



Storm Sewer Remediation Case History Minnesota

Accelerated Remediation Technologies, Inc. (ART) in-situ treatment technology was implemented to prevent migration of contaminated water into a protected wetland area. This difficult and unique scenario entailed impacted ground water seeping into a storm water system. Groundwater is contaminated with chlorinated solvents. The main objective of the ART system was to treat water in a city manhole prior to drainage into the wetland.

Site Description: The storm sewer infrastructures are also utilized as a French Drain system to collect, drain and subsequently lower the ground water table under an interstate highway. The ground water is impacted from an up-gradient solvent release. The cleanup target of the project included reducing VOC concentrations in incoming water prior to release in to the wetland area by more than 95%. Other measures were attempted in the past but could not achieve objectives.

Challenges: The project included treatment of the incoming storm sewer base flow as the water passed through piping and manhole structures. One challenge was to produce enough residence time for treatment while not impeding the storm sewer capacity. Thinking “outside the box”, ART developed a sparge diffuser pipeline that was extended into the inflowing sewer line up gradient of the manhole structure to maximize contact and residence times. The extended sparge diffuser allowed the incoming water to be treated via sparging prior to aggressive treatment via several rounds of sparging and air stripping in the last manhole prior to the discharge point.

Summary: *By utilizing the many processes and technologies included in the ART Integrated Remedial system, ART was able to attain the project main objective of reducing VOC concentrations by up to 98% of initial levels. The client and state regulating agencies were pleased to have located a solution to this common problem in a unique setting.*

For additional information, please contact:

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