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Existing Burden Analysis

Prepared in accordance with
NYSDEC's Program Policy DEP 24-1:
Permitting and Disadvantaged
Communities

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Description	Existing burden analysis using NYSDEC DEP 24-1 and the NYSDA Disadvantaged Communities Map to evaluate potential impacts of the proposed Camp Oraysa expansion (sewage treatment plant capacity increase and bunkhouse construction), including assessment of environmental and health indicators, construction-related effects, wastewater, air, traffic, and odor impacts, and quantification of direct and indirect GHG emissions.

EXISTING BURDEN ANALYSIS

1. Introduction

Pursuant to N.Y. Env. Conser. L. § 70-0118 and the New York State Department of Environmental Conservation's (NYSDEC) April 25, 2025, letter to Congregation Oraysa, an existing burden analysis¹ was performed to identify whether disproportionate, adverse environmental effects, if any, from the proposed Congregation Oraysa Expansion ("the Project") at Camp Oraysa can be avoided, minimized, or mitigated. Per the direction of the NYSDEC, this analysis was performed in accordance with NYSDEC Division of Environmental Permits (DEP) Program Policy 24-1,² utilizing the New York State Energy Research and Development Authority's (NYSERDA) Disadvantaged Communities Map.³

This existing burden analysis is focused on assessing the potential impacts of the Project. Because the baseline NYSERDA Disadvantaged Communities Map results do not account for the Project's proposed expansion, this analysis also qualitatively discusses the potential cumulative impacts on the surrounding community following implementation of the Project. Accordingly, potential impacts from the Project are considered and assessed.

This technical memorandum documenting the existing burden analysis is intended to provide the necessary documentation supporting the Environmental Justice Siting Law (EJSL) – Environmental Assessment Form (EAF) Supplemental Information specific to Disadvantaged Communities (DACs), Part 1, Section E.4, subsections a through c. Additionally, this analysis presents information supporting completion of EAF, Part 1, Section D.2, subsection h, pertaining to the potential to generate or emit annual direct or indirect greenhouse gas (GHG) emissions.

2. Camp Oraysa Project Description

Camp Oraysa was built in the 1990's and is an overnight summer camp located at 228 Todd Road in Woodbourne, NY, and run by the non-profit Congregation Oraysa. The camp sits on 138 acres of rural land in Sullivan County, NY, and is in operation for two months out of the year. Camp Oraysa is located in the Catskills Mountains in an area known for its natural beauty and for hosting summer camps, summer hotels, and vacation homes, which are largely uninhabited outside of the summer season.

Camp Oraysa currently has a maximum capacity for 594 campers and staff. Wastewater is treated by an existing 8,000 gallon per day (gpd) sewage treatment plant (STP), which flows to an existing outfall (see **Figure 1**). To aid in the expansion of the camp, which would accommodate an additional 326 persons, Camp Oraysa is proposing to 1) construct additional bunkhouses and 2) increase the capacity of the STP to handle a total wastewater flow of 48,000 gpd, an increase of 40,000 gpd.

Bunkhouse Additions: Construction of the bunkhouses is intended to increase the camp's lodging capacity. The improvement would support the camp's operational growth while remaining consistent with the function and overall character of the existing site. Implementation of the expansion would require coordinated use of labor and equipment with early phases relying on temporary operation of

¹ We refer to this report as the "existing burden analysis report" and the analysis contained herein as the "existing burden analysis," consistent with N.Y. Env. Conser. L. § 7-0118.2 and NYSDEC's April 25, 2025, letter to Congregation Oraysa.

² NYSDEC. 2024. Program Policy DEP 24-1: Permitting and Disadvantaged Communities. Available at: <https://dec.ny.gov/sites/default/files/2024-05/prgrmpolicy24dash1.pdf>

³ NYSERDA. 2025. Disadvantaged Communities. Available at: <https://www.nyserda.ny.gov/ny/Disadvantaged-Communities>

heavy equipment (e.g., excavators, loaders). Under typical construction conditions, each bunkhouse is expected to be completed in fewer than 40 days, with use of heavy equipment not anticipated to exceed 19 days. Construction of up to five bunkhouses is anticipated, with construction planned to occur in phases. Temporary increases in vehicle activity, equipment use, noise, dust and localized emissions are further discussed in this document.

STP Expansion: The new treatment system will recirculate water through a sand filter before it is discharged at the same location as the existing outfall. Therefore, the two major STP-related changes associated with the Project are installation of a new treatment system that will operate in conjunction with the existing system and an increase in the total volume of treated wastewater discharged.

The existing (and proposed) outfall discharges in the vicinity of an undeveloped, wooded intermittent stream area located in a narrow wash found at an elevation of approximately 1,375 feet above mean sea level (amsl) between hillsides rising to an elevation of approximately 1,490 feet amsl.⁴ Camp Oraysa structures and nearest neighbors situated along Todd Road are found atop the surrounding hills, at elevations ranging from approximately 1,475 (camp) to 1,550 (neighbors) feet amsl. The camp and neighbors are situated 100 feet or more above the wash receiving the treated wastewater. During the summer season, the treated wastewater will flow downgradient via the narrow wash to an unnamed intermittent stream, which is part of a marsh system. The STP is being designed to meet intermittent stream standards,⁵ which are the most stringent standards for nutrients, solids, and other water quality parameters established by the state and as such are not expected to impact the existing wooded intermittent stream environment.

3. Approach for this Analysis

The existing burden analysis was conducted in five steps:

1. Define the study area and review NYSEDA's Disadvantaged Communities Map⁶ information specific to the study area.
2. Screen for potential impacts to identify existing burdens and vulnerabilities that may affect the community in the area surrounding the Project. In this analysis, the results of the NYSEDA Disadvantaged Communities Map are used to identify potential baseline environmental indicators present in the study area that reflect an elevated potential burden relative to other communities in the state.
3. Evaluate indicators identified as potential concerns in the context of known potential impacts of the Project to determine whether existing burdens may be further exacerbated.
4. Assess potentially relevant impact categories identified by NYSDEC or otherwise considered relevant to the Project.
5. Discuss the Project's potential to generate or emit GHG and co-pollutants.

3.1 Study Area Definition

Program Policy DEP 24-1 states that "at a minimum, the impact study area should be the area within a one-half mile of the facility" and further states, "distances beyond ½ mile may be appropriate where

⁴ See USGS topographic map for reference: <https://ngmdb.usgs.gov/topoview/viewer/#13/41.7810/-74.6284>

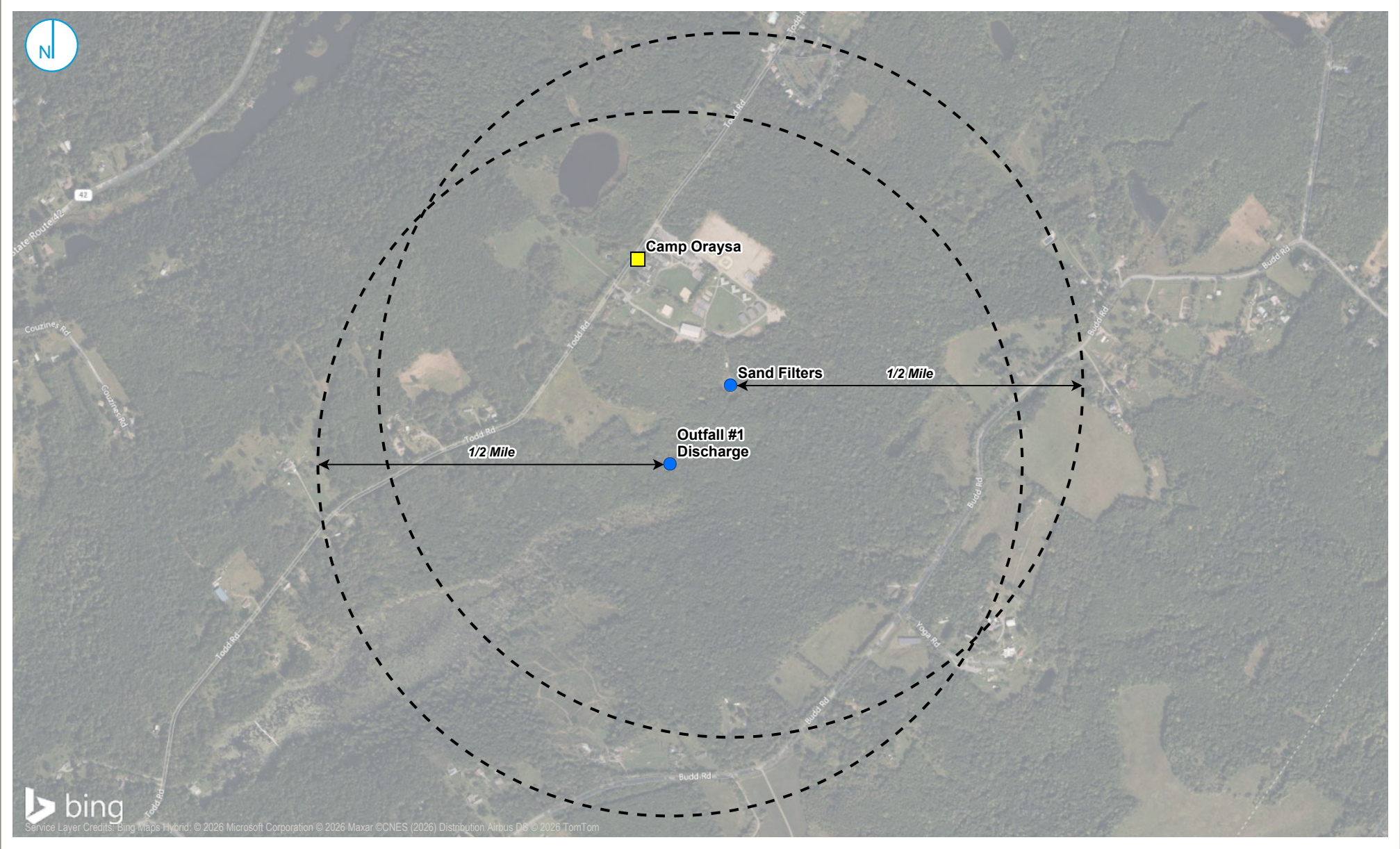
⁵ Standards typically vary by stream; specific numerical standards will be established by NYSDEC upon issuance of the STP discharge permit.

⁶ Ibid.

modeling of air impacts indicates a wider impact from the facility.”⁷ Because the Project involves an increase in wastewater discharge due to the expansion of the STP and temporary construction of additional bunkhouses, long-term air quality impacts are not expected, and the study area for this analysis is defined as a 1/2-mile radius surrounding two Project-related areas of interest at Camp Oraysa as shown in **Figure 1** and discussed below:

Figure 1 illustrates overlapping 1/2-mile buffers surrounding two primary areas of interest at Camp Oraysa: 1) Location of the Outfall 1 Discharge and 2) location of the sand filters. Both radii extend into developed properties along Todd Road. Two census tracts border the study area: 36105950800 and 36105951100. Both census tracts are in Sullivan County, New York and are part of the Mid-Hudson region. Camp Oraysa itself is located in census tract 36105950800, which is the census tract for the nearby hamlet Loch Sheldrake. The 1/2-mile buffers also border census tract 36105951100, which is the census tract for the nearby hamlets of Woodbourne and Mountain Dale. The total estimated population of these two tracts is 7,710; no significant residential areas lie within the study area.

⁷ NYSDEC. 2024. Program Policy DEP 24-1: Permitting and Disadvantaged Communities. Available at: <https://dec.ny.gov/sites/default/files/2024-05/prgrmpolicy24dash1.pdf>



**SAND FILTERS AND OUTFALL #1 DISCHARGE
AREA OF INTEREST**

FIGURE 01

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

3.2 NYSERDA Disadvantaged Communities Map Review

The NYSERDA Disadvantaged Communities Map is New York State’s tool for evaluating potential impacts to communities facing concerns related to disproportionate burdens. The mapping tool provides a consistent dataset and approach for assessing potential environmental impacts in vulnerable communities. The NYSERDA Disadvantaged Communities Map depicts DACs that were identified by New York’s Climate Justice Working Group (CJWG). The CJWG identified 35% of the census tracts in New York as a DAC using 45 indicators that encompass environmental burdens and climate change risk, population characteristics, and health vulnerabilities.⁸ The percentile rank of each of the 45 indicators is then combined into a single value for comparison to other communities within the entire state of New York, or one of the 10 regions of the state. Communities are analyzed at the census tract level.

Since 35% of New York is considered a DAC, this would correspond to the 65th percentile of communities, or individual indicators. Thus, for consistency with the methodologies used in the NYSERDA Disadvantaged Communities Map, this analysis assumes that individual indicators higher than the 65th percentile on a statewide scale are “elevated” and may indicate an existing burden. Elevated indicators, as well as non-elevated indicators directly related to the Project, are discussed further as part of this existing burden analysis.

4. Screening of Potential Impacts

Table 1 presents the environmental and population characteristic indicators considered by NYSERDA’s Disadvantaged Communities Mapping Tool. Because Camp Oraysa was built decades prior to development of the mapping tool, the data presented in the tool account for the presence and potential impacts already associated with the camp. Indicator scores for the census tracts associated with the Project and notes regarding whether the Project, expansion of the STP, could impact each indicator also are presented in the table.⁹ Indicator scores at the 65th percentile or greater are shaded, noting a need for additional discussion. Discussion of all indicators, including those below this threshold, is included in Sections 4.1 and 4.2, below.

As shown in **Table 1**, both census tracts within a ½-mile radius of Camp Oraysa, 36105950800 and 36105951100, are assigned scores greater than 65 by the state’s mapping tool and are considered DACs relative to the Mid-Hudson region, and census tract 36105950800 is designated as a DAC relative to the entire state. The basis for designation of the two census tracts located within the study area is due to population characteristics and health vulnerability indicators, e.g., poverty rate, premature death, and energy affordability. The environmental burden and climate change risk indicators do not largely influence the DAC designation for the study area. **Table 1** lists all population characteristics, all health vulnerability indicators, and all environmental burden and climate change risk indicators considered in calculating scores for DACs.

The following subsections discuss all indicators, including elevated indicators (those ranked at or above the 65th percentile within the state or region) and non-elevated indicators (those below that threshold). They also assess whether the Project is expected to affect each individual indicator. In this analysis, impacts are defined as adverse or beneficial health or environmental effects of the proposed Project at Camp Oraysa to the surrounding community. This includes cumulative impacts on the surrounding community that could result when impacts from the Project combine with existing burdens.

⁸ NYSERDA. 2024. New York State’s Disadvantaged Communities Criteria. Available at: <https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria>

⁹ NYSERDA. 2024. New York State’s Disadvantaged Communities Criteria. Available at: <https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria>

Disproportionate impacts are also considered and are defined as adverse impacts borne disproportionately on the basis of protected characteristics.

Table 1. Summary of Individual Indicators Available in NYSDA's Disadvantaged Communities Mapping Tool

Indicator	Percentile in Census Tract 36105950800 (Camp Oraysa)	Percentile in Census Tract 36105951100 (bordering tract)	Could Project Impact Individual Indicator?
Summary Indicators			
Combined Indicator Percentile (Statewide)	68	59	--
Combined Indicator Percentile (Mid-Hudson Region)	83	76	--
Environmental Burden and Climate Change Risk			
Benzene Air Concentration	9	15	Slight (short-term) ^a impact possible
Particulate Matter (2.5) Air Concentration	16	20	Slight (short-term) ^a impact possible
Diesel Trucks and Bus Traffic	11	3	Slight (short-term) ^a impact possible
Vehicle Traffic Density	9	3	Slight (short-term) ^a impact possible
Proximity to Wastewater Discharge	28	37	Slight impact possible
Housing Vacancy Rates	99	99	No impact
Industrial, Mining, and Manufacturing Land Use	52	28	No impact
Proximity to Active Landfills	0	0	No impact
Proximity to Major Oil Storage Facilities	0	0	No impact
Proximity to Municipal Waste Combustion	0	0	No impact
Proximity to Power Generation Facilities	0	0	No impact
Proximity to Risk Management Plan Sites	13	16	No impact
Proximity to Remediation Sites	57	0	No impact
Proximity to Scrap Metal Processing and Vehicle Dismantlers	0	75	No impact

Table 1. Summary of Individual Indicators Available in NYSERDA's Disadvantaged Communities Mapping Tool

Indicator	Percentile in Census Tract 36105950800 (Camp Oraysa)	Percentile in Census Tract 36105951100 (bordering tract)	Could Project Impact Individual Indicator?
Agricultural Land Use	56	43	No impact
Flooding in Coastal and Tidally Influenced Areas (Projected)	0	0	No impact
Projected Days Above 90 Degrees	52	60	No impact
Drive Time to Hospitals or Urgent/Critical Care	98	99	No impact
Flooding in Inland Areas (Projected)	41	27	No impact
Low Vegetative Cover	11	9	No impact
Population Characteristics and Vulnerability			
Asian and Asian American Population	18	31	No impact
Black or African American Population	47	78	No impact
Hispanic and Latino Population	70	73	No impact
Native American or Indigenous Population	70	79	No impact
Limited English Proficiency	32	31	No impact
Population Earning Less Than 80% of Area Median Income	59	34	No impact
Poverty Rate (Below 100% Federal Poverty Line)	73	53	No impact
Adults Without a Bachelor's Degree	59	92	No impact
Single Parent Households	77	84	No impact
Unemployment Rate	86	49	No impact
Asthma Emergency Department Visits	43	43	No impact
COPD Emergency Department Visits	54	54	No impact
Population With a Disability	97	64	No impact

Table 1. Summary of Individual Indicators Available in NYSERDA's Disadvantaged Communities Mapping Tool

Indicator	Percentile in Census Tract 36105950800 (Camp Oraysa)	Percentile in Census Tract 36105951100 (bordering tract)	Could Project Impact Individual Indicator?
Low Birth Weight Births	24	24	No impact
Heart Attack Hospitalization Rate	58	58	No impact
Percentage Without Health Insurance	50	55	No impact
Population Over Age 65	38	10	No impact
Premature Deaths	86	86	No impact
Households without Internet Access or Internet Subscription	56	49	No impact
Energy Affordability	98	99	No impact
Homes Built Before 1960	13	11	No impact
Manufactured and Mobile Homes	92	70	No impact
Rented Housing Units	33	44	No impact
Rental Housing Cost Burden	48	41	No impact
Notes a. Potential for short-term impacts only occurs during construction events of bunkhouses and/or STP expansion.			

4.1 Population Characteristics and Health Vulnerability Indicators

4.1.1 Elevated Indicators

Eleven population characteristics and vulnerability indicators were identified as potential existing burdens (i.e., are ranked at or above the 65th percentile for state or region) in at least one of the census tracts within the study area (**Table 1**). These include Black or African American Population; Hispanic and Latino Population; Native American or Indigenous Population; Poverty Rate (Below 100% Federal Poverty Line); Adults Without a Bachelor's Degree; Single Parent Households; Unemployment Rate; Population With a Disability; Premature Deaths; Energy Affordability; and Manufactured and Mobile Homes.

These indicators are the primary basis for the classification of census tracts near Camp Oraysa as DACs. Elevated indicators in this category indicate that the communities may be more susceptible or vulnerable to adverse environmental impacts relative to other communities. The Project is not expected to adversely impact the population characteristics identified as elevated in the state's mapping tool. The Project may beneficially impact the surrounding communities through the creation of additional, seasonal jobs.

4.1.2 Non-Elevated Indicators

Thirteen population characteristics and vulnerability indicators were not identified as elevated (i.e., are ranked below the 65th percentile for state or region), suggesting they do not present existing burdens in the two census tracts within the study area. These include: Asian and Asian American Population, Limited English Proficiency, Population Earning Less Than 80% of the Area Median Income; Asthma Emergency Department Visits; COPD Emergency Department Visits; Low Birth Weight Births; Heart Attack Hospitalization Rate; Percentage Without Health Insurance; Population Over Age 65; Households without Internet Access or Internet Subscription; Homes Built Before 1960; Rented Housing Units; and Rental Housing Cost Burden.

Table 1 lists the percentiles assigned by NYSEDA to each indicator. The indicator percentile scores show how a given indicator ranks compared to the entire state. As the DEC has explained,¹⁰ “a truck traffic indicator percentile score of 10% means that in that tract, 10% of the census tracts have estimated lower truck traffic and 90% of the census tracts have estimated higher truck traffic.”

The Project is not expected to adversely impact any of the above population characteristics. The Project may, however, beneficially impact the surrounding communities through the creation of additional, seasonal jobs.

4.2 Environmental Burden and Climate Change Risk Indicators

The indicators most relevant to the proposed Project (Wastewater Discharge; Benzene Air Concentration; Particulate Matter (2.5) Air Concentration; Diesel Trucks and Bus Traffic; and Vehicle Traffic Density) were not identified as potential existing burdens in either census tract near Camp Oraysa but are further assessed in later sections.

4.2.1 Elevated Indicators

Three existing environmental burden and climate change indicators were identified as elevated in at least one of the census tracts in the study area; a brief discussion is provided about each individual indicator as it relates to the Project:

- **Housing Vacancy Rate:** The housing vacancy rate is a measure of how many vacant housing units there are as a percentage of total housing units in a census tract. A higher housing vacancy rate can be associated with migration away from the community, which may indicate threats of climate risk, population displacement, and community disinvestment. However, seasonal housing is included in housing vacancy rates, which means that vacation homes, such as those in the Catskill Mountains, may be counted toward this indicator. The Project is unlikely to adversely impact the housing vacancy rate near Camp Oraysa since the activities associated with the Project solely involve the expansion of the STP and construction of up to five additional bunkhouses to be utilized during the summer season on Camp Oraysa property, for the exclusive use of Camp Oraysa.
- **Proximity to Scrap Metal Processing and Vehicle Dismantlers:** This indicator is a measure of distance to a processing and dismantling facility within the census tract. The only means to impact this specific indicator would be to expand or open a scrap metal processing facility or close an existing facility. Camp Oraysa is not a scrap metal processing plant; therefore, the Project will not impact this indicator.

¹⁰ NYSDEC. 2025. Disadvantaged Community Assessment Tool Methodology. Available at: <https://dec.ny.gov/sites/default/files/2025-01/part617risdactoolappa.pdf>

- **Drive Time to Hospitals or Urgent/Critical Care:** The drive time to hospitals or critical/urgent care indicator is based on the average travel time and distance within a census tract to the three nearest healthcare facilities. The Project and associated activities will not improve or increase the drive time to health care. Therefore, the Project will not impact this indicator.

Given that the Project is proposing to increase wastewater treatment capacity of an existing facility, the Project will not adversely impact or exacerbate the three environmental burden indicators identified as elevated in this screening analysis. Similarly, the addition of bunkhouses on the site is for private use to be occupied during operation and are not anticipated to impact the aforementioned indicators. In the absence of any adverse impact, there can therefore be no disproportionate adverse impacts, or cumulative adverse impacts, to the surrounding DACs.

4.2.2 Non-Elevated Indicators

As shown in **Table 1**, 17 of the environmental and climate change indicators ranked below the 65th percentile threshold for the state or region and therefore were not identified as elevated. Of these 17 indicators, 12 were determined to be not materially relevant to the Project and therefore do not represent existing burdens within the two census tracts in the study area. The remaining five indicators were identified as potentially relevant and are evaluated further. The aforementioned indicators are listed below, along with a discussion of the Project's anticipated impact, or lack thereof, on each.

- **Existing Surrounding Land Use Related Indicators (8):** Of the non-elevated indicators, a total of 8 can be categorized as relevant to land use but not to the Project, including those that contextualize the Project's proximity to industrial or industrial-adjacent facilities. These are not indicative of current or anticipated conditions at the Project site at Camp Oraysa. The indicators include: Industrial, Mining, and Manufacturing Land Use; Proximity to Active Landfills; Proximity to Major Oil Storage Facilities; Proximity to Municipal Waste Combustion; Proximity to Power Generation Facilities; Proximity to Risk Management Plan Sites; Proximity to Remediation Sites; and Agricultural Land Use.

The Project is located within the existing camp and would not alter the site's underlying land use, nor would it impact existing facilities surrounding the site. Proposed improvements are limited to expansion of the STP and construction of additional bunkhouses to accommodate campers and staff. Accordingly, the Project is not anticipated to result in impacts to the indicators identified above.

A ninth land use-related indicator, Wastewater Discharge, is relevant to this Project and further discussed in Section 4.3.3.

- **Flooding in Coastal and Tidally Influenced Areas (Projected) (1):** This indicator demonstrates the approximate percentage of census tracts within an "extreme" or "high" flood risk area within coastal and tidally influenced areas. The site is neither located near the coast nor a tidally influenced region and therefore, the census tracts in the immediate proximity of the site both received a score of zero. The Project is not expected to impact this indicator.
- **Projected Days Above 90 Degrees (1):** Scores for this indicator are calculated based on the average annual number of days with a maximum temperature above 90 degrees Fahrenheit (°F) and 95°F for both baseline (1980 – 2010) and future (2036 – 2065) periods.¹¹ The two census

¹¹ New York State Climate Justice Working Group. 2023. Disadvantaged Communities Criteria. Available at: <https://climate.ny.gov/-/media/Project/Climate/Files/Disadvantaged-Communities-Criteria/Technical-Documentation-on-the-Disadvantaged-Communities-Criteria---Final-Version.pdf>

tracts in the area received scores of 52 and 60. Temporary construction activities associated with the Project are not anticipated to impact this indicator.

- **Flooding in Inland Areas (Projected) (1):** This indicator score is determined using data for the projected annual return interval of flow relative to historic 100-year event flows as projected under a future climate change scenario. The two census tracts in the area of interest yielded percentiles of 41 and 27, both below the threshold of 65, indicating current conditions are not a primary concern. The Project is not expected to impact this indicator.
- **Low Vegetative Cover (1):** Scores for this indicator are calculated using data on the percent of census tract land area that is “highly developed” or not covered by vegetation using the U.S. Geological Survey’s National Land Cover Database. The two tracts’ percentiles were well below the 65th percentile threshold, with scores of 11 and 9, respectively. Furthermore, future bunkhouses will be constructed on existing open land away from vegetation; therefore, the Project is not expected to affect vegetative cover.

The remaining five non-elevated environmental burden (below the 65th percentile) indicators not discussed in this section include: Benzene Air Concentration; Diesel Trucks and Bus Traffic; Particulate Matter (PM_{2.5}) Air Concentration; Vehicle Traffic Density; and Wastewater Discharge. Each indicator is evaluated in detail to account for potential impacts associated with construction activities in support of the Project. Discussion of these indicators is provided in the following sections.

4.3 Project-Specific Considerations

This section reviews the potential impact to DACs of environmental indicators relevant to the Project: Benzene Air Concentration; Diesel Trucks and Bus Traffic; Particulate Matter (PM_{2.5}) Air Concentration; Vehicle Traffic Density; and Wastewater Discharge. Potential odor effects are also explored, a component identified as a potentially relevant impact in NYSDEC’s April 25, 2025, letter to Congregation Oraysa.

4.3.1 Potential Impacts Associated with Air Quality

The Project proposes the development of the STP to increase the wastewater discharge volume from 8,000 gpd to 48,000 gpd, as well as construction of additional on-site bunkhouses. Construction-related air quality effects would be temporary and primarily associated with limited use of diesel-powered equipment; significant impacts are not anticipated.

Of the 45 indicators considered by NYSEDA’s Disadvantaged Communities Mapping Tool, the Benzene Air Concentration and Particulate Matter (PM_{2.5}) Air Concentration indicators were not identified as immediate, existing burdens for the study area. However, due to the nature of both the STP expansion and the bunkhouse construction projects, relevant data pertaining to these qualities were reviewed. The Project is not expected to result in long-term impacts on either indicator, and any construction-related effects would be brief and limited to the short construction periods.

- **Benzene Air Concentration:** This indicator displays modeled ambient air concentrations, a process that takes into account emissions from large industrial facilities (e.g., power plants, manufacturing plants) and smaller facilities (e.g., cleaners, gas stations); and mobile sources (e.g., motor vehicles, trains, airports); and farming and construction equipment.
- **Particulate Matter (PM_{2.5}) Air Concentration:** This indicator measures the annual average PM_{2.5} (particulate matter 2.5 microns or less in diameter) modeled ambient air concentrations.

Because impacts to these indicators are expected to be minimal and limited to the construction period, a focused evaluation has been conducted to address potential effects. A detailed assessment of these

construction-related impacts is provided in Section 5, where each indicator is evaluated in relation to temporary construction activities and associated changes in site conditions.

4.3.2 Potential Impacts Associated with Traffic

Information relevant to the indicators pertaining to traffic, Diesel Trucks and Bus Traffic and Vehicle Traffic Density, was reviewed. Although neither was flagged as a major concern during the screening of potential impacts, both were further explored due to relevance to the proposed STP and bunkhouse projects.

- **Diesel Trucks and Bus Traffic:** This indicator quantifies the annual daily count of diesel trucks and buses on the roads within each census tract. Measurement of this assessment incorporates the assumption that most vehicles within classes 4 to 13 are diesel powered.
- **Vehicle Traffic Density:** The approximate count of vehicles (average annual daily traffic) on major roads is represented via the Vehicle Traffic Density indicator.

Similarly to the air quality-related indicators, the traffic and vehicular use indicators also underwent detailed assessment with consideration of potential, short-term impacts during construction as discussed in Section 5.

4.3.3 Potential Impacts Associated with Wastewater Discharge

The Project proposes to increase Camp Oraysa's wastewater discharge volume from 8,000 gpd to 48,000 gpd. Of the 45 indicators considered by NYSED's Disadvantaged Communities Mapping Tool, the Proximity to Wastewater Discharge indicator is not identified as a potential existing burden for the study area. This indicator is the primary environmental burden indicator that could be relevant to the Project.

When considering the quality of treated water that will be discharged, it is highly unlikely that the Project will result in the Proximity to Wastewater Discharge indicator being re-scored as "elevated," indicating that it is an environmental burden borne by the communities within the study area. This is because the wastewater treatment facility will meet the existing discharge criteria, and the increased volume of water will be discharged for only two months per year. Thus, while the volume of discharged water will increase, the quality of water will be unchanged. Wastewater is cycled a total of three to five times through the treatment system and then discharged into a nearby intermittent stream, which further filters nutrients present in the wastewater.

To demonstrate that the Project will not result in the Proximity to Wastewater Discharge indicator being elevated, a brief discussion of the methodology and expected impact from the Project is provided. The Proximity to Wastewater Discharge indicator in NYSED's Disadvantaged Communities Mapping Tool is based on the "toxicity-weighted stream concentrations at stream segments within 500 meters" value, which is based on the 2017 version of the Risk Screening Environmental Indicators (RSEI) tool.¹² RSEI considers the quantity of wastewater discharged, the toxicity-weighted stream concentrations of pollutants with potential human health effects, and the proximity of wastewater discharge points to a census tract.

From 2013-2022, Sullivan County, where Camp Oraysa is located, did not have a single water release included in RSEI data.¹³ This is not a surprise given the lack of industrial facilities in the County. A secondary search was conducted on the United States Environmental Protection Agency's (U.S. EPA)

¹² NYSED. 2024. New York State's Disadvantaged Communities Criteria. Available at: <https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria>

¹³ USEPA. 2025. Easy RSEI. Available at: <https://edap.epa.gov/public/extensions/EasyRSEI/EasyRSEI.html>

enforcement and compliance history online tool to identify facilities in Sullivan County that are required to submit discharge monitoring reports (DMRs). This search identified 354 total facilities within the county, six facilities within the two census tracts near Camp Oraysa, but none within the ½-mile radius of the camp.¹⁴ Camp Oraysa was not listed as a facility requiring a DMR and it is unlikely to be added given that the concentration limits in the existing permit are likely to remain within the discharge permit.

The low likelihood that wastewater discharged at Camp Oraysa will result in actual population exposure also reduces the Project's potential impacts on the Wastewater Discharge Indicator. NYSERDA mentions that a key limitation with the Proximity to Wastewater Discharge indicator is that wastewater discharge does not directly correspond to population exposures: "Individuals would need to come into contact with the contaminated water either by dermal exposure through swimming, inhalation of volatilized pollutants, drinking contaminated water, or by eating contaminated fish."¹⁵ Discharged water from the Project feeds a wooded intermittent stream area, which is not used for swimming, drinking water, or fishing. Additionally, as shown in **Figure 1**, the location of the discharge point is approximately 0.2 miles from camp facilities and the limited number of nearby residential properties, minimizing the potential for contact with the treated wastewater.

To keep the system running smoothly, the camp designates a staff member to handle daily operational tasks at the plant. These responsibilities include monitoring and recording key parameters such as temperature, pH, residual chlorine levels (when chlorine is used for disinfection), and daily flow rates as indicated by the flow meter. Staff are also required to promptly notify the licensed operator of any issues, such as filter ponding or pump failures, as soon as they are detected. A licensed operator is tasked with inspecting the plant at least once per week and conducting sampling and testing of the wastewater in accordance with the monitoring requirements specified in the State Pollutant Discharge Elimination System (SPDES) permit. All collected data and observations are compiled by the operator into monthly operating reports, which are submitted to NYSDEC for review and recordkeeping.

The operator is also responsible for documenting any operational problems and the corrective actions taken to address them within the monthly report. Both the operator and the camp owner are expected to collaborate in resolving such problems promptly.

Given the quality of the treated wastewater, regular inspections, and the low likelihood that individuals will come in contact with discharged water, it is highly unlikely that the increase in wastewater volume at Camp Oraysa will create adverse impacts in DACs. Given the low likelihood of adverse impacts from the Project, there cannot be disproportionate adverse impacts, or cumulative adverse impacts, to the surrounding DACs.

4.4 Impacts Associated with Odor

The potential for increased odor was cited as a potentially relevant impact by NYSDEC. Odor is not included as an indicator within the NYSERDA Disadvantaged Communities Mapping Tool, and New York regulates odors as a "nuisance," which often means that standards are qualitative.

The STP will address odors present in the wastewater and, upon discharge, the nutrient levels and other indicators of water quality that may influence odors will meet stringent standards. It is also important to consider the location of the discharged water in relation to local community members. The discharge

¹⁴ USEPA. 2025. Enforcement and Compliance History Online. Available at: <https://echo.epa.gov/trends/loading-tool/water-pollution-search/results/browse-facilities-dmr>

¹⁵ NYSERDA. 2024. New York State's Disadvantaged Communities Criteria. Available at: <https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria>

point is located in a narrow wash, at least 100 feet lower in elevation than and approximately 0.2 miles from the nearest residential property, which reduces the likelihood of odor dispersion to these areas.

Provided that the system is operated and maintained appropriately, there are not expected to be any odor issues at the sand filters or the outfall. Any potential odor would be minimal and not expected to be intense, persistent, or detectable beyond the immediate treatment area. The treatment process involves the water passing through the system multiple times (approximately four to five cycles), resulting in increasing dilution at each stage. As a result, any trace scent that may be present would not reach a threshold typically classified as an odor.

Based on this reasoning, it is highly unlikely that the Project will result in additional odor impacts to the local community. Regardless, Camp Oraysa is committed to maintaining the STP by conducting routine inspections¹⁶ to minimize the likelihood of preventable odor releases that could cause a nuisance to the local community. Given the low likelihood of adverse odor impacts from the Project, disproportionate adverse impacts, or cumulative adverse impacts, to the surrounding DACs are unlikely.

5. Construction Impacts

The Project includes two distinct on-site development components: 1) expansion of the STP to increase capacity to approximately 48,000 gallons per day, and 2) construction of additional bunkhouses to accommodate an increase of up to 326 additional campers and staff.

- **Bunkhouse Additions:** Construction of the proposed bunkhouses will occur through a straightforward, phased building process intended to increase overall camp capacity by approximately 326 additional campers and staff. Crews are expected to complete excavation and foundation preparation, including trenching and base work, before proceeding to concrete placement, followed by structural and interior work. Construction of each bunkhouse is expected to be completed in fewer than 40 days.

The work will be carried out by small, phased crews. Diesel-powered equipment (e.g., excavators, backhoes, loaders, dump trucks) will be used intermittently throughout key phases of construction, particularly during site preparation, excavation, and material handling. Use of equipment will be temporary and concentrated within early and mid-stage construction activities. The coordinated sequence of construction activities, combined with the implementation of established engineering controls and mitigation measures, will support the efficient development of the proposed bunkhouses. These practices are expected to maintain a short and manageable construction schedule and minimize potential impacts to the surrounding environment.

- **Sewage Treatment Plant Expansion:** Construction of the proposed improvements to the STP will be a short-duration effort intended to increase system capacity from approximately 8,000 gallons per day to 48,000 gallons per day in support of expanded camp operations. Work will proceed through a defined sequence, including but not limited to site mobilization, limited grading, excavation, and trenching, followed by installation of essential equipment to enhance capacity of the system to achieve the desired daily outflow. Overall, construction is expected to be completed in fewer than 20 days.

The work will be performed by small crews, with total labor effort not expected to exceed approximately 48 days. Diesel-powered equipment will be used intermittently throughout the

¹⁶ Camp staff will perform daily and weekly inspections to monitor STP operations, and a licensed operator will perform maintenance and testing on a weekly basis. Routine inspections and testing requirements will be outlined in the forthcoming permit and subsequently, NYSDEC-approved design plans.

project, primarily during early and mid-stage activities (e.g., excavation, trenching, material handling, and hauling). Equipment may include excavators or backhoes, skid steers or compact loaders, dump trucks, delivery vehicles, and compactors; however, equipment use will be limited in duration and concentrated within specific phases of work. This sequence of work will enable efficient expansion of the treatment system while minimizing the overall duration and intensity of on-site construction.

An evaluation of potential short-term impacts of construction associated with these expansions is discussed below. The assessment examines existing environmental conditions and short-term impacts anticipated such as air emissions primarily from diesel equipment use, fugitive dust, noise, and traffic. These on-site development efforts (bunkhouse additions and STP expansion) are anticipated to occur in separate, independent phases to reduce the potential for cumulative impacts if they were to take place simultaneously.

Overall, construction activities are anticipated to result in negligible effects on existing environmental conditions, with any temporary disturbances effectively managed through standard best practices.

5.1 Air Emissions

Construction-related emissions are expected to consist primarily of diesel exhaust from on-site equipment, with diesel particulate matter (DPM) representing the primary potential air toxic. Because construction activities for the Project are temporary and intermittent, no chronic exposures are anticipated. Acute air quality considerations during construction are more appropriately associated with particulate matter (PM), primarily from fugitive dust generated during earth-moving and equipment operation. However, because construction-related air emissions are expected to be short-term, minor, and localized, impacts are expected to be negligible.

5.1.1 Air Emissions During Construction

Construction of the proposed bunkhouses and wastewater treatment plant expansion would involve temporary use of diesel-powered construction equipment and on-site vehicle activity. Each bunkhouse is expected to be completed in fewer than 40 days, with use of heavy equipment not anticipated to exceed 19 days. The wastewater treatment plant expansion, meanwhile, is estimated to last between 10 to 20 days, with heavy equipment use not expected to exceed 10 days. Diesel equipment such as backhoes, loaders, and dump trucks is currently expected to be used intermittently on-site.

Pollutant air concentrations generated during construction are difficult to reliably model due to the variability and intermittent nature of the operating equipment. Regardless, best practices to mitigate construction-related emissions will be implemented (see Section 5.5). U.S. EPA identifies diesel construction equipment as a source of emissions associated with construction activities and notes that reducing exposure to diesel exhaust in and around construction areas is important for human health and the environment.¹⁷

In New York State, heavy-duty vehicle emissions are addressed through statewide mobile-source control programs, including the New York State idling regulation at 6 NYCRR Subpart 217-3, which generally prohibits on-road heavy-duty vehicles with a gross vehicle weight rating greater than 8,500 pounds from idling for more than five minutes at a time, subject to specified exceptions.¹⁸ New York

¹⁷ USEPA. Reducing Diesel Emissions from Construction and Agriculture. Available at: <https://www.epa.gov/dera/reducing-diesel-emissions-construction-and-agriculture>

¹⁸ NYSDEC. Heavy Duty Vehicles – New York State Idling Regulation, 6 NYCRR Subpart 217-3. Available at: <https://dec.ny.gov/environmental-protection/air-quality/controlling-motor-vehicle-pollution/heavy-duty-vehicles>

State also regulates certain heavy-duty diesel vehicles used on State-awarded contracts through ECL 19-0323 and 6 NYCRR Part 248, which require use of ultra-low sulfur diesel fuel and best available retrofit technology for covered vehicles, as applicable.¹⁹

Based on the temporary nature of this work, the limited construction durations, the relatively limited use of heavy equipment, and the expectation of compliance with federal and New York State diesel-emission and idling requirements, construction-related air emissions are expected to be short-term, localized, and negligible.

5.1.2 Existing Conditions

As discussed in section 4.3.1, two air quality indicators relevant to the Project are Benzene Air Concentration and PM_{2.5} Air Concentration. As shown in **Table 1**, the NYSDOT tool reports percentiles for both indicators well below the 65th percentile threshold. In census tract 36105950800, where Camp Oraysa is located, the Benzene Air Concentration and PM_{2.5} Air Concentration indicators are in the 9th and 16th percentiles, respectively. Similarly, in the adjacent tract (36105951100), Benzene Air Concentration is in the 15th percentile and PM_{2.5} Air Concentration is in the 20th percentile.

These values are below the 65th percentile and are not considered baseline burdens. Air toxics source data were reviewed to further assess local air quality.

5.1.3 Benzene

The Benzene Air Concentration indicator is sourced from the U.S. EPA's AirToxScreen, which uses modeled ambient concentrations to estimate long-term air toxics conditions. The current version of the NYSDOT tool relies on the 2017 AirToxScreen data, although a more recent 2020 assessment is also available.²⁰ These modeled concentrations reflect contributions from regional, local, and background emission sources and are intended to represent long-term average ambient conditions.

Because AirToxScreen estimates concentrations at the census-tract level²¹ and, in the 2020 assessment, at the census-block level,²² the reported values may include emissions from sources not located directly within or immediately adjacent to the study area. As a result, the estimates may be conservative when applied at the site scale.

AirToxScreen reported benzene concentrations of 0.24 µg/m³ in 2017 and 0.26 µg/m³ in 2020 for the Camp Oraysa study area. These concentrations reflect existing background conditions and are not attributable to the proposed construction activities. As shown in **Table 2**, the total annual benzene concentration in the census tract (and block) in which Camp Oraysa is located is driven primarily by a combination of the following sources:

- Residential wood combustion (34% of total benzene in 2017; 60% in 2020)
- On-road light-duty gasoline vehicles from off-network processes (20% in 2017 and 10% in 2020)
- Off-road recreational/pleasure craft sources (22% in 2017; 0% in 2020)

¹⁹ NYSDOT. Diesel Emissions Reduction Act Regulatory Compliance, ECL 19-0323 and 6 NYCRR Part 248. Available at: https://www.dot.ny.gov/portal/pls/portal/mexis_app.pa_ei_eb_admin_app.show_rtf?id=13277

²⁰ USEPA. 2020 AirToxScreen. Available at: <https://www.epa.gov/AirToxScreen/2020-airtoxscreen-assessment-results>

²¹ A census tract is a small statistical subdivision utilized to present Census data; they are ideally comprised of approximately 4,000 people and 1,600 housing units.

²² A census block is the smallest geographic unit utilized by Census Bureau when tabulating census data. A census block is an area bounded by visible features (e.g., streets, roads, streams) and nonvisible boundaries (e.g., property lines, townships).

- Open burning, waste treatment, composting, and landfills (<1% in 2017; 13% in 2020)

Similar patterns were observed in the adjacent census tract, with benzene source contributions generally decreasing from 2017 to 2020. Overall, the 2017 and 2020 AirToxScreen data indicate a shift in the study area from a more mixed benzene source profile in 2017 to one more strongly dominated by residential wood combustion in 2020.

Table 2. Benzene Air Concentration Reported in AirToxScreen 2017 & 2020 in the study area of Camp Oraysa by Source Group Contribution

AirToxScreen (version)	Total Annual Benzene Air Concentration (µg/m³)	Contribution by Source Group (%)			
		Residential wood combustion - woodstoves, fireplaces	On-road light-duty gasoline vehicles - off-network processes (e.g., starts)	Off-road motorcycles, snowmobiles, golf carts, and pleasure craft	Open burning, waste treatment, composting, and landfills
Census Tract 36105950800 (Camp Oraysa) ^a					
2017	0.24	34	20	22	0.49
Census Block 361059508021021 (Camp Oraysa) ^b					
2020	0.12	60	10	0	13
Census Tract 36105951100 (Bordering Tract) ^c					
2017	0.26	40	21	16	0.42
Census Block 361059511002000 (Bordering Tract) ^d					
2020	0.12	60	9.9	0	13
Notes a. The 2017 AirToxScreen data are based on census tract 36105950800, where Camp Oraysa is located. b. The 2020 AirToxScreen data are based on census block 361059508021021, where Camp Oraysa is located. c. The 2017 AirToxScreen data are based on census tract 36105951100, a small portion of which overlaps with the study area. d. The 2020 AirToxScreen data are based on census block 361059511002000, a small portion of which overlaps with the study area.					

Given the short-term, intermittent nature of the proposed construction activities, including less than 20 days of heavy diesel equipment use, the Project is not expected to materially affect these existing benzene-related air quality conditions or result in more than negligible risk in the study area.

5.1.3.1 Benzene Air Conditions During Construction

Construction of the proposed bunkhouse and wastewater treatment plant expansion may generate short-term emissions of air toxics, including benzene, from diesel-powered construction equipment and on-site vehicle activity. U.S. EPA identifies benzene as an air toxic associated with motor vehicle and nonroad equipment exhaust and evaporative emissions.⁵ However, these construction-related benzene emissions would be temporary and localized and would not represent a long-term source of

ambient benzene in the study area. As discussed above, baseline benzene concentrations reported in AirToxScreen reflect long-term average ambient conditions from regional, local, and background emission sources. The existing benzene source profile in the study area is driven primarily by residential wood combustion and on-road light-duty gasoline vehicle off-network processes rather than similar short-term construction activity. Therefore, construction of the proposed bunkhouse and wastewater treatment plant expansion is not expected to materially change the long-term ambient benzene conditions characterized by the AirToxScreen baseline data.

Per available sources, prevailing winds are primarily from the northwest. As a result, short-term construction air toxics emissions, including diesel equipment emissions, would generally be carried southeast of Camp Oraysa. No residences were identified within the immediate study area, and the nearest downwind residence is more than half a mile away, allowing temporary emissions to disperse and dilute before reaching nearby receptors. Additional details on these findings are provided in Section 5.1.4.1.

5.1.4 Particulate Matter (PM_{2.5})

The PM_{2.5} Air Concentration indicator was derived from the U.S. EPA's EJScreen, which is based on the EPA Downscaler Model. The current version of NYSED's Disadvantaged Communities Mapping Tool relies on modeled PM_{2.5} concentrations from 2016 and may not reflect current conditions. Because the original version of EJScreen is no longer available, other U.S. EPA sources (e.g., U.S. EPA RSIG Data Portal, EPA Downscaler Model²³) were utilized to estimate approximate PM_{2.5} concentrations in the area.

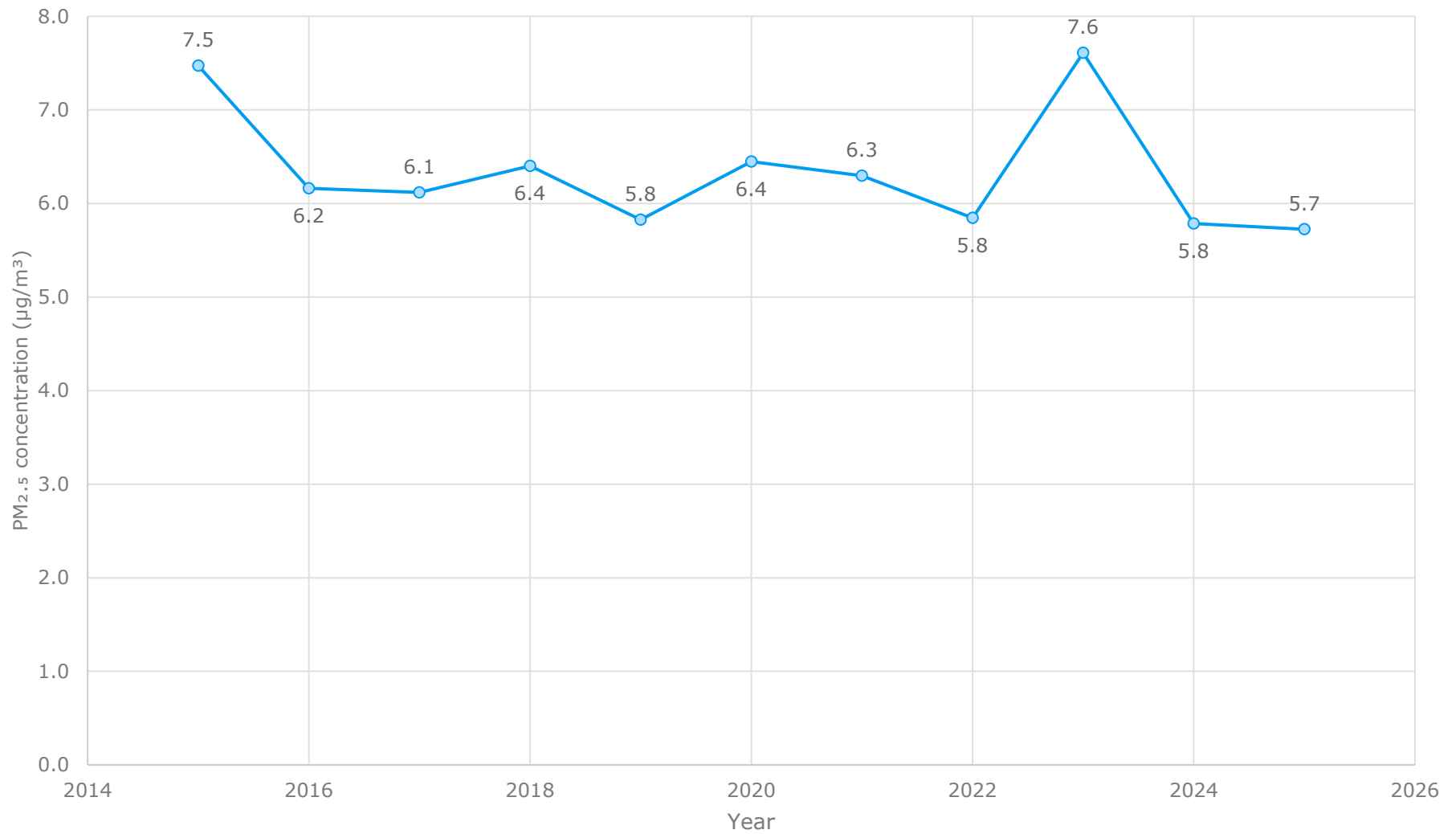
The modeled annual average PM_{2.5} concentration at census tract 36105950800 is 6.1 µg/m³. This concentration, which is not influenced by the Project, is below the current National Ambient Air Quality Standards (NAAQS) annual standard of 9.0 µg/m³ and therefore demonstrates compliance.²⁴

To evaluate the EPA Downscaler Model's representation of PM_{2.5} concentrations, data from the nearest U.S. EPA Air Quality System (AQS) monitor to Camp Oraysa were compared with model results for the census tract containing the monitor.²⁵ The nearest monitor (state code: 36, county code: 71, site number 2) is located at 55 Broadway in Newburgh, approximately 45 miles southeast of Camp Oraysa. As shown in **Figure 2**, the monitor recorded an average PM_{2.5} concentration of 6.3 µg/m³ from 2015 to 2025 and an annual average of 5.8 µg/m³ in 2022. For the corresponding census tract (36071000400), the EPA Downscaler Model estimated 6.9 µg/m³ in 2022, indicating the model overpredicted PM_{2.5} concentrations in the area by approximately 16%. This suggests that modeled PM_{2.5} concentrations for the census tract 36105950800, where Camp Oraysa is located, may be similarly overpredicted.

²³ EPA Downscaler Model estimates PM_{2.5} data using a combination of monitoring data and Community Multiscale Air Quality (CMAQ) modeling. The model uses monitored and community-scale model data to develop a relationship between observed concentrations from monitors and modeled concentrations to predict concentrations in unmonitored regions. The additional methodology is discussed in EPA Report EPA-454/S-15-001. Data downloaded at EPA RSIG: <https://www.epa.gov/hesc/rsig-related-downloadable-data-files>

²⁴ USEPA. 2025. NAAQS Table. Available at: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>

²⁵ USEPA. 2025. Air Data Air Quality Monitors Mapping Application. Data downloaded at: <https://www.epa.gov/outdoor-air-quality-data/interactive-map-air-quality-monitors>



Annual Average Particulate Matter (PM_{2.5}) Concentration, 2015 – 2025
Monitor ID 36_071_0002

FIGURE 02

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

228 Todd Road
Woodbourne, New York



5.1.4.1 Particulate Matter (PM_{2.5}) Air Concentration During Construction

Construction of the proposed bunkhouse and wastewater treatment plant expansion may also generate short-term PM_{2.5} emissions from diesel-powered construction equipment, on-site vehicle activity, material handling, grading, trenching, excavation, and limited earth disturbance. U.S. EPA regulates emissions from nonroad compression-ignition diesel engines used in equipment such as excavators and other construction equipment through federal nonroad diesel engine standards, including Tier 4 standards and ultra-low sulfur diesel fuel requirements.⁶ Construction-related PM_{2.5} emissions are expected to be short-term and localized and would not represent a long-term source of PM_{2.5} in the study area.

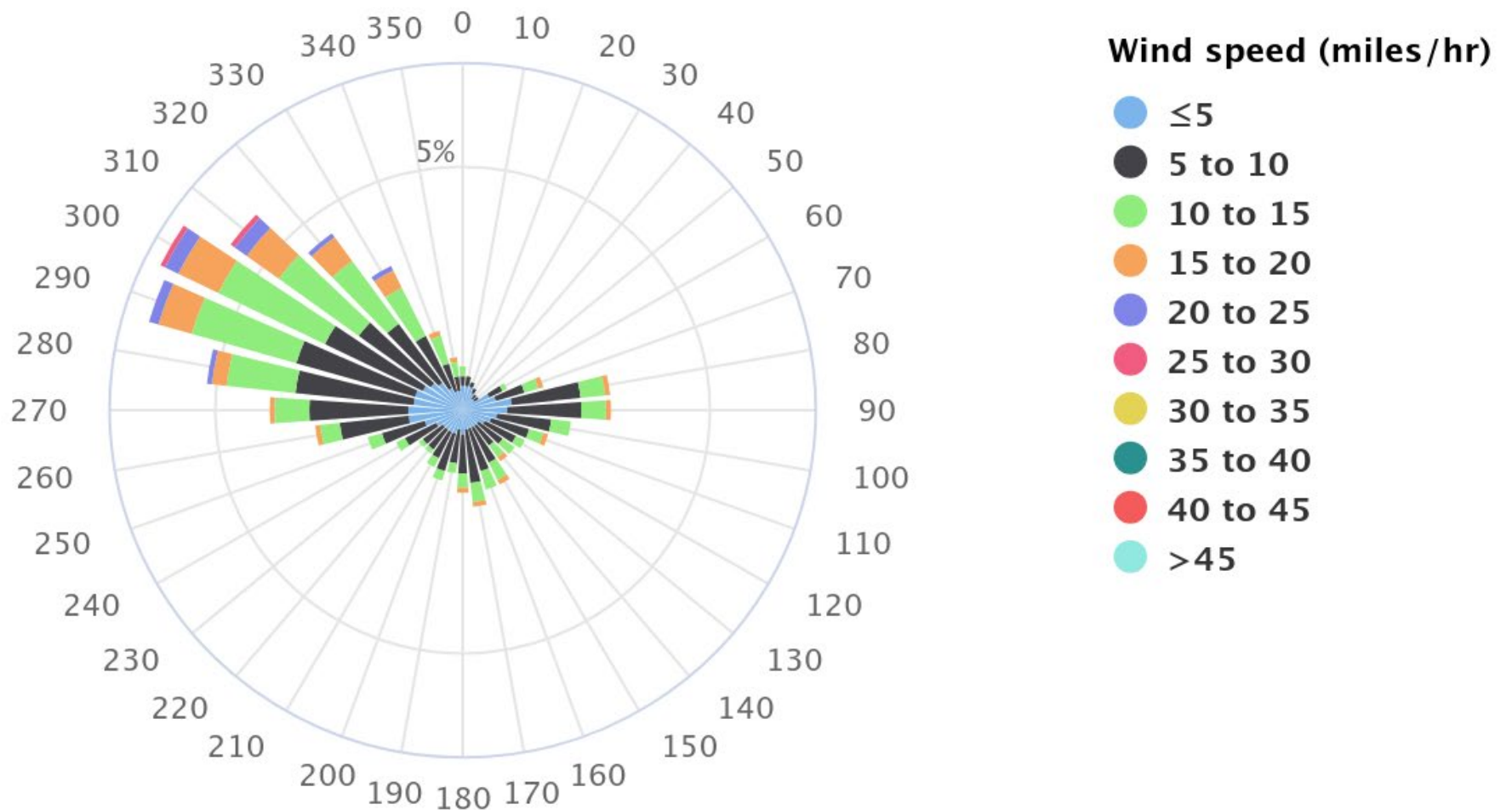
As discussed above in Section 5.1.4, the modeled annual average PM_{2.5} concentration for census tract 36105950800, where Camp Oraysa is located, was estimated to be 6.1 µg/m³, which is below the current annual PM_{2.5} NAAQS of 9.0 µg/m³.

Construction activities associated with the Project are temporary, are to occur independently of one another, and are expected to require minimal heavy equipment use. As a result, any temporary PM_{2.5} impacts are expected to be short term and remain below the 24-hour NAAQS of 35 µg/m³.⁷

Comparison with the nearest AQS monitoring site suggests that the U.S. EPA Downscaler Model may overpredict PM_{2.5} concentrations in the broader area. Accordingly, construction of the proposed bunkhouse and wastewater treatment plant expansion is not expected to materially alter baseline annual average PM_{2.5} conditions in the study area or cause sustained short-term PM_{2.5} impacts.

As previously noted in Section 5.1.3.1, no residences have been identified in the immediate study area. According to the windrose for Monticello, Sullivan, NY (2020–2025; **Figure 3**), which is the AQS monitoring station closest to the camp²⁶, the prevailing winds in the area are primarily from the northwest. During construction, short-term air toxics emissions generated within the study area, including those from diesel-powered equipment, are expected to be transported primarily to the southeast of Camp Oraysa. The closest residential house downwind is located approximately 0.6 miles from Camp Oraysa. The dominant wind directions are expected to disperse and dilute these temporary emissions before they reach nearby residential receptors.

²⁶ Windrose was generated for station KMSV (network icao) from Northeast Regional Climate Center:
<https://www.nrcc.cornell.edu/wxstation/windroses/windroses.html>



Powered by ACIS

Percent of Winds Blowing from the Indicated Direction

January 1, 2020 - December 31, 2025

FIGURE 03

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

Monticello Sullivan, New York

5.2 Noise

During construction, Camp Oraysa will comply with all applicable local noise ordinances and related municipal requirements, including restrictions on construction hours, noise mitigation obligations, and permit or variance requirements for work conducted outside standard hours. Because the site is located in Woodbourne, New York, within the Town of Fallsburg, applicable town regulations will be followed, including limits on the hours during which construction activities may occur. If after-hours work or a noise variance is required, Camp Oraysa will provide the information necessary to support the applicable application, implement any required mitigation measures, and complete the work as efficiently as practicable. Reasonable administrative and engineering controls will be used to minimize construction noise to the extent practicable.

5.3 Traffic

Although a temporary increase in traffic volume is plausible during the brief construction periods, traffic is not anticipated to be significantly impacted either during construction or after the Project is complete.

5.3.1 Diesel Trucks and Bus Traffic

The Diesel Trucks and Bus Traffic indicator is based on the annual average daily count of diesel trucks and buses occurring on roads within each census tract. The indicator was developed using the New York State Roadway Inventory System and New York State Department of Transportation (NYSDOT) Traffic Viewer annual average daily traffic data for 2019, using Federal Highway Administration vehicle classes 4 through 13 as a surrogate for diesel-powered trucks and buses. For this analysis, more recent traffic data from 2024²⁷ were reviewed to better characterize current diesel truck and bus traffic conditions in the study area. Estimated truck counts for nearby road segments were derived using 2024 annual average daily traffic (AADT) values and the reported truck percentage for each segment. Truck counts were calculated by multiplying the 2024 AADT by the reported truck percentage and are presented in **Figure 4**.

Figure 4 shows that estimated truck counts near the study area vary by roadway segment. The highest counts were along State Route 52, approximately 2.5 miles south of Camp Oraysa, ranging from 482 to 630 trucks per day. The closest available traffic data point to Camp Oraysa is located along State Route 42, approximately 0.7-mile northwest of the camp, with an estimated 149 trucks per day. Overall, the 2024 traffic review indicates that diesel truck and bus traffic in the vicinity of Camp Oraysa is concentrated primarily along larger regional and local roadway corridors. No readily available traffic data point was identified within the central portion of the study area.

5.3.1.1 Diesel Trucks and Bus Traffic during Construction

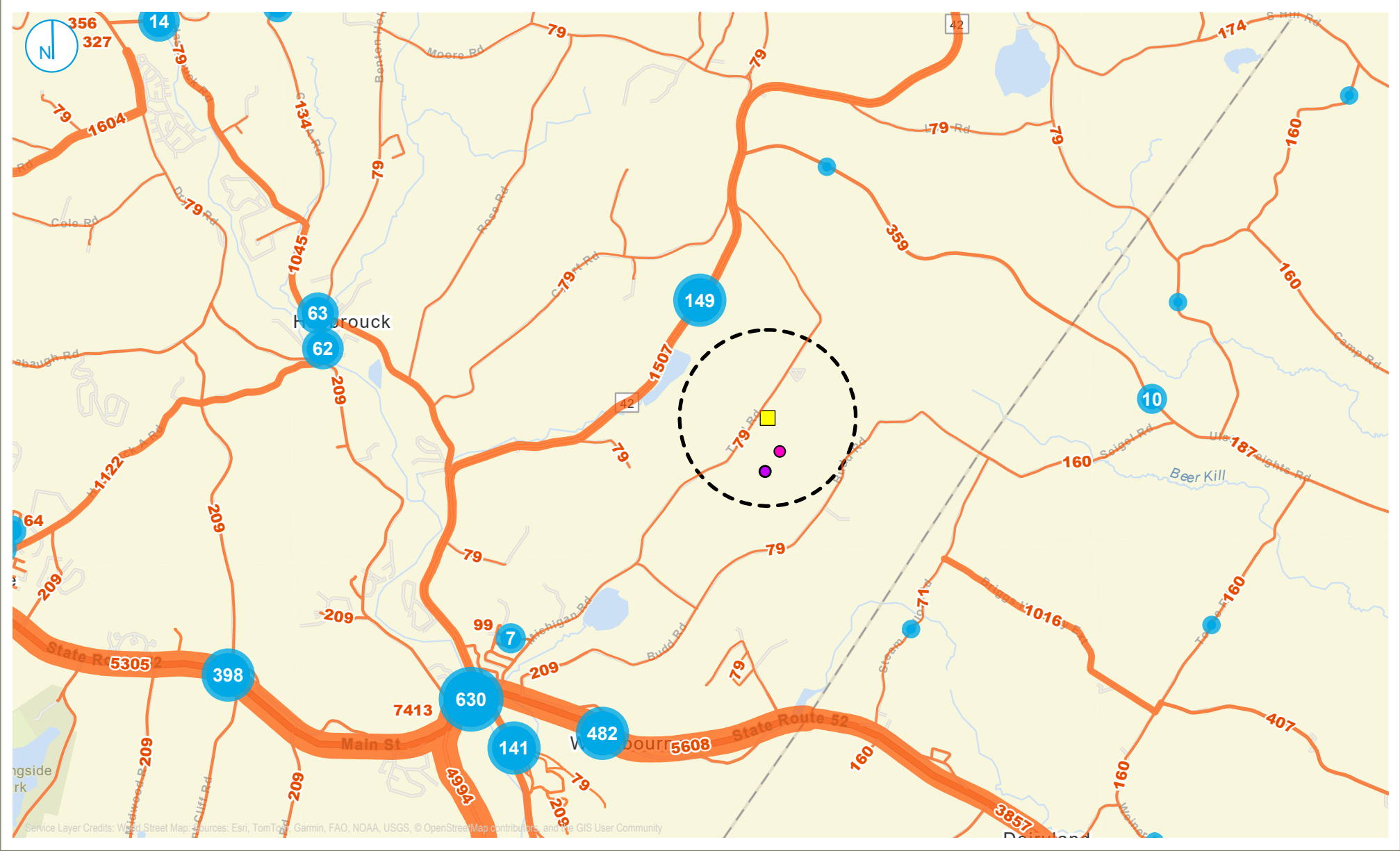
Construction of the proposed bunkhouse may temporarily increase diesel truck activities, which may include approximately 4 to 8 days associated with intermittent use of dump trucks and concrete ready-mix trucks. Assuming each truck-related day represents one round trip, bunkhouse construction would generate approximately 8 to 16 diesel truck movements over the construction period. Spread over the 22- to 38-day construction duration, this is equivalent to approximately 0.2 to 0.7 diesel truck movements per construction day. Compared with the closest available estimated truck count of

²⁷ New York State Department of Transportation (NYSDOT). 2024. All Station Annual Average Daily Traffic and Truck Percent Statistics. Data downloaded at Traffic Data Viewer (TDV): <https://nysdottrafficdata.drakewell.com/publicmultinodemap.asp>

149 trucks per day along State Route 42, the average construction-period increase would be less than approximately 0.5%.

Construction of the wastewater treatment plant expansion may temporarily increase diesel truck activity, with an estimated 8 to 20 days associated with intermittent dump truck and material delivery truck use. Assuming one round trip per day in which heavy equipment is utilized, this would result in approximately 16 to 40 diesel truck movements over the 10- to 20-day construction period, or about 0.8 to 4.0 truck movements per day. Relative to the closest available truck count of 149 trucks per day on State Route 42, this represents an average increase of approximately 0.5 to 2.7% during construction.

As discussed above, existing diesel truck and bus traffic in the vicinity of Camp Oraysa is concentrated primarily along larger regional and local roadway corridors. Therefore, construction of the proposed bunkhouse and wastewater treatment plant expansion may result in temporary and localized increases in truck activity during construction but is not expected to materially change the long-term diesel truck and bus traffic conditions characterized by the Diesel Trucks and Bus Traffic indicator.



1/2-mile Buffer Study Area

Camp Oraysa

Sand Filters

Outfall #1 Discharge

Notes:

AADT = Annual Average Daily Traffic

USDOT = United States Department of Transportation

HPMS = Highway Performance Monitoring System

0 2,500 5,000 Feet

Diesel Truck and Vehicle Traffic

FIGURE 04

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

Camp Oraysa
228 Todd Rd
Woodbourne, NY 12788



5.3.2 Vehicle Traffic Density

Vehicle Traffic Density indicator from the NYSDOT's Disadvantaged Communities Mapping Tool is based on the count of vehicles, expressed as AADT, on major roads. The indicator was sourced from U.S. EPA EJScreen and calculated from 2017 Highway Performance Monitoring System (HPMS) dataset in the U.S. Department of Transportation's (USDOT) National Transportation Atlas Database, weighted by census tract population. Because the Tool relies on older traffic data, the most recent 2024 HPMS dataset²⁸ were reviewed to better characterize current vehicle traffic density conditions in the study area.

As presented in **Figure 4**, the 2024 HPMS data indicates that AADT values vary by roadway segment near Camp Oraysa, with the highest AADT occurring along State Route 52 in Woodbourne, southwest of Camp Oraysa, ranging from 3,857 to 7,413 vehicles per day. Two HPMS roadway segments, i.e., Todd Road and Budd Road, were identified within the study area, with an AADT of 79 vehicles per day. The closest HPMS roadway segment outside of the Camp Oraysa is State Route 42, which runs west and north of the study area and has an AADT of 1,507 vehicles per day. Overall, the updated 2024 HPMS review indicates that vehicle traffic in the vicinity of Camp Oraysa is concentrated primarily along larger regional and local roadway corridors.

5.3.2.1 Vehicle Traffic Density during Construction

Bunkhouse construction would temporarily increase vehicle activity associated with worker access, equipment mobilization, material deliveries, and construction support trips. Overall, construction-related vehicle activity is anticipated to be limited, averaging approximately 5 to 22 vehicle movements per construction day. Compared with the closest available 2024 HPMS AADT value of 79 vehicles per day along Todd Road or Budd Road, the average construction-period increase would be approximately 6 to 27%, which reflects the relatively low baseline traffic volumes on these local roadway segments. Compared with the closest available major roadway AADT value of 1,507 vehicles per day along State Route 42, the average construction-period increase would be approximately 0.3% to 1.4%.

Construction of the wastewater treatment plant expansion may similarly result in a temporary increase in vehicle activity associated with worker access, equipment mobilization, material deliveries, and construction support trips. Overall, construction-related vehicle activity associated with the wastewater treatment plant expansion is anticipated to be limited, with approximately 52 to 136 vehicle movements expected over the construction period (2.6 to 13.6 per day). Compared with the closest available 2024 HPMS AADT value of 79 vehicles per day along Todd Road or Budd Road, the average construction-period increase would be approximately 3% to 17%, again reflecting the relatively low baseline traffic volumes on these local roadway segments. Compared with the closest major roadway AADT value of 1,507 vehicles per day along State Route 42, the average construction-period increase would be approximately 0.2% to 0.9%.

As discussed above, the 2024 HPMS data show that vehicle traffic near Camp Oraysa is concentrated primarily along larger regional and local roadway corridors, State Routes 42 and 52. Because construction of the proposed bunkhouse and wastewater treatment plant expansion would be temporary, limited in duration, and limited in scale, construction-related vehicle activity is not expected to materially change the long-term vehicle traffic density conditions.

²⁸ USDOT. 2024. Highway Performance Monitoring System (HPMS). <https://geodata.bts.gov/datasets/5e6a977c2d7c4ec1bdc82e684d3384f2/about>

5.4 Benefits

Labor needs to complete both the STP expansion and the development of the bunkhouses will require small construction crews (generally a few workers at a time), providing temporary employment opportunities for local workers.

5.5 Construction Management and Mitigative Measures

To reduce construction-related impacts such as emissions, traffic, and noise, effective mitigation strategies will be implemented, following industry best practices and established site management protocols. Applying these practices ensures that these impacts are brief, temporary, and minimized during construction.

Air Pollutants and Diesel: Construction associated with the Project will result in temporary short-term emissions of air pollutants, restricted to the short and intermittent construction periods. The majority of equipment used during construction is fueled by diesel. The use of newer diesel equipment (e.g., Tier 4 engines) will result in lower criteria and toxic emissions. During this work, mitigative measures will be implemented to reduce diesel combustion emissions, including but not limited to:

- Tier 4 diesel equipment, as available.
- Preventative maintenance on all vehicles and equipment.
- Trained equipment operators.
- Implementation of a no-idling policy per industry standards.
- Utilization of equipment with “pony” motors that are used to run ancillary equipment such as air conditioning without the main diesel engine in operation.
- Development and implementation of pre-construction silica mitigation plans and training.
- Use of electric equipment such as welding machines when available.

Fugitive Dust: Construction associated with the Project may also result in temporary emissions of fugitive dust. To minimize these emissions, all or a combination of the following practices will be applied:

- Apply water, asphalt, oil, or other suitable dust suppressants, as appropriate, on exposed soils, dirt roads, material stockpiles, and other surfaces that may generate airborne dust or odors during excavation, backfilling, grading, and related construction activities.
- Cover open-bodied and haul trucks transporting soil or other dust-generating materials.
- Empty excavator buckets slowly to minimize dust generation during material handling.
- Stage trucks on site to the extent practicable before loading and unloading to minimize impacts on local streets.
- Limit vehicle idling to no more than 5 minutes to reduce unnecessary exhaust emissions.
- Require vehicles to maintain low on-site speeds (e.g., less than 10 miles per hour) to support safety and dust control.
- Minimize vehicular traffic in non-designated travel areas and limit the size of vehicle staging areas.
- Keep trucks on clean surfaces to the extent practicable to reduce track-out and the need for tire cleaning.

Noise: Best management practices will be followed to minimize potential noise impacts resulting from standard construction equipment:

- Utilize adequate muffler systems for vehicles and engine-powered equipment.
- Maintain vehicles and equipment in accordance with manufacturer's recommendations.
- Operate vehicles in accordance with posted speed limits.
- Truck engine exhaust brake use will be limited to emergencies.

No nearby residential receptors have been identified near the construction area, further reducing the likelihood of community-level exposure.

Overall, the construction efforts are expected to be short-term with limited environmental impact and will provide temporary employment. During full operation, the completed system and camp expansion are expected to have minimal ongoing disturbance and will pose negligible risk to long-term environmental factors.

6. GHG Analysis

NYSDEC prioritizes evaluation of the potential to generate or emit GHG, and in this case, the potential impacts of GHG are considered in the context of whether the Project may disproportionately impact DACs. The analysis considered direct emissions²⁹ from the STP and effluent, and indirect emissions³⁰ from electricity used to run motors for pumps, etc. used in the plant. Emissions from capital equipment, infrastructure, mobile sources, short-term construction activities, and sludge end-of-life treatment are not quantified. Additionally, based on Project designs, it is assumed that typical facility influent flows to the outfall contain 220 milligrams of five-day biochemical oxygen demand per liter (mg BOD₅/L) and 30 mg total nitrogen per liter (TN/L), and typical effluent flows from the outfall contain 5 mg BOD₅/L and 1.1 mg ammonia as N/L.

Annual direct and indirect GHG emissions of the Project were determined using the activity-based method by multiplying project-specific activity values by emission factors from literature. Direct emissions from effluent discharge were calculated using the methods established in the 2019 Refinement to the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, Volume 5, Chapter 6.³¹ Indirect emissions associated with electricity generation used the U.S. EPA 2023 Emissions & Generation Resource Integrated Database (eGRID) factors for the Upstate New York (NYUP) eGRID subregion.³² Conservative emission factors were chosen when a range was provided.

²⁹ Per [DEP 24-1 / Permitting and Disadvantaged Communities](#), direct emissions "include the applicable portions of the project owned or controlled by the project sponsor that include any new or modified emission sources that have the potential to emit GHG and co-pollutants, including increases and decreases in emissions of GHG and co-pollutants from existing equipment."

³⁰ Per [DEP 24-1 / Permitting and Disadvantaged Communities](#), indirect emissions "are reasonably foreseeable emissions that are a consequence of the activities of the proposed facility not owned or controlled by the project sponsor. For example, a project that will increase truck traffic associated with the facility would have indirect GHG and co-pollutant emissions associated with that increase. Indirect emissions are generally emitted from sources owned or controlled by other entities, not the facility itself, for example waste haulers utilizing a transfer station."

³¹ [2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 5 Waste, Chapter 6 Wastewater Treatment and Discharge](#)

³² United States Environmental Protection Agency (U.S. EPA). (2023). *Emissions & Generation Resource Integrated Database (eGRID)*, 2023. Washington DC: Office of Atmospheric Protection, Clean Air and Power Division. <https://www.epa.gov/egrid>.

The 20-year global warming potentials (GWP20) of the GHG emissions were then characterized in units of carbon dioxide equivalents (CO₂e) using the GWP values in 6 NYCRR Part 496³³ and provided in **Table 3**. Per the Regulatory Impact Statement (RIS) for 6 NYCRR Part 496, biogenic CO₂ emissions are excluded from the analysis, as “the CO₂ associated with decay in the landfill or with the Biological Treatment of Solid Waste, or as a result of solid waste diverted to a compost or anaerobic digestion facility, is omitted.”³⁴ Per the RIS for Part 496, removals of emissions, such as through storage in plants, are not included.

³³ New York State Department of Environmental Conservation. (2020). 6 NYCRR Part 496: Statewide greenhouse gas emission limits. <https://dec.ny.gov/sites/default/files/2023-12/6nycrrpart496adopted2020.pdf>

³⁴ Ibid

Table 3. 20-year GWP values from 6 NYCRR Part 496 per IPCC Fifth Assessment Report (AR5)

Greenhouse gas	Carbon dioxide equivalent (CO ₂ e) value
Carbon dioxide (CO ₂)	1
Methane (CH ₄)	84
Nitrous oxide (N ₂ O)	264
The proposed Project is not expected to be a source of sulfur hexafluoride, hydrofluorocarbons, or perfluorocarbons and therefore the GWP values of these species are not included herein. Source: 6 NYCRR Part 496 Statewide Greenhouse Gas Emission Limits	

As shown in **Table 4**, the estimated GWP20³³ of the Project is approximately 100 metric tons CO₂e per year. While this is only an estimate of actual GHG emissions from the Project, the estimate is well below the threshold. Emissions from capital equipment, infrastructure, short-term construction activities, mobile sources, and sludge end-of-life treatment are not expected to be significant enough to exceed the threshold; therefore, emissions associated with these indirect activities were not quantified. As such, it is reasonable to assume that the Project will not generate or emit annual direct and indirect GHGs in excess of 10,000 metric tons of total carbon dioxide equivalents per year at any point in the lifetime of the Project.

Table 4. Estimated Global Warming Potentials of the Project

Emission Source	Greenhouse gas	Activity Value ¹	Activity Value Units	Emission Factor ²	Emission Factor Units	Annual Emissions by GHG	Annual Emissions Units	GWP20 (metric ton CO ₂ e/year) ³
Direct Emissions								
Outfall 001								
Sewage Treatment Plant	Methane	2,478	kg BOD ₅ /year	0.4	kg CH ₄ /kg BOD	1,071	kg CH ₄ /year	90
	Nitrous oxide	338	kg N/year	0.008	kg N ₂ O/kg N	3	kg N ₂ O/year	0.7
Effluent	Methane	56	kg BOD ₅ /year	0.2	kg CH ₄ /kg BOD	9	kg CH ₄ /year	0.8
	Nitrous oxide	12	kg N/year	0.12	kg N ₂ O/kg N	1.5	kg N ₂ O/year	0.4
Outfall 003								
Sewage Treatment Plant	Methane	52	kg BOD ₅ /year	0.4	kg CH ₄ /kg BOD	22	kg CH ₄ /year	2
	Nitrous oxide	7	kg N/year	0.008	kg N ₂ O/kg N	0.055	kg N ₂ O/year	0.01
Effluent	Methane	1	kg BOD ₅ /year	0.2	kg CH ₄ /kg BOD	0.19	kg CH ₄ /year	0.02
	Nitrous oxide	0.26	kg N/year	0.12	kg N ₂ O/kg N	0.030	kg N ₂ O/year	0.008
Indirect Emissions								
Electricity	Carbon dioxide	17,856	kWh/year	0.109810	kg CO ₂ /kWh	1,961	kg CO ₂ /year	2
	Methane	17,856	kWh/year	0.000005	kg CH ₄ /kWh	0.1	kg CH ₄ /year	0.007
	Nitrous oxide	17,856	kWh/year	0.0000005	kg N ₂ O/kWh	0.01	kg N ₂ O/year	0.002
Total (metric ton CO₂e)								100
Notes								
¹ Activity values for direct emissions were calculated using discharge volume and sampling results from the SPDES application and assuming 62 operating days per year. Activity values for indirect emissions are based on a conservative assumption of 12 kW of power consumption 24 hours per day for 62 days. All motors are not expected to run at the same time, and therefore, actual power output is expected to be lower than calculated here.								
² Emission factors for direct emissions are derived from the 2019 Refinements to the IPCC Guidelines for National Greenhouse Gas Inventories and for indirect emissions from the U.S. EPA 2023 eGRID factors for the NYUP subregion. Conservative emission factors were chosen when a range was provided.								
³ Summed values may not match totals due to rounding to appropriate significant digits.								

7. Conclusions

This existing burden analysis was performed to identify potential adverse environmental impacts of the Project to DACs, inclusive of the potential to increase climate risk via the generation or emission of GHGs and co-pollutants. Based on review of information provided by NYSDEC, there are 11 population characteristics and vulnerability indicators contributing to classification of the census tracts surrounding Camp Oraysa as DACs. Additionally, an analysis of the environmental and climate burdens identified by NYSDEC, as well as additional factors relevant to the Project, was performed to assess potential impacts.

The analysis demonstrates that the Project is highly unlikely to cause adverse impacts to the DACs surrounding Camp Oraysa. This conclusion is based on a review of data from the NYSEDA Disadvantaged Communities Mapping Tool, engineering considerations related to Project design, and publicly available data. A summary of findings from the existing burdens analysis is presented here:

- **Population Characteristics and Health Vulnerability Indicators:** No adverse impacts are anticipated as a result of the Project.
 - Elevated Indicators: 11 of the 24 population characteristics and vulnerability indicators are considered elevated in one of the two DACs near Camp Oraysa. Although these indicators are elevated, these scores are indicative of existing conditions unrelated to the Project; the Project will not directly impact these indicators.
 - Non-Elevated Indicators: 13 of the 24 population characteristics and vulnerability indicators are considered non-elevated in one of the two DACs, none of which are expected to be adversely impacted by the Project.
- **Environmental and Climate Risk Indicators:** No adverse impacts are anticipated as a result of the Project.
 - Elevated Indicators: Three environmental burden and climate change indicators were elevated in at least one census tract within the study area.
 - **Housing Vacancy Rate:** The Project will not have an impact on the housing vacancy rate of the surrounding DACs.
 - **Proximity to Scrap Metal Processing and Vehicle Dismantlers:** Camp Oraysa is not a scrap metal processing plant; therefore, the Project will not have an impact on the proximity of local DACs to a scrap metal processing plant.
 - **Drive Time to Hospitals or Urgent/Critical Care:** The Project will not impact the location of or drive time to local healthcare facilities.
 - Non-Elevated Indicators: Seventeen of the environmental and climate risk indicators were below the 65th percentile. Twelve of these indicators, including 8 land use-related and 4 climate-related indicators, are not expected to be impacted by the Project. The five remaining indicators are potentially relevant to the Project and summarized below, as well as one project-specific potential impact raised by NYSDEC.
 - **Benzene Air Concentration:** Construction of the proposed bunkhouse and wastewater treatment plant expansion is not expected to materially affect long-term ambient benzene conditions in the study area. Although diesel-powered equipment and on-site vehicle activity may generate short-term benzene emissions, these emissions would be minor, temporary, and localized.
 - **Particulate Matter (PM_{2.5}) Air Concentration:** Construction of the proposed bunkhouse and wastewater treatment plant expansion is not expected to materially affect PM_{2.5} conditions in

the study area. Any construction-related PM_{2.5} emissions would be minimal and localized, and baseline modeled concentrations for Camp Oraysa remain below the annual PM_{2.5} NAAQS. Available monitoring and wind data also indicate that impacts would be dispersed and are unlikely to cause sustained short-term exceedances.

- Diesel Trucks and Bus Traffic: Updated 2024 NYSDOT traffic data indicate that diesel truck and bus traffic near Camp Oraysa is concentrated along larger regional roadway corridors and is unlikely to be materially affected by the Project. During construction, a temporary and localized increase in truck traffic may occur but is not expected to impact long-term diesel truck and bus traffic conditions characterized by this indicator.
- Vehicle Traffic Density: Vehicle traffic in the vicinity of Camp Oraysa is concentrated primarily along larger regional and local roadway corridors, including State Route 42 and State Route 52. The Project is not anticipated to impact this indicator. During construction, vehicular traffic may temporarily increase but effects are expected to be limited and short-term.
- Proximity to Wastewater Discharge: The proximity to wastewater discharge indicator is not elevated in the study area. However, the Project is proposing to increase the volume of discharged water from Camp Oraysa from 8,000 gpd to 48,000 gpd while meeting the same pollutant concentration limits listed in the current discharge permit. Given the high quality of the water and low likelihood that individuals will come in contact with discharged water, the increase in wastewater volume at Camp Oraysa is highly unlikely to impact nearby DACs.
- Odor: The Project is adequately addressing the potential for odors by increasing the capacity of the STP to accommodate additional campers and designing the system to meet stringent discharge limits. By properly maintaining the treatment facility, which is located away from residential properties, potential generation of odors will be minimized and adverse impacts to surrounding communities will not occur.
- **GHG Emissions:** The Project will not generate or emit annual direct and indirect GHGs in excess of 10,000 metric tons of total carbon dioxide equivalents per year at any point in the lifetime of the Project.

In conclusion, this analysis demonstrates that the Project will result in insignificant, if any, direct or indirect impacts on neighboring DACs and the environment. In the absence of direct and indirect impacts, there can be no cumulative (when considering existing conditions) adverse impacts or disproportionate impacts on local DACs.