noise created by aviation use. The article included comments by Allison S. Injaian, a researcher with the Bioacoustics Research Program at Cornell University, New York and Selvino R. DeKort, a behavior ecologist at Manchester Metropolitan University. A. Injaian expressed agreement with Vyawahare reciting that the results above were consistent with what she found among wood thrushes (*Hylocichla mustelina*) breeding near Ithaca Regional Airport. She stated that the vocal of wood thrush breeding at a bird sanctuary just a mile from the airport showed an increase in their vocal behavior during dawn chorus related and in response to aircraft morning flights. She opined that the birds may be compensating for diminished ability to communicate in response to aircraft noise. Selvino R. DeKort, a behavior ecologist at Manchester Metropolitan University responded to Mongabay News, and stated that "We have similar observations on a much smaller scale that some bird species seem to increase their singing when aircrafts take off and land. It is possible that sound in itself, irrespective of its source, stimulates birds to sing." Selvino R. DeKort explained "If you consider airplane noise as an acoustic stimulus it is "probably adaptive" for birds to sing in their presence. It is likely that birds habituate to noise as do humans," De Kort said, "however, habituation does not mean that individuals are not under a substantial level of stress" and concluded that it is likely that bird populations continue to settle near airports as birds have not evolved to deal with anthropogenic noise. (Vyawahare, Malavika, Do Birds Try to Shout Down Airplanes? The Evidence Suggest They Do).

In an article credited to Max Planck Society, Phys Org, September 8, 2016, it was reported that birds adjust their singing activity around airport noise and robins, blackbirds, blue tits, great tits, and chaffinches at the airport locations started singing five to ten minutes earlier than their conspecifics in the forested area. (Brumm, H., Max Planck Society). Henrick Brumm, credited as head of the study, is quoted as saying "That doesn't sound like much, but, even small differences in the onset of the dawn song can lead to big differences in reproductive success. It is interesting that the final comment in the article recites that other studies have revealed that birds that sing earlier find more mating partners and are more likely to have success in promiscuous mating. (Brumm, H., Max Planck Society).

As the studies, thesis and articles above reflect, there is conflicting opinions regarding grassland birds and impacts of aviation use and these works offer little if any conclusive evidence that the noise from aviation use has a negative impact(s) upon grassland birds.

Studies Of Aviation Impact On Grassland Habitats

There is, however, consensus among all the experts that grassland is critical to grassland birds for foraging or other habitat needs, and , while some grassland species require or may use very small grasslands (less than 10 or 20 acres, the large expanses of connected (non-fragmented) grassland provides the most suitable habitat and supports a greater diversity of grassland birds as the expanse of grassland typically includes a variety of grasses, scattered forbs and an occasional tree or shrub and in turn a greater variety of foods ranging from grass seeds to crickets, grasshoppers and worms, small mammals (i.e. voles) small birds, and even small reptiles and amphibians. There is also no debate that there has been a dramatic decline in grassland habitat throughout the northeast, be it due to intensive agriculture, residential and commercial development, fragmentation and succession, with limited ability to recapture these lands and restore to grassland habitat. In the northeast some species, such as upland sandpiper, bobolink, dickissel, grasshopper sparrow, savannah sparrow, and Henslow's sparrow each declining by 94 to 98 percent in the past 40 years (Robbins, C.S., et al, The Breeding Bird Survey: Its First Fifteen Years 1965-1979; Herkert, J. R., Et Al., Habitat Establishment, Enhancement And Management For Forest And Grassland Birds in Illinois. Ill.; Askins, R.A. Population Trends in Grassland, Shrubland, and Forest Birds in Eastern North America)

Based upon the above, it is counterintuitive and counterproductive to focus on those potential negative environmental impacts recited above where there is ample studies to support use of grasslands located at and made part of active airports as the grasslands at active airports evidence the ability to stabilize and even support population increases of the grassland birds designated as threatened, endangered and species of special concern. This is especially true in view of the loss and irretrievable large tracts of open grassland with active airports serving as some of the last remaining large open grasslands available to the grassland bird species and ability to monitor and manage these grassland habitats.

While federal, state, and municipal grasslands account for a small fraction of the total grassland habitat in the northeast, the grasslands located at active airfields (both military and civilian) provide some of the most significant and valuable habitats for grassland birds. (Askins, R.A., History of Grassland Birds In Eastern North America 1999) It should be noted that in southern New England, most of the remaining populations of Grasshopper Sparrows and Upland Sandpipers are found in extensive mowed areas at airports and military airfields Veit, R.R., and W.R. Peterson, Birds of Massachusetts; Bevier, L.. R., The Atlas Of Breeding Birds Of Connecticut; Melvin, S. Military Bases Provide Habitat for Rare Grassland Birds). In addition, and perhaps more significantly, Westover Air Reserve Base an active military base an average of 44 flights per day located in Chicopee, Massachusetts, boasts that the populations of Upland Sandpipers and Grasshopper Sparrows have increased by more than 200% as a result of these management changes during the late 1980s through to 1990s. Melvin, S. Military Bases Provide Habitat For Rare Grassland Birds; Jones, A. J. And Vickery, P. D., Conserving Grassland Birds: Managing Large Grasslands Including Conservation Lands, Airports, and Landfills)

Federal, state, and conservation groups have made clear that active airports with its large contiguous grasslands are and will continue to be provide critical habitat for grassland birds and made part of conservation plans. It is also widely accepted that avian abundance measures alone are not adequate for measuring habitat quality and emphasis is now being placed on monitoring

local demographic parameters (e.g., nest survival, fledging success, and fecundity) as targets for management and monitoring and adjusting management activities. A study by the Department of Defense provides evidence of successful breeding and nesting at active airports, successful management measures, and requirement for continued monitoring to improve maintenance for continued success for preservation and population increase of grassland birds.

The Department of Defense through the Legacy Resource Management Program, together with support and funding from Massachusetts Natural Heritage and Endangered Species Program (MANHENSP) and the United States Navy Agricultural Outlease Program, funded a three year study (2009, 2010, and 2012) of grassland birds and reproductive success in grasslands maintained (mowed) as part of active military airfields in the Mid-Atlantic and Northeast, to wit: Westover Air Reserve Base ('Westover'; Massachusetts), Joint Base McGuire-Dix-Lakehurst ('Lakehurst'; New Jersey), and Patuxent River Naval Air Station ('Patuxent'; Maryland) .(United States Department of Defense Legacy Resource Management Program, Grassland Bird Productivity on Military Airfields in the Mid-Atlantic and Northeast Regions-Final Report)

The purpose and focus of the study was to determine the role that airfields in the northeastern United States (both military and civilian) and maintenance of airfields play in maintaining populations of grassland bird's species, including nesting success and productivity of the different grassland species. While the study targeted two species, Grasshopper Sparrow [Ammodramus savannarum] and Eastern Meadowlark [Sturnella magna]) other grassland species, including the Savannah Sparrow, Bobolink, Upland Sandpiper and Field Sparrow, were located and monitored at regular intervals. The study measured vegetation at nesting sites and at random selected sites within the airbases.

As stated above, the Department of Defense selected Westover Air Reserve Base ('Westover'; Massachusetts), Joint Base McGuire-Dix-Lakehurst ('Lakehurst'; New Jersey), and Patuxent River Naval Air Station. The Westover Air Reserve Base ("Westover") is situated on 2500 acres with two active runways measuring approximately 11, 500ft x 300ft and 7000ft x 150 ft., and is the largest Air Force Reserve base in the United States. Westover shares its military maintained runways with a public airport knows as the Westover Metropolitan Airport. According to Federal Aviation Authority records for the 12-month period ending 31 October 2017, Westover airport had 16,213 aircraft operations, an average of 44 per day: 64% military, 33% general aviation and 3% air carrier. Westover maintains approximately 1100 acres of grasslands, which include over 100 species of plants but large areas are dominated by non-native vegetation. The Patuxent River Naval Air Station ('Patuxent') is situated on approximately 6, 300 acres and is home to Headquarters, Naval Air Systems Command (NAVAIR), the U.S. Naval Test Pilot School, the Atlantic Test Range with research and testing facilities for both rotary and fixed-wing aircraft and evaluation and testing of systems relating to naval aviation. In 1991, the Naval Test Wing Atlantic (NTWL) and Aircraft Division of the Naval Air Warfare Center (NAWCAD) launched a partnership at Patuxent to revitalize aircraft research and development complete with acquisition, research, development, test, and evaluation and engineering and fleet support activity for manned and unmanned aircraft, engines, avionics, aircraft support systems and ship/shore/air operations. There are more than 165,000 air operations annually which include over 140 different

aircrafts as part of air operations. The Westover complex hosts over 17,000 people, including active-duty service members, civil-service employees, defense contractor employees, and military dependents. The third active military base made part of the Department of Defense study is Joint Base McGuire-Dix-Lakehurst in Lakehurst, New Jersey, situated on 7,400 acres and is only tri-service base in the United States Department of Defense and includes units from all five armed forces branches. While reliable figures could not be obtained for the number of weekly or annual flights, it should be noted that Joint Base McGuire-Dix-Lakehurst aircrews are airborne 24 hours a day, 7 days a week and there are frequent formations of up to four C-17s or KC-10s each launched at one minute intervals. In 2008, Lakehurst become one of the largest sites for Air Force Expeditionary Center training programs with approximately 3500 airman trained at the site annually. Most recently, Lakehurst was selected to house 24 KC-46A Pegasus described as next generation mid-air refueling aircraft and a $146.5 million construction project, new aircraft hangars and other infrastructure to house 24 the KC-46A Pegasus is planned for the site. Finally, approximately 1,700 acres of the 7,400 acre site is considered grassland habitat and 1,200-1,300 acres are actively managed as habitat for grassland birds. . (United States Department of Defense Legacy Resource Management Program, Grassland Bird Productivity on Military Airfields in the Mid-Atlantic and Northeast Regions-Final Report)

The base model used and made part of the study DOD Study is very detailed and variables where created for each airfield to reflect differences in percentage of coverage of grass, woody vegetation (i.e. Lakehurst has an abundant amount of woody vegetation vs. Westover), forbs and open ground; differences in heights of grasses, differences in distance from active runways, and differences in management regimes in order to best evaluate nest survival and failure rates and overall young successfully produced per nest ("productivity"). At each airport, an average of two to three plots were selected and monitored for periods of two hours such that each plot was monitored/studied at least every one to two weeks throughout the season mid-April - mid July in 2009, and late April – mid July in 2010 and 2012. Note, the study employed a host of methods to locate nests, including behavioral observations (singing, calling, carrying nest material), sticking-flushing adults off the next) and rope-dragging. (United States Department of Defense Legacy Resource Management Program, Grassland Bird Productivity on Military Airfields in the Mid-Atlantic and Northeast Regions-Final Report)

The Department of Defense Study confirmed that active airports play and will likely continue to play an important role in the preservation of and population increases in grassland birds species, however, the study highlighted the need for additional study on grassland management activities. The Department of Defense Study reported that overall nest survival rates for Grasshopper Sparrow and Eastern Meadowlark at all three sites were above average when compared with rates from other studies, however, there were significant and unique differences between nest survival rates between mowed and non-mowed grasslands for each of the airports. For example, overall nest survival estimates for Grasshopper Sparrow and Meadowlark were substantially lower in mowed areas than in non-mowed areas at Westover – 28 vs. 53% for Grasshopper sparrow, 15 vs. 40% for Meadowlarks. One of the more intriguing findings in this study was that the number of young produced per successful nest both for target species and for

all species at Westover was lower in mowed areas than in non-mowed areas. . (United States Department of Defense Legacy Resource Management Program, Grassland Bird Productivity on Military Airfields in the Mid-Atlantic and Northeast Regions-Final Report)

Grassland Bird Studies At EPCAL

Grassland and grassland birds did not exist on the EPCAL site in the 1800's through and until the mid-1950. Instead, as reflected above, the EPCAL site was densely wooded (or referred to in the 1998 NEPA/FEIS study as "forested"). As the EPCAL property lies within the Pine Barrens Region of Long Island with a portion of EPCAL lying within the more than 52,500 acres designated as Core Pine Barrens Preservation Area by the Long Island Pine Barrens Protection Act of 1993, the woods/forest at EPCAL were predominately comprised of the pitch pine-oak dominant upland plant community within the Pine Barrens Region.

The transformation of the NWIRP site, in particular EPCAL, from forest to military manufacture and testing of jet aircraft began in 1950s. The aerial photographs from 1947 through to 1978, show the evolution of development and eventual establishment of grasslands proximate to the runways and taxiways or what is sometimes referred to as the "clear zones". See Exhibits "1", "3" and "4" annexed hereto. During this same period of time, late 1950's, 1960s, 1970's, and late 1980's and as stated above, there was evidence of dramatic decline in grassland bird species throughout the northeast with some species such as upland sandpiper, bobolink, dickissel, grasshopper sparrow, savannah sparrow, and Henslow's sparrow each declining by 94 to 98 percent. (Robbins, et al, The Breeding Bird Survey: its first fifteen years 1965-1979; Herkert, J. R., et al, Habitat establishment, enhancement and management for forest and grassland birds in Illinois. Ill.; Askins, R.A., Population Trends in Grassland, Shrubland, and Forest Birds in Eastern North America). In New York, upland sandpiper, grasshopper sparrow, vesper sparrow, and Henslow's sparrow were all historically locally common became listed as Species of Special Concern by the NYSDEC (United States Department of Navy Final Environmental Impact Statement Transfer and Reuse of Naval Weapons Industrial Reserve Plant, Calverton, NY December, 1997 citing Andrle, R.F. and J.H. Carroll The Atlas of Breeding Birds in New York State, Smith and Smith, Henslow's Sparrow and Grasshopper Sparrow: A Comparison of Habitat Use in Finger Lakes National Forest, New York). While grassland bird species were rapidly declining and listed as species of special concern in New York, at EPCAL "area within the fence" of the NWIRP the removal of the forest to make way for construction of buildings and runways created a new potential habitat for grassland birds. During operations, manufacturing and testing of military aircraft, together with testing of military aircraft manufactured off-site and testing of commercial aircraft at EPCAL, the newly created grasslands along the runways and taxiways did attract a variety of grassland birds, including bobolink, grasshopper sparrows, meadowlark, vesper, and upland sandpiper. (United States Department of Navy Final Environmental Impact Statement Transfer and Reuse of Naval Weapons Industrial Reserve Plant, Calverton, NY December). The Atlas of Breeding Birds in New York State, a comprehensive, statewide survey sponsored by the New York State Ornithological Association and the Department of Environmental in cooperation with New York Cooperative Fish and Wildlife Research Unit at Cornell University, Cornell University Department of Natural Resources, and the Cornell Lab of Ornithology and conducted from 1980-1985 reported that over 100 bird species were confirmed to have bred on-site and an additional 35 species as probable or possible breeding on-site (Andrle, R.F. and J.H. Carroll, The Atlas of Breeding Birds in New York State). It should be noted

that this study was conducted during the height of production and testing at EPCAL with active use of the site within the fence and more significantly, active use of the runways. Just after the study above and during the period of time, 1986 and 1987, field studies conducted by staff of the New York Natural Heritage Program reported grassland birds in and along the runways and throughout the grasslands/open space portions of the buffer areas. (United States Naval Weapons Industrial Reserve Plant, Calverton, New York Natural Resources Management Plan May 1990).The New York Heritage Program study was part of the NWIRP Natural Resources Management Plan, a cooperative agreement between Fish and Wildlife Service, Third Naval District and New York State Department of Environmental Conservation for continued management of the buffer zones located immediately proximate to the GOCO portions (manufacturing plants and runways) of the site. (United States Naval Weapons Industrial Reserve Plant, Calverton, New York Natural Resources Management Plan)While the focus of the NWIRP Natural Resources Management Plan was to , develop and implement a plan to maintain and increase habitat diversity within the buffer zone areas, the study areas did include the GOCO portion of the property and recited plans to maintain the military mission at NWIRP, including the goal to reduce bird/aircraft collision potential and continue to maintain clear zone along runways in vegetation eight to ten inches tall and reduce mowing operations of clear zones from five times per year to an as needed basis to keep out hardwood invasion and keep vegetation under 10 inches height and maintain landscapes with pest management, pruning and mowing. (United States Naval Weapons Industrial Reserve Plant, Calverton, New York Natural Resources Management Plan The focus and goals of the NWIRP Natural Resources Management Plan recited that without proposed management of the old field, grassland and bushlands existing wildlife would be lost through natural succession processes and recommended management activities that included creation of openings in wooded stands; mow, cut or burn the abandoned fields and other open areas, plant grasses, legumes and grains, plant fruit shrubs for quail and pheasant, protect and main tiger salamander breeding habitat with the goal to support the highest populations of fish and wildlife. (United States Naval Weapons Industrial Reserve Plant, Calverton, New York Natural Resources Management Plan) A second bird study was performed during 2000 and 2005 as part of the update to the Atlas of New York State Breeding Birds which included the area within the fence (GOCO portion of property aka EPCAL, area including western and eastern runways) which confirmed near identical number of bird species in Blocks 6853C and 6753D with fluctuations in the number of possible, probable and confirmed existence on species on site-A copy of Map Blocks Blocks 6853C and 6753D are annexed hereto as Exhibit "11". (McGowan, K. and Corwin, K., Second Atlas of Breeding Birds in New York State)

In 2008, Amy S. Greene Environmental Consultants, Inc. (ASGECI) preformed comprehensive study of the New York state designated threatened and endangered grassland bird species. The New York State Department of Environmental Conservation set the survey protocol and expended the ASGECI field study to include an additional five grassland bird species and three pineland bird species. The ASGECI focused on thirteen grassland species, six classified as "endangered" or "threatened" and seven classified as 'special concern or 'watch list", and three pine land species classified as species of "special concern". The ASGECI included winter and breeding season visual and auditory studies. While the ASGEIS study, together with weekly logs and corresponding site/block data, are included and made part of the FSGEIS, some important findings are appropriate to recite herein, to wit: Breeding Season Surveys-grasshopper sparrow, eastern meadowlark and savannah sparrow were well represented on the EPCAL site, 88 pairs, 57 parks and 79 pairs, respectively; a male Norther Harrier was observed foraging; bobolink, vesper sparrow and others were not encountered on the site; and Winter Surveys documented healthy

populations of Norther Harrier; American Kestrel; short-eared owl, horned lark and eastern meadowlark. (Town of Riverhead EPCAL SGEIS and FSGEIS: townofriverheadny.gov).

It is abundantly clear that the development at NWIRP did, albeit unintentionally, create new valuable grassland at a time when grassland was disappearing from the Long Island landscape. It is also evident that during the operation of the GCOC with active aviation use the use of grassland and species diversity continued throughout active aviation use of the property. Similar to EPCAL, the JFK International Airport was built in stages beginning in 1930 to 1960, with expansion and redevelopment throughout the years to the present. JFK boast one of the largest breeding populations of Upland Sandpipers in the northeast. This habitat was artificially created from primarily sandy dredge spoils built to a level of six feet above sea level. It is suspected that the Upland Sandpipers and steadily continuing populations of Upland Sandpipers are descendants of birds that once bred at Hempstead Plans until development decreased and fragmented areas of these former natural grasslands. (Garber, S.D., et al., Twenty-eight Year Study of Upland Sandpiper Breeding Population in New York). Similarly, the New Jersey Breeding Atlas for the period of time 1993-1997 reported that Upland Sandpipers were recorded in only 15 of 852 blocks and almost completed restricted to active airports and military bases, including Newark International Airport, McGuire Airforce Base, and Atlantic City International Airport. (United States Federal Aviation Administration Airports Division, Environmental Impact Statement, Atlantic City International Airport).

The Town of Riverhead's Reuse & Revitalization Plan for EPCAL seeks to follow the edict and determination of the federal government, in particular the Department of Navy, to reuse this property to restore economic dislocation caused by closure of the NWIRP. The Town's Reuse & Revitalization Plan and its 8-Lot Subdivision is quite different from NWIRP GOCO use of the property and the original reuse plan approved under NEPA/FEIS for Calverton Enterprise Park Reuse Plan and its attendant aviation uses. The Town's Reuse and Revitalization Plan significantly reduces the area for development in favor of preservation of grasslands and woodlands. The Town's Reuse and Revitalization Plan reduces the area for development, be it aviation, commercial, or industrial to 593.2 as compared to the 2,923 acres slated for development under NWIRP and approximately 2,200acres slated for development under the Calverton Enterprise Park Reuse Plan (of which 853 acres were to be developed for "aviation/aircraft use"). The Town Reuse and Revitalization Plan limits development to 593.2 total area/acreage for development, while preserving 583.0 acre for grassland and 787.3 acres of woodland.

It is beyond cavil that aviation use of the EPCAL property shall never rise to the level of the aviation uses during the Cold War and NWIRP/Grumman era. During the NWIRP/Grumman era, the Congressional approved defense spending soared from 4.7 billion dollars in 1942 to 153.5 billion in 1961, 178.2 billion in 1981 and 251.2 billion in 1987 (Note, these figures are recorded in 1982 dollar value- Cato Institute Policy Analysis No. 114: U.S. Military Spending in the Cold War Era: Opportunity Costs, Foreign Crises, and Domestic Constraints November 30, 1988 Robert Higgs). It is well known that shortly after acquiring the property in 1950, the Department of Navy leased a portion of the property, EPCAL, to the Grumman Corporation. The Grumman Corporation secured military contracts to build, assembled, retrofitted, and tested the following military fighter aircraft at EPCAL:A-6 Intruder, E-2 Hawkeye, EA-6B Prowler and F-14 Tomcat. It should be noted that over 700 F-14 Tomcats were assembled and tested at EPCAL and nearly all E-2C Hawkeye aircraft were either assembled, retrofitted or tested at EPCAL. In addition, the U.S. Navy and U.S. Marine Corps used the EPCAL site to test the F9F Panther, F-9 Cougar, and F-

11 Tiger . Perhaps not a well-known fact, in addition to military related aviation operations at EPCAL, American Airlines and other carriers used the runways at EPCAL for jet training, with maneuvers, including full-stop landings, high-off set approaches, and simulated engine out landings. In addition to all of the above, during the Space Race, Grumman built several mock ups of the lunar roving vehicle. It was reported that the tower logged over 19,000 flights per year at EPCAL with test flights beginning at dawn. See Exhibit "7" Grumman Plane News annexed above.

In addition, the land use (number of acres) designated for potential for aviation use shall never rise to the level or intensity of the original reuse plan, a plan adopted on or about 1998 by the Department of Navy after environmental study funded and undertaken by the Department of Navy and adopted pursuant to National Environmental Protection Act/FEIS, known as the Calverton Enterprise Park Reuse Plan which designated 853 acres to aviation uses. The Calverton Enterprise Park Reuse Plan not only designated 853 acres to aviation use, but the entire 2,323 acres (that acreage of the NWIRP leased to Grumman) was slated for a variety of uses, including but not limited to, 282 acres designated for industrial park, 191 acres for commercial recreational facility with golf course and stadium, 434 acres for theme park, 63 acres for hotel/conference center, subject to or more accurately made part thereof, that the lands used and referred to as buffer areas or often referred to as "outside the fence" be transferred to the New York State Department of Environmental Conservation (3,137 acres legislatively mandated to remain in natural state for conservation and recreational purposes) and Department of Veterans Affairs (150 acres, together with 1977 transfer of over 900 acres for a national cemetery).

As demonstrated above and recited in all its environmental studies, while the Town seeks to restore the local and regional economy devastated by the closure of NWIRP and such reuse of EPCAL is likely to include aviation use of the runways and taxiways, the Town also seeks to protect and provide habitat for threatened, endangered, special concern and rare plants and animals, including grassland birds and require monitoring and maintenance of these natural areas to protect them from forestation and waste. The Town is confident that any and all reuse of the property consistent with the Reuse & Revitalization Plan, including the Comprehensive Habitat Protection Plan, will achieve the goals set forth in said Reuse & Revitalization Plan and provide critical grassland habitat necessary for foraging, nesting and breeding and serve to stabilize and even support population increases of the grassland birds designated as threatened, endangered and species of special concern.

Grassland Birds and Aviation Use
Study for EPCAL, Calverton, NY

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