



Department
of Health



Department of
Environmental
Conservation

Questions and Answer Fact Sheet for Study Area Characterization City of Corning, Steuben County March 2015

Public Meeting Announced

Thursday, March 26, 2015 – Ramada Inn, 304 South Hamilton Street, Painted Post

Availability Session: 3:00 - 5:00 PM - for residents in the Study Area and other interested parties to speak one-on-one with State and Corning Incorporated representatives.

Public Meeting: 6:30 - 8:00 PM – for general information regarding findings to date and next steps.

The New York State Department of Environmental Conservation (NYSDEC) invites you to an availability session and public meeting to discuss the findings of work completed to date in the Study Area and next steps. NYSDEC and New York State Department of Health (NYSDOH), in cooperation with Corning Incorporated, will present findings and invite your questions.

Corning Incorporated is currently undertaking a study of property located in the City of Corning, Steuben County. Please see the attached map for the site location. Documents related to the investigation of this site can be found at the location(s) identified below under "Where to Find Information."

Background:

The Study Area is located in the northeastern portion of the City of Corning. It is bounded by Pyrex Street to the west, the Chemung River to the south, Post Creek to the east, and East Pulteney Street to the north. During the 2012 demolition of the former Kent Phillips School and expansion of the Corning-Painted Post (CPP) High School, workers encountered fill containing ash, brick, and glass waste during excavations. Based on the elevated levels of lead and cadmium, some of this fill was characterized as "hazardous waste" which is a legal designation that requires the material to have special handling and disposal. In addition to lead and cadmium, much of the excavated fill at the school property contained elevated levels of other metals such as arsenic, barium, and chromium that exceeded New York State soil cleanup objectives (SCOs), which are contaminant-specific soil concentrations that are protective of public health and the environment. NYSDEC determined the presence of fill material and the contaminant levels warranted additional investigation at the school property and at nearby properties within the Study Area. NYSDEC asked Corning Incorporated to begin an investigation to further characterize the nature and extent of fill material containing ash, brick, and/or glass within the study area. Corning Incorporated has entered into a Consent Order with NYSDEC to conduct the investigation, and has implemented the initial phase of work described in the "Study Area Characterization Work Plan," which was approved by NYSDEC.

Why was an investigation of the Study Area conducted?

The CPP High School property and much of the surrounding neighborhood is a former low lying area along the Chemung River that has been extensively filled since the 1930s (or earlier) to the early 1960s, when the school was constructed. A

1920 property deed contains a condition that allowed Corning Glass Works to maintain “ash dumps as now located” in the Study Area. Fill containing ash, glass, and brick waste at CPP High School came to our attention at the outset of excavation work during the spring of 2012. At that time, the extent of the fill was not known and is currently being investigated. Anecdotal reporting and subsequent research into historical documentation led to the conclusion that at least some of the neighboring area is likely underlain by the same or similar fill. The agencies are working cooperatively with Corning Incorporated, the school district, and the community to fully characterize the nature and extent of the fill in the Study Area.

What Study Area characterization activities have been completed?

Most of the investigation activities described in the “Study Area Characterization Work Plan” have been completed. Specific details of the investigation activities can be found in the Study Area Characterization Work Plan at <http://www.dec.ny.gov/chemical/97180.html>. The Study Area has been divided into seven subareas:

- 1) CPP School District Property
- 2) Corning Christian Academy Property
- 3) Memorial Stadium Property
- 4) Firehouse Frontage Property
- 5) Residential Area (five homes) at the Eastern End of Corning Boulevard
- 6) Residential Properties in the rest of the Study Area
- 7) Flood Control Area

In general, investigation activities included soil sampling to determine the presence of fill material containing ash, brick and/or glass as well as soil concentrations in these areas. The investigation also evaluated the thickness and integrity of the new soil placed on the athletic fields of CPP High School and the mulch/ground cover at the Corning Christian Academy and Houghton Park playgrounds. Finally, seven groundwater monitoring wells were installed and sampled to determine if contaminants in the fill material had migrated from soil into groundwater.

Subsequent shallow soil evaluation activities completed by NYSDEC at certain properties within and near the Study Area confirmed the presence of fill containing ash, brick, and glass at additional locations. This evaluation is on-going.

What kinds of environmental samples have been collected to date?

Several types of samples were collected to determine whether fill material is present. Soil samples were collected at or up to two inches below the ground surface (where people are most likely to come in contact with soil through activities like yard work or play). Exposure to chemicals in soil is more likely if the soil is bare and is not covered with grass or pavement. Subsurface soil samples were also collected under the ground where people could also come in contact with soil by digging below the surface, such as when planting a tree, gardening, or making home improvements. Groundwater samples were collected to evaluate if the contaminants in the fill material are getting into groundwater within the study area.

What was the purpose of taking the soil samples?

The soil sampling had three purposes. The first was to characterize the nature and extent of the fill. The second was to evaluate the fill to determine if it met criteria that would make it “hazardous waste.” The third purpose was to see if the soil chemical constituent contaminant levels exceed the New York State soil cleanup objectives (SCOs) for residential land use, which helps us evaluate the potential for contaminant exposure and what remedial measures may be needed to address the contamination.

What is meant by “hazardous waste?”

The term “hazardous waste” is a regulatory designation. In New York State, hazardous wastes are defined by U.S. Environmental Protection Agency and NYSDEC regulations (see <http://www.dec.ny.gov/chemical/100401.html>), based on whether the materials exhibit one or more of the following four traits: ignitibility, reactivity, corrosivity, or toxicity. Fill material in the study area was tested to see if it meets the criteria for being designated hazardous waste using a procedure known as the Toxicity Characteristic Leaching Procedure (TCLP). TCLP simulates leaching through a landfill to assess the

potential for contamination in the material being tested (typically soil) to get into groundwater. Designation of the fill materials in the study area as hazardous waste is not directly related to the potential for human exposure or health risks; rather, it tells us that the materials require special handling and disposal in a hazardous waste landfill.

What are soil cleanup objectives or “SCOs”?

New York State established SCOs in 2006 for 86 chemicals, and they are contained in NYSDEC’s Environmental Remediation Program’s regulations (see <http://www.dec.ny.gov/chemical/34189.html>). SCOs are contaminant-specific soil concentrations that are protective of public health and the environment (groundwater and ecological resources) for specified uses of a property (e.g., residential, commercial). The residential SCOs were developed based on the assumption that people are exposed to chemicals in soil through activities that typically occur on residential properties (e.g., working and playing in the yard, gardening). SCOs are set at a soil level at which health effects are unlikely to occur and are used, along with other considerations, to guide decisions about the need to reduce exposure to environmental contaminants

What are the results of the environmental samples that have been collected to date?

Hazardous Waste

Environmental sampling to date has confirmed the presence of fill containing ash, brick, and glass at various locations, including CPP High School, Corning Christian Academy, Memorial Stadium, the land in front of the Corning Fire Station, and the southeast and northwestern portions of the residential area. At the CCP High School, soil samples were collected from piles containing fill by the school district’s consultant during the 2012-2014 expansion construction activities. Seventy of 268 samples met the hazardous waste criterion for lead, three met the criterion for cadmium, and none met the criterion for arsenic or other constituents. These soil piles have since been removed from the school property. At the Corning Christian Academy, Memorial Stadium, and the southeast and northwestern portions of the residential area, hazardous waste designations for lead and cadmium have been limited to subsurface soil/fill (not at the surface). The finding of hazardous waste required disposal of the fill excavated during the school project at a hazardous waste landfill. Nothing in the surface soil samples analyzed from 168 residential properties was identified as hazardous waste.

Soil Sampling Results

We compared the surface soil sampling results for study area-related contaminants (arsenic, cadmium, and lead) from the 168 residential properties to the corresponding residential SCOs. Most of the levels of the study area-related contaminants in surface soil were below the corresponding residential SCOs. At about one quarter of the properties, the levels of arsenic, cadmium, or lead in one or more surface soil samples exceeded the SCO. Specifically, the residential SCO was exceeded in surface soil levels at 38 residential properties, including 29 properties for arsenic, 10 properties for cadmium and 10 properties for lead.

Where fill material was found in other parts of the Study Area, many of the subsurface soil samples were also found to have levels of arsenic, cadmium, and/or lead at levels that exceed the residential SCOs. The subsurface sample results are less likely to represent a potential exposure to people than surface soil results. Locations where sub-surface soil levels exceeded the residential SCO include the CPP High School, Corning Christian Academy Property, Memorial Stadium Property, Firehouse Frontage Property, and the southeast and northwestern portions of the residential area. Of 214 soil samples collected by the school district’s consultant from soil piles as part of the expansion of CPP High School, residential SCOs were exceeded for arsenic and cadmium in about half of the samples, and for lead in about one third of the samples.

Groundwater Sampling Results

Groundwater samples were collected from four monitoring wells installed on the CPP High School property, two monitoring wells installed on the Memorial Stadium property, and one monitoring well installed in the residential area at the eastern end of Corning Boulevard. No study-related contaminants were found at levels above groundwater standards in samples collected from these monitoring wells. In addition, the State collected a sample from a public water supply well located on the adjacent Corning fire station property during the school expansion construction activities, and no study-related contaminants were found at levels above groundwater standards.

How can I be exposed to contaminants in soil or fill material?

People can be exposed to soil contaminants if they get soil particles on their hands and swallow the soil through hand-to-mouth activity. Some exposure may also occur when contaminated soil is tracked inside a building and becomes part of indoor dust. Other ways people could be exposed are by breathing windblown soil and dust particles, or by eating vegetables grown in contaminated soil. Young children have the greatest potential for exposure to soil contaminants because they often come into direct contact with the soil while playing or digging in the dirt, and may swallow the soil after putting their fingers, hands, or toys in their mouths.

How are the surface soil sampling results for my property evaluated?

The surface soil sampling results for the residential properties are evaluated by comparing them to the residential SCOs. The residential SCOs are set at a soil level at which health effects are unlikely to occur and assume exposure occurs through activities that typically occur on residential properties (e.g., working and playing in the yard, gardening).

The residential SCOs for the primary site-related contaminants are 16 parts per million (ppm) for arsenic, 2.5 ppm for cadmium, and 400 ppm for lead. The SCOs are used as a tool, along with other considerations, to guide decisions about the need to reduce exposure to environmental contaminants.

What does it mean if arsenic, cadmium, and/or lead was found on my property above the SCOs?

An SCO is not a "bright line" between soil concentrations that will result in health effects and those that will not. Moreover, exceedance of an SCO at your property does not represent an immediate health hazard, but indicates a need to evaluate measures to reduce the contaminant levels. The degree of public health concern when an SCO is exceeded depends on several factors, including (among others) the extent to which the SCO is exceeded, the potential for human exposure, other sources of exposure to the chemical, and the strength and quality of the available toxicological information on the chemical.

Will my children get sick if they play in my yard? What measures should I take to protect them?

We do not expect there to be any immediate health effects from exposure to arsenic, cadmium, and/or lead in the soil through typical use of the yards. However, you can reduce the chances for exposure to arsenic, cadmium, and/or lead by taking reasonable and practical steps to minimize direct and repeated contact with bare soils (particularly by young children). Maintenance of a grass or mulch cover will help prevent direct contact with the soil. Unnecessary digging in the dirt should be avoided, and children and adults should wash hands after outdoor activities. The use of doormats and periodic damp mopping of floors can help reduce exposure to outdoor soil that might be tracked indoors. It's important to note that all soils contain chemicals and microorganisms, and therefore it is always a good idea to minimize getting soil into the body whether it is contaminated or not.

Can I plant a garden? Should I eat vegetables grown in my garden?

Until properties are fully characterized and/or cleaned up, eating vegetables from your garden could increase your exposure to arsenic, cadmium, and/or lead if they are present at elevated levels in the soil of your garden. Metals can be taken up from soil into garden vegetables. Contaminant levels in homegrown vegetables depend on many factors such as the specific kind of vegetable, characteristics of the soil, the level of contamination in the soil, and others. Also, soil can stick to vegetables and then be taken into the body when the vegetables are eaten. If you decide to grow and eat vegetables, here are some steps to consider to help reduce exposures:

- Grow vegetables in raised beds with clean soil (at least ten inches deep). Use untreated wood to make the beds. Pressure-treated wood and railroad ties contain added chemicals.
- Wear gloves when working in the garden.
- Brush off your clothes and remove shoes and gloves before entering your home.
- Wash with soap and water after gardening or any time before you eat.
- Additional information about healthy gardening may be found at: <http://www.health.ny.gov/publications/1301/>.

What is arsenic?

Arsenic is a naturally-occurring metal found in ores of copper, lead, and other minerals, and in soil, groundwater, and surface water. Commercially, arsenic compounds are used in agricultural products (insecticides and herbicides), wood preservatives, and veterinary drugs.

What is cadmium?

Cadmium is a natural element in the earth's crust. Soils and rocks, including coal and mineral fertilizers, contain some cadmium. Most cadmium used in the United States is extracted during the production of other metals like zinc, lead, and copper. Cadmium does not corrode easily and has many uses, including batteries, pigments, metal coatings, and plastics.

What is lead?

Although lead is a naturally occurring heavy metal, the majority of lead present in the environment is due to human activity. It was once widely used in gasoline and paint, and it also has been used in pipes, automotive batteries, weights, shot and ammunition, cable covers, and radiation shields. Lead can be found in soil and dust, and was also historically used in the manufacture of certain glass products by Corning Incorporated.

What health effects can be caused by exposure to arsenic, cadmium, and lead?

All chemicals can cause health effects. The risk for adverse health effects from exposure to any chemical depends on the chemical's toxicity, the amount of the chemical to which a person is exposed, and how long and how often the exposure occurs. Below is some general information about the kinds of health effects that are associated with arsenic, cadmium, and lead.

Arsenic is classified as a human carcinogen based on evidence from a large number of scientific studies that show an increased risk for skin, lung, and bladder cancer among people who have been exposed to high levels of arsenic in drinking water. Exposure to high levels of arsenic also can cause non-cancer health effects such as stomach irritation, and effects on the nervous system, heart, blood vessels, and skin.

There is some evidence that cadmium causes cancer in rats exposed to high levels in their drinking water over their lifetime. Some people exposed to large amounts of cadmium had kidney and bone damage. Exposure to high levels of cadmium damages the kidneys, blood, liver, heart, and the immune and nervous systems of laboratory animals. High exposure also damages the unborn offspring of laboratory animals exposed during pregnancy.

Ingestion of lead can increase blood lead levels. Numerous scientific studies show that elevated blood lead levels in children (before or after birth) cause or are associated with adverse effects on the developing nervous system. These include reductions in several measures of cognitive ability, which is an indicator of a child's ability to learn.

Should my children or I be tested for arsenic, cadmium, and lead?

These metals are common in the environment and it is not unusual to find some arsenic, cadmium, or lead in a person's body (e.g., in a blood or urine sample). However, while testing can measure the amount of these metals in a person's body, the test cannot identify where the metal came from. If you are interested in being tested for these chemicals, you should consult your health care professional.

New York State requires health care providers to test all children for lead with a blood lead test at age 1 year and again at age 2 years. At every well-child visit up to age six, health care providers must ask parents about any contact their child might have had with lead. If there's been a chance of contact, providers are required to test for lead again. Parents can ask their child's doctor or nurse if their child should get a lead test, and what the lead test results mean.

What other chemicals might be present?

During the Study Area characterization, every sample was analyzed for arsenic, cadmium, and lead. In addition, many of the of the samples were analyzed for TCLP metals, total metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs). As discussed previously, lead and cadmium were the only metals for which the fill (in limited portions of the study area) met the criteria for hazardous waste designation based on TCLP testing results. Metals other than arsenic, cadmium, and lead that have been detected at concentrations above SCOs in the Study Area include barium, chromium, copper, and mercury. Elevated detections of these other metals are less frequent but when present are also typically associated the fill material containing ash, brick, and glass. VOCs were detected at levels above residential SCOs in fill soils underneath a limited area of the CPP High School athletic fields and further delineation of this area will be undertaken. SVOCs were sometimes detected at levels above residential SCOs, and the elevated levels in fill typically appear to be associated with ash. Other potential source(s) of SVOCs are being evaluated. There were no exceedances of the residential SCOs for PCBs.

Can we use Houghton Park?

Yes. Much of this public park is covered by grass and materials such as mulch or wood chips in the playground portions. Both grass and mulch/wood chips provide a cover that prevents contact with the soils beneath. Based on the results of eight surface soil samples collected at the park, arsenic, cadmium, and lead were detected at levels below the SCOs for residential use. One soil boring installed in the central portion of this park did not identify fill material containing ash, brick, or glass. To further evaluate the potential for this type of fill material to be present in subsurface soil, which has been reported at the west side of Houghton Park, one or more additional soil samples will be taken during the next phase of the investigation.

What does the presence of fill material containing ash, brick and/or glass mean?

The presence of fill material containing ash, brick, and/or glass indicates the need for that material to be fully investigated. The fill material that contains ash, brick, and/or glass is the suspected source of contamination within the study area. Additional sampling will help determine the nature and extent (where it is and where it ends) of the fill material. Exposure to the fill materials (visible ash, brick, and glass) is possible by direct contact, and measures such as maintaining a grass or mulch cover over fill material can help to prevent direct and repeated contact with fill material. Additional characterization as to the nature and extent of fill material within the Study Area is currently ongoing. If you encounter fill material containing ash, brick, and/or glass at your property, please contact the State for further assistance.

Will further evaluation of the Study Area be done?

Various locations within the study area require further evaluation and investigation of the fill material beneath the ground surface. Soil samples collected from some yards show the presence of arsenic, cadmium, and/or lead at concentrations above the SCOs for a residential setting. Additional evaluation is required to determine the nature and extent of the contamination and what further remedial action may be needed. Once this additional evaluation is completed, an action plan will be developed and shared with public officials and the local community.

Who is going to clean up my yard, if necessary?

The need for cleanup measures or other interim remedial measures (e.g., emplacement of cover material) has not yet been determined. NYSDEC will work to ensure the responsible party(ies) covers the cost of cleanup.

Will I be responsible for the cost of any cleanup action on my property, if it's deemed necessary?

There will be no cost to individual property owners for any investigation or subsequent cleanup activities that may be undertaken on their property to address this contamination.

FOR MORE INFORMATION

Where to find information?

Project documents are available at the following location(s) to help the public stay informed:

NYSDEC – Region 8 Office
6274 East Avon- Lima Rd.
Avon, NY 14414
M-F: 8:45am – 4:30pm
Contact: Linda Vera for an appointment
(585) 226 - 5324

Southeast Steuben County Library
300 Nasser Civic Center Plaza
Suite 101
Corning, NY 14830
phone: (607) 936-3713

Project documents are also available on the NYSDEC website at:

<http://www.dec.ny.gov/chemical/97180.html>.

Whom to Contact

Comments and questions are always welcome and should be directed as follows:

Project-Related Questions

Gregory B. MacLean, P.E.
Department of Environmental Conservation
Division of Environmental Remediation
6274 East Avon-Lima Road
Avon, NY 14414
585-226-5356
greg.maclea@dec.ny.gov

Project-Related Health Questions

Melissa A. Doroski, MPH
New York State Department of Health
Empire State Plaza, Corning Tower Room #1787
Albany, NY 12237
518-402-7860
BEEI@health.ny.gov

We encourage you to share this fact sheet with neighbors and tenants, and/or post this fact sheet in a prominent area of your building for others to see.

Receive Future Site Fact Sheets by Email

Have site information such as this fact sheet sent right to your email inbox.

NYSDEC invites you to sign up with one or more contaminated sites county email listservs available at the following web page:

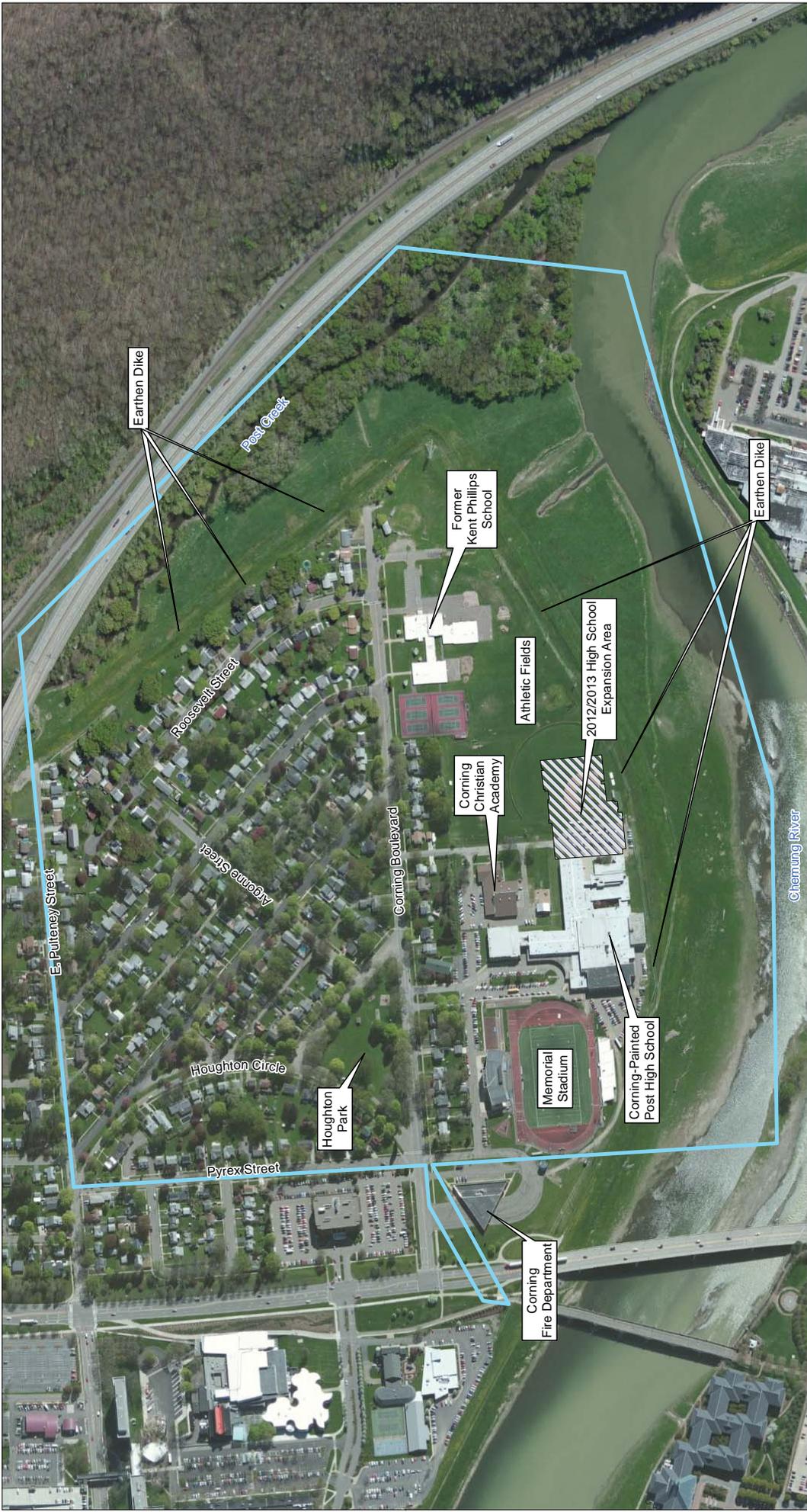
<http://www.dec.ny.gov/chemical/61092.html>.

It's quick, it's free, and it will help keep you *better informed*.

As a listserv member, you will periodically receive site-related information/announcements for all contaminated sites in the county(ies) you select.

Note: Please disregard if you already have signed up and received this fact sheet electronically.





Legend
 Study Area Boundary Based on 1937 Quit Claim Deed
 Study Area Boundary

NOTES:
 Base Imagery: ESRI, DigitalGlobe, GeoEye
 Mapping Service: 2011
 Coordinate System: NAD 1983 State Plane
 New York State
 Datum: NAD83 Units: Feet

Scale:
 0 350 700 Feet
 0 80 160 240 Meters

WESTON SOLUTIONS

Figure 2-1
Study Area

Document Name: Study_Area_Features.MXD
 6/2/2014

