



Groundwater Wells

Site Name and Location:	Study Area, Corning, NY
Order on Consent and Administrative Settlement:	NYSDEC Project ID 851046
Corning Incorporated Project Coordinator:	Mike Ford
NYSDEC Project Coordinator:	Gregory B. MacLean
Date:	October 24, 2014

Introduction

In accordance with Section 4.3.1.6 and Section 4.3.4.3 of the approved Study Area Characterization Work Plan dated June 2014 (Work Plan), Weston Solutions, Inc. (WESTON[®]), on behalf of Corning Incorporated (Corning) proposes to install five (5) groundwater monitoring wells in the Study Area. Groundwater monitoring wells are proposed to be installed in the Study Area at the Corning-Painted Post School District property and within the City of Corning right-of-way in the Residential Area at the Eastern End of Corning Boulevard. In addition, two (2) groundwater monitoring wells are proposed to be installed at the Memorial Stadium property. The proposed locations have been selected based on the observance of fill material containing ash, brick and glass pieces in the soil borings and preliminary un-validated analytical results for soil samples collected from soil borings installed within these areas. Upon New York Department of Conservation (NYSDEC) approval, this proposal becomes a part of the Study Area Characterization Work Plan pursuant to the terms of the Order on Consent and Administrative Settlement.

Well Locations

A total of four (4) groundwater monitoring wells are proposed to be installed at the Corning-Painted Post School District property. Locations for the groundwater monitoring wells were selected based on the observance of fill material containing ash, brick and glass pieces during soil boring installation and preliminary, un-validated analytical data for soil samples collected during the soil boring installation. One (1) groundwater monitoring well is proposed to be installed near soil boring CPPSB010. A second groundwater monitoring well is proposed to be installed along the western edge of the newly constructed athletic fields near soil boring CPPSB007. A third groundwater monitoring well is proposed to be installed along the southern portion of the new athletic fields, in the vicinity of soil boring CPPSB008. A fourth groundwater monitoring well is proposed to be installed in the eastern corner of the property, southeast of soil boring CPPSB014. The locations of the proposed groundwater monitoring wells at the Corning-Painted Post School District property are shown on Figure 1, attached.



**Groundwater Wells
Study Area, Corning, NY
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(continued)**

Two (2) groundwater monitoring wells are proposed to be installed on the Memorial Stadium property based on the observance of fill material containing ash, brick and glass pieces during soil boring installation and preliminary, un-validated analytical data for soil samples collected during the soil boring installation. The first groundwater monitoring well is proposed to be installed southwest of the Memorial Stadium in the area of soil boring CMSSB002. The second groundwater monitoring well is proposed to be installed south of the Memorial Stadium east of soil boring CMSSB003. The locations of the proposed groundwater monitoring wells at the Memorial Stadium are shown on Figure 2, attached.

One (1) groundwater monitoring well is proposed to be installed in the Residential Area at the Eastern End of Corning Boulevard based on the observance of fill material containing ash, brick and glass pieces during soil boring installation and preliminary, un-validated analytical data for soil samples collected during the soil boring installation. The well is proposed to be installed in the City of Corning right-of-way near soil boring RESEECB002 as shown on Figure 3, attached.

The proposed locations of the groundwater monitoring wells may be adjusted, with verbal approval by the NYSDEC Project Manager, followed by email confirmation and/or documentation in the field notes, based on site conditions and/or access issues.

Groundwater Well Construction

Groundwater monitoring wells will be installed and developed in accordance with the procedures contained in Section 4.2.5 of the approved Work Plan.

Groundwater Well Sampling

Two rounds of groundwater samples will be collected for laboratory analysis from the new monitoring wells in accordance with the procedures contained in Section 4.2.5 of the approved Work Plan. Monitoring well samples will be collected utilizing low-flow, low turbidity sampling procedures described in Appendix D (Standard Operating Procedures) of the approved Work Plan and will be analyzed for the constituents of potential concern (COPCs) as defined in the Work Plan (i.e., lead, cadmium and arsenic). In addition, 20% of all groundwater samples, at least one sample per property, will be analyzed for total Target Analyte List (TAL) metals plus mercury, TCL semi-volatile organic compounds (SVOCs), and volatile organic compounds (VOCs) as listed in Table 4-3 of the Work Plan.

Samples will also be collected using field filtering methods described below, at the same time as the samples discussed above, and sent to the laboratory and held. If the results of a groundwater sample exceed the NYSDEC groundwater quality standards for a COPC or



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(continued)**

TAL metal, the corresponding filtered sample collected from the same groundwater monitoring well will be analyzed.

Field Filtering Procedure

After the groundwater purging process and sampling described in Appendix D (Standard Operating Procedures) of the approved Work Plan is completed, filtered samples will be collected using the following procedure:

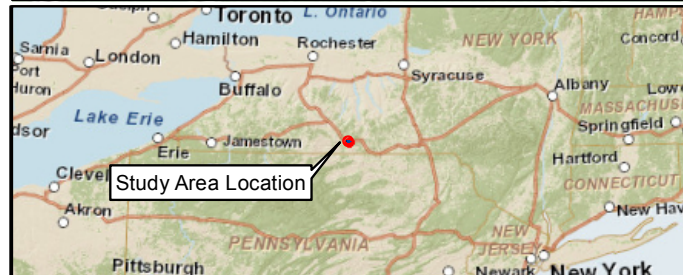
1. Attach the pump discharge tubing to a disposable 0.45- μ m Nalgene filter unit,
2. Allow for discharge of at least 0.5 liter of water through the disposable filter before filling sample bottles.
3. Use a clean 500-ml plastic Nalgene bottle pre-preserved with HNO₃, remove the lid from the sample bottle, and then fill slowly and at the same rate as the purging rate.
4. Affix the sample ID label to the bottle and note "Dissolved Metals" for the analysis requested and mark "Hold for Analysis" on the chain of custody.

Schedule

Upon receipt of approval from the NYSDEC of the proposed groundwater monitoring well locations, the work will be completed in accordance with the approved Work Plan schedule for the Study Area.

A handwritten signature in black ink, appearing to read "John Sontag, Jr.", written over a horizontal line.

John Sontag, Jr.
Senior Project Manager



Legend

- Corning-Painted Post School District Property
- Parcels
- School Addition
- Former School
- Parking Lot
- ⊗ Surface Soil Sampling Locations
- Soil Borings
- ⊗ Proposed Monitoring Well Locations

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

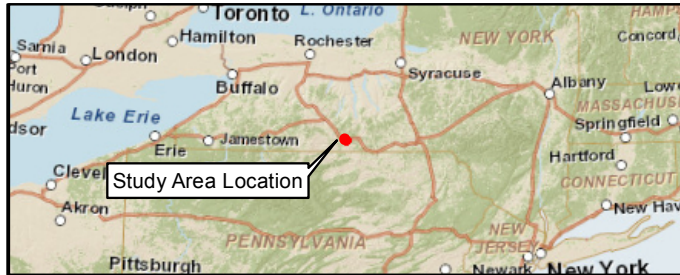
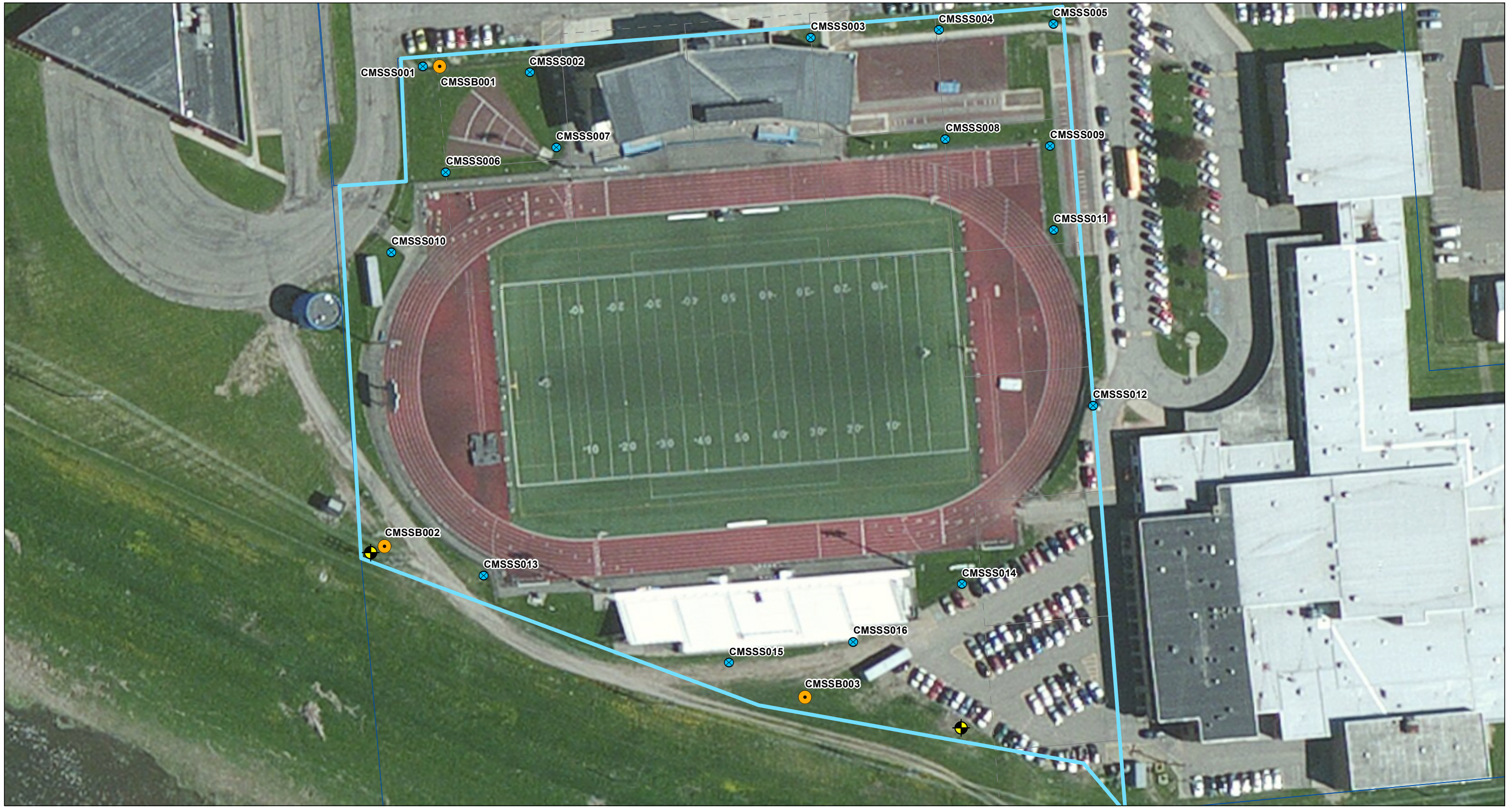
Study Area
 Corning NY



Figure 1
 Proposed Well Locations
 Corning-Painted Post
 School District Property

Document Name: Prop_Well_A1.MXD

11/4/2014



Legend

- Memorial Stadium Property
- Parcels
- Grid (100x100 ft)
- X Surface Soil Sampling Locations
- Soil Borings
- ⊗ Proposed Monitoring Well Location

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

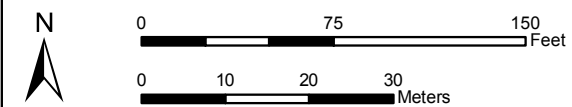
Study Area
 Corning NY

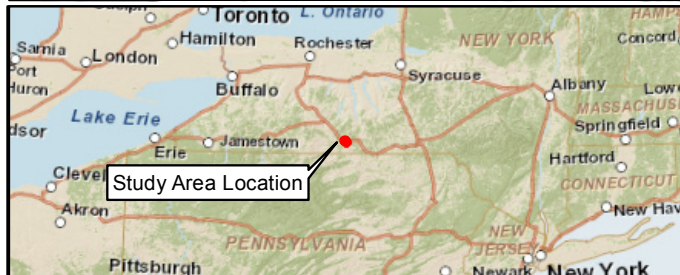
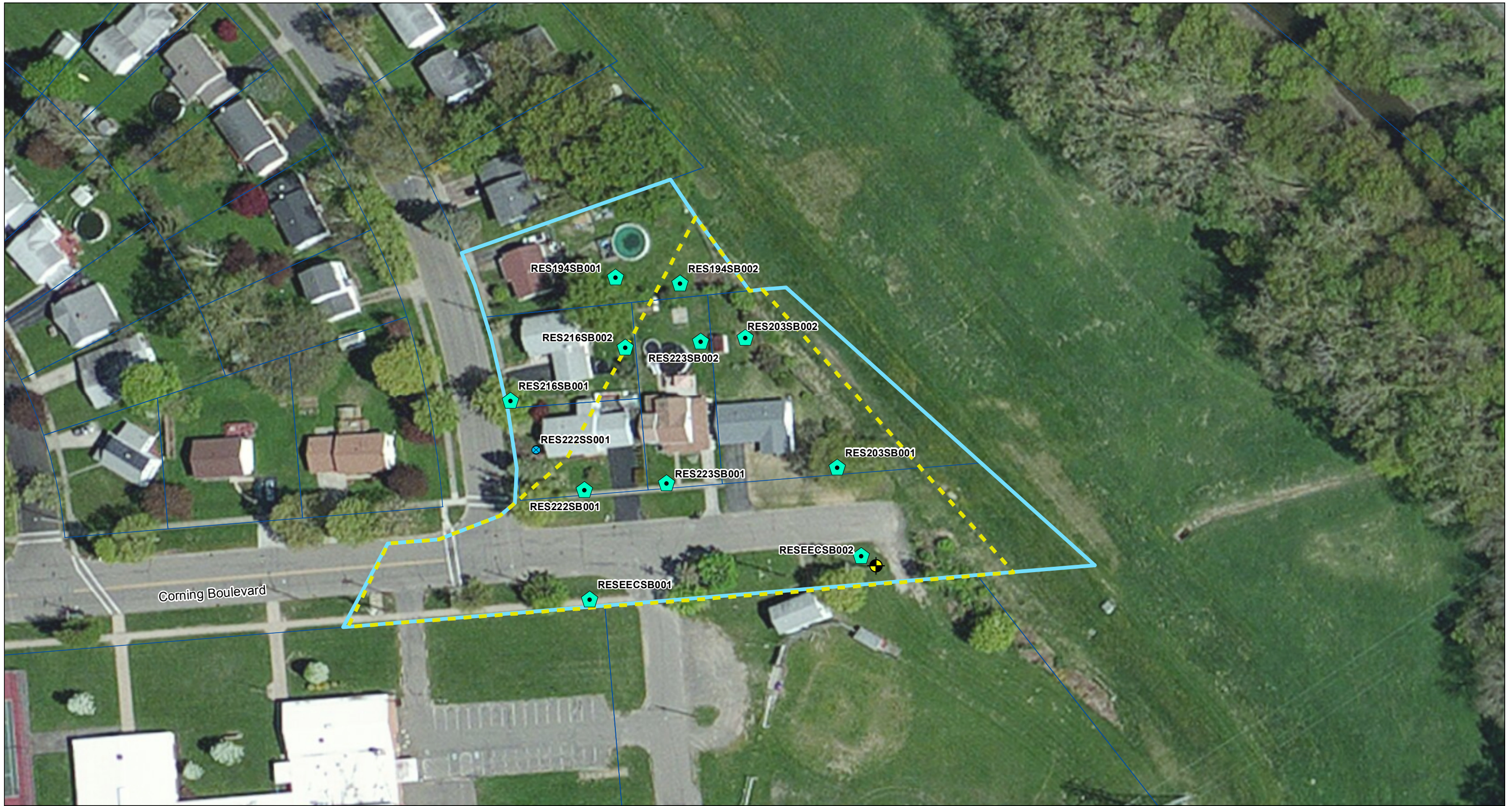


Figure 2
Proposed Well Locations
Memorial Stadium Property

Document Name: Prop_Well_A3.MXD

11/4/2014





Legend

- Residential Area at the Eastern End of Corning Boulevard
- Parcels
- Area of Potential Historic Disturbance
- ⊗ Surface Soil Sampling Locations
- ⬠ Soil Borings and Surface Soil Samples
- ⊗ Proposed Monitoring Well Location

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

Study Area
 Corning NY



Figure 3
 Proposed Well Locations
 Residential Area at the
 Eastern End of Corning Boulevard

Document Name: Prop_Well_A5.MXD

11/4/2014



Joe Martens
Commissioner

October 27, 2014

Michael Ford, P.E.
Corning Incorporated
HP-ME-03-83
Corning, New York 14831

**RE: Study Area Characterization Work Plan Addendum Number 1 -
Additional Field Investigation Activities; and
Groundwater Wells proposal
Study Area, Project No. 851046
Corning (C), Steuben (Co)**

Dear Mr. Ford:

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has reviewed the *Study Area Characterization Work Plan Addendum Number 1 - Additional Field Investigation Activities* and the *Groundwater Wells* proposal, both of which are dated October 24, 2014. These documents are hereby approved with the following stipulations:

- 1.) While we understand there are no plans during this phase of work for additional soil borings in the Study Area beyond those already proposed, additional soil borings may be required to characterize the extent of fill containing ash, brick, and glass as a subsequent phase of work should this fill be identified in perimeter soil borings that have been proposed. To the extent that access is available to install any additional borings for this purpose, should the need become apparent based on field observations, such work should be considered during this phase.
- 2.) Based on the presence of a substantial amount of glass noted from approximately 18 to 24 inches below grade in a shallow soil boring completed by NYSDEC personnel at the rear of the residential property at 45 Houghton Circle, additional characterization in this area is required. Please provide an additional Addendum to the Study Area Characterization Work Plan for this purpose by November 14, 2014. In particular, a minimum of four additional soil borings are required in adjacent areas of the right-of-way between properties on Pyrex Street and Houghton Circle, and in adjacent areas of the right-of-way along the western side of Houghton Circle. Depending on the findings of this work, in concert with the findings of the currently proposed

work in the northwest portion of the residential area, additional characterization activities in rights-of-way and/or apparently affected residential property may be required.

- 3.) One or more groundwater monitoring wells will be needed in the northwest portion of Residential Area to evaluate the impact of the fill identified at soil boring ROWSB001. We understand that this work will be proposed as a subsequent phase of work after further characterization of the nature and extent of the fill material in this area is undertaken during the upcoming work.
- 4.) Corning Incorporated is to coordinate with the Corning-Painted Post School district regarding sampling of the irrigation well on the High School property. The irrigation well should be sampled during the same time frame as the groundwater monitoring wells to be installed on the school property. The construction of the well should be understood and reported. The irrigation well is to be sampled for the expanded list of analytical parameters (i.e., total TAL metals plus mercury, and TCL SVOCs and VOCs).
- 5.) These documents contain references to “preliminary un-validated analytical results” for soil samples collected in various portions of the Study Area. The validation of all applicable data is now complete and the associated Data Usability Summary Reports have been received and accepted by NYSDEC.

If you should have any questions regarding this letter, please contact me at (585) 226-5356 or greg.macleam@dec.ny.gov.

Sincerely,



Gregory B. MacLean, P.E.
Project Manager
Division of Environmental Remediation

ec: R. Schick, NYSDEC
M. Ryan, NYSDEC
B. Conlon, NYSDEC
M. Cruden, NYSDEC
B. Putzig, NYSDEC
M. Doroski, NYSDOH
J. Deming, NYSDOH
Karen Douglas, Corning Incorporated
Jean McCreary, Nixon Peabody
John Sontag, Weston Solutions



October 28, 2014

Gregory B. MacLean, P.E.
Project Manager, Division of Environmental Remediation
New York State Department of Environmental Conservation
Region 8
6274 East Avon-Lima Road
Avon, New York 14414-9519

Re: Study Area Characterization Work Plan Addendum #1 - Additional Field Investigation
Activities And Groundwater Wells
Study Area, Project No. 851046
Corning (C), Steuben (Co)

Dear Mr. MacLean:

As you are aware, Corning Incorporated ("Corning") has been diligently implementing the Department of Environmental Conservation ("DEC" or "Department")-approved Study Area Characterization Work Plan that was attached as Exhibit B to the Order on Consent and Administrative Settlement that was executed by Corning on June 23, 2014, and by DEC on June 27, 2014. A substantial amount of work has been completed and Corning is pleased to present the results of this work to the community at a public meeting on October 30, 2014. Further, Weston Solutions, Inc. will shortly embark on Phase II of this work, generally consisting of groundwater evaluation and of a second opportunity for homeowners within the Study Area who have not previously submitted access agreements to do so in order to have their residential properties to be sampled.

Based on the initial results and after discussion with DEC, Corning submitted on October 24 to DEC an Addendum 1 to the Study Area Characterization Work Plan ("Addendum 1") proposing certain additional characterization activities within the Study Area, and a Groundwater Wells proposal as provided for under the original Department-approved Study Area Characterization Work Plan. DEC and Corning discussed Addendum 1 and the scope of groundwater assessment on October 20; DEC sent a letter providing comments on October 21; and Corning submitted a revised Addendum 1 and the Groundwater Wells plan on October 24. Corning received late yesterday (October 27, 2014) afternoon DEC's letter about the Addendum and Groundwater Plan. Corning has responded, via separate letter today, to DEC's comments on the Short Term Response Action Plan.

In its letter of October 27, 2014, DEC conditionally approved the implementation of the Addendum 1 and Groundwater Plan work subject to five stipulations. Corning responds as follows:

The second stipulation is problematic because it is based on information that Corning has not had the opportunity to review, i.e., the results of sampling reportedly conducted by the Department. On several occasions Corning has requested to both you and the Department's counsel, Ben Conlon, a copy of the analytical results for all sampling conducted by the Department. To date

these analytical results have not been provided to us. This information is needed prior to proposing additional characterization in this area, if needed. Corning hereby renews its request for a written copy of all analytical results collected within the Study Area by or on behalf of the Department, including boring logs, sampling results, sample collection methods and photographs. Corning requests an extension of the November 14, 2014 proposed timeline for at least three weeks from the date of its receipt of the requested information in order to enable the data to be reviewed and an appropriate work plan to be developed.

The remaining stipulations are acceptable to Corning to the extent that they relate to work within the boundaries of the Study Area as defined in the above-referenced Order on Consent, and subject to Corning receiving permission for access to conduct such work. The Order on Consent signed by Corning and the Department is limited to characterization activities within the Study Area, and until that characterization is completed, the Department's review and any Department-suggested modification to the proposals for additional characterization and groundwater assessment must remain within the limits of the Study Area. Further, the Department's comments must be limited to those necessary "in order to achieve the objectives of the Work Plan as set forth in the Order" pursuant to Appendix A.III.B.2.i of the Order, which defines its scope in Sec. II.1.

Corning strongly urges the Department, subject to the clarifications outlined above, to immediately approve Corning's proposed Addendum 1 and Groundwater Wells plan for the Study Area dated October 24, 2014, so that this work may be jointly presented to the property owners at the public meeting on October 30. We believe being able to conduct this work in the next few weeks is very much in the Department's interest, the interest of the property owners, and the interest of the community at large.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael Ford".

Michael Ford, P.E.
Sr. Env. Project Engineer

cc – John Sontag - Weston Solutions.



Joe Martens
Commissioner

October 29, 2014

Michael Ford, P.E.
Corning Incorporated
HP-ME-03-83
Corning, New York 14831

**RE: Study Area Characterization Work Plan Addendum Number 1 -
Additional Field Investigation Activities; and
Groundwater Wells proposal
Study Area, Project No. 851046
Corning (C), Steuben (Co)**

Dear Mr. Ford:

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has reviewed the *Study Area Characterization Work Plan Addendum Number 1 - Additional Field Investigation Activities* and the *Groundwater Wells* proposal, both of which are dated October 24, 2014. As noted in the NYSDEC letter dated October 27, 2014, these documents are approved. In response to your letter dated October 28, 2014, Stipulation No. 2 provided in the NYSDEC's October 27, 2014 letter is revised as follows:

- Based on the presence of a substantial amount of glass noted from approximately 18 to 24 inches below grade in a shallow soil boring completed by NYSDEC personnel at the rear of the residential property at 45 Houghton Circle, additional characterization in this area is required. Please provide an additional Addendum to the Study Area Characterization Work Plan for this purpose within three weeks following receipt of the preliminary un-validated data for two soil samples collected by NYSDEC at and adjacent to the 45 Houghton Circle property. Data for additional samples collected by NYSDEC in other portions of the Study Area will follow separately. In particular, a minimum of four additional soil borings are required in adjacent areas of the right-of-way between properties on Pyrex Street and Houghton Circle, and in adjacent areas of the right-of-way along the western side of Houghton Circle. Depending on the findings of this work, in concert with the findings of the currently proposed work in the northwest portion of the residential area, additional characterization activities in rights-of-way and/or apparently affected residential property may be required.

October 29, 2014
Michael Ford, P.E.
Page 2

If you should have any questions regarding this letter, please contact me at (585) 226-5356 or greg.macleam@dec.ny.gov.

Sincerely,

A handwritten signature in blue ink that reads "Gregory B. MacLean". The signature is written in a cursive, flowing style.

Gregory B. MacLean, P.E.
Project Manager
Division of Environmental Remediation

cc: R. Schick, NYSDEC
M. Ryan, NYSDEC
B. Conlon, NYSDEC
M. Cruden, NYSDEC
B. Putzig, NYSDEC
M. Doroski, NYSDOH
J. Deming, NYSDOH
Karen Douglas, Corning Incorporated
Jean McCreary, Nixon Peabody
John Sontag, Weston Solutions



October 29, 2014

Gregory B. MacLean, P.E.
Project Manager, Division of Environmental Remediation
New York State Department of Environmental Conservation
Region 8
6274 East Avon-Lima Road
Avon, New York 14414-9519

Re: Study Area Characterization Work Plan Addendum Number 1 – Additional Field Activities
and Groundwater Wells Proposal
Study Area, Project No. 851046
Corning (C), Steuben (Co)

Dear Mr. MacLean:

Thank you for considering Corning Incorporated's comment letter of October 28, 2014. This confirms that Corning Incorporated accepts the revised stipulations set forth in your letter dated October 29, 2014 as additions to the final approved Work Plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Ford".

Michael Ford, P.E.
Sr. Env. Project Engineer

Cc – John Sontag – Weston Solutions