

DRAFT SITE REGISTRY REPORT

PROPOSED WATER QUALITY ASSURANCE REVOLVING FUND (WQARF) SITE Highway 260 and Main Street Cottonwood, Yavapai County, Arizona August 2016

Site Location

The proposed Highway 260 and Main Street Water Quality Assurance Revolving Fund (WQARF) Registry Site (the Site) consists of contaminated groundwater located in the vicinity of the intersection Highway 260 and Main Street in Cottonwood, Arizona. The Site is generally bounded to the north by Mingus Avenue, to the south Mongini Lane, to the east by the Verde River, and to the west by South 15th Street, South Main Street and Highway 260.

Background

In August 2005, the owners of the Swanson RV Park filed a complaint with the Arizona Department of Environmental Quality (ADEQ) Hazardous Waste Inspections & Compliance Unit due to tetrachloroethene (PCE) contamination in a drinking water well (ADWR #55-612344). Water in this well was contaminated with PCE at a concentration of 8.5 micrograms per liter ($\mu\text{g/L}$).

In 2006, MACTEC Engineering and Consulting, Inc. conducted an investigation to identify potential sources of PCE to the well at Swanson RV Park. Groundwater and soil-gas sampling identified two likely potential source areas; Cottonwood Cleaning & Bridal Boutique, located at the corner of Main Street and Aspen Street, and Cottonwood Quality Dry Cleaning, located at the corner of Main Street and Camino Real. A limited field investigation showed that groundwater in the area of Cottonwood Cleaning & Bridal Boutique and in the area of Cottonwood Quality Dry Cleaning was impacted with PCE at concentrations of up to 340 $\mu\text{g/L}$ and 170 $\mu\text{g/L}$, respectively. Soil gas concentrations near these facilities were measured as high as 1,200 micrograms per cubic meter ($\mu\text{g/m}^3$) and 450 $\mu\text{g/m}^3$, respectively.

An October 2015 sampling event identified PCE, TCE, and cis-1,2-DCE in several wells across the area. Two samples had a PCE concentration above the Aquifer Water Quality Standard. The highest PCE concentration was 20 $\mu\text{g/L}$, detected in the sample collected from the 830-Oasis domestic well. PCE was also present in a mobile home park well supplying water to 14 residences. The PCE concentration in this well (sample ID 612344) was 8.6 $\mu\text{g/L}$. PCE concentrations in these two wells were 20 $\mu\text{g/L}$ and 8.3 $\mu\text{g/L}$, respectively, during a previous sampling event conducted in 2007. No other VOCs were detected at concentrations above the applicable AWQS in October 2015.

Based upon the initial investigations, it appears that the primary sources of contamination are likely the Cottonwood Cleaners and Bridal Boutique (CCBB) and Cottonwood Quality Dry Cleaning (CCDC), where elevated concentrations of PCE were detected in groundwater and soil gas. It is unclear from the sampling conducted to date whether PCE concentrations detected above the AWQS in private wells likely originate from one or both of these potential sources.

Limited data are available regarding Site hydrogeology. Fractured, faulted limestone is known to exist in the area at approximately 50-60 feet below ground surface (bgs). Water table elevations measured in previous studies have ranged from approximately 30 feet bgs to greater than 100 feet bgs. Thus, multiple aquifers may exist in the area. The depth to water measured at a single well,

ADWR #55-633177, in 2015 was 30 feet bgs. Based on previous investigations, groundwater flow in the area is estimated to be to the southwest, following the general topography of the Site.

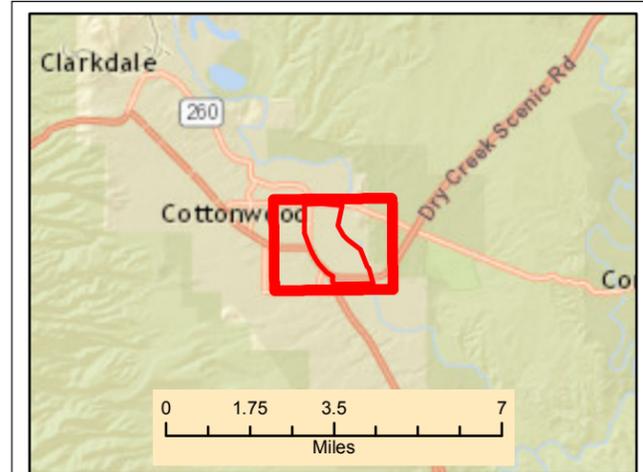
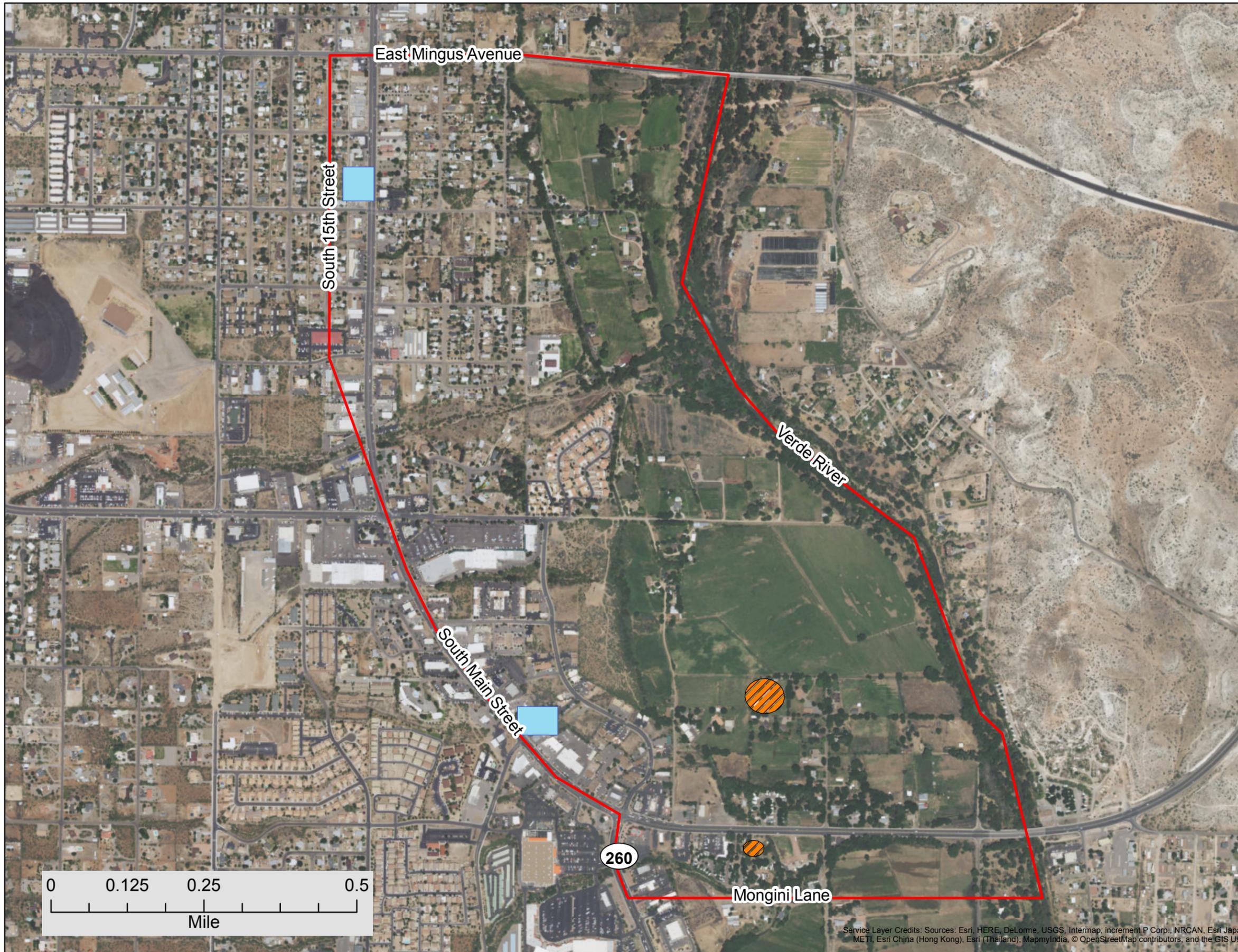
The limited available data and complex hydrogeology make plume definition impractical at this time. It is likely that the differences in well construction (e.g. well depth, screen interval, etc.) have a significant effect on the potential for exposure to contamination. However, construction details for most wells at the Site are not known due to the considerable age of these wells.

The E&E score for the Site is 40 out of a possible 120. ADEQ proposes that the Site be added to the WQARF Registry established pursuant to Arizona Revised Statutes (ARS) § 287.01(D). This Draft Site Registry Report (SRR) was prepared to meet the requirements of ARS § 287.01(B).

Rationale for Registry Listing

- PCE has impacted groundwater at the Site above the Aquifer Water Quality Standard. The full extent of PCE in groundwater located down gradient of the Site is unknown at this time.
- Two private drinking water wells are currently impacted with PCE above the Aquifer Water Quality Standard. Approximately 150 wells are registered within one-half mile of the two source areas. Only a fraction of these wells have been sampled to date.
- Soil gas concentrations detected in a previous investigation at the Site exceed screening criteria and may be a threat to receptors in the area.

Highway 260 and Main Street



Legend

-  Area of Investigation
-  Potential Source Area
-  Confirmed Groundwater Contamination

Data Update: September 2016



Boundaries depicted on the site map represent ADEQ's interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated geographic extent of potential contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the area of investigation for this site may change in the future as new information becomes available.

Date Map Saved: 2016-09-26



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