

**Information Concerning Shallow Unconsolidated Deposits Groundwater
Extraction Well Proposed for Huston Park**

With the 2019 discovery of a shallow, low concentration, groundwater plume extending to the northeast from the Hydrite Chemical Co. (Hydrite) Cottage Grove facility, Hydrite completed vapor intrusion investigations and confirmed that residential homes in that vicinity were not experiencing exposure to vapors from the groundwater contaminants. Out of an abundance of caution and to eliminate any future risks, Hydrite is taking the preventive measure to install a groundwater extraction system to intercept and divert the groundwater flow away from those homes. It will be assumed that the groundwater intercepted by this system may contain contaminants from the facility and the system will include equipment to treat the pumped groundwater prior to discharge. To design this system, Hydrite proposes the following workplan:

Hydrite Chemical Co. proposes to install one groundwater extraction well (EW-165) completed in the unconsolidated deposits in the northeast corner of Huston Park at the location shown on the attached figure (Figure 1). The extraction well will be drilled using a truck-mounted drill rig and support vehicle. Mud mats will be laid down in front of the path of the drill rig as the drill rig mobilizes to and de-mobilizes from the proposed well location to minimize disturbance of the grass in Huston Park. It is anticipated the extraction well will be completed at an approximate depth of 40 feet below ground surface to accommodate the installation of an electric submersible pump in the well and the anticipated drawdown of the water table in the well induced by pumping. The extraction well will be constructed of 6-inch nominal diameter schedule 40 PVC casing and 0.010-inch slot well screen. The screen length will be approximately 35 feet. A schematic diagram of the extraction well is attached. The extraction well will be developed by the drilling subcontractor (Cascade Drilling Technical Services) after installation. The groundwater produced during development will be contained in frac tanks and tested for contaminants. If contaminants are detected, the water would be transported and discharged to the Village of Cottage Grove sanitary sewer at the 110 South Main Street lift station into the same manhole to which the groundwater pumped from the three existing Hydrite Chemical hydraulic barrier system extraction wells is discharged. The discharge to the sanitary sewer would be contingent on receiving approval from the Village of Cottage Grove and Madison Metropolitan Sewerage District (MMSD). It is anticipated the installation and development of the extraction well will take two to three days to complete, weather permitting.

Pumping tests will be performed on the extraction well to determine the radius of influence of the extraction well under various pumping rates, the maximum sustainable pumping rate of the well and the number, if any, of additional extraction wells that should be installed to adequately intercept the shallow groundwater flow beneath Huston Park. Groundwater levels in the extraction well and the temporary monitor wells located in and north of Huston Park will be monitored during the pumping tests to document the radius of influence of the extraction well and estimate the hydraulic properties of the unconsolidated deposits. It is anticipated the groundwater produced during the pumping tests will be discharged to the sanitary sewer contingent on receiving approval from the Village of Cottage Grove and MMSD. The pumping tests should take two to three days to complete.

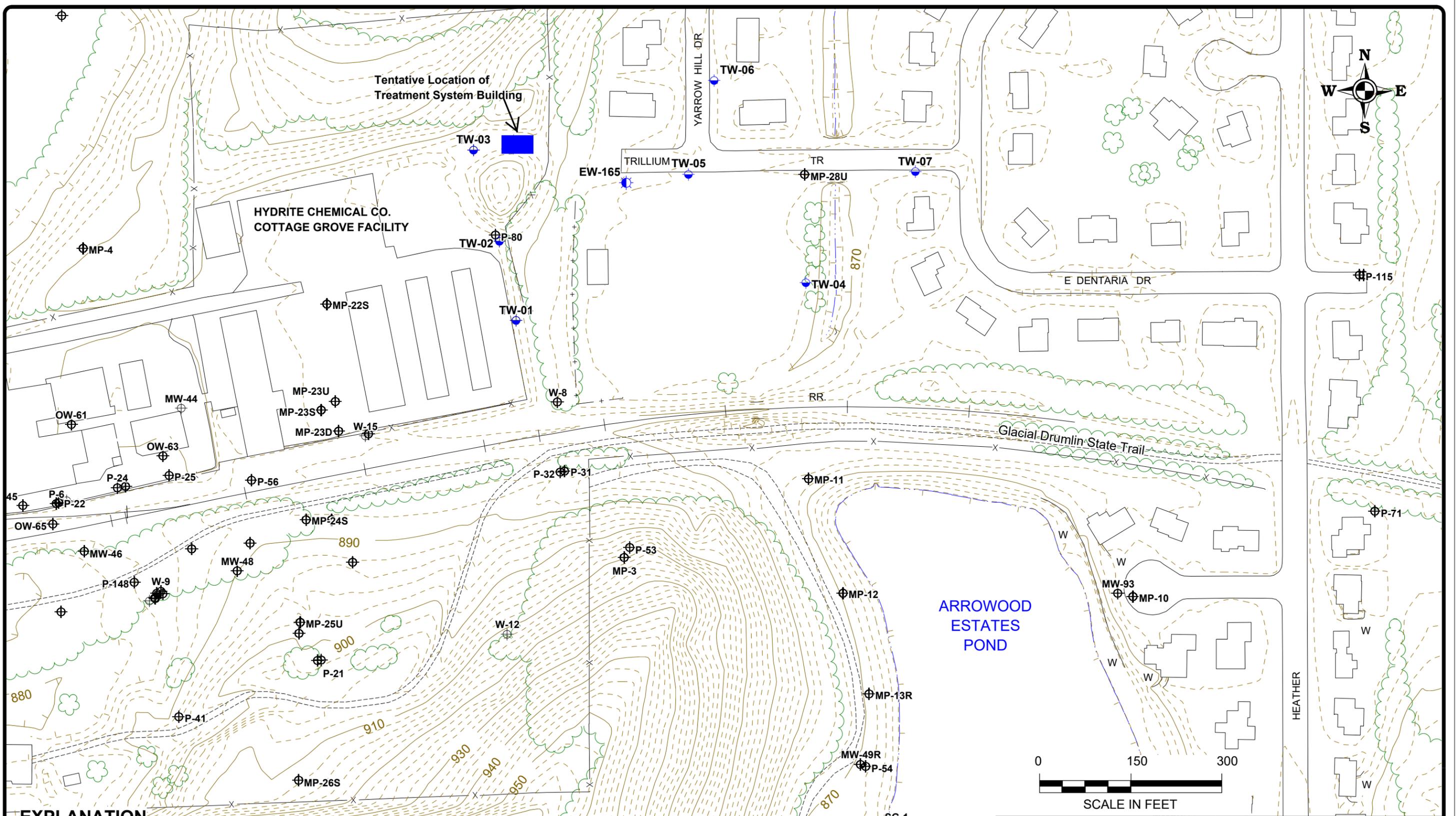
A second information package will be submitted to the Village of Cottage Grove after the pumping tests are completed. If the data obtained from the pumping tests indicates one or more additional extraction wells are required to capture the shallow groundwater flow beneath Huston Park, the second information package will include a request to approve the installation of the additional extraction well(s). The second information package will also include a figure showing the proposed location(s) of the additional extraction well(s) and the preliminary routing of the extraction well(s) discharge lines and the routing of the treated groundwater effluent line along Trillium Trail for discharge to the storm sewer that discharges to Arrowwood Estates Pond located south of Huston Park (Figure 1). The tentative location of the treatment equipment building near the northeast corner of the Hydrite Cottage Grove facility is shown on Figure 1.

The groundwater pumped from the extraction wells will be conveyed via underground piping to the treatment system building located on the Hydrite Chemical Cottage Grove facility property. The connection of the in-well piping from the submersible pump to the underground piping will be made a minimum of 4 feet below ground surface at the well using a pitless adapter. The treated groundwater will be discharged to the storm sewer that discharges to Arrowwood Estates Pond under a general Wisconsin Pollutant Discharge Elimination System (WPDES) permit.

The pump controls and meters and the groundwater treatment equipment will be housed in the treatment equipment building. The wiring to power the electrical submersible pumps in the two extraction wells will be laid in the same underground boring in which the extraction wells discharge piping is installed.

Design plans for the extraction wells pumps and in-well piping, treatment system, underground extraction wells discharge lines and underground treated groundwater discharge line will be prepared and submitted to the Village of Cottage for review and approval before these items are installed. The design plans will be finalized based on the comments received from the Village of Cottage Grove.

Hydrite Chemical would like to install, develop and test the first extraction well in April and May of this year. The additional extraction well(s), if required, will be installed and developed as soon as possible after receiving approval from the Village of Cottage Grove. Completion of the preliminary design plans for the treatment system and horizontal borings is targeted for late August or September with construction to follow as soon as possible after approval or conditional approval of the design plans by the Village of Cottage Grove. It is anticipated construction activities will be completed by the end of November or mid-December and that the extraction wells and treatment system will be brought on-line before the end of the year or in January 2021.



EXPLANATION	
	MW-93 Monitor well location and designation.
	Intermediate topographic contour
	Index topographic contour (feet above msl)
	TW-04 Temporary monitor well location and designation. Contour Interval: 2 feet
	EW-165 Proposed unconsolidated deposits extraction well location and designation.

Datum: Mean Sea Level (msl)

TITLE: PROPOSED UNCONSOLIDATED DEPOSITS EXTRACTION WELLS LOCATIONS

LOCATION: HYDRITE CHEMICAL CO., COTTAGE GROVE, WISCONSIN

CHECKED	M.A.M.	FIGURE: 1
DRAFTED	M.A.M.	
PROJECT	117-3005042	
DATE	3/12/2020	

TETRA TECH

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Unconsolidated Deposits Extraction Well Schematic

10-inch diameter Protective Casing with Lock completed approximately 2 feet above ground level.

