Supplemental Human Health Risk Evaluation

Onondaga Lake Superfund Site

Wastebeds 1-8

Lakeview Amphitheater Facility

Geddes, NY

June 2014

U.S. Environmental Protection Agency, Region II

Emergency and Remedial Response Division

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EXECUTIVE SUMMARY

This report documents the Environmental Protection Agency's (EPA's) evaluation of potential risks to humans associated with the proposed Lakeview Amphitheater Facility along the shoreline of Onondaga Lake. The evaluation included a comparison of the human receptors (Amphitheater Attendee, Amphitheater Maintenance Worker, and Amphitheater Construction Worker) likely to be associated with the proposed Lakeview Amphitheater Facility to receptors that were quantitatively evaluated as part of the 2011 Wastebeds 1-8 site (hereafter the entire Wastebeds 1-8 site will be referred to as the "Site," as opposed to the specific location of the amphitheater facility within the Site) baseline human health risk assessment (HHRA). It is important to note that the HHRA and the supplemental evaluation provided below assumed no remediation, nor access or use controls such as fencing or signage. The current remedial schedule for the Site, however, calls for remedial activities to be implemented prior to or concurrent with construction of the proposed amphitheater and related facilities. The remedial activities will include measures which will further limit and reduce potential exposures to humans and wildlife. Once these remedial measures and controls are implemented, there will be reduced potential for human exposure to Site contaminants relative to the conditions which were assumed in the HHRA and in this supplemental evaluation.

The supplemental risk evaluation concluded that the potential risks and hazards associated with the Amphitheater Attendee and Amphitheater Maintenance Worker are expected to be within acceptable risk ranges and targets. The estimated cancer risks for an Amphitheater Construction Worker are expected to be similar to potential exposures to the Construction Worker as evaluated in the HHRA, and be within the acceptable risk range. The non-cancer hazards for the Amphitheater Construction Worker may exceed EPA's threshold value. Consequently, an Amphitheater Construction Worker can and should employ measures (*e.g.*, use of personal protective clothing and equipment) while engaging in on-Site construction activities.

1. INTRODUCTION

Onondaga County recently proposed the construction of an outdoor events center on county-owned land on the Site (see Figure 1), which is located on the southwestern shore of Onondaga Lake, in the Town of Geddes, Onondaga County, and which is a subsite[1] of the Onondaga Lake National Priorities List (NPL) site. The proposed Lakeview Amphitheater Facility will be an outdoor event complex, which will include an amphitheater with both covered and lawn seats, a vendor area, recreational trails and amenities. Associated infrastructure will include access roads/driveways and utilities (power, water, sewer, etc.). It is anticipated that vehicular access to the amphitheater will be provided directly from Interstate 690 (I-690), and parking will be accommodated through use of the existing parking lots located between I-690 and Onondaga Lake. These lots are primarily utilized during the New York State Fair. Pedestrians will be able to access the amphitheater through use of the Onondaga County Park Trail System and the

[1] On December 16, 1994, Onondaga Lake and its tributaries and the upland hazardous waste sites which have contributed or are contributing contamination to the lake (subsites) were added to EPA's NPL. The New York State Department of Environmental Conservation and EPA have, to date, organized the work for the Onondaga Lake NPL site into 11 subsites. The Wastebeds 1-8 site is one of the subsites at the Onondaga Lake NPL site.

pedestrian bridge from State Fair Boulevard. Additional water-based access is also anticipated in the future through use of a seasonal (removable) docking system. Construction is anticipated to occur in multiple phases, beginning in the late fall/winter of 2014 and concluding in the fall of 2015. The Lakeview Amphitheater Facility will be owned by Onondaga County (Onondaga County, 2014). Figure 2 shows the location of the proposed amphitheater, the nearby vendor area, and associated support facilities.

This evaluation supplements information in the Site baseline Human Health Risk Assessment (HHRA) (O'Brien & Gere, 2011) for the purpose of evaluating potential human health risks to populations which would access the Site to either attend events or be employed as maintenance or construction workers at the proposed amphitheater to be located on the Site.

For this evaluation, EPA reviewed existing information to assess potential risks and hazards to populations that may access the Site. Specifically, EPA considered two human health risk assessments, the Site baseline human health risk assessment which was conducted to assess exposures to various media for current and reasonably foreseeable future land uses, and the other one conducted to assess exposure to surface soil contamination from the use of a portion of the Site for a recreational bike trail.

1.1 Site Overview

The Site includes former Solvay wastebeds which extend into the lake at Lakeview Point and cover roughly 315 acres (O'Brien & Gere, 2006). The wastebeds are composed of a series of perimeter dikes that were filled in with waste materials (primarily Solvay waste) consisting largely of calcium carbonate, gypsum, sodium chloride and calcium chloride. These wastes were generated at the former Main Plant as part of soda ash production. Solvay waste was hydraulically pumped into the wastebeds from approximately 1916 to 1943. The Crucible Landfill covers roughly 20 acres on the northwestern portion of the Site and contains both hazardous and nonhazardous waste. The landfill was capped in 1988 in accordance with a New York State Department of Environmental Conservation (NYSDEC)-approved closure plan. As shown on Figure 3, the Site includes the Lakeshore, Parking Lot, and Upland Successional Areas. The Amphitheater Facility is located primarily in a portion of the Upland Successional Area that is characterized as having generally very low levels of contaminants in surface soils. Contaminants at the Site include benzene, toluene, ethylbenzene and xylene (BTEX), naphthalene and assorted polycyclic aromatic hydrocarbons (PAHs), phenolic compounds, and inorganics. Surface soil contaminants in the Lakeshore Area include BTEX, PAHs and inorganics.[2] Surface soil contaminants in the Parking Lot and Upland Successional Areas include PAHs, dieldrin, 4,4'-DDT, inorganics and volatile organic compounds. (These areas are depicted in Figure 3.) Subsurface soil contaminants include BTEX, acetone, naphthalene and PAHs, phenolic compounds, and inorganics (O'Brien & Gere, 2006). Organic contaminants were detected more frequently and at the highest concentrations in subsurface soil between the central and southeastern portions of the Site. Polychlorinated biphenyls (PCBs) were also detected in subsurface soils. The majority of these detections were in or near the Biosolids Area in the southeastern portion of the Site where the City of Syracuse and Onondaga County disposed of sewage sludge from 1925 to 1978 (O'Brien & Gere, 2008). The Site is currently owned by the State of New York and Onondaga County.

In accordance with a 2011 decision document issued by the NYSDEC and EPA, an interim remedial measure (IRM) to prevent the continued migration of contaminants into Ninemile Creek and Onondaga

[2] The New York State Department of Health considers surface soil as encompassing the top two inches only. However, surface soils considered in the 2011 HHRA and this evaluation included soil 0-2 feet below ground surface.

Lake is being implemented at the Site. The IRM includes the placement of a vegetative cover over a 14.4-acre area along the eastern lakeshore, sediment removal from the lower reach of a ditch, rehabilitation of water conveyance pipes at the upper reach of the ditch, stabilization of the lakeshore soils and the collection of groundwater and seeps along the shoreline of Onondaga Lake and Ninemile Creek with treatment of collected groundwater and seeps at Honeywell's Willis Avenue Groundwater Treatment Plant. A remedial investigation/feasibility study for the Site is currently underway.

2. REVIEW OF BASELINE HUMAN HEALTH RISK ASSESSMENT EXPOSURE POPULATIONS

The baseline HHRA (O'Brien & Gere, 2011) uses the "exposure unit" (EU) concept to refine estimates of quantitative risk. An EU is defined as an area over which receptors are expected to integrate exposure when routinely present at the Site. For example, if a future construction worker has been identified as a potential receptor, that worker is assumed to be exposed randomly to Site media in an area equal to the area over which construction is possible. This area may include more than one of the defined sub-areas (exposure areas) of the Site: 1) State Fair Parking Areas, 2) the Lakeshore Area, 3) the Upland Old Field Successional Area, 4) the Biosolids Area, 5) the Ponded Area, 6) Ditch A – South, and 7) the Site Ditches. (See Figure 3.) As such, each receptor is associated with an EU that accounts for their potential exposure in all areas where the receptor may be expected to come in contact with environmental media (O'Brien & Gere, 2011).

Under the HHRA, receptors for which excess potential risks and hazards were developed include the Older Child Transient Trespasser, Lunchtime Trespasser, Utility/Sewer Worker, Commercial/Industrial Worker, Older Child Trespasser/ATV Recreator, Young Adult/ATV Recreator, Construction Worker, Adult State Fair Attendee, Older Child State Fair Attendee, Younger Child State Fair Attendee, State Fair Maintenance Worker, Drainage Ditch Worker, Fisherperson/Trespasser, Adult Resident, and Child Resident. Quantitative risk estimates for the Utility/Sewer Worker, Adult State Fair Attendee, Older Child State Fair Attendee, Younger Child State Fair Attendee, State Fair Maintenance Worker, Drainage Ditch Worker, and Fisherperson/Trespasser were based on exposures to media and/or EUs that would not be representative of exposures to the Amphitheater Attendee, Amphitheater Maintenance Worker, or Amphitheater Construction Worker. As a result, exposure estimates for these receptors were not further considered here except for the Fisherperson/Trespasser which is discussed below in the evaluation of the Amphitheater Attendee.

The HHRA assumed that the Older Child Trespasser/ATV Recreator and Young Adult Trespasser/ATV Recreator would spend a portion of their time riding all-terrain-vehicles (ATVs) off-trail. Under the HHRA, it was assumed that these riders would be exposed, in part, through inhalation of dust generated as a result of off-trail ATV riding (O'Brien and Gere, 2011). As persons attending outdoor events or performing maintenance at the Lakeview Amphitheater Facility would not be expected to ride ATVs in the area, quantitative exposure estimates developed in the HHRA for the Older Child Trespasser/ATV Recreator and Young Adult Trespasser/ATV Recreator would not be representative of potential exposures to amphitheater goers or maintenance workers, and were therefore not further considered in this evaluation. Additionally, potential estimated excess risks and hazards associated with an Adult Resident and Child Resident would not be representative of an Amphitheater Attendee or Amphitheater Maintenance Worker due to the much longer exposure timeframes associated with residential use. Therefore, exposure estimates for the Older Child Trespasser/ATV Recreator, Young Adult Trespasser/ATV Recreator, Adult Resident, and Child Resident were not further considered in this evaluation.

The HHRA's Older Child Transient Trespasser and the Lunchtime Trespasser were further considered as they may inform potential risks for an Amphitheater Attendee. Similarly, potential estimated risks associated with the HHRA's Commercial/Industrial Worker and the Construction Worker were further considered as they may inform potential risks for the Amphitheater Maintenance Worker and Amphitheater Construction Worker, respectively.

3. REVIEW OF BIKE TRAIL HUMAN HEALTH RISK ASSESSMENT EXPOSURE POPULATIONS

The Bike Trail Human Health Risk Assessment (BTHHRA) (EPA, 2009) focused on the areas where the bike trail will be constructed, and assumed that adult and adolescent riders would spend a portion of their time riding all-terrain-vehicles (ATVs) off-trail. Under the BTHHRA, it was assumed that these riders would be exposed, in part, through inhalation of dust generated as a result of off-trail ATV riding (EPA, 2009). As persons attending outdoor events or performing maintenance at the Lakeview Amphitheater Facility would not be expected to ride ATVs in the area, exposure estimates developed in the BTHHRA for adult and adolescent riders would not be representative of potential exposures to amphitheater goers or maintenance workers, and were therefore not further considered in this evaluation. The BTHRRA also evaluated exposures to a child rider assuming that he or she would not go off-trail. However, as a child rider (0-12 years) would not be expected to attend an amphitheater event alone, exposures associated with the child rider were not further considered under this evaluation.

An additional receptor that was evaluated in the BTHHRA was the construction worker who will be responsible for constructing the bike trail. Because the bike trail was laid directly on top of existing land, the bike trail construction worker is not expected to be digging and would, therefore, only come in contact with surface contamination. As construction workers constructing the amphitheater would not be limited to exposures resulting only from contact with surface contamination, construction worker exposure estimates developed in the BTHHRA were not further considered under this evaluation.

4. LAKEVIEW AMPHITHEATER FACILITY SUPPLEMENTAL HUMAN HEALTH RISK EVALUATION: POTENTIALLY EXPOSED POPULATIONS

As stated above, this Supplemental Human Health Risk Evaluation evaluated populations previously assessed in either the HHRA or the BTHHRA, and compared these populations to the populations reasonably anticipated to access the Lakeview Amphitheater Facility. Exposure parameters that would be unique to the Lakeview Amphitheater Facility are the frequency, duration, and time of the exposures. Other parameters used in the baseline HHRA, such as body weight and intake rate, are expected to be consistent for populations accessing the amphitheater facility; these will therefore not be discussed further.

4.1 Amphitheater Attendee

The EU associated with the Lunchtime Trespasser includes the New York State Fair Parking Area, the Upland Old Field Successional Area and the Biosolids Area. The Amphitheater Attendee may access this exposure area with the probable exception of the Biosolids Area, which is not in close proximity to the proposed location of the amphitheater. However, as the Biosolids Area contains higher levels of PCBs and other contaminants relative to the other Site exposure areas (O'Brien & Gere, 2011), the assumption that the Amphitheater Attendee is exposed to this area in addition to the New York State Fair Parking Area

and the Upland Old Field Successional Area only adds conservatism when one considers the estimated risks associated with Lunchtime Trespasser in comparison to the Amphitheater Attendee.

The EU associated with the Older Child Transient Trespasser includes the Ponded Area, which has since been remediated under the IRM noted above, and Ditch A - South as well as the exposure areas associated with the Lunchtime Trespasser EU. The Ponded Area and Ditch A – South were also identified in the HHRA as spatial hot spot areas for certain contaminants in sediment. Therefore, the inclusion of the Biosolids Area, Ponded Area, and Ditch A – South in the Older Child Transient Trespasser EU adds conservatism when one considers this receptor in comparison to the Amphitheater Attendee.

The reasonable maximum exposure (RME)[3] frequency, time, and duration for the Older Child Transient Trespasser is 94 days, 1 hour/day, and 12 years, respectively. The RME frequency, time, and duration for the Lunchtime Trespasser is 95 days, 0.5 hours/day, and 25 years, respectively. Although an Amphitheater Attendee may be expected to have a longer RME time (*e.g.*, 3 hours/day), the RME frequency would be expected to be significantly less (*e.g.*, 25 days). Therefore, the RME frequency and time for the Amphitheater Attendee (75 hours) would be similar to that of the Older Child Transient Trespasser (94 hours) and the Lunchtime Trespasser (47.5 hours). The RME exposure durations for the Older Child Transient Trespasser (12 years) and the Lunchtime Trespasser (25 years) are also consistent with what may be expected for an Amphitheater Attendee (30 years). As noted above, the Amphitheater Attendee may frequent a subset of the exposure areas that the Older Child Transient Trespasser or the Lunchtime Trespasser may be exposed to, and these exposure areas would not include areas (*e.g.*, Biosolids Area, Ponded Area, Ditch A – South) at which some contaminants are known to be present at higher levels than in the other exposure areas. Also, the Amphitheater Attendee would be expected to frequent these areas at similar or lower exposure timeframes than the Older Child Transient Trespasser or the Lunchtime Trespasser. Consequently, one would not expect potential excess risks and hazards for an Amphitheater Attendee to exceed risk estimates developed in the HHRA for either the Older Child Transient Trespasser or the Lunchtime Trespasser. Since risks and hazards for both the Older Child Transient Trespasser and Lunchtime Trespasser were within or below acceptable risk ranges and targets, one would also not expect potential risks or hazards to the Amphitheater Attendee to exceed acceptable risk ranges and targets.

The proposed project may at some point include boat dock access for water taxis to transport some Amphitheater Attendees to and from events. If a boat dock facility were to be constructed, an Amphitheater Attendee may then also frequent the Lakeshore area in addition to the exposure areas identified above. However, as an Amphitheater Attendee would only be present in these areas while boarding and being discharged from the watercraft, the exposure timeframes would be minimal. When considering potential exposures in the Lakeshore area, it may also be helpful to bear in mind the quantitative estimates associated with Fisherperson/Trespasser. The exposure unit for the Fisherperson/Trespasser includes the Lakeshore Area and Ditch A - South, but no other exposure areas. The exposure frequency, time, and duration for the Fisherperson/Trespasser is 42 days/year, 4 hours/day, and 30 years, respectively. These exposures timeframes are significantly greater than those that would be expected for an Amphitheater Attendee. Even with these greater timeframes, however, the HHRA determined that there were no estimated unacceptable risks or hazards to the Fisherperson/Trespasser. This provides an additional line of evidence that the Amphitheater Attendee would not be expected to incur any exposures from the Lakeshore Area which would result in unacceptable risks or hazards.

[3] The reasonable maximum exposure scenario represents the highest level of exposure that could reasonably be expected to occur.

4.2 Amphitheater Maintenance Worker

An Amphitheater Maintenance worker may be exposed to contaminants through regular upkeep of the Facility and nearby areas, such as picking up garbage and performing periodic repairs.

The EU associated with the Commercial/Industrial Worker as evaluated in the HHRA include the New York State Fair Parking Area, the Upland Old Field Successional, and the Biosolids Area.

An Amphitheater Maintenance Worker would be expected to frequent the same exposure areas as the Commercial/Industrial Worker except that an Amphitheater Maintenance Worker would not likely encounter the Biosolids Area as it not in the vicinity of the proposed amphitheater. As in the case discussed above for the Amphitheater Attendee, assuming that the Amphitheater Maintenance Worker is exposed to this area in addition to the New York State Fair Parking Area and the Upland Old Field Successional Area only adds conservatism to this evaluation as the Biosolids Area contains higher levels of certain contaminants relative to other Site exposure areas.

The exposure frequency, time, and duration for the Commercial/Industrial Worker is 250 days/year, 8 hours/day, and 25 years, respectively. The Amphitheater Maintenance Worker would be expected to have a similar or lower level of exposure in terms of exposure time and duration as the Commercial/Industrial Worker, but with a likely lower exposure frequency, as it is not reasonable to assume that the amphitheater would be in use 250 days/year. As cancer risks and non-cancer hazards did not exceed acceptable ranges or targets for the HHRA's Commercial/Industrial Worker, one would also not expect them to be exceeded for the Amphitheater Maintenance Worker.

4.3 Amphitheater Construction Worker

The EU and media associated with the Construction Worker as evaluated in the HHRA include the New York State Fair Parking Area, the Upland Old Field Successional, the Biosolids Area, the Lakeshore Area, and Site-wide Shallow Ground Water. The EU and media are consistent with location and media at which the Amphitheater Construction Worker might be engaged in construction activities, with the exception of the Biosolids Area, since it is not in the vicinity of the proposed construction. As in the case discussed above for the Amphitheater Attendee and Amphitheater Maintenance Worker, assuming that the Amphitheater Construction Worker is exposed to the Biosolids Area in addition to the other areas only adds conservatism to this evaluation as the Biosolids Area contains higher levels of certain contaminants relative to other Site exposure areas.

In the HHRA, estimated excess lifetime cancer risks for the Construction Worker were within the acceptable risk range. Estimated non-cancer hazards to the Construction Worker exceeded the threshold value with the primary constituents being attributable to manganese, nickel, and benzene, and the primary exposure media being shallow groundwater and outdoor air. Therefore, it is also reasonable to expect that the potential estimated excess cancer risks for the Amphitheater Construction Worker would be within the acceptable risk range, but that non-cancer hazards for this receptor may exceed the threshold value. Consequently, an Amphitheater Construction worker can and should employ measures (*e.g.*, use of personal protective clothing and equipment) in accordance with Site-specific Health and Safety plans to ensure worker protection while engaging in on-Site construction activities.

5. REVIEW OF LOCALIZED HOT SPOTS

In addition to evaluating exposure factors for an Amphitheater Attendee, Amphitheater Maintenance Worker, and Amphitheater Construction Worker relative to those for other receptors for which quantitative risk estimates were developed in HHRA, the HHRA was reviewed to determine if any localized hot spots were found to be present at or in the vicinity of the proposed amphitheater. The presence of any localized hot spots in the amphitheater area may result in higher potential exposures to receptors that would be more likely to access the hot spot area relative to the receptors evaluated in the HHRA.

The HHRA determined that a hot spot for nickel is present in the area immediate southeast of and adjacent to the Crucible Landfill as noted in surface sample results for samples SS-19, SS-19A, SS-19B, SS-19C, and SS-19D (O'Brien & Gere, 2011). (See Figure 4 for sample locations.) The maximum concentration for nickel in this area, 281 mg/kg, is more than an order of magnitude higher than the maximum nickel concentration in the rest of the Upland Old Field Successional Area, 16 mg/kg. However, this maximum detected concentration for nickel is below EPA's risk-based Screening Level of 1,500 mg/kg (EPA, 2013) for nickel, indicating that no adverse health effects would be expected as a result of any exposures to this hot spot area.

The HHRA identified spatial hot spot areas (*e.g.,* Biosolids Area, Ponded Area, Ditch A - South, Site Ditches) on the Site (O'Brien & Gere, 2011). However, none of the areas are near the amphitheater and therefore are not expected to be frequented by an Amphitheater Attendee, Amphitheater Maintenance Worker, or Amphitheater Construction Worker. Also, as noted above, the Ponded Area was remediated under the IRM. Consequently, the Amphitheater Attendee would not be expected to be subject to higher risks as a result of exposure to hot spot areas than would the Older Child Transient Trespasser and the Lunchtime Trespasser. Similarly, the Amphitheater Maintenance Worker and the Amphitheater Construction Worker would not be expected to be subject to higher potential health risks as a result of exposure to hot spot areas relative to the HHRA's Commercial/Industrial Worker and Construction Worker, respectively.

6. RISK SUMMARY AND RECOMMENDATIONS

A review of exposure populations, scenarios, timeframes, and hot spots on the Site determined that estimated potential human health risks for certain receptors evaluated in the HHRA could be used to inform potential human health risks for an individual attending events at the amphitheater and for an individual performing maintenance or construction activities associated with the amphitheater. Specifically, as described in detail in Sections 4 and 5, potential exposures to an Amphitheater Attendee are expected to be similar to or less than potential exposures to an Older Child Transient Trespasser or a Lunchtime Trespasser as evaluated in the HHRA, either because the exposure scenario is similar or less for the Amphitheater Attendee, or the concentration to which the Amphitheater Attendee would be exposed is likely less because hot spot areas would not be included in these activities. As the HHRA determined that estimated risks and hazards to an Older Child Transient Trespasser and a Lunchtime Trespasser were within acceptable risk ranges and targets, potential risks or hazards for the Amphitheater Attendee are also expected to be within acceptable risk ranges and targets. Similarly, potential exposures to an Amphitheater Maintenance Worker are expected to be similar to or less than potential exposures to an Industrial/Commercial Worker as evaluated in the HHRA. Since the HHRA determined that estimated risks and hazards to an Industrial/Commercial Worker were within acceptable risk ranges and targets, it

is also expected that potential risks or hazards to the Amphitheater Maintenance Worker would be within acceptable risk ranges and targets.

For the Amphitheater Construction Worker, potential exposures to this receptor are expected to be similar to potential exposures to the Construction Worker as evaluated in the HHRA. In the HHRA, potential estimated excess cancer risks for the Construction Worker were within the acceptable risk range. However, potential estimated excess non-cancer hazards to the Construction Worker exceed the threshold value with the primary constituents being attributable to manganese, nickel, and benzene, and the primary exposure media being shallow groundwater and outdoor air. Therefore, it is also reasonable to expect that the potential estimated excess cancer risks for the Amphitheater Construction Worker would be within the acceptable risk range, but that non-cancer hazards for this receptor may exceed EPA's threshold value. Consequently, an Amphitheater Construction Worker can and should employ measures (*e.g.*, use of personal protective clothing and equipment) in accordance with Site-specific Health and Safety plans to ensure worker protection while engaging in on-Site construction activities.

It is also important to note that the HHRA and this supplemental evaluation assumed no remediation, nor access or use controls such as fencing or signage. The current remedial schedule for the Site, however, calls for remedial activities to be implemented prior to or concurrent with construction of the proposed amphitheater and related facilities. The remedial activities will likely include measures which will limit and reduce potential exposures to humans and wildlife. Access or use controls for the area may also be incorporated as part of the construction of the Lakeview Amphitheater Facility. Once these remedial measures and controls are implemented, it is anticipated that there will be reduced potential for human exposure to Site contaminants relative to the conditions which were assumed in the HHRA and in this supplemental evaluation.

7. REFERENCES

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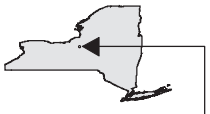

QUADRANGLE LOCATION

HONEYWELL
WASTEBEDS 1 - 8
GEDDES, NEW YORK

SITE LOCATION

N

0 1,000 2,000 4,000 6,000 8,000

Feet

1:24,000

JUNE 2010
1163.41861

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ONONDAGA COUNTY
LAKEVIEW AMPHITHEATER

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THEATRE PROJECTS Consultants

Figure 2

SITE MASTER PLAN

JUNE, 2014

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FIGURE 3

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LEGEND

- BIKE TRAIL
- APPROXIMATE WASTEBED BOUNDARY
- SITE BOUNDARY

EXPOSURE AREA

- BIOSOLIDS AREA
- NEW YORK STATE FAIR PARKING AREAS
- LAKESHORE AREA
- UPLAND OLD FIELD SUCCESSIONAL AREA
- PONDED AREA
- SITE DITCH
- DITCH A - SOUTH

HONEYWELL
WASTEBEDS 1-8 SITE
GEDDES, NEW YORK

EXPOSURE AREAS

0 350 700 1,400
Feet

MAY 2014
1163.39642

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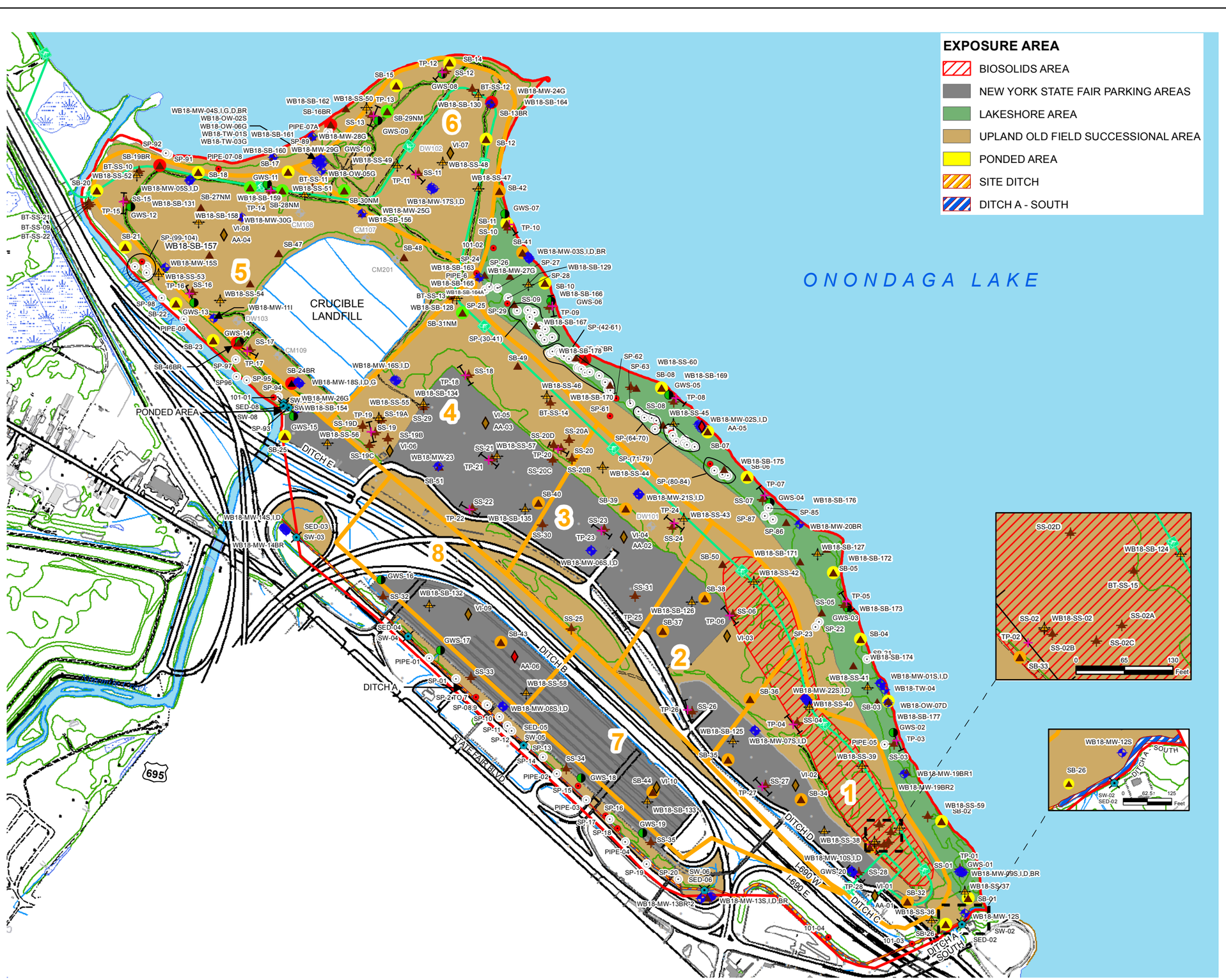
FIGURE 4



LEGEND

LOCATION TYPE

- AMBIENT AIR
- MONITORING WELL
- GROUND WATER SCREENING
- SOIL BORING
- SURFACE SOIL
- SURFACE WATER/SEDIMENT
- TEST PIT SAMPLE
- VAPOR INTRUSION
- SEEP WATER/SEDIMENT (sampled)
- SEEP WATER/SEDIMENT (not sampled)
- SOIL SAMPLE (Cr SPECIATION)
- CRUCIBLE WELL (not sampled)
- BORING TO TOP OF BEDROCK/TILL
- BORING TO SILT AND CLAY
- BORING (SOURCE CHARACTERIZATION)
- BORING (NMC GRAVEL/ SAND DELINEATION)
- BIKE TRAIL
- TEST PIT
- APPROXIMATE WASTEBED BOUNDARY
- SITE BOUNDARY

HONEYWELL
WASTEBEDS 1-8 SITE
GEDDES, NEW YORK

EXPOSURE AREAS & SAMPLING LOCATIONS

0 350 700 1,400
Feet

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