ENVIRONMENTAL IMPACT EVALUATION

FOR REGIONAL COMPOSTING FACILITY AND RECYCLING INFRASTRUCTURE

TOWN OF MANCHESTER

October 2025

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List of Acronyms

ASP – Aerobic Static Pile
BFE – Base Flood Elevation
BMP – Best Management Practices
CEJST – United States' Climate and Economic Justice Screening Tool
CEPA – Connecticut Environmental Policy Act
CFR – Code of Federal Regulations
CMMS – Comprehensive Materials Management Strategy
CRCOG – Capitol Region Council of Governments
CS – Carbon Disulfide
CTDOT – State of Connecticut Department or Transportation
DEEP – State of Connecticut Department of Energy & Environmental Protection
DEM – Digital Elevation Model
DMDS – Dimethyl Disulfide
DMS – Dimethyl Sulfide
ECD – Environmental Classification Document
EIE – Environmental Impact Evaluation
FEMA – Federal Emergency Management Agency
FIRM – Flood Insurance Rate Map
GHG – Greenhouse Gases
H2S – Hydrogen Sulfide
HAP – Hazardous Air Pollutants
IWQR – Integrated Water Quality Report
kWh – Kilowatt Hours
MMI – Material Management Infrastructure
MSW – Municipal Solid Waste
NAAQS – National Ambient Air Quality Standards
NDDB – National Diversity Database
NMFS – National Marine Fisheries Service
NPDES – National Pollutant Discharge Elimination System
NRCS – Natural Resources Conservation Service
OPM – State of Connecticut Office of Policy Management
PILOT – Payment in Lieu of Taxes
PM – Particulate Matter
POCD – Plan of Conservation & Development
RCSA – Regulations of Connecticut State Agencies
SHPO – State of Connecticut Historic Preservation Office
SOP – Standard Operating Procedure
SSO – Source-Separated Organics
SSURGO – Soil Survey Geographic Database
USEPA – United States Environmental Protection Agency
USFWS – United States Fish & Wildlife Service
VFA – Volatile Fatty Acids

VOC – Volatile Organic Compounds
WHO – World Health Organization
WTE – Waste-to-Energy

1.0 INTRODUCTION

1.1 Background/Purpose & Need

The Purpose of this Materials Management Infrastructure (MMI) Grant administered by the Department of Energy and Environmental Protection (DEEP) is to provide funds to the Town of Manchester to undertake six (6) initiatives that will divert wastes from the MSW waste stream, increase the collection and processing of food wastes in the Capitol Region, improve existing recycling programs and make them more cost efficient, increase the types and quantities of materials recycled, and manage more of our waste streams in state. The initiatives include: 1) Expanded Residential Food Scrap Collection; 2) Regional Food Waste Collection and Processing; 3) Aerated Static Pile (ASP) Composting; 4) Mobile Grinder for Organic Wastes; 5) Mobile Screener for Compost – to be shared with other municipalities; and 6) Regional Plastic Film Collection and Processing Facility.

This EIE is intended to provide a detailed analysis of potential environmental impacts of the proposed action. This review was conducted using readily available information and based on qualitative and quantitative assessments of the existing and proposed conditions. If during the course of implementing the proposed action described in this EIE re-evaluation of the project results in modifications to the proposed action, it is not anticipated that small mid-course improvements or adjustments will necessitate the drafting of a new EIE.

In accordance with the regulations of the Connecticut Environmental Policy Act Sections 22a-1a-1 to 22a-1a-12, the findings of the environmental review are summarized below.

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1.2 Public Involvement

Given that the proposed action would constitute a state-funded action that could have impacts on the environment, the Connecticut Environmental Policy Act (CEPA) was investigated to determine its pertinence to the proposed action and the process for appropriate environmental review and noticing. DEEP operates its CEPA process under the Generic Environmental Classification Document (ECD) as promulgated by the Office of Policy and Management (OPM) for use by state agencies that do not have their own agency-specific ECD. Examination of this document and the Regulations of Connecticut State Agencies (RCSA), Sections 22a-1a-1 to 22a-1a-12, determined that a

Notice of Scoping needed to be prepared, followed by a Post Scoping Notice after the required 30 day public comment period. The next steps after the Post Scoping Notice were to be determined by the comments received during the public comment period and the specifics of the CEPA statutes and regulations.

In the May 20, 2025 issue of the Environmental Monitor, a Notice of Scoping for the proposed Regional Composting Facility and Recycling Infrastructure project in Manchester, CT was published. The public comment period concluded on June 19, 2025, and no comments were received.

Upon review of the ECD, it was determined that as a "regional solid waste facility," the proposed action necessitated the completion and publishing of an Environmental Impact Evaluation (EIE). On May 20, 2025, DEEP published a Notice of Scoping in the Environmental Monitor to solicit public comments. During the scoping period, no comments were received. In the August 5, 2025 issue of the Environmental Monitor, a Post-Scoping Notice for the proposed Regional Composting Facility and Recycling Infrastructure project in Manchester, CT was published, which explained that an EIE was being prepared for the proposed action, as the current ECD lists regional solid waste facilities as requiring an EIE. This Draft EIE is available for public review and comment.

2.0 ALTERNATIVES

This section describes the alternatives considered for the regional compost facility. DEEP has evaluated the following alternatives as part of its grant action:

- **Proposed Action:** Execute the grant assistance agreement for the Manchester Regional Composting Facility and Recycling Infrastructure project.

- **No Action:** Not execute the grant assistance agreement for the Manchester Regional Composting Facility and Recycling Infrastructure project.

2.1 Alternative 1 – The Proposed Action

The Town of Manchester is seeking to develop a food scraps collection and processing facility and an associated aerated static pile (ASP) composting facility as part of the DEEP MMI grant. Currently, food scraps are collected from a drop-off program operated by a private contractor and transported to an in-state anaerobic digestion facility or an out-of-state depackaging facility for processing prior to anaerobic digestion. The Town intends to engage in a public-private partnership to develop, construct, and operate the food scraps collection and processing facility and an associated ASP composting facility at the preferred location at 263 Olcott Street.

The Town of Manchester provides an excellent location for these types of facilities because of its central geographic location in the Capitol Region; accessibility to the highway networks; established regional need for such facilities; industrial zoning at the preferred location; and existing onsite or adjacent solid waste management facilities, infrastructure, scale, software, and operating procedures. The facilities and their respective permits will be owned by the Town; it is envisioned that the Town will have the facilities be operated under an agreement with a private partner. Acquisition of an adjacent approximately 5 acre parcel is key to locating these operations at the preferred location. The acquisition of this adjacent parcel is under negotiation and is outside the funded program components of the MMI Grant award.

The facilities will be designed to accept, process, and transfer 10,000 to 15,000 tons of food waste annually from residential, commercial, industrial, and institutional sources throughout the region. Materials received could be transferred to an anaerobic digestion facility or depackaging facility, and/or processed on-site before transfer. On-site processing will consist of a series of screens and hammer mills to remove inorganics (e.g., “contaminants”) and produce an organic slurry. Processed food waste slurry will be transported via tanker truck to a permitted composting or anaerobic digestion facility. A design that can transfer or process and then transfer food wastes will provide operational flexibility and the ability to commence operations sooner.

The Town intends to repurpose an existing salt storage structure into a facility to receive and process the food wastes. The building will be enclosed and retrofitted to support negative air pressure and a system to collect and control odors. Additional site

improvements will include 3-phase power, a connection to the existing public water supply and sanitary sewer system, and an 80,000-gallon organics slurry holding tank.

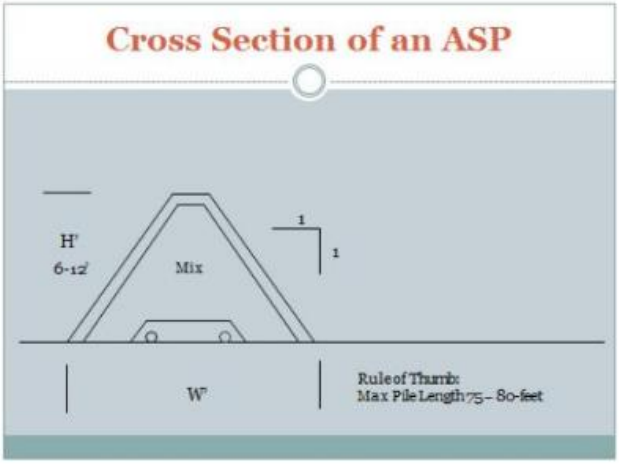
The salt bin location at the Town of Manchester could be an ideal location to repurpose and rebuild an organics processing facility.

The Town is also seeking to develop an ASP composting facility as part of the DEEP MMI grant. Currently, food scraps are collected through a drop-off program by a private contractor and transported to an in-state anaerobic digestion facility or an out-of-state depackaging facility for processing prior to anaerobic digestion. The Town will engage in a public-private partnership to develop, construct, and operate an ASP composting facility at the preferred location at 263 Olcott Street. The composting facility will accept processed food waste slurry from the associate food scraps processing facility, mixed yard wastes (i.e., shredded leaves and yard wastes) from the Town of Manchester, and mixed yard wastes from other municipalities and commercial sources. ASP composting uses less area and is significantly quicker than the windrow-and-turn method used at Manchester's leaf compost pad. ASP composting facilities produce compost in ten to twelve weeks – six to eight weeks of active aerated composting and a month to cure. The mixture of food wastes with mixed yard wastes produces a nutrient rich, high-quality compost.

At this time, the Town is considering an ASP composting facility sized to handle approximately 1,000 tons of food waste slurry and to be scalable to manage more materials as food waste management programs expand throughout the region. A typical ratio of food wastes to mixed yard wastes is 5-to-1 by weight, so an ASP composting facility designed to manage 1,000 tons of food wastes would need roughly 5,000 tons of mixed yard wastes. At 450 pounds per cubic yard, the Town will compost approximately 22,000 cubic yards of shredded yard wastes with the food wastes at this facility. The estimated size requirements for this composting facility is 0.75 acres.

Proposed site improvements include concrete bunkers, a concrete composting pad, blowers for the aeration system designed to draw air through the static piles of mixed yard wastes and food waste slurry, and odor control through a biofilter. Additional site improvements will include 3-phase power and a connection to the existing sanitary sewer system.

Potential ASP Locations



An ASP composting facility will provide a full circle on-site option for recycling food wastes and mixed yard wastes generated, received, and processed in Manchester. Providing a composting component with the proposed food waste collection and processing facility will provide the next step in the recycling process. Residential and commercial generators will be able to view the entire process and make it more tangible, which will assist with public education and outreach efforts. In addition, the Town will continue to make a portion of its compost available to the Manchester Parks Division and town residents. This initiative will reduce landfilling and/or energy recovery in favor of recycling/composting, which is a more preferred management strategy on the state's solid waste management hierarchy.

The proposed project will:

- establish food waste processing infrastructure that will facilitate diversion of approximately 10,000 to 15,000 tons annually of food waste from the MSW stream;
- convert approximately 1,000 tons of food waste slurry combined with wood/yard waste into a beneficial compost end product;
- save municipalities money by lowering waste disposal costs through food scraps diversion;
- establish large-scale capacity for organics recycling;
- reduce greenhouse gas emissions created by incineration, trucking of ash out of the region, and trucking of purchased soil amendments into the region;
- sequester carbon in the natural process of composting;
- provide a local source of soil amendment/fertilizer alternative, some of which will be provided free to the local community
- reduce the amount of waste being sent to incinerators and landfills; and
- educate local communities about organics recycling and compost.

2.2 Alternative 2 – No Action

The No Action Alternative consists of not constructing the proposed regional composting facility and recycling infrastructure. In this case, the No Action Alternative does not meet the purpose and need for waste reduction and waste diversion from the region's and the State of Connecticut's waste streams. Food waste diversion will stagnate in the region; although small local composting operations will continue to function, it will be very difficult to expand and increase waste diversion opportunities in northern and eastern Connecticut without the proposed facility due to limited available land and lack of financial resources to invest in capital infrastructure for expansion, which can be very costly. Without increased capacity in waste diversion infrastructure, the region will need to continue incinerating its waste or trucking its waste to out-of-state landfills at roughly the same rates as in 2025 for the foreseeable future, incurring the cumulative environmental impacts associated with this form of disposal.

Additionally, being unable to utilize the MMI grant would have negative impacts on both the Town of Manchester and the CRCOG region as a whole. First, if the 10,000 to 15,000 tons of food scraps, 1,000 tons of food waste slurry, and 5,000 tons of wood and yard waste that will be processed through the proposed action needed to be incinerated instead of being composted, residents of the town and region would be impacted by the additional emissions from WTE plants, especially particulate matter PM 10 and PM 2.5. Second, the towns within the CRCOG region would be financially impacted by the differential between the higher cost of disposing of the food scraps via incineration or trucking to out-of-state landfills versus the lower cost of composting.

Utilizing the MMI grant now for this infrastructure project is important and essential to enhancing the waste management system in northern and eastern Connecticut and prevent negative impacts from additional incineration of waste, and missing this opportunity would be a significant financial and public health setback. Therefore, DEEP has determined that the No Action Alternative is not a feasible alternative.

3.0 Required Licenses, Permits, and Certifications to Implement the Proposed Action

It is expected that in order to operate the proposed regional composting and food processing facility, the Town of Manchester will need to obtain a DEEP Permit for Construction and Operation of a Solid Waste Facility from the department's Waste Engineering and Enforcement Division. The project will also require a Discharge of Stormwater and Dewatering Wastewater Associated with Construction Activities – General Permit Registration, an NDDB Review Request (endangered, threatened, and special concern species and habitats), an Individual NPDES Wastewater Permit for Discharge of Leachate or Co-Mingled Stormwater, and a General Pretreatment Permit for Non-Significant Industrial User. In addition, the Stormwater Pollution Prevention Plan (SWPPP) for the facility must be updated and additional stormwater monitoring locations identified, as applicable in regard to the addition of the proposed action's components. Finally, local building and land use/zoning permits will be required prior to site disturbance and construction activities commencing.

4.0 Affected Environment and Environmental Consequences

This section summarizes the physical, biological, social and development environments of the affected project area and the potential changes to those environments due to implementation of the proposed action. Identification and description of any mitigation measures considered, including any mitigation measures that must be adopted to ensure the action will not have significant impacts, are provided under each resource area, as applicable.

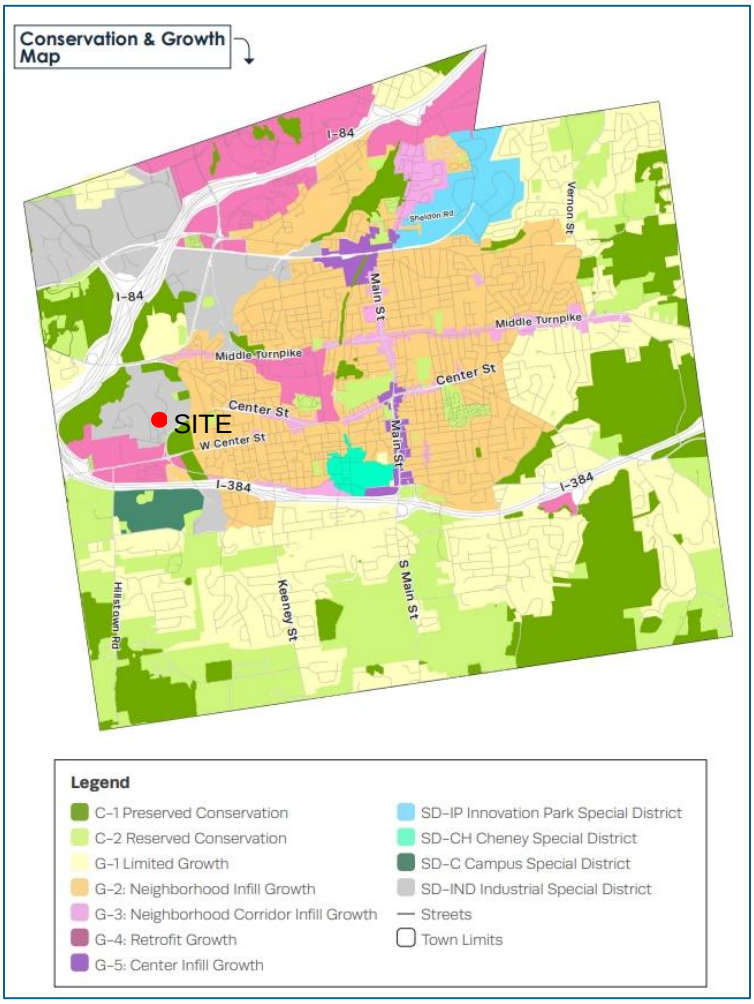
4.1 Land Use Planning and Controls

The site of the proposed action is located within the Industrial (IND) zone under the Town's Zoning Regulations. The Zoning Regulations note that "an industrial zoned district is an area for commercial operations and uses of a type which are not generally suitable or appropriate in retail sales areas. The uses allowed in this zone encompass a

wide range of operations, but some are prohibited in the interest of public welfare and site preparation is strictly regulated for the purpose of environmental protection."[1]

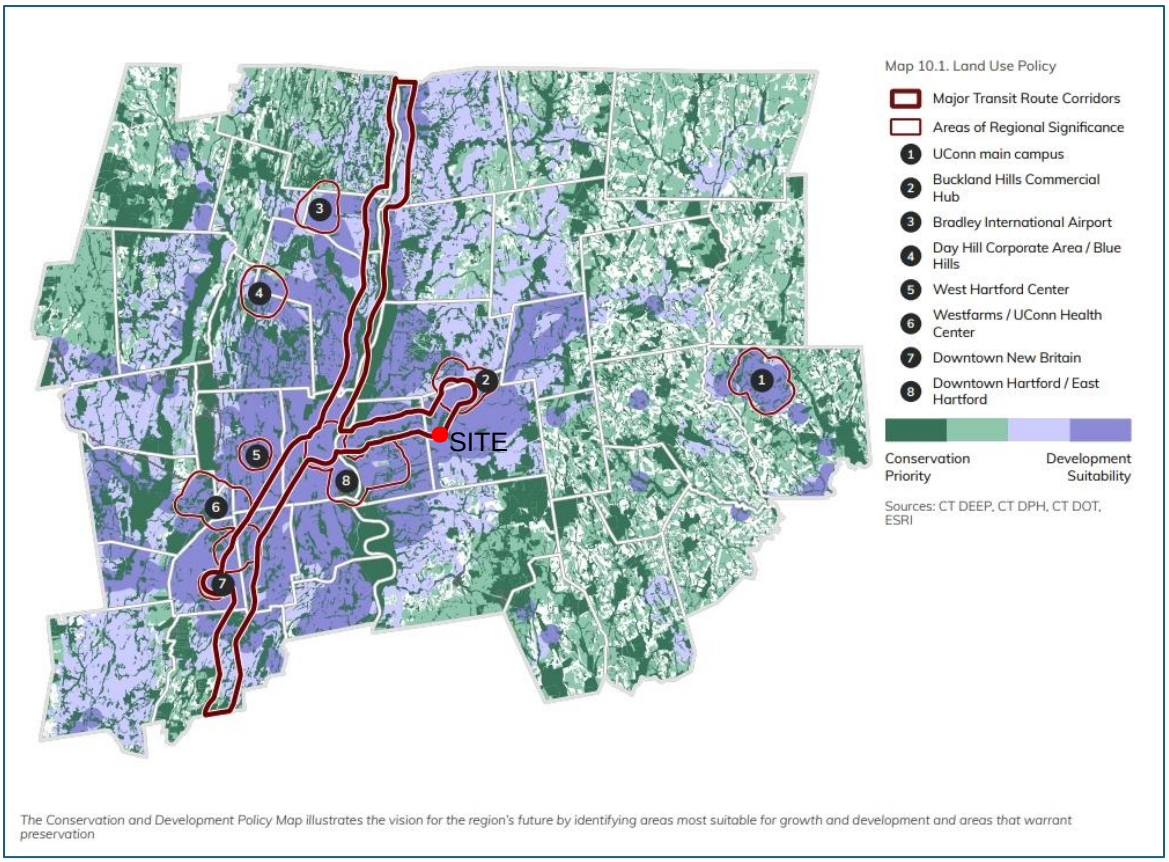
In the Town of Manchester's 2023 Plan of Conservation and Development, the Conservation & Growth Map has the site of the proposed action identified as "SD-IND Industrial Special District." The plan notes that "the Industrial Special District is assigned to existing Industrial Zone areas. Growth in this district should accommodate truck circulation, large building footprints, and other unique requirements for construction, warehousing, manufacturing, utility, and engineering uses."[2]

In reviewing the various goals and objectives of the Plan of Conservation Development, the proposed action is consistent with the Plan and its recommendations for the future of the Town.



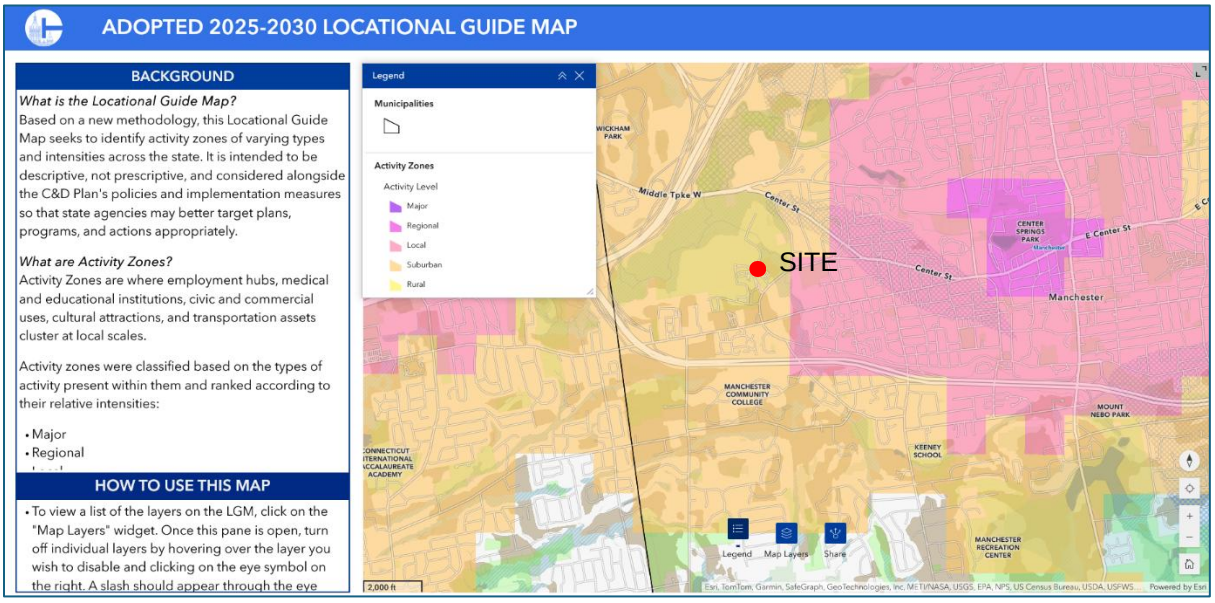
[1] Town of Manchester Zoning Regulations, Section 2.2.12, pg. 3.
[2] 2023 Manchester Next Plan of Conservation and Development, pg. 177.

The 2024 Capitol Region Council of Governments (CRCOG) Regional Plan of Conservation and Development (POCD) is the regional planning document that provides guidance to the Town of Manchester and impacts the development of the site of the proposed action. Under the 2024 Regional POCD, the Land Use Policy Map identifies the site of the proposed action as one of the areas in the region with the highest level of development Suitability. The site area is also identified as a Municipal Area of Focus, indicating regional and municipal agreement that this area will be available for focused development over the coming years. As such, the proposed action is consistent with the Regional POCD's future development objectives and is not inconsistent with any of the POCD's identified goals and strategies for regional development.



The Connecticut Conservation and Development Policies Plan, 2025-2030 (C&D Plan) was adopted by the Connecticut General Assembly via House Joint Resolution No.67 on March 5, 2025. The Adopted 2025-2030 Locational Guide Map indicates that the site of the proposed action has a "Suburban" Activity Zone designation. In the associated text section, the Plan notes that Suburban Activity Zones encompass *"town centers or areas peripheral to more intense Activity Zones with strong commercial, civic, and transportation-related uses. Contributing assets within Suburban Activity Zones are generally spread over larger geographic areas than Local, Regional and Major Activity*

Zones."[3] The Locational Guide Map also indicates that the site of the proposed action lies within an area designated as "Draft 2023 Protected Open Space." While this may be an accurate designation of the portion of the parcel occupied by the landfill, the adjacent areas of the parcel dedicated to Town Public Works Department operations such as the municipal transfer station, heavy vehicle garage, and the salt shed are clearly developed and have been for some time. Given this fact, the proposed action meets the threshold of appropriateness.



The proposed action is either consistent with or not inconsistent with the policies and implementation measures identified for the State of Connecticut in the C&D Plan, including:

- Promote reduction of greenhouse gas emissions
- Develop coordinated capacity and infrastructure for solid waste management that provides efficient, equitable and sustainable systems that incorporate source reduction, recycling and composting
- Increasing capacity and sustainability of in-state management of Municipal Solid Waste

4.2 Air Quality and Resources

Impacts on air quality are determined by analyzing current environmental characteristics in comparison to the potential emissions from the proposed action. The focus is placed on whether the proposed action will cause emissions concentration to exceed any NAAQS or is additive to a present NAAQS violation, delays the attainment of any NAAQS within a reasonable timeframe, significantly increases

[3] Connecticut Conservation and Development Policies Plan, 2025-2030, pg. 36.

GHG emissions above current levels, or impairs visibility of any “Class I” national park or wilderness area.

According to data from USEPA and DEEP, all of the State of Connecticut is currently in attainment for all criteria air pollutants with the exception of ozone. The site of the proposed action is located in the Greater Connecticut Ozone non-attainment area; this area, encompassing Hartford, Litchfield, New London, Tolland, and Windham counties, is also classified as "moderate" nonattainment for ozone. In addition, the Greater Connecticut area was recently reclassified from "moderate" to "serious" nonattainment for the 2015 ozone NAAQS, according to the Federal Register. This reclassification was requested by the State and indicates how difficult meeting federal ozone standards has been for the larger region.

The Clean Air Act also provides a heightened level of air quality protection for “Class I” areas, which are specific national park and wilderness areas across the country are given special protection under the Clean Air Act, known as “Class I” areas. The Town of Manchester is not in a Class I Protected Area under the Clean Air Act, nor are there any Class I areas within the larger region.

The construction of the regional composting and food processing facility will involve site preparation and clearing, excavation, facility modifications, and new construction. Development of this nature typically causes dust, along with the generation of particulate matter (PM), including PM 2.5 and PM 10 primarily from “fugitive” sources (i.e., emissions released through means other than through a stack or tailpipe). Smaller amounts of other air pollutants generated by the operation of construction equipment are also present. PM 10 and PM 2.5 emissions from construction can vary greatly based upon the level of activity during a particular timeframe and site-specific characteristics such as soil composition and weather. Larger diameter dust particles (greater than 30 microns) tend to be deposited in and around the area of disturbance, while smaller diameter particles (PM 10 and PM 2.5) remain airborne until deposited through weather effects and are more likely to have human health impacts.

Construction of the proposed composting and food processing facility will have very minor and localized impacts on air quality. To minimize any impacts, all construction vehicles must have effective emission controls and must be operated in compliance with BMPs such as reducing vehicle speeds, anti-idling requirements, etc. Overall, air quality impacts during construction will be localized and generally short-term but less than significant with the implementation of BMPs.

Table 1 provides the estimated greenhouse gas (GHG) emissions savings from increased diversion of approximately 1,000 tons of source-separated organic material (SSOM) slurry and 5,000 tons of yard waste annually, most likely from incineration. To the extent that the region ships its municipal solid waste to out-of-state landfills, the

composting of food scraps will provide even greater emissions savings. Emissions calculations have been performed utilizing EPA WARM v.16.

TABLE 1

Proposed Action Total Organic Waste (Food Scraps & Mixed Yard Waste) Composted GHG Emissions	**2028 Proposed Action Projection***
Baseline (Landfill)	N/A
Incineration	(530.98)
Proposed Action (Composting)	(681.67)
Incremental GHG Emissions ($MTCO_2E$):	**(150.69)**
*GHG Emissions Savings in Metric Tons of carbon dioxide equivalent (MTCO2E).	

Source: U.S. EPA, Waste Reduction Model Tool, Version 16.

As this table indicates, the proposed action will reduce greenhouse gas emissions by almost 151 metric tons annually as compared to incineration of the food scraps and wood waste, and by almost 682 metric tons annually as compared to landfilling out of state.

The Town of Manchester is home to one stationary source air emitter: the Manchester Landfill premises, which is located adjacent to the site of the Proposed Action. Table 2 below illustrates the air emission characteristics of this facility.

TABLE 2

Facility	VOC	NOx	CO	PM10-PRI	PM2.5-PRI	SO2	NH3	Lead
Manchester Landfill Premises	4.17	1.77	1.11	0.54	0.54	2.42	20.15	0.0011

Source: CT DEEP, 2017 Periodic Emissions Inventory, Table C-1: 2017 Annual Emissions of Connecticut Point Sources.

Overall, the construction of the compost facility's effect on air quality during construction is expected to be minor and short-term and will result in no significant impacts to air quality. Cumulative impacts on air quality in the Town of Manchester are expected to be low, since neither the proposed action nor the "no action" scenario would have considerable air quality impacts, and air quality in the area of the project site is generally good.

4.3 Use and Conservation of Energy Resources

Energy expenditure for the proposed action has two components: construction phase and operations phase. In terms of the construction phase, energy consumption would primarily include power for construction vehicles, production of project components, and assembly of these project components at the site of the proposed action. These energy expenditures will be quite minor in scale. In terms of the operations phase, the energy expenditures would consist of resources to operate the composting facility and equipment supporting the operations.

One study estimated the total energy requirements for ASP composting at 18.3 kWh per ton of feedstock, which included 15.00 kWh/ton for fuel and 3.3 kWh/ton for electricity. Other studies have reported figures ranging from 25.2 kWh per metric ton to 30-60 kWh per metric ton. Using the first metric, at 6,000 tons of annual feedstock, the proposed action would draw approximately 109,800 kWh annually. This figure is equivalent to the energy required to power roughly 10 to 11 single family homes per year, based upon the US Energy Information Administration's estimate of 10,500 kWh/year for a residential household. Therefore, within the scale of regional energy markets, the impact of the proposed action on energy resources is expected to be less than significant.

ASP (Aerated Static Pile) composting facilities like the one in the proposed action generally have lower power consumption compared to other methods like turned windrow composting due to reduced need for turning the piles. Such facilities can also focus on energy efficiency through controlled aeration, efficient duct design, and appropriate fan selection.

4.4 Cultural, Historic, and Archaeological Resources

The Town of Manchester has five (5) designated historic districts – the Manchester Historic District; Union Village Historic District; Case Brothers Historic District; Main Street Historic District; and the Cheney Brothers National Historic Landmark District. However, the site of the proposed action is outside of these areas and would not impact historical or cultural resources. A review of the Connecticut State Historic Preservation Office's (SHPO) online mapping viewer ConnCRIS, which highlights a wide variety of cultural resources around the state, does not indicate the presence of any significant cultural resources in proximity to the site of the proposed action.

From an archaeological standpoint, the state has not established any Designated Archaeological Preserves within the Town of Manchester. The Town's 2023 Plan of Conservation and Development does not include any identification of archaeological resources in the Town. Finally, the extensive disturbance and development of the site of the proposed action over the course of many years almost certainly precludes the presence of preservable archaeological artifacts or resources.

Based upon the above information, impacts to cultural, historic, and archaeological resources resulting from the proposed action are anticipated to be less than significant.

4.5 Noise, Vibration, and Odors

Noise and Vibrations: Construction activities for the proposed regional composting and food processing facility will create low to moderate levels of noise; however, these noise levels would return to baseline conditions upon completion of project construction. The temporary impacts would be the result of heavy equipment operation. The construction activities would occur during daytime hours and on

weekdays when noise levels of a low to moderate range would be more frequently expected and better tolerated.

In an effort to minimize any potential annoyances caused by a temporary increase in noise levels, construction activities should be limited to between 7:00am and 10:00pm, consistent with the Town's noise ordinance. This mitigation measure would further ensure no significant impacts as a result of a short-term increase in noise. Given the site of the proposed action being approximately 700 feet distant from the nearest residential properties, construction noise is not expected to disturb residents and other sensitive noise receptors above current levels. The Federal Highway Administration (FHWA) data indicates that typical construction equipment and vehicles such as front-end loaders, dump trucks, bulldozers, and excavators have a maximum noise level generally between 80 decibels and 85 decibels at a distance of 50 feet. To calculate noise at a given distance (700 feet from residential properties) based upon this information, the following equation is used:

$$dB_1 = dB_0 + 20\log(d_0/d_1), \text{ where:}$$

dB_1 = the new sound level
dB_0 = the original sound level
d_0 = is the original distance from the source
d_1 = is the new distance from the source

Utilizing this equation results in the following:

dB_1 = 85 + 20log(50/700)
dB_1 = 85 + 20log(0.007143)
dB_1 = 85 + (-42.9226)
dB_1 = 85 – 42.9226
dB_1 = 42.1 dBA

Under Section 223-4 of the Manchester Town Code, construction activities occurring between the hours of 7:00am and 10:00pm are exempt from the Town noise ordinance. However, as a point of reference, the noise ordinance establishes that for an industrial use located in an industrial zone emitting noise where the receptor of the noise is located in a residential zone, a maximum dBA of 61 would be permitted during daytime hours and a maximum of 51 dBA would be permitted during nighttime hours. Even if the noise ordinance were applicable to construction activities, the maximum dBA expected from the site of the proposed action would be significantly lower than these thresholds. In addition, the World Health Organization (WHO) recommends general daytime noise levels of less than 55 dBA to prevent significant community annoyance.

During the operational phase of the proposed regional ASP composting facility, there will be noise from basic equipment, such as from an industrial grinder, a trommel, and front-end loaders. In addition, the proposed food waste processing facility will utilize high noise level equipment such as hammermills, vibrating screens or trommels, air systems, conveyors, and compactors. While specific sound output varies by manufacturer and model, general noise levels for processing equipment are known to be high. Hammermills often reach 95 to 105 dBA at 50 feet, vibrating screens or trommels can reach 90 to 100 dBA at 50 feet, and other mechanical equipment is likely in the 80 to 85 dBA range at 50 feet.

While the actual design and construction of the food waste processing facility will have a significant impact on noise levels generated by the operation through potential noise attenuation and mitigation measures, taking a worst-case assumption of 105 dBA generated by the facility at a distance of 50 feet results in the following noise level calculation:

$$dB_1 = dB_0 + 20\log(d_0/d_1)$$

dB_1 = 105 + 20log(50/700)
dB_1 = 105 + 20log(0.007143)
dB_1 = 105 + (-42.9226)
dB_1 = 105 – 42.9226
dB_1 = 62.1 dBA

A maximum noise level of 62.1 dBA would exceed the Town noise ordinance levels established for uses such as the proposed action by a small margin during daytime (7:00am-10:00pm) hours, and by a more sizable during nighttime hours. Therefore, in the facility design and construction process, the Town should require the inclusion of sufficient building and site noise mitigation measures to reduce noise by at least 1.1 dBAs during the daytime hours. If the facility is planned for 24 hour per day use, the inclusion of sufficient building and site noise mitigation measures to reduce noise by at least 11.1 dBAs should be required. Alternatively, the operation could be required to only operate during the times of 7:00am to 10:00pm daily.

Vehicular traffic noise associated with the operation and maintenance of the facility will be incidental when considered in combination with the existing traffic use of surrounding roadways (see Section 4.10 for traffic data) and the existing truck traffic into and out of the adjacent landfill operation.

With the implementation of proper mitigation measures incorporated, the potential construction and operational noise impacts will be less than significant.

Odors: Composting and food processing facilities, while beneficial for diverting waste from landfills and creating valuable soil amendments, can generate unpleasant odors

that can be a source of concern for nearby communities. These odors result from the biological activity of microorganisms during the decomposition of organic materials and can impact both air quality and human health. The two most important site management practices to reduce odors are rigorous housekeeping and water management.

Several classes of compounds contribute to compost odors:

- Volatile Fatty Acids (VFAs): These are produced as carbohydrates, fats, and oils decompose, and can create "sour-smelling" odors like vinegar (acetic acid) or rancid smells (butyric acid).

- Volatile Nitrogen Compounds: This group includes:
    - Ammonia: A pungent, irritating odor, especially when processing high-nitrogen feedstocks like manure or fish waste.
    - Amines: Foul-smelling compounds like putrescine and cadaverine, which are associated with decaying flesh.
    - Indoles: Compounds like indole and skatole, which can have a fecal odor.

- Volatile Sulfur Compounds: These are highly offensive and include:
    - Hydrogen sulfide (H2S): The characteristic "rotten egg" smell, a sign of anaerobic decomposition.
    - Mercaptans: Strong, pungent odors reminiscent of rotten cabbage, garlic, or skunks.
    - Organic sulfides: Compounds like dimethyl disulfide (DMDS), dimethyl sulfide (DMS), and carbon disulfide (CS), which are also associated with strong, offensive odors.

- Other VOCs: Ketones, aldehydes, and alcohols also contribute to the overall odor profile of a composting facility.

The proper implementation of appropriate BMPs for odor control must be included as part of the proposed action to ensure that potential impacts from odors will be less than significant. Section 4.14 on Mitigation Measures for Potential Adverse Impacts provides additional specifics on implementing BMPs for odor control.

4.6 Geological and Soil Resources

Geological Resources: Geological resources are defined as the topography, geology, and geological hazards of a given area.

The statewide 10-foot Digital Elevation Model (DEM) surface based on the Connecticut 2000 LiDAR ground elevation data indicates that the site of the proposed action has relatively flat topography. As such, development of the site under the proposed action

would require limited excavation and grading activities, thereby reducing potential impacts to the surrounding environment. The site of the proposed action is underlaid by the "Jp" bedrock geology typology. The "Jp" category is defined as the Portland Arkose Formation consisting of reddish-brown arkose (brownstone). The quaternary geology mapping indicates that the site of the proposed action includes "Early Postglacial Deposits" consisting of sand overlying fines and "Natural Postglacial Deposits" consisting of alluvium overlying sand and gravel. No geological hazards are apparent from the mapping.

Soil Resources: Soil information, including soil surveys and soil classification, is available through the Natural Resources Conservation Service (NRCS) and DEEP's online GIS mapping. Soils and topography at a project site are characterized prior to construction to assess suitability for construction and potential for erosion.

The soil on the site of the proposed action includes categories "306 – Udorthents-Urban land complex" and "702A – Tisbury silt loam, 0 to 3 percent slopes." Udorthents-Urban land complex soil, typical of established urban development areas in Connecticut, can offer construction challenges due to the high variability of the soil in terms of composition, permeability, load-bearing capacity, and likelihood of shifting and settlement over time. Tisbury silt loam soils can also offer challenges in the form of a typical seasonal high water table, slow permeability, potential for frost heaving, and limited capacity for septic systems.

Given the characteristics of the site of the proposed action such as relatively level topography and availability of a public sewer connection, as well as the nature of the proposed action, no significant impacts to geological resources are expected as a result of the proposed action. However, in the final design of the proposed facilities and improvements, particularly in the foundation design of the food waste processing facility and associated stormwater drainage improvements, care should be taken to ensure that thorough geotechnical analysis is completed and the findings addressed appropriately in the construction design and plan.

Hydric Soils: No hydric soils are present on the site of the proposed action.

Prime Farmland: The site of the proposed action consists of soils identified as "All Areas are Prime Farmlands" in the Soil Survey Geographic (SSURGO) database for the State of Connecticut' geographic data layer, specifically the area consisting of Tisbury silt loam soils. This category of potential farmland soils is the top level of importance out of the three farmland soil categories.

While the proposed action would impact some prime farmland soils, a few factors associated with the proposed action significantly reduce any potential impacts to farmland as a whole. First, given the fact that the site of the proposed action has been home to the Town of Manchester's Department of Public Works road salt barn and

miscellaneous municipal transfer station operations for an extended period of time, it is exceedingly unlikely that the site would be available in the future for utilization as actively managed farmland. Second, the fact that intensive heavy institutional/industrial use of the site of the proposed action has gone on for many years has likely rendered the underlying soils as unsuitable for active farming. Finally, the very close proximity of the active Manchester landfill to the site of the proposed action, and the general incompatibility of such a use with active farming, essentially preclude any farming use of the site of the proposed action going forward.

In terms of impacts as from the proposed action, construction will involve soil-disturbing activities, including some excavation and grading necessary to establish level surfaces. Approximately 5.5 acres will be affected by the soil-disturbing activities for the development of the composting and food waste processing facility. Stormwater for the proposed action is further discussed in Section 4.7 Water Resources below.

In summary, short-term and long-term impacts on geologic and soil resources are anticipated to be less than significant given the compliance requirements of applicable permits and implementation of BMPs to control stormwater runoff.

4.7 Water Resources

Surface Water and Water Quality: Per Connecticut Water Quality mapping, the Hockanum River South Fork (Hop Brook/Folly Brook), a tributary of the larger Hockanum River to the north, that runs adjacent to the east of the site of the proposed action is designated Class B waters, meaning its water quality is not appropriate for direct human consumption. Class B waters are freshwater, and their designated uses are habitat for marine fish and aquatic life and wildlife; recreational use; agricultural and industrial water supply; and navigation. The 2022 Integrated Water Quality Report (2022 IWQR) produced by DEEP identifies which uses are impaired for reaches of waterbodies and in some cases the potential sources of impairment. As part of this report process, an IWQR 305(b) cycle assessment was completed for the segment of the Hockanum River South Fork (Hop Brook/Folly Brook) adjacent to the site of the proposed action. This assessment determined that Aquatic Life Attainment Use was "Not Supporting" and Recreation Use was "Not Assessed." A prior 305(b) cycle assessment completed in 2012 determined that Aquatic Life Attainment Use was "Not Supporting," Recreation Use was "Not Assessed," and Fish Consumption was "Fully Supporting." Finally, the Draft 2024 IWQR 305(b) cycle assessment determined that Aquatic Life Attainment Use was "Not Supporting," Recreation Use was "Not Assessed," and Fish Consumption was "Insufficient Information."

During construction, the proposed action will include a Storm Water Pollution Prevention Plan with various BMPs for controlling stormwater and any potential spills. A Discharge of Stormwater and Dewatering Wastewater Associated with Construction Activities – General Permit Registration will also be obtained. Compliance with the

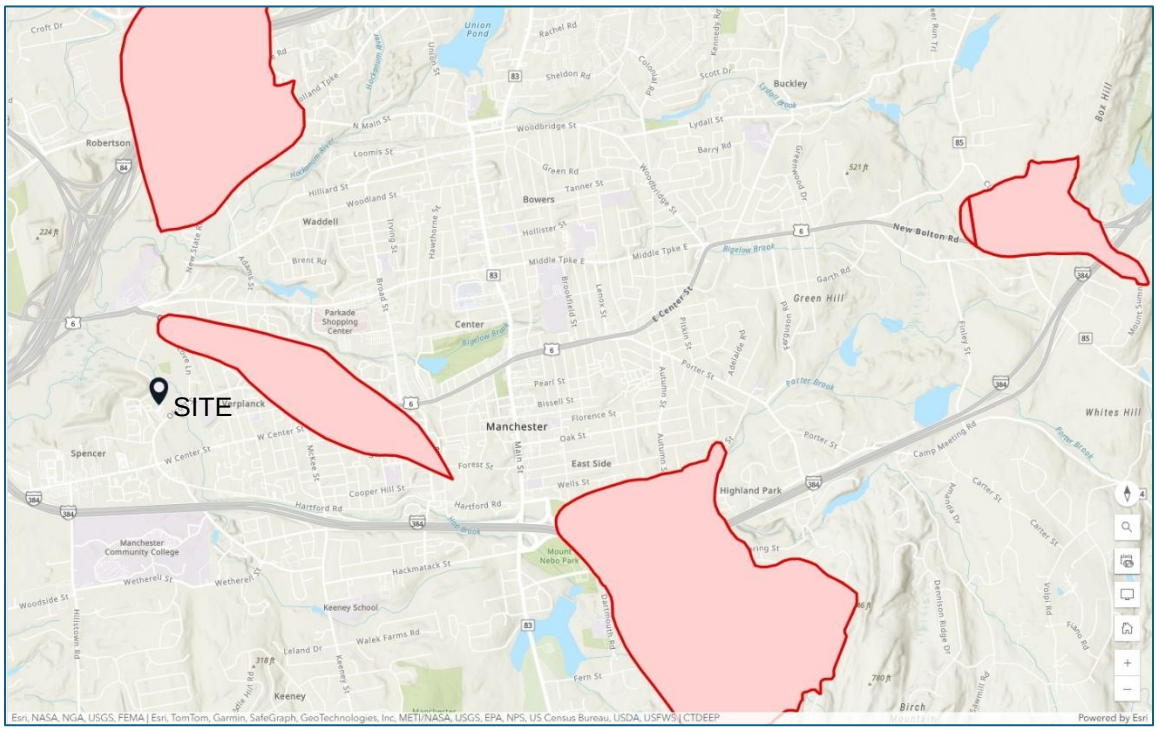
requirements and conditions of the Individual NPDES Wastewater Permit for Discharge of Leachate or Co-Mingled Stormwater during the operations phase of the proposed action will ensure that storm water run-off impacts from the proposed action will be less than significant. This project will include stormwater controls to be added to the site, which will be beneficial for the adjacent segment of the Hockanum River South Fork (Hop Brook/Folly Brook). Based on this, short-term and long-term impacts from the proposed action to surface waters and water quality are anticipated to be less than significant.

Estuaries: No estuaries are located in close proximity to the site of the proposed action.

Freshwater Lakes and Reservoirs: No freshwater lakes or reservoirs are located in close proximity to the site of the proposed action. The closest such body of water is Center Spring Park Pond, approximately 1.35 miles east of the site of the proposed action.

Wild and Scenic Rivers: National Wild and Scenic Rivers System mapping shows that the project area contains no wild and scenic rivers.

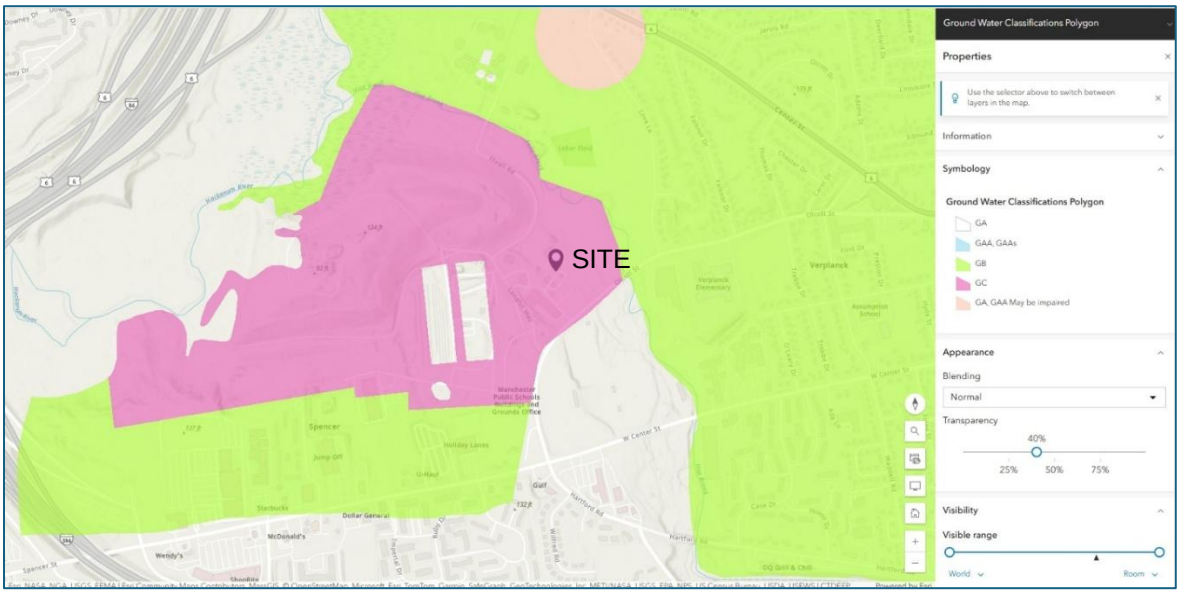
Aquifers: According to the state's Aquifer Protection Area Map, there are four (4) Level A aquifer protection areas identified within the Town of Manchester; however, none of the



four areas intersect the site of the proposed action. Surficial aquifer potential mapping

indicates that the site of the proposed action is categorized as “Coarse-Grained Deposits, 50-100,” “Coarse-Grained Deposits, 100-200,” and “Other Stratified Drift Deposits.” While roughly half of the site area of the proposed action is classified as Other Stratified Drift Deposits, which are akin to Other Glacial Meltwater Deposits with lower potential water supply yield, and has limited aquifer potential, the half of the site area that is comprised of course-grained deposits is an area that could have relatively high yield potential for water supply development.

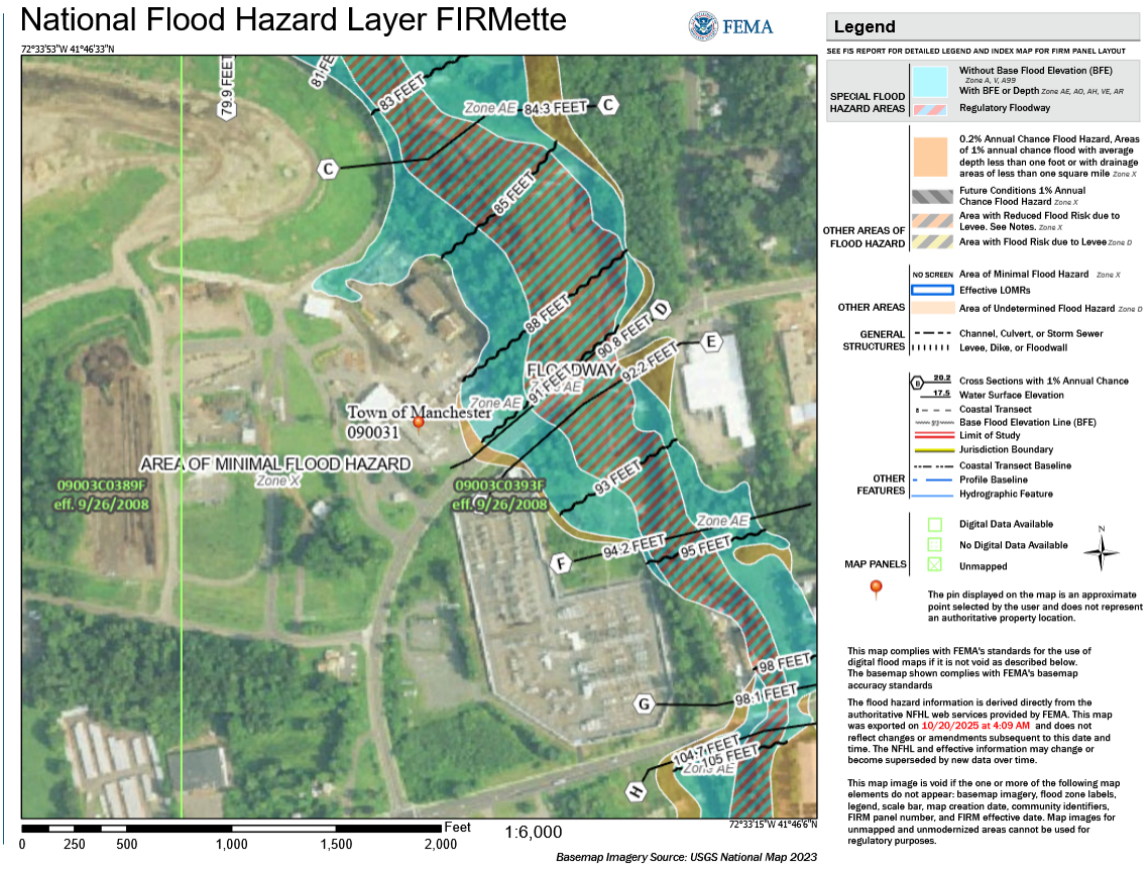
Despite the presence of surficial sediment types overlying bedrock that might lend themselves to aquifer development, the present and past use of the site of the proposed action for heavy institutional/industrial operations. In addition, the ground water classification for the site of the proposed action is “GC,” which is indicative of an area where the primary designated use is for the assimilation of permitted discharges and are not suitable for drinking water. These areas are typically sites of permitted waste disposal, such as landfills. As such, the site does not have potential as an aquifer area. Furthermore, since the proposed action has access to public water service infrastructure, it is not anticipated to result in increased demand for existing potable groundwater supplies.



Wetlands: The site of the proposed action does not include any inland wetland soils or delineated wetland areas. However, wetland areas are found immediately adjacent to the site of the proposed action to the east and the north. Although not directly impacting inland wetlands, implementation of the proposed action should include adequate BMPs to prevent stormwater runoff and soil erosion and sedimentation that could travel offsite into these wetland areas with potentially negative impacts to flora, fauna, and ecosystem components.

Coastal Area Management: The site of the proposed action is not located within a Coastal Area Management zone or within a Coastal Area Boundary.

Floodplains: The Federal Emergency Management Agency (FEMA) Q3 Flood zone data shown on FIRM Panel number 09003C0393F indicates that a portion of the site of the proposed action intersects with an AE Zone designation with an identified Base Flood Elevation (BFE) of 85 feet. This AE Zone area is not located within the regulatory floodway area. The area of the site in question is on the north side of the existing DPW salt barn, which is one of two possible locations for the project's proposed aerated static pile (ASP) composting operation. An AE Zone designation identifies an area as a high-risk flood zone subject to inundation by the 1% annual chance flood (100-year floodplain) with a specific Base Flood Elevation (BFE) identified. Properties in AE Zones require mandatory flood insurance for federally backed mortgages and must follow strict building standards, such as elevating structures above the BFE, to be protected against flood damage.



In general, state agencies cannot conduct or fund any activity in a floodplain without first obtaining a Flood Management Certificate or an exemption from the Commissioner of DEEP. Any project receiving a certificate must demonstrate that it will not increase flood elevations, obstruct flood flows, or pose a hazard to property or life during a flood.

For state-administered grant programs, recipients must adhere to the state's Flood Management Program rules, including elevation standards.

An initial discussion between the Town of Manchester and DEEP technical staff at a Pre-Application Meeting explored the issue of a possible discrepancy on the FEMA maps regarding inaccurate elevations and how to proceed. Based upon the current FIRM map, since state funding will be used to implement the proposed action, a Flood Management Certificate may be needed for the construction of the food waste processing and composting facility at the proposed location.

Overall, the proposed action avoids impacting water resources to the maximum extent practical. The implementation of BMPs will include measures to reduce or eliminate sedimentation and manage stormwater at the site. Therefore, any impacts resulting from the proposed action are anticipated to be short-term and less than significant.

4.8 Biological Resources

Impacts to biological resources resulting from the proposed action are anticipated to be less than significant and further mitigated through the implementation and use of BMPs and SOPs, appropriate construction phasing/timing, and site design measures. The subsections below discuss specific potential impacts for various components of the site area's biological resources.

Vegetation/Flora: As the site of the proposed action is in active use, implementation of the proposed action would include very limited to no removal of trees and brush as the site is generally clear of vegetation. The proposed action will not likely cause disturbance to vegetation beyond the project site boundaries, and no protected species of vegetation have been identified on the site.

Wildlife/Fauna: A report generated through the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) website identified that there are no migratory birds with potential to occur in the project area. Since the project site is relatively small and has been disturbed previously, no impacts to migratory birds or their nesting sites are anticipated.

Rare, Threatened and Endangered Species: The State Natural Diversity Data Base (NDDB) map for the Town of Manchester shows the site of the proposed action and its proximity to areas where state and federal listed species and significant natural communities may exist. No impacts to these species by the proposed action are expected as the project activities are not expected to impact any areas where such species have been identified. In addition, an NDDB request was submitted as part of the preparation of this EIE, and an approval letter was obtained and is attached in the Appendix of this EIE. The NDDB approval letter indicated that two (2) species of concern, the Spotted Turtle and the Wood Turtle, have been documented within the project area or in close proximity to the site of the proposed action. A series of specific

recommended Best Management Practices (BMPs) were identified in the approval letter that would ensure that any impacts from the proposed action would be not significant to these species. If the proposed impacted area is altered during design, DEEP/NDDB program staff would be consulted for additional measures that may be necessary to provide the required protection for these species.

The construction of the proposed food waste processing and composting facility would not occur on the habitat of nor impact any endangered or threatened species, and there is no designated critical habitat within the project area. According to the National Marine Fisheries Service's (NMFS) Marine Mammal Species Range and Critical Habitat Mapper, no Critical Habitat was mapped that would be directly affected by the proposed action. The NMFS Essential Fish Habitat mapper determined that there are no essential fish habitats in the project area. for the following species:

The proposed action would have no effect on essential fish or shellfish habitat provided that stormwater runoff is properly managed through adherence to the requirements of the Discharge of Stormwater Associated with Commercial Activity – General Permit Registration and the Discharge of Stormwater and Dewatering Wastewater Associated with Construction Activities – General Permit Registration that will be required for the proposed action.

A report generated through the USFWS IPaC website identified that there are two (2) species potentially impacted that are listed as threatened, endangered, or candidate species in the area of the site of the proposed action. They are:

- Tricolored Bat (Proposed Endangered)
- Monarch Butterly (Proposed Threatened)

Additional information for each species from the USFWS is provided below:[4]

Tricolored Bat
The tricolored bat is a small insectivorous bat that is distinguished by its unique tricolored fur and often appears yellowish to nearly orange. The once common species is wide ranging across the eastern and central United States and portions of southern Canada, Mexico and Central America. During the winter, tricolored bats are often found in caves and abandoned mines, although in the southern United States, where caves are sparse, tricolored bats are often found roosting in road-associated culverts where they exhibit shorter torpor bouts and forage during warm nights. During the spring, summer, and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves of live or recently dead deciduous hardwood trees, but may also be found in Spanish moss, pine trees, and occasionally human structures.

[4] The three subsequent paragraphs are provided from the USFWS website at https://ipac.ecosphere.fws.gov/location/YFJBIBDI7VCGPIEIPW7XCYBWS4/resources.

Tricolored bats face extinction due primarily to the range-wide impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. White-nose syndrome has caused estimated declines of more than 90 percent in affected tricolored bat colonies across the majority of the species' range. To address the growing threat of white-nose syndrome to the tricolored bat and other bats across North America, the U.S. Fish and Wildlife Service is leading the White-nose Syndrome National Response Team, a coordinated effort of more than 150 non-governmental organizations, institutions, Tribes, and state and federal agencies. Together they are conducting critical white-nose syndrome research and developing management strategies to minimize impacts of the disease and recover affected bat populations.

Monarch Butterfly

Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. The black border has a double row of white spots, present on the upper side of the wings. Adult monarchs are sexually dimorphic, with males having narrower wing venation and scent patches. The bright coloring of a monarch serves as a warning to predators that eating them can be toxic.

During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily Asclepias spp.), and larvae emerge after two to five days. Larvae develop through five larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic chemicals (cardenolides) as a defense against predators. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately two to five weeks; overwintering adults enter into reproductive diapause (suspended reproduction) and live six to nine months.

In many regions where monarchs are present, monarchs breed year-round. Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migration, and live for an extended period of time. In the fall, in both eastern and western North America, monarchs begin migrating to their respective overwintering sites. This migration can take monarchs distances of over 3,000 km and last for over two months. In early spring (February-March), surviving monarchs break diapause and mate at the overwintering sites before dispersing. The same individuals that undertook the initial southward migration begin flying back through the breeding grounds and their offspring start the cycle of generational migration over again.

The proposed action will involve minimal or no removal of trees or brush within the approximately 5.5 acres of site disturbance for construction of the proposed food waste processing and composting facility. Given the small relative size of the site area and the significant prior disturbance of the site, it is not expected that significant potential habitat for any of the two identified species of concern will occur. The IPaC

report also indicates that there are no critical habitats that intersect the site of the proposed action. Therefore, the impacts from the proposed action on biological resources are anticipated to be minimal and less than significant.

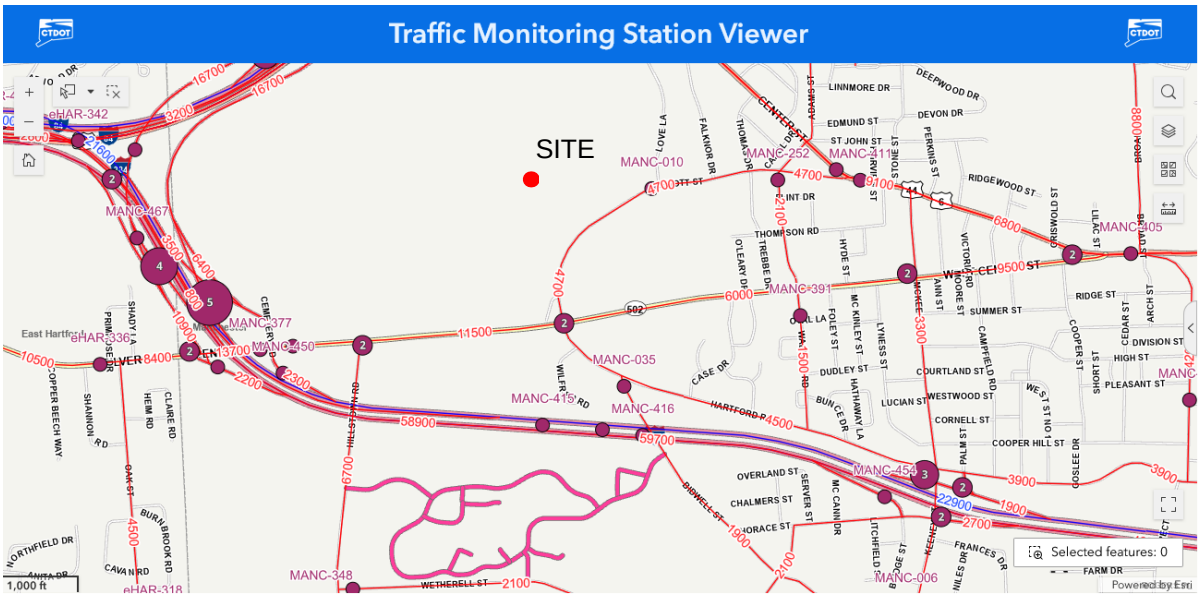
4.9 Hazardous and Toxic Materials and Waste

Construction activities associated with the proposed action could involve equipment that utilizes hazardous materials such as petroleum-based fuels and oil. Accidental spills of such materials are always a concern during construction work. The Town of Manchester will be responsible for ensuring that any contractors or subcontractors working on the site of the proposed action are properly maintaining construction vehicles and equipment, along with any hazardous and toxic materials used in their operation, per applicable state and federal laws and regulations. This responsibility further extends to any disposal of hazardous waste generated as part of the construction phase and operational phase of the proposed action, and the requirement that all such materials and wastes be handled according to safety data sheet instructions. The implementation and use of BMPs and standard operating procedures for preventing and responding to spills and contamination, impacts are anticipated to be less than significant. In addition, the operation of the compost facility is not expected to generate any significant hazardous waste or toxic materials.

4.10 Transportation Resources

Access to the site of the proposed action is provided by way of Olcott Street, a local road that connects US Route 6/US Route 44 to the north and east with Spencer Street (SR502) to the south and west. According to CTDOT's most recent traffic data for Manchester from 2021, the segment of Olcott Street that runs past the site of the proposed action experiences approximately 4,700 average daily trips (ADT).[5] Given this level of existing traffic, the relatively small size of the proposed food waste processing and composting facility, and the significant amount of truck traffic already accessing the adjacent Manchester Landfill, impacts to the traffic levels and roadway system connecting the site of the proposed action to the regional transportation network are expected to be less than significant.

[5] https://portal.ct.gov/dot/travel-gateway/roads-and-highways/traffic-monitoring-data/traffic-monitoring?language=en_US



Presently, CT Transit does not operate any bus routes that utilize the portion of Olcott Street that is adjacent to the site of the proposed action. The 83 Silver Lane route provides service along Spencer Street to the south and west of the site of the proposed action. CT *fasttrak* also offers regional bus service on its 121 CT State Manchester/Hartford/UConn Health route along Spencer Street just to the west of the site of the proposed action. miles north of the site of the proposed action. Given the characteristics of the proposed action, impacts to the regional mass transit system are expected to be less than significant.

4.11 Community Services and Utility Resources

The proposed action will not require new infrastructure to be constructed at, or connecting to, the site. Roads and utilities will extend from existing rights-of-way adjacent to the site. There are no anticipated interruptions in service to residents in the surrounding area that will occur during construction. The proposed action will not impact community services or utilities in the immediate area. The project will not cause an increase in monthly service rates for public utilities. The proposed action will not impact recreational and park resources, nor will it impact other general local governmental functions or services. Given these findings, impacts on community services and utility resources as a result of the proposed action are expected to be less than significant.

4.12 Environmental Justice

The site of the proposed action is located in Census Tract 5151.02, Block Group 3, where 30.13% of the population is living below 200% of the federal poverty level. The Town of Manchester itself is not identified as an Environmental Justice Distressed Municipality. Currently, the Town of Manchester is home to one (1) "Affecting Facility" –

the Manchester Landfill, which as discussed previously is directly adjacent to the site of the proposed action.

Affecting Facilities are these facilities defined in section 22a-20a of the Connecticut General Statutes (CGS) as any facility that falls under at least one of the following categories:

(A) electric generating facility with a capacity of more than 10 megawatts;

(B) sludge or solid waste incinerator or combustor;

(C) sewage treatment plant with a capacity of more than 50 million gallons per day;

(D) intermediate processing center, volume reduction facility or multitown recycling facility with a combined monthly volume in excess of 25 tons;

(E) new or expanded landfill, including, but not limited to, a landfill that contains ash, construction and demolition debris or solid waste;

(F) medical waste incinerator; or

(G) major source of air pollution, as defined by the federal Clean Air Act.

Since some components of the proposed action meet the definition of an "Affecting Facility" and the site of the proposed action is located within a census block group where 30% of the population is living below 200% of the federal poverty level, potential impacts on an Environmental Justice Community must be considered. The proposed action will require implementation of an approved Environmental Justice Participation Plan. Once a Public Participation Plan is issued tentative approval by DEEP, the applicant will hold an informational meeting in the community and submit a summary report on the meeting and how concerns raised at the meeting will be addressed. If requested by 25 or more people, a public hearing on the plan will be required. All DEEP bureaus and divisions such as the Waste Engineering and Enforcement Division (WEED) are not permitted to take any agency action (including taking sufficiency review of applications) for 60 days after the informational meeting.

The Town has indicated a commitment to environmental justice and will develop and implement an environmental justice public participation plan following Connecticut General Statute 22a-20a and DEEP's current guidance. The goal of this plan will be to seek meaningful public participation on the proposed project. The public participation plan will identify:

- Proposed new or expanded activities, including location, operations, traffic, traffic patterns, and operating hours

- Potential environmental and health impacts
- Permits and/or authorizations needed
- Efforts to mitigate the potential environmental and health impacts
- Pollution control measures to be implemented
- Proximity to sensitive receptors
- The potentially impacted communities
- Individuals and groups to be notified of the proposed activities
- Proposed outreach efforts
- The date, time, and place of an informal public meeting
- Communication methods for the informal public meeting

Manchester will seek input and concerns from the community and conduct meaningful review and consideration of the issues raised. The Town will respond to questions and concerns raised and document all actions in an environmental justice report. As appropriate, the Town will address concerns via modifications to the plans, mitigation efforts, and/or control measures.

4.13 Discussion of Committed Resources

The implementation of the proposed action will consume nonrenewable resources during the construction of the food waste processing and composting facility (i.e., construction supplies, fuel, etc.), which are considered irreversibly and irretrievably committed. Additionally, the irreversible and irretrievable expenditure of $4,775,000 is expected for the construction of the proposed composting facility. After construction, maintenance and labor resources will be required long-term to operate and maintain the facility. There will be no irreversible or irretrievable impact to wild and scenic rivers, coastal zone management, endangered species, aesthetics, traffic, noise, air quality, water quality/quantity, or the above-referenced resources.

4.14 Mitigation Measures for Potential Adverse Impacts

The following mitigation measures are recommended for implementation to address any potential adverse impacts from the establishment and operation of the proposed action, based upon the analysis conducted in this EIE:

- In order to mitigate any potential impacts from odors, effective odor control must be included in the proposed action, involving a combination of preventative and treatment measures:
    - Optimizing the Composting Process:
        - Maintaining proper carbon-to-nitrogen ratios to ensure efficient decomposition and minimize the release of nitrogen-based odors.
        - Adequate aeration to ensure aerobic conditions, preventing the accumulation of foul-smelling compounds that thrive in anaerobic environments.

        - Controlling moisture levels to optimize microbial activity and prevent both excessively wet and excessively dry conditions.
        - Regulating pile temperature to maximize decomposition and minimize the volatilization of odorous compounds.

    - Feedstock Management:
        - Prompt processing of incoming feedstocks, particularly those with high odor potential, such as food waste or manure.
        - Mixing odorous materials with porous bulking agents like wood chips or leaves immediately upon arrival to promote aeration and reduce initial odor emissions.

    - Odor Treatment Technologies:
        - Biofilters: These systems use layers of porous materials (e.g., cured compost, shredded yard waste) to biologically degrade odor compounds in the exhaust air.
        - Biocovers: Applying a layer of mature compost over fresh composting piles can help adsorb and biologically degrade odors before they are released into the atmosphere.
        - Chemical Treatment: Oxidizing chemicals like hydrogen peroxide or potassium permanganate can be used to chemically neutralize odors, though careful application is needed to avoid harming beneficial microorganisms.
        - Enzymatic Catalysts and Neutralizers: These products aim to break down or mask odorous compounds, though independent research on their effectiveness varies.
        - High Carbon Wood Ash: Studies have shown that adding high carbon wood ash can significantly reduce odor emissions.

- During operation of the food waste processing and composting facility, the projected maximum noise level of 62.1 dBA would exceed the Town noise ordinance levels established for uses such as the proposed action by a small margin during daytime (7:00am-10:00pm) hours, and by a more sizable during nighttime hours. Therefore, in the facility design and construction process, the Town should require the inclusion of sufficient building and site noise mitigation measures to reduce noise by at least 1.1 dBAs during the daytime hours. If the facility is planned for 24 hour per day use, the inclusion of sufficient building and site noise mitigation measures to reduce noise by at least 11.1 dBAs should be required. Alternatively, the operation could be required to only operate during the times of 7:00am to 10:00pm daily.

- Compliance with the required Storm Water Pollution Prevention Plan and its associated BMPs, as well as with the Discharge of Stormwater Associated with Commercial Activity – General Permit Registration, during the operations phase of

the proposed action must occur to mitigate any potential impacts to surface water, water quality, fish and marine life, estuaries, and soil resources.

- Erosion occurring after construction prior to site stabilization may require the implementation of BMPs such as seeding or planting stabilizing vegetation after disturbance, and silt fencing.

- The NDDB approval letter obtained as part of this EIE indicated that two (2) species of concern, the Spotted Turtle and the Wood Turtle, have been documented within the project area or in close proximity to the site of the proposed action. A series of specific recommended Best Management Practices (BMPs) were identified in the approval letter that would ensure that any impacts from the proposed action would be not significant to these species. These BMPs are included as part of the Appendix attached hereto, and should be incorporated into the project design, construction and operational processes.

Adverse impacts related to construction activities will be short-term and can be mitigated to a large extent by including proper control measures in all construction contract documents, and enforcing said requirements as well as any permit conditions and requirements. Control measures may include: control of dust pollution by wetting the ground surface periodically to reduce dust dispersion; requiring a traffic control plan to re-route traffic in the impacted areas to minimize traffic disruption, particularly the traffic flowing in and out of the Manchester Landfill; appropriate signage and traffic control personnel to route traffic in the impacted areas; and minimization of erosion through the use of hay bales and silt fences in strategic areas, such as around storm drains and the boundaries of the project site. In addition, the following mitigation measures have been identified:

- In order to mitigate any potential impacts to air quality, all construction equipment must have appropriate emission controls. Contractors working on the project must implement appropriate best management practices to reduce construction impacts, including reducing vehicle speeds and adhering to anti-idling requirements.

- In order to mitigate any potential impacts from noise, construction activities should be limited to between 7:00am and 10:00pm in compliance with the Town of Manchester's noise ordinance.

- In order to mitigate any potential impacts from soil erosion, excavation, site grading, and/or the removal of trees and vegetation, contractors must utilize erosion control BMPs such as the use or installation of sandbags, silt fences, earthen berms, fiber rolls, sediment traps, and/or erosion control blankets.

- The proposed action must include a Storm Water Pollution Prevention Plan with various BMPs for controlling stormwater and any potential hazardous materials spills. Compliance with the requirements and conditions of the Construction General Permit for Storm Water Discharges for Large and Small Construction Activities must occur so that storm water run-off impacts from the proposed action will be less than significant.

- In order to mitigate any potential impacts to biological resources, the Town of Manchester and its subcontractors must utilize site design, timing of construction activities, and implementation of best management practices and standard operating procedures (SOPs) to minimize noise, traffic, and natural landscape disturbance to the greatest extent feasible.

5.0 Comments Received Pursuant to RSCA Section 22a-1a-6

On May 20, 2025, the Connecticut Department of Energy and Environmental Protection (DEEP) published a Notice of Scoping in the Environmental Monitor to solicit comments for the proposed Regional Composting Facility and Recycling Infrastructure project in Manchester, CT. No comments were received during the public comment period.

APPENDIX

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

Generated by eNDDB on:
10/9/2025

Michael Looney
Looney
79 Elm St
Hartford, CT 06106
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Subject: Regional Composting Facility and Recycling Infrastructure
Filing # 134096
NDDB – New Determination Number: 202507624
263 OLCOTT ST
MANCHESTER

Expiration Date: 10/9/2027

Current data maintained by the Natural Diversity Database (NDDB) and housed in the DEEP ezFile portal indicates that populations of the following State Endangered, Threatened, or Special Concern species (RCA Sec. 26-306) have been documented within the project area or in close proximity to the proposed Building and Infrastructure Development (including stormwater discharge associate with construction)/New Commercial, Industrial, Governmental, Regional Composting Facility and Recycling Infrastructure.

Spotted turtle (*Clemmys guttata*)
Wood turtle (*Glyptemys insculpta*)

In accordance with the project information provided in your request submittal, implementation of the following Best Management Practices will avoid negative impacts to listed species:

Common Name	Spotted turtle
Scientific Name	*Clemmys guttata*
Taxa	reptile
Status[1]	SC
General Ecology	Individuals of this species are associated with wetlands and vernal pools. Over the course of a season and lifetime, individuals will travel large distances (up to 1km) over upland forest and fields between multiple wetlands. They overwinter burrowed into the mud in wetlands between Nov 1- March 15. They do not begin to reproduce until 7-10 years old and adults can live at least 30 years. This species is threatened most by any activities that reduce adult survivorship including road kills, commercial and casual collection, increased predation in areas around commercial and residential development, mortality and injury from agricultural equipment or other mechanical equipment.
Best Management Practice	**Female turtles looking for nesting habitat are frequently killed by vehicles when crossing roads. These turtles of reproductive age are the most valuable individuals in**

	the population to maintain population persistence. Highways with high traffic are impenetrable barriers that isolate populations **• Culverts/Crossings: Should be avoided. When necessary it is critical that the culvert or bridge allow turtles to pass underneath (i.e. it is not perched) and the road surface and side slope will not mimic sandy nesting areas for females.** **• High traffic road surfaces and high traffic facilities (>100 vehicle/lane/day, 5-10 cars per hour) should use curbs and fencing to deflect animals off into wildlife underpasses or around high traffic areas.** **• Low traffic road surfaces should (rate) should use Cape Cod-style curbing or no curb alternatives to allow animals to cross road unimpeded.** **• Cluster development to reduce the amount of roadway needed and place housing as far from high use areas as possible.** **• Do not use road surfaces and side slopes that will mimic sandy nesting areas for females.** **Work with biologists to plan your development to protect (buffer) and connect critical habitat. Presence of bird seed, pet food, and garbage in and around residential areas can increase the threat of predators. Predation activity from species like raccoons and skunks can destroy the majority of this species reproductive output each year.** **Land disturbance activities need to consider local habitat features and apply fencing and/or time of year restrictions as appropriate. We recommend you consult with a herpetologist familiar with preferred habitats to assist you with proper techniques to ensure the best protection strategies are employed for your site and the scope of your project.** **• Land disturbance and excavation confined to the upland can be done without risk for impact if work is restricted to the dormant season (November 1- March 15).** **If land disturbance activity will include significant areas within and around wetlands, you will need to take precautions to avoid impacting hibernating adults. Consult with a qualified herpetologist to assess your work impact zone for the potential to impact overwintering spotted turtle.** **• Do not conduct land disturbance activities that will impact suitable overwintering wetland habitat during the turtle's dormant period (November 1- March 15).** **To prevent turtle access and entry into your upland work zone between March 16-October 31:** **• Exclusionary practices will be required to prevent any turtle access into construction areas. These measures will need to be installed at the limits of disturbance as shown on the plans, or be specifically designated by a qualified herpetologist.** **• Exclusionary fencing be at least 20 inches tall and must be secured to and remain in contact with the ground and be regularly maintained (at least bi-weekly and after major weather events) to secure any gaps or openings at ground level that may let animal pass through.** **• Prior to construction, all turtles occurring within fencing work area will be relocated to suitable habitat outside disturbance area. This should be performed by a qualified professional familiar with habitat requirements and behavior of the species.** **• The Contractor must search the work area each morning prior to any work being done.** **• All construction personnel working within the turtle habitat must be apprised of the**

	species description and the possible presence of a listed species. **• Any turtles encountered within the immediate work area shall be carefully moved to an adjacent area outside of the excluded area and fencing should be inspected to identify and remove access point. These animals are protected by law and no turtles should be relocated from the site.** **• In areas where silt fence is used for exclusion, it shall be removed as soon as the area is stable to allow for reptile and amphibian passage to resume.** **• Special precautions must be taken to avoid degradation of wetland habitats including any wet meadows and seasonal vernal pools.** **If land disturbance will occur in potential nesting areas designated by a qualified herpetologist, you will need to take precautions to prevent female turtles from entering work area and setting up nests. This fencing would need to be in place before May 15. Potential nesting areas may include open fields, early successional habitat, sandy open patches nearby wetland features, and sandy roads and roadsides.**
Common Name	Wood turtle
Scientific Name	*Glyptemys insculpta*
Taxa	reptile
Status[1]	SC
General Ecology	Individuals of this species are riverine and riparian obligates, overwintering and mating in clear, cold, primarily sand-gravel and rock bottomed streams and foraging in riparian zones, fields and upland forests during the late spring and summer. They hibernate in the banks of the river in submerged tree roots between November 1 and March 31. Their summer habitat focuses within 90m (300ft of rivers) and they regularly travel 300m (0.2 mile) from rivers during this time. During summer they seek out early successional habitat: pastures, old fields, woodlands, powerline cuts and railroad beds bordering or adjacent to streams and rivers. Their habitat in Connecticut is already severely threatened by fragmentation of riverine, instream, riparian, and upland habitats, but is exacerbated by heavy adult mortality from machinery, cars, and collection. This is compounded by the species late maturity, low reproductive potential, and high nest and hatchling depredation rates.
Best Management Practice	**Female turtles looking for nesting habitat are frequently killed by vehicles when crossing roads. These turtles of reproductive age are the most valuable individuals in the population to maintain population persistence. Highways with high traffic are impenetrable barriers that isolate populations** **• Culverts/Crossings: Should be avoided. When necessary it is critical that the culvert or bridge allow turtles to pass underneath (i.e. it is not perched) and the road surface and side slope will not mimic sandy nesting areas for females.** **• High traffic road surfaces and high traffic facilities (>100 vehicle/lane/day, 5-10 cars per hour) should use curbs and fencing to deflect animals off into wildlife underpasses or around high traffic areas.** **• Low traffic road surfaces should (rate) should use Cape Cod-style curbing or no curb alternatives to allow animals to cross road unimpeded.** **• Cluster development to reduce the amount of roadway needed and place housing as far from high use areas as possible.** **• Do not use road surfaces and side slopes that will mimic sandy nesting areas for females.** **Work with biologists to plan your development to protect (buffer) and connect critical habitat. Presence of bird seed, pet food, and garbage in and around residential areas can increase the threat of predators. Predation activity from species like raccoons and skunks can destroy the majority of this species reproductive output each year.**

	Recreational activities may increase incidental collection and impact nesting behavior, which both contribute to local turtle population decline. Most often turtles collected are adult females traveling to and from nesting. These turtles of reproductive age are the most valuable individuals in the population to maintain population persistence. Due to slow maturity and low reproductive success, even infrequent collection poses a long-term conservation problem. **• To avoid collection by the public, do not post signs alerting the public to the presence of this species.** **• Litter from recreation can pose a choking hazard. Ensure there is a plan for how garbage will be managed.** **• Work with biologists to plan your recreational area so that it minimizes the effect on this species.** **This species hibernates in the banks of streams and some nests are vulnerable to flooding.** **• Do not dewater streams during dormant period (November 1- April 1).** **• Do not alter stream volume, depth or water flow rates (i.e. there should be no sudden large water released into local streams as a temporary or permanent result of your project)** **• Do not alter water quality conditions of sandy streams including turbidity, temperature, and substrate.** **Any fragmentation of habitat within 300m (0.2mile) of occupied streams has been demonstrated to reduce wood turtle survival through crushing of turtles under cars or mowers, collection of turtles by public, introduced predators (raccoons, skunks, chipmunks etc) that increase with housing development. New development, increased traffic, new agricultural practice that will use motorized vehicles, new or enhance recreational trails, or other removal or fragmentation of habitat within 90m buffer of occupied streams will cause increased adult mortality.** **• Where possible do not increase recreational traffic through important stream and 90m buffer habitat.** **Land disturbance activities need to consider local habitat features and apply fencing and/or time of year restrictions as appropriate. We recommend you consult with a herpetologist familiar with preferred habitats to assist you with proper techniques to ensure the best protection strategies are employed for your site and the scope of your project.** **• Land disturbance and excavation confined to the upland can be done without risk for impact to wood turtle if work is restricted to the dormant season (November 1- March 31).** **If land disturbance activity will include significant areas within and around rivers and streams, you will need to take precautions to avoid impacting hibernating adults. Consult with a qualified herpetologist to assess your work impact zone for the potential to impact overwintering wood turtle.** **• Do not begin instream activity and bank disturbance in suitable overwintering habitat within a river or stream during the turtle's dormant period (November 1- March 31).** **To prevent turtle access and entry into your upland work zone between April 1- October 31:** **• Exclusionary practices will be required to prevent any turtle access into construction areas. These measures will need to be installed at the limits of**

	disturbance as shown on the plans, or be specifically designated by a qualified herpetologist. **• Exclusionary fencing be at least 20 inches tall and must be secured to and remain in contact with the ground and be regularly maintained (at least bi-weekly and after major weather events) to secure any gaps or openings at ground level that may let animal pass through.** **• Prior to construction, all turtles occurring within fencing work area will be relocated to suitable habitat outside disturbance area. This should be performed by a qualified professional familiar with habitat requirements and behavior of the species.** **• The Contractor must search the work area each morning prior to any work being done.** **• All construction personnel working within the turtle habitat must be apprised of the species description and the possible presence of a listed species.** **• Any turtles encountered within the immediate work area shall be carefully moved to an adjacent area outside of the excluded area and fencing should be inspected to identify and remove access point. These animals are protected by law and no turtles should be relocated from the site.** **• In areas where silt fence is used for exclusion, it shall be removed as soon as the area is stable to allow for reptile and amphibian passage to resume.** **• Special precautions must be taken to avoid degradation of wetland habitats including any wet meadows and seasonal pools.** **If land disturbance will occur in potential nesting areas designated by a qualified herpetologist, you will need to take precautions to prevent female turtles from entering work area and setting up nests. This fencing would need to be in place before May 15. Potential nesting areas may include open fields, early successional habitat, sandy open patches nearby wetland features, and sandy roads and roadsides.**

[1]E = State Endangered, T = State Threatened, SC = State Special Concern, FE = Federally Endangered, FT = Federally Threatened, NA = Not applicable.

Your submission information indicates that your project requires a state permit, license, registration, or authorization, or utilizes state funding or involves state agency action. This NDDB – New determination may be utilized to fulfill the Endangered and Threatened Species requirements for state-issued permit applications, licenses, registration submissions, and authorizations.

Please be aware of the following limitations and conditions:

Natural Diversity Database information includes all information regarding listed species available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, land owners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as enhance existing data. Such new information is incorporated into the Database and accessed through the ezFile portal as it becomes available. New information may result in additional review, and new or modified restrictions or conditions may be necessary to remain in compliance with certain state permits.

- During your work listed species may be encountered on site. A report must be submitted by the observer to the Natural Diversity Database promptly and additional review and restrictions or conditions may be necessary to remain in compliance with certain state permits. Please fill out the appropriate survey form and follow the instructions for submittal.
- Your project involves the state permit application process or other state involvement, including state funding or state agency actions; please note that consultations with your permit analyst or the agency may result in modifications or additional requirements. In this situation, additional evaluation of the proposal by the DEEP Wildlife Division may be necessary and additional information, including but not limited to species-specific site surveys, may be required.
- If your project involves preparing an Environmental Impact Assessment, this NDDB consultation and determination should not be substituted for conducting biological field surveys assessing on-site habitat and species presence.
- This determination applies only to the project as described in the submission and summarized at the end of this letter. Please re-submit an updated Request for Review if the project's scope of work and/or timeframe changes, including if work has not begun by 10/9/2027.
- If biological surveys have been conducted in accordance with Best Management Practices provided, please forward a copy of the results to the address listed at the end of this letter. Include the Project Name and Determination Number on all correspondence.

The NDDB – New determination for the Regional Composting Facility and Recycling Infrastructure at 263 OLCOTT ST, MANCHESTER, as described in the submitted information and summarized at the end of this document is valid until 10/9/2027. This determination applies only to the project as described in the submission and summarized at the end of this letter. Please re-submit an updated Request for Review if the project's scope of work and/or timeframe changes, including if work has not begun by 10/9/2027.

This letter is computer generated and carries no signature. If however, any clarification is needed, or, if you have further questions, please contact the following:

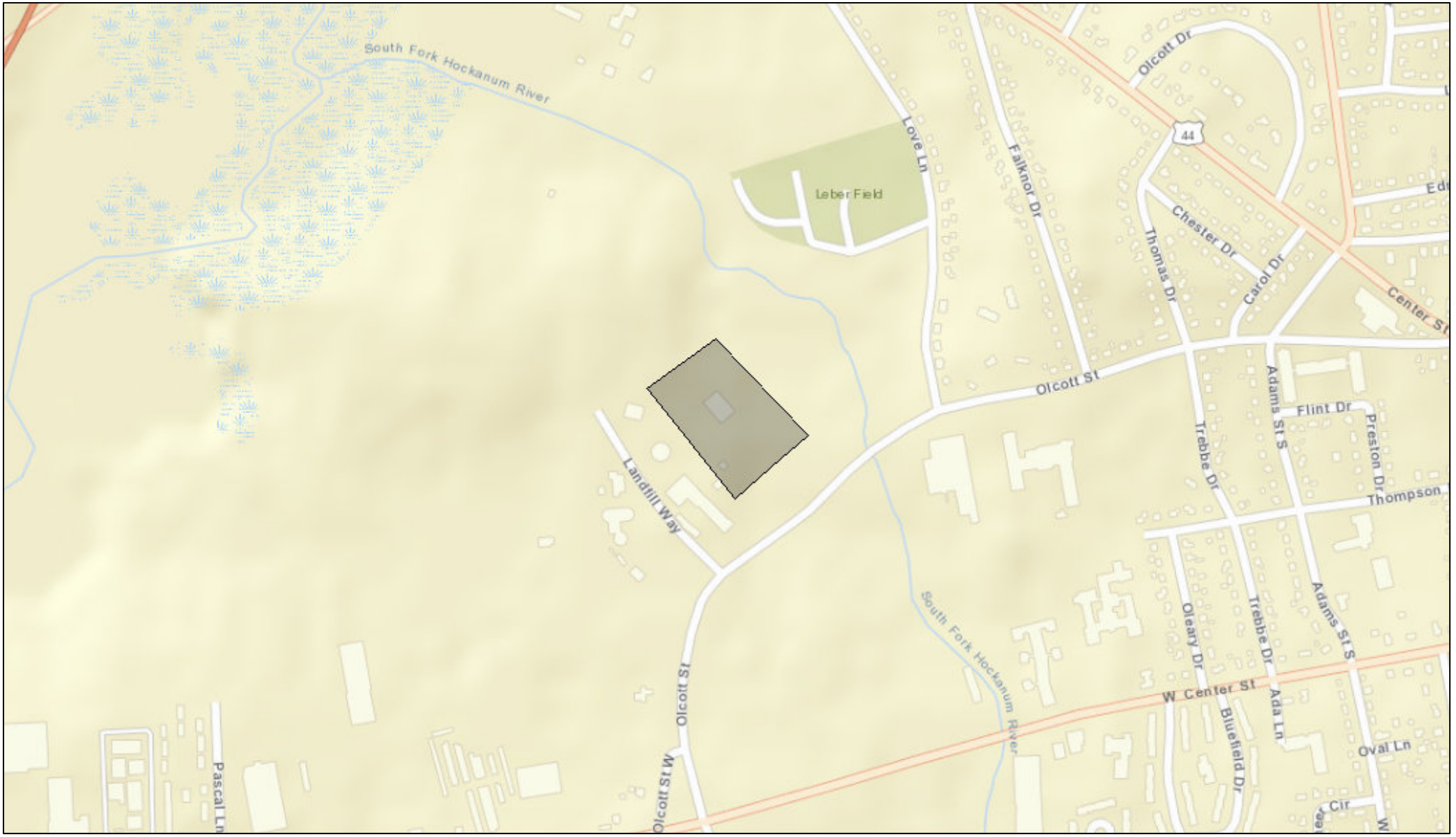
CT DEEP Bureau of Natural Resources
Wildlife Division
Natural Diversity Database, 6th floor
79 Elm Street,
Hartford, CT 06106-5127
(860) 424-3011
deep.nddbrequest@ct.gov

Please reference the Determination Number provided in this letter when you e-mail or write. Thank you for submitting your project through DEEP's ezFile portal for Natural Diversity Database reviews.

Application Details:

Project involves federal funds or federal permit:	No
Project involves state funds, state agency action, or relates to CEPA request:	Yes
Project requires state permit, license, registration, or authorization:	Yes
DEEP enforcement action related to project:	
Project Type:	Building and Infrastructure Development (including stormwater discharge associate with construction)
Project Sub-type:	New Commercial, Industrial, Governmental
Project Name:	Regional Composting Facility and Recycling Infrastructure
Project Description:	

Regional Composting Facility and Recycling Infrastructure Map



October 7, 2025

1:9,597

0 0.075 0.15 0.3 mi

0 0.125 0.25 0.5 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community