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November 17, 2021

Via email to: comment.HughesRoxbury2021@dec.ny.gov

Kate Kornak
Regional Permit Administrator
Division of Environmental Permits, Region 4
NYS Department of Environmental Conservation
1130 North Westcott Road
Schenectady, NY 12306

Re: **Hughes Energy, LLC - Proposed Solid Waste Management Facility**
Roxbury, NY (DEC ID# 4-1248-00321)
Comments on Draft Scoping Document dated 10/1/2021

Dear Ms. Kornak:

We are writing on behalf of Our Children's Earth Foundation and its members to provide comments on the Draft Scoping Document dated October 1, 2021, for the Hughes Energy Municipal Solid Waste Processing Facility (hereinafter, "Draft Scope"). We are providing these comments in advance of the November 30, 2021 deadline for public written comment because that is also the deadline for DEC to issue the final scope. We may supplement these comments before November 30, or after that date consistent with 6 NYCRR § 617.8(f) and (g). We also reiterate our request for a public scoping meeting, which we first made in our October 25, 2021 letter to you.

Our Children's Earth Foundation (OCE) is a 501(c)(3) non-profit organization that advocates on behalf of children, who are most vulnerable to pollution, to enable them to breathe clean air and use clean water. OCE educates the public about the health problems caused by pollution in their neighborhoods and empowers affected communities to take action to reduce pollution. Its primary objectives are to promote public awareness of domestic and international human rights issues and environmental impacts through information dissemination, artistic expression, education projects, and private enforcement of environmental protection statutes. OCE is active throughout the United States, with current campaigns focused on supporting grassroots groups and environmental justice organizers in New York, Florida, and California. OCE's members in Roxbury, Delaware County, and the Catskills are highly concerned about the proposed project, which threatens to adversely affect their health and quality of life due to the many potentially significant adverse environmental impacts, such as increased traffic, odors, noise, light, and impacts to community character, parkland, aesthetics, water quality, air, climate, public health, land, animals, plants, and other natural resources.

I.

INTRODUCTION

Hughes Energy proposes to build and operate an industrial facility in the Town of Roxbury that would add a new, proprietary "steam-cleaning" operation to solid waste management in the state. Hughes has, however, chosen the worst possible site for such a waste processing facility—a beautiful, pristine, and sensitive location less than five miles from the "blue line" boundary of Catskill Park, approximately 1000 feet from Schoharie Reservoir and Creek, on property containing freshwater wetlands and a Class A perennial stream that feeds the reservoir. The 39.6-acre property borders a large undeveloped forest tract above Schoharie Creek, which, along with the site, forms a seamless transition of undisturbed forest and floodplain wetlands that provides important wildlife habitat and protects water quality. The project site is nearly 200 miles away from the landfill where Hughes proposes to transport and dispose inert wastes after steam-cleaning them, and it is thousands of miles from the solid fuel boilers that would burn fuel pellets that Hughes hopes to manufacture from fibrous waste. The source of Hughes's incoming waste stream remains unclear.

What is clear is that the proposed facility would receive truckloads of waste six days a week; process that waste 24 hours a day, seven days a week; transport outgoing loads of hazardous wastes, inert solid wastes, recyclables, and fuel pellets; burn liquid propane; use groundwater; consume electricity; emit air pollution and discharge water pollution; generate noise, orders, and light; disturb the land and natural communities; degrade visual and aesthetic resources and community character; and produce copious amounts of offsite pollution.

Yet, the viability of Hughes's proposal is highly uncertain, and there is no established public need for adding this type of steam-cleaning process—which has no precedent statewide or nationally—to solid waste management practices in New York. Nor is there an apparent public benefit from the action, which threatens to increase greenhouse gas emissions due its extensive transportation requirements and carbon footprint and to thwart recycling efforts by burning paper, cardboard, and food waste rather than recycling or agriculturally composting them. Indeed, the project may *increase* the volume of material discarded at landfills, and *decrease* the volume recycled and composted, by converting fibrous recyclables into pellets and converting deformed inert recyclables into landfilled waste.

While Hughes claims that its proposal would support statewide climate and waste management policies—and seeks to rush its application through the review and approval processes—it is the forthcoming environmental impact statement by which DEC, in coordination with the involved agencies and the public, will determine the full extent of environmental impacts, the project's consistency with state and local environmental policies, and whether there is any need for, or public benefit from, this proposed industrial facility. Consistent with SEQRA, the final scoping document should require the DEIS to contain a robust scientific analysis of the whole proposed action, its impacts, mitigation measures, and reasonable alternatives.

II.

BACKGROUND

A. The Project Application Process

The project proponent, Hughes Energy, LLC ("Hughes"), is a limited liability company that was formed and is domiciled in the State of Delaware and conducts business in New York as a Foreign Limited Liability Company, pursuant to a filing with the New York Department of State, Division of Corporations, in 2020. Hughes has been described as the U.S.-based distributor for Wilson Bio-Chemical Ltd ("Wilson"),[1] which is based in the United Kingdom ("UK"). Wilson's website explains that Hughes is Wilson's "main selling agent for this territory [*i.e.*, North America]."[2]

Hughes met with DEC and NYSERDA staff in DEC's Central Office in 2018, and then with DEC Region 3 staff in May 2019 about potential projects in Rockland and Orange Counties, and then with Region 4 staff starting in September 2019, hoping to proceed with projects in Greene County.[3] Hughes told DEC that the "infrastructure requirements" for a Wilson Steam Composting Facility include "a Transfer station with permit to process 150,000 tons of MSW per year" and a "Contract for 150,000 tons for 10-15 years."[4] Hughes asked DEC about the "[p]rocess for permitting a Wilson Steam Composting Facility in Region 4 at the Green-Del Sanitation and Transfer Station."[5]

Hughes then sought site plan approval from the Town of Roxbury to construct a steam facility at the Green-Del Sanitation and Transfer Station site, which is owned by Robert and Linda Compton. By letter dated September 21, 2020, DEC sought lead agency status, which the Town Planning Board concurred with on October 6, 2020.

In January 2021, Hughes applied to DEC for a Solid Waste Management Facility Permit pursuant to 6 NYCRR Part 360 ("Part 360 Regulations") and a State Facility Air Permit pursuant to 6 NYCRR Part 201. Hughes' applications are not, however, for the Green-Del Sanitation and Transfer Station site, but for an adjacent 39.6-acre parcel owned by Martin Shuback and Julie Martin (Tax Parcel 113.-1-25). On March 30, 2021, Hughes told DEC that it still "has a purchase agreement for the existing Greene-Del Transfer Station on the adjacent property and intends to purchase the property if the MSW Processing Facility receives necessary approvals and advances to construction."[6] But Hughes has not explained how it would operate the Green-

[1] https://www.thedailystar.com/news/local_news/proposed-facility-would-turn-waste-into-fuel/article_f994bc0f-0f7a-5672-a5b8-b44610f2c9cb.html
[2] https://wilsonbio-chemical.co.uk/about-us/
[3] *See* Attachment 5, hereto, Hughes Energy slide deck entitled "NY DEC Region 4 Introduction."
[4] *Id*.
[5] *Id*.
[6] Hughes 3/30/21 Response to DEC's 3/3/21 Notice of Incomplete Application at 4.

Del transfer station and what integration, if any, there would be between the two facilities.

Despite DEC's issuance of five Notices of Incomplete Application and five responses from Hughes and its consulting Sterling Environmental Engineering ("Sterling"), a number of fundamental aspects of Hughes's proposal to build and operate a solid waste facility in Roxbury remain unclear or contradictory, such as the "target service area" from which it expects to receive unsorted municipal solid waste ("MSW").

On September 20, 2021, DEC issued a Positive Declaration, determining that the proposed action may have a significant effect on the environment and that a draft environmental impact statement ("DEIS") must be prepared. Less than two weeks later, on October 1, 2021, Hughes submitted the Draft Scope to DEC. Although the SEQRA regulations direct the lead agency to provide a final written scope within 60 days of its receipt of a draft scope,[7] the regulations also specifically provide that the "[t]ime periods in this Part may be extended by mutual agreement between a project sponsor and the lead agency."[8] Further, the SEQR Handbook explains that "the 60-day clock in 617 to go from draft to final scope can be tight"[9] and "[f]or particularly complex or sensitive projects, . . . an extended scoping timetable is frequently necessary to ensure that the final scope appropriately addresses all issues and study specifications."[10]

DEC received hundreds of requests from the public to extend the timeframe for review of and comment on the Draft Scope, including requests from OCE and other community organizations requesting a 90-day public comment period and a public scoping meeting. DEC then asked Hughes to agree to extend the 60-day deadline. However, Hughes refused to agree to any extension whatsoever. As a result, the public and involved agencies are forced to provide scoping comments on a completely unprecedented project in an extremely tight time frame, and DEC is being forced by the applicant to issue the final scope on the same day that scoping comments are due, which threatens to hamstring the SEQRA review process.

B. SEQRA Requires the Final Written Scope and the DEIS to Include Certain Mandatory Elements and to Achieve Certain Important Objectives.

As you know, SEQRA's scoping process has several important purposes and objectives. Among those are:

- to ensure that the draft EIS will be an accurate and complete document that is adequate for public review;
- to ensure public participation in the EIS development process;

[7] 6 NYCRR § 617.8(e).
[8] 6 NYCRR § 617.3(i).
[9] The SEQR Handbook (4th Ed. 2020) at 111.
[10] *Id*. at 101.

- to allow open discussion of issues of public concern;
- to identify the significant environmental conditions and resources that maybe affected by the project;
- to describe the extent and quality of information needed;
- to list available sources of information;
- to specify study methods or models to be used to generate new information, including criteria or assumptions underlying any models;
- to define the nature and presentation of the data to be generated by those studies and models;
- to specify possible measures for mitigating potential impacts; and
- to define reasonable alternatives for avoiding specific impacts, either as individual scenarios or a range of alternatives.[11]

More specifically, the SEQRA regulations provide that a final written scope must include, at a minimum, the following:

> (1) a brief description of the proposed action;
>
> (2) the potentially significant adverse impacts identified both in Part 3 of the environmental assessment form and as a result of consultation with the other involved agencies and the public, including an identification of those particular aspect(s) of the environmental setting that may be impacted;
>
> (3) the extent and quality of information needed for the preparer to adequately address each impact, including an identification of relevant existing information, and required new information, including the required methodology(ies) for obtaining new information;
>
> (4) an initial identification of mitigation measures;
>
> (5) the reasonable alternatives to be considered;
>
> (6) an identification of the information or data that should be included in an appendix rather than the body of the draft EIS; and
>
> (7) a brief description of the prominent issues that were considered in the review of the environmental assessment form or raised during scoping, or both, and determined to be neither relevant nor environmentally significant or that have been adequately addressed in a prior environmental review and the reasons why those issues were not included in the

[11] SEQR Handbook at 100–101.

final scope.[12]

The SEQR Handbook explains further that "[w]henever possible, the final scope should prescribe the form and extent of analysis for identified impacts and issues." [13] In the final scope the lead agency should, among other things, do the following:

- Define the extent and quality of information needed to adequately address identified impacts. For each impact:

  – Cite available scientific literature that is pertinent to the issues;
  – Identify other existing and relevant data that should be used; and
  – Specify any new information that must be developed.

- Identify methods to be used to assess the project's impacts. Define any thresholds in addition to regulatory standards to be used in evaluating the significance of studied impacts. Where existing data will be relied on, cite the sources and summarize the findings. Where new information must be developed, applicant should include study plans with details like descriptions of field work techniques, locations of control and sampling points, methods for analysis of data, and any models to be used.

  Examples include:

  – mathematical models proposed to predict air, traffic, or water quality impacts;
  – wildlife population studies;
  – visual resource impact analysis techniques; or
  – noise or vibration analyses.

- Provide an initial list of potential mitigation measures to be discussed in the EIS, to the extent that they can be identified at the time of scoping, plus an explicit requirement to include and address additional mitigation measures which may be identified during EIS studies and analyses.

- Include a list of reasonable alternatives for avoiding or reducing identified impacts to be specifically addressed in the EIS, (size, sites, alternative technologies, or others), including any relevant thresholds. The lead agency may prescribe some or all the range of alternatives to be included and should identify which impact(s) a specified alternative would eliminate or minimize.

- List information and data to be included in appendices rather than in the body of the EIS as well as any information or analyses to be presented graphically. The lead agency should specify how summaries and conclusions from all appendices will be

[12] 6 NYCRR § 617.8(e).
[13] SEQR Handbook at 103.

> represented in the body of the EIS and may wish to require advance review and approval of any graphics (or samples thereof).[14]

The SEQRA regulations provide that the DEIS, which will be prepared from the final written scope, "must assemble relevant and material facts upon which [each involved] agency's decision is to be made. It must analyze the significant adverse impacts and evaluate all reasonable alternatives."[15] Among other things, the DEIS must "must include the following elements":

> (i) a concise description of the proposed action, its purpose, public need and benefits, including social and economic considerations;
>
> (ii) a concise description of the environmental setting of the areas to be affected, sufficient to understand the impacts of the proposed action and alternatives;
>
> (iii) a statement and evaluation of the potential significant adverse environmental impacts at a level of detail that reflects the severity of the impacts and the reasonable likelihood of their occurrence. The draft EIS should identify and discuss the following impacts only where they are relevant and significant:
>
> > (a) reasonably related short-term and long-term impacts, cumulative impacts and other associated environmental impacts;
> >
> > (b) those adverse environmental impacts that cannot be avoided or adequately mitigated if the proposed action is implemented;
> >
> > (c) any irreversible and irretrievable commitments of environmental resources that would be associated with the proposed action should it be implemented;
> >
> > (d) any growth-inducing aspects of the proposed action;
> >
> > (e) impacts of the proposed action on the use and conservation of energy . . . ;
> >
> > (f) impacts of the proposed action on solid waste management and its consistency with the state or locally adopted solid waste management plan;
> >
> > * * *
> >
> > (i) measures to avoid or reduce both an action's impacts on climate change and associated impacts due to the effects of climate change such as sea level rise and flooding.

[14] *Id*. at 104–105.
[15] 6 NYCRR § 617.9(b)(1).

(iv) a description of the mitigation measures;

(v) a description and evaluation of the range of reasonable alternatives to the action that are feasible, considering the objectives and capabilities of the project sponsor. The description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed. The range of alternatives must include the no action alternative. The no action alternative discussion should evaluate the adverse or beneficial site changes that are likely to occur in the reasonably foreseeable future, in the absence of the proposed action. The range of alternatives may also include, as appropriate, alternative:

(a) sites;
(b) technology;
(c) scale or magnitude;
(d) design;
(e) timing;
(f) use; and
(g) types of action.

For private project sponsors, any alternative for which no discretionary approvals are needed may be described. Site alternatives may be limited to parcels owned by, or under option to, a private project sponsor; * * *

(viii) a list of any underlying studies, reports, EISs and other information obtained and considered in preparing the statement including the final written scope.[16]

In sum, the scoping process—including a detailed and comprehensive final scope—is designed to ensure that significant topics have not been missed, that the DEIS's elements and level of analysis satisfy legal standards, and to "avoid the submission of an obviously deficient draft EIS."[17] While the applicant prepares the draft scoping document (and, later, the DEIS), it is lead agency that "controls the scoping process" and "is responsible for developing the final written scope."[18] The lead agency is likewise responsible for the adequacy of the EIS. It is therefore critically important for DEC to issue a thorough final scoping document that is calculated to produce an EIS that fully complies with SEQRA and fully informs the public and agency decisionmakers of the proposed project's public benefits (if any), significant impacts, mitigation measures, and alternatives.

[16] 6 NYCRR § 617.9(b)(5).
[17] SEQR Handbook at 100.
[18] *Id*. at 101.

III.

PRELIMINARY COMMENTS ON DRAFT SCOPE AND COVER LETTER

Hughes's Draft Scope is remarkable in that it fails to fulfill any of the important purposes of scoping. Instead, the hastily prepared and exceedingly brief Draft Scope (along with the cover letter that accompanied it) spend most of their pages attempting to argue that the DEIS should analyze only noise impacts and nothing more.

This does not bode well for the DEIS that Hughes and Sterling will be tasked with preparing for submittal to DEC. DEC and the applicant have significant work ahead of them to ensure that the final scope and the DEIS (and FEIS) comply with SEQRA.

IV.

DETAILED COMMENTS ON DRAFT SCOPE AND ADDITIONS/REVISIONS FOR FINAL SCOPE

The final scope for the DEIS should contain each of the elements discussed below. For some topics, we have put our comments in context by first providing a summary of the applicable SEQRA regulations or other relevant authority. For DEC's convenience, attached hereto in Attachment 1 is a proposed Table of Contents containing the minimum elements that should be discussed and analyzed in the DEIS. The applicant should have included such a table in its Draft Scope. DEC may determine that it is necessary to include additional elements as well.

These scoping comments are also supplemented and informed by three technical letters or brief reports that are attached hereto and hereby incorporated by reference. Attachment 2 is an initial review of natural features and natural communities that may be found on the project site on a seasonal or year-round basis. The report was prepared by Matthew D. Rudikoff Associates (hereinafter, "MDRA Report") to identify natural resource concerns that should be included in the final scope as a guide to the DEIS's examination of the environmental setting and the proposed action's impacts on those site resources. Attachment 3 is a letter from Burgess Environmental ("Burgess Environmental Letter") that comments on solid waste and other engineering and environmental issues for the final scope. Attachment 4 is a letter from Downstream Strategies ("Downstream Strategies Letter") addressing certain air pollution and greenhouse gas ("GHG") climate issues for the final scope.

Also attached hereto in Attachment 5 are certain materials submitted to DEC by Hughes that help to illustrate these comments.

Description of the Proposed Action
6 NYCRR §§ 617.8(e)(1), 617.8(b)(5)(i)

The final scope and the DEIS must describe the proposed action.[19] The Draft Scope did not do so adequately.

A. SEQRA Requires the DEIS to evaluate the "whole proposed action."

The first required element of a DEIS is a "description of the proposed action."[20] The SEQRA regulations define "actions" to include:

> (1) projects or physical activities, such as construction or other activities that may affect the environment by changing the use, appearance or condition of any natural resource or structure, that:
>
> (i) are directly undertaken by an agency; or
>
> (ii) involve funding by an agency; or
>
> (iii) require one or more new or modified approvals from an agency or agencies;
>
> (2) agency planning and policy making activities that may affect the environment and commit the agency to a definite course of future decisions;
>
> (3) adoption of agency rules, regulations and procedures, including local laws, codes, ordinances, executive orders and resolutions that may affect the environment; and
>
> (4) any combinations of the above.[21]

One of SEQRA's general rules provides that since "[a]ctions commonly consist of a set of activities or steps . . . [t]he entire set of activities or steps must be considered the action, whether the agency decision-making relates to the action as a whole or to only a part of it."[22] Therefore, "[c]onsidering only a part or segment of an action is contrary to the intent of SEQR. . . . Related actions should be identified and discussed to the fullest extent possible."[23]

To comply with SEQRA, an EIS must review the "whole action." As The SEQR Handbook explains:

> Reviewing the "whole action" is an important principle in SEQR; interrelated or phased decisions should not be made without consideration of their consequences

[19] 6 NYCRR §§ 617.8(e)(1), 617.8(b)(5)(i).
[20] 6 NYCRR § 617.9(b)(5)(i).
[21] 6 NYCRR § 617.2(b).
[22] 6 NYCRR § 617.3(g).
[23] 6 NYCRR § 617.3(g).

> for the whole action, even if several agencies are involved in such decisions. Each agency should consider the environmental impacts of the entire action before approving, funding or undertaking any specific element of the action . . . .[24]

An EIS must include "all phases or components of the activity consistent with the 'whole action' concept of review."[25] Thus, one of the basic questions that must always be asked when determining the scope of a DEIS is "Has the lead agency determined what the whole action is?"[26] To determine the scope of the whole action, The SEQR Handbook poses, and answers, several related questions, including these:

> [Q] *How does an agency determine if the proposed project is part of a larger plan?*
>
> [A] Sometimes the project sponsor has a definite plan for future development, and other times the future projects are merely wishful thinking. It is up to the lead agency to determine if the project is the "whole action" or merely a part or segment of the action that should be reviewed. If there is evidence of a plan, then there is a strong presumption that the larger project is the "whole action" and should therefore be the subject of the environmental review.[27]
>
> [Q] *How might an agency address uncertainty about later phases?*
>
> [A] All known or reasonably anticipated phases of a project should be considered in the determination of significance. If later phases are uncertain as to design or timing, their likely environmental significance can still be examined as part of the whole action by considering the potential impacts of total build-out.[28]

Significantly, where "some . . . activities on an overall action are not subject to review under SEQR does not remove the consequences of these decisions from consideration with respect to the whole action."[29] Thus, once an action is subject to SEQRA and being analyzed in an EIS, the environmental review must include all aspects of the overall action, including those which, by themselves, would not require discretionary agency approval or funding.

An important corollary of SEQRA's requirement to review the "whole action" is that "segmentation" of environmental review is prohibited.[30] "Segmentation means the division of the environmental review of an action such that various activities or stages are addressed under this [SEQRA] as though they were independent, unrelated activities . . ."[31] One situation where illegal segmentation may occur is "where activities that may be occurring at different times or

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[24] SEQR Handbook at 53.
[25] *Id*. at 32.
[26] *Id*. at 2.
[27] *Id*. at 55.
[28] *Id*. at 54.
[29] *Id*. at 14.
[30] 6 NYCRR § 617.3(g).
[31] 6 NYCRR § 617.2(ah).

places are excluded from the scope of the environmental review."[32] This prevents proper SEQRA review because, "[b]y excluding subsequent phases or associated project components from the environmental review, the project may appear more acceptable to the reviewing agencies and the public."[33]

The SEQR Handbook also provides a basic test for segmentation—"[i]f the answer to one or more of these questions is yes, an agency should be concerned that segmentation is taking place:"

- Purpose: Is there a common purpose or goal for each segment?
- Time: Is there a common reason for each segment being completed at or about the same time?
- Location: Is there a common geographic location involved?
- Impacts: Do any of the activities being considered for segmentation share a common impact that may, if the activities are reviewed as one project, result in a potentially significant adverse impact, even if the impacts of single activities are not necessarily significant by themselves?
- Ownership: Are the different segments under the same or common ownership or control?
- Common Plan: Is a given segment a component of an identifiable overall plan? Will the initial phase direct the development of subsequent phases or will it preclude or limit the consideration of alternatives in subsequent phases?
- Utility: Can any of the interrelated phases of various projects be considered functionally dependent on each other?
- Inducement: Does the approval of one phase or segment commit the agency to approve other phases?[34]

Two other SEQRA concepts closely related to the "whole action" ___ and segmentation are cumulative impacts and synergistic impacts. "The draft EIS should identify and discuss . . . reasonably related short-term and long-term impacts, cumulative impacts and other associated environmental impacts.[35] As The SEQR Handbook explains:

Cumulative impacts occur when multiple actions affect the same resource(s). These

[32] SEQR Handbook at 53.
[33] *Id*.
[34] *Id*. at 53–54.
[35] 6 NYCRR § 617.9(b)(5)(iii)(a).

> impacts can occur when the incremental or increased impacts of an action, or actions, are added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from a single action or from two or more individually minor but collectively significant actions taking place over time. Cumulative impacts do not have to all be associated with one sponsor or applicant. They may include indirect or secondary impacts, long-term impacts, and synergistic effects.[36]
>
> * * *
>
> Cumulative impacts must be assessed when actions are proposed, or can be foreseen as likely, to take place simultaneously or sequentially in a way that the combined impacts may be significant.
>
> Assessment of potential cumulative impact assessment should be done if two or more simultaneous or subsequent actions themselves are related because:
>
> - One action is an interdependent part of a larger action or included as part of any long-range plan;
> - One action is likely to be undertaken because of the proposed action or will likely be triggered by the proposed action;
> - One action cannot or will not proceed unless another action is taken, or one action is dependent on another; or
> - If the impacts of related or unrelated actions may be incrementally significant and the impacts themselves are related.
>
> Another factor in examining whether two or more actions should be considered as contributing to cumulative impacts, is whether the two actions are in close enough proximity to affect the same resources.[37]

These fundamental SEQRA requirements and principles must govern DEC's determination of the "whole proposed action" to be reviewed in the DEIS and to be described as the "proposed action" (or "proposed project"), first in the final scope and then in the DEIS.

[36] "Synergistic environmental impacts are caused by an interaction between two or more direct adverse environmental impacts, where the combined impacts are more severe than the sum of the individual effects." SEQR Handbook at 82.
[37] *Id*. at 80.

B. Hughes's Draft Scope Defined the Proposed Action Far Too Narrowly to Comply with SEQRA. This Must Be Corrected in the Final Scope.

On page 1 of its Part 360 Permit application, Hughes states that it is:

> proposing to construct a new permitted solid waste management facility (SWMF) located on Tax Parcel 113.-1-25 (39.60 acres) in the Town of Roxbury, Delaware County, New York. The new SWMF will process up to 176,400 tons per year (tpy) of municipal solid waste (MSW) into a marketable pelletized fuel in a state-of-the-art MSW processing facility (the "Facility"). MSW is processed through rapid steam composting and mechanical processing to produce a marketable biomass fiber suitable for manufacturing into fuel pellets. . . .
>
> The Facility is designed to process MSW through a proprietary high-speed compositing system (the Wilson System®) that steam-cleans the MSW and breaks down all organics (e.g., food, paper, and cardboard) within an autoclave to manufacture a unique biomass fiber that is pelletized as a marketable commodity for fuel, power, and heat.

This project description—referring to "marketable pelletized fuel"—is repeated nearly verbatim in its application for a State Facility Air Permit, Part 1 of the EAF and the EAF Narrative, and many other Hughes materials.

In contrast, in Section 1.0 of the Draft Scope, Hughes describes the proposed action as construction of a solid waste management facility that will process MSW "to produce a marketable biomass fiber suitable for manufacturing into various recycled products (e.g., paper products)." Indeed, the word "fuel" never appears in the Draft Scope, except in the EAF and Positive Declaration that are attached to it. Hughes Energy has not, however, suddenly decided to manufacture recycled tissue paper instead of fuel pellets. Even if it had, an applicant may not apply for permits for one type of project and then seek to review a different project under SEQRA. Nor can "marketable pelletized fuel" be euphemistically referred to as a recycled paper product in an attempt to circumvent review of the fuel production proposal. Incinerating a fuel does not constitute "recycling." Thus, the first necessary change in the final scope is to conform the description of the product to be manufactured in Roxbury so that it matches the permit applications and EAF.

Even more fundamentally, the description of the proposed action in the final scope and the DEIS must include the whole action, as required by SEQRA. Here, the whole action includes, at a minimum, the following components:

- Acquisition of the 39.6-acre parcel (Tax Parcel 113.-1-25) by Hughes Energy, LLC. [This is part of the whole action because, as The SEQR Handbook

explains, that "some . . . activities on an overall action are not subject to review under SEQR does not remove the consequences of these decisions from consideration with respect to the whole action."[38]]

- Acquisition of the adjacent Green-Del Transfer Station and its property (Tax Parcel 114.-1-11) by Hughes Energy, LLC. [This is part of the whole action because Hughes has informed DEC that it will acquire the Green-Del site if it obtains permits for the pelletization facility. Hughes has made these aspects of the action interdependent, and they are adjacent properties and affect the same resources.]

- Construction of the proposed Solid Waste Management Facility on Parcel 113.-1-25. This includes:

    - Construction of the proposed ~115,000 sf MSW processing facility consisting of a waste receiving area, processing area, and pelletizing area;

    - Construction of the proposed ~9,500 sf administrative office and maintenance shop building consisting of offices, locker rooms, a break room, and an equipment maintenance garage area;

    - Construction of the new commercial driveway entrance from State Route 23;

    - Construction of stormwater infrastructure;

    - Installation of a private water well service with onsite water storage;

    - Connection to the Town of Prattsville sanitary sewer system;

    - Installation of four 30,000-gallon liquid propane tanks for heat and boiler steam generation; and

    - Installation of an air handling system and air pollution control devices.

- All additions or changes to the Green-Del Transfer Station site, facilities, or operations; any permits needed for Green-Del, and any and all integration between that site/facility and the proposed adjacent Solid Waste Management Facility [This is part of the whole action because Hughes has made these aspects of the action interdependent, and they are on adjacent properties and affect the same resources. Furthermore, Hughes told DEC starting in 2019 that its infrastructure requirements for a Wilson Steam Composting Facility include "a Transfer station with permit to process 150,000 tons of MSW per year" and a

[38] *Id*. at 14.

"Contract for 150,000 tons for 10-15 years." *See* page 3, above. And Hughes initially proposed to locate the palletization facility on the Green-Del site. These are not separate actions.]

- Transportation of MSW to the proposed Solid Waste Management Facility; The DEIS must identify and describe, with specificity, the source of the incoming MSW. [This is discussed further below.]

- All aspects of operation of the proposed Solid Waste Management Facility. This includes:

    - Receiving unsorted MSW. The reasonably likely sources of unsorted MSW must be disclosed along with an adequate basis and rationale for identifying those sources, and the expected content of such waste must be analyzed and discussed;

    - The facility's attempts to exclude hazardous wastes and other "unauthorized wastes"

    - Storage of hazardous wastes and other "unauthorized wastes" on-site;

    - Transportation of hazardous wastes and other "unauthorized wastes" to an appropriate disposal facility;

    - All aspects of the proposed Solid Waste Management Facility's proprietary high-temperature, pressured steam-cleaning of unsorted MSW in an autoclave, as described in Hughes's engineering report, including but not limited to operations in the scale house, tipping area, process area, sorting area, storage areas, drying pelletization, and packing area, and outdoor areas; emissions air treatment, water extraction, and process wastewater treatment;

    - Transportation of steam-cleaned "residues" (*i.e.*, inert material not used in the manufacture of fuel pellets) to a landfill and landfilling of those residues. [The DEIS should explain why Hughes believes that waste will go to the ***Seneca Meadows Landfill***, yet listed the ***Albany Landfill*** as where waste will go in the event of closure of the facility];

    - Deforming metals, plastics, and other containers (including flattening them, delaminating them, causing them to coagulate, as described on page 10 of the Facility Manual submitted with its Part 360 application);

    - Transportation of recyclables that have been steam-cleaned and deformed to an end user or other facility for recycling (if any) or to a landfill if they cannot be recycled;

- Transportation of marketable fuel pellets to an end-user in the UK, Europe, New York State and/or elsewhere in the U.S.;

- Combustion of fuel pellets in solid fuel boilers.

- All purchase/sale, transportation, and disposal contracts or other arrangements made with suppliers of MSW and public or private entities that will receive unauthorized waste, residuals, recyclables, and fuel pellets, as well as any brokers and transporters of those materials. [This is part of the whole action because, as The SEQR Handbook explains, that "some . . . activities on an overall action are not subject to review under SEQR does not remove the consequences of these decisions from consideration with respect to the whole action."[39]];

- Funding or loan arrangements for the proposed project, including but not limited to funds provided by state or local entities that are subject to SEQRA or federal entities that are subject to the National Environmental Policy Act (NEPA). [This is part of the whole action because both SEQRA and NEPA define action to include projects funded in whole or part by public agencies.]

It should be emphasized that Hughes must, in the DEIS, provide a detailed discussion and analysis of the sources, municipal or otherwise, where it expects to obtain MSW and the expected content of paper, cardboard, food, recyclables, and other materials in that MSW. This is critically important for several reasons. First, to determine whether the project is economically or logistically feasible. Not being able to obtain MSW, or obtaining MSW that has a lower percentage of combustible material than expected, could result in the facility being built and then prematurely closed. Further, the source of incoming MSW in necessary information to analyze transportation impacts and related energy, GHG, and climate effects in both the baseline/no-action case (*i.e.*, where would the MSW go in the absence of this project?) and in the project case.

The content of the MSW is necessary to determine solid waste impacts and any project benefits, for example how much waste would be converted to fuel, how much inert waste would be transported additional distances and steam-cleaned before ending up in the landfill, how much recyclable material will be transported, steam-cleaned, "deformed," and recycled, and how much recyclable material will be transported, steam-cleaned, "deformed," and then landfilled. The source and content of the MSW is also relevant to the likelihood of unauthorized wastes being in the MSW and the facility's attempt to exclude it. Finally, the air emission and water discharges from the facility are related to the character of the MSW that is processed there. Hughes would not be ordering material that meets certain desired specifications, but rather receiving loads of unsorted garbage subject to variability. Thus, there must be an analysis of the source and composition of that waste.

So far, Hughes has been vague and contradictory on those points. For example, the Part

[39] *Id*. at 14.

360 Permit application contains a "Service Area Map" showing the site location towards the upper portion of a 13-county area in central New York, from Orange County in the south to Chenango and Rensselear Counties in the north. *See* Attachment 5 hereto. That application also states (in Section 5.2 of the Engineering Report) that "[t]he primary service area includes regional communities within New York's Hudson Valley, Southern Tier, and Capital District." That document and the EAF also have a Primary Truck Routes map showing routes to the NW, NE, SW, and SE. *See* Attachment 5 hereto. But when responding to post-application questions from DEC about transportation and climate, Hughes submitted only a Greene County Waste Overview depicted waste transfer station locations in Greene County that Hughes seems to suggest, without providing a basis, would provide MSW to Hughes. *See* Attachment 5 hereto. And Hughes suggested that all of the MSW it would receive is MSW that would otherwise be landfilled at Seneca Meadows Landfill in the Finger Lakes region. That unsupported assertion appears highly unlikely for MSW in many counties in Hughes's "Service Area" map.

Notably, the Delaware County Public Works Commissioner Susan McIntyre has explained that Delaware County is not interested in providing MSW to or entering into a working agreement with Hughes because the County already diverts significant volumes of material away from the landfill by recycling and composting, and thus Hughes's proposal would not be beneficial to the County.[40] This is discussed further below. Thus, Hughes cannot merely assume that any county will want to provide it with MSW or where that MSW will come from or where it would normally be landfilled.

Relatedly, Hughes's EAF Narrative (at p. 10, Part D.2.r) states that the "MSW waste stream is anticipated to have the following approximate composition for biomass fiber and fuel pellet production, recyclable extraction, and residue disposal," with a table containing estimated percentages for six categories of materials. The basis for these estimates is unclear. If they came from Wilson facilities in the UK or Ireland, that is not appropriate because the composition of waste streams is not consistent from country to country. Moreover, the composition of waste streams can vary between municipalities in the same state. As noted above, Delaware County reports high levels of recycling and composting, and a waste stream from such a municipality may contain little material to be pelletized into fuel.

Those issues must be analyzed and supported as part of the project description, to form a basis for analysis in the other sections of the DEIS.

Public Need and Benefits (If Any)

6 NYCRR § 617.8(b)(5)(i)

The DEIS must describe the proposed action's public need and benefits, including social and economic considerations.[41]

[40] https://www.thedailystar.com/news/local_news/proposed-facility-would-turn-waste-into-fuel/article_f994bc0f-0f7a-5672-a5b8-b44610f2c9cb.html
[41] 6 NYCRR § 617.8(b)(5)(i).

A. SEQRA Requires the DEIS to Show Whether There Is Any *Public* Need for, or Would Be Any *Public* Benefit From, the Proposed Project, Apart from the Applicant's Profit-Making Objective.

Following the description of the proposed action, a DEIS must discuss whether there is any public need for the proposed action or any public benefits that would result from the proposed action, including social and economic considerations. This element of the EIS relates to the requirement that the involved agencies, in considering whether or not to grant any discretionary approvals for the project, after considering the final EIS, must weigh and balance relevant environmental impacts with social, economic and other considerations and then provide a rationale for the agency's decision which is supported by sound evidence.

The "purpose" of a proposed project is legally distinct from any "public need and benefit" it might have, as The SEQR Handbook explains:

> "Purpose" is a goal or objective to be achieved. *The purpose of most privately sponsored projects is to make a profit from some development activity on their property*. . . .
>
> "Need" is a lack of something required, desirable, or useful. The need for an action may be public, private, or a combination of both. *Public need may apply to publicly or privately sponsored projects that satisfy a societal need*. . . .
>
> "Benefit" is something that promotes well-being. The benefits of an action relate to satisfaction of need. . . .
>
> * * *
>
> In reaching a decision on whether to undertake, fund, or approve an action that is the subject of an EIS, each involved agency is *required to weigh and balance public need and other social, economic, and environmental benefits of the project against significant environmental impacts*. Thus, for an agency to approve an action with potential to create a significant environmental impact, or to adversely affect important environmental resources, the agency must be able to conclude that the action that the agency will approve, including any conditions attached to that approval, avoids or minimizes anticipated adverse impacts to the maximum extent practicable, or that public need and benefit outweigh the identified environmental impact. *Where public need and benefit cannot be shown to outweigh the environmental impacts of a project, the agency may be compelled to deny approvals for the action*.
>
> * * *
>
> [Where] proposed privately sponsored projects would result in unavoidable or unmitigated adverse environmental impacts . . . the EIS must document any public

need or benefits that may be associated with the project . . .

* * *

> The EIS should show how the proposed action can serve a public use, benefit, or purpose. . . . The discussion of public need should be given a greater level of detail when there are potential adverse impacts that cannot be reduced or eliminated. This is essential because it is usually the public who will bear the burden of environmental impacts caused by the action.[42]

B. The DEIS Must Assess Public Need and Public Benefit.

In its Part 1 of the Full EAF, Section A ("Brief Description of Proposed Action (include purpose or need)"), Hughes did not provide any public need or public purpose for the action. Nor does the EAF Narrative contain any discussion of any public need or public purpose for the action. The Draft Scope (at 5.1.2) says, merely, that the section of the DEIS describing the proposed action will a description of "[p]ublic need and benefits, including social and economic considerations." The DEIS should follow the SEQRA Handbook guidelines discussed above in describing whether there is any need or benefit.

Certain issues solid waste management and climate issues that should be considered in the discussion of public need and public benefits (if any) are addressed below in the sections on those issues.

Permits and Approvals for Proposed Project

This is a standard section in a DEIS.

In addition to the government approvals listed in Part B of the EAF narrative, this section should list the following:

- NYSDEC Protection of Waters Permit
- NYSDEC Water Quality Certification
- NYSDEC Multi-Sector General Permit for Discharges of Stormwater Associated with Industrial Activity (MSGP)
- Town of Roxbury Planning Board site plan review, which requires referral to the Delaware County Planning Board per the Town Site Plan Law and state law
- Any federal or state endangered species consultations required as a result of

[42] SEQR Handbook at 113–115 (emphasis added).

wildlife surveys

- USEPA determination under 40 CFR Part 241 and related sections as to whether Hughes's marketable pelletized fuel is deemed a solid waste subject to incineration requirements under 40 CFR Part 60, Subpart CCCC

- All funding or loans sought from state, local, or federal agencies or other governmental entities for the project

- All permits, including modifications or renewals, for the Green-Del Sanitation and Transfer Station

Environmental Setting
6 NYCRR § 617.9(b)(5)(ii)

The DEIS must include a description of the environmental setting of the areas to be affected, sufficient to understand the impacts of the proposed action and alternatives. On this topic, please see the SEQR DEIS Scope Commentary, dated November 16, 2021, prepared by Matthew D. Rudikoff Associates, Inc., which is attached hereto as Attachment 2 and hereby incorporated by reference. As the MDRA Report explains (on p.3), without having had access to the site itself, but having consulted reference materials and viewed the site from the public roadway:

> Various map sources depict the Site as an integral part of a relatively undisturbed habitat matrix that encompasses more than 1,000 acres of forest, with embedded fields, wetlands, streams and riparian corridor habitats extending into Greene and Schoharie Counties . . . . To the north and east, the Site borders a large undeveloped forest tract above Schoharie Creek, which along with the Site, provide substantial core habitat and an unbroken travel corridor for a diversity of wildlife particularly birds and mammals. The seamless transition of undisturbed forest from the easterly boundary of the Site with that of abutting NYCDEP owned forested property to the east and northeast serves as an important resources in the protection of water quality of surface runoff and subsurface seepage to Schoharie Creek. . . , its associated floodplain wetlands and Schoharie Reservoir below the Site's eastern boundary. . .

On pages 9–10 of its report, MDRA makes a number of specific recommendations for the final scope, including the following:

> Ecological communities and their component flora and fauna should be fully investigated and described for the entire Site along with a focus on the potential for rare species to occur on the Site or to use the Site on a periodic basis. The lead agency's DEIS Scope should ensure that a comprehensive inventory of Site natural resources be conducted and that surveys for rare species follow established protocols of the U.S. Fish and Wildlife Service, New York State Department of

> Environmental Protection, and other environmental institutional agencies, as appropriate, that specify: (1) the appropriate season(s) of the year to search for each targeted rare species; (2) suitable weather conditions; and (3) duration and frequency of searches. For example, the Winter Raptor Survey methodology developed by the Hawk Migration Association of North America should be used to conduct surveys for short-eared owl and northern harrier. Wildlife surveys should be required to be conducted by qualified credentialed biologists experienced with the habitats, behavior and seasonal movement patterns of each individual rare species of concern.

Accordingly, the final scope should require the applicant to engage the appropriate wildlife specialists (qualified, credentialed biologists, not engineers) to conduct an appropriate number of wildlife surveys on the site, and nearby, for appropriate durations in the appropriate seasons, using generally accepted study protocols. DEC should follow all of MDRA's recommendations for the final scope and the DEIS should survey all of the types of natural features and natural communities identified or discussed by MDRA, including but not limited to rare plants and animals that may occur seasonally or year-round on or near the site.

Potentially Significant Adverse Environmental Impacts
6 NYCRR § 617.9(b)(5)(iii)

SEQRA requires the DEIS to include a "statement and evaluation of the potential significant adverse environmental impacts at a level of detail that reflects the severity of the impacts and the reasonable likelihood of their occurrence."[43] The SEQRA regulations also provide that, in determining whether an action may have a significant adverse impact on the environment, the lead agency "must consider reasonably related long-term, short-term, direct, indirect and cumulative impacts, including other simultaneous or subsequent actions which are: (i) included in any long-range plan of which the action under consideration is a part; (ii) likely to be undertaken as a result thereof; or (iii) dependent thereon."[44]

While DEC has already determined that the proposed project may have potentially significant adverse environmental impacts in four areas—traffic, noise, odors, and water resources—it is the analysis in the DEIS that will assist in DEC's determination, in consultation with the other involved agencies and the public, as to the significance of those and many other potentially significant adverse environmental impacts.

A. The SEQRA Regulations Specifically Require the DEIS to Analyze Certain Impacts.

Under 6 NYCRR § 617.9(b)(5), the DEIS for this project must include an analysis of the following elements:

[43] 6 NYCRR § 617.9(b)(5)(iii).
[44] 6 NYCRR § 617.7(c)(2).

1. Impacts of the Proposed Action on Solid Waste Management and its Consistency with the State or Locally Adopted Solid Waste Management Plan (6 NYCRR § 617.9(b)(5)(iii)(f))

A mandatory element of the DEIS for a solid waste management facility is an analysis of the impacts of the proposed action on solid waste management and the proposed action's consistency or inconsistency with the state or locally adopted solid waste management plan. Hughes's Part 360 permit application (at § 2.6) contains only few very general and conclusory sentences regarding consistency with the New York State Solid Waste Management Plan. The DEIS, however, must analyze these mandated issues in depth, and present its analysis for review and comment by the involved agencies and the public, after all aspects of the "whole action" have been properly defined for purposes of SEQRA review, as discussed above.

To further assist in scoping these issues, several points are notable regarding the proposed project's relationship to state and local solid waste management and policy. From its inception in 1987, the New York State Solid Waste Management Plan has "placed *waste prevention* at the top of the state's solid waste management hierarchy."[45] As the most recent state solid waste management plan (entitled *Beyond Waste - A Sustainable Materials Management Strategy for New York State* and issued by DEC in 2010) explains:

> As its priority standing in the hierarchy indicates, the state values the reduction of volume and toxicity of materials that ultimately become waste as the strategy with the greatest overall environmental benefit. By not producing waste to begin with, we don't have to manage it—whether by reuse, recycling, combustion or landfilling—and we save money and natural resources besides.[46]

The state waste plan's second priority strategy is "Reuse," defined as "the recovery of materials and products for the same or a similar use for which they were originally produced."[47] The third and fourth priorities are "Recycling" and "Composting and Organic Materials Recycling."[48] The state plan notes that recycling is inferior to Reuse because "it generally consumes more energy and fuel in the processing and transportation of materials than reuse."[49] The plan explains that, for materials that cannot be reused, recycling "conserves natural resources by keeping valuable materials in circulation"[50] and "[c]omposting involves the aerobic biological decomposition of organic materials to produce a stable, humus-like material."[51]

Notably, Hughes's proposed project does not include *any* Waste Prevention or Reuse of materials whatsoever. Every ton of MSW proposed to be received at a Hughes facility will be

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[45] *Beyond Waste - A Sustainable Materials Management Strategy for New York State*, NYSDEC (adoption date: Dec. 27, 2010) at 116.
[46] *Id*.
[47] *Id*. at 124.
[48] *Id*. at 130, 155.
[49] *Id*. at 131.
[50] *Id*.
[51] *Id*. at 155.

combusted, landfilled, or (possibly) recycled—which are the same three processes to which the MSW is currently subjected.[52]

Moreover, it is not clear that the project will divert *any* MSW from landfills, and it appears that the project may cause recycling to *decrease*. If 176,400 tons per year of unsorted MSW is received at a Hughes facility, that does not mean that 176,400 tons will be kept out of a landfill. Under existing baseline conditions (and the "no-action" alternative), some portion of that 176,400-ton annual unsorted waste load contains recyclables that are being (or should be) sorted out of the MSW and recycled, and not disposed at a landfill. Further, some portion of the 176,400 tons per year of MSW that would be received at a Hughes facility (*i.e.*, the residues) will be disposed of at a landfill after being processed at the facility.

Only a portion of the 176,400 tons per year would be converted into fuel pellets, but much of that material is fiber that would not be diverted from a landfill but from the recycling stream. Paper and cardboard are among the most readily recyclable materials. Hughes would prevent those materials from being recycled into other paper products; instead, they would be combusted in fuel pellets (which is not reuse or recycling) and the project would therefore cause a decrease increase in paper and cardboard recycling and a concomitant increase in the use of virgin material (*i.e.*, trees) for new paper products.

The project may also cause a decrease in the recycling of metal and certain plastics (#1 and #2 plastics have the highest recycling rates relative to other plastics, which are generally not recycled). Recyclable metals and plastics in the unsorted MSW proposed to be processed as at a Hughes facility would be physically transformed—"deformed," "coagulated," "flattened," etc—by the high-pressure steam processing in the autoclave.[53] When removed from the autoclave in that altered form, those materials may no longer be recyclable. Or, if they are still technically recyclable, there may be serious economic and logistical difficulties to actually recycling it.

For example, the deformed recyclables could no longer be sent to a typical Materials Recovery Facility ("MRF"). The sorting lines at MRFs are designed to sort out recyclable containers in their original form; flattened materials are notorious for slipping through gaps at MRFs' conveyer belts and ending up in residues that are landfilled or incinerated. Nor would it appear that MRFs would be willing to accept materials from Hughes either to be sorted with the other incoming materials or to be baled for sale at the back end of the MRF, because variability in the recycling markets requires MRFs to stockpile recyclables until there is sufficient volume to be sold to an end user. It appears that, if any materials processed by Hughes are to be recycled, Hughes would have to sell those materials directly to the end-user market. For the similar economic and logistical reasons that MRFs contend with, Hughes may have to stockpile its processed recyclable material for long periods of time and may struggle to find buyers at the volumes it produces and in locations that make it economically feasible given transportation

[52] Indeed, by trying to create a marketable product from waste, rather than preventing waste at its source, Hughes's proposal could have the effect of *increasing* the generation of waste, in a manner similar to how adding a lane to a highway creates more traffic and air pollution because the expanded capacity induces more driving.
[53] *See* Part 360 Application, Facility Manual at 10.

costs. Notably, Hughes states "[s]torage of recovered recyclables will not exceed 10 days."[54] That seems like a wildly unrealistic amount of time to move those materials to an end market user given the current realities of recycling markets.

If recyclables are no longer recycled after being processed at a Hughes facility and cannot be stored there long enough to find a buyer, they will likely be landfilled. By diverting paper and cardboard, as well as metal and plastics, away from recycling markets to be combusted or landfilled, and by landfilling all of the non-recyclable inert materials, the project does not appear to represent sound waste management policy and does not appear to be consistent with the New York State Solid Waste Management Plan.

As to the food waste that Hughes would process into fuel pellets, it should be noted that this process is not "composting" (as Hughes refers to it), as defined in the New York State Solid Waste Management Plan[55] or by the dictionary definition,[56] or scientifically/environmentally.[57] By converting food into fuel pellets to be shipped and burned thousands of miles away, the project would divert a valuable organic resource away from its more natural and beneficial use for fertilizing and conditioning local agricultural fields and gardens.

With respect to locally adopted solid waste management plans, Delaware County has a *Delaware County, Final Local Solid Waste Management Plan (Update 2018 – 2027)*, which the DEIS must address. Notably, the Delaware County Public Works Commissioner Susan McIntyre has explained that Delaware County is not interested in providing MSW to Hughes or entering into a working agreement with Hughes because the County already diverts significant volumes of material away from the landfill by recycling and composting and Hughes's proposal would not provide an environmental or economic benefit to the County. As quoted in the local press:

> Saving room in a landfill is not a matter of great concern for Delaware County, which was among the first to implement a centralized waste facility and continues to lead the industry in innovative and diverse uses of solid waste, according to Public Works Commissioner Sue McIntyre.
>
> While other municipalities have adopted profit-driven waste management strategies, importing solid waste from beyond their borders, Delaware County maintains an operation in Walton that is "very much self-sufficient," McIntyre said.

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[54] See Part 360 Application, Facility Manual at 10.
[55] *Beyond Waste* at 155 ("Composting involves the aerobic biological decomposition of organic materials to produce a stable, humus-like material.").
[56] https://www.merriam-webster.com/dictionary/compost (v. "to convert (a material, such as plant debris) to compost"; n. "a mixture that consists largely of decayed organic matter and is used for fertilizing and conditioning land").
[57] *See, e.g.*, https://www.compostingcouncil.org/page/CompostDefinition, https://www.epa.gov/sustainable-management-food/types-composting-and-understanding-process, https://www.nrdc.org/stories/composting-101#whatis

> In an age when many U.S. landfills are nearing capacity, the Walton site has maintained an efficient intake rate "only because we divert so much material away from the landfill by recycling and composting and only handling Delaware County waste," McIntyre said.
>
> Landfills throughout western New York, including the Allegheny Plateau and northern Finger Lakes regions, remain significant importers, according to McIntyre. * * *
>
> McIntyre said she met with Hughes Energy representatives several years ago after the developers sought a potential working agreement with Delaware County.
>
> "They were looking into securing waste from Walton to take to Green-Del, which is not something we're interested in," she said. "Not only would we be providing a source of material, they would be charging a tipping fee, so we would be both a source and a revenue for them."[58]

There is no indication that any other county or community is interested in providing its unsorted MSW as feedstock material for Hughes in Roxbury. When Hughes met with DEC in 2019, it told the Department that the "infrastructure requirements" for a Wilson Steam "Composting" Facility include "a Transfer station with permit to process 150,000 tons of MSW per year" and a "Contract for 150,000 tons for 10-15 years."[59] But Hughes does not appear to have such permit or contract now.

Accordingly, to analyze the impacts of the proposed action on solid waste management and the proposed action's consistency or inconsistency with the state or locally adopted solid waste management plan, the DEIS must analyze, at minimum, the following issues and answer the following questions:

- Where does Hughes intend to obtain 176,400 tons per year of unsorted MSW?
- What are the contractual arrangements pursuant to which the MSW would be provided to Hughes in Roxbury?
- What is the average proportion of each type of material in that MSW? While Hughes has provided a preliminary estimate on page 10 of the EAF Narrative, it is not clear whether that was based on a national average or, perhaps, from existing Wilson facilities in the UK. The specific local waste stream that would be processed at a Hughes facility in Roxbury must be analyzed.
- How is each component of the relevant waste stream being managed now, and

[58] https://www.thedailystar.com/news/local_news/proposed-facility-would-turn-waste-into-fuel/article_f994bc0f-0f7a-5672-a5b8-b44610f2c9cb.html
[59] *See* Attachment 5, hereto, Hughes Energy slide deck entitled "NY DEC Region 4 Introduction."

how is it expected to be managed over the life of the Hughes facility?

- What proportion of the 176,400 tons per year can be expected to be hazardous wastes and other and other unauthorized wastes?

- Describe in detail exclude, store, transport, and arrange for proper disposal.

- What proportion of the 176,400 tons per year can be reasonably expected to contain paper and cardboard?

- How much paper and cardboard will be diverted from recycling into marketable fuel pellets?

- What proportion of the 176,400 tons per year can be reasonably expected to contain food waste?

- How much food waste will be diverted from composting (as defined in the state waste plan) into marketable fuel pellets?

- What proportion of the 176,400 tons per year can be reasonably expected to contain non-fibrous recyclables?

- What is Hughes's plan for storing, transporting, and selling the deformed and coagulated recyclable material to an end market use for actually being recycled? Any existing or proposed contractual relationships should be disclosed and discussed.

- How much recyclable material will be diverted from recycling and sent to landfills (or incinerators)?

- How does Hughes intend to address the fundamental logistical and economic difficulties inherent in the proposal—*i.e.*, that the greater the percentage of paper, cardboard, and food waste in its MSW feedstock, the more fibrous recyclables and compostables that are diverted from recycling markets and composting; while the greater the percentage of inert materials in its MSW feedstock, the more waste is simply transported to Roxbury, steam-cleaned there, and then transported to a landfill. Neither appears to be consistent with sound waste management policy.

- Where will the marketable fuel pellets be stored, who will they be sold to, how will they be transported? Any existing or proposed contractual relationships should be disclosed and discussed. If a lack of buyers, supply chain issues, or transportation issues cause a shortage of storage capacity for finished product at the Roxbury facility, what will Hughes do with incoming unsorted MSW as it accumulates?

- How will the Green-Del Sanitation and Transfer Station site be used? Explain the degree of separation and/or integration of that facility's operation with the autoclave facility. Any existing or proposed contractual relationships should be disclosed and discussed. Will new or modified permits be sought for the Green-Del Sanitation and Transfer Station?

See also the solid waste issues discussed in the attached letter from Burgess Environmental in Attachment 3.

Once suitable answers to these questions and issues have been developed, the DEIS should analyze the New York State Solid Waste Management Plan and all local solid waste management plans and assess which policies in those plans the proposed action may be consistent with (if any) and which policies it is inconsistent with.

2. Impacts of the Proposed Action on the Use and Conservation of Energy (6 NYCRR § 617.9(b)(5)(iii)(e))

Another mandatory element of the DEIS for the proposed Hughes Energy facility is an analysis of impacts of the proposed action on the use and conservation of energy. Energy is also a listed topic (No. 14) in the full EAF. Energy as well as GHG and climate issues are commented on in the attached letters from Downstream Strategies and Burgess Environmental. As mentioned there (and as supplemented herein), to analyze the impacts of the proposed action on the use and conservation of energy, the DEIS must analyze, at minimum, the following issues and answer the following questions:

- Quantify the grid-sourced electricity to be consumed at the proposed facility;
- Quantify the energy needs for onsite equipment that may be used for waste handling at the proposed facility, such as loaders;
- Quantify the amount of liquid propane to be used at the proposed facility;
- Quantify any other on-site fuel or energy consumption;
- Quantify the amount of fuel (of which fuel types) to be consumed by the transportation of materials to and from the facility. This should include:
    - Transportation of unsorted MSW to the facility;
    - Transportation of unauthorized wastes from the facility to an appropriate disposal location;
    - Transportation of steam-cleaned residuals from the facility to a landfill;
    - Transportation of deformed recyclable material from the facility to an end

user or other node in the recycling supply chain (if any);

- Transportation of deformed recyclable material that cannot for economic or logistical reasons be recycled from the facility to a landfill;

- Transportation of marketable fuel pellets from the facility to an end user in Europe or elsewhere (this should include cargo ships across the Atlantic Ocean, as well as trucks or other transportation to the United States port and from the overseas port to the facility where the pellets would be burned);

- Quantify the amount of fuel in pellets produced by the facility and combusted in boilers by end-user customers of the facility;

- Quantity the amount of electricity or other energy lost by the diversion of combustible wastes from landfills, such as a decrease in methane produced, captured, and used in a landfill-gas-to-energy plant such as the one at Seneca Meadows Landfill; and

- Quantity any purported energy conservation or other energy-related benefits from the proposed project.

With respect to methane and other landfill gasses, if waste is presently disposed in a landfill that captures (and recovers electricity from) these gasses, as the Seneca Meadows Landfill does, then the environmental analysis is quite different than if the waste is disposed of at a landfill that fails to capture landfill gasses. That is true in the context of energy and also climate change, addressed in the next section.

Once suitable answers to these questions and issues have been developed, the DEIS should analyze the impacts of the proposed action on the use and conservation of energy.

3. Measures to Avoid or Reduce Both an Action's Impacts on Climate Change and Associated Impacts Due to the Effects of Climate Change Such as Sea Level Rise and Flooding (6 NYCRR § 617.9(b)(5)(iii)(i))

Another mandatory element of the DEIS for the proposed Hughes Energy facility is an analysis of any measures to avoid or reduce both an action's impacts on climate change and associated impacts due to the effects of climate change such as sea level rise and flooding.

The DEIS should include a full Life Cycle Assessment (LCA) of all of the direct and indirect GHG and climate effects of the proposed project, including upstream and downstream emissions. While Hughes mentioned an LCA prepared in the UK by a governmental agency, it was not submitted to DEC and cannot otherwise be readily located, and thus we cannot assess what methodologies Hughes may think are appropriate. In any event, an LCA must be prepared using the proposed Roxbury facility's expected waste stream, the source municipalities' waste

and recycling management practices, the facility's location relative to the sources and end-points for its materials and products, and other factors such as the characteristics of local landfills and their handling of methane.

Notably, DEC has published guidance regarding how to consider an action's impacts on climate change in an EIS.[60] That guidance calls for analysis of several kinds of direct and indirect GHG emissions:

(1) Direct GHG emissions—(a) stack and fugitive emissions from combustion processes or industrial processes conducted on-site, and (b) emissions from fleet vehicles owned (or leased) and operated by the project proponent and associated with the project.

(2) Indirect GHG emissions—(a) emissions from off-site energy plants supplying energy used by the project, (b) emissions from vehicle trips to and from the project site during its operation from, e.g., freight deliveries, employee commuting, and visitors (but not the owner's fleet), and (c) emissions from the generation, transportation, treatment and disposal of wastes generated at the site.[61]

The guidance also cites established methodologies that may be used to quantify each of these kinds of emissions, and specifies a separate methodology for quantifying methane emissions from landfills. The guidance also *requires* emissions from fuels produced by the proposed Hughes Energy project to be considered in the GHG analysis: "Project proponents should not be required to include the emissions (either qualitatively or quantitatively) from the use of products that will be produced or sold at the project site, *except where the projects involve fuel production*."[62]

Another reason why the DEIS must analyze climate issues is because Section 7 of the New York Climate Leadership and Community Protection Act of 2019 ("Climate Act") states that that all state agencies, in making decisions, "shall consider whether such decisions are inconsistent with or will interfere with the attainment of the statewide greenhouse gas emission limits established in article 75 of the environmental conservation law." Further, "[w]here such decisions are deemed to be inconsistent with or will interfere with the attainment of the statewide greenhouse gas emissions limits, each agency . . . shall provide a detailed statement of justification as to why such limits/criteria may not be met, and identify alternatives or greenhouse gas mitigation measures to be required where such project is located." Additionally, "all state agencies . . . shall not disproportionately burden disadvantaged communities [and] . . . shall also prioritize reductions of greenhouse gas emissions and co-pollutants in disadvantaged

[60] NYSDEC, *Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements*." (July 15, 2009).
[61] Courts around the country have likewise understood the National Environmental Policy Act ("NEPA") to require both upstream and downstream emissions analysis in a variety of contexts, including fossil fuel extraction and transportation.
[62] NYSDEC, *Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements*." (July 15, 2009).

communities . . . ."

While the Climate Act is in the process of being fully implemented, and the New York State Climate Action Council is developing a Scoping Plan to achieve the state's clean energy and climate agenda, the Climate Act is properly interpreted to include consideration of GHG emissions from out-of-state combustion of materials fabricated in New York because, of course, we all share one atmosphere and the GHGs have the same climate impact wherever generated.

A full LCA including direct and indirect, on-site and off-site, upstream and downstream GHG emissions is therefore necessary her for a variety of reasons, including the SEQRA regulations and guidance, the standard approach under NEPA,[63] the Climate Act, and the fact that while Hughes has stated an intention to ship its fuel pellets across the ocean to be burned in the UK or Europe, it has also stated that it is seeking local buyers, and thus the pellets may end up being combusted, and the GHGs released, within New York State or in a neighboring state.

Following submission of Hughes's initial applications in January 2021, DEC informed Hughes of the Climate Act requirements in a Notice of Incomplete Application. Although Hughes provided very general narrative responses to DEC on March 30, 2021 and April 20, 2021, its answers remain glaringly incomplete, were not quantified, and are nowhere near the level of analysis needed in a DEIS. As explained in the attached letters from Downstream Strategies and Burgess Environmental, some of the obviously missing components from Hughes's letters include:

- Upstream GHG emissions associated with grid-sourced electricity consumed at the proposed facility were not calculated.

- GHG emissions were not calculated for onsite equipment that may be used for waste handling at the proposed facility, such as loaders.

- GHG emissions were not calculated for the transport of processing residue to the landfill or for the transport of other separated materials, such as metals and plastics, to their final destinations.

- Also uncalculated are landfill emissions that would be generated by materials sent to landfill from the facility, including processing residue and separated materials.

- Transportation emissions of pellet products away from site, up to and including ocean transport to overseas customers, is not calculated.

- GHG emissions associated with the combustion of fuel pellets, and a comparison to the GHG emissions associated with the fuel(s) displaced by pellets, are not calculated.

For more detail on these issues, we refer you to the attached letters from Downstream

[63] NEPA precedents are often followed under SEQRA where the relevant statutory language is similar.

Strategies and Burgess Environmental and ask that DEC follow those recommendations in preparing the final scope.

B. The SEQRA Regulations Specifically Require the DEIS to Include Other Sections.

In addition, the DEIS must, per the SEQRA regulations, include sections discussing:

> (a) reasonably related short-term and long-term impacts, cumulative impacts and other associated environmental impacts;
>
> (b) those adverse environmental impacts that cannot be avoided or adequately mitigated if the proposed action is implemented;
>
> (c) any irreversible and irretrievable commitments of environmental resources that would be associated with the proposed action should it be implemented; and
>
> (d) any growth-inducing aspects of the proposed action.[64]

C. DEC's Positive Declaration Requires the DEIS to Analyze Certain Impacts.

The four potentially significant adverse environmental impact areas identified in the Positive Declaration must be analyzed and discussed in the DEIS. We offer a few comments on those issues.

1. <u>Potential Impacts on Water Resources</u>

The DEIS must analyze the impacts of the proposed action—the "whole action— on water resources. This includes constructing and operating the fuel pelletization facility, as well as operating the Green-Del Sanitation and Transfer Facility on the adjacent parcel (either as a related or interconnected operation with the pelletization facility, or as a separate operation) and any associated changes or renewals to Green-Del's permits and renewed operations. In addition to the water resources issues identified in Part 3 of the EAF and Positive Declaration, all effects of water resources should be examined in the DEIS. The water resources to be evaluated include groundwater, surface water, drinking water, wetlands, and the floodplain, and the impacts and sources of pollution to be analyzed include at a minimum land disturbance, creating impervious surfaces, road construction, groundwater extraction, stormwater runoff, and wastewater discharges.

As shown in Hughes's Reservoir Setback Site Vicinity Map, included in Attachment 5 hereto, Hughes is proposing to shoehorn its pelletization facility directly between the on-site federal wetland and the 1000-foot setback from five tributaries to Schoharie Creek/Reservoir, such that the facility practically touches the setbacks. Even if the facility is not categorically

[64] 6 NYCRR § 617.9(b)(5)(iii)(a)–(d).

prohibited from being built a few inches from the setbacks, it unquestionably creates the risk of significant adverse environmental impacts on those adjacent resources.

As also shown on that same map, the Green-Del Sanitation and Transfer Facility is within the 1000-foot setback from the tributaries to the Schoharie, and thus NYCDEP's Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and Its Sources ("Watershed Regulations") would apparently prohibit that facility from being built there today. The Watershed Regulations (at § 18-27) provide that solid waste management facilities that are "noncomplying regulated activities" may be continued but shall not be "shall be substantially altered or modified without the prior review and approval of [NYCDEP]." Thus, any proposal to substantially alter or modify the Green-Del Sanitation and Transfer Facility would require, among other things, that the facility be moved out of the 1000-foot setback.

As discussed above, the Green-Del Sanitation and Transfer Facility is a component of the whole action that must be analyzed in the DEIS for a variety of reasons, including that Hughes has stated that its infrastructure requirements include an existing transfer station with a specified volume, contracts, and permits; Hughes originally proposed to site the pelletization facility on the Green-Del parcel; Hughes has told DEC that, if it obtains permits for the pelletization facility, it will purchase and operate Green-Del; and the SEQRA factors regarding reviewing the "whole action," avoiding segmentation, and including review of cumulative or synergistic effects are all met here, especially if the operation of the two adjacent facilities will be integrated, and even if they are separate. For example, there is (or will be) common ownership and control, evidence of an overall plan, a common purpose and goal, and the facilities share some common impacts and are in close enough proximity to affect the same resources.

Notably, an August 21, 2019 proposal from Hughes to Green-Del proposed that the owners of Green-Del would sell the land to Hughes and "[g]et contracts for up to 150,000 tons per year," among other things. See Attachment 5, hereto. Then, two years later, after applying for permits on the adjacent parcel, and telling DEC that, if those permits are approved, Hughes will purchase the Green-Del facility, Hughes's marketing director was quoted in the press, in reference to the proposed and existing facilities, that "Together, we are looking to create a green recycling hub in the area which will attract dozens of US and international delegations every year." [65] Clearly, there is evidence of a common plan.

With respect to water issues, please also see the attached MDRA Report and Burgess

2. <u>Potential for Significant Traffic Impacts</u>

Part 3 of the EAF provides as follows:

The proposed action may alter the present pattern of movement of people or goods.

[65] https://www.thedailystar.com/news/local_news/proposed-facility-would-turn-waste-into-fuel/article_f994bc0f-0f7a-5672-a5b8-b44610f2c9cb.html

> The application indicates the proposed new facility will process 176,400 tons of municipal solid waste (MSW) per year. Per the application material, MSW will be transported directly to the facility by semi-trailers and other large vehicles; recovered recyclables will be transported to an authorized recyclables handling facility; non-fibrous, non-recyclable material will be transported to an authorized solid waste management facility; fuel pellet products will be transported from the facility for use and sale; water trucks will access the facility; fuel trucks will access the facility; wastewater tankers may access the facility; maintenance trucks will access the facility; and employee vehicles will enter and exit the facility for accommodation of 24-hour shift work in addition to 7am-4pm standard hour employees.
>
> * * *
>
> The proposed facility location is a rural setting. The new facility is proposed to operate 24-hours per day, accommodate 24-hour shift work for employees, and has the expected operation duration of decades. Increased traffic will potentially have a moderate to large impact along the truck routes which includes areas identified as potential environmental justice communities. Traffic impacts include noise, odors, air quality from vehicle emissions, and overall decrease in ability to move through the area as a result of increased traffic flow. These potential impacts could occur while vehicles are in motion (en route to the facility or departing from) or idling. These potential significant traffic impacts require further evaluation.

We agree that these issues require careful study in the DEIS, and also wish to emphasize that the whole proposed action must be properly defined before the transportation analysis can be conducted, because, as discussed above, it remains unclear where the MSW will be transported from and where the various components of outgoing materials (unauthorized waste, inert materials, potentially recyclable materials, and fuel pellets) will be transported to.

3. <u>Potential for Significant Noise Impacts</u>

Part 3 of the EAF provides as follows:

> The proposed action may result in noise impacts that exceed Part 360 regulation thresholds and do not meet Department standards for a rural setting. . . . As indicated in the Noise Assessment revised July 21, 2021, mitigation of a minimum of 3.5 dBA is required to achieve the Part 360 daytime noise standards at the closest facility property line, and mitigation of a minimum of 1.8 dBA is required to achieve Department Noise Guidance standards for daytime screening levels to limit the projected noise increase above ambient levels. . . . The proposed facility location is a rural setting. The facility is expected to operate 24 hours per day with a duration of decades. . . . The Noise Assessment revised July 21, 2021 provides that the facility will generate noise from both stationary and mobile sources including the

> process building which will operate 24 hours per day, employee vehicles entering and exiting for standard shift-work, and other noise sources from the maintenance shop, administrative office, and delivery trucks operating 7am to 4 pm. Noise levels from mobile noise sources were projected to exceed applicable Part 360 and Department Noise Guidance screening levels without mitigation. These potential significant noise and odor impacts require further evaluation.

We agree, and do not provide any further comment on this issue at this particular time.

4. **Potential for Significant Odor Impacts**

Part 3 of the EAF provides as follows:

> The proposed action may result in routine odors for more than one hour per day. . . . The proposed facility location is a rural setting. The facility is expected to operate 24 hours per day with a duration of decades. The probability of the proposed action producing noticeable odors is high, whether at the facility itself, or from vehicles moving waste or other materials to or from the facility. . . .

And the Positive Declaration provides:

> The operation of this facility will produce odors from transporting, receiving and processing of putrescible solid waste in addition to handling other waste and recyclable materials. Potential odor impacts must be evaluated and, if necessary, mitigation measures developed to reduce or minimize such impacts.

We agree, and do not provide any further comment on this issue at this particular time.

D. The DEIS Must Analyze Other Potential Significant Impacts

There are many other potentially significant adverse environmental impacts that must be analyzed, beyond the elements that are explicitly mandated by the SEQRA regulations and that were identified in the Positive Declaration.

1. Potential for Significant Air Impacts (EAF No. 6)

In addition to the GHG and climate analysis required by SEQRA and discussed above, the DEIS should analyze the significance of more localized air pollution emissions, including but not limited to Hazardous Air Pollutants ("HAPs") and Volatile Organic Compounds ("VOCs) that would be intentionally emitted from the stacks of the proposed facility or escape in fugitive emissions.

Part 2 of the EAF (6. Impacts on Air) properly states that "[t]he proposed action may include a state regulated air emission source." That section of the form then includes check-

marks for all of the in the "No, or small impact may occur" column for all of the questions (a-f) rather than "Moderate to large impact may occur." However, at this point in the environmental review process, based on Hughes's application materials, there is not a sufficient basis to conclude that that the answers to the questions are "no" or that the air impacts will be small.

For example, one of the EAF questions asks if the "proposed action may reach 50% of any of [certain] thresholds," including that the "proposed action may generate 10 tons/year or more of any one designated [HAP], or 25 tons/year or more of any such [HAPs]." Whether the action "may" reach 50% of either of those thresholds remains an open question, for several reasons, even if Hughes's initial calculations show levels of HAPs below the relevant thresholds.

To begin with, as Burgess Environmental explains in their attached letter:

> The predicted air emissions from the Facility process do not appear to make technical sense. The emissions from the MSW steaming, drying, and pelletizing process are assumed to be consistent with that of landfill gas (Sterling, 2021a, Section 8.3). Landfill gas is generated by the decay of organic waste under saturated or nearly saturated, anaerobic conditions, which produce (primarily) carbon dioxide and methane. These anaerobic, biological processes will certainly not occur during the steaming, drying, and pelletizing of MSW; hence, there is no reason why the emissions from the process would be similar to the composition of landfill gas. The Facility process operates at 250^{o}F (Sterling, 2021a, page 3) and is turbulent, which would be expected to liberate volatile and semi-volatile contaminants (e.g.: paints, solvents, cleaners) that are present in the MSW into the process air emissions stream. These types of contaminants are not typically present in significant concentrations in landfill gas. In my opinion, a more rigorous assessment of process air emissions is required to support the air permit application and EIS.

Indeed, Hughes's State Facility Air Permit application (at § 8.3) states that "Process Emissions are assumed to have a comparable composition as landfill gas from the decomposition of MSW; therefore, emission factors for organic compounds for process emissions were derived from AP-42 Section 2.4 for Municipal Solid Waste Landfill Gas." That is improper for the reasons stated by Burgess Environmental. Wilson's pelletization facilities in the UK and Ireland may have data on air emissions from similar facilities. However, it would also be improper to merely import that data here, as the levels of air emissions will depend, in part, on the content of the waste being processed. As discussed above, the DEIS should first identify the source of MSW to be processed and then conduct a rigorous analysis of the air emissions expected from processing that waste.

Furthermore, as also explained by Burgess Environmental, the assumption by Hughes that a regenerative thermal will be 98.5% effective in destroying *all* contaminants is not a proper assumption:

> This very high rate of [assumed] performance should be supported by a detailed evaluation of the constituents of the emissions (see above) as well as performance specifications of the air pollution prevent equipment that will be deployed. The contaminants entrained in the air emissions stream are likely to be varied and are likely to be present in various forms (e.g.: volatiles, water droplets, particulate); hence, applying a constant removal efficiency may not be appropriate. The removal efficiency should be evaluated for each individual contaminant, and appropriate sensitivity analyses should be completed where a range of potential removal efficiencies is anticipated for an individual contaminant.
>
> The Application should also include an assessment of the products of the RTO for each specific contaminant that may be present in the process air emissions stream. For example, oxidation of some compounds, such as chlorinated compounds, may result in harmful oxidation products.

With respect to one particular HAP, acrylonitrile, the attached letter from Downstream Strategies explains:

> Of all the highly toxic air contaminants assessed in the facility's air permit application, acrylonitrile is the only one for which the emission rate potential, potential to emit, and estimated actual emissions all exceed the mass emission limit. Further, of all the pollutants included in the application's Allowable Emissions Analysis (Section 8.4 of the air permit application), acrylonitrile is the pollutant for which the modeled concentration most closely approaches the allowable threshold from NYSDEC's DAR-1 Guidelines for the Evaluation and Control of Ambient Air Contaminants Under 6NYCRR Part 212.
>
> More specifically, the DAR-1 Annual Guideline Concentration for acrylonitrile is 1.5 x 10-2 µg/m3, and the modeled maximum annual concentration, at maximum impact, is 0.865 x 10-2 µg/m3—or more than half of the guideline concentration. Because the modeled concentration is so close to the guideline concentration, the DEIS should include a sensitivity analysis to assess the likelihood of acrylonitrile exceeding the guideline concentration using other reasonable model inputs and emission factors that capture (1) model input variations among the parameters, (2) model input variations among the stacks, (3) variations among emission factor assumptions, and (4) variations in MSW composition, as detailed below.

Accordingly, both Burgess Environmental and Downstream Strategies emphasize the importance of a sensitivity analysis. And like Burgess Environmental, Downstream Strategies points out that Hughes's air permit application was based on improper assumptions and factors. Please see pages 5–6 in the attached Downstream Strategies Letter regarding model input variations among the parameters, model input variations among the stacks, variations among emission factor assumptions, variations in MSW composition, and related issues.

Another issue related to air emissions is that Hughes's attempt to sort out "unauthorized waste"—such as friable asbestos-containing material, mercury-added consumer products, radioactive waste, sewage sludges, infectious and regulated medical waste, construction and demolition debris, and hazardous wastes—from the "feedstock" for its processing operation, no matter how effective, will never be able to exclude all such unauthorized waste. As Burgess Environmental explains in their attached letter:

> Although the Application states that procedures will be in place to extract these unauthorized wastes from entering the pelletizing process, it is not clear what these procedures are or how effective they will be. Given that the incoming materials will be a random mixture of garbage generated by multiple sources, there is a high likelihood that some of these unauthorized wastes will ultimately be processed. It is difficult to envisage a screening process that will effectively remove unauthorized, hazardous wastes from the MSW given that the Facility processes MSW and over 20 ton batches. The waste screening system appears to be geared towards removing bulky waste items that are not compatible with the process (Sterling, 2021a). The process of screening out hazardous and unauthorized wastes should be better described as should the implications to the process and emissions in the event that these hazardous and unauthorized wastes are not captured by the waste screening process.

The DEIS should therefore assume that some proportion of "unauthorized waste" will not be excluded, will end up in the autoclaves, and will be subjected to high-pressure steam at high temperatures that can be expected to liberate VOCs and HAPs that are present in that "unauthorized waste." This should be factored into the air emissions analysis.

Only after Hughes and its consultants have analyzed the waste streams, the expected emissions from processing that waste, and the effectiveness of its proposed RTO for each contaminant in a far more rigorous fashion—and subjected that analysis to public review and comment—will DEC, the involved agencies, and other stakeholders know the extent of proposal to cause significant adverse effects on air resources (and on public health, as discussed below).

2. <u>Potential for Significant Impacts on Land (EAF No. 1)</u>

The proposed action will involve construction on and physical alteration of land surface of the proposed site. These impacts should be analyzed in the DEIS. Please see the attached MDRA Report regarding natural features on the site. Among many other issues, that report notes:

> The Oldfield and other areas of the Site are underlain with Collamer silt loam soils, 3 to 15 percent slopes soils (CoB, CoC) that were formed in lacustrine deposits of lake plains (sediments that settled to the bottom of an ancient lake or adjacent shore). Such sediments are clayey and often limy with a neutral pH (pH of 7), and could support plant species with a preference for calcium rich soils (calcicoles), a

> number of which are rare species. Collamer soils are also one of the rarest soils in Delaware County, comprising only 489 acres for the entire County, a small fraction of one percent (USDA Natural Resources Conservation Services. 2006). Uncommon soils may have uncommon chemical / physical features which could support uncommon species. Collamer soils also exhibit seasonally shallow depth to the water table: 1.2 to 1.8 feet below the surface from March to May. Such shallow water depths may support small areas of wetland pockets in otherwise upland oldfields. Shallow depth to the saturation zone also poses limitations to excavations for building foundations and road construction.

While Hughes's EAF gives an average depth to water table greater than 10 feet, and states that 80% of the site has 10-15% slopes, there does not appear to be adequate support for conclusions that there will not be construction in areas where the water table is less than 3 feet or the slopes are 15% or greater or that other significance criteria will not be exceeded.

Indeed, it appears from the Slope map in the Town of Roxbury Comprehensive Plan, that the facility is, in fact, proposed to be constructed on land that is, in part, on a slope in the 15-25% range.[66]

These issues should be studied in the DEIS.

3. <u>Potential for Significant Impacts on Plants and Animals (EAF No. 7)</u>

Part 2 of EAF states that the proposed action may result in a loss of flora or fauna. Although it states that these impacts will be small, rather than "moderate to large," it appears that such initial conclusion was based on Hughes's answers to Part 1 of the EAF, which contains a negligeable amount of information about plants and animals, for example, briefly referencing only deer and small mammals, answering "no" to the question "Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of concern?" But there is no indication that appropriate wildlife surveys (or any wildlife surveys) have been conducted by or on behalf of Hughes.

As explained throughout the attached MDRA Report, the natural features on the site are excellent habitat for a number of rare species and species of concern that may be present on a seasonal or year-round basis on the site. In preparing the DEIS, Hughes should be required to engage qualified, credentialed biologists and other wildlife specialists to conduct an appropriate number of wildlife surveys on the site, and nearby, for appropriate durations in the appropriate seasons, using generally accepted study protocols. Those surveys, once subjected to public and agency review and comment, would provide an appropriate basis for analyzing the projects effects on plants and animals.'

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[66] http://roxburyny.com/wp-content/uploads/2010/08/3-Slope.pdf The parcel boundaries are shown on that map, and the areas having 15-25% slopes are depicted in yellow.

4. Potential for Significant Impacts on Human Health (EAF No. 9)

With respect to human health impacts, we hereby incorporate the above discussions regarding air pollution, drinking water protection, the inability of the proposed facility to exclude all hazardous wastes, the storage of excluded hazardous waste on-site. Further, it should be noted that on-site workers in the negative pressure facility will be exposed to air pollutants at more acute levels and for longer durations. A risk assessment of worker health and safety should be performed.

The solid waste facility may also attract vermin (such as rats) and nuisance wildlife (such as raccoons and skunks) which should be evaluated and appropriate mitigation proposed to offset anticipated impacts regarding disease vectors.

In the EAF, the question "The proposed action involves construction or modification of a solid waste management facility[?]" in No. 16 (Impact on Human Health) was responded to as "No, or small impact may occur." This appears incorrect and lacking in adequate support in the record.

The DEIS should include an analysis of impacts on public health

5. Potential for Significant Impacts on Aesthetic Resources (EAF No. 16)

The project site is less than five miles from the "blue line" boundary of the Catskill Park, and the facility will be visible from within the park. The project site is also in one of the designated scenic view areas in the Town of Roxbury Comprehensive Plan. See Visual Assessment Map and Town of Roxbury Scenic Views map in Attachment 5 hereto.[67]

Part 2 of the EAF answered "YES" to this statement: "The land use[s] of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource." While not the most artfully worded statement, the proposed facility is obviously different from, and in sharp contrast to current land use patterns and scenic and aesthetic resources in this rural area of the Catskills in close proximity to the Catskill Park and the Schoharie.

The DEIS should include visual simulations from all relevant vantage points so that the public can assess its aesthetic impacts.

6. Potential for Significant Impacts on Historic and Archaeological Resources (EAF No. 10)

In Part 1 of the EAF, Hughes answered "Yes" to the question "Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory." Notably, the

[67] *See also* http://roxburyny.com/comprehensive-plan/

letter from the New York State Office of Parks, Recreation, and Historic Preservation ("OPRHP") in the record that that OPRHP has not yet taken a position as to effects on parkland. And, as noted above and shown in the Visual Assessment Map, the facility would be visible from within the Catskill Park. The project is proposed within a very historic area with several important cultural sites/landmarks including the Hardenbourgh Manor, historic cemeteries, Johnson Hollow springs, and near the Gilboa fossils discovery site.

The DEIS should include visual simulations from all relevant vantage points, including within the Catskill Park, so that impacts on the park and other historic resources can be assessed.

7. Inconsistency with Community Plans (EAF No. 17)

The DEIS must assess consistency with the Town of Roxbury Comprehensive Plan,[68] including but not limited to policies related to scenic views and building on steep slopes.

8. Inconsistency with Community Character (EAF No. 18)

As hundreds of local residents can tell you, and are telling you, the proposed solid waste management facility designed to haul waste and fuel pellets in and out of this small town in the rural Catskills, and to process those materials 24 hours a day, seven days a week there, is dramatically inconsistent with the character of the community. This impact must be analyzed in the DEIS so that the public, DEC, and all involved agencies can determine its significance and whether that impact is unavoidable or unmitigated (if the project were to proceed in the proposed location) and so that project alternatives, including alternative locations, can be fairly evaluated and compared to the proposed location.

9. Potential for Significant Light Impacts (EAF No. 15)

The proposal is to operate the facility 24 hours a day, seven days a week. Thus, the facility and its outdoor areas will be lit 24 hours a day, seven days a week. This has the potential to affect not only the quality of life of people living near the facility but also has the potential to adversely affect wildlife. As explained in the attached MDRA Letter, the final scope should include:

> Assessment of Site and building exterior lighting impacts upon the surrounding area in general and Site wetland resources specifically (prolonged night lighting trespass over and in proximity to wetlands can result in adverse impacts on the resource habitat quality and the species relying on that resource).

[68] http://roxburyny.com/comprehensive-plan/

10. Potential for Significant Impact on Critical Environmental Areas (EAF No. 12)

Less than two miles to the west of the proposed project site is a Critical Environmental Area ("CEA"), the Roxbury Water District Aquifers. CEAs are areas in the state which have been designated by a local or state agency to recognize a specific geographical area, including a feature that is a benefit or threat to human health. The Roxbury Water District Aquifers CEA was designated by the Town of Roxbury to protect its groundwater aquifers. One of the project's "primary traffic routes" the "route from southwest" goes through this nearby CEA. The DEIS should analyze impacts on this CEA.

Mitigation Measures

6 NYCRR §§ 617.8(e)(4), 617.9(b)(5)(iv)

SEQRA requires the final scope to include an "initial identification" of mitigation measures,[69] which, as The SEQR Handbook explains, means that the scope should provide an "initial list of potential mitigation measures to be discussed in the EIS, *to the extent that they can be identified at the time of scoping*, plus an *explicit requirement to include and address additional mitigation measures which may be identified during EIS studies and analyses*."[70]

While DEC may be able to identify some mitigation measures at this juncture, such as those mentioned in Part 3 of the EAF, it is the DEIS's studies and analyses that must identify and assess all of the adverse environmental impacts and propose detailed, effective mitigation measures.

Alternatives

6 NYCRR §§ 617.8(e)(5), 617.9(b)(5)(v)

The SEQRA regulations provide that a DEIS must include:

> a description and evaluation of the range of reasonable alternatives to the action that are feasible, considering the objectives and capabilities of the project sponsor. The description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed. The range of alternatives must include the no action alternative. The no action alternative discussion should evaluate the adverse or beneficial site changes that are likely to occur in the reasonably foreseeable future, in the absence of the proposed action. The range of alternatives may also include, as appropriate, alternative:
>
> (a) sites;
> (b) technology;

[69] 6 NYCRR § 617.8(e)(4).
[70] SEQR Handbook at 104 (emphasis added).

> (c) scale or magnitude;
> (d) design;
> (e) timing;
> (f) use; and
> (g) types of action.
>
> For private project sponsors, any alternative for which no discretionary approvals are needed may be described. Site alternatives may be limited to parcels owned by, or under option to, a private project sponsor;[71]

The SEQRA regulations also state that the final scope should include "the reasonable alternatives to be considered."[72] The SEQR Handbook explains that the scope should "Define reasonable alternatives for avoiding specific impacts which must be included in the EIS, either as individual scenarios or a range of alternatives," and further:

> The lead agency may prescribe some or all the range of alternatives to be included and should identify which impact(s) a specified alternative would eliminate or minimize.
>
> * * *
>
> Additional alternatives to avoid or mitigate specific impacts may be developed in the course of EIS studies and analyses. The lead agency may also specify criteria or rationale to be used to determine whether additional alternatives which emerge during studies or agency and public review would help balance environmental and sponsor concerns. [73]

Here, in addition to the required analysis of the no-action alternative, the most obvious type of alternative that would mitigate adverse environmental impacts is an alternative location. Hughes apparently does not own Tax Parcel 113.-1-25 or Tax Parcel 114.-1-11. Hughes has stated, in its response to questions posed at the meetings it held that "Hughes Energy is actively pursuing locations in addition to the Roxbury location." *See* Attachment 5, hereto. Hughes specifically mentioned Rockland County in that response. Hughes has also said that it "[m]et in New Paltz with Region 3 team about projects we are working on in Rockland and Orange Counties." *See* Attachment 5, hereto. And Hughes told DEC it was "Looking for direction from DEC Region 4 to proceed with projects in Greene County." *See* Attachment 5, hereto. Hughes also submitted to DEC air emission calculations for a project it referred to as "Saugerties, NY Solid Waste Processing Facility." Hughes should be required to disclose as part of the DEIS the locations of any other project location it is considering for a fuel pelletization facility and any land that it, or any affiliate, owns or has an option to purchase. Those other sites—and a variety of potential alternative sites—could serve as alternatives to Roxbury, subject to environmental

[71] 6 NYCRR § 617.9(b)(5)(v).
[72] 6 NYCRR § 617.8(e)(5).
[73] SEQR Handbook at 100, 105.

review of the locations' abilities to mitigate significant adverse impacts. Indeed, it is not clear whether the proposed facility is even viable at the current site.

A site that is in close proximity to (or co-located with) a landfill and/or a solid fuel boiler—and thus would not require waste and fuel pellets to be transported hundreds or thousands of miles—would reduce carbon impacts and thereby mitigate some of the significant adverse impacts related to energy consumption, transportation, and climate.

A site, such as one that is located in an industrial park or an area otherwise zoned for industrial uses, and not in a quiet, rural, scenic area in the Catskills, would mitigate many of the impacts discussed above.

A site that is not shoehorned between a federal wetlands and tributaries to a drinking water reservoir would mitigate the impacts on water resources.

The no-action alternative must, of course, be analyzed. The no-action alternative should consider not only the *current* state of affairs in the absence of the proposed project, but also any *reasonably anticipated changes*. For example, any planned efforts by a municipality to divert a greater proportion of recyclables and compostables from their waste streams should be taken into account.

The final scope should give Hughes specific direction as to the DEIS's alternatives analysis.

Discussion of any Issues Excluded from the DEIS and a Proper Basis for Excluding Them
6 NYCRR § 617.8(e)(7)

The SEQRA regulations provide that the final scope must include:

> a brief description of the prominent issues that were considered in the review of the environmental assessment form or raised during scoping, or both, and determined to be neither relevant nor environmentally significant or that have been adequately addressed in a prior environmental review and the reasons why those issues were not included in the final scope.[74]

Accordingly, if DEC decides to exclude any issues from the draft scope, it must provide its reasons for doing so and, of course, any such agency decision must be supported by a sound rationale and have an adequate basis in the record.

[74] 6 NYCRR § 617.8(e)(7).

V.

CONCLUSION

We thank you for considering these comments, and we are available to discuss any of these issues at the Department's convenience.

Sincerely,

Reed W. Super

Attachments:

(1) Recommended DEIS Table of Contents
(2) MDRA Report
(3) Burgess Environmental Letter
(4) Downstream Strategies Letter
(5) Selection of figures and slide decks from Hughes application materials

cc: Mark Lanzafame, DEC
Anthony Luisi, DEC
Supervisor, Town of Roxbury
Phillip Zorda, Town of Roxbury Planning Board Chair
Supervisor, Town of Prattsville
Tal G. Rappleyea, Prattsville Town Attorney
Delaware County Public Works Department
Delaware County Planning Board
Philip Bein, Watershed Inspector General, NYS AG
Cynthia Garcia, NYCDEP
Nicholas Sadler, NYCDEP
Involved agency distribution list for Draft Scope

Attachment 1

DEIS OUTLINE

Executive Summary

Chapter 1: Description of the Proposed Action, including Public Purpose and Need

Chapter 2: Environmental Setting

Chapter 3: Impacts of the Proposed Action on Solid Waste Management and its Consistency or Inconsistency with the State or Locally Adopted Solid Waste Management Plan

Chapter 4: Impacts of the Proposed Action on the Use and Conservation of Energy

Chapter 5: Measures to Avoid or Reduce Both an Action's Impacts on Climate Change and Associated Impacts Due to the Effects of Climate Change Such as Sea Level Rise and Flooding

Chapter 6: Impacts on Water Resources, Including Groundwater, Surface Water, Drinking Water, Wetlands, and the Floodplain,

Chapter 7: Air Pollution Impacts

Chapter 8: Traffic Impacts

Chapter 9: Noise Impacts

Chapter 10: Odor Impacts

Chapter 11: Light Impacts

Chapter 12: Impacts on Land

Chapter 13: Impacts on Plants and Animals

Chapter 14: Impacts on Human Health

Chapter 15: Impacts on Aesthetic Resources

Chapter 16: Impacts on Historic and Archaeological Resources

Chapter 17: Consistency or Inconsistency with Community Plans

Chapter 18: Consistency or Inconsistency with Community Character

Chapter 19: Impact on Critical Environmental Areas

Chapter 20: Mitigation Measures

Chapter 21: Alternatives

Chapter 22: Reasonably related short-term and long-term impacts, cumulative impacts and other associated environmental impacts

Chapter 23: Adverse environmental impacts that cannot be avoided or adequately mitigated if the proposed action is implemented

Chapter 24: Irreversible and irretrievable commitments of environmental resources that would be associated with the proposed action should it be implemented

Chapter 25: Growth-inducing aspects of the proposed action

Appendices

Attachment 2

MATTHEW D. RUDIKOFF ASSOCIATES, INC.
PLANNING • ENVIRONMENT • DEVELOPMENT
Offices in New York and Connecticut
www.rudikoff.com

SEQR DEIS SCOPE COMMENTARY

Hughes Energy LLC Proposed Facility - NYS Route 23
Town of Roxbury, Delaware County, New York

Prepared at Request of: Super Law Group, LLC

NOVEMBER 16, 2021

INTRODUCTION

At the request of Super Law Group, LLC, Matthew D. Rudikoff Associates, Inc. (***MDRA***) conducted a combined off-site desk-top review and analysis of several publicly available photo-imagery/map resources and reports as well as a roadside inspection of the proposed Hughes Energy LLC project property (Site) (SBL 113.-1-25 / 39.60 acres) located off NYS Route 23 in the Town of Roxbury, Delaware County, New York. The purpose of the desk-top review and roadside inspection was to identify site natural features and to the extent possible, describe/characterize site natural communities, identify conspicuous site plant species, and on the basis of the observed communities, discuss the potential for rare plants and animals to utilize the site on a seasonal or year-round basis.

On September 22, 2021, The New York State Department of Environmental Conservation (NYSDEC), as SEQR lead agency, determined that the proposed Hughes Energy, LLC - New Solid Waste Management Facility project ("proposed action") may have a significant adverse impact on the environment and a Draft Environmental Impact Statement (DEIS) was required. Consequently, the purpose of the review was also to identify potential natural resources concerns that should be included in the lead agency Scoping Outline to be addressed in the DEIS for the proposed action.

RESOURCE DOCUMENTS REVIEWED

In addition to the various applicant submitted application and SEQR documents (Site Plan, EAF, Joint Permit Application, SWPPP, NOIA, etc.) the following resource documents were reviewed in the preparation of this Report:

- Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (Eds). 2002. Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. (Draft for review). New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.
- Kiviat, E. and G. Stevens. 2001. Biodiversity Assessment Manual for the Hudson River Estuary Corridor. New York State Department of Environmental Conservation. Albany, NY.
- McGowan, K.J. and K. Corwin (Eds.). 2008. The Second Atlas of Breeding Birds in New York State. Cornell University Press. Ithaca, NY.
- New York State Department of Environmental Conservation. New York State Amphibian and Reptile Atlas Project 1990-1999. (http://www.dec.state.ny.us/website/dfwmr/wildlife/herp/). Accessed 2021.
- New York State Department of Environmental Conservation. New York State Breeding Bird Atlas2000-2005. (http://www.dec.state.ny.us/website/dfwmr/wildlife/bba/). Accessed 2021.
- New York State Department of Environmental Conservation. Environmental Resource Mapper (https://gisservices.dec.ny.gov/gis/erm/) Accessed October,2021.
- New York State Department of Environmental Conservation. Nature Explorer (https://www.dec.ny.gov/natureexplorer/app/) Accessed October 2021

- Stevens, G. and C. Graham. 2019. Natural Resources Inventory for Greene County, New York. Hudsonia, Ltd, Annandale, NY.
- Storm Water Pollution Prevention Plan (SWPP) for Hughes Energy, LLC Municipal Solid Waste Processing Facility, Roxbury, NY. Sterling Environmental Engineering P. C., May 27, 2021, provided by Super Law Group, LLC.
- Town of Roxbury Comprehensive Plan 2013 (Draft)
- USDA Natural Resources Conservation Services. 2006. Soil Survey of Delaware County, New York.
- USF&WS National Wetland Inventory Maps (www.fws.gov/wetlands) (Accessed October, 2021)
- New York State Freshwater Wetlands (www.gisservices.dec.ny.gov/gis/erm/) (Accessed October, 2021)
- Web Soil Survey (www.nrcs.usda.gov/wps/portal/nrcs/main/ny/soils/) (Accessed October, 2021)

ROADSIDE SITE INSPECTION

A roadside inspection of the Site from the right-of-way of NYS Route 23 was conducted by Joseph T. Bridges, PhD, Senior Biologist of ***MDRA*** on October 23, 2021. A northeast-trending ridge extending across the mid-length of the site, as shown on the USGS topographic map covering the Site (Figure 1 in Stormwater Pollution Prevention Plan 2021), limited the road-side view to the westerly half of property. Photographs of the subject property were taken from the south and north ends of the Site ***(refer to Figures 1 and 2, Site Photographs)***.

Figure 1. *View of Site looking north from its southern boundary. NYS Route 23 is on the left. A portion of oldfield community with goldenrods and conifers is in the foreground. The yellow-brown area mid-photo is part of a freshwater wetland drained by a Class A perennial stream.*

Figure 2. *View of the Site looking south from its approximate northern boundary. NYS Route 32 is on the right. An unseen stone-fill farm road crosses right to left mid-photo behind the leafless tree. Portions of freshwater marsh (yellow-brown) can be seen just forward of the mid-photo line of trees and shrubs.*

FINDINGS

Landscape Setting

Various map sources depict the Site as an integral part of a relatively undisturbed habitat matrix that encompasses more than 1,000 acres of forest, with embedded fields, wetlands, streams and riparian corridor habitats extending into Greene and Schoharie Counties (Stevens and Graham 2019). To the north and east, the Site borders a large undeveloped forest tract above Schoharie Creek, which along with the Site, provide substantial core habitat and an unbroken travel corridor for a diversity of wildlife particularly birds and mammals. The seamless transition of undisturbed forest from the easterly boundary of the Site with that of abutting NYCDEP owned forested property to the east and northeast serves as an important resources in the protection of water quality of surface runoff and subsurface seepage to Schoharie Creek ***(refer to Figure 3, Site and Abutting NYCDEP Parcels)***, its associated floodplain wetlands and Schoharie Reservoir below the Site's eastern boundary ***(refer to Figure 3, NYSDEC Freshwater Wetland P-3 and Adjacent Area (100-foot wetland buffer) east of the Site above Schoharie Creek)***.

Figure 3. *Site and Abutting NYCDEP Parcels.*

Figure 4. *NYSDEC Freshwater Wetland P-3 and Adjacent Area (Regulated 100-foot wetland buffer).*

A NYSDEC Class A stream drains northeastward across the Site through a shallow freshwater marsh into Schoharie Creek. The stream/freshwater marsh system is extensive, – entering the Site from the southwest, crossing the Site and continuing north-northeast toward Schoharie Creek ***(refer to Figure 5, National Wetland Inventory)***.

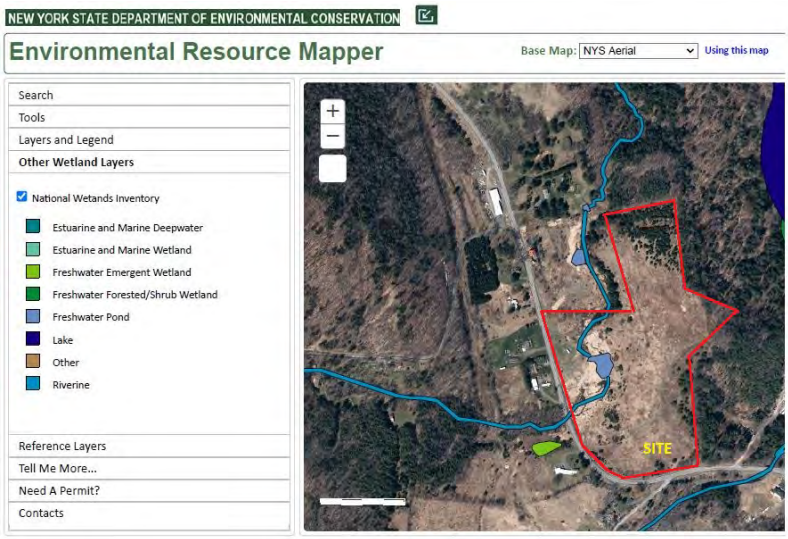
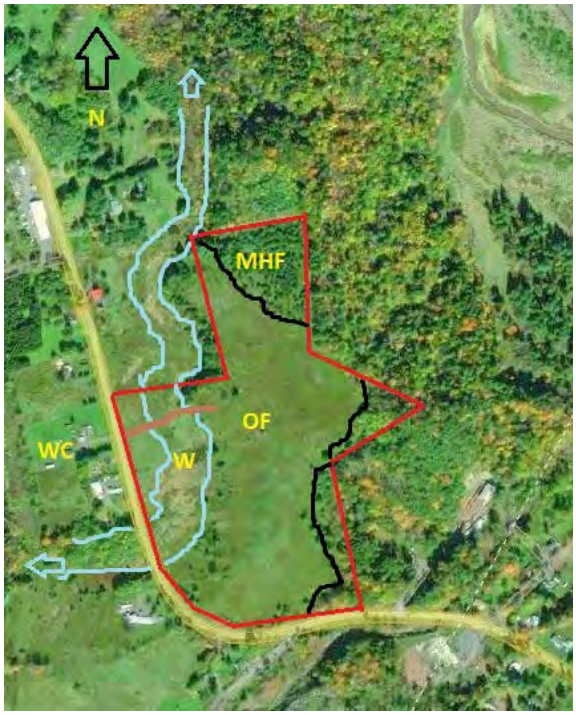


Figure 5. *National Wetland Inventory. The perennial stream in blue is a NYSDEC Class A Stream. Its best usage is as a drinking water source and warrants stringent protection for public safety. Substantial areas of freshwater marsh border much of the stream.*

Ecological Communities

Various map sources and observations from the roadside inspection were used to identify and map the following ecological communities present on the Site ***(Refer to Figure 6, Site Ecological Communities)***:



- Freshwater Marsh (W)
- Oldfield (OF)
- Mixed Hardwood Forest (MHF)

Figure 6. *Site Ecological Communities. The limits of the Freshwater Marsh (W) outlined in light blue is unknown but appears quite large and extends well off-site from west to northeast of the Site. The brown line (WC) marks the approximate location of a stone-fill farm road crossing the marsh.*

Freshwater Marsh (W)

This community is permanently saturated and seasonally flooded with water depths to an estimated 3 to 4 feet. A perennial stream courses through the approximate center of the freshwater marsh. Plants observed from the roadside included broad-leaf cattail (*Typha latifolia*), tussock sedge (*Carex stricta*), woolgrass (*Scirpus cyperinus*), several wetland grasses, and wetland shrubs, including willow (*Salix* sp.). Other plants typically found within communities of this type include: sedges (*Carex* spp.), rushes (*Juncus* spp.), spike rushes (*Eleocharis* spp.), Loosestrifes (*Lysimachia* spp.), and numerous other species of wetland plants (Edinger et al. 2002). Animals typically found in this community include: painted turtle, snapping turtle, muskrat, northern watersnake, ducks and geese, marsh wren, red-winged blackbird, great blue heron, red-spotted newt, green frog, pickerel frog, northern leopard frog, and great blue heron.

Freshwater marsh community provides potentially suitable habitat for a number of rare or uncommon species, including pied-billed grebe (a NYS-listed threatened species that utilizes open pools of freshwater marshes). Uncommon or rare Pool-breeding mole salamanders (*Ambystoma* spp.) and Virginia rail also utilize pools in freshwater marshes. ***Refer below to Table I, Rare Species with Potential to Occur on the Site.***

This community is quite large and extends seamlessly from west of the Site, across the Site, and farther offsite to the northeast. If the entire marsh was determined to be larger than 12.4 acres, it would be large enough to qualify as a NYS regulated freshwater wetland. Despite the Site stone-fill farm road that bisects part of the marsh ***(Refer to Figure 5, Site Ecological Communities)***, 6 NYCRR §664.7(b) states that "*two or more separate wetlands may be considered to be a single wetland for regulatory purposes if they are determined by the commissioner to function as a unit, or are dependent upon each other, and they are no more than 50 meters (approximately 165 feet) apart*." If the marsh was determined to be a NYS regulated wetland, the State would then also regulate an Adjacent Area (100-foot upland buffer) extending outward from the boundary of the marsh. The wetland and Adjacent Area would also be subject to State regulatory review for projects that might adversely affect it.

Oldfield

The Oldfield community on the site is quite complex and appears to support a high level of biodiversity made up of numerous non-woody plant species (broad-leaved herb and grass species) but also substantial coverage of scattered to clumped shrubs and trees. Plants identified from the roadside in this community included goldenrods (*Solidago* spp.), vetch, (*Viccia* sp.), white pine (*Pinus strobus*), spruces (*Picea* spp.), oaks (*Quercus* spp.), birch (*Betula* spp.), willows (*Salix* spp.), milkweed (*Asclepias* sp.), staghorn sumac (*Rhus typhina*) and widely scattered unidentified grasses and shrubs. A list of common oldfield plant species would be very long.

Oldfields, particularly those near open wetlands, such as is present at the Site, support many species including insects (butterflies, bees, dragonflies and damselflies), small-to-large mammals (meadow vole, white-footed mouse, meadow jumping mouse, eastern cottontail, fisher, white-tailed deer), reptiles (garter snake, and State-listed Special Concern wood turtle and eastern box turtle), and numerous species of birds.

Oldfield breeding birds include American goldfinch, gray catbird, brown thrasher, American robin, blue-winged warbler, prairie warbler, song sparrow, and Savannah sparrow. Cooper's hawk and Sharp-shinned hawk, both listed as Special Concern species by the NYSDEC, could utilize the Site's oldfield and adjacent forest edges for hunting.

The Site's Oldfield community is part of a grassland habitat complex that extends immediately off-site to the southwest. Birds that utilize grassland complexes for breeding include the rare "grassland sparrows" namely, Henslow's sparrow, vesper sparrow and grasshopper sparrow. Large grasslands and grassland complexes are also used by rare raptors, such as northern harrier and short-eared owl, particularly in fall and winter ***(Refer below to Table I, Rare Species with Potential to Occur on the Site)***.

The New York Nature Explorer Report for Delaware County has marked three areas of rare plant or animal species recorded on or near the Site, including an area of the grassland complex just south of the one encompassing the Site and extending northward ***(Refer to Appendix 1, The New York Nature Explorer Report for Delaware County)***. The New York Nature Explorer Report for Delaware County also lists other rare species occurring in Delaware County.

The Oldfield and other areas of the Site are underlain with Collamer silt loam soils, 3 to 15 percent slopes soils (CoB, CoC) that were formed in lacustrine deposits of lake plains (sediments that settled to the bottom of an ancient lake or adjacent shore). Such sediments are clayey and often limy with a neutral pH (pH of 7), and could support plant species with a preference for calcium rich soils (calcicoles), a number of which are rare species. Collamer soils are also one of the rarest soils in Delaware County, comprising only 489 acres for the entire County, a small fraction of one percent (USDA Natural Resources Conservation Services. 2006). Uncommon soils may have uncommon chemical / physical features which could support uncommon species. Collamer soils also exhibit seasonally shallow depth to the water table: 1.2 to 1.8 feet below the surface from March to May. Such shallow water depths may support small areas of wetland pockets in otherwise upland oldfields. Shallow depth to the saturation zone also poses limitations to excavations for building foundations and road construction.

Mixed Hardwood Forest

The greater extent of this ecological community is present near the easterly side of the Site and could not be viewed fully from NYS Route 32. Typically, this community type shows a mix of conifers white pine (*Pinus strobus*), spruce (*Picea* spp.) and eastern hemlock (*Tsuga canadensis*) in scattered stands interspersed with oaks (*Quercus* spp.), maples (*Acer* spp.), beech (*Fagus grandifolia*), hickories (*Carya* spp.), white ash (*Fraxinus americana*), black cherry (*Prunus serotina*), and black birch (*betula lenta*) as common hardwood trees. Common understory species include witch-hazel (*Hamamelis virginiana*), maple-leaf viburnum (*Viburnum acerifolium*), shadbush (*Amelanchier* sp.), mountain laurel (*Kalmia latifolia*), and a wide variety of wildflowers and ferns.

This community type provides important nesting habitat for a number of raptors, including red-shouldered hawk, Cooper's hawk, sharp-shinned hawk, broad-winged hawk and barred owl. Many species of songbirds such as scarlet tanager, wood thrush, cerulean warbler, black-throated blue and black-throated green warblers and other warblers, as well as vireos, thrushes and flycatchers. Hardwood trees greater than 3 to 5 inches in diameter, especially those with cavities and cracks or with loose platy bark such as shagbark hickory and black locust, are used by northern long-eared bat (*Myotis septentrionalis*) for summer roosting and nursery colonies. Northern long-eared bat, a State-listed threatened species, has been confirmed in Delaware County ***(Refer to Appendix 1, The New York Nature Explorer Report for Delaware County)***.

Eastern Box Turtle, a NY species of Special Concern, utilizes several different habitats, including various types of forests, field edges, oldfields, wetlands and stream banks. The eastern box turtle is near its NYS northwestern geographic range limit in Delaware County.

Rare Species of the Area and with Potential to Occur on the Site

A review of Several NYS Breeding Bird Atlases, the NYSDEC Amphibian and Reptile Atlas, The New York State Nature Explorer Report for Delaware County ***(refer to Appendix I)***, The New York State Breeding Bird Atlas data 2000 - 2005 for the survey block covering the Site [Block 5268D] ***(refer to Appendix II)***, The NYS Flora Atlas, and the Town of Roxbury Comprehensive Plan (2013 Draft) indicate that, based on suitable Site habitats and proximity of rare species records and reports, the rare species listed in ***Table 1*** below have potential to occur on the Site or to utilize the Site on a regular or interim basis. For NYS animal and plant species rarity classifications ***refer to Appendix III***.

TABLE 1 RARE SPECIES WITH POTENTIAL TO OCCUR ON THE SITE			
SPECIES	**NYS RARITY STATUS**	**SUITABLE SITE HABITAT**	**COMMENTS**
ANIMALS			
Northern harrier (*Circus cyaneus*)	T	OF, MHF	Town of Roxbury confirmed, NYS BBA 2009
Cooper's hawk (*Accipiter cooperii*)	SC	OF, MHF	Delaware County confirmed
Sharp-shinned hawk (*Accipiter striatus*)	SC	OF, MHF	Delaware County confirmed
Pied-billed grebe (*Podilymbus podiceps*)	T	W	Delaware County confirmed
Northern long-eared bat (*Myotis septentrionalis*)	T	MHF	Delaware County confirmed
Henslow's sparrow (*Ammodramus henslowii*)	T	OF	Delaware County confirmed
Grasshopper sparrow (*Ammodramus savannarum*)	SC	OF	
Vesper sparrow (*Pooecetes gramineus*)	SC	OF	
Bald eagle (*Haliaeetus leucocephalus*)	T	MHF, W	Town of Roxbury confirmed
Short-eared owl (*Asio flammeus*)	E	OF, MHF	
Eastern box turtle (*Terrapene carolina*)	SC	MHF, OF, W	Delaware County confirmed
Wood turtle (*Glyptemys insculpta*)	SC	MHF, OF, W	Delaware County confirmed
PLANTS			
Tall hairy lettuce (*Lactuca hirsuta*)	E	MHF, OF	Delaware County confirmed, opening in woods, field edges
Culver's root (*Veronicastrum virginicum*)	T	OF, W	Openings in woods, oldfield edges, Delaware County confirmed
Yellow thistle (*Cirsium horridulum var horridulum*)	R	OF, MHF	Wet meadows, oldfields, Delaware County confirmed
Perfoliate-leaved horse gentian (*Triosteum perfoliatum*)	R	OF, MHF	Delaware County confirmed
Whorled mountain mint (*Pycnanthemum verticilatum*)	E	OF, MHF	Delaware County confirmed
Jacob's Ladder (*Polemonium vanbruntiae*)	R	W	Town of Roxbury, open areas of Schultice Mountain approximately 3 miles west of Site
Meadow horsetail (*Equisetum pratense*)	T	W	Wet meadows, streambanks, swamps and seepages, Delaware County confirmed

DEIS SCOPING OUTLINE RECOMMENDATIONS

The applicant's submitted DRAFT DEIS Scope dated October 1, 2021 is substantially inadequate for a project of this type and size. The DRAFT Scope is self-serving and appears to write-off the need for much of any detailed environmental assessment based on the Part 3 EAF, despite the lead agency's issuance of Positive Declaration. The DEIS Scope should be revised accordingly to fully evaluate the project's impacts, while identifying at a greater detail impact avoidance, mitigation measures and project alternatives to otherwise minimize project environmental impacts.

Some of the items that should be added to the DEIS Scope include:

- Consistency and compliance with local planning and zoning, wetland and other environmental permitting standards and requirements.
- October 14, 2021 NYCDEP involved agency watershed protection scoping comments.
- Assessment of Site and building exterior lighting impacts upon the surrounding area in general and Site wetland resources specifically (prolonged night lighting trespass over and in proximity to wetlands can result in adverse impacts on the resource habitat quality and the species relying on that resource).
- Traffic related impacts as commented below.
- Site soil, water and habitat resource impacts as commented below.
- Inclusion of project design alternatives that could provide greater impact avoidance or impact reductions upon the area, the Site, Site habitats and resources, as well as adequate buffers.

Of particular concern is the complete lack for the need to provide any ecological community assessment. This Summary Report of the Site's (and interconnecting offsite) ecological communities and the potential of the Site to possess or support a number of rare species of regulatory concern documents the presence of sufficient natural resources to warrant a comprehensive habitat analysis in the DEIS addressing:

- Flora and Fauna, and associated Habitat Analysis (Environmental Setting)
- Potential Impacts Assessment
- Avoidance Strategies and Mitigation Measures
- Project and Project Design Alternatives

The analysis, at minimum, should provide details regarding:

- ❖ Site soils, their physical properties, suitability/limitations to proposed development, and how soils limitations to development can/will be overcome.

- ❖ Potential hydric inclusions within the Site-mapped soils should be reviewed and the presence of oldfield pocket wetlands should be investigated.

- The total aerial extent and size of the Site's freshwater marsh on and continuance offsite should be determined, and if its size warrants, NYSDEC should map it and make it subject to Regulation. The DEIS scope should include the need for this evaluation, as well as analysis of interconnectivity factors such as hydrology, soils and vegetation. The evaluation should also include corresponding permit and impact analyses and mitigation measures sections should the wetland satisfy the regulatory 12.4 acres threshold.

- Ecological communities and their component flora and fauna should be fully investigated and described for the entire Site along with a focus on the potential for rare species to occur on the Site or to use the Site on a periodic basis. The lead agency's DEIS Scope should ensure that a comprehensive inventory of Site natural resources be conducted and that surveys for rare species follow established protocols of the U.S. Fish and Wildlife Service, New York State Department of Environmental Protection, and other environmental institutional agencies, as appropriate, that specify: (1) the appropriate season(s) of the year to search for each targeted rare species; (2) suitable weather conditions; and (3) duration and frequency of searches. For example, the Winter Raptor Survey methodology developed by the Hawk Migration Association of North America should be used to conduct surveys for short-eared owl and northern harrier. Wildlife surveys should be required to be conducted by qualified credentialed biologists experienced with the habitats, behavior and seasonal movement patterns of each individual rare species of concern.

- As stated, the analysis should include a focused section on rare species identification and potential impacts to them that might result from the proposed development (direct impacts such as injury/mortality due to Site disturbance/vehicular movement, loss of habitat, and noise). Avoidance, mitigation and project design alternatives to offset adverse impacts to Site flora and fauna should also be evaluated.

- Potential adverse impacts associated with the proposed waste facility's anticipated attraction of vermin (such as rats) and nuisance wildlife (such as raccoons and skunks) should be evaluated and appropriate mitigation proposed to offset anticipated impacts.

- The water quality criteria / standards for the Site NYSDEC Class A stream should be evaluated and mitigation and project alternatives to monitor and prevent contravention of said water quality standards by chemical pollution, including road deicing compounds, organics, and sand/sediment should be evaluated.

- The potential for development and operation of the project to introduce nonnative invasive species to the Site and area, particularly for the wide-ranging movement of vehicles that will be transporting waste and product to and from the project, should be evaluated. Of particular concern is the spotted lanternfly (*Lycorma delicatula*), which has been found recently in nearby counties to the south. According to the NYSDEC, spotted lanternflies lay their eggs on vehicles, firewood, outdoor furniture, stone, and other surfaces, which are then transported to new areas, causing the insect to spread (https://www.dec.ny.gov/animals/113303.html).

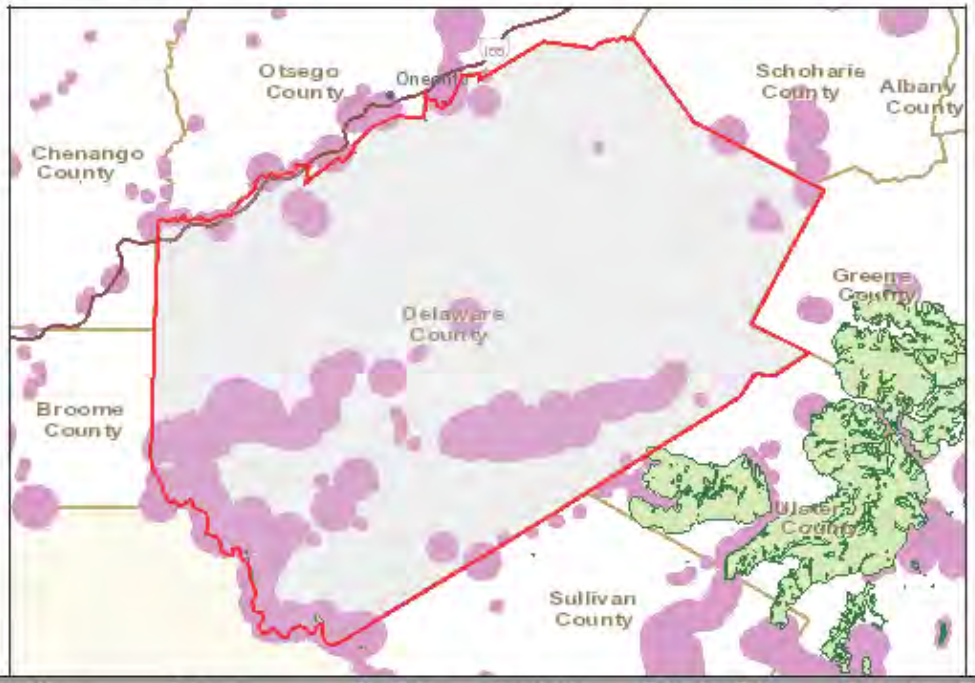
Appendix I

NATURE EXPLORER REPORT FOR DELEWARE COUNTY NEW YORK

http://www.dec.ny.gov/natureexplorer/

New York Nature Explorer
County Results Report

Criteria: County: Delaware



Common Name	Subgroup	Distribution Status	Year Last Documented	Protection Status State	Protection Status Federal	Conservation Rank State	Conservation Rank Global
County: Delaware							
Animal: Mammals							
Northern Long-eared Bat *Myotis septentrionalis*	Bats	Historically Confirmed		Threatened	Threatened	S1	G1G2
Animal: Birds							
Bald Eagle *Haliaeetus leucocephalus*	Hawks, Falcons, Eagles, Vultures	Recently Confirmed	2017	Threatened		S2S3B,S2N	G5
Henslow's Sparrow *Ammodramus henslowii*	Sparrows and Towhees	Recently Confirmed		Threatened		S3B	G4

New York State Department of Environmental Conservation
10/24/21 4:48 PM

Page 1 of 3

Appendix II

NEW YORK STATE BREEDING BIRD ATLAS 2000 - 2005 RECORDS FOR SURVEY BLOCK 5268D (COVERS SITE)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NYS Breeding Bird Atlas
Block 5268D 2000-2005

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation | ATLAS 2000

List of Species Breeding in Atlas Block 5268D

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Canada Goose	*Branta canadensis*	NE	4/28/2003	Game Species
Mallard	*Anas platyrhynchos*	FL	7/1/2001	Game Species
Ruffed Grouse	*Bonasa umbellus*	FL	6/25/2000	Game Species
Great Blue Heron	*Ardea herodias*	X1	7/1/2001	Protected
Turkey Vulture	*Cathartes aura*	NY	6/25/2000	Protected
Northern Harrier	*Circus cyaneus*	D2	4/13/2005	Threatened
American Kestrel	*Falco sparverius*	X1	6/25/2000	Protected
Killdeer	*Charadrius vociferus*	D2	6/30/2002	Protected
American Woodcock	*Scolopax minor*	FL	6/25/2000	Game Species
Rock Pigeon	*Columba livia*	X1	6/25/2000	Unprotected
Mourning Dove	*Zenaida macroura*	X1	6/25/2000	Protected
Ruby-throated Hummingbird	*Archilochus colubris*	X1	6/25/2000	Protected
Yellow-bellied Sapsucker	*Sphyrapicus varius*	NY	6/25/2000	Protected
Downy Woodpecker	*Picoides pubescens*	X1	6/30/2002	Protected
Hairy Woodpecker	*Picoides villosus*	X1	6/30/2002	Protected
Northern Flicker	*Colaptes auratus*	X1	6/25/2000	Protected
Eastern Wood-Pewee	*Contopus virens*	X1	6/25/2000	Protected
Alder Flycatcher	*Empidonax alnorum*	X1	6/30/2002	Protected
Least Flycatcher	*Empidonax minimus*	X1	6/25/2000	Protected
Eastern Phoebe	*Sayornis phoebe*	X1	6/25/2000	Protected
Eastern Kingbird	*Tyrannus tyrannus*	B2	6/25/2000	Protected
Blue-headed Vireo	*Vireo solitarius*	X1	7/1/2001	Protected
Warbling Vireo	*Vireo gilvus*	X1	6/25/2000	Protected
Red-eyed Vireo	*Vireo olivaceus*	X1	6/25/2000	Protected

List of Species Breeding in Atlas Block 5268D

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Blue Jay	*Cyanocitta cristata*	X1	7/1/2001	Protected
American Crow	*Corvus brachyrhynchos*	X1	6/25/2000	Game Species
Tree Swallow	*Tachycineta bicolor*	NY	6/25/2000	Protected
Barn Swallow	*Hirundo rustica*	FL	7/1/2001	Protected
Black-capped Chickadee	*Poecile atricapillus*	FY	7/1/2001	Protected
White-breasted Nuthatch	*Sitta carolinensis*	X1	6/25/2000	Protected
House Wren	*Troglodytes aedon*	D2	6/30/2002	Protected
Eastern Bluebird	*Sialia sialis*	N2	6/25/2000	Protected
Veery	*Catharus fuscescens*	D2	6/25/2000	Protected
Hermit Thrush	*Catharus guttatus*	X1	6/25/2000	Protected
Wood Thrush	*Hylocichla mustelina*	X1	6/25/2000	Protected
American Robin	*Turdus migratorius*	FY	6/30/2002	Protected
Gray Catbird	*Dumetella carolinensis*	FY	7/1/2001	Protected
Brown Thrasher	*Toxostoma rufum*	X1	6/30/2002	Protected
European Starling	*Sturnus vulgaris*	X1	6/25/2000	Unprotected
Cedar Waxwing	*Bombycilla cedrorum*	X1	6/25/2000	Protected
Nashville Warbler	*Vermivora ruficapilla*	X1	7/1/2001	Protected
Yellow Warbler	*Dendroica petechia*	FY	7/1/2001	Protected
Chestnut-sided Warbler	*Dendroica pensylvanica*	FY	6/25/2000	Protected
Magnolia Warbler	*Dendroica magnolia*	X1	7/1/2001	Protected
Black-throated Blue Warbler	*Dendroica caerulescens*	X1	6/25/2000	Protected
Yellow-rumped Warbler	*Dendroica coronata*	D2	7/1/2001	Protected
Black-throated Green Warbler	*Dendroica virens*	X1	6/25/2000	Protected
Blackburnian Warbler	*Dendroica fusca*	X1	7/1/2001	Protected
Prairie Warbler	*Dendroica discolor*	X1	6/25/2000	Protected
Black-and-white Warbler	*Mniotilta varia*	FY	7/1/2001	Protected
American Redstart	*Setophaga ruticilla*	X1	6/25/2000	Protected
Ovenbird	*Seiurus aurocapilla*	D2	7/1/2001	Protected
Mourning Warbler	*Oporornis philadelphia*	D2	6/25/2000	Protected
Common Yellowthroat	*Geothlypis trichas*	FL	6/25/2000	Protected
Canada Warbler	*Wilsonia canadensis*	FY	6/25/2000	Protected
Eastern Towhee	*Pipilo erythrophthalmus*	D2	7/1/2001	Protected

List of Species Breeding in Atlas Block 5268D

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Chipping Sparrow	*Spizella passerina*	FY	6/30/2002	Protected
Field Sparrow	*Spizella pusilla*	D2	7/1/2001	Protected
Savannah Sparrow	*Passerculus sandwichensis*	FY	7/1/2001	Protected
Song Sparrow	*Melospiza melodia*	D2	6/25/2000	Protected
Swamp Sparrow	*Melospiza georgiana*	X1	6/25/2000	Protected
White-throated Sparrow	*Zonotrichia albicollis*	D2	7/1/2001	Protected
Dark-eyed Junco	*Junco hyemalis*	D2	6/25/2000	Protected
Scarlet Tanager	*Piranga olivacea*	X1	6/25/2000	Protected
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	D2	6/25/2000	Protected
Indigo Bunting	*Passerina cyanea*	D2	7/1/2001	Protected
Bobolink	*Dolichonyx oryzivorus*	X1	6/25/2000	Protected
Red-winged Blackbird	*Agelaius phoeniceus*	FY	7/1/2001	Protected
Eastern Meadowlark	*Sturnella magna*	D2	6/30/2002	Protected
Common Grackle	*Quiscalus quiscula*	FY	6/25/2000	Protected
Brown-headed Cowbird	*Molothrus ater*	X1	6/25/2000	Protected
Baltimore Oriole	*Icterus galbula*	X1	6/25/2000	Protected
Purple Finch	*Carpodacus purpureus*	X1	6/25/2000	Protected
American Goldfinch	*Spinus tristis*	X1	6/25/2000	Protected

Appendix III

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION RARITY RANKINGS ANIMALS

E Endangered Species are determined by the New York State Department of Environmental Conservation (NYSDEC) to be in imminent danger of extinction or extirpation in New York State, or are federally listed as endangered. All such species are fully protected under New York State ECL 11-0535.

T Threatened Species are determined by the NYSDEC as likely to become endangered within the foreseeable future in New York State, or are federally listed as threatened. All such species are fully protected under the New York State ECL 11-0535.

SC Special Concern Species are those native species which are not yet recognized as endangered or threatened, but for which documented evidence exists relating to their continued welfare in New York State. Legislation passed 4 October 2005 gave Protected Wildlife status under ECL 11-0103 to all species listed as Special Concern. Special Concern species may also be protected under other laws.

PLANTS

The following categories are defined in regulation 6 NYCRR Part 193.3 and apply to New York State Environmental Conservation Law §9-1503. Part (f) of the law reads as follows: "It is a violation for any person, anywhere in the state to pick, pluck, sever, remove, damage by the application of herbicides or defoliants, or carry away, without the consent of the owner, any protected plant. Each protected plant so picked, plucked, severed, removed, damaged or carried away shall constitute a separate violation." Violators of the regulation are subject to fines of $25 per plant illegally taken. The list and contact information for questions about the list may be accessed at the NYSDEC Protected Plants website. This list is updated only every ten (10) years so legal status ranks may not reflect the current Heritage rank.

E Endangered Species: listed species are those with five (5) or fewer extant sites, or fewer than 1,000 individuals, or restricted to fewer than four (4) USGS 7 ½ minute topographical maps, or species listed as endangered by the U. S. Department of Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

T Threatened: listed species are those with six (6) to fewer than twenty (20) extant sites, or 1,000 to fewer than 3,000 individuals, or restricted to not less than four (4) or more than seven (7) USGS 7 ½ minute topographical maps, or listed as threatened by the U.S. Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

R Rare: listed species have twenty (20) to thirty-five (35) extant sites, or 3,000 to 5,000 individuals statewide.

Attachment 3

Burgess Environmental

24 Strathlorne Crescent SW
Calgary, Alberta, T3H 1M8
Telephone: (403) 249 1684
burgessenv@shaw.ca

November 16, 2021

Project #: SUPE-01

Super Law Group, LLC
110 Wall Street, 3rd Floor
New York, New York, 10005

Attn: Reed Super

Dear Mr. Super:

Subject: Hughes Energy Municipal Solid Waste Processing Facility

INTRODUCTION

Background

Super Law Group LLC (SLG) retained Burgess Environmental Ltd. (Burgess) on behalf of Our Children's Earth Foundation to review and comment on the proposed Draft Scoping Document (**Sterling, 2021j**) of the Environmental Impact Statement (EIS) for the Hughes Energy (Hughes) Municipal Solid Waste Processing Facility (Facility) proposed for construction in Roxbury, New York. The New York State Department of Environmental Conservation (NYSDEC) as Lead Agency pursuant to 6 NYCRR Part 617 (collectively known as the State Environmental Quality Review Act (SEQRA)) regulations has determined that the proposed facility has the potential to present significant adverse environmental impacts and has issued a Positive Declaration requiring that a Draft Environmental Impact Statement (DEIS) be prepared.

A Full Environmental Assessment Form, 'Part 1 Project and Setting' was submitted on March 29, 2021 (**Hughes, 2021a**). Based on this submission, New York State Department of Environmental Conservation completed Part 2 – Identification of Potential Project Impacts and Part 3 – Evaluation of the Importance of Impacts, on September 16, 2021 (**NYSDEC, 2021f**). The assessments completed by NYSDEC resulted in a positive declaration that identified the following impacts to be included in the draft scope of an EIS:

- water resources
- noise
- odor
- transportation

In response to this positive declaration, Sterling Environmental Engineering, P.C. (**Sterling, 2021j**), on behalf of Hughes, completed a SEQRA Draft Scoping Document. This draft Scope acknowledges the

impacts identified by NYSDEC (above), but appears to argue the exclusion of each of these impacts, except noise impacts, in the draft EIS Scope.

This letter provides Burgess' comments regarding this draft Scope and supporting materials that describe the proposed Facility and its potential impacts.

Basis of Review

The opinions and supporting information presented in this letter is based on Burgess' review of the documents listed in Table 1.

FACILITY DESCRIPTION

Overview

The Facility is designed to process MSW through a proprietary high-speed compositing system (the Wilson System®) that steam-cleans the MSW and breaks down all organics (e.g., food, paper, and cardboard) within an autoclave to manufacture a unique biomass fiber that is pelletized as a marketable commodity for fuel, power, and heat.

Burgess' understanding of the proposed Hughes Facility and operation is based on review of the facility description provided by the proponent in the air permit application (**Sterling, 2021a**), and consists of the following:

- The processing facilities are located indoors, in a 115,00 ft^2 building that is located on a 39.6 acre property in Roxbury, NY. Trucks access the building by fast opening-closing, automatic doors. The Facility will process up to 176,400 tons of MSW per year to produce up to 105,840 tons per year of pellets for combustion (**Sterling, 2021b, page 8**).
- The MSW is dumped onto a floor where unauthorized wastes are removed by transfer equipment and MSW for batch processing is fed onto a conveyor and into a locked autoclave.
- The MSW is treated using pressured steam and rotation, which separates the MSW wastes streams and render those streams suitable for subsequent processing (fibers).
- An out-feed conveyor system removes large textiles prior to transporting the remainder to a vibrating screen. The vibrating screen separates the cellulose fiber from other components within the processed material.
- Following discharge from the vibrating screen, the oversize materials are taken by conveyor to an electromagnetic system that separates ferrous metals from the remaining components.
- Metals are separated by an electromagnetic system and the remaining components (typically plastics, wood, etc.) are taken via a conveyor to a manual picking station where operators separate and remove the various components.
- The fiber materials are dried by a high speed rotating dryer that dries and mills the fiber. The centrifugal force of the drying removes the majority of any glass, stone, or aggregate entrained in the fiber.

- Angled conveyors transfer the fiber to a series of rotating pelletizing machines (orbit presses) designed to convert the fine fiber particles to pellets, which are transferred into bins or bags for shipping.

Comments – Facility Operations

Fundamental Basis of Facility Operation and Viability

The purpose of the facility is to extract organic fiber that is present in the MSW and convert that fiber into pellets to be burned, presumably for a beneficial purpose. The Facility is intended to recover a commercially viable proportion of combustible pellets from the MSW. Although the basis of this assumption is not fully explained, it is likely based on the operating experience of similar facilities in Ireland and the United Kingdom. As the economic viability of the Facility is clearly tied to its ability to produce combustible fiber pellets, this is an important assumption that warrants further explanation and analysis. An assessment of the composition of the MSW in the designated collection area is warranted, especially when considering that significant effort is imparted in New York State to recover and recycle paper and wood products before they enter the MSW stream. Given the above, the base assumption that 105,840 tons of dried fiber will be recovered each year, which represents 60% of the total MSW by weight (**Sterling, 2021b, page 8**), may not be appropriate.

Hazardous Wastes

Operation of the Facility prohibits unauthorized wastes (friable asbestos-containing material (ACM), mercury-added consumer products, radioactive waste, sludges, infectious and regulated medical waste, construction and demolition debris, and hazardous wastes from being processed (**Sterling, 2021b**). Although the Application states that procedures will be in place to extract these unauthorized wastes from entering the pelletizing process, it is not clear what these procedures are or how effective they will be. Given that the incoming materials will be a random mixture of garbage generated by multiple sources, there is a high likelihood that some of these unauthorized wastes will ultimately be processed. It is difficult to envisage a screening process that will effectively remove unauthorized, hazardous wastes from the MSW given that the Facility processes MSW and over 20 ton batches. The waste screening system appears to be geared towards removing bulky waste items that are not compatible with the process (**Sterling, 2021a**). The process of screening out hazardous and unauthorized wastes should be better described as should the implications to the process and emissions in the event that these hazardous and unauthorized wastes are not captured by the waste screening process.

Process Air Emissions

The predicted air emissions from the Facility process do not appear to make technical sense. The emissions from the MSW steaming, drying, and pelletizing process are assumed to be consistent with that of landfill gas (**Sterling, 2021a, Section 8.3**). Landfill gas is generated by the decay of organic waste under saturated or nearly saturated, anaerobic conditions, which produce (primarily) carbon dioxide and methane. These anaerobic, biological processes will certainly not occur during the steaming, drying, and pelletizing of MSW; hence, there is no reason why the emissions from the process would be similar to the composition of landfill gas. The Facility process operates at 250°F (**Sterling, 2021a, page 3**) and is turbulent, which would be expected to liberate volatile and semi-volatile contaminants (e.g.: paints, solvents, cleaners) that are present in the MSW into the process air emissions stream. These types of contaminants are not typically present in significant concentrations in landfill gas. In my opinion, a more rigorous assessment of process air emissions is required to support the air permit application and EIS.

Air Pollution Prevention Measures

The air emissions from the Facility process will be treated using a biofilter and regenerative thermal oxidizer (RTO), which is assumed to be 98.5% effective in destroying contaminants (**Sterling, 2021a, Section 8.3**). This very high rate of performance should be supported by a detailed evaluation of the constituents of the emissions (see above) as well as performance specifications of the air pollution prevent equipment that will be deployed. The contaminants entrained in the air emissions stream are likely to be varied and are likely to be present in various forms (e.g.: volatiles, water droplets, particulate); hence, applying a constant removal efficiency may not be appropriate. The removal efficiency should be evaluated for each individual contaminant, and appropriate sensitivity analyses should be completed where a range of potential removal efficiencies is anticipated for an individual contaminant.

The Application should also include an assessment of the products of the RTO for each specific contaminant that may be present in the process air emissions stream. For example, oxidation of some compounds, such as chlorinated compounds, may result in harmful oxidation products.

Industrial Wastewater

The Facility is expected to generate 4,800 gallons per day of industrial wastewater generated by the steam cleaning and pellet forming processes (**Hughes, 2021a, page 5**). The information supporting Hughes' Application includes a table summarizing the anticipated contaminants of concern (COCs) in the wastewater stream (**Sterling, 2021d, page 7**). The anticipated composition of the wastewater was reportedly based on the operating experience of other facilities located in Ireland and the United Kingdom (**Sterling, 2021d, page 7**). The COCs listed by Hughes are general indicators of water quality and are not specific compounds or constituents of wastewater. Accordingly, the precise nature of the COCs in the wastewater have not been communicated, which is required to validate the efficacy and compatibility of the receiving water treatment facility. For example, the steaming process could liberate Polyfluoroalkyl Substances (PFAS) in the MSW and these PFAS may not be effectively treated by the receiving facility. A more rigorous assessment of the COCs anticipated in the process wastewater should be provided and should include actual testing of wastewater generated by existing facilities utilizing the Wilson process technology.

It is also possible that the MSW streams in New York will differ from the Ireland and U.K. experience. A thorough assessment of the waste streams, which includes assessment of waste recycling and separation efforts in both regions, is warranted to ensure that the Ireland and U.K. experience is applicable to New York.

ENVIRONMENTAL IMPACT STATEMENT

NYSDEC Positive Declaration

NYSDEC issued a positive declaration on September 16, 2021 that was based on their determination (verbatim) of the following Potential Large Impacts (**NYSDEC, 2021g, Part 3**).

> ***Impact on Water Resources***
>
> *The application indicates that Fanny Brook, a Class A stream (Water Index Number H-240-82-113A) will be impacted by the proposed project. Fanny Brook is classified as a federally-regulated wetland (R3UBH – Riverine, Upper Perennial, Unconsolidated Bottom, Permanently Flooded). The Class A stream is a direct tributary to the Schoharie Reservoir, a drinking water source within the New York*

City watershed. The application indicates that stormwater will be directed to this stream which may cause soil erosion or otherwise create a source of stormwater discharge that may lead to siltation, turbidity, or other degradation of the receiving waterbody. The project proposes an increase in impervious surface near the above-noted waterbodies and over a primary aquifer. The proposed action onsite may affect the water quality onsite or downstream of the proposed action.

Impact on Noise, Odor and Light

The proposed action may result in routine odors for more than one hour per day. The proposed action may result in noise impacts that exceed Part 360 regulation thresholds and do not meet Department standards for a rural setting.

Impact on Transportation

The proposed action may alter the present pattern of movement of people or goods. The application indicates the proposed new facility will process 176,400 tons of municipal solid waste (MSW) per year. Per the application material, MSW will be transported directly to the facility by semi-trailers and other large vehicles; recovered recyclables will be transported to an authorized recyclables handling facility; non-fibrous, non-recyclable material will be transported to an authorized solid waste management facility; fuel pellet products will be transported from the facility for use and sale; water trucks will access the facility; fuel trucks will access the facility; wastewater tankers may access the facility; maintenance trucks will access the facility; and employee vehicles will enter and exit the facility for accommodation of 24-hour shift work in addition to 7am-4pm standard hour employees.

I agree with the NYSDEC that these are Potentially Large Impacts that should be included and addressed in full by the EIS, for the reasons stated in the NYSDEC Positive Declaration.

SEQRA Draft Scoping Document

On October 1, 2021, Sterling (2021j) submitted the Draft Scoping Document for the proposed Hughes Facility, which is intended to serve as a guide to the Draft Environmental Impact Statement (DEIS) to be completed on behalf of the Hughes, for the Facility. I have the following two primary concerns and comments regarding the Draft Scoping Document prepared by Sterling.

EIS Approach

The impacts associated with the Facility (Project Case) should be compared with the impacts associated with the current situation (Baseline Case) throughout the full life cycle of the Facility. The Baseline Case would address MSW being delivered to landfills in the region that would otherwise be delivered to and processed by the Facility. No such comparison appears to be included in the Draft Scoping Document.

Potential Large Impacts

It appears that Hughes intends to exclude all but one of the Large Potential Impacts identified by NYSDEC from the scope of the DEIS. For example, Hughes completed a Traffic Impact Study (**Sterling, 2021c**). Based on the results of that Study, Sterling (**2021j, Section 4.1**) concluded that "*impacts on transportation are not significant and not recommended for inclusion in the EIS scope*". Regarding potential odor impacts, Sterling (**2021j, Section 4.3**) cited the air emissions controls that will be implemented and the need for an air permit to conclude that "*impacts on*

odor are not significant and not recommended for inclusion in the EIS scope". Regarding water resources, cited interactions with the NYSDEC, New York City Department of Environmental Protection, and the U.S. Army Corps of Engineers to conclude that "*impacts to the Class A stream and Federal wetlands are not significant and not recommended for inclusion in the EIS Scope*".

The logic presented by Sterling (**2021j**) in the Draft Scoping Document is flawed for two reasons. First, the studies and interactions cited by Sterling do not constitute complete and comprehensive environmental impact assessment. Second, the studies and interactions referred to by Sterling were known to and available to the NYSDEC at the time that it made its Positive Declaration and identified the Potential Large Impacts (**NYSDEC, 2021g, Part 3**). Hughes should address each of these Large Potential Impacts in the DEIS, and its assessment should be compared to the impacts of the Baseline Case through the full life cycle of the proposed Facility.

Additional EIS SCOPING COMMENTS

Pursuant to the Positive Declaration issued by the NYSDEC, it is necessary for the applicant to submit a proposed scope which contains the items identified in paragraphs 6 NYCRR § 617.8 e(1) through (5) of the SEQR regulations which are detailed below:

(e) The lead agency must provide a final written scope to the project sponsor, all involved agencies and any individual that has expressed an interest in writing to the lead agency within 60 days of its receipt of a draft scope. The final written scope should include:

1) a brief description of the proposed action;
2) the potentially significant adverse impacts identified both in Part 3 of the environmental assessment form and as a result of consultation with the other involved agencies and the public, including an identification of those particular aspect(s) of the environmental setting that may be impacted;
3) the extent and quality of information needed for the preparer to adequately address each impact, including an identification of relevant existing information, and required new information, including the required methodology(ies) for obtaining new information;
4) an initial identification of mitigation measures;
5) the reasonable alternatives to be considered;

In consideration of the above and in addition to the Potential Large Impacts determined by NYSDEC, it is my opinion that the DEIS include assessment of the following aspects.

Air Emissions

The steaming, mixing, screening, and drying processes of the Facility have the potential to liberate a variety of potentially harmful COCs into the air emissions stream. In my opinion. The assessment of air emissions should not be limited to assessment of odors, but should also include the potential health impacts of the air emissions as well as worker safety. Workers may be exposed to fumes from the MSW and process in the enclosed areas of the Facility. The air emissions assessment should be based on detailed monitoring of the existing facilities that utilize the Wilson technology for MSW processing as well as a detailed analysis of the efficacy of the air pollution prevention equipment for all COCs in the air emissions. This should be done on a contaminant specific basis, for each individual contaminant and should include sensitivity analyses and conservative assumptions where there is uncertainty regarding treatment efficacy.

Greenhouse Gas Emissions

The Facility is predicted to emit 18,870 tons per year of carbon dioxide, but that prediction appears to be limited only to the emissions from the Facility and process (**Hughes, 2021a, Page 6**). The Facility will also emit nitrous oxide and methane (**Hughes, 2021a, Page 6**). When these compounds and upstream emissions are included in the quantification, total GHG emissions approach 30,000 tons per year CO_2e (**Sterling, 2021d, Page 2**); however, this total does not include direct and indirect emissions associated with transportation or emissions associated with pellet combustion.

The accounting of Greenhouse Gases (GHGs) should be expanded to include all direct and indirect GHG emissions over the full life cycle of the project, including the transportation of MSW to and from the Facility, the transportation of pellets to market, and the combustion of those pellets. When the quantification of GHGs for the entire project life-cycle is completed, the total GHG emissions should be compared to the Baseline Case, where the MSW is disposed in a municipal landfill, including assessment of landfill gas collection and use, where appropriate. The GHG emissions estimates should be completed in accordance with a standard methodology, such as Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impacts Statements (NYSDEC, 2009), or current methodologies published by the Global Reporting Initiative (GRI).

A complete and thorough accounting of GHG emissions over the full life cycle of the Facility and project is particularly relevant to the Hughes application because reduction in GHG emissions appears to be a key motivator for the Facility. Sterling (**2021d, page 2**) claims that "the Wilson System® technology provides significant and measurable impacts on GHG emissions that can save up to 179,000 metric tons of CO_2e per year". This specific claim should be supported by a detailed life cycle assessment of GHGs from the Facility relative to the Baseline Case, which is disposal of MSW in a local landfill that includes landfill gas collection and use, if and where appropriate.

Water Resources Assessment

As previously stated, I agree with NYSDEC's position that "t*he proposed action onsite may affect the water quality onsite or downstream of the proposed action"* (**NYSDEC, 2021g, Part 3**); however, I do not agree that DEIS for water resources should be limited to assessment of stormwater and/or wetlands disturbance in isolation. This is because of the interrelated aspects of water resources; surface water and groundwater quantity and quality affect wetlands and aquatic ecosystems. In my opinion, it is not reasonable or informative to complete assessment of any one or two of these aspects in isolation from the others.

Water resources are clearly an important issue in the area of the proposed Facility development for the following reasons:

- the footprint of the Facility encroaches on a classified wetland (**Hughes, 2021a, Page 5**)
- the Facility is potentially susceptible to flooding (**NYSDEC, 2021b**)
- the reservoir downstream of the Facility is used for domestic water supply (**NYSDEC, 2021b**)
- operation of the facility will affect surface water and groundwater (**Hughes, 2021a, Page 5**) flow regimes

- stormwater will be discharged to water courses that are classified as Waters of the United States (WOTUS) and support aquatic ecosystems
- the generation of industrial wastewater (**Hughes, 2021a, page 5**) may affect the operations of the receiving facilities

In my opinion and for these reasons, the DEIS should include assessment of the quantity and quality of surface water, the quantity and quality of groundwater, potential impacts to wetlands, potential impacts to aquatic ecosystems, and potential impacts to drinking water supplies. This assessment should include the collection of site-specific data regarding surface water and groundwater quality and quantity, as well as the species of concern in the adjacent creeks and reservoir.

Potential flooding of the Facility appears to be a concern. Accordingly, a site specific analyses of flood potential should be completed to properly quantify that risk. This would be completed in addition to the review of FEMA maps and could be completed using computer programs made available by the U.S. Army Corps of Engineers (e.g.: HEC-RAS and HEC-HMS).

Social and Economic

While it is understood that the SEQRA process is not intended to include a detailed assessment of the social and economic impacts of an action, the DEIS for the potential impacts outlined above should not be limited to assessment of potential human health and ecological impacts. The DEIS should include an assessment of the potential social and economic impacts of the proposed action on the community surrounding the proposed Facility that will be directly affected by its development and operation. In particular, the economic viability of the Facility should be evaluated in the context of the potential variability of organic fiber in the MSW stream given the somewhat optimistic assumption that the MSW contains approximately 60% recoverable fiber, by weight (**Sterling, 2021b, page 8**).

Concerns regarding the Facility's potential impacts to air quality and the potential to adversely affect human health as well as the proper and thorough accounting of GHG emissions were raised in an email from Judith Maguire dated October 26, 2021. I agree with these concerns for the reasons stated in this letter and in Ms. Maguire's email.

CLOSURE

I trust that this letter provides a clear and concise description of my opinions regarding the proposed draft scoping document for the proposed Hughes Energy Municipal Solid Waste Processing Facility. If you have any questions or further information requirements, please contact the undersigned.

Yours sincerely,

BURGESS ENVIRONMENTAL LTD.

Gordon J. Johnson, M.Sc., P.Eng.
President

Table 1: Documents Relied Upon in Burgess' Review of the Hughes MSW Processing Facility Draft Scoping Document

Date	Item	Reference	Item Chain-of-Custody
2021-01-27	Air Facility Permit Application	Sterling Environmental Engineering, P.C., 2021a. Application for State Facility Air Permit.	Prepared for Hughes Energy LLC by Sterling Environmental Engineering P.C. and submitted to the New York State Department of Environmental Conservation on January 27, 2021.
2021-01-27	Part 360 Permit Application	Sterling Environmental Engineering P.C., 2021b. Application for a Solid Waste Management Permit.	Prepared for Hughes Energy LLC by Sterling Environmental Engineering P.C. and submitted to the New York State Department of Environmental Conservation on January 27, 2021.
2021-02-04	NYSDEC NOIA	New York State Department of Environmental Conservation, 2021a. Notice of Incomplete Application Dated February 4, 2021.	Issued to Hughes Energy, LLC by the New York State Department of Environmental Conservation on February 4, 2021.
2021-03-03	NYSDEC NOIA	New York State Department of Environmental Conservation, 2021b. Notice of Incomplete Application Dated March 3, 2021.	Issued to Hughes Energy, LLC by the New York State Department of Environmental Conservation on March 3, 2021.
2021-03-08	NYSDEC NOIA	New York State Department of Environmental Conservation, 2021c. Notice of Incomplete Application Dated March 8, 2021.	Issued to Hughes Energy, LLC by the New York State Department of Environmental Conservation on March 8, 2021.
2021-03-17	Traffic Impact Study	Sterling Environmental Engineering P.C., 2021c.Traffic Impact Study for Hughs Energy, LLC Municipal Solid Waste Processing Facility.	Prepared for Hughes Energy LLC by Sterling Environmental Engineering P.C. and submitted to the New York State Department of Environmental Conservation on March 17, 2021.
2021-03-29	Full Environmental Assessment Form (Parts 1)	Hughes, Dan McSpedon CEO, 2021a. Full Environmental Assessment Form (Part 1).	Submitted by Hughes Energy LLC on March 29, 2021 to the New York State Department of Environmental Conservation.
2021-03-30	Applicant Repsonse to NYSDEC NOIA	Sterling Environmental Engineering P.C., 2021d. Subject: Hughes Energy, LLC Response to Notice of Incomplete Application dated March 3, 2021.	Prepared for Hughes Energy LLC by Sterling Environmental Engineering P.C. and submitted to the New York State Department of Environmental Conservation on March 30, 2021.
2021-04-19	Noise Assessment Report	Sterling Environmental Engineering, P.C., 2021e. Noise Assessment for Hughes Energy, LLC Municipal Solid Waste Processing Facility in Roxbury, NY.	Prepared for Hughes Energy LLC by Sterling Environmental Engineering P.C. and submitted to the New York State Department of Environmental Conservation on April 19, 2021.
2021-04-20	Applicant Response to NYSDEC Request for Supplemental Information	Sterling Environmental Engineering P.C., 2021f. Subject: Supplemental Information as Requested by New York State Department of Environmental Conservation by email dated April 1, 2021.	Prepared for Hughes Energy LLC by Sterling Environmental Engineering P.C. and submitted to the New York State Department of Environmental Conservation on April 20, 2021.
2021-04-22	NYSDEC NOIA	New York State Department of Environmental Conservation, 2021d. Notice of Incomplete Application Dated April 22, 2021.	Issued to Hughes Energy, LLC by the New York State Department of Environmental Conservation on April 22, 2021.
2021-04-30	Wetlands Delineation & Report	Ecological Analysis, LLC, 2021. Wetlands Delineation & Report	Prepared for Hughes Energy, LLC by Ecological Analysis, LLC and submitted to the New York State Department of Environmental Conservation on April 30, 2021.
2021-05-12	Applicant Repsonse to NYSDEC NOIA	Sterling Environmental Engineering P.C., 2021g. Subject: Hughes Energy, LLC Municipal Solid Waste Processing Facility NYSDEC SWMF Permit Application.	Prepared for Hughes Energy LLC by Sterling Environmental Engineering P.C. and submitted to the New York State Department of Environmental Conservation on May 12, 2021.
2021-06-15	NYSDEC NOIA	New York State Department of Environmental Conservation, 2021e. Notice of Incomplete Application Dated June 15, 2021.	Issued to Hughes Energy, LLC by the New York State Department of Environmental Conservation on June 15, 2021.
2021-07-21	Noise Assessment Report	Sterling Environmental Engineering, P.C., 2021h. Noise Assessment for Hughes Energy, LLC Municipal Solid Waste Processing Facility in Roxbury, NY.	Prepared for Hughes Energy, LLC by Sterling Environmental Engineering P.C. and submitted to the New York State Department of Environmental Conservation on July 21, 2021.
2021-07-22	Applicant Repsonse to NYSDEC NOIA	Sterling Environmental Engineering P.C., 2021i. Subject: Hughes Energy, LLC Municipal Solid Waste Processing Facility NYSDEC SWMF Permit Application.	Prepared for Hughes Energy, LLC by Sterling Environmental Engineering P.C. providing supplemental information in response to NYSDEC NOIA dated 2021-06-15 submitted to the New York State Department of Environmental Conservation on July 22, 2021.
2021-09-16	Full Environmental Assessment Form (Parts 2 & 3)	NYSDEC, Kate Kornak, Regional Permit Administrator, 2021f. Full Environmental Assessment Form (Parts 2 & 3).	Completed by the New York State Department of Environmental Conservation on September 16, 2021.
2021-09-20	Positive Declaration with Cover Letter	NYSDEC, 2021g. SEQR Positive Declaration.	Issued to Hughes Energy, LLC by New York State Department of Environmental Conservation on September 20, 2021.
2021-10-01	Draft Scoping Document with Scoping Cover Letter	Sterling Environmental Engineering, P.C., 2021j. State Environmental Quality Review Act Draft Scoping Document.	Prepared for Hughes Energy LLC by Sterling Environmental Engineering P.C. and submitted to the New York State Department of Environmental Conservation on October 1, 2021.
2021-10-11	Response to Positive Declaration from Town of Prattsville	Tal G. Rappleyea, 2021. Subject: Hughes Energy, LLC Municipal Solid Waste Processing Facility SEQRA Positive Declaration EIS Scoping Document.	Letter submitted by Tal G. Rappleyea the attorney for the Town of Prattsville on behalf of the Town of Prattsville to the New York State Department of Environmental Conservation on October 11, 2021.
2021-10-14	DEPs Comments to NYSDEC in Response to Draft Scoping Document	New York City Department of Environmental Protection, 2021. Subject: Hughes Energy, LLC - Draft Scope.	New York State Department of Environmental Conservation submitted comments to the New York State Department of Environmental Conservation in response to the Draft Scoping Document on October 14, 2021
2021-10-15	Department of Transportations Response to Positive Declaration and Draft Scoping Document	New York State Department of Transporation, 2021. Subject: Positive Declaration Hughes Energy, LLC, Greene-Del-Sanitiation Municipal Solids Waste Thermal Treatment Facility.	New York State Department of Transporation submitted comments in a letter to the New York State Department of Environmental Conservation in response to the Draft Scoping Document on October 15, 2021.
2021-10-25	Super Law Group Comments on Draft Scoping Document	Super Law Group, LLC, 2021. Subject: Hughes Energy, LLC - Proposed Solid Waste Management Facility.	Super Law Group, LLC submitted comments in a letter to the New York State Department of Environmental Conservation in response to the Draft Scoping Document on October 25, 2021.
2021-10-26	Public Comments by Maguire	Maguire, 2021. Subject: Formal Public Hearing for Hughes Energy Project.	Letter submitted by Judith Maguire pretaining to the Formal Public Hearing for Hughes Energy Project to the New York State Department of Environmental Conservation on October 26, 2021.
2021-11-01	Public Comments by Scarangello	Scarangello, 2021. Subject:DEC Public Commentes on the Waste Management Plant Construction Proposed by Hughes Energy.	Letter submitted by Joseph Scarangello pretaining to the Formal Public Hearing for Hughes Energy Project to the New York State Department of Environmental Conservation on November 1, 2021.

Attachment 4

Downstream Strategies
Ideas that sustain.

Reed Super
Super Law Group, LLC
110 Wall Street, 3rd Floor
New York, NY 10005

November 16, 2021

Re: Hughes Energy Municipal Solid Waste Processing Facility scope of impacts to be included within the Draft Environmental Impact Statement

Mr. Super,

On behalf of Our Children's Earth Foundation, we have reviewed Hughes Energy's Draft Environmental Impact Statement (DEIS) Scoping Document for its proposed solid waste processing facility in the Town of Roxbury, New York, along with other relevant documents. In this letter, we summarize our initial findings related to air emission topics that deserve greater analysis, explanation, or scrutiny in the DEIS.

The proposed facility will process up to 176,400 tons per year of municipal solid waste (MSW) and produce a pelletized fuel using rapid steam composting and mechanical processing.

The facility itself will emit pollutants to the air from two propane steam boilers, a biofilter for odor treatment, and a regenerative thermal oxidizer.

Also, as detailed below, the facility itself, as well as the diversion of MSW from the landfill and the generation and use of pellets, will impact the generation of greenhouse gases (GHGs) through several stages of the MSW collection, processing, and disposal process.

304.292.2450

downstreamstrategies.com

MORGANTOWN
911 Greenbag Road
Morgantown, WV 26508

LEWISBURG
1046 Washington Street, East, Suite 15
Lewisburg, WV 24901

DAVIS
10624 Appalachian Highway
Davis, WV 26260

BERKELEY SPRINGS
PO Box 706
Berkeley Springs, WV 25411

Greenhouse gas emissions

New York's Climate Leadership and Community Protection Act requires that agency decisions be consistent with statewide GHG emission limits, which are designed to gradually reduce emissions over the next 30 years. The applicant has failed to account for several GHG emission sources directly and indirectly related to the proposed solid waste processing facility and has failed to clearly define the overall effect this facility would have on GHG emissions.

We evaluated materials from the New York State Department of Environmental Conservation (NYSDEC), Hughes, and Sterling Environmental Engineering to ascertain whether all required data has been gathered, and whether a full life cycle analysis (LCA) has been completed to document the overall change to GHG emissions as a result of operating the facility.

The facility's impacts on GHG emissions would be calculated as the difference in emissions between two scenarios:

1. **The Landfill Scenario**. The first scenario represents the current handling of MSW. It would begin at curbside pickup of the MSW and include all relevant trucking emissions, as well as emissions at the landfill.
2. **The Pellet Scenario**. The second scenario accounts for the construction of the proposed facility. It would also begin at curbside pickup of the MSW and would include trucking emissions based on the new configuration of trucking routes. It would end at the point that the pellets are combusted. It would also include any emissions at the landfill generated by the disposal of processing residue and separated materials from the facility.

Many components of a full LCA are missing or incomplete. Government agencies and other entities have published numerous guidance documents and methodologies to help with the proper calculation of changes in GHG emissions. The following documents are just two examples that the DEIS may reference:

- **NYSDEC GHG EIS guidance.** This 2009 document is titled "Guide for Assessing Energy Use and Greenhouse Gas Emissions in an Environmental Impact Statement."
- **Council on Environmental Quality GHG guidance**. This 2016 document is titled "Federal Greenhouse Gas Accounting and Reporting Guidance."[1]

In both the Landfill Scenario and the Pellet Scenario, transportation-related GHG emissions are incompletely calculated. While these emissions are discussed in varying levels of detail in Sterling's letters to NYSDEC dated 3/31/21 and 4/20/21, they are never fully calculated. Differences between the two scenarios are therefore not fully assessed. The two documents listed above (the NYSDEC GHG EIS guidance document and the Council on Environmental Quality GHG guidance document), or similar documents or methods, should be used to guide these calculations.

In the Landfill Scenario, landfill emissions are not calculated for the MSW currently sent to the landfill. These emissions are discussed, but not calculated, in Sterling's letter to NYSDEC dated 3/31/21. In addition to the two documents listed above (the NYSDEC GHG EIS guidance document and the Council on Environmental Quality GHG guidance document), the DEIS may also reference MSW-specific documents such as the U.S. Environmental Protection Agency's 2004 document titled "Climate Leaders Greenhouse Gas Inventory Protocol, Direct Emissions from Municipal Solid Waste Landfilling."

[1] https://www.sustainability.gov/pdfs/federal_ghg%20accounting_reporting-guidance.pdf

In the Pellet Scenario:

- Upstream GHG emissions associated with grid-sourced electricity consumed at the proposed facility are not calculated. To estimate these emissions, the NYSDEC GHG EIS guidance document recommends the use of energy modeling software to estimate energy consumption at the facility, although the applicant may have better methods of estimating electricity demand based on the unique characteristics of the facility. In either case, the NYSDEC GHG EIS guidance document states that the total projected purchased electricity should be multiplied by an emissions factor, which could be based on the statewide average, adjusted based on data from the local load-serving entity's environmental disclosure label.[2]
- GHG emissions are not calculated for onsite equipment that may be used for waste handling at the proposed facility, such as loaders. The NYSDEC GHG EIS guidance document recommends estimating fuel consumption and then utilizing the most current carbon dioxide emissions coefficients[3] as published by the U.S. Energy Information Administration (EIA).
- GHG emissions are not calculated for the transport of processing residue to the landfill or for the transport of other separated materials, such as metals and plastics, to their final destinations. As above, fuel consumption estimates paired with emissions coefficients from the EIA can be used to estimate these emissions.
- Also uncalculated are landfill emissions that would be generated by materials sent to landfill from the facility, including processing residue and separated materials. As in the landfill scenario, the NYSDEC GHG EIS guidance document recommends utilizing "site specific data" (from Seneca Meadows Landfill, in this instance). The DEIS may also reference MSW-specific documents such as the U.S. Environmental Protection Agency's 2004 document titled "Climate Leaders Greenhouse Gas Inventory Protocol, Direct Emissions from Municipal Solid Waste Landfilling."
- Transportation emissions of pellet products away from site, up to and including ocean transport to overseas customers, is not calculated. As above, fuel consumption estimates paired with emissions coefficients from the EIA can be used to estimate these emissions. In addition, to estimate emissions from ocean-going vessels, Hughes may employ the Clean Cargo Working Group's emissions estimation methodology[4] along with the most recent trade lane emission factor estimates,[5] also published by the Clean Cargo Working Group on an annual basis.
- GHG emissions associated with the combustion of fuel pellets, and a comparison to the GHG emissions associated with the fuel(s) displaced by pellets, are not calculated. Presumably, Hughes Energy has conducted tests on their own product and collected the data necessary to report these emissions. However, these calculations should also be informed by the type of fuel(s) displaced by the pellets. For example, if the pellets substitute for coal or other fossil fuels, the change in GHG emissions will be different than if the pellets substitute for biomass fuels.

These missing or incomplete components of a full LCA result in an inability to accurately calculate the full impact of the facility on GHGs emissions and should be required in the DEIS.

[2] https://www3.dps.ny.gov/W/PSCWeb.nsf/All/80AF99D08DD828EA85258228005172A9?OpenDocument
[3] https://www.eia.gov/environment/emissions/co2_vol_mass.php
[4] https://www.bsr.org/reports/BSR_CCWG_Carbon_Emissions_Methodology_2015.pdf
[5] https://safety4sea.com/wp-content/uploads/2020/07/BSR-Clean-Cargo-Emissions-Report-2020.pdf

An additional element of uncertainty arises from the applicant's overall characterization of landfill gas emissions. In its response letter to the NYSDEC dated 3/30/21, rather than quantifying avoided landfill gas emissions with attention given to the specific landfill itself, Sterling instead states that "diverting...from landfill disposal…[eliminates] the potential generation and release of methane." Missing from this analysis is acknowledgement that the current receiving landfill (Seneca Meadows Landfill in Waterloo, New York) is engaged in methane capture.[6] This reduces the GHG impact of the landfill and merits investigation because landfill methane capture has the potential to reduce total methane emissions by 60-90%.[7] The NYSDEC GHG EIS guidance for estimating landfill emissions is crafted with this exact issue in mind: the recommended model includes numerous site-specific parameters, including several that account for onsite methane capture and combustion.

Lastly, it is unclear to what extent the applicant has given attention to the actual composition of the MSW stream to be processed at the proposed facility. Given that, to date, Hughes has operated entirely within the United Kingdom, it is worth inquiring as to whether Hughes has accounted for potential differences between waste processed at their current facilities and the waste generated in New York that would be processed at the proposed facility. A cursory examination of studies that, on a national level, characterize MSW streams for these countries suggests that there are measurable differences between MSW streams in the United Kingdom[8] and the United States.[9] The exact impact of these differences is a subject worthy of inclusion in the DEIS.

Other emissions

Potential toxic air emissions from certain materials in the waste stream

According to the air permit application, certain materials will not be accepted, including, for example, mercury-added consumer products and radioactive waste. Other than an explanation that the floor of the reception area allows for easy removal of unauthorized wastes, the application does not provide details on how materials with potential toxic air emissions will be prevented from entering the waste stream in the first place, nor does it provide specific information about how such waste will be identified and removed if it makes it to the facility.

Also, certain plastics such as polyvinyl chloride (PVC) may generate toxic air emissions, including dioxin, when burned under certain conditions. In this facility, the entire MSW stream, including plastics, will be heated in the autoclave before the processed waste is screened and items such as plastics and metals are removed.

The DEIS should include a more detailed discussion and analysis of any potential toxic air emissions generated in the autoclave, along with measures taken to ensure that such emissions, if generated, are not released to the air.

[6] https://www.naturalcapitalpartners.com/projects/project/seneca-meadows-landfill-gas
[7] https://www.epa.gov/lmop/benefits-landfill-gas-energy-projects
[8] https://wrap.org.uk/resources/report/quantifying-composition-municipal-waste
[9] https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials

Acrylonitrile emissions

Of all the highly toxic air contaminants assessed in the facility's air permit application, acrylonitrile is the only one for which the emission rate potential, potential to emit, and estimated actual emissions all exceed the mass emission limit. Further, of all the pollutants included in the application's Allowable Emissions Analysis (Section 8.4 of the air permit application), acrylonitrile is the pollutant for which the modeled concentration most closely approaches the allowable threshold from NYSDEC's DAR-1 Guidelines for the Evaluation and Control of Ambient Air Contaminants Under 6NYCRR Part 212.

More specifically, the DAR-1 Annual Guideline Concentration for acrylonitrile is 1.5×10^{-2} µg/m^3, and the modeled maximum annual concentration, at maximum impact, is 0.865×10^{-2} µg/m^3—or more than half of the guideline concentration.

Because the modeled concentration is so close to the guideline concentration, the DEIS should include a sensitivity analysis to assess the likelihood of acrylonitrile exceeding the guideline concentration using other reasonable model inputs and emission factors that capture (1) model input variations among the parameters, (2) model input variations among the stacks, (3) variations among emission factor assumptions, and (4) variations in MSW composition, as detailed below.

Model input variations among the parameters. Table 4 of the facility's air permit application lists numerous AERSCREEN model input parameters that are consistent for all modeled emissions. A sensitivity analysis should consider whether, for example, changes to the minimum air speed, for which the default value was used, impact the modeled maximum annual acrylonitrile concentration.

Model input variations among the stacks. The sensitivity analysis should also consider whether certain inputs in Table 4 of the facility's air permit application—such as the stack gas exit flow rate and the stack gas temperature—vary in meaningful ways among the four process stacks within the single wind shield chimney (two steam boilers, biofilter, and regenerative thermal oxidizer).

Variations among emission factor assumptions. The sensitivity analysis should also consider whether the most accurate available emission factors, or, if necessary, the most conservative emission factors, are used. The air permit application states:

> "Emission Factors for the stationary combustion installations (boiler, dryer, and RTO) were derived from AP-42, Compilation of Air Pollutant Emissions Factors, Section 1.5 for Liquefied Petroleum Gas Combustion. Emission Factors for process emissions of VOCs were obtained from the Facility technology provider as actual emissions after treatment by the RTO. Process Emissions are assumed to have a comparable composition as landfill gas from the decomposition of MSW; therefore, emission factors for organic compounds for process emissions were derived from AP-42 Section 2.4 for Municipal Solid Waste Landfill Gas." (p. 8)

This description must be clarified in the DEIS, because it seems to be contradictory. On the one hand, it states that emission factors for process emissions of VOCs are based on actual emissions, but on the other hand it states that process emissions for organic compounds come from AP-42. This must be reconciled and explained more fully in the DEIS. Ideally, emission factors used in the DEIS would consider those measured in similar facilities in the United Kingdom as well as those in AP-42, and best professional judgement would be used to select the most appropriate emission factors for the analysis.

Variations in MSW composition. The most appropriate emission factors, whether from measurements at similar facilities, AP-42, or another source, should be informed by the composition of the MSW for which the emission factor was derived. As discussed above, our cursory examination of studies suggests that there are measurable differences between MSW streams in the United Kingdom and the United States. There may also be differences between the MSW streams anticipated at the Hughes facility and those from which the AP-42 emission factors were generated.

For all four of the potential variations listed above, the DEIS should document whether these variations would meaningfully impact the final model results or if conservative assumptions were used. If conservative assumptions were not used, then a sensitivity analysis should be required in the DEIS to identify the likelihood that the acrylonitrile threshold (or the threshold for any other parameter) may be exceeded.

EPA determination regarding whether the fuel pellets are a solid waste

In a 4/11/18 email to Hughes, a NYSDEC representative suggests that Hughes seek a determination from the U.S. Environmental Protection Agency regarding whether the fuel pellets are a solid waste, in which case the unit burning the pellets would be considered incineration. More stringent regulatory and permitting requirements would ensue. The DEIS should include updated information on whether such a determination has been requested, and, if so, the agency's response should also be included.

We will continue to review documents in the record and may supplement this letter later at a later date as more information is available.

Sincerely,

Evan Hansen
Evan Fedorko

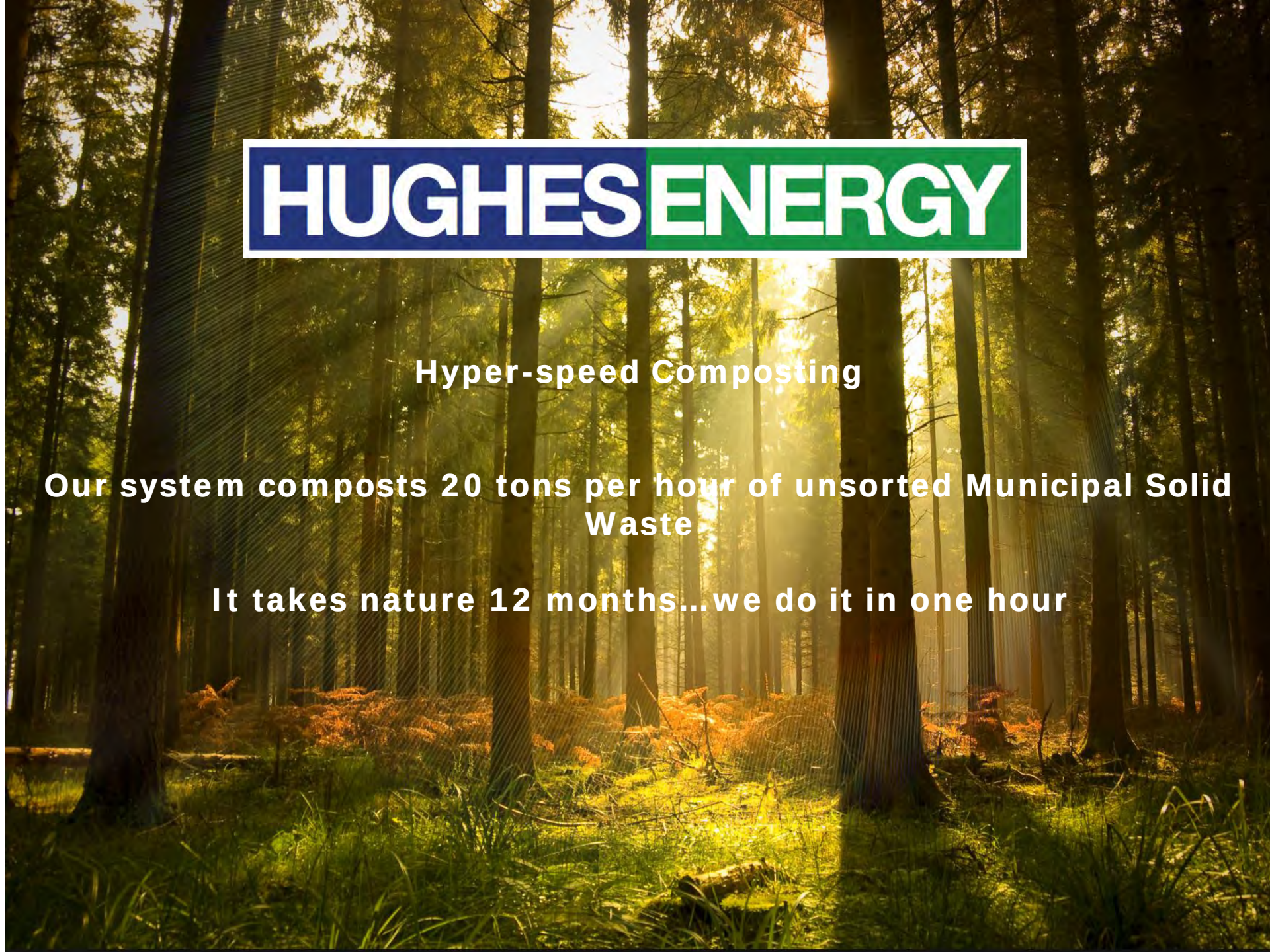
Attachment 5

HUGHES ENERGY

NY DEC Region 4
Introduction

Sept, 2019

NEW YORK
STATE OF
OPPORTUNITY.


HUGHES ENERGY
Hyper-speed Composting
Our system composts 20 tons per hour of unsorted Municipal Solid Waste
It takes nature 12 months…we do it in one hour

Summary:
Supporting Next Generation Growth

- Hughes Energy has a proprietary high-speed **composting** system which converts 20 tons per hour of Municipal Solid Waste into a green product for sale
- The technology is a world-leading system developed in 2001 in the UK (the Wilson System) and has been deployed in UK and Ireland at 5 sites
- The system input is unsorted Municipal Solid Waste (MSW); the system output is a unique biomass fiber which has many valuable uses.
- Only organic material is processed (food, paper, cardboard, grasses, sewage cake). Each plant offsets up to 175,000 tons of CO2 per year (10,000 homes)
- Looking for direction from DEC Region 4 to proceed with projects in Greene County
- See **www.hughesenergygroup.com**

Hughes Energy Technology

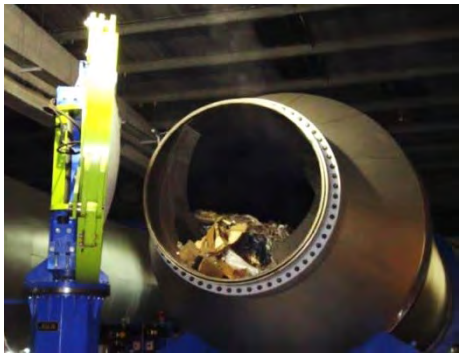
- Our hyper-speed composting system **does not** burn, melt or thermochemically transform garbage – we essentially steam-clean the waste, breaking down all organics (food, paper, cardboard) into a fiber which we sell for Green Power Generation

- In Europe, the fiber our system produces is considered to never have been waste – a unique designation.

- System highly efficient, recycling water and steam

- Virtually NO emissions to atmosphere – only standard natural-gas boiler emissions and some steam

The Wilson System®



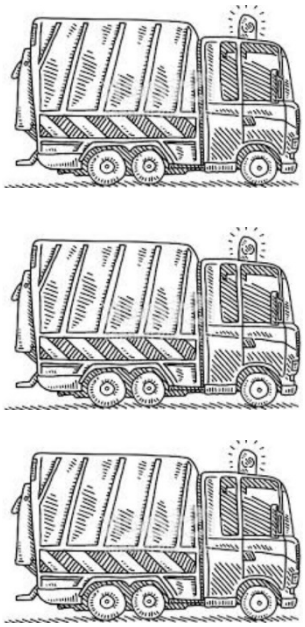
Autoclave vessel

MSW before autoclaving

MSW post-autoclaving

HUGHES ENERGY

Waste Process Today – Transfer Station



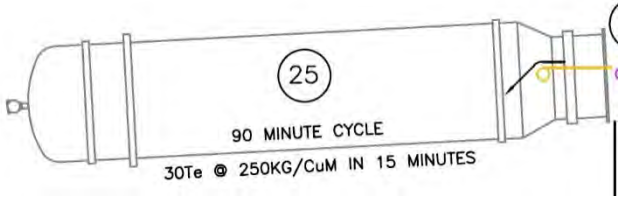
Curbside Pickup

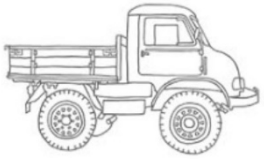
Transfer Station

55-65% To Landfill
(significant cost)

HUGHESENERGY

Waste Process with Hughes' Technology





5-7 %
into Landfill

Delivery

Hyper-speed Compost Station – At the Transfer Station

Fiber Sold

HUGHESENERGY

Wilson Fibre™

Biogenic Fiber

- Perfect replacement for wood pellets for biomass power plants
- As a homogenous material, best feedstock for anaerobic processes, gasification, increased return for pyrolysis (no pre-shred)
- Torrefied Wilson Fibre patented as Wilson BioCoal
- Pressed into bricks and combusted – like peat or logs
- Made into Biofuel or Biochemicals

HUGHESENERGY

Environmental Impact

- Emissions to Air:
  1. Steam Raising Boilers – excess heat. Exceeds all standards for UK Clean Air Act.
  2. Negative Pressure system in the building will contain odor from MSW on tipping floor
  3. Venting post autoclave within the building goes through a thorough odor abatement process
- Emissions to Water:
  1. Water softener cleaning
  2. Daily flushing of interior of boilers
  3. Water is cleaned and cooled. In EU and UK, considered gray water which can be released to storm drains
- Emissions to Land: 5% of non-treatable incoming waste

Hughes Energy Partners

- Construction Management: SKANSKA ($21B global construction firm)
- Architecture, Design Engineers: H2M
- EPC and Operation: Ameresco ($1B company which operates green energy facilities)
- Insurance: Lloyds of London underwriter

SKANSKA

H 2 M architects + engineers
practical approach. creative results.

LLOYD'S
LLOYD'S OF LONDON

AMERESCO
Green • Clean • Sustainable

HUGHESENERGY

Infrastructure Requirements

1. A Transfer station with permit to process 150,000 tons of MSW per year
2. 3 acres (1.6 hectares)
3. Contract for 150,000 tons for 10-15 years
4. 80,000 ft2 building (8,000 m2) (steel frame, clad construction) The site itself must have:
    - 24/7 access and permit to operate 24/7/365
    - Natural gas line
    - Electricity interconnect to grid - 1000KW per hour demand from system
    - Water source capable of providing 400 gallons per hour
    - Sewer connection or process to drain waste water (gray – water designation)

Questions

- Process for permitting a Wilson Steam Composting Facility in Region 4 at the Green-Del Sanitation and Transfer Station
- Suggestions for next steps
- Next Meeting Date

Contact us:

Dane McSpedon
+1 914 299 5032

dane.mcspedon@hughesenergygroup.com

see: www.hughesenergygroup.com

DEC Albany

- April 2018 – Met in Albany with:
  - Richard Clarkson (Director, Bureau of Solid Waste Management
  - Mark Lanzafame, P.E (Air Emissions)
  - George Sweikert (Air Emissions, Region 3)
  - NYSERDA
- May 2019 – Met in New Paltz with Region 3 team about projects we are working on in Rockland and Orange Counties

HUGHESENERGY

Hughes Energy Composting Plant – What we need from each side to proceed:

	Green-Del	Hughes Energy
	Get the Permit Changed, secure waste contracts	
Consulting Agreement	To be agreed depending on your availability	
Land	Sell land to Hughes	Green Del
Waste Contracts	**Get contracts for up to 150,000 tons per year**	
Terms		
10 year contracts		
10% per ton below current tipping fees		
BUT minimum gate fee at site $75 per ton		
Prices are DELIVERED TO SITE		
Can review pricing every 5 years		
Permit	**Amend Part 360 with NY DEC**	
400 tons per day of MSW		
Operating Hours of site	Get approvals from towns for 24/7 operation	
Site requirements		
Water connections 400 gph	**Is this available or can we get it?**	
Electricity connection 1000 kw		
Approval for natural gas or Oil storage on site to run boilers		
30-40 trucks per day		
Approval for disposal of waste water - sewer water		

HUGHESENERGY

Hughes Energy – Build a Hyper Speed Composting Plant at the Green Del Transfer Station

Market-Disruptive Proprietary Technology

- Hughes Energy Group is installing plants using a developed proprietary disruptive waste composting technology ~ **The Wilson System ™ (TWS)** ~ which converts household garbage into a saleable fiber (Wilson Fibre ™, TWF).
- TWF can be utilized to generate electricity – active European market in place
- 4 commercial deployments in Europe; negotiating with 4 US sites for initial US plants

Immediate Opportunity to Build

Plant ready for construction in Green Del Transfer Station

Hughes Energy has financing secured to build and operate a facility to compost the food, paper and cardboard in MSW. 20 tons per hour, 20 hours per day, 360 days per year.

- NY DEC is excited about the technology – they want a permit modification from existing Part 360 licensed transfer stations.
- Hughes will see the fiber we produce to European customers – already secured
- In order to proceed, we need Green Del to: secure 75,000 to 150,000 tons per year of MSW for 10 years; get the Part 360 permit amendment from NYS DEC to process 400 tons per day of MSW; get approval from the towns so that we can build the 100,000 ft2 building on-site

Hughes Energy Team

Brendan Hughes – Founder, majority shareholder. Owns a successful construction contractor in NY. 12 years owner of TWS
Dane McSpedon - CEO, Principal. 25 years experience in driving high-tech businesses (Honeywell, IBM, De La Rue). Engaged 5 years w/ Hughes Energy (HEG)
Frank DarConte - Director of Program Management. 35 years engineer/design/build infrastructure projects. 2 years w/ HEG
Kevin Smith - Director of Engineering. 25 years experience in hardware and software engineering. 2 years with HEG.
Jatish Shah - CFO. 25 years in various financial executive roles. Experience in start-up and high growth tech. 4 years w/ HEG
Bari Zahn - General Counsel. Experienced tax attorney and business advisor with prestigious law firms. 3 years w/ HEG
Sheila Hughes – Marketing Director. 8 years experience with the Wilson Systems deployed in Europe.

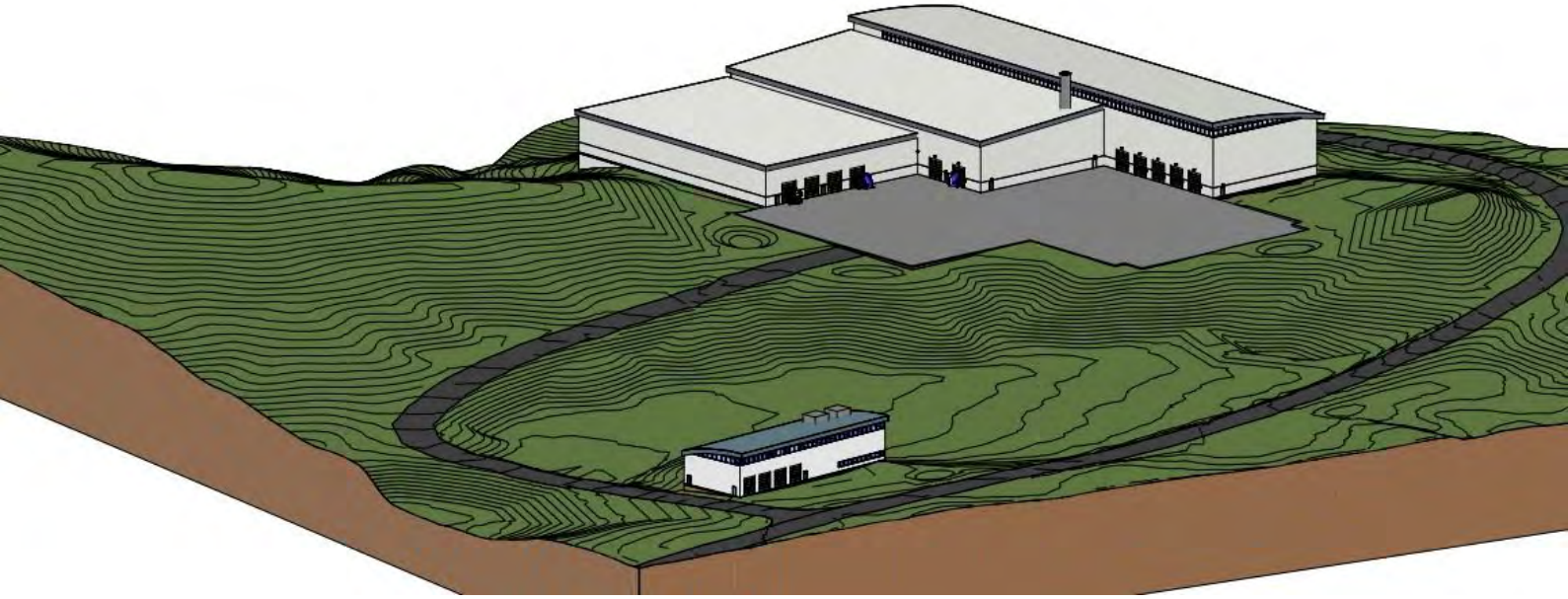
Non-Executive Directors:
Tom Wilson – inventor, the Wilson System
Pete Metcalf – Chief Chemist, Wilson Bio-Chemical Ltd

High Level Overview

New full-time jobs created	***50 jobs – half engineers***
Investment by Hughes	***$85,000,000***
MSW processed per day	***400 tons***
Permits to Process MSW	***Need to change permit to accept 400 tons of MSW per day***
Waste Contracts	***Need binding Letters of Intent for up to 150,000 tons per year***
Construction to revenue less than 18 months.	

For additional information please contact Dane McSpedon
dane.mcspedon@hughesenergygroup.com *Tel: +1 914 299 5032*

HUGHES ENERGY



GREEN DEL
MSW PROCESSING FACILITY

DELAWARE COUNTY, NEW YORK

Hughes Energy, LLC held two public meetings to solicit comments and questions from the public. The first meeting was held on August 19, 2021 in Prattsville and the second meeting was held on August 27, 2021 in Roxbury. Received questi**ons** and responses are summarized in this document.

Key documents relating to the proposed project are stored for public viewing at the Roxbury Town Hall, 53690 Route 30, Roxbury, New York 12474 and the Prattsville Town Hall, 14517 Main St, Prattsville, New York 12468

You can also download the documents at
www.hughesenergygroup.com/projects

Questions and comments can continue to be submitted to:
greenedelfacility@hughesenergygroup.com

Public Meeting Questions/Comments

1. Project Permitting
    a. What specific permits are being applied for and what is the SEQRA status?
    b. Where can project permit documents be accessed for public review?
2. Facility Traffic
    a. General concern about quantity and type of traffic.
    b. Will trucks queue onto public roads?
    c. Who will maintain the condition of roadways that may be impacted by increased truck traffic?
3. Facility Operations
    a. How much waste will be received and how much of the waste will be produced into fiber versus material removed for recycling and material for landfill disposal?
    b. What is the source of waste? How are hazardous materials prevented from being received? Will hazardous materials end up in the wastewater?
    c. What if there is a fire and/or explosion? Who will respond?
4. Location
    a. General concern about development in proximity to the Schoharie River and Reservoir and not near a metropolitan area. Several comments were supportive of the technology and concept, but concerned about the location in proximity to a drinking water supply.
    b. What is the height of the building?
    c. Why did the Applicant abandon plans for a facility located in Rockland County?
5. Community Impacts
    a. How is noise and odor monitored?
    b. What is the water source? Will there be an impact on local aquifer?
6. Community Benefit
    a. What will the facility provide to the community?
        i. What is the tax benefit?
        ii. Will facility employees be hired locally? What kind of jobs and what education?
    b. Will public drop-off be available to local residents?
    c. Will there be a decrease in property values for surrounding residences?

Responses to Questions/Comments

1. Project Permitting
    a. The project is applying for the following permits and approvals:
        i. NYSDEC Solid Waste Management Facility Permit
        ii. NYSDEC State Facility Air Permit
        iii. NYSDEC Construction Stormwater General Permit
        iv. NYSDEC Stream Disturbance
        v. NYCDEP Watershed Protection Review
        vi. USACE Wetland Disturbance
        vii. NYSDOT Highway Work Permit
        viii. Town of Roxbury Planning Board Site Plan
        ix. Town of Prattsville Sewer Connection

        The project submitted a Site Plan Application to the Town of Roxbury Planning Board in August 2020 that initiated the State Environmental Quality Review Act (SEQRA) process. The NYSDEC requested to be the Lead Agency for the environmental review. To date, the project has been providing additional information as requested by NYSDEC, and the review is ongoing. If NYSDEC issues a "Negative Declaration", the project is determined to not have a potential adverse impact and the various individual permits and approvals can continue their specific review/approval process. If NYSDEC issues a "Positive Declaration", one or more potential adverse impacts are identified that require further study and review through an Environmental Impact Statement. A decision has not yet been made by any agency regarding the approval of this project.

    b. The project permit documents can be viewed at the following locations. Copies of the public meeting presentations can be viewed at the electronic repository:
        i. Roxbury Town Hall
        ii. Prattsville Town Hall
        iii. Electronically for download at www.hughesenergy.com/projects

2. Facility Traffic
    a. Projected traffic is based on anticipated employment levels and the sizes of transport vehicles delivering material to and from the facility. A Traffic Impact Study was performed and submitted to NYSDEC and NYSDOT that is available for public review at the document repositories and includes the following breakdown:

Employee Vehicles	44 cars/day
MSW Delivery	26 semi-trailer/day
Fuel Pellet Distribution	16 semi-trailer/day
Recyclable and Residue Removal	14 roll-off truck/day
Fuel Delivery	1 tanker/day
Total Daily Vehicle Count	101 vehicles/day

    The traffic impact review is based on the peak design hour, which is up to 22 vehicles entering or leaving the facility in a given hour. This quantity is within the capacity of the existing road network. The exact quantity of traffic will be a factor of truck size delivering material to the Facility.

    b. Trucks will not queue onto Route 23. The facility access road provides 900 feet for queuing, if necessary, completely off the public roadway.

    c. The traffic impact study indicates that anticipated traffic is within the capacity of the existing road network. Residents are encouraged to contact their local governments for topics of consideration in specific community agreements.

3. Facility Operations

    a. The Facility is designed to receive 176,400 tons of municipal solid waste per year. This corresponds to a target daily reception of 565 tons based on 312 receiving days per year. Approximately 60% will be converted to fiber, up to 25% will be extracted as sanitized recyclables, and up to 15% will be inert material that may need to be landfilled.

    b. The source of waste will be municipal solid waste from a target service area within 50 miles of the Facility. Receipt of hazardous materials is prevented in the same manner as local transfer stations through education and planning. The evaluation of waste begins with the contracted haulers at the source of collection. Waste haulers will not pick up or transfer items considered hazardous household waste, oil, gasoline, paint, batteries, compressed gas cylinders, large appliances, or furniture. At the Facility, signs will be posted at the scale house of prohibited items, and suspicious loads are subject to random inspection before unloading. The scale is equipped with radiation detectors to screen all incoming loads. Facility personnel are trained in the recognition, management, and reporting procedures for prohibited wastes should unauthorized waste be inadvertently delivered to the Facility.

        The waste that is received is delivered in covered vehicles and handled indoors; therefore, there is little potential for leachate (i.e., liquid) generation. Any liquids in the waste are removed through the autoclave and drying process and do not become part of the wastewater stream that is discharged to the sanitary sewer. The Facility wastewater is generated from cleaning and maintenance of the steam generating equipment and is primary dissolved solids.

    c. The Facility must comply with state code requirements for fire protection. The Facility will include a fire suppression system with water supplied by an onsite storage tank. Sessions will be held with first responders to familiarize them with the Facility, site layout, and fire controls.

4. Location

    a. The project selected this location for several reasons including the parcel availability, existing permitted transfer station, and regional demand for waste management options. The NY Climate Leadership and Community Protection Act (CLCPA) along with decreasing landfill capacity and increasing disposal costs have created an environment of increased demand for alternative waste management options.

        Several comments were received regarding the proximity of the facility the Schoharie River and Reservoir. The project must comply with watershed protection regulations under jurisdiction of the NYCDEP in addition to all other permits and approvals. The attached site location figure is provided to show the distance between the Facility and the Schoharie River and Reservoir.

    b. The process building roofline will be 60 feet above the final ground surface. Site grading will be performed on the property that will result in the roofline being no more than 30 feet above the existing ground surface. Landscaping in the form of berms and trees will be used to screen the Facility to the greatest extent possible. A Visual Impact Study was prepared for review by NYSDEC that is available for public review at the document repositories.

    c. Other communities, such as Rockland County, have issued solicitations for alternative waste management options. The purpose of these solicitations is to evaluate options with the intent of ultimately issuing a formal request for proposals. Hughes Energy responded to a “Request for Expressions of Interest” issued by Rockland County. This process is ongoing and Rockland County has not yet issued a formal request for proposal for companies to respond to. Hughes Energy is actively pursuing locations in addition to the Roxbury location.

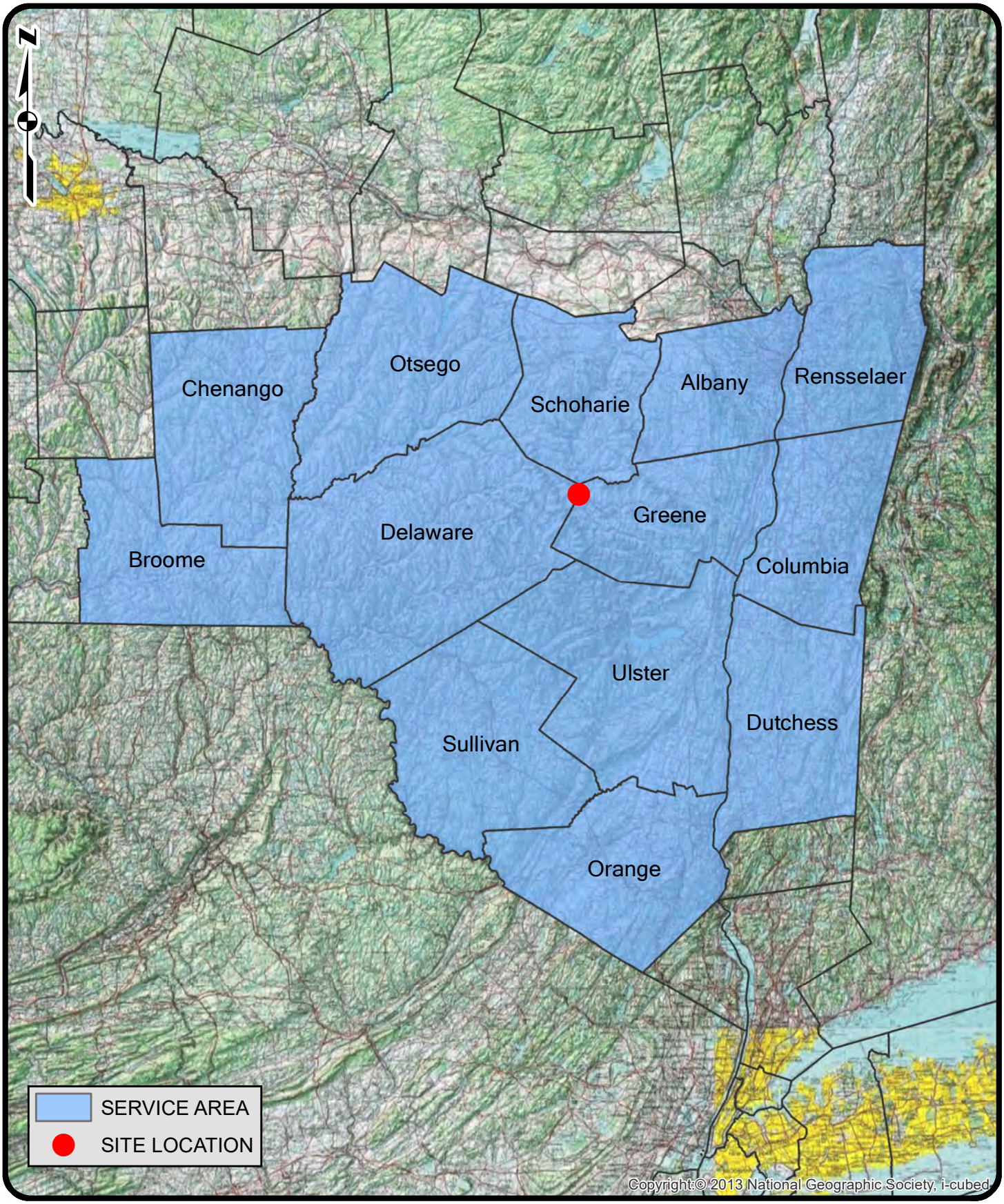
5. Community Impacts

    a. A Noise Assessment has been prepared for NYSDEC review and is available at the document repositories. The Facility must comply with established noise limits at the property line, and compliance is determined through noise monitoring under jurisdiction of NYSDEC. For odors, the facility will be maintained under negative air pressure to prevent odors from migrating out from the facility. All internal air within the facility is passed through an odor control system prior to exhaust and is subject to an air permit.

b. The primary water source will be through onsite water wells similar to surrounding properties. Water is intended to be pumped at a low rate into a storage tank such that peak water demand is satisfied by stored water and not by increased pumping. Additional water conservation measures will decrease demand for groundwater use. These measures include recycling steam for reuse in the process and rainwater harvesting.

6. Community Benefit
    a. Hughes is committed to be a good neighbor to the local community and will pay an estimated $700,000 in local taxes and over $2 Million in payroll plus additional investments as agreed with the local towns. There are estimated to be over 200 construction jobs and the facility is anticipated to have 50 full-time positions. The intent is for all employees to come from the local area. Approximately 34 positions will include labor and operations (e.g., forklift operators, systems operators, laborers, mechanics). Approximately 16 positions will include engineers and supervisors. All full-time employees will be eligible for benefit packages and training for professional advancement.

       Hughes plans to set up a community advisory committee including local officials, local residents, and employees at the Facility to provide feedback on operations. This will include an annual report on Facility operations, production, and truck traffic.
    b. The opportunity to incorporate a public drop off service into the Facility design will be reviewed with the project team.
    c. Property values are dependent on a number of factors. The Facility itself will be a clean and modern looking manufacturing style building.



S:\Sterling\Projects\2020 Projects\Hughes Energy - 2020-14\Drawings-Maps-Figures\GIS\2020-14004G- FIG 1 SERVICE AREA.mxd\

STERLING

Sterling Environmental Engineering, P.C.

24 Wade Road • Latham, New York 12110

SERVICE AREA MAP

HUGHES ENERGY, LLC.

TAX PARCEL 113.-25-1

TOWN OF ROXBURY DELAWARE CO., NY

PROJ.NO. 2020-14	DATE: 1/6/2021	SCALE: 1 " = 120,000 '	DWG.NO. 2020-14004G	FIGURE 3

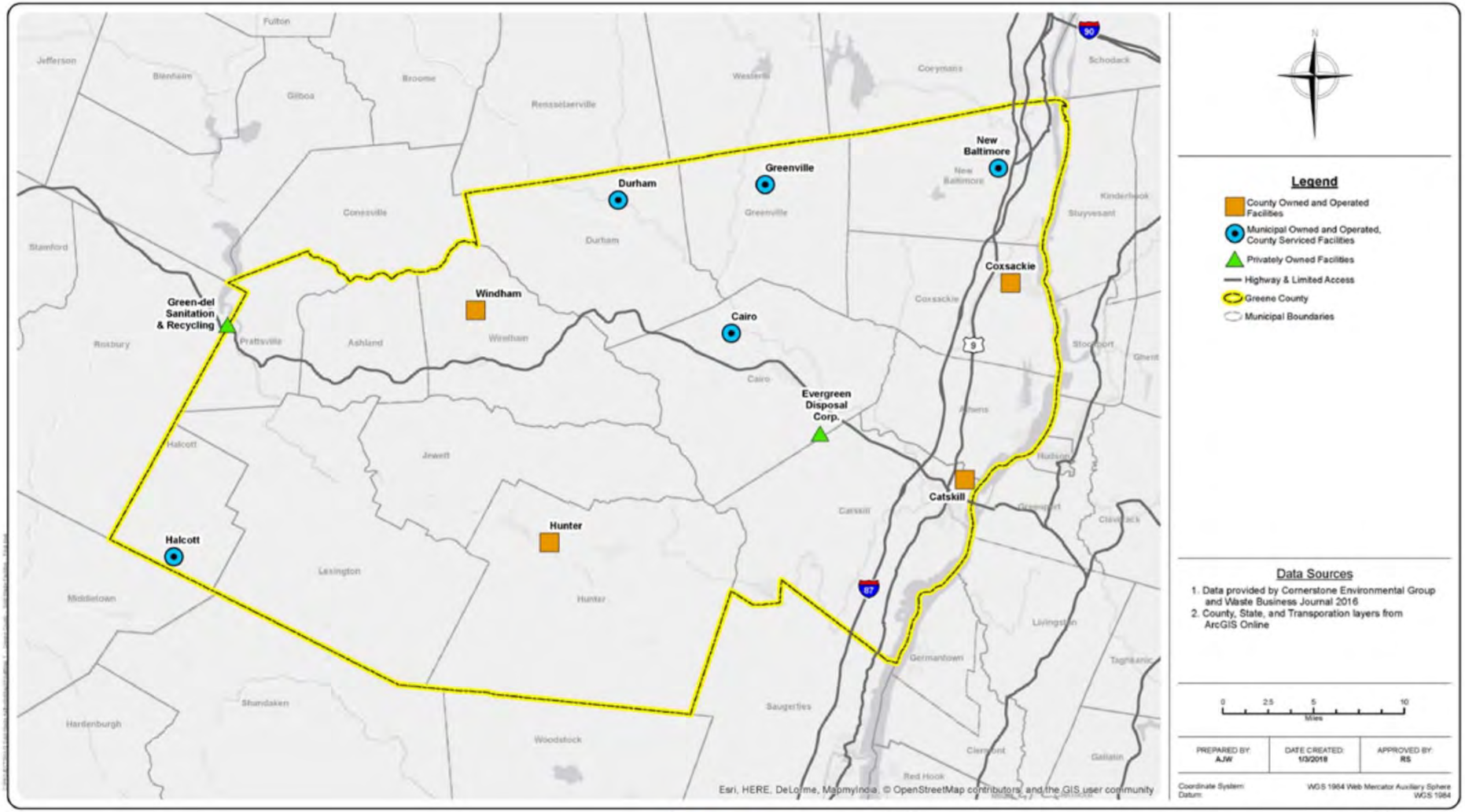
HUGHES ENERGY

Greene County Waste Overview

April 2021

NEW YORK
STATE OF
OPPORTUNITY.

GREENE COUNTY WASTE LOCATIONS



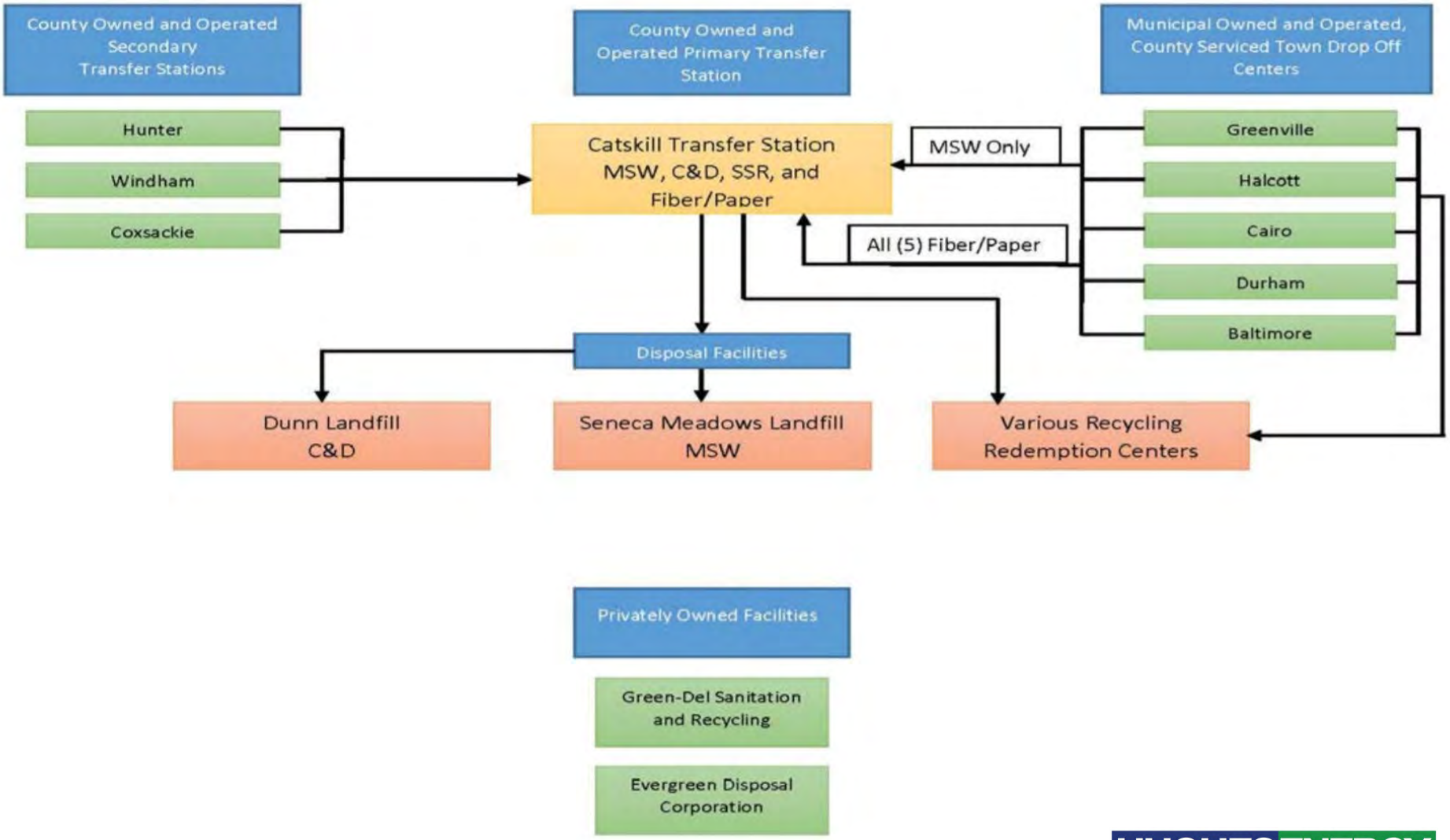
cornerstone
A TETRA TECH COMPANY
PREPARED BY:
CORNERSTONE ENVIRONMENTAL GROUP, LLC

SOLID WASTE FACILITIES LOCATED IN GREENE COUNTY

FIGURE NO. 1
PROJECT NO. 170589

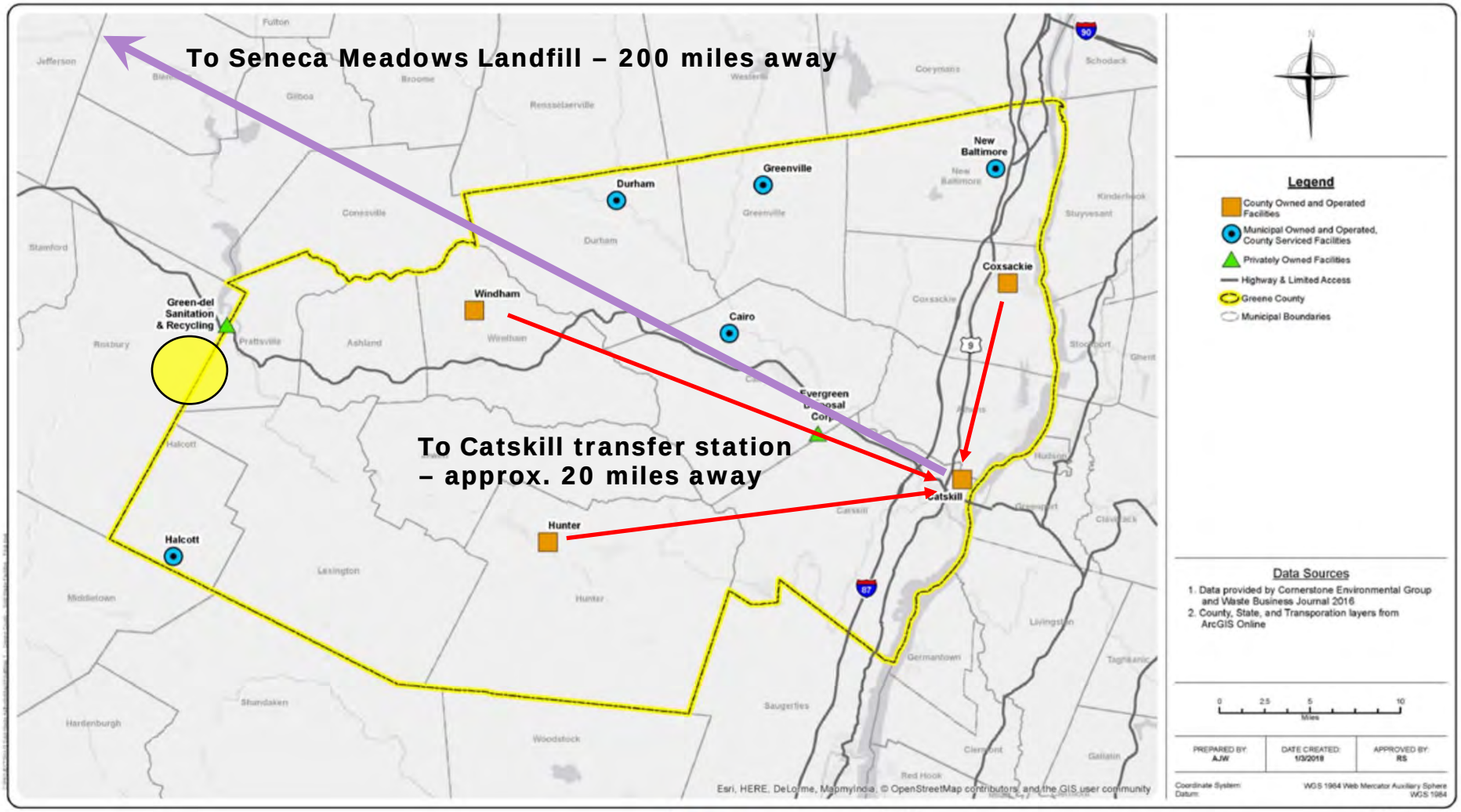
HUGHESENERGY

Greene County Operational Flow Chart



HUGHESENERGY

GREENE COUNTY WASTE PROCESS - Current



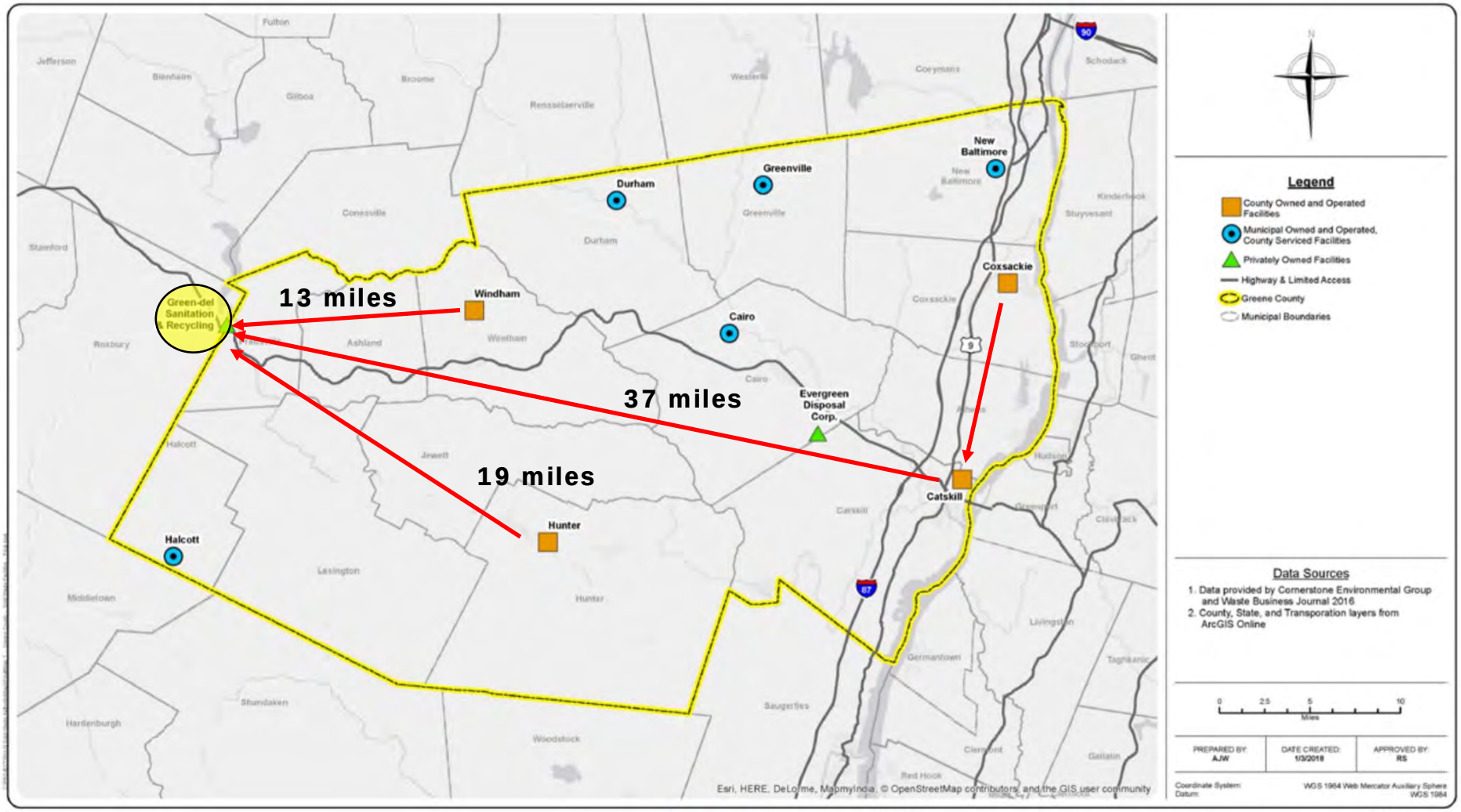
cornerstone
A TETRA TECH COMPANY
PREPARED BY:
CORNERSTONE ENVIRONMENTAL GROUP, LLC

SOLID WASTE FACILITIES LOCATED IN GREENE COUNTY

FIGURE NO. 1
PROJECT NO. 170589

HUGHESENERGY

GREENE COUNTY WASTE PROCESS - Proposed



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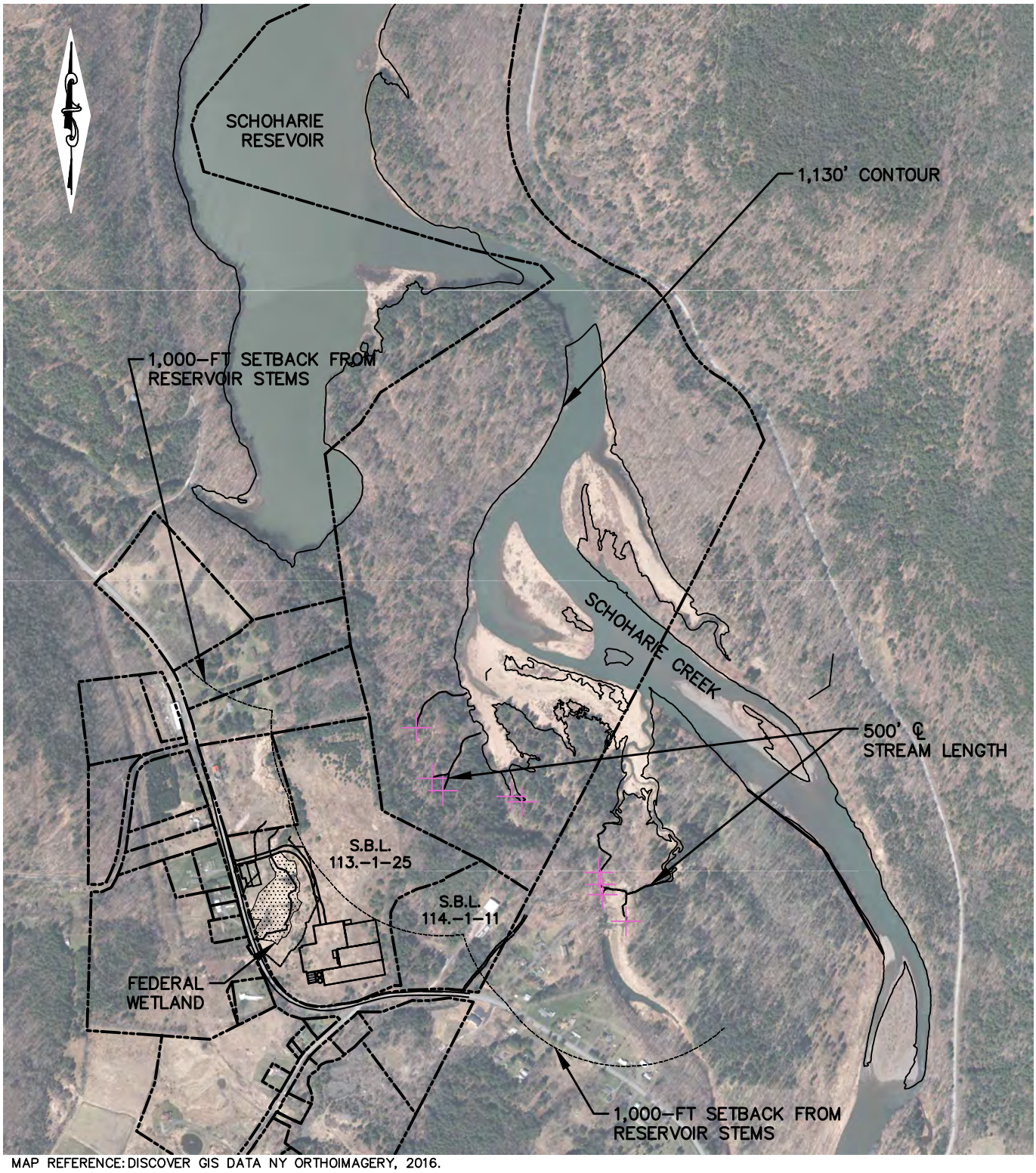
A TETRA TECH COMPANY
PREPARED BY:
CORNERSTONE ENVIRONMENTAL GROUP, LLC

SOLID WASTE FACILITIES LOCATED IN GREENE COUNTY

FIGURE NO. 1

PROJECT NO. 170589

HUGHES ENERGY



MAP REFERENCE: DISCOVER GIS DATA NY ORTHOIMAGERY, 2016.

LEGEND:

PARCEL BOUNDARY

1,000-FT SETBACK FROM RESERVOIR STEMS

0 500 1,000

1" = 1,000'

S:\Sterling\Projects\2020 Projects\Hughes Energy - 2020-14\Drawings-Maps-Figures\ACAD\2020-14012_F-1 - Reservoir Setback Map_Rev 2021-09.dwg TYLER.SWEET 9/8/2021 1:08 PM

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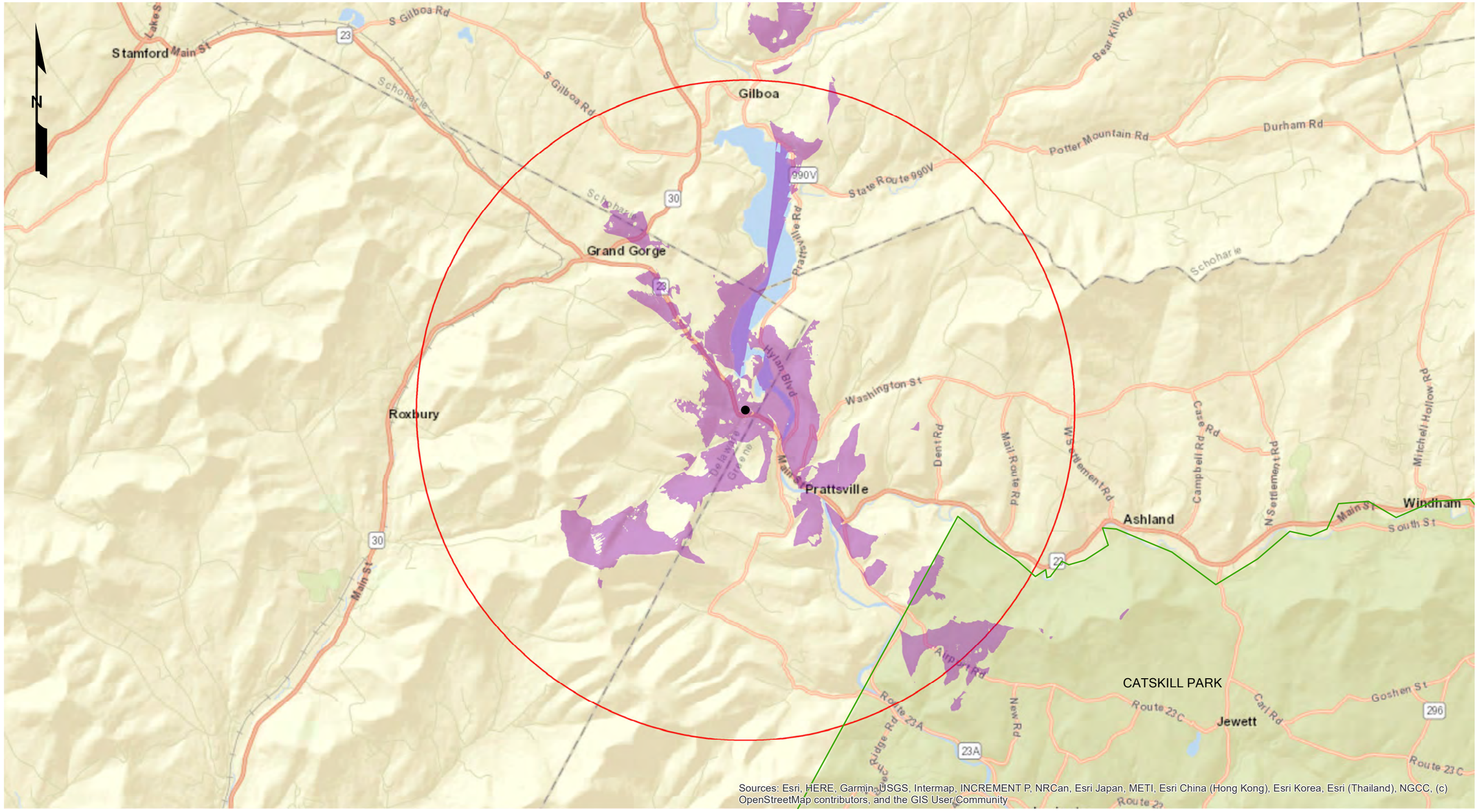
RESERVOIR SETBACK
SITE VICINITY MAP

HUGHES ENERGY, LLC.

S.B.L. 113.-1-25

TOWN OF ROXBURY DELAWARE CO., NY

PROJ. No.: 2020-14	DATE: 09/08/2021	SCALE: 1" = 1,000'	DWG. NO. 2020-14012	FIGURE 1



LEGEND

- SITE LOCATION
- VISUAL IMPACT AT STACK TIP (1,362' AMSL.)
- 5 MILE VISUAL ASSESSMENT RADIUS

0 10,000 20,000 FEET

1 inch = 10,000 feet

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VISUAL IMPACT ASSESSMENT MAP

HUGHES ENERGY, LLC.

TAX PARCEL 113.-25-1

TOWN OF ROXBURY DELAWARE CO., NY

PROJ.NO.	DATE:	SCALE:	DWG.NO.	FIGURE
2020-14	3/20/2021	1"=10,000'	2020-14005G	1

S:\Sterling\Projects\2020 Projects\Hughes Energy - 2020-14\Drawings-Maps-Figures\GIS\2020-14005G- FIG 1 VISUAL IMPACT (STACK).mxd

Town of Roxbury
Delaware County, NY

Date: 4-19-2012

0 0.5 1 2 Miles

Scenic Views

- Town Boundary
- Surrounding Town Boundaries
- Water
- Streams
- Property Boundaries
- View Points

Roads

- State Route
- County Road
- Local Road
- Private Road
- Railroad

Community Planning & Environmental Associates

Nan Stolzenburg, AICP - www.planningbetterplaces.com
152 Stolzenburg Road, Berne, NY 12023
Don Meltz, Planning and GIS - www.donmeltz.com