



FREQUENTLY ASKED QUESTIONS ONONDAGA LAKE DREDGING PROJECT

June 2012

The following questions were compiled by the Onondaga Lake Community Participation Working Group. Answers reflect a collaborative effort of New York State Department of Environmental Conservation (DEC), United States Environmental Protection Agency (EPA) and New York State Department of Health (DOH).

BACKGROUND

1. What is the overall objective of the lake bottom cleanup that is taking place under the federal and state superfund program?

Baseline ecological and human health risk assessments conducted for the lake bottom indicated that contaminants associated with the lake sediments resulted in risks to the ecological community and potentially to people who consume fish caught from the lake. For that reason, the objective of the cleanup is to protect human health and the environment by reducing the unacceptable risks posed by the site and to restore the habitats in all areas that are remediated.

2. What is the overall cost of the lake bottom cleanup and who is paying for it?

The estimated present worth cost of the lake bottom cleanup (dredging, capping, habitat restoration, operation and maintenance) is \$451 million. As the primary responsible party, Honeywell is required to pay for the cost of cleanup. Other responsible parties *may* be required to contribute to the cost of cleanup. Honeywell is also responsible by law for NYSDEC's and EPA's administrative costs associated with the lake cleanup. As in all instances, if a responsible party is unwilling or unable to pay the costs, the expenses would have to be borne by NYS taxpayers and/or the federal Superfund program. Honeywell is responsible for the cost of implementing the remedy even if it exceeds the \$451 million estimate. Honeywell is also responsible for cleaning up the other sites near the lake which it owns or which it operated that have impacted or are currently impacting the lake.

3. When will Honeywell start the dredging and capping and when will it be completed?

Dredging and capping operations will begin in the summer of 2012. Dredging and capping operations are anticipated to be completed 2016. Habitat restoration activities, which will be performed in all areas that are remediated, are anticipated to be completed in 2016 as well.

4. What contaminants are in the lake bottom?

The major contaminants include benzene, toluene, mercury and other metals, chlorinated benzenes, polycyclic aromatic hydrocarbons (PAHs), and PCBs.

There has been extensive analysis of the concentrations of waste in the lake sediments. Average concentrations of contaminants within lake sediment samples are presented in Tables 3 and 5 of the July 2005 Record of Decision (available on DEC's website www.dec.ny.gov/chemical/37558.html). These average contaminant levels are comparable to NYS soil cleanup standards for industrial sites.

5. What agencies have been involved in the decisions, designs and oversight of the lake bottom remedy?

Honeywell is responsible for the design and implementation of the remedy under a federal consent decree (legal agreement). All design and implementation work is subject to DEC and EPA review and approval. Often, Honeywell's proposals are supplemented based on review comments from the environmental agencies. DEC and EPA also rely on the expertise of the New York State Department of Health and, when appropriate, private consultants hired by DEC to assist with these complex document reviews.

6. What community outreach efforts have occurred to solicit community input for the selection and design of the remedy?

DEC and EPA provided extensive opportunities for public review of the proposed remediation plans for Onondaga Lake including plans for disposal of dredged sediments at the wastebeds. Beginning in November 2004, numerous fact sheets, public comment periods, informal availability sessions, formal public meetings, mailings and other methods of communication were used to inform the Onondaga Lake community of the project. In addition, Honeywell conducted concurrent outreach efforts to keep the public informed. Extensive independent media coverage, including newspaper articles and television news reports, also occurred. During remedial design, outreach efforts focused on various design issues including the selection of Wastebed 13 as the preferred disposal site, habitat restoration, and the Community Health and Safety Plans associated with the implementation of the remedy.

In sum, the outreach efforts for the Onondaga Lake Bottom remediation project have far exceeded the requirements of State and Federal law for similar projects. Public outreach efforts will continue throughout project implementation, as guided by the Citizen Participation Plan for the Onondaga Lake Bottom Subsite.

7. Is Honeywell remediating upland sites to prevent the recontamination of areas that will be dredged or capped?

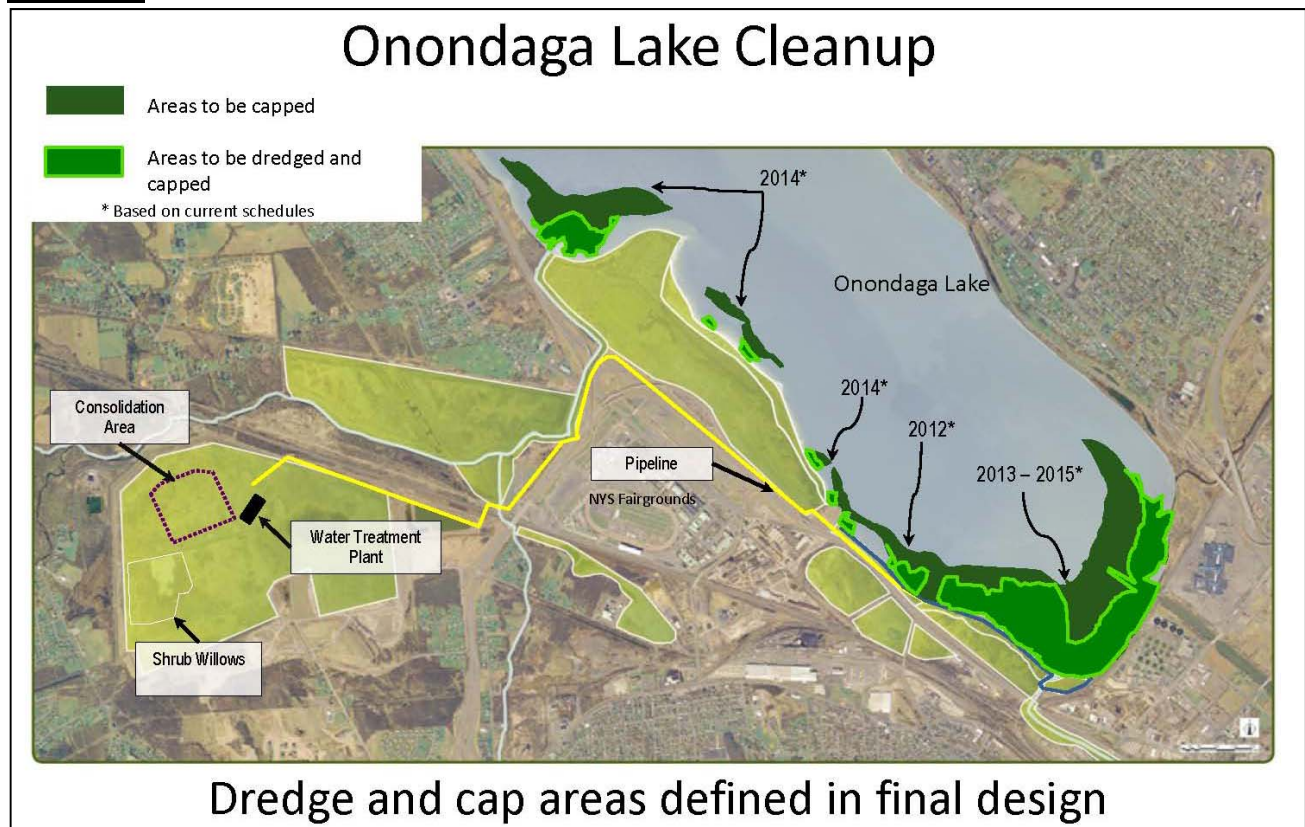
Work is underway and/or planned to ensure that significant upland sources to the lake will be controlled prior to dredging or capping areas that could otherwise become recontaminated.

There are several upland areas around the lake that are in various stages of cleanup in order to eliminate/reduce contaminant sources to the lake as well as risks to the sites themselves. This includes remedial work in some of the lake’s tributaries (including Geddes Brook, Ninemile Creek, and Harbor Brook), remedial work at former plant sites (including the former LCP/Bridge Street Plant, which was the largest source of mercury to Onondaga Lake), and remedial work along lakeshore areas which involves the installation of underground barrier walls and groundwater collection systems to prevent groundwater from reaching the lake. In addition, other projects are planned.

8. To what extent are local workers, consultants, companies, and universities involved in the lake bottom cleanup?

The lake cleanup has provided jobs for more than 500 Central New York scientists, engineers, and skilled craft laborers who are working with Honeywell on the remediation of the lake and surrounding upland sites. Honeywell hired local experts to assist in the remedial design including several researchers from the State University of New York College of Environmental Science and Forestry (SUNY ESF), Syracuse University, and Upstate Freshwater Institute, in addition to engineering firms Parsons, O’Brien & Gere, and Anchor QEA.

DREDGING



9. How much of the lake bottom is being dredged and/or capped?

Dredging will be performed in 185 acres of the lake (approximately 6 percent of the 3,000 acre lake bottom). In addition, dredging will be performed in 21 acres in three areas adjacent to the lake. The estimated volume of materials to be removed is approximately 2 million cubic yards.

An isolation cap will be installed over 417 acres (approximately 14 percent) of the lake bottom, including the areas that will be dredged. In addition, an isolation cap will be installed over 21 acres in three areas adjacent to the lake.

A thin-layer cap will be installed in deep water (greater than 30 feet) over 27 acres (approximately 1 percent) of the lake bottom.

10. How was it determined where to dredge and cap, and where not to dredge and cap?

Dredging and capping, or capping only, is being required in all areas of the lake where sediment contamination is present in shallow water at concentrations exceeding the sediment cleanup criteria. The cleanup criteria developed for this project were based on sediment toxicity tests that were performed during the Remedial Investigation. The cleanup criteria also address those sediments with mercury concentrations that present the potential to result in unacceptable levels of mercury in fish tissue.

As part of the Remedial Investigation, more than 6,000 samples were collected and analyzed for contaminants including metals, volatile organic compounds (VOCs), and semivolatile organic compounds (SVOCs). During remedial design, seven additional phases of sampling were performed. In total, over 12,000 samples were collected to fine tune the extent of contamination and the extent of the areas requiring remediation.

11. Why is hydraulic dredging being used and how does it differ from mechanical dredging?

Hydraulic dredging removes and transports contaminated sediments with water in the form of a slurry. The dredge dislodges the sediment from the bottom of the water body and a pump transports the sediment and water as a slurry via a pipe to the disposal or dewatering facility.

Mechanical dredging removes the contaminated sediment through the application of mechanical force to dislodge and transport the sediment to the surface where it is loaded into a barge or other container to be transported to the disposal or dewatering facility. This is typically done via a clamshell or other type of excavation equipment. Mechanical dredging is not proposed for Onondaga Lake.

The advantages of using hydraulic dredging over mechanical dredging specific to Onondaga Lake are: increased production rates, lower resuspension of sediments, and the ability to transport sediments directly to the disposal or dewatering site. Hydraulic dredging provides an economical means of removing large volumes of contaminated sediments in a given period of time. The disadvantages of hydraulic dredging are: the large volume of water generated during hydraulic dredging requires treatment to remove any contaminants, the equipment is difficult to operate in very shallow water or

in areas which have a large amount of debris, and hydraulic dredging is often not practical for small projects.

The volume of sediments that require removal, the advantage of lower sediment resuspension during dredging, the lack of significant debris in the dredge areas, the water depth of the areas requiring remediation, and the ability to transport the sediment slurry directly to the disposal facility in an enclosed pipeline, all favor the use of hydraulic dredging over mechanical dredging for this project.

12. How many dredges will be used in the lake?

There will be three hydraulic dredges working on the lake. Each dredge will be a different size and used for a specific purpose. The larger two dredges can operate alone, while the smallest dredge will need to operate in conjunction with the midsized dredge. Therefore, the number of working dredges at any one time will be either one or two.

13. How will the dredging and capping impact recreational boating during lake operations?

The dredging operations should not have a major impact on recreational boating. The majority of the dredging will be performed in relatively shallow areas. All dredging and capping will be done within an area that will be surrounded with highly visible silt curtains and/or demarcation curtains. These curtains will be used to mark the areas that are restricted from recreational use by the public. One impact to recreational boating will be the inability for the public to use the area adjacent to the I-690 Exit 7 ramp for launching boats during certain times. However, the public boat launch at Onondaga Lake Park Marina will remain available during its normal hours of operation.

14. Will this project affect fish and other wildlife?

Dredging and capping may cause some short term adverse impacts to fish and wildlife since lake bottom habitat in remediated areas will be significantly disturbed. These short term impacts are not anticipated outside work zones that will be contained within silt curtains and monitored. Remedy implementation is expected to bring about significant long term benefits to fish and wildlife due to removal and/or isolation of lake contaminants and the implementation of a comprehensive habitat restoration plan which will restore and improve lake and upland habitats.

15. Will herbicides be used to control aquatic vegetation in the areas that will be dredged and capped? Will the use of herbicides be safe?

While it is anticipated that chemical control (use of herbicides) will be the primary control method, mechanical removal will also be used in some areas. Use of either control method will be conducted in an effective manner that will be protective of human health and the environment and in compliance with applicable or relevant and appropriate rules and regulations. Use of herbicides in New York State waterways is regulated under Part 327 of Title 6 in the New York State Code of Rules and Regulations (6 NYCRR Part 327).

To implement chemical control, the most appropriate herbicide(s) will be applied by an experienced applicator in accordance with New York State regulations using the herbicide(s) and application

procedures approved in advance by DEC. Similar chemical applications have been conducted for Onondaga County in the Seneca River near the Onondaga Lake outlet. Chemical control has also been conducted recently in other Central New York waterbodies, such as Cazenovia Lake.

16. How much water will be pumped out of the lake during hydraulic dredging and will removal of that much water have an impact on the lake?

It is assumed that the dredges, on average, will pump 6 to 7 million gallons of water to the Sediment Consolidation Area (SCA) each day during the dredging season over the course of 4 years. The water that drains from the geotextile tubes will be treated at the on-site water treatment plant, then sent to the Onondaga County collection system for final polishing (ammonia removal) at the Syracuse Metropolitan Wastewater Treatment Plant, and finally discharged back to the lake. The removal of the water will not have an impact since it will be returned to the lake following treatment.

17. Will dredging and capping stir up contaminants, and if so, what methods will be used to contain contaminants and to monitor the water near the dredging sites?

Hydraulic dredging is not expected to cause resuspension problems. Silt curtains will be used as turbidity control devices around all dredging and will remain in place at least until the first layer of the cap is placed in those areas. They will be used as necessary around the remaining capping operations.

A comprehensive DEC-approved water quality monitoring program will be implemented to prevent unacceptable water quality impacts during capping and dredging activities. The water quality monitoring will include sampling for mercury, volatile organic compounds (VOCs), semivolatile organic compounds, and other parameters.

18. When debris is removed from the lake, will it be covered prior to it being trucked to the Sediment Consolidation Area for disposal?

In accordance with the Community Health and Safety Plan, debris will be managed to minimize potential odors and emissions, including rinsing sediments from the debris as it is removed from the lake. Mitigative measures (e.g., covering) will be implemented if the debris is causing air quality action levels to be exceeded.

19. Will in-lake operations (e.g., dredging, capping) continue during severe inclement weather?

Lake operations will halt when inclement weather (e.g., high winds, heavy rains, snow squalls, thunderstorms, tornadoes, snow and ice) does not allow for safe conditions for workers. Health and safety professionals will regularly monitor the weather during operations to allow construction crews adequate time to prepare for adverse weather conditions. Based on previous experience at Onondaga Lake, mid-November is typically when winter weather conditions start to hinder work activities for the season. However, this target end date will be moved as weather conditions permit/dictate.

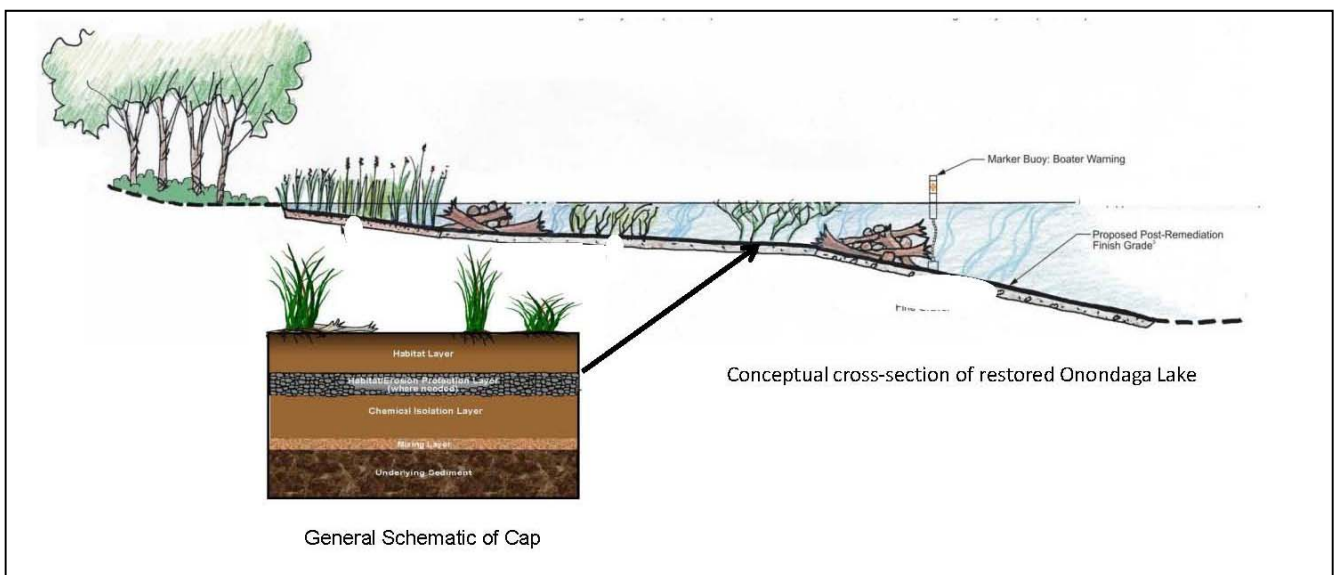
CAPPING OF THE LAKE BOTTOM

20. What is “capping” and where has it been used previously?

Capping is a well-recognized engineering approach that has been successfully used in several sediment remediation projects including the Fox River (Wisconsin), the St. Louis River Interlake Duluth Tar site (Minnesota), and Commencement Bay (Washington). An isolation cap will be constructed in designated shallow water areas to ensure that the underlying contaminated materials are permanently isolated from the lake ecosystem. A thin layer cap will be placed in some deep water areas to provide an immediate decrease in surface sediment contaminant concentrations by introducing clean substrate at the surface.

21. What material is in the cap for the lake bottom and where is the cap material coming from?

To ensure that the cap will provide long-term protection of human health and the environment, the cap will include several layers dedicated to various purposes. These layers will include, from top to bottom, a habitat layer, an erosion protection layer, a chemical isolation layer, and to allow for mixing of the bottom of the chemical isolation layer with the underlying existing lake sediment, a mixing layer. The habitat layer will be comprised of topsoil, medium sand, fine or coarse gravel, or gravely cobble. The erosion protection layer will include medium sand, coarse or fine gravel, or gravely cobble. The chemical isolation and mixing layers will be comprised mostly of medium sand or, to a lesser extent, gravely sand. In some areas, activated carbon will be added to the sand in the chemical isolation layer to act as an absorbent to help prevent chemicals from reaching the top portion of the cap (habitat layer). In areas where elevated pH material is present and is to be capped, the chemical isolation and mixing layers will include siderite, a naturally-occurring mineral composed mostly of iron carbonate, to enhance microbial degradation of contaminants. The majority of the cap material is being obtained from sources in Central New York.



22. How long will the cap last?

Capping is a proven technology. Across the country in projects where capping has been utilized, caps have been demonstrated to work effectively over the long term. The cap will be continually monitored over the long term and corrective actions will be performed to ensure long-term containment of the sediment. The cap is designed to be protective in isolating underlying contamination for 1,000 years or longer and will include an erosion protection layer to withstand 100-year events (winds, waves, tributary flows).

There will be a long-term monitoring program to make sure the caps remain effective. Samples will be collected periodically to make sure the contamination does not penetrate the cap and there will be physical inspections to make sure there is no movement or erosion of the cap from wind, wave action or ice.

23. What was the blue barge doing in the lake last summer (2011)?

In the fall of 2011, Honeywell performed a full-scale demonstration project to test methods to spread the cap material on the lake bottom. The field demonstration project followed extensive modeling and indoor laboratory testing. Valuable information was collected during the demonstration project specific to Onondaga Lake that will be used during the placement of the cap.

TRANSPORT OF SEDIMENT FROM THE LAKE TO THE SEDIMENT CONSOLIDATION AREA (SCA)

24. What are the blue pumps and the pipelines along I-690, and will they remain after the lake bottom cleanup is complete?

The pipeline is the dredge slurry pipeline which will be used to transport the dredged sediments to the containment area. The “blue pumps” are the booster stations that will pump the slurry through the pipeline. Green electric power is being utilized to power the pumps. The pipeline and booster pumps will be removed when the cleanup is complete.

25. How will it be determined if the pipeline develops a leak?

The pipeline is double walled (a pipe within a pipe) for protection against leaks. In the unlikely event the inner pipe developed a leak, the resultant pressure loss would be detected. The pipeline is also equipped with an automatic leak detection system in case of leaks. In that event, the dredging operation would be shut down in order to correct the problem. Any spill would be quickly cleaned up as appropriate. In addition, the pipeline will be inspected daily. Inspectors will be walking the pipeline, looking for signs of damage or leaks of the pipeline, monitoring expansion/contraction of the pipeline, inspection of the leak detection sumps, etc. The project will also have booster pump operators who will be responsible for operation, maintenance and inspection of the four booster stations on a daily basis.

26. Will the most toxic material be shipped offsite? If so, how?

Non-aqueous phase liquids (NAPLs) are essentially pure liquid wastes which were previously in the lake but are now contained inboard (landward) of the lakeshore barrier wall. The NAPLs, which are highly toxic and mobile, are being collected via recovery wells for offsite disposal.



SEDIMENT CONSOLIDATION AREA (SCA)

27. What does the SCA design consist of?

The containment aspects of the SCA include a composite liner system, overlain by a gravel drainage layer, which will support the geotextile tubes that will contain the lake sediments, and finally the layered SCA final cover system that is designed to further isolate the sediments from the environment and minimize exposure.

To explain this in more detail, the composite liner system includes a geomembrane liner underlain by a natural clay barrier layer. Above this, a gravel drainage layer will be constructed which will effectively convey the drainage from the geotextile tubes to a sump area where the liquid will be pumped to a waste water treatment system. The geotextile tubes will be placed and filled above the gravel drainage layer. The final cover system includes a soil leveling layer above the geotextile tubes, then a geomembrane which will be overlain by a barrier protection soil layer, which in turn will be overlain by a vegetated topsoil layer.

Dredged sediments will be pumped to the SCA directly from the dredge via a double-walled pipe. The sediment slurry, which is mostly water, will be discharged into the geotextile tubes. The water will drain via gravity through fabric of the geotextile tubes, while the solids portion (the sediments) will remain trapped within the geotextile tube. The water that drains from the tubes will be conveyed via the gravel drainage layer to a sump area for effective removal to an on-site water treatment plant. The majority of contaminants will remain with the sediments within the geotextile tubes. Any contaminants that remain in the water as it drains from the geotextile tubes will be treated before being returned to the lake.

28. What is the schedule for construction of the SCA?

Construction of the containment area started in August 2010. Construction of all containment area facilities (needed to commence dredging in 2012) and the Water Treatment Plant are substantially complete and will be ready to receive dredge slurry in summer 2012.

29. Will the sediment be left in the geotextile tubes?

Yes, the sediment will be left in the geotextile tubes. The geotextile tubes are designed to dry the sediments. At the completion of the lake dredging phase, a cover system (including a vegetative cover, a topsoil layer, 24-inches of protective soil, a geomembrane cover, and grading layer) will be placed over the geotextile tubes and containment area. Honeywell will operate, monitor and maintain the site in accordance with a maintenance and monitoring plan (that will be developed) for as long as necessary to ensure public health and safety.

30. Will the SCA be visible from offsite?

The containment area should not be visible from offsite surrounding neighborhoods. To the extent practical, existing trees and other vegetation around the perimeter of the site will be left in place to provide a near-field visual barrier for the site.

31. Will the SCA liner leak?

The composite liner system is not anticipated to leak. The liner system used for the SCA is an engineered barrier system that has been used for over 35 years at landfills across the nation. This type of system has been found to be effective at containing a wide range of waste materials. The liner system used for the SCA has been tested to confirm that it is chemically compatible with the materials to be dredged. When the geomembrane liner is used in conjunction with the low-permeability clay barrier (to form a composite liner) and is used in conjunction with a drainage layer designed to limit liquid head on the liner system to one foot or less, EPA studies have demonstrated that the liner efficiency is 99.9% or better.

Both the liner and final cover system have been designed using well-established engineering procedures to provide a containment system meeting acceptable factors of safety and to provide adequate isolation of the sediments from the environment and human exposure. The composite liner system is recognized as a best available single liner technology to contain waste materials.

During construction, the installation of the SCA liner was subjected to construction quality control and construction quality assurance monitoring. The same will apply to the construction cover systems.

Following the installation of the liner system and the drainage layer, the SCA liner system is subjected to a liner integrity test to identify, locate and repair any construction related defects (leaks) prior to placing the SCA into service. Once the SCA is filled and the final cover system is installed, infiltration into the SCA will be essentially cut off, thereby further eliminating a primary potential pathway for any future source of leakage. The integrity of the cover will be maintained by a post-closure maintenance program which requires regular monitoring and inspections; maintenance and repairs would be made as needed.

32. What will happen to the SCA once the lake cleanup is complete and the final cover system is installed?

The containment area will last indefinitely. It is designed with several redundancies to ensure that the containment is permanent. The leachate pumping system will be maintained to minimize the amount of liquids on the liner. Beneath the pumping system there is a high density polyethylene membrane and minimum 12-inch layer of natural clay. To keep precipitation from entering the containment area in the future, a vegetative cover (native grasses or shrubs), a topsoil layer, 24-inches of protective soil, a geomembrane cover, and grading layer will be placed over the containment area to prevent water from entering the containment area, and therefore further reduce the risk of water leaching out of the containment area. Honeywell will operate, monitor and maintain the site as long as necessary to ensure public health and safety. This will include operating the pumping system, inspecting and repairing the cover, sampling monitoring wells, etc. Honeywell will be obligated to resolve any problems. In the event that Honeywell were to go bankrupt, New York State would assume responsibility for continued site maintenance and monitoring.

33. Where can I find additional background information on the SCA?

Additional background information on the Sediment Consolidation Area is provided in the April 2010 Frequently Asked Questions available on DEC's website at www.dec.ny.gov/chemical/37558.html.

PROTECTING THE COMMUNITY

34. What is being done to protect the community during the cleanup?

A comprehensive Community Health and Safety Plan has been developed for the lake operations. The plan includes an air quality monitoring program and contingency measures which will be implemented, if needed, to ensure the safety of the public and workers during all phases of the lake cleanup. The Community Health and Safety Plan can be found on DEC's website at www.dec.ny.gov/chemical/37558.html.

35. How will public access to the work sites be restricted?

Public access to the various lakeshore and upland cleanup operation sites will be restricted for the safety of both the public and site workers. Fencing exists around most areas to enhance security. A security firm will be present at the entrance to the sediment consolidation area to monitor the area. Site workers will also provide security surveillance. Measures will be implemented to minimize potential risks to recreational boaters during on-water remediation activities. Navigation protection measures include vessel coordination, lights, marker buoys, and the use of a silt curtain around work areas.



36. Will there be harmful airborne emissions of toxins and/or dust from the SCA? How is the SCA being monitored for airborne emissions and for dust? How long will the monitoring continue into the future?

It is not anticipated that there will be harmful airborne emissions of toxins and/or dust. The dredged materials conveyance, dewatering, solids containment and water treatment systems have been designed to minimize opportunities for volatile emissions of contaminants of concern. The primary means of preventing volatile emissions and odors will be by enclosing all of the various processes to the extent practicable.

A comprehensive Community Health and Safety Plan has been developed for the lake operations. The plan includes an air quality monitoring program (at the SCA as well as in the Onondaga Lake work areas) and contingency measures which will be implemented, if needed, to ensure the safety of the public and workers during all phases of the lake cleanup.

Total VOCs and dust will be continuously monitored at eight fixed monitoring stations that are currently located along the SCA perimeter. VOCs will also be monitored at two or three fixed stations along the lake shore. The continuous data will be time-averaged, recorded by a data logger at each station, and transmitted via cellular phone line to a computer located at the SCA or the lakeshore. Also, compound-specific VOCs will be measured from samples collected over 24-hour periods once every six days at four of the eight SCA monitoring stations. Air quality monitoring will be conducted for the duration of the project.

37. Are the air quality monitoring data available to the public?

During the construction of the SCA, Honeywell has been posting daily continuously measured air quality data for total VOCs and dust on their website at www.lakecleanup.com. Compound-specific VOCs data (generated by an offsite laboratory) will be provided in tabular format on the same website on a periodic basis. Similarly, the air quality data collected during the dredging/capping phases will be made available to the public.

38. What methods are being used to prevent odors emanating from the SCA and from the lakeside dredging site, and what are the contingency plans if community residents smell the operation?

Odors are not expected to be a nuisance. The dredged materials conveyance, dewatering, solids containment and water treatment systems have been designed to minimize opportunities for nuisance odor emissions. The primary means of preventing odor emissions will be by enclosing all of the various operations to the extent practicable. In addition, air monitoring stations will be placed at the perimeter of the SCA and the property line to monitor air quality.

In the event that the engineering controls and procedures described above are not sufficient to maintain emissions below health-based criteria or to control nuisance odors, mitigative measures will be implemented as appropriate. Specific actions will be determined on a case-by-case basis depending on the determined cause of the emissions. Mitigative measures may include: reduction or temporary suspension of dredging and sediment processing operations; modification of geotextile tube layout and filling sequencing and/or procedures; use of temporary covers; modification of water management practices; modification of dredging procedures, sequencing, or schedule; reducing debris stockpile sizes and/or modifying their location and/or management and covering approach.

39. Will groundwater around the SCA be affected?

The containment area has been designed so that groundwater will not be impacted. The composite liner system is designed to isolate the contaminants from the environment. The containment area will be maintained and monitored (including groundwater monitoring) to ensure that it is operating properly.

40. Since dredging and operations at the SCA will be occurring 24 hours per day, will the lighting affect the surrounding community?

The lighting is not anticipated to impact the community. Based on previously expressed concerns regarding potential off-site impacts from site lighting, the lighting approach for this project will use shorter, focused, and adjustable lights to provide the lighting required for safe night operations. Only the active work area will be illuminated at night, minimizing the overall lighting required.

41. Will noise from operations at the SCA be heard in surrounding neighborhoods?

It is not anticipated that surrounding neighborhoods will be impacted by noise from operations. NYSDEC's guidance values for ambient noise levels have been adopted for the project. If action levels are exceeded, increased monitoring would identify and confirm if the cause of the noise is project-related. If the noise exceedance is found to be project-related, changes would be made to existing equipment or operations to reduce the noise to within acceptable limits, and follow-up monitoring would be conducted to ensure compliance.

42. Will traffic around the work areas be problematic to the surrounding neighborhoods?

Truck routes have been carefully planned to reduce impacts to local traffic and neighbors. The routes maximize the use of major highways and minimize travel through residential areas.

43. What emergency response plans are in place if the pipeline breaks?

The pipeline is double walled (a pipe within a pipe) for protection against leaks. A major leak would result in shut-down of the dredge and booster station(s). Leakage would be detected automatically via the leak detection system, or manually based on any observations of the workers.

Any compromised sections of pipe identified by periodic inspection would be repaired or replaced and then tested prior to re-start of dredging.

The surrounding area of any compromised pipe sections would be inspected and sampled if necessary to determine if any environmental impact occurred. Any unacceptable impact to the surrounding soils would be cleaned up.

44. How will the community know if there is an incident that may affect community health?

The Onondaga Lake Operations Community Health and Safety Plan establishes detailed steps in the unlikely event of a significant spill or release of dredged sediment or other emergency. Local first responders are a key part of this process. The responders will follow the National Incident Management System and issue a public notification using their established protocols (e.g., reverse 911 calling) if they determine that an incident requires public notification.

45. What monitoring will be conducted after the remedy is implemented to determine its effectiveness? Will the monitoring plan include surface water sampling and analyses for organic contaminants?

Site monitoring plans for the period after the remedy has been implemented have not yet been developed. However, it is anticipated that the monitoring program will be comprehensive and will include sampling of various media and biota (e.g., surface water, groundwater, sediment, capping and habitat material, zooplankton, benthics, sport and prey fish) to determine if remedial goals for the lake have been achieved. The surface water quality monitoring will likely include monitoring for organics such as chlorinated benzenes which were detected during previous investigations at levels above applicable surface water standards. The monitoring plan will be coordinated with the existing extensive water quality monitoring being done on Onondaga Lake by Onondaga County and others.

LAKE AND HABITAT ENHANCEMENTS

46. What is the Onondaga Lake Habitat Restoration Plan and who had input into devising the plan?

The purpose of the Onondaga Lake Habitat Restoration Plan (Habitat Plan) is to present the conceptual habitat restoration and enhancement designs for Onondaga Lake in those portions of the lake where remediation activities (e.g., dredging, capping) will be conducted.

The draft Habitat Plan was released for public comment in December 2009. Public comments were received and reviewed by DEC and EPA, as well as by Honeywell. As appropriate, the comments were incorporated into the lake design documents and will be incorporated into the final Onondaga Lake Habitat Restoration Plan, which will be released in 2012.

Key benefits of the conceptual design in the Habitat Plan include:

- increasing the size, diversity and function of shoreline (and upland) wetlands and connectivity with the lake;
- promoting pike spawning in adjacent wetland areas;
- establishing habitats that are currently lacking in the lake (e.g., floating aquatic plants);
- discouraging the establishment of invasive species;
- creating conditions suitable for a variety of native and culturally significant species;
- providing suitable conditions for transient cold water fish (e.g., brown trout) and other game fish (e.g., bass); and
- providing deep water near shore for improved fishing access.

Honeywell developed the Habitat Plan with extensive input from the Habitat Technical Work Group (TWG), as well as from those who use and care about the lake.

This Habitat TWG includes representatives from the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation; NYSDEC Division of Fish, Wildlife and Marine Resources; United States Environmental Protection Agency (USEPA); United States Fish and Wildlife Service (USFWS); and Honeywell and its team from the State University of New York College

of Environmental Science and Forestry (SUNY ESF), Mississippi State University, Terrestrial Environmental Specialists (TES), Anchor QEA, O'Brien & Gere, and Parsons. This extensive team of local and national experts encompasses experience in areas of wetland ecology, biology, restoration ecology, and fisheries biology, as well as the study of landforms and the processes that shape them.

As a related matter, habitat-related work (e.g., restoration of wetlands, remediation of stream channels) is also being performed as part of the remedial work taking place at the upland areas and associated lake tributaries.

47. How many acres of wetlands will be restored or created within or adjacent to Onondaga Lake?

Habitat restoration will be performed as part of the dredging and capping activities that will be completed within the lake, as well as in 21 acres in three areas adjacent to the lake. As part of restoration, wetlands will be restored/created at the following three areas:

- *Wastebeds 1-8* - There will be 9.3 acres of wetlands constructed on Wastebeds 1-8 to mitigate for wetlands and open water aquatic habitat disturbed or lost by the Willis/Semet Interim Remedial Measure (IRM), Wastebed B/Harbor Brook IRM, and Wastebeds 1-8 IRM. This will include 2.3 acres of wetland connected directly to Onondaga Lake and 7 acres of inland wetlands. The wetland mitigation complex is located within the low-lying eastern shoreline of Wastebeds 1-8.
- *Wastebed B/Harbor Brook Outboard Area* - There will be 14.2 acres of wetlands restored as part of the remediation of the Outboard Area. The wetlands have been designed to support the spawning of Northern Pike.
- *Ninemile Creek Spits* - There will be 1.9 acres of wetlands that will be restored as part of the remediation of this area.

48. What types of plants will be used in the wetlands and in the cap areas?

The list of plant species that will be used is being developed and will consist of plants that are native to New York State.

FUTURE COMMUNITY USE

49. After the cleanup, will the public have access to lakeshore areas and tributaries around the lake that are not currently open?

Yes. A NYSDEC boat launch, located off of I-690 Exit 7, will be constructed after the lake cleanup is completed. The public will have an opportunity to provide input on the design of that boat launch.

In addition, initial public meetings have been held to seek input on the community's desires for lake access, trails and habitat enhancement at Honeywell property on the Southwest Lakeshore. To date, no final decisions have been made regarding future public access at the Southwest Lakeshore and Honeywell is committed to seeking public input regarding future use.

Onondaga County continues to improve public use and access as well, specifically on County parkland located along the vast majority of lakeshore. The County is currently conducting public outreach through FOCUS Greater Syracuse to further advance ideas for lakeshore use.

Also, recreational access from the water (i.e., canoe, kayak) has been included in the design for the Geddes Brook wetlands, Ninemile Creek, and the Harbor Brook wetlands.

50. What are the plans for the Honeywell industrial property in Camillus?

DEC and Honeywell agreed in 2010 to implement a remedy for Honeywell property located off Airport Road in the Towns of Camillus and Geddes. The agreement includes a proposal to use shrub willows developed by SUNY-ESF as a sustainable vegetative cover system for the former industrial property. The agreement also includes a public planning process to identify recreational opportunities for up to 10% of the property's nearly 660 acres. A committee comprised of community members and planning experts has been formed to guide this public planning and community engagement process and help identify the community's preferred end use of the area.

51. Will Honeywell continue to own the SCA and the improved lakeshore land indefinitely?

Honeywell is required to maintain the SCA as long as necessary to ensure public health and safety. Long-term ownership of this land has not yet been determined. Similarly, no determination has been made on Honeywell's long-term ownership of the lakeshore land.

52. Will we ever be able to swim in the lake?

The New York State Department of Health advises that, when possible, people swim in a beach area regulated by the state, counties, towns or villages because these beaches are monitored for safety and health and are posted for closures or swimming advisories. Currently, no part of Onondaga Lake is a regulated swimming body and there are no permitted bathing beaches located along the shorelines. Historically, this was due to public health concerns relating to contact with elevated counts of fecal coliform bacteria in lake water, in addition to insufficient water clarity resulting from elevated nutrient loading to the Lake. However, water quality has improved dramatically over the years. Recent water data (2010) indicates public health standards for bacteria have been achieved throughout Onondaga Lake, except in areas along the Lake's southern shoreline following high rainfall and runoff events. These events typically coincide with combined sewer overflow discharges to the lake. These same patterns from 2010 were also observed when conducting water clarity measurements. Water quality data generated by Onondaga County continues to assist with evaluating how the lake is responding to wastewater/stormwater infrastructure improvements, and protocols are in place to monitor conditions prior to events taking place on Onondaga Lake. During the timeframe of completing the lake's remediation and various improvements, water quality will continue to be monitored and evaluated to assess its overall condition for future recreational activities. To attain recent information on water quality, see "*Onondaga Lake Ambient Monitoring Program 2010 Annual Report (Revised March 2012)*" at www.ongov.net/wep/we15.html.

FURTHER INFORMATION

53. Who can I call to ask questions or register a complaint?

A 24-hour local hotline has been established for this project (315) 313-8068. The community is encouraged to call this number with questions or to register a complaint about the Onondaga Lake remediation project.

In addition to calling the hotline, the public can also address general questions or concerns to the DEC at (315) 426-7403 during business hours. Emergency numbers for DEC include the NYS Spill Hotline (800) 457-7362 to report the release of chemicals or petroleum to the environment, and DEC's 24-hour Law Enforcement Dispatch number (877) 457-5680.

Honeywell also has a community liaison that is available during work activities to answer questions or address concerns and can be reached at (315) 552-9784.

54. Will there be a public area for viewing or learning about the dredging?

Honeywell will have a lakeshore office that will include an educational and conference facility for the public to learn more about and view lake dredging and capping operations as well as habitat and wildlife improvement projects. For more information on public availability, contact Honeywell at (315) 552-9784.

55. What is the CPWG and what is this group tasked with?

In 2010, the NYSDEC established a Community Participation Working Group (CPWG). The CPWG is open to the public and consists of public officials, community leaders, citizens, and conservation and environmental group leaders. The CPWG meets periodically providing a forum to inform, receive input, and discuss the lake bottom remediation program and related upland remediation efforts, as appropriate. The CPWG creates opportunities for the public to contribute information, opinions, perspectives and recommendations. Feedback from the CPWG is provided to DEC and Honeywell. More information about the CPWG is available on their website www.onondagalake.info.

56. Where can design plans, and other information on the dredging and capping, and other project information be obtained?

Onondaga Lake project information can be found on the following websites.

DEC www.dec.ny.gov/chemical/37558.html

Honeywell www.lakecleanup.com

CPWG website www.onondagalake.info

57. How can one be added to the project mailing list to receive project information, updates and meeting announcements?

Interested community members should sign up to receive project information from both DEC and Honeywell.

DEC's Onondaga Lake News E-Mail List: www.dec.ny.gov/chemical/52545.html

Honeywell's E-Newsletter: www.lakecleanup.com/newsletters

58. What is the status of the New York State Department of Health fish advisory and will conditions improve in the future?

One of the goals of the Onondaga Lake remedy is to reduce chemical concentrations in fish to levels that protect humans and wildlife that consume fish. Currently, the New York State Department of Health has a specific advisory for Onondaga Lake which recommends that children and women under 50 years of age do not eat any fish from this lake, and men over 15 years and women over 50 do not eat certain species and limit the consumption of other species. Please consult and follow the full NYSDOH fish consumption guidelines for Onondaga Lake, available online at www.health.ny.gov/fish.

It is expected that concentrations of contaminants in fish will be reduced following the completion of remedial activities in Onondaga Lake. Monitoring of fish tissue samples will continue both during and after the lake remediation efforts and the NYSDOH will continue to evaluate the fish data and the fish advisories on an annual basis.

59. Is there any general advice people should follow when recreating on Onondaga Lake?

Onondaga Lake and its tributaries are classified as Class B and Class C waters, which are suitable for water contact recreation. In general, the New York State Department of Health recommends that people who choose to swim and participate in water sports should follow good hygiene and safety advice. Lake and river waters contain microorganisms such as bacteria, viruses and parasites, and some of these can make a person sick if they enter the body. Many swimmers are exposed to these organisms by swallowing the water. Putting your head under water while swimming also increases the likelihood of exposure through the eyes, ears and nose. People are less likely to get exposed if they wade or swim without immersing their heads and avoid swallowing lake water. People should wash their hands after recreating on or in lake and rivers, and especially before eating. It may also be helpful to take a shower to wash off lake water and any sediment. Following these recommendations can help to reduce exposure to chemicals and microorganisms in the water. In general, people should avoid swimming in cloudy water. Cloudy or turbid water can contain more microorganisms than normal and also can affect a person's ability to see underwater hazards.

60. What improvements have been made so far in terms of improving the quality of Onondaga Lake?

Significant improvement has been made in Onondaga Lake in recent years, and the water quality is the best it's been in decades. Onondaga Lake was once significantly impaired due to both phosphorous and ammonia levels in the lake. As a result of Onondaga County's wastewater treatment improvements, ammonia and phosphorous levels are now meeting desired levels in the lake. Oxygen levels in the lake have significantly improved, vegetation in the lake has increased and water clarity has returned to the lake. This has had a direct impact on the number of fish species seen in the lake today. Sixty five species of fish were recently documented in the lake, up from the nine to 12 species counted in the 1970s.

Onondaga County's continued work to eliminate wastewater impacts, along with Honeywell's dredging project, will result in even further improvements to Onondaga Lake.

For extensive information on Onondaga Lake water quality, please visit Onondaga County's Ambient Monitoring Program web page at www.ongov.net/wep/we15.html.

61. What is the status of Onondaga County's work to prevent combined sewer overflows into Onondaga Lake tributaries?

Onondaga County continues to implement innovative projects to reduce the impact of combined sewer overflows (CSO) to Onondaga Lake and its tributaries. Much of the focus now on CSO reduction is concentrated on green infrastructure. Through its *Save the Rain* program, the County is constructing green projects in the City of Syracuse and elsewhere to capture stormwater naturally and prevent it from entering the sewer system and potentially impacting water quality in the lake.

In addition to green infrastructure, Onondaga County continues to construct traditional gray infrastructure projects such as underground storage and sewer separation projects. Onondaga County's CSO reduction plan is anticipated to be completed in 2018. Additional information is available at www.savetherain.us.

62. What can the public do as community members to improve the quality of the water in Onondaga Lake and its tributaries?

Individuals can participate in the revitalization of Onondaga Lake by practicing sound environmental measures in their homes and businesses in the lake's watershed. If you live in Syracuse or other areas around Onondaga Lake, anything you dump or throw on the ground or in the street can end up in Onondaga Lake. You can do the following at home to reduce pollution of the lake:

- Reduce the use of pesticides and fertilizers on your lawn and follow instructions carefully. Pesticides and fertilizers can be carried with runoff into sewers, creeks, and the lake. Fertilizers contain phosphorus that promotes unwanted algae and weeds to grow in the lake.
- Keep storm drains clear of debris. Call the city to clean, repair, or replace clogged storm drains (315-448-CITY).
- Help pick up litter and street debris. Street debris, litter, and trash can be carried into storm drains that lead to storm sewers and combined sewer overflows that empty into creeks and the lake. This causes unsightly trash along creek banks, the Inner Harbor, and the lakeshore.
- Dispose of used motor oil properly. Never pour it down storm drains or into the street. Service stations that change oil accept used oil for recycling.
- Dispose of household hazardous wastes like paint thinners properly. Call (315) 453-2870 (OCRRA) for information on community disposal days.
- Pick up pet waste and put it into the trash.
- Don't put leaves, grass clippings, or tree clippings into the street. Put yard waste between the curb and sidewalk (on the boulevard strip) for designated pickup times, or take to special collection sites operated by the City. Call (315) 448-8005 for locations and hours.
- Keep lids on all garbage cans and trash containers when stored or placed by the curb for pickup.
- Sweep driveways and sidewalks and put the sweepings in the trash. Hosing down sidewalks and driveways wastes water and can wash oil, grease, and dirt into storm drains.
- Plant bare spots in your yard with grass or shrubs to cut down on erosion.
- Direct roof drains into grassy areas to water your grass and plants, save water, and reduce erosion.

Additional information about green solutions to help Onondaga Lake is available at www.savetherain.us and www.ocrra.org.