



December 19, 2023

To: PADEP Northeast Regional Office (NERO) – 2 Public Square, Wilkes-Barre, PA 18701-1915

Submitted electronically to: [RA-EPWW-NERO@pa.gov](mailto:RA-EPWW-NERO@pa.gov)

**Re: Nazareth Borough Municipal Authority Hower Farm Draft NPDES Permit for Discharges of Stormwater Associated with Construction Activities (PAD480199)**

Delaware Riverkeeper Network (DRN) submits this comment opposing the issuance of the draft permit proposed by the Pennsylvania Department of Environmental Protection (DEP) related to the Hower Farm project. This comment contains this letter, the attached Review of Nazareth Borough Municipal Authority (NBMA) Hower Farm Draft NPDES Permit for Discharges of Stormwater Associated with Construction Activities (PAD480199) by Meliora Design, and photo attachments. DRN requests that the permit be denied.

Based on the attached technical review, compliance with federal technology-based effluent standards at 40 CFR Part 450 has not been demonstrated. Mistakes and inadequate compliance with regulations in the application's design will result in a project that is a threat to the water quality of groundwater and surface waters, including the protected Little Bushkill Creek and associated wetlands and riparian areas. The project will endanger the stability, stream structure, and ecological integrity of the UNT as it flows to the Little Bushkill Creek.

The project threatens the Little Bushkill Creek and the Bushkill Creek, which are protected under PADEP's Special Protection Waters Program, and the water resources of the Delaware River, a major water supply for downstream water users, which is designated by the Delaware River Basin Commission as Special Protection Waters, where water quality degradation is prohibited. The project fails to protect the environment, including the Little Bushkill Creek and local, regional, and downstream water resources, from degradation related to the stormwater runoff from the planned construction activities, land use, and permanent infrastructure.

The NBMA has issued notice that it plans to apply biosolids from their sewage treatment facility on the Hower Farm. DRN is concerned that because the property is being operated primarily as a biosolids disposal facility with a farm as its secondary use, planned conservation practices will not be effective. As explained in the attached technical review, the design of the proposed project makes the land applying of the biosolids a serious liability on all levels.

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DRN is gravely concerned that the proposed project does not adequately protect the public health of the local community from the additional threat of pollution from biosolids that are not adequately retained or controlled by the stormwater system and associated land use practices. Many residents in the region, and those who are proximate to the Hower Farm, are dependent on the local groundwater aquifer that feeds their individual private water wells. These wells and the regional groundwater are at risk of contamination.

DRN considers that the designed project demonstrates a failure to comply with regulations and must not be approved. It is requested that the NPDES Stormwater Construction Application Number PAD480199 be rejected and the draft permit be denied.

Thank you for the opportunity to comment.



Maya K. van Rossum  
the Delaware Riverkeeper  
Delaware Riverkeeper Network



Tracy Carluccio  
Deputy Director  
Delaware Riverkeeper Network

Enclosures:

Review letter from Meliora Design, RE: Preliminary Review of Nazareth Borough Municipal Authority Hower Farm Draft NPDES Permit for Discharges of Stormwater Associated with Construction Activities (PAD480199), dated 12.18.23 with photo attachment to Meliora Design letter (Attachment A).

Photo of Hower Farm, UNT with fields, dated July 21, 2023 (Attachment B)

Photo of Hower Farm, UNT, dated December 18, 2023 (Attachment C)

Ms. Tracy Carluccio  
Deputy Director Delaware Riverkeeper Network  
925 Canal Street, Suite 3701  
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December 18, 2023

**RE: Preliminary Review of Nazareth Borough Municipal Authority Hower Farm Draft NPDES Permit for Discharges of Stormwater Associated with Construction Activities (PAD480199)**

Dear Ms. Carluccio,

Meliora Design has reviewed the Draft NPDES Permit submission related to the Nazareth Borough Municipal Authority (NBMA) Hower Farm Project located at 6249 Hower Road in Plainfield Township, Northampton County, Pennsylvania, including the following documents prepared on behalf of the applicant:

1. NBMA Hower Farm Draft NPDES Permit for Discharges of Stormwater Associated with Construction Activities (PAD480199)
  - a. PCSM Narrative dated June 23, 2023, prepared by TeamAg, Inc., last updated August 4, 2023
  - b. PCSM Plans dated June 23, 2023, prepared by TeamAg, Inc., last updated August 4, 2023
  - c. E&S Narrative dated June 23, 2023, prepared by TeamAg, Inc., last updated August 4, 2023
  - d. E&S Plans dated June 23, 2023, prepared by TeamAg, Inc., last updated August 4, 2023
  - e. Wetland Report dated July 18, 2023, prepared by Vortex Environmental, Inc. based on June 22, 2023 field investigations

We have also reviewed various supporting documents including the following:

1. Notification of First Land Application of Biosolids to a Site (30-Day Notice) dated October 13, 2023, prepared by Material Matters.

We have reviewed these materials specifically for issues related to site development and stormwater management. We have supplemented this letter with a figure that clearly identifies one of our areas of concern on the applicant's documentation. After having completed our document review, it is our opinion that there are significant technical issues to substantiate the Delaware Riverkeeper Network's position that the proposed development of NBMA Hower Farm does not adequately protect the public health of nearby community members and all citizens downstream of the site, especially those who use the Delaware River as a drinking water source. It is our opinion that this design does not protect nearby water resources from construction activities or the proposed biosolids operation on site, and that the potential for contamination of special protection water resources is high.

## MAJOR ISSUES OF CONCERN

### RIPARIAN BUFFER REQUIREMENTS (Pa §102.14)

Pennsylvania Chapter 102 Section 14 outlines the requirements associated with protecting waterways via riparian buffers. Applicants who propose earth disturbance activities within 150 feet of an intermittent stream

in a protected watershed where there are waters failing to attain one or more designated use are required to protect an existing riparian forest buffer or establish a new riparian forest buffer. The applicant's E&S and PCSM Narratives state, "Riparian Buffer and Riparian Forest Buffer (150 ft min) are not applicable to this project as there are no surface waters located near the proposed improvements." However, Meliora compared the PCSM Plans to the Ch 93 designated use map on eMapPA. The northern LOD appears to abut the start of the existing UNT to Little Bushkill Creek (HQ-CWF, MF). The applicant's PCSM narrative calls this a "drainage draw" that drains to UNT to Little Bushkill but in our opinion, this looks like a spring and the headwaters of the creek. The bed and banks are visible in the aerial map on eMapPA (see attached figure). We have not seen evidence that the applicant satisfies §102.14 nor have they submitted a written request for waiver as part of the application for a permit under Chapter 102.

The wetland study performed by Bradley Gochnauer of Vortex Environmental on June 22, 2023 determined that the UNT to Little Bushkill originates where the applicant has shown on their drawings (approximately 500 ft from DP-001). We contest that it originates 0 ft from DP-001. It is important to note that this spring/summer was unusually dry, and this is an intermittent stream. It is likely that if the study were performed at a different time, the study would have been able to document the stream under flowing conditions. The investigation provided by Vortex Environmental seems insufficient to determine where the stream actually begins. The photos provided do not show a key map of where the photos were taken. From our interpretation, it looks like the photos were only taken in the forested area of the stream, with no photos provided near the project LOD where we suspect the stream begins. There is no proof offered that a stream does not exist upstream of the forested area. The Department should require more thorough documentation to support the extent of the stream channel.

## INFILTRATION TESTING

Infiltration testing appears to have been completed by the stormwater engineer and there is no supporting documentation from a soil scientist or geotechnical engineer, including a detailed soil log. Without adequate documentation of methods, it is difficult to support the validity of these results.

The PCSM Narrative reports rock and high infiltration rates in excess of 10 inches per hour in Basin B. This indicates that the excavation may be in proximity to the bedrock. This basin could become hydrologically connected to the groundwater. This becomes a water quality concern, given that the applicant does not plan to incorporate any water quality measures on site before the runoff reaches the basin. Further hydrogeological study is necessary to determine how this basin could interface with local and regional groundwater.

## BIORETENTION SOIL

Due to infiltration test results above 10 inches per hour, the applicant has proposed to over-excavate Basin B and backfill with an amended soil mixture. The Engineered Soil in Basin Bottom Detail (Sheet PC-5) indicates a soil mixture that will have no stable structure. It is composed primarily of topsoil and compost that will decompose. It will not hold grade, maintain porosity, or infiltrate as the applicant claims.

Basin A is shown in the details to have amended soil along the bottom, but this is not reflected in the narrative. This needs further clarification. If Basin A does not have amended soil, there is a portion of the basin (near the outlet control structure) where the proposed grade is above the existing grade. This would indicate that the

basin would not be infiltrating into native soils in this portion of the basin. The applicant must provide further detail on how this will be addressed.

### EARTHWORK TO DIVERT BIOSOLIDS FROM BASINS

The proposed grading relies extensively on the implementation of “swales” to direct runoff from areas of biosolids application areas from entering the basins, including runoff from areas of biosolids holding areas. Little detail is provided on the plans to assure that the contractor constructs the swales properly.

If these swales were not to function as designed, runoff from 3.23 additional acres could end up in Basin A and runoff from 10.61 additional acres could end up in Basin B. This additional source of runoff would overwhelm the basins. The basins would not be able to function as designed, as the applicant’s models do not account for this additional volume of water being routed through the basins. This additional volume of water compounds the issues that would arise from the proposed amended soils on the basin bottoms that would not allow for infiltration. The basin would release water from its outlet control structure in storms smaller than the 2-year, and it would overtop the emergency spillway more frequently than the 100-year storm.

It is important to note that runoff from fields with applied biosolids is what is proposed to be redirected through these swales. The failure of the swales and basins would result in degradation of the EV wetland and the HQ-CWF, MF stream on site and the pollution of groundwater, causing further downstream ecological damage. More detailed design and documentation of these swales is needed to ensure proper construction and maintenance.

Additionally, we do not agree that the proposed biosolids storage area in LOD B will drain away from Basin B. The drainage area to Basin B appears to be arbitrarily drawn to exclude the biosolids storage area and contradicts the proposed grading for that area of the site. We noted above that we suspect that Basin B could become hydrologically connected to groundwater, and if biosolids enter Basin B, the biosolids would have a direct pathway into the groundwater. Berms should be implemented to prevent runoff from the biosolids holding areas and application areas entering the stormwater basins.

### OFF-SITE DISCHARGE ANALYSIS

Per PA DEP’s Chapter 102 Off-Site Discharges of Stormwater to Non-Surface Waters FAQ Bulletin published on January 2, 2019, “For any off-site discharge to a non-surface water, any point source discharge (including discharges from a basin, BMP, channel, storm sewer, etc.) will require an off-site discharge analysis, regardless if the stormwater is being managed to meet 25 Pa. Code §§ 102.8(g)(2) & (3) for rate, volume and water quality.” The applicant is responsible for demonstrating that the concentrated flow in post-construction conditions will create a path from DP-002 that is stable until it reaches the confluence with a surface water. The applicant does not own the parcel that the runoff must travel through to reach the nearest surface water.

The applicant must also demonstrate flow path stability from the existing terrace discharge point at the southern edge of the property (which receives runoff from the proposed Swale C which directs drainage from field 7 around Basin B). This is an undetained drainage. The applicant has not provided this required documentation.

The applicant must supply photos, figures, and an analysis deemed suitable by the Department and Conservation District. DEP requires this information under the authority of the Pennsylvania Clean Streams

Law and 25 Pa. Code §§ 102.4(c) & 102.8(f)(15). The documentation in the permit application is not sufficient to demonstrate that the discharge will not cause accelerated erosion on the properties along the flow path to the nearest surface water.

### BIOSOLIDS CONSIDERATIONS

It is important to note that the site work included in the applicant's NPDES permit application is to prepare the property to essentially function like an industrial site. NBMA purchased this preserved farmland to use it as a biosolids disposal site for their wastewater treatment plant (WWTP). We are unsure how this was approved for a site that contains an EV wetland and HQ-CWF, MF stream in an area that is not serviced by the owner's WWTP.

We have no information about the contents of the biosolids that will be applied, e.g. does the Nazareth Borough WWTP service industrial facilities that produce harmful waste that is not measured in standard WWTP effluent? We do know for certain that the biosolids will be of Class B nature, indicating a higher pathogen load. NBMA has not made publicly available the rate of application of the biosolids on the site.

NBMA has supplied an Agricultural E&S Plan in their 30-Day Notice documentation that offers NRCS-approved conservation practices that would theoretically reduce sediment transport and nutrient runoff to surface waters. However, from aerial photos, it looks like NBMA has mowed the existing stream buffers and wetlands up to the edge of the stream. We wonder why they would do that if part of their conservation plan is restoring the riparian forest buffer? (Note the forested riparian buffer proposed in the Agricultural E&S Plan does not negate the applicant's deficiency under §102.14 because their buffers are not planned for establishment near the area of proposed disturbance.)

### CONCLUSION

If we had more information about the contents of the biosolids and how much or how frequently they will be applied, we would be able to say more about the water quality implications of this site resulting from the technical deficiencies of PAD480199. Regardless of the site's proposed use, PAD480199 has several technical deficiencies that must be addressed before a permit is issued. We urge the Department to further investigate this. The Delaware Riverkeeper Network and citizens of the watershed bring up valid concerns about how this operation will impact our water resources.

Sincerely,

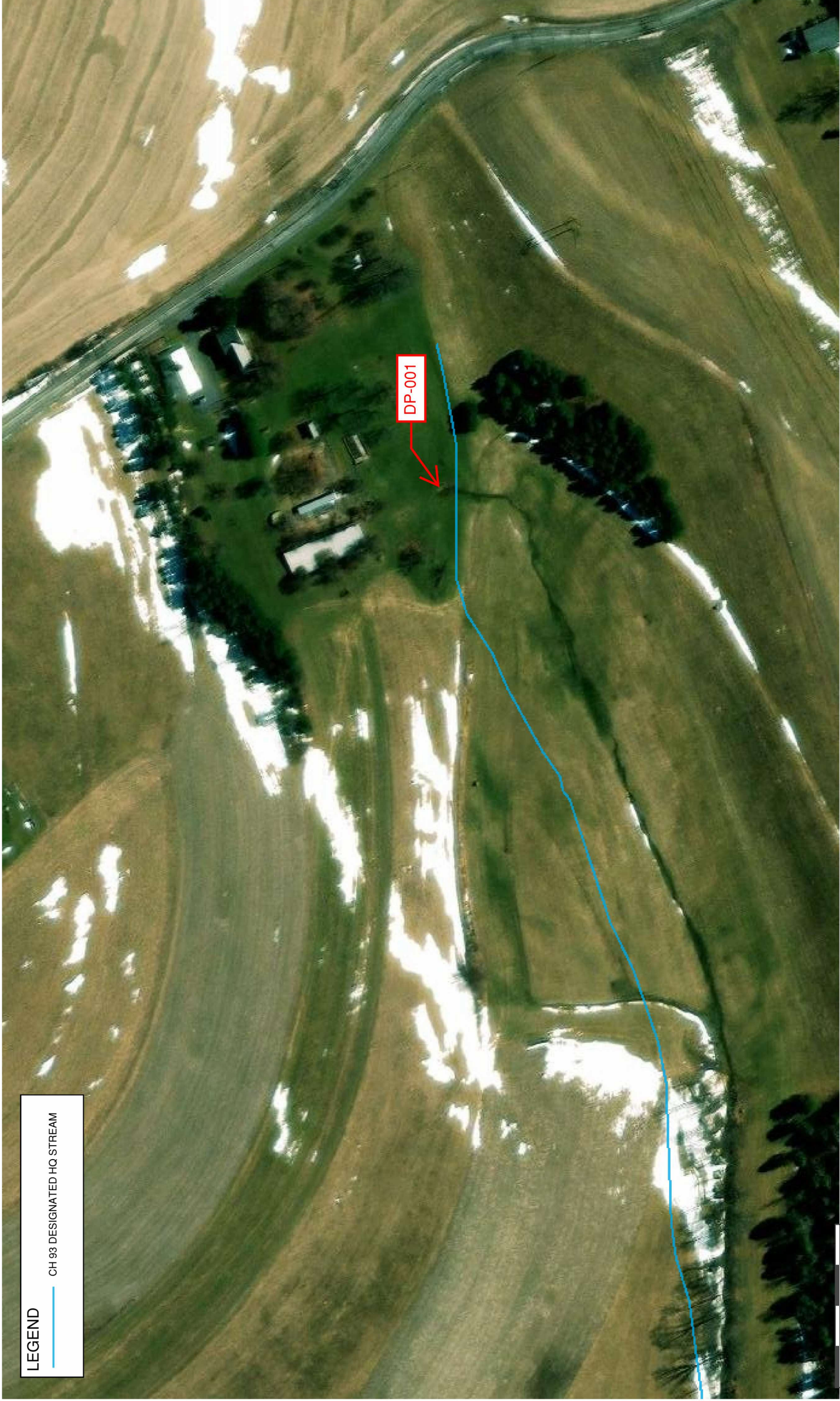


Michele C. Adams, PE, LEED AP  
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LEGEND  
— CH 93 DESIGNATED HQ STREAM



Aerial Photograph of NBMA Hower Farm sourced from eMapPa