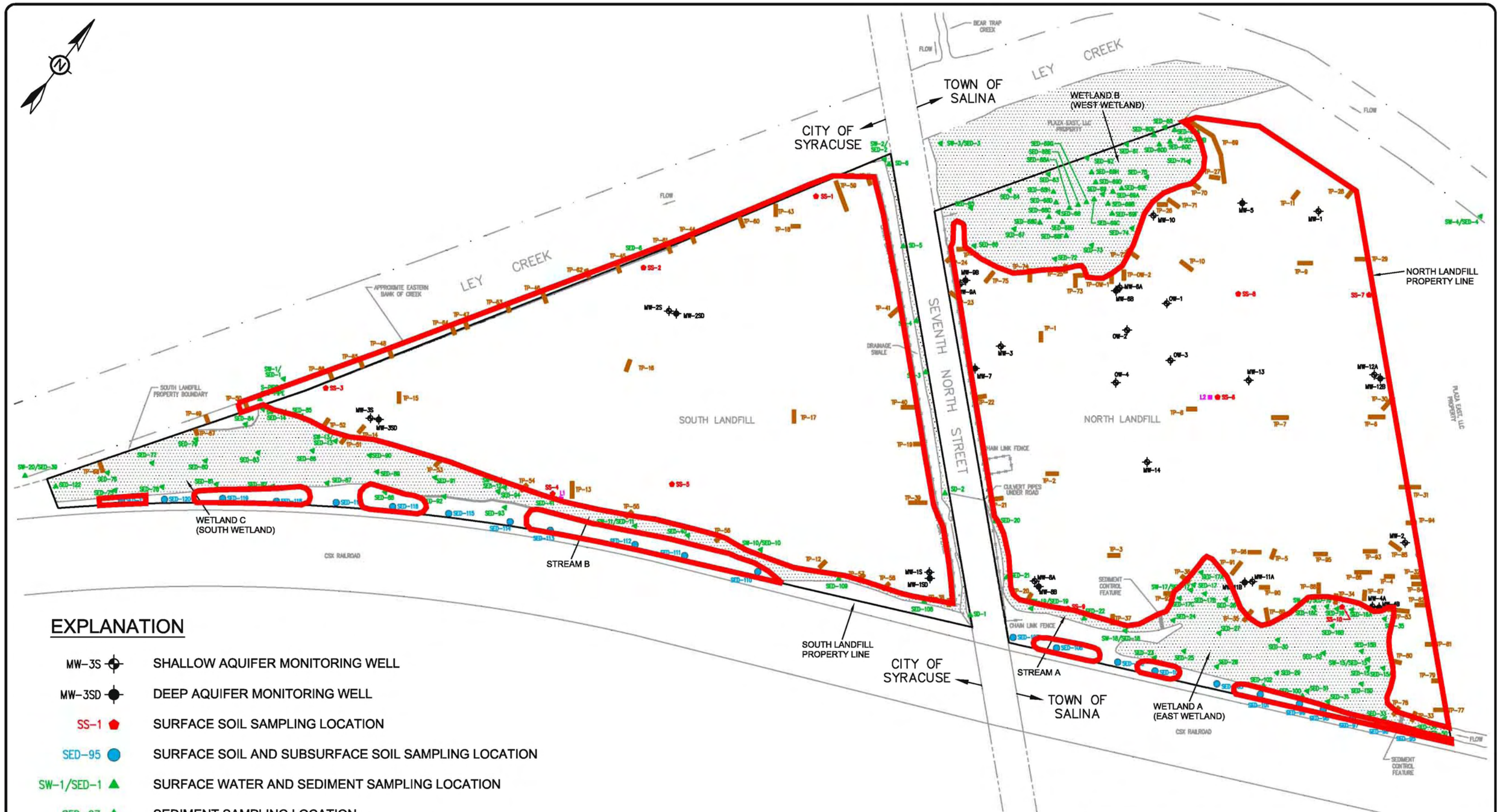

EXPLANATION

MW-3S	SHALLOW AQUIFER MONITORING WELL
MW-3SD	DEEP AQUIFER MONITORING WELL
SS-1	SURFACE SOIL SAMPLING LOCATION
SED-95	SURFACE SOIL AND SUBSURFACE SOIL SAMPLING LOCATION
SW-1/SED-1	SURFACE WATER AND SEDIMENT SAMPLING LOCATION
SED-27	SEDIMENT SAMPLING LOCATION
TP-13	TEST PIT LOCATION
L1	LEACHATE SAMPLING LOCATION
	EXTENT OF SOIL ABOVE SCOs (UNRESTRICTED)

0 180 360

SCALE IN FEET

TITLE: COOPER CROUSE-HINDS LANDFILL FACILITY
EXTENT OF SOIL CONTAMINATION

LOCATION: SYRACUSE, NEW YORK

GeoTrans, Inc. A TETRA TECH COMPANY

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2202036
DATE	1/27/11

FIGURE: 4

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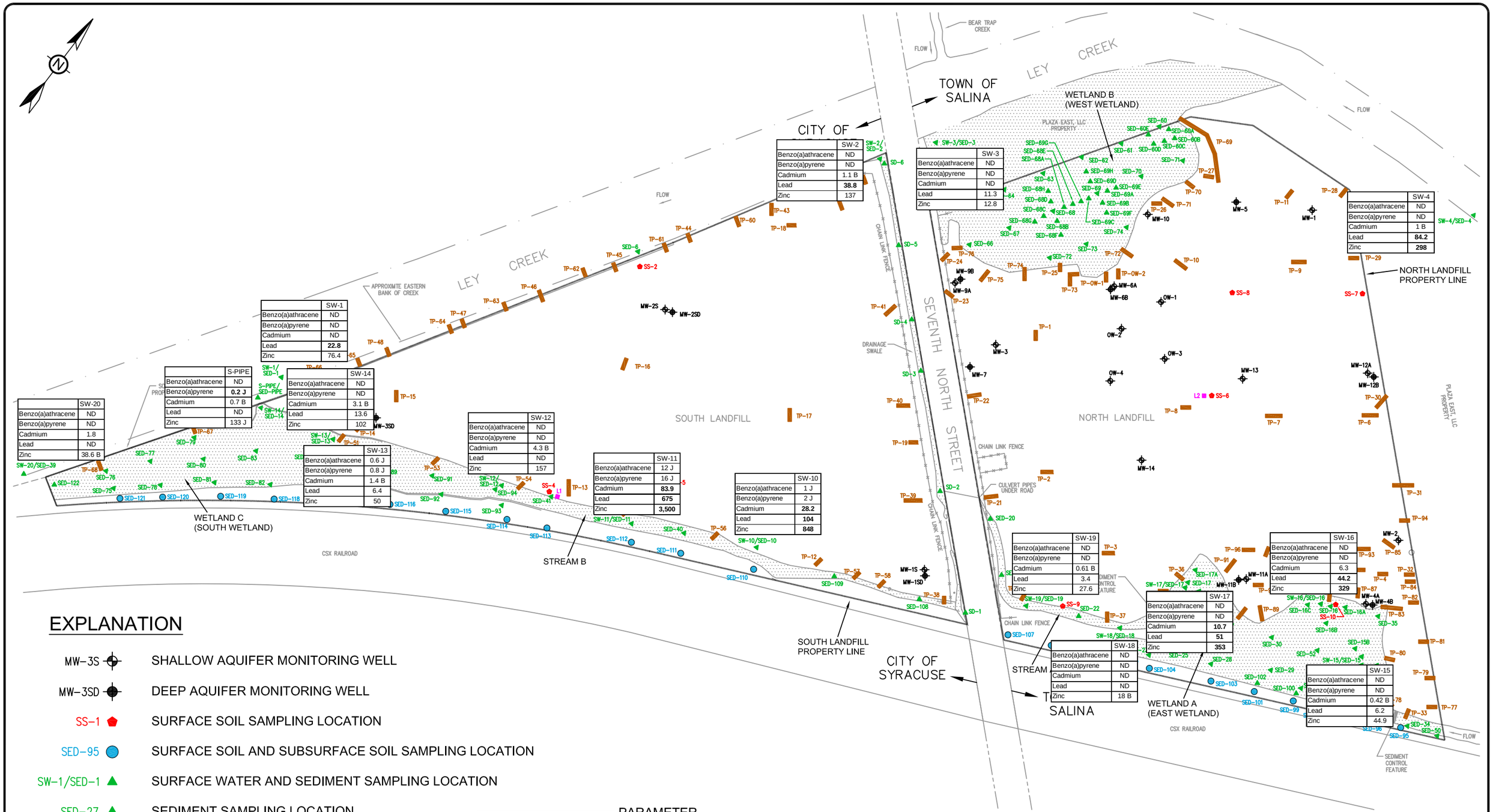

	SW-1
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	ND
Lead	**22.8**
Zinc	76.4

	SW-2
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	1.1 B
Lead	**38.8**
Zinc	137

	SW-3
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	ND
Lead	11.3
Zinc	12.8

	SW-4
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	1 B
Lead	**84.2**
Zinc	**298**

	SW-10
Benzo(a)athracene	1 J
Benzo(a)pyrene	2 J
Cadmium	**28.2**
Lead	**104**
Zinc	**848**

	SW-11
Benzo(a)athracene	12 J
Benzo(a)pyrene	16 J
Cadmium	**83.9**
Lead	**675**
Zinc	**3,500**

	SW-12
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	4.3 B
Lead	ND
Zinc	157

	SW-13
Benzo(a)athracene	0.6 J
Benzo(a)pyrene	0.8 J
Cadmium	1.4 B
Lead	6.4
Zinc	50

	SW-14
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	3.1 B
Lead	13.6
Zinc	102

	S-PIPE
Benzo(a)athracene	ND
Benzo(a)pyrene	**0.2 J**
Cadmium	0.7 B
Lead	ND
Zinc	133 J

	SW-20
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	1.8
Lead	ND
Zinc	38.6 B

	SW-19
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	0.61 B
Lead	3.4
Zinc	27.6

	SW-18
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	ND
Lead	ND
Zinc	18 B

	SW-17
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	**10.7**
Lead	**51**
Zinc	**353**

	SW-16
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	6.3
Lead	**44.2**
Zinc	**329**

	SW-15
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	0.42 B
Lead	6.2
Zinc	44.9

EXPLANATION

- MW-3S — SHALLOW AQUIFER MONITORING WELL
- MW-3SD — DEEP AQUIFER MONITORING WELL
- SS-1 — SURFACE SOIL SAMPLING LOCATION
- SED-95 — SURFACE SOIL AND SUBSURFACE SOIL SAMPLING LOCATION
- SW-1/SED-1 — SURFACE WATER AND SEDIMENT SAMPLING LOCATION
- SED-27 — SEDIMENT SAMPLING LOCATION
- TP-13 — TEST PIT LOCATION
- L1 — LEACHATE SAMPLING LOCATION

	SW-4
Benzo(a)athracene	ND
Benzo(a)pyrene	ND
Cadmium	1 B
Lead	**84.2**
Zinc	**298**

PARAMETER
SAMPLING LOCATION
NON-DETECT
CONCENTRATION (ug/L)
BOLD INDICATES NYSDEC CLASS C SURFACE WATER STANDARD EXCEEDED

0 180 360
SCALE IN FEET

TITLE: COOPER CROUSE-HINDS LANDFILL FACILITY
EXTENT OF CONTAMINATED SURFACE WATER

LOCATION: SYRACUSE, NEW YORK

GeoTrans, Inc. A TETRA TECH COMPANY

CHECKED	MRN
DRAFTED	HJW
PROJECT	117-2202036
DATE	11/11/10

FIGURE: 5

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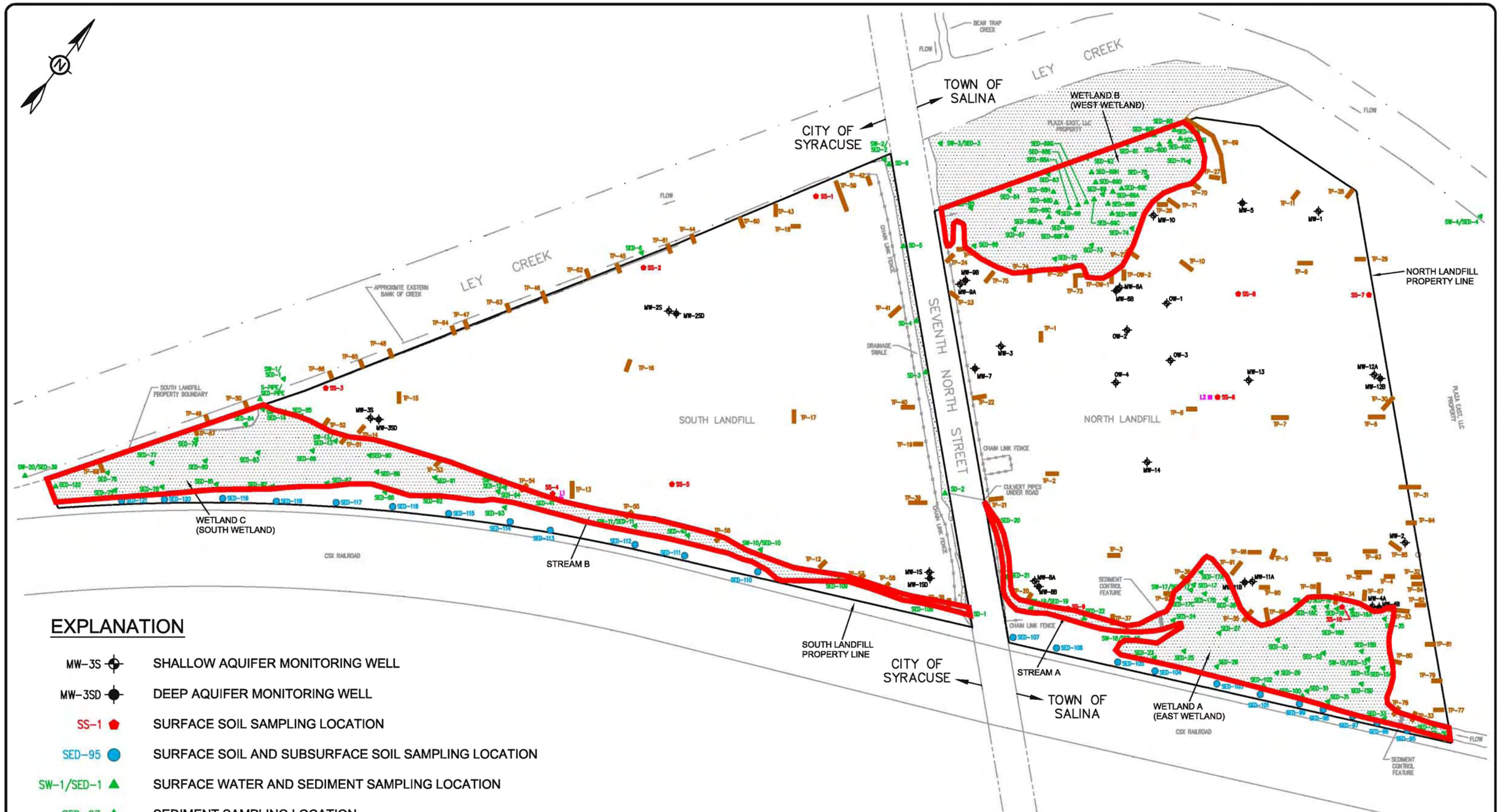

EXPLANATION

MW-3S	SHALLOW AQUIFER MONITORING WELL
MW-3SD	DEEP AQUIFER MONITORING WELL
SS-1	SURFACE SOIL SAMPLING LOCATION
SED-95	SURFACE SOIL AND SUBSURFACE SOIL SAMPLING LOCATION
SW-1/SED-1	SURFACE WATER AND SEDIMENT SAMPLING LOCATION
SED-27	SEDIMENT SAMPLING LOCATION
TP-13	TEST PIT LOCATION
L1	LEACHATE SAMPLING LOCATION
	EXTENT OF SEDIMENTS EXCEEDING SCGs

0 180 360

SCALE IN FEET

TITLE: COOPER CROUSE-HINDS LANDFILL FACILITY
EXTENT OF CONTAMINATED SEDIMENTS

LOCATION: SYRACUSE, NEW YORK

GeoTrans, Inc. A TETRA TECH COMPANY

CHECKED	MRN	FIGURE:
DRAFTED	HJW	6
PROJECT	117-2202036	
DATE	1/27/11	

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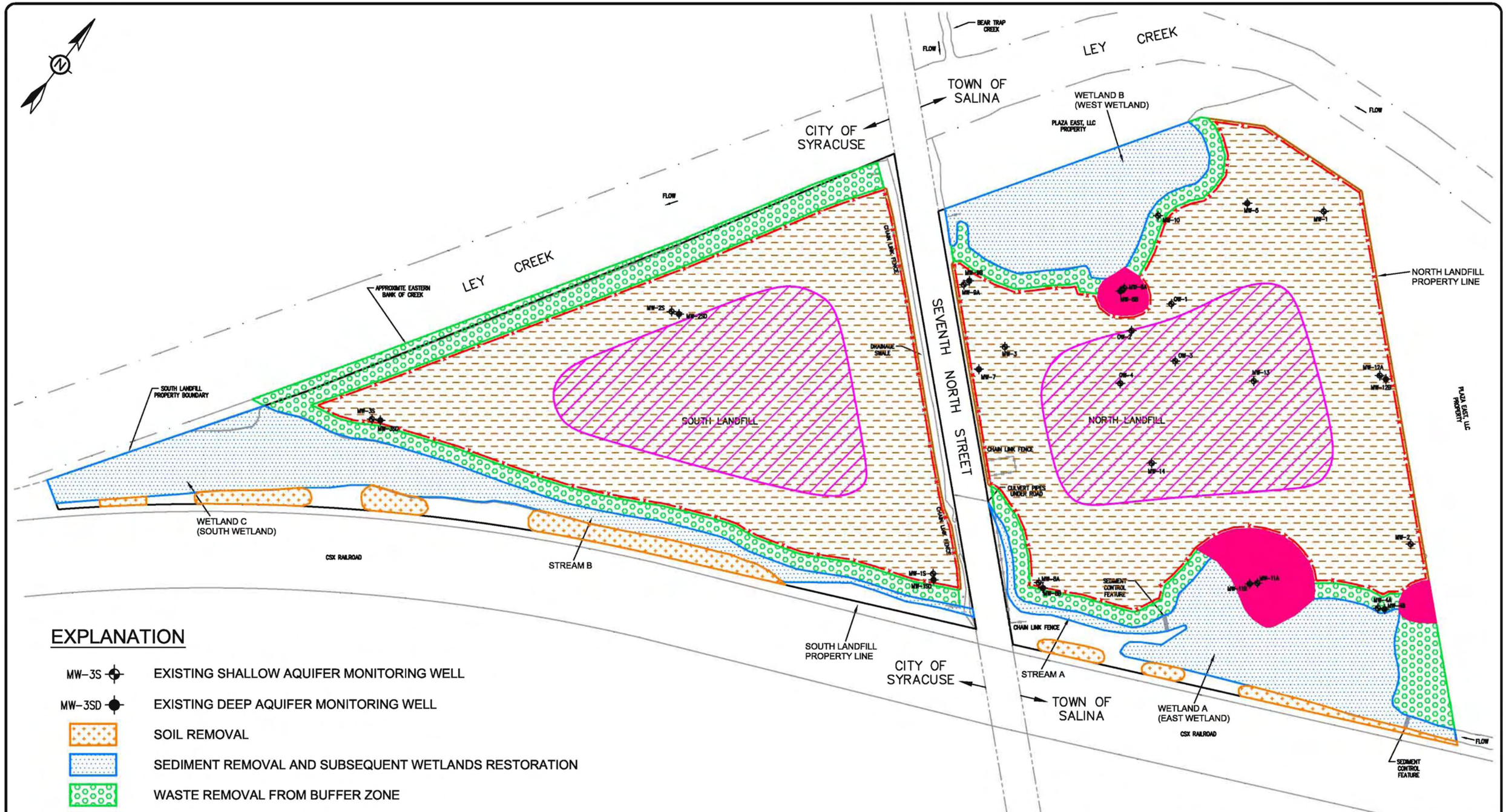

EXPLANATION

- MW-3S — EXISTING SHALLOW AQUIFER MONITORING WELL
- MW-3SD — EXISTING DEEP AQUIFER MONITORING WELL
- SOIL REMOVAL
- SEDIMENT REMOVAL AND SUBSEQUENT WETLANDS RESTORATION
- WASTE REMOVAL FROM BUFFER ZONE
- HOT SPOT REMOVAL AND OFF-SITE DISPOSAL
- SEDIMENT / WASTE CONSOLIDATION
- 6 NYCRR PART 360 CAP
- FENCE

0 180 360
SCALE IN FEET

TITLE:	COOPER CROUSE-HINDS LANDFILL FACILITY ALTERNATIVE 4
LOCATION:	SYRACUSE, NEW YORK

GeoTrans, Inc. A TETRA TECH COMPANY

CHECKED	MRN	FIGURE:
DRAFTED	HJW	7
PROJECT	117-2202036	
DATE	11/11/10	

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APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Crouse-Hinds Landfill Site
State Superfund Project
City of Syracuse and Town of Salina, Onondaga County, New York
Site No. 7-34-004

The Proposed Remedial Action Plan (PRAP) for the Crouse-Hinds Landfills site was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 4, 2011. The PRAP outlined the remedial measure proposed for the contaminated soil, sediment, surface water and groundwater at the Crouse-Hinds Landfills site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on February 17, 2011, which included a presentation of the remedial investigation and feasibility study (RI/FS) for the Crouse-Hinds Landfills site as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period was to have ended on March 7, 2011, however it was extended to March 25, 2011, at the request of the public.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

COMMENT 1: After the remedy is implemented, will there be public access for fishing at the site?

RESPONSE 1: The site is currently zoned industrial and is private property. Access for fishing or other activities at the site would need to be allowed by the property owner, although such use would be consistent with the commercial use restriction for the site. Any such change of use at the site would have to be approved by New York State.

COMMENT 2: The on-site treatment of hot spots should be evaluated.

RESPONSE 2: The hot spot removals will occur in three areas each of which are based on different contaminants and are of limited volume. Based on this limited volume and treatment needs on-site treatment was not pursued. The Feasibility Study identified and evaluated a sufficient number of alternatives, and there is no need to evaluate on-site treatment alternatives.

The following comments were received from Joseph J. Heath, Esq., General Counsel for the Onondaga Nation, in a March 8, 2011 letter to the Department.

COMMENT 3: Most of the alternatives considered in the PRAP do not take substantial steps toward Nation's Vision of a clean, healthy, and useable environment in and around Onondaga Lake. Rather, in the majority of alternatives considered, the Crouse Hinds Landfill site will continue to be a potential source of contamination for the Lake and its environs, will be limited to industrial or other limited contact uses, and will potentially endanger subsistence or traditional users of the Lake and its surrounding. For all those reasons, the Nation strongly supports Alternative 2, which requires full remediation of the site. At minimum, additional review and revision of some alternatives is required.

RESPONSE 3: As stated in the PRAP under Section 4, Land Use and Physical Setting, the Department may consider the current, intended and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, the current, intended and reasonably anticipated future land use of the site is industrial. Once the remedy is implemented, it is possible that commercial soil cleanup objectives (SCOs) are achieved, in which case the use of the property could be expanded to include commercial if zoning is changed. In addition, as stated in the PRAP in Exhibit E, consolidation and capping, with hotspot removal (Alternative 4), would be much less expensive than Alternative 2, while Alternative 2 would have additional short term impacts and implementability issues, yet it would provide virtually equal protection to public health and the environment. Alternative 4, while providing equivalent protection to public health and the environment, uses less natural resources and produces less greenhouse gas emissions, with respect to construction equipment and truck traffic, compared to Alternative 2. In addition, Alternative 4 will cut off potential pathways for releases to Ley Creek via wetland remediation, capping and hotspot removal.

COMMENT 4: The PRAP undervalues the restoration of this property to unrestricted uses and, for that reason, favors a limited remediation. Without proper assessment of the value added by the full remediation contemplated by Alternative 2, neither the DEC nor local governments can properly weigh the alternatives. Accordingly, we ask that DEC provide more detailed consideration of the benefits of full remediation at this site and ensure that the full range of affected communities be notified and fully involved in the selection of a remedy.

RESPONSE 4: The evaluation of alternatives, including remediation that would allow for unrestricted use, followed applicable regulations and guidance during which a detailed evaluation of each alternative was performed using the criteria in section 7. In addition, affected communities were provided opportunity to comment on the proposed remedy in accordance with applicable regulations and policies. Relative to the undervaluing of the restoration of the property, the estimated cost to achieve unrestricted use is greater than $44M as compared to $12.5 M for the selected remedy. In conjunction with the discussion in Response 3 above of several of the technical balancing criteria evaluated which demonstrate the protectiveness of the remedy, the incremental cost of $31.5M clearly exceeds the value of the subject property.

COMMENT 5: The DEC must ensure that any remedy prevents additional contaminants of concern from flowing to the Lake. However, the PRAP itself documents a clear pathway for contaminant movement from the site to the Lake. As described in this document, the South Landfill directly abuts Ley Creek, the North Landfill is separated from the Creek by vacant land

and wetlands and the upper layer of groundwater is generally moving toward the Creek. Given this unobstructed pathway from the site to the Creek, the DEC's lightly supported conclusion that Crouse Hinds Landfill does not contribute contaminants to the Creek or the Lake strains belief. Without a more thorough investigation of the potential contributions of Crouse Hinds Landfill to Ley Creek, we believe that the discussion in Section 3.4, paragraph 3, stating that the Landfill does not contribute contaminants to Ley Creek, should be removed from the PRAP. The DEC also must ensure that its remedy breaks any potential soil to groundwater and groundwater to surface water pathways flowing from the Landfill. Only Alternative 3 includes an active groundwater treatment and monitoring element that meets this requirement. A similar monitoring and treatment element should be added to any alternative that the DEC adopts.

RESPONSE 5: As discussed in Exhibit A, surface water data from site investigations reveal that Ley Creek meets applicable water quality standards for site related contaminants in the vicinity of the site with the exception of lead, which exhibits higher concentrations upstream of the site indicative of an upstream source. Sediment data, as discussed in Exhibit A, reveal a consistent pattern of contaminants (several PAH's, PCBs, and several heavy metals) and corresponding concentrations upstream, adjacent to, and downstream of the site which indicates that there are no discernable site impacts to Ley Creek sediments in the vicinity of the site (see Figure 6). Although the data are not conclusive in relation to the potential for historic releases from the site to Ley Creek, the available data do not warrant the inclusion of Ley Creek sediment contamination within the site's remedial program. It should be noted that Lower Ley Creek (downstream from the former GM IFG facility site) is a part (subsite) of the Onondaga Lake National Priorities List site for which the Environmental Protection Agency is presently conducting a remedial investigation. Any unacceptable risks to human health and the environment posed by the Lower Ley Creek site will be addressed by this EPA lead remedial program. Furthermore, the remedy for Crouse-Hinds landfill site includes development of a monitoring program to ensure that the objectives of the remedy, which include preventing releases to Ley Creek, are met.

Regarding the comment's recommendation that the remedy include an active groundwater treatment and monitoring element, an active groundwater collection system is not warranted for this site. Groundwater data demonstrate that site groundwater contamination is not impacting Ley Creek.

Although the site investigation did not discern any ongoing releases from this site to Ley Creek, the selected remedy will eliminate potential pathways to Ley Creek and Onondaga Lake from storm water run-off /erosion (landfill capping and sediment remediation of sediments in drainage ways) and the remedy will further reduce impacts to on-site groundwater (capping and hot spot removal).

COMMENT 6: As in past remedial efforts, the DEC continues to rely on human health risk assessment standards that are not protective of subsistence users. As a result, the remediation contemplated by DEC would not allow the Nation to safely resume its traditional uses of the Lake. For this reason, the Nation again asks the DEC to revise its human health risk assessment to consider Nation-specific exposure rates and exposure durations.

RESPONSE 6: Superfund site cleanup goals relative to human health are aimed at preventing exposures while taking into consideration current and likely future uses. The site is private property owned by Cooper Crouse-Hinds, is currently zoned for industrial use, and changes to this use would have to be approved by the Department due to restrictions posed by the environmental easement. Furthermore, the cleanup of this site does not impact the protectiveness of human uses of Onondaga Lake.

COMMENT 7: The Nation is particularly concerned about some elements of the DEC's preferred alternative. In particular, Alternative 4 contemplates creating a buffer between on-site wetlands and the contaminated soils that will be left in place (Sec. 7.2), but provides no similar protection for the off-site wetlands that abut the North Landfill to the west and north or lie to the south of the South Landfill (Sec. 3). At minimum, these off-site wetlands should receive the same protection as on-site wetlands.

RESPONSE 7: The remedy calls for, and Figure 7 depicts, buffers between the North Landfill and Wetlands A and B and buffers between the South Landfill and Ley Creek and Wetland C. All wetlands and Ley Creek are buffered from the landfills. In addition, Alternative 4 calls for the remediation of sediments in, and the restoration of, Wetlands A, B and C.

COMMENT 8: Further, the DEC proposes removing PCB-contaminated wastes and PCB-contaminated sediments from on-site wetlands if PCB levels reach 50 ppm or higher, but leaving those wastes in place and simply consolidated contaminated sediments within the smaller landfill footprint if PCB levels fall between 1 ppm and 50 ppm. Our concern is that the restricted (industrial use) soil cleanup objective listed in the PRAP for total PCBs is only 25 ppm and the DEC provides no explanation within the draft PRAP for the higher limit being proposed. We believe that the DEC should, at minimum, remove PCB-contaminated wastes above the 25 ppm standard or provide a clear explanation of the 50 ppm standard being proposed.

RESPONSE 8: Alternative 4 calls for the remediation of contaminated sediments in Wetlands A, B and C to 1 ppm, with wetland restoration. Contaminated sediments between 1 ppm and 50 ppm will be excavated and consolidated in the landfills, above the water table and will be covered by an engineered cap. PCB-contaminated soil and sediment above hazardous waste regulatory levels (*i.e.*, 50 ppm) will be excavated and properly disposed of off-site. The 25 ppm SCO for industrial use is based on exposure to surficial soils where direct contact may occur. The engineered cap systems will cover the landfill masses (all solid and hazardous waste), providing protection to direct contact to any site soils, PCB-contaminated or other, above the Department's industrial use SCOs. The approach to consolidating and shrinking the footprint of the landfill is consistent with the Department's approach to landfill remediation. It is also consistent with EPA's presumptive remedy for landfills (see http://www.epa.gov/superfund/policy/remedy/presump/clms.htm).

COMMENT 9: The Nation believes that the PRAP should include information about the potential contamination of the lower aquifer and whether any site-related contaminants have been identified in this aquifer. Given that this lower aquifer is described as sometimes being under artesian conditions, it may exacerbate the soil to groundwater to surface water pathway discussed above.

RESPONSE 9: The PRAP (and the ROD) includes information related to potential site impacts on the lower aquifer. In Exhibit A, Nature and Extent of Contamination, Groundwater section, the PRAP stated that samples collected at the North and South Landfills indicate no reproducible detections of VOCs, SVOCs, or total phenols. Metals were detected at concentrations slightly in excess of the NYSDEC Class GA groundwater standards (primarily aesthetic water quality criteria for iron). No pesticides, PCBs or cyanide were detected in the deep groundwater. Therefore, the data indicate that the site in not impacting the deep groundwater aquifer.

The shallow and deep groundwater aquifers are not in communication with each other. They are separated by a continuous confining layer of silt and clay deposits of varying thickness commencing at approximately 30 feet below the ground surface (see the ROD, Section 2, Site Description and History, Site Geology and Hydrogeology).

In addition to the silt and clay unit, groundwater in the deep aquifer exhibits a strong upward vertical gradient, further preventing the migration of contamination from the upper aquifer to the lower aquifer.

COMMENT 10: It is not clear that:

(1) interested parties, including elected officials, and land planning entities, and the general public have been advised that an unrestricted cleanup is a viable option and

(2) an increase in economic benefits via increased land value (other than construction, O&M, ICs costs) were considered in the economic valuation used to support full removal of wastes on the south side of the creek.

Current zoning and planning was conducted as a consequence of current condition—not what is likely attainable after clean-up.

As stated before on comments associated with the Salina Landfill, the Onondaga Nation believes that the concept of increased land valuation has been omitted from many of the other RODs for the other OUs. This concept should be revisited to generate a more accurate portrayal of costs associated with each alternative.

RESPONSE 10: See the Department's response to Comment #4.

COMMENT 11: The Lake Bottom OU does not allow for an influx of COCs; therefore, the preferred Alternative for this OU as well as all other OUs or subsites must be designed to "Break the soil to groundwater and the groundwater to surface water pathways". This design requirement is central to all remedies. The Nation requests that this statement be included within the first paragraph in order to inform the reader early-on.

Only Alternatives 3 provides a means of potentially breaking the ground water to surface water pathway (Alternatives 2 and 4 would also require active pumping and treatment until pre-release baseline conditions had re-established). Based on current potentiometric map, Ley Creek is a discharge area that will receive water from the site. Even, if the landfills are capped with

impermeable or semi-permeable membranes, a depression in the potentiometric surface underlying the landfill caused by the temporary infiltration shadow will be in-filled by lateral flow toward the contaminated area. Post capping contours will indicate that groundwater will still pass underneath the site where the aquifer matrix material is contaminated. In summary, Ley creek and Onondaga Lake will continue to be contaminated unless active pump and treat is employed. From this discussion alone, a properly designed and implement Alternative 3 is much more proactive of downstream interests.

RESPONSE 11: See the Department's response to Comment #5.

COMMENT 12: The Human Health Risk Assessment does not include future traditional subsistence or current subsistence use of resources. Many of the clean-up goals PRAD are not protective of subsistence users. The Nation recommends that the entire BHHRA section be revised, complete with Nation-Specific Exposure factors and durations of exposure.

RESPONSE 12: Please see the Department's response to Comment #6.

COMMENT 13: Page 4; Section: Site Geology and Hydrogeology. This section needs to advise the reader on the status of the lower aquifer, and if any site related contaminants have been identified. The fact that the lower aquifer is sometimes under artesian conditions may exacerbate the problem described in General Comment No 2, above.

RESPONSE 13: Please see the Department's response to Comment #9.

COMMENT 14: Page 5; Section 6.1.1: Paragraph 2:

> *The tables found in Exhibit A list the applicable SCGs in the footnotes.*

Again, these RAO's are not protective of subsistence users or for release as unrestricted.

RESPONSE 14: See the Department's response to Comment #6 above.

COMMENT 15: Page 7; Section 6.4; Paragraph 3:

> *While contaminants of concern were detected in the sediment and surface water in Ley Creek, the data demonstrate that the current impacts to Ley Creek are not attributable to the site. Rather, sampling has shown that upstream sources, not associated with this site, are impacting the creek. For example, lead in Ley Creek surface water was detected at concentrations in excess of the New York State surface water quality standard (17.9 ppb) adjacent to the site; however, the highest concentration detected in Ley Creek during the RI was at the upgradient sampling location (84.2 ppb).*

This discussion should be removed, since one cannot conclude that Crouse-Hinds is not contributing contaminants to Ley Creek.

RESPONSE 15: See the Department's response to Comment #5.

The following comments were received from Onondaga County through a March 7, 2011 from Kevin C. Murphy, Esq. of Wladis Law Firm to the Department.

COMMENT 16: The County is in full agreement that the data establishes that Ley Creek is impacted by upstream sources of contamination, but disputes that the data in Remedial Investigation Report establishes that there is *no current impact* to Ley Creek from the Site and more importantly, any implication that the Site had no historic impact on the Creek.

RESPONSE 16: See the Department's response to Comment #5.

COMMENT 17: In support of this objection the County notes that prior to being used as landfills the Site consisted of low lying fields and salt marshes immediately adjacent to and in the flood plain of Ley Creek. The County also directs the Department to page 5 of the PRAP which notes that "[s]urface water and sediments in drainage channels and wetlands at the site provide a complete pathway to aquatic organisms and their predators. Surface water runoff to Ley Creek provides a potential pathway to aquatic organisms and their predators. Groundwater seepage to surface water onsite provides a potential pathway to aquatic organisms."

REPSONSE 17: Section 3: Site Description and History, Historical Use, of the PRAP states, "Prior to the mid-to-late 1950's the North and South Landfill areas had been occupied by low lying fields, salt marshes and woodlands." Currently, wetland maps indicate that only Wetland B is considered a National Wetland Inventory wetland, and that there are no State wetlands onsite. While surface water runoff to Ley Creek and groundwater seepage to surface water onsite provide *potential pathways*, the only completed pathway discussed in the PRAP text is in regard to on-site wetlands and drainage channels, not to Ley Creek. As discussed in the Department's response to Comment #5, site investigatory data indicate that there are no on-going contaminant releases from the site to Ley Creek. Further, remedial actions set forth in the ROD will minimize the potential for future impacts.

COMMENT 18: While the County does not dispute and in fact, concurs that the primary source of historic and on-going contamination to Ley Creek is up gradient of this Site, the County submits the suggested "no impact" statement made in the PRAP Fact Sheet is premature and not adequately supported by either the data or the data-based conclusions in the Remedial Investigation Report.

RESPONSE 18: See the Department's response to Comment #5.

The following comments were received from Samuel H. Sage, President and Senior Scientist of Atlantic States Legal Foundation in a March 24, 2011 letter to the Department.

COMMENT 19: Atlantic States is particularly concerned that DEC has not adequately considered the potential habitat impacts of its preferred alternative. Because DEC plans to

pursue an alternative aimed at restoring the property to industrial use, the Site will continue to be a potential source of contamination for the surrounding habitat and potentially pose a danger to the wildlife dependent on those habitats. While Atlantic States would prefer a remedy that provides more complete remediation and returns the Site to natural conditions, at minimum, additional review and revision of the habitat and wildlife impact of this preferred alternative is required.

RESPONSE 19: The Department has reviewed the potential habitat impacts of its preferred alternative. The remedy will mitigate threats to the environment through hotspot removal, consolidation, capping, creating a buffer zone between the landfills and the wetlands and the restoration of on-site wetlands.

COMMENT 20: Although the PRAP recognizes the presence of complete contaminant pathways affecting burrowing wildlife and aquatic organisms (Sec. 6.4, p. 7), the impact of such exposure is not seriously considered in the evaluation of alternatives. DEC appears to have dismissed the possibility of off-site exposure because sampling in Ley Creek failed to show contaminant spikes downstream of the Site. Without a more thorough analysis, including contaminant finger-printing, this finding is speculative at best. There is no discussion of wetland sampling on adjacent sites (Exhibit A, p. 6). Further, there is no discussion of potential wildlife exposure on the site itself or steps to minimize that potential exposure. Given that DEC's preferred alternative does not disrupt recognized contaminant pathways affecting habitat and wildlife in the vicinity of the Site, the PRAP should include a more detailed assessment of potential exposure impacts and consider additional remediation or protective measures to disrupt those impacts.

RESPONSE 20: See the Department's response to Comment #5.

COMMENT 21: In addition, the PRAP makes no mention of the potential exposure of humans through recreational fishing in Ley Creek downstream of the Site. Human exposure is considered only through direct contact pathways, such as drinking contaminated water or dermal contact with contaminated soils. While there may not be designated public access for fishing or other water-related recreation in these downstream areas, recreational fishing and similar uses are occurring in these areas. The argument that there is now no public access or public property on this site is not a convincing argument against this. We know of people who fish there now and with further cleanup, additional fisher days will ensue making it essential that their health be considered in this cleanup plan. In addition, public access may well be provided in future, as part of habitat restoration plans created under the Onondaga Lake Superfund remediation or the related Natural Resources Damages action. The PRAP should reflect this reality.

RESPONSE 21: The remedy for the Crouse Hinds Landfill site will address potential pathways from the site to Ley Creek as discussed in the response to Comment #5.

Ley Creek is also subject to a NYSDOH human health advisory for consumption of fish that may be caught from Ley Creek (and all tributaries to Onondaga Lake) in the reach between the lake upstream to the first barrier impassible by fish.

COMMENT 22: Other habitat restoration projects are also being developed in and around Onondaga Lake, some of which may be impacted by the remedial design at the Site. We believe that DEC should explicitly evaluate the potential for the Site to interfere with or otherwise impact habitat restoration projects that may be planned or proposed in the surrounding areas. At a minimum, the PRAP should identify and explicitly discuss all habitat restoration projects that are underway or currently being planned in the area.

RESPONSE 22: The remedy for this site includes restoration of the on-site impacted wetlands following removal of contaminated sediments. The details for wetland restoration will be developed during remedial design with DEC input/oversight and subject to DEC approval. Evaluation of ongoing or potential future habitat restoration projects related to remediation of other inactive hazardous waste disposal sites in the area is outside the scope of the Crouse-Hinds Landfill site's remedial program. However, insofar as the DEC is managing the majority of the remedial programs for sites within the Onondaga Lake basin or is providing oversight/support to EPA for the several sites that EPA is managing, coordination among respective sites' remedial programs, as appropriate, is ongoing including issues such as habitat restoration projects.

COMMENT 23: Further, DEC should assess the possibility that wetlands were historically present on the Site itself and the potential impact of its preferred alternative on restoration or recover of this historic habitat. As noted in the PRAP, adjacent properties to the north and south of the Site contain numerous wetlands. Prior to the 1950s, according to both the PRAP and the Fact Sheet, the Site included "low lying fields and salt marshes" (Sec. 3, p. 3), which suggests that wetlands may have been common on site. At present, there is a small federally recognized wetland on the Site itself. This was confirmed in conversation with the DEC Region 7 Office in Syracuse and could be further verified from wetlands maps. Given these facts, it seems likely that the Site contained more extensive wetlands at one time. The PRAP should evaluate this possibility and consider the potential impacts of leaving significant levels of contamination in an area of historic wetlands.

RESPONSE 23: It is outside the scope of the Fish and Wildlife Impact Analysis and the remedy to consider potential historic filling of wetlands. The Department considers wetlands that exist now and evaluates potential routes of exposure and impacts, as appropriate, in order to determine whether remedial action is necessary and if so, to help select the remedy.

COMMENT 24: The full extent of historic wetlands on the Site can be determined by various methods of physical analysis on the site and by checking with older maps and aerial photographs. In addition, according to the PRAP there will be "new" wetlands created on the side of the work site farthest from Ley Creek and we expect that these will then be considered jurisdictional under state and federal regulations. All of these wetlands areas should be considered in evaluating the full impact of any proposed remedial action.

RESPONSE 24: The remedy does not call for the creation of new wetlands. The remedy calls for the remediation and restoration of existing on-site wetlands (*i.e.*, Wetlands A, B and C).

COMMENT 25: DEC must ensure that any remedy prevents additional contaminants of concern from flowing to adjacent surface waters. The PRAP documents a clear pathway for

contaminant movement from the Site to Ley Creek and adjacent wetlands and potentially Onondaga Lake. The South Landfill directly abuts Ley Creek. The North Landfill is separated from the Creek by vacant land and wetlands. Further, the shallow groundwater layer is generally moving from the Site toward the Creek. Given this unobstructed pathway, DEC's lightly supported conclusion that the Site does not contribute contaminants to the Creek, adjacent wetlands or Onondaga Lake strains belief. A more thorough investigation is required to document this position. DEC also must ensure that its remedy breaks any potential soil to groundwater and groundwater to surface water pathways flowing from the Landfill.

RESPONSE 25: See the Department's response to Comment #5.

COMMENT 26: As described in the PRAP, the preferred alternative simply creates a 50 foot buffer between Ley Creek and contaminated soils remaining on-site and a 30 foot buffer between on-site wetlands and remaining contaminated soils. This provision is inadequate. If DEC does not include any remedial components designed to completely break the groundwater to surface water pathway, it should at minimum double the buffer between surface waters and contaminated soils. Moreover, this larger buffer should be applied to all surface water components, including Ley Creek, on-site wetlands and the off-site wetlands that abut the North Landfill to the west and north or lie to the south of the South Landfill.

RESPONSE 26: The buffer zones were developed with input from the Department's Division of Fish, Wildlife and Marine Resources, and are protective of the environment.

COMMENT 27: Atlantic States was disappointed with the range of alternatives considered as part of the Remedial Investigation/Feasibility Study (RI/FS) done for the Site. Although public input is not mandatory for this portion of the project, we believe that public involvement could have dramatically improved the final product. As a result, we stress the importance of and ask that DEC continue to provide for public involvement, particular of key stakeholders, in any additional review of this Site, modifications to the remedial design, development of additional remedial alternatives, and restoration planning. In addition to the ROD and responsiveness summary documents, we expect to be on the site mailing list and receive other technical and work plan submittals.

RESPONSE 27: Citizen participation for this site will continue through remedial design and construction, as appropriate, consistent with Department policy. Subsequent to the issuance of a PRAP, this generally consists of keeping the public informed of major remedial program milestones, including issuance of the ROD and the start of remedial construction. Public information meetings may be held, depending upon the level of interest expressed by the community, related to specific aspects of a site's remedial program. The site's Project Manager is readily accessible by phone or e-mail to respond to questions and/or concerns expressed by individuals.

The Division of Environmental Remediation (DER) is actively working to reduce the use of paper in its programs. Some recent efforts include the current initiative to move to e-citizen participation (transmitting fact sheets and notices electronically through a listserv) and e-procurement efforts (providing procurement documents electronically on our website and

providing notices through a listserv). To further this effort, the DER is reducing the number of copies of work plans and reports that it requires to be submitted to DER and the New York State Department of Health (DOH). This policy was stated in the PRAP.

It is the Department's understanding that ASLF, in an effort to aid the Department in "going paperless", has already signed up for the listserv in which information regarding this site is distributed electronically. While the Department has agreed that ASLF may be an additional document repository for this site, and as with other document repositories for this site, copies of future documents will be transmitted to ASLF in .pdf format on a CD.

COMMENT 28: In particular, Atlantic States asks that DEC open the development of the restoration plan for the Site to public comment. The PRAP includes minimal discussion of post-remediation restoration on the Site, noting only that a restoration must be developed using "green remediation and sustainability efforts" (Sec. 7.2, p. 11). Although DEC calls for "cover systems [that are] useable for habitat and restoration," (Sec. 7.2, p. 11), we have too often seen restoration plans at similar sites which simply provide for planting grass or other vegetation that adds little or nothing of value to the surrounding habitat. DEC should require more productive uses of the Site. Without public input and oversight, we are concerned that opportunities to create a sustainable and environmentally beneficial restoration will be lost. These areas are suitable for various agricultural and forestry applications, whether edible products are considered or not (at this point we are not pushing growing consumables although scientific opinion from both US EPA and US Department of Agriculture increasingly feels there is little or no risk involved). Potential plantings could be for timber, nuts, fiber (linen from flax for example), and biofuels. Even plantings where the objective is carbon sequestration without any harvest is a possibility. A detailed planting plan and analysis needs to be done. Aside from aesthetics, habitat, carbon sequestration, and economic value, certain plantings might enhance remediation efforts. For example, Red mulberry, Morus rubra, is reputed to enhance growth of the bacteria responsible for breaking down PCBs in soil. This tree is a native species, another benefit in planting some on this site.

RESPONSE 28: ALSF's recommendations regarding site restoration in relation to remedy implementation will be considered during the design of the remedy. The level of citizen participation during the remedial design phase will depend largely on the degree of interest expressed by the public. Any comments received from the public will be considered.

COMMENT 29: Further, we urge DEC to be mindful of the potential for additional remediation and restoration at the Site as part of the on-going Natural Resources Damage (NRD) action being pursued by the Department of Interior, the State of New York and the Onondaga Nation. Any restoration or remediation plans for the Site should be considered in light of their potential to affect or disrupt future restoration efforts by the NRD Trustees. Given the interconnected nature of this remedial action and the NRD process and the confusion that may arise as a result, we ask DEC to acknowledge in the PRAP or related documents that the state-based remedy on the Site and its treatment as separate from the Onondaga Lake Superfund Site will not affect its potential inclusion in the NRD action.

RESPONSE 29: The DEC is the designated New York State NRD Trustee. The Department's remedial and NRD programs are coordinated in relation to a specific site's remedial programs, as appropriate. In relation to the Onondaga Lake NRD claim, DEC, the Department of Interior and the Onondaga Nation are working together under a Memorandum of Understanding which provides for coordination among the Trustees.

The Department does not believe that language in the ROD is needed to explain that remedy selection for this site does not affect potential inclusion of impacts from this site in a NRD action.

Nelson Olavarria, Director Environmental Assessment & Remediation of Cooper Industries submitted an e-mail (dated March 2, 2011) which included the following comments:

COMMENT 30: Section 3 page 3 Site Description and History under the paragraph on Historical Use can DEC add the dates of when CC-H disposed of the zinc hydroxide sludge into the North Landfill. According to GeoTrans' FS report, it was between 1972-1980.

RESPONSE 30: The referenced passage has been revised in the Record of Decision to state: "Zinc hydroxide sludge generated from the facility's wastewater treatment plant was also disposed of in the North Landfill from 1972 to 1980."

COMMENT 31: The PRAP states that no IRM's were performed at the site, however there were some beneficial improvements implemented by CC-H with DEC's oversight, such as the installation of sediment check dams for erosion control measures in both landfills and follow-up inspections. The recovery of free and dissolved petroleum product from monitoring well MW-6A, monitoring of the nearby observation wells and the collection and treatment of the purge water by CC-H. In addition, a fence was installed around the landfill site with warning signs as an institutional control measure.

RESPONSE 31: Even though not considered interim remedial measures, the Department acknowledges that the above beneficial improvements were implemented by Cooper Crouse-Hinds.

APPENDIX B

Administrative Record

Administrative Record

Crouse-Hinds Landfill Site
State Superfund Project
City of Syracuse and Town of Salina, Onondaga County, New York
Site No. 7-34-004

1. *Proposed Remedial Action Plan for the Crouse-Hinds Landfills site*, dated February 2011, prepared by the Department.

2. Order on Consent, Index No. D-7-0002-01-07, between the Department and Cooper Crouse-Hinds, executed on May 14, 2004.

3. "Preliminary Site Assessment Work Plan", April 2004, prepared by InteGreyted International, LLC.

4. "Preliminary Site Assessment Report", September 2004, prepared by InteGreyted International, LLC.

5. "Supplemental PSA Work Plan", October 2005, prepared by Delta Environmental Consultants, Inc.

6. "Preliminary Site Assessment and Supplemental Site Assessment Report", May 2006, prepared by Delta Environmental Consultants, Inc.

7. "Remedial Investigation/Feasability Study Work Plan", February 2008, prepared by Delta Environmental Consultants, Inc.

8. "Remedial Investigation Report", August 2009, prepared by GeoTrans, Inc.

9. "Feasibility Study Report", April 2010, prepared by GeoTrans, Inc.

10. Comment letter from Onondaga County, March 7, 2011, prepared by Kevin C. Murphy, Esq. of Wladis Law Firm.

11. Comment letter from the Onondaga Nation, March 8, 2011, prepared by Joseph J. Heath, Esq., General Counsel for the Onondaga Nation.

12. Comment letter from Atlantic States Legal Foundation, March 24, 2011, prepared by Samuel H. Sage, President and Senior Scientist of ASLF.

WLADIS LAW FIRM
THE NEW STANDARD IN CLIENT SERVICE

Kevin C. Murphy, Esq.
kmurphy@wladislawfirm.com

March 7, 2011

Via E-Mail: rxmustic@gw.dec.state.ny.us

Richard Mustico, P.E.
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Re: Crouse-Hinds Landfills, Site Number 7-34-004
City of Syracuse and Town of Salina, NY

Proposed Remedial Action Plan

Dear Mr. Mustico:

I write on behalf of our client, Onondaga County, New York, and provide below the following limited comments in response to the Proposed Remedial Action Plan for the Crouse-Hinds Landfills, Site Number 7-34-004.

These comments are submitted following a review and analysis of the Proposed Remedial Action Plan (PRAP), the supporting August 5, 2009 Remedial Investigation Report and the PRAP Fact Sheet by the County and its consultants.

The County notes and takes issue with the statement in the PPAP Fact Sheet that "the data demonstrate that Ley Creek is not currently being impacted by the site."

The County is in full agreement that the data establishes that Ley Creek is impacted by upstream sources of contamination, but disputes that the data in Remedial Investigation Report establishes that there is *no current impact* to Ley Creek from the Site and more importantly, any implication that the Site had no historic impact on the Creek.

In support of this objection the County notes that prior to being used as landfills the Site consisted of low lying fields and salt marshes immediately adjacent to and in the flood plain of Ley Creek. The County

In support of this objection the County notes that prior to being used as landfills the Site consisted of low lying fields and salt marshes immediately adjacent to and in the flood plain of Ley Creek. The County also directs the Department to page 5 of the PRAP which notes that "[s]urface water and sediments in drainage channels and wetlands at the site provide a complete pathway to aquatic organisms and their predators. Surface water runoff to Ley Creek provides a potential pathway to aquatic organisms and their predators. Groundwater seepage to surface water onsite provides a potential pathway to aquatic organisms."

While the County does not dispute and in fact, concurs that the primary source of historic and on-going contamination to Ley Creek is up gradient of this Site, the County submits the suggested "no impact" statement made in the PRAP Fact Sheet is premature and not adequately supported by either the data or the data-based conclusions in the Remedial Investigation Report.

Should you have any questions or comments, please do not hesitate to contact me or David Coburn, Director of the Onondaga County Department of the Environment directly.

Very truly yours,
The Wladis Law Firm, P.C

Kevin C. Murphy

KCM/cs

Cc: David Coburn
Luis A. Mendez, Esq.

JOSEPH J. HEATH
GENERAL COUNSEL FOR THE ONONDAGA NATION
ATTORNEY AT LAW
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March 8, 2011 VIA ELECTRONIC MAIL

Richard Mustico
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
rxmustic@gw.dec.state.ny.us

Re: Comments on Crouse Hinds Landfill PRAP

Dear Mr. Mustico:

We submit these comments on behalf of the Onondaga Nation. Onondaga Lake and the land along its shoreline are sacred to the Onondaga Nation and the restoration of these resources is critical to the Nation. Based on our review and the review of our technical consultants, we wish to raise the following concerns.

Our biggest concern is that most of the alternatives considered in the PRAP do not take substantial steps toward Nation's Vision of a clean, healthy, and useable environment in and around Onondaga Lake. Rather, in the majority of alternatives considered, the Crouse Hinds Landfill site will continue to be a potential source of contamination for the Lake and its environs, will be limited to industrial or other limited contact uses, and will potentially endanger subsistence or traditional users of the Lake and its surrounding. For all those reasons, the Nation strongly supports Alternative 2, which requires full remediation of the site. At minimum, additional review and revision of some alternatives is required.

As noted in the attached comments from our consultant, Fred Kerschner, the PRAP undervalues the restoration of this property to unrestricted uses and, for that reason, favors a limited remediation. Without proper assessment of the value added by the full remediation contemplated by Alternative 2, neither the DEC nor local governments can properly weigh the alternatives. Accordingly, we ask that DEC provide more detailed consideration of the

benefits of full remediation at this site and ensure that the full range of affected communities be notified and fully involved in the selection of a remedy.

Further, the DEC must ensure that any remedy prevents additional contaminants of concern from flowing to the Lake. However, the PRAP itself documents a clear pathway for contaminant movement from the site to the Lake. As described in this document, the South Landfill directly abuts Ley Creek, the North Landfill is separated from the Creek by vacant land and wetlands and the upper layer of groundwater is generally moving toward the Creek. Given this unobstructed pathway from the site to the Creek, the DEC's lightly supported conclusion that Crouse Hinds Landfill does not contribute contaminants to the Creek or the Lake strains belief. Without a more thorough investigation of the potential contributions of Crouse Hinds Landfill to Ley Creek, we believe that the discussion in Section 3.4, paragraph 3, stating that the Landfill does not contribute contaminants to Ley Creek, should be removed from the PRAP. The DEC also must ensure that its remedy breaks any potential soil to groundwater and groundwater to surface water pathways flowing from the Landfill. Only Alternative 3 includes an active groundwater treatment and monitoring element that meets this requirement. A similar monitoring and treatment element should be added to any alternative that the DEC adopts.

As in past remedial efforts, the DEC continues to rely on human health risk assessment standards that are not protective of subsistence users. As a result, the remediation contemplated by DEC would not allow the Nation to safely resume its traditional uses of the Lake. For this reason, the Nation again asks the DEC to revise its human health risk assessment to consider Nation-specific exposure rates and exposure durations.

The Nation is particularly concerned about some elements of the DEC's preferred alternative. In particular, Alternative 4 contemplates creating a buffer between on-site wetlands and the contaminated soils that will be left in place (Sec. 7.2), but provides no similar protection for the off-site wetlands that abut the North Landfill to the west and north or lie to the south of the South Landfill (Sec. 3). At minimum, these off-site wetlands should receive the same protection as on-site wetlands.

Further, the DEC proposes removing PCB-contaminated wastes and PCB-contaminated sediments from on-site wetlands if PCB levels reach 50 ppm or higher, but leaving those wastes in place and simply consolidated contaminated sediments within the smaller landfill footprint if PCB levels fall between 1 ppm and 50 ppm. Our concern is that the restricted (industrial use) soil cleanup objective listed in the PRAP for total PCBs is only 25 ppm and the DEC provides no explanation within the draft PRAP for the higher limit being proposed. We believe that the DEC should, at minimum, remove PCB-contaminated

wastes above the 25 ppm standard or provide a clear explanation of the 50 ppm standard being proposed.

Finally, the Nation believes that the PRAP should include information about the potential contamination of the lower aquifer and whether any site-related contaminants have been identified in this aquifer. Given that this lower aquifer is described as sometimes being under artesian conditions, it may exacerbate the soil to groundwater to surface water pathway discussed above.

Thank you for your attention to these comments. We will be happy to provide more information or discuss them further at your request.

Sincerely,

Joseph J. Heath

Joseph J. Heath

Enc.

cc: Onondaga Nation Council of Chiefs
Haudenosaunee Environmental Task Force
EPA Region 2

AESE, Inc.

P.O. Box 50392,
Henderson, NV 89016
509-924-0184
http://www.aeseinc.com

MEMORANDUM

TO: Joseph J. Heath, Esq.
Counsel for the Onondaga Nation

FROM: Dr. F. E. Kirschner, Senior Scientist

DATE: March 2, 2011

SUBJECT: Rapid review of "***Proposed Remedial Action Plan Crouse-Hinds Landfills State Superfund Project Syracuse, Onondaga County Site No. 734004 February 2011"***

CC: Alma Lowry Esq.
Dr. Harper, DABT
File

We have rapidly reviewed the aforementioned document. Below are a few General Comments flowed by Specific Comments.

General Comment No. 1

Unlike the ROD and subsequent amendments to the ROD for the Salina landfill, this Alternative 2 of the PRAD does contemplate full cleanup that would render this land appropriate for unrestricted land use (URLU).

However, it is not clear that:

(1) interested parties, including elected officials, and land planning entities, and the general public have been advised that URLU is a viable option and

(2) an increase in economic benefits via increased land value (other than construction, O&M, ICs costs) were considered in the economic valuation used to support full removal of wastes on the south side of the creek.

Current zoning and planning was conducted as a consequence of current condition—not what is likely attainable after clean-up.

As stated before on comments associated with the Salina Landfill, the Onondaga Nation believes that the concept of increased land valuation has been omitted from many of the other RODs for the other OUs. This concept should be revisited to generate a more accurate portrayal of costs associated with each alternative.

General Comment No. 2

The Lake Bottom OU does not allow for an influx of COCs; therefore, the Preferred Alternative for this OU as well as all other OUs or subsites must be designed to **"Break the soil to groundwater and the groundwater to surface water pathways"**. This design requirement is central to all remedies. The Nation requests that this statement be included within the first paragraph in order to inform the reader early-on.

Only Alternatives 3 provides a means of potentially breaking the ground water to surface water pathway.[1] Based on current potentiometric map, Ley Creek is a discharge area that will receive water from the site. Even, if the landfills are capped with impermeable or semi-permeable membranes, a depression in the potentiometric surface underlying the landfill caused by the temporary infiltration shadow will be in-filled by lateral flow toward the contaminated area. Post capping contours will indicate that groundwater will still pass underneath the site where the aquifer matrix material is contaminated. In

[1] Alternatives 2 and 4 would also require active pumping and treatment until pre-release baseline conditions had re-established.

summary, Ley creek and Onondaga Lake will continue to be contaminated unless active pump and treat is employed. From this discussion alone, a properly designed and implement Alternative 3 is much more proactive of downstream interests.

General Comment No. 3

The Human Health Risk Assessment does not include future traditional subsistence or current subsistence use of resources. Many of the clean-up goals PRAD are not protective of subsistence users. The Nation recommends that the entire BHHRA section be revised, complete with Nation-Specific Exposure factors and durations of exposure.

Specific Comments

1. Page 4; Section: Site Geology and Hydrogeology

This section is needs to advise the reader on the status of the lower aquifer, and if any site related contaminants have been identified. The fact that the lower aquifer is sometimes under artesian conditions may exacerbate the problem described in General Comment No 2, above.

2. Page 5; Section 6.1.1: Paragraph 2:

> *The tables found in Exhibit A list the applicable SCGs in the footnotes.*

Again, these RAO's are not protective of subsistence users or for release as URLU.

3. Page 7; Section 6.4; Paragraph 3:

> *While contaminants of concern were detected in the sediment and surface water in Ley Creek, the data demonstrate that the current impacts to Ley Creek are not attributable to the site. Rather, sampling has shown that upstream sources, not associated with this site, are impacting the creek. For example, lead in Ley Creek surface water was detected at concentrations in excess of the New York State surface water quality standard (17.9 ppb) adjacent to the site; however, the highest concentration detected in Ley Creek during the RI was at the upgradient sampling location (84.2 ppb).*

This discussion should be removed, since one cannot conclude that Crouse-Hinds is not contributing contaminants to Ley Creek.

ATLANTIC STATES
LEGAL FOUNDATION, INC.

March 24, 2011

Richard Mustico
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
rxmustic@gw.dec.state.ny.us

Re: Comments on Crouse Hinds Landfill PRAP
Submitted via e-mail

Dear Mr. Mustico:

Atlantic States Legal Foundation submits the following comments on the Proposed Remedial Action Plan (PRAP) for the Crouse Hinds Landfill site ("the Site"). Atlantic States Legal Foundation, Inc. (ASLF) is a New York chartered not-for-profit corporation founded in 1982 with its purpose being to provide technical, legal, and organizing services to a variety of citizens, citizen groups, local governments, and others on a wide variety of environmental issues. We are creative problem solvers trying to advance environmental sanity through the implementation of projects that in addition to their intrinsic merit can be prototypes for similar efforts elsewhere by ourselves and others.

Atlantic States is concerned that the DEC is not taking adequate measures to assess the potential damage to or protect habitat at or near the Site. The PRAP should be revised to include more detailed assessment of the impacts of proposed remedial measures on surrounding habitats, on current recreational uses of those areas, on habitat restoration projects that may be undertaken in and around the site, and on the historic habitat on-site. Any alternatives that leave contaminated soils or groundwater in place should include larger buffers to protect adjacent surface waters and wetlands. Finally, we were dismayed at the limited alternatives considered in the RI/FS and ask that the State consult more frequently with key stakeholders, including Atlantic States, on any additional review of this site, modifications to the remedial design or development of additional remedial alternatives.

I. THE PRAP DOES NOT GIVE SUFFICIENT CONSIDERATION TO THE HABITAT AND ECOSYSTEM IMPACTS OF THE PREFERRED ALTERNATIVE.

Atlantic States is particularly concerned that DEC has not adequately considered the potential habitat impacts of its preferred alternative. Because DEC plans to pursue an alternative aimed at restoring the property to industrial use, the Site will continue to be a potential source of contamination for the surrounding habitat and potentially pose a danger to the wildlife dependent on those habitats. While Atlantic States would prefer a remedy that provides more complete remediation and returns the Site to natural conditions, at minimum, additional review and revision of the habitat and wildlife impact of this preferred alternative is required.

Although the PRAP recognizes the presence of complete contaminant pathways affecting burrowing wildlife and aquatic organisms (Sec. 6.4, p. 7), the impact of such exposure is not seriously considered in the evaluation of alternatives. DEC appears to have dismissed the possibility of off-site exposure because sampling in Ley Creek failed to show contaminant spikes downstream of the Site. Without a more thorough analysis, including contaminant finger-printing, this finding is speculative at best. There is no discussion of wetland sampling on adjacent sites (Exhibit A, p. 6). Further, there is no discussion of potential wildlife exposure on the site itself or steps to minimize that potential exposure. Given that DEC's preferred alternative does not disrupt recognized contaminant pathways affecting habitat and wildlife in the vicinity of the Site, the PRAP should include a more detailed assessment of potential exposure impacts and consider additional remediation or protective measures to disrupt those impacts.

In addition, the PRAP makes no mention of the potential exposure of humans through recreational fishing in Ley Creek downstream of the Site. Human exposure is considered only through direct contact pathways, such as drinking contaminated water or dermal contact with contaminated soils. While there may not be designated public access for fishing or other water-related recreation in these downstream areas, recreational fishing and similar uses are occurring in these areas. The argument that there is now no public access or public property on this site is not a convincing argument against this. We know of people who fish there now and with further cleanup, additional fisher days will ensue making it essential that their health be considered in this cleanup plan. In addition, public access may well be provided in future, as part of habitat restoration plans created under the Onondaga Lake Superfund remediation or the related Natural Resources Damages action. The PRAP should reflect this reality.

Other habitat restoration projects are also being developed in and around Onondaga Lake, some of which may be impacted by the remedial design at the Site. We believe that DEC should explicitly evaluate the potential for the Site to interfere with or otherwise impact habitat restoration projects that may be planned or proposed in the surrounding areas. At minimum, the PRAP should identify and explicitly discuss all habitat restoration projects that are underway or currently being planned in the area.

Further, DEC should assess the possibility that wetlands were historically present on the Site itself and the potential impact of its preferred alternative on restoration or recover of this historic habitat. As noted in the PRAP, adjacent properties to the north and south of the Site contain numerous wetlands. Prior to the 1950s, according to both the PRAP and the Fact Sheet, the Site included "low lying fields and salt marshes" (Sec. 3, p. 3), which suggests that wetlands may have been common on site. At present, there is a small federally recognized wetland on the

Site itself. This was confirmed in conversation with the DEC Region 7 Office in Syracuse and could be further verified from wetlands maps. Given these facts, it seems likely that the Site contained more extensive wetlands at one time. The PRAP should evaluate this possibility and consider the potential impacts of leaving significant levels of contamination in an area of historic wetlands.

The full extent of historic wetlands on the Site can be determined by various methods of physical analysis on the site and by checking with older maps and aerial photographs. In addition, according to the PRAP there will be "new" wetlands created on the side of the work site farthest from Ley Creek and we expect that these will then be considered jurisdictional under state and federal regulations. All of these wetlands areas should be considered in evaluating the full impact of any proposed remedial action.

II. THE PRAP MUST INCLUDE GREATER PROTECTIONS FOR ADJACENT WATERWAYS AND WETLANDS.

DEC must ensure that any remedy prevents additional contaminants of concern from flowing to adjacent surface waters. The PRAP documents a clear pathway for contaminant movement from the Site to Ley Creek and adjacent wetlands and potentially Onondaga Lake. The South Landfill directly abuts Ley Creek. The North Landfill is separated from the Creek by vacant land and wetlands. Further, the shallow groundwater layer is generally moving from the Site toward the Creek. Given this unobstructed pathway, DEC's lightly supported conclusion that the Site does not contribute contaminants to the Creek, adjacent wetlands or Onondaga Lake strains belief. A more thorough investigation is required to document this position. DEC also must ensure that its remedy breaks any potential soil to groundwater and groundwater to surface water pathways flowing from the Landfill.

As described in the PRAP, the preferred alternative simply creates a 50 foot buffer between Ley Creek and contaminated soils remaining on-site and a 30 foot buffer between on-site wetlands and remaining contaminated soils. This provision is inadequate. If DEC does not include any remedial components designed to completely break the groundwater to surface water pathway, it should at minimum double the buffer between surface waters and contaminated soils. Moreover, this larger buffer should be applied to all surface water components, including Ley Creek, on-site wetlands and the off-site wetlands that abut the North Landfill to the west and north or lie to the south of the South Landfill.

III. DEC SHOULD COMMIT TO ON-GOING PUBLIC INVOLVEMENT.

Atlantic States was disappointed with the range of alternatives considered as part of the Remedial Investigation/Feasibility Study (RI/FS) done for the Site. Although public input is not mandatory for this portion of the project, we believe that public involvement could have dramatically improved the final product. As a result, we stress the importance of and ask that DEC continue to provide for public involvement, particular of key stakeholders, in any additional review of this Site, modifications to the remedial design, development of additional remedial alternatives, and restoration planning. In addition to the ROD and responsiveness

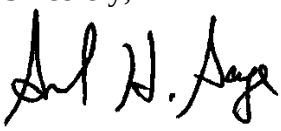
summary documents, we expect to be on the site mailing list and receive other technical and work plan submittals.

In particular, Atlantic States asks that DEC open the development of the restoration plan for the Site to public comment. The PRAP includes minimal discussion of post-remediation restoration on the Site, noting only that a restoration must be developed using "green remediation and sustainability efforts" (Sec. 7.2, p. 11). Although DEC calls for "cover systems [that are] useable for habitat and restoration," (Sec. 7.2, p. 11), we have too often seen restoration plans at similar sites which simply provide for planting grass or other vegetation that adds little or nothing of value to the surrounding habitat. DEC should require more productive uses of the Site. Without public input and oversight, we are concerned that opportunities to create a sustainable and environmentally beneficial restoration will be lost. These areas are suitable for various agricultural and forestry applications, whether edible products are considered or not (at this point we are not pushing growing consumables although scientific opinion from both US EPA and US Department of Agriculture increasingly feels there is little or no risk involved). Potential plantings could be for timber, nuts, fiber (linen from flax for example), and biofuels. Even plantings where the objective is carbon sequestration without any harvest is a possibility. A detailed planting plan and analysis needs to be done. Aside from aesthetics, habitat, carbon sequestration, and economic value, certain plantings might enhance remediation efforts. For example, Red mulberry, *Morus rubra,* is reputed to enhance growth of the bacteria responsible for breaking down PCBs in soil. This tree is a native species, another benefit in planting some on this site.

Further, we urge DEC to be mindful of the potential for additional remediation and restoration at the Site as part of the on-going Natural Resources Damage (NRD) action being pursued by the Department of Interior, the State of New York and the Onondaga Nation. Any restoration or remediation plans for the Site should be considered in light of their potential to affect or disrupt future restoration efforts by the NRD Trustees. Given the interconnected nature of this remedial action and the NRD process and the confusion that may arise as a result, we ask DEC to acknowledge in the PRAP or related documents that the state-based remedy on the Site and its treatment as separate from the Onondaga Lake Superfund Site will not affect its potential inclusion in the NRD action.

Thank you for your attention to these comments. We will be happy to provide more information or discuss them further at your request.

Sincerely,



Samuel H. Sage, President and Senior Scientist