

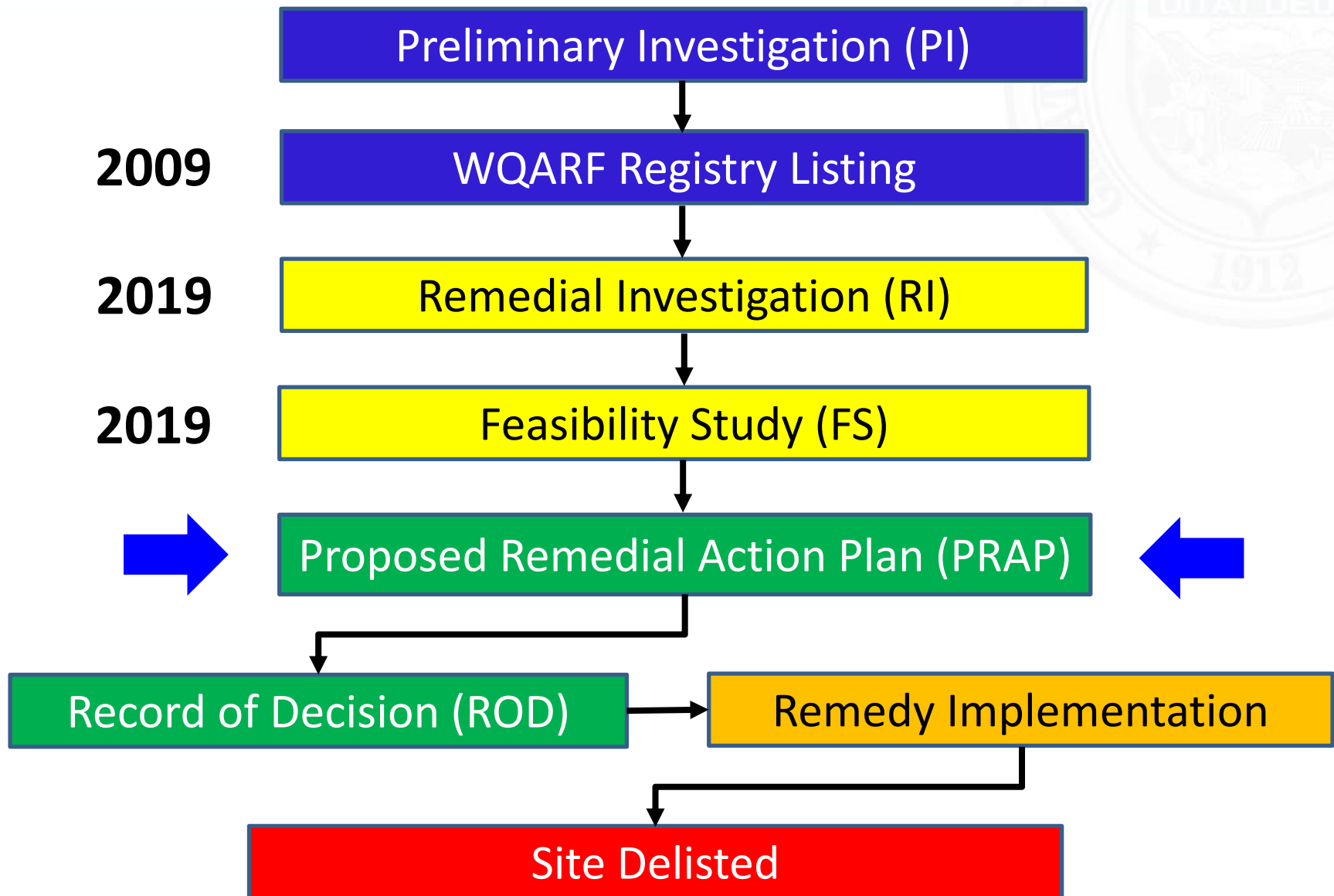


East Central Phoenix – 32nd Street and Indian School Road Proposed Remedial Action Plan (PRAP)

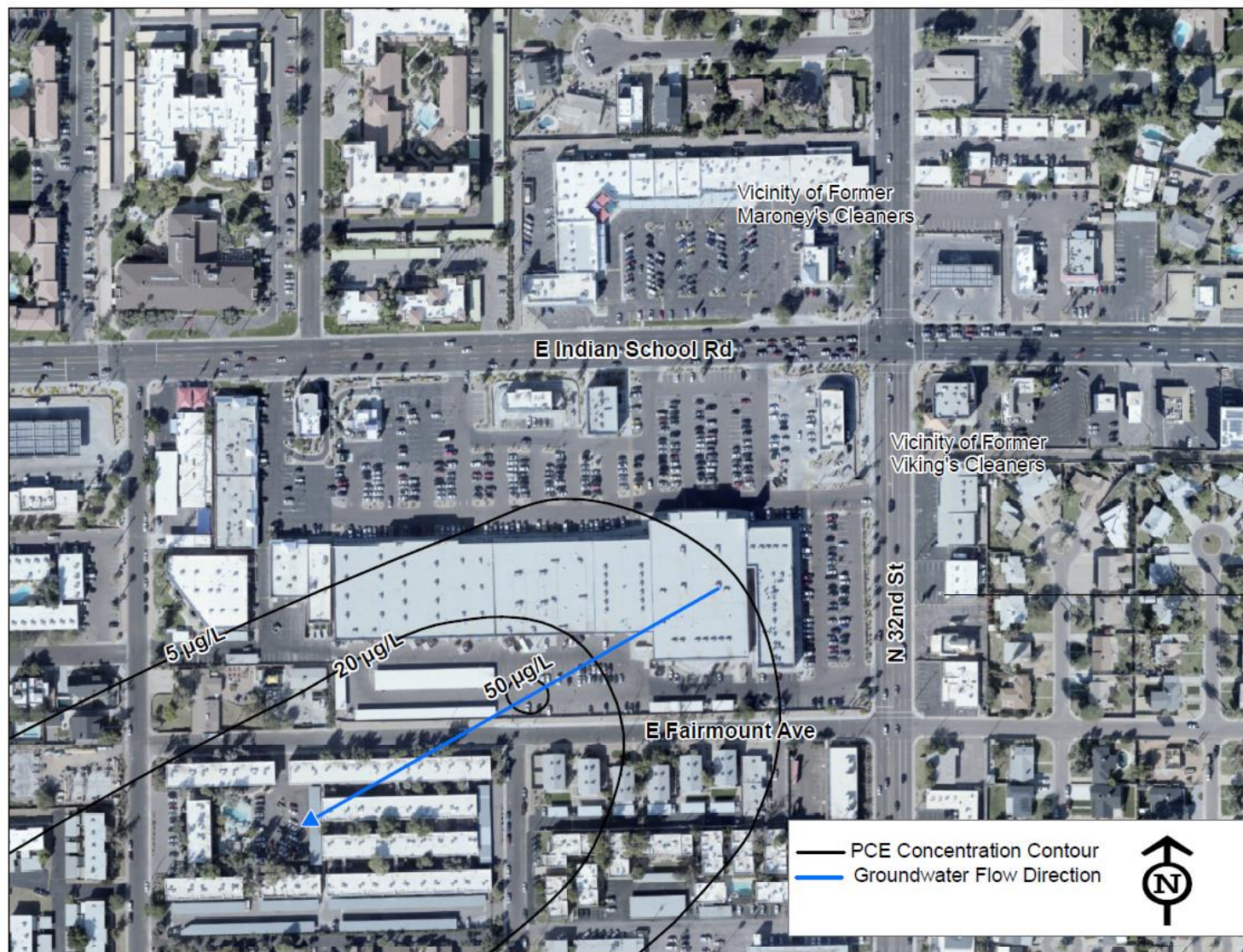
November 19, 2020

- WQARF Process
- Background
- Remedial Objectives
- Proposed Remedial Technologies
- Proposed Contingencies
- Summary



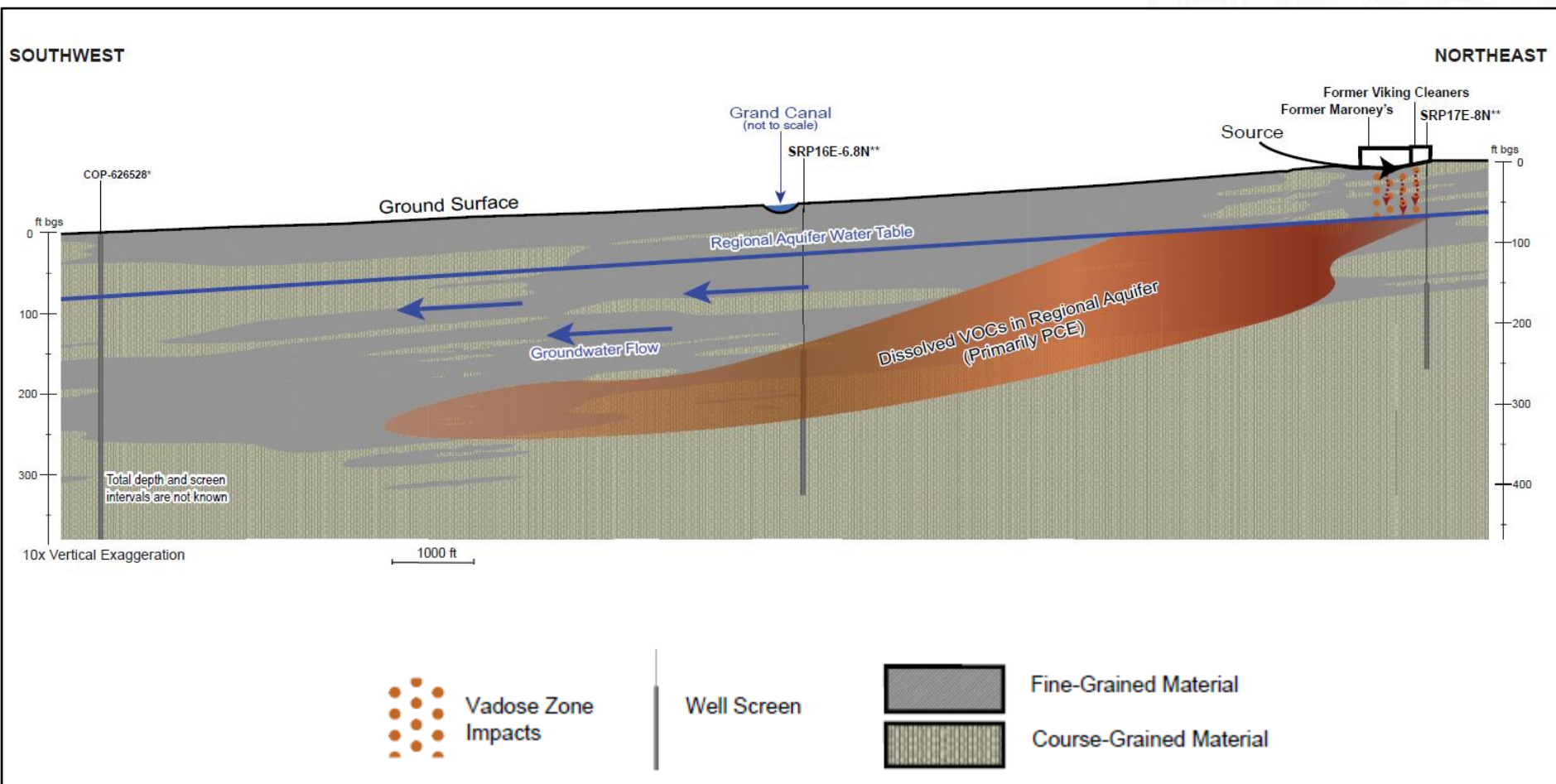


Source Area Map

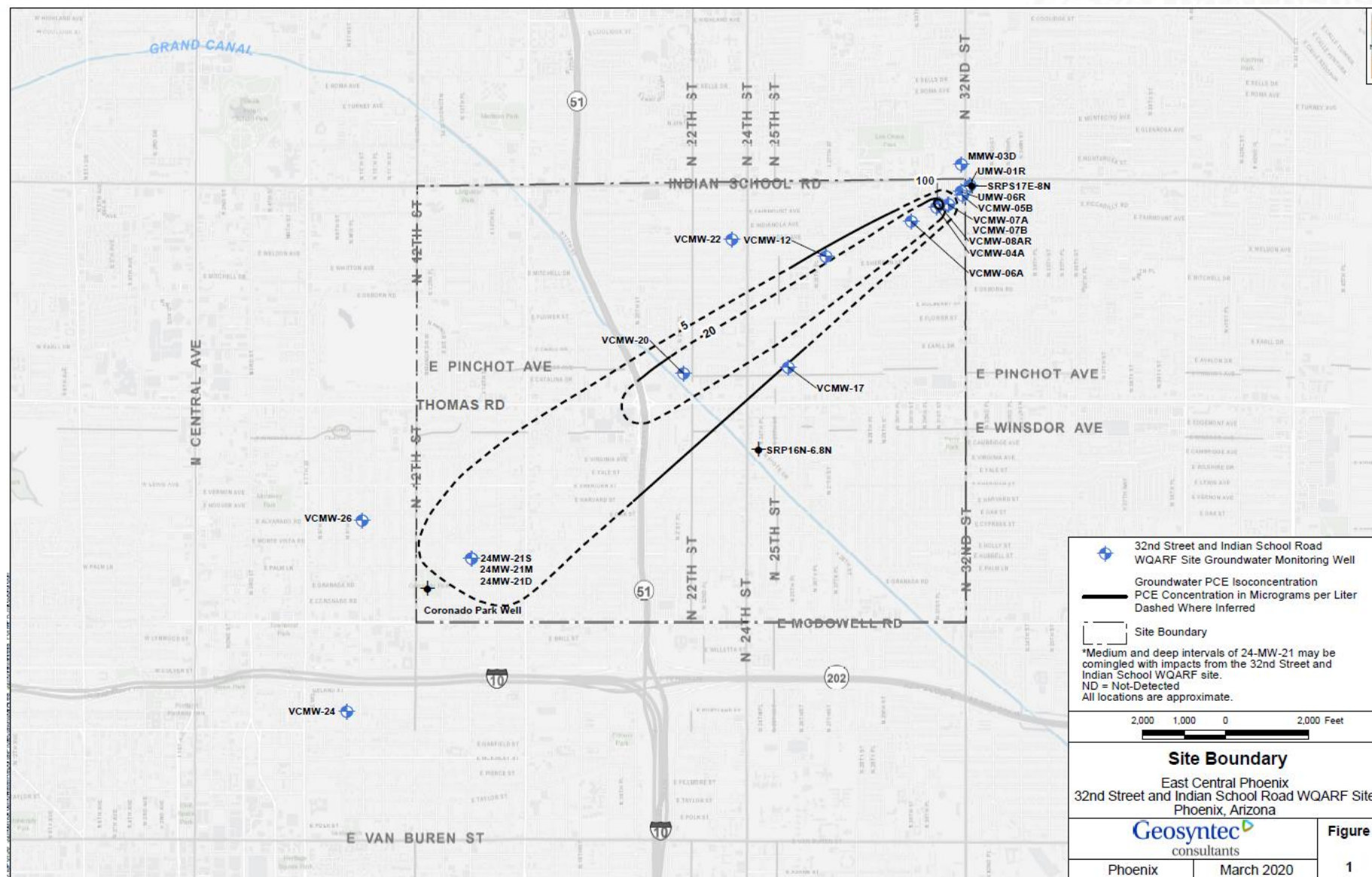


Conceptual Site Model

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Site Boundary Map



The purpose of the PRAP is to inform the public on the remedy selected from the alternatives evaluation performed during the feasibility study which addresses site-specific Remedial Objectives (ROs).

The Land Use remedial objective for the 32nd Street and Indian School Road WQARF Site is:

Protect against the loss or impairment of land threatened by contaminants of concern at the 32nd Street and Indian School Road WQARF site and restore land that has been impaired by contaminants of concern at the 32nd Street and Indian School Road WQARF site to below applicable remediation levels. Action is needed for the present time and for as long as necessary to ensure that the level of contamination in the soil associated with the Site no longer exceeds applicable remediation levels.

The Groundwater Use remedial objective for the 32nd Street and Indian School Road WQARF Site is:

Protect against the loss or impairment of irrigation/potable water threatened by contaminants of concern at the 32nd Street and Indian School Road WQARF site. Where protection cannot be achieved in a reasonable, necessary or cost-effective manner; restore, replace, or otherwise provide for potable water that is lost or impaired by contaminants of concern at the 32nd Street and Indian School Road WQARF site. Action is needed for as long as necessary to ensure that, while the water exists and the resource remains available, the contamination associated with Site does not prohibit or limit the designated use of groundwater.

Proposed Remedial Technologies

Remedial Component	Duration	Future Cost ¹
Vadose Zone (Soil):		
Soil Vapor Extraction at the Former Maroney's Facility	1 Year	\$269K ²
Groundwater:		
Enhanced Reductive Dechlorination (ERD) treatment in the Fairmount Avenue Study Area	4 Years	\$608K
Monitored Natural Attenuation (MNA)	10 Years ³	~\$2M ²
<i>SUBTOTAL</i>	<i>10 Years</i>	<i>~\$2.9M</i>

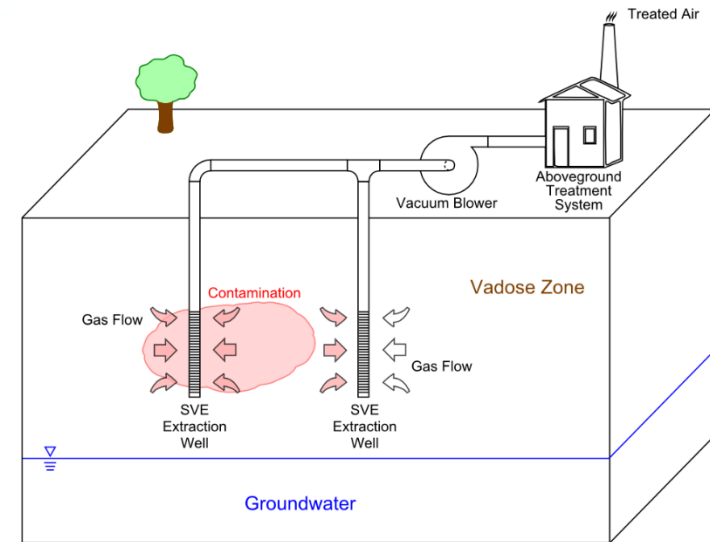
1 - Cost assumes 3% annual inflation rate.

2 - Decommissioning cost is included.

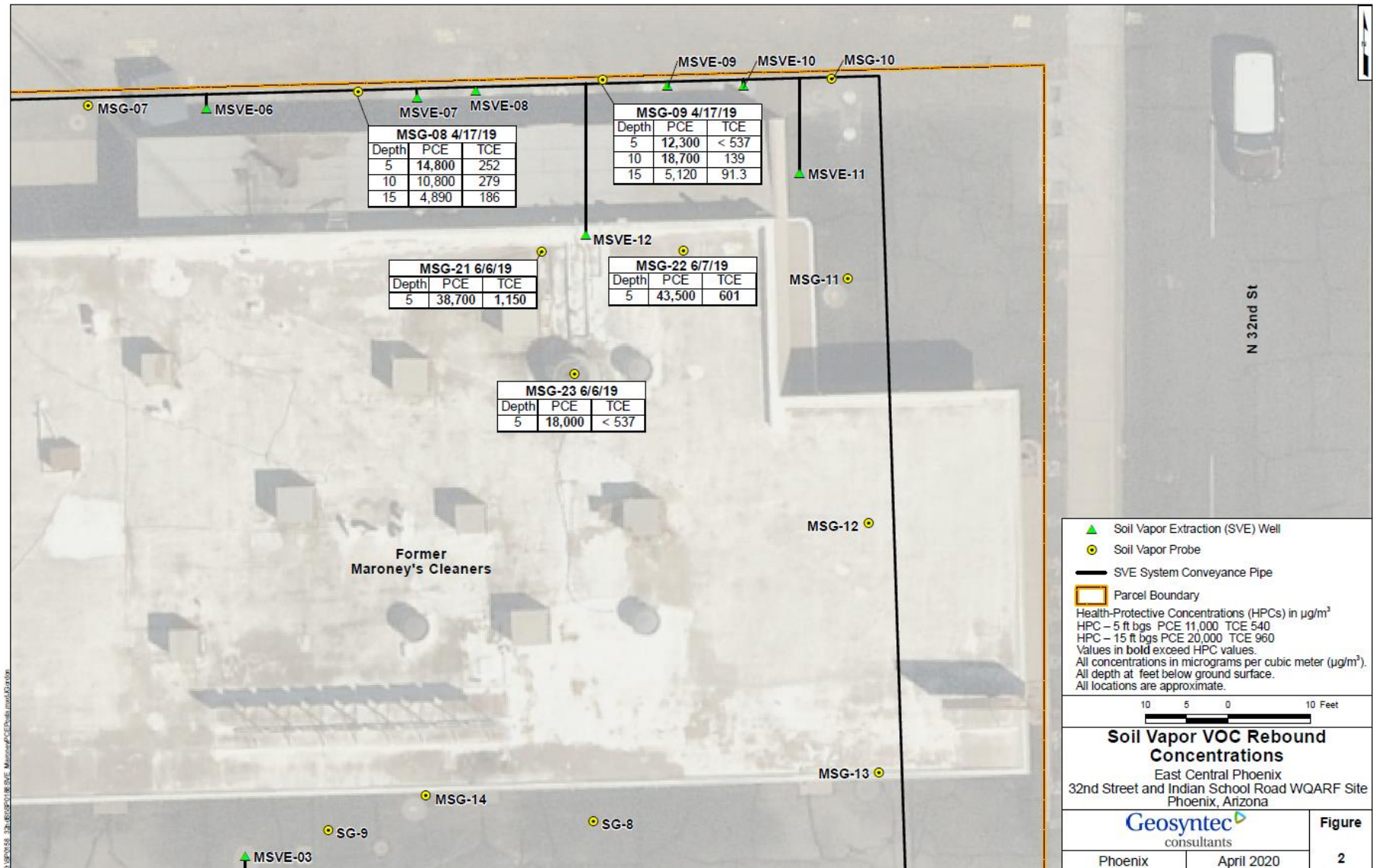
3 - Soil vapor extraction and MNA conducted concurrent to ERD treatment.

SVE Vadose Zone Treatment

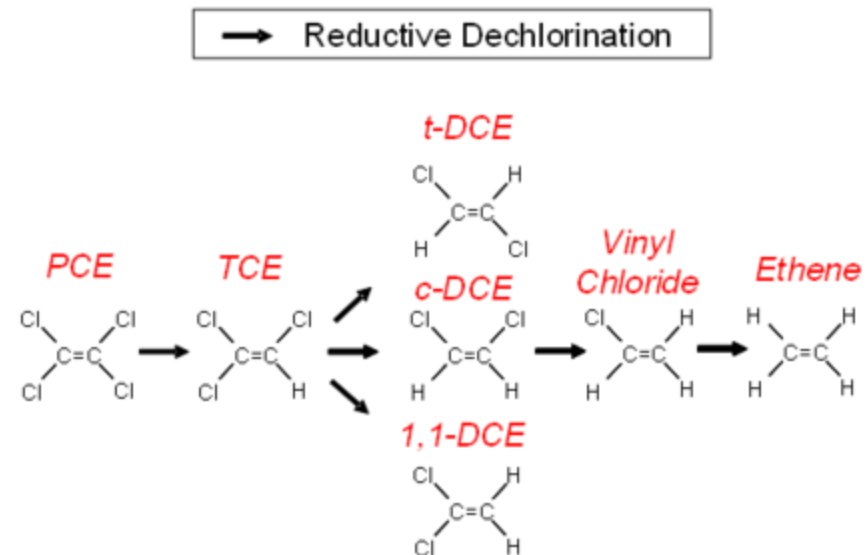
- Operated as Early Response Action (ERA)
- Utilize existing infrastructure
- Granular Activated Carbon (GAC) treatment
- Targeted focus
- Intermittent operation



SVE Vadose Zone Treatment

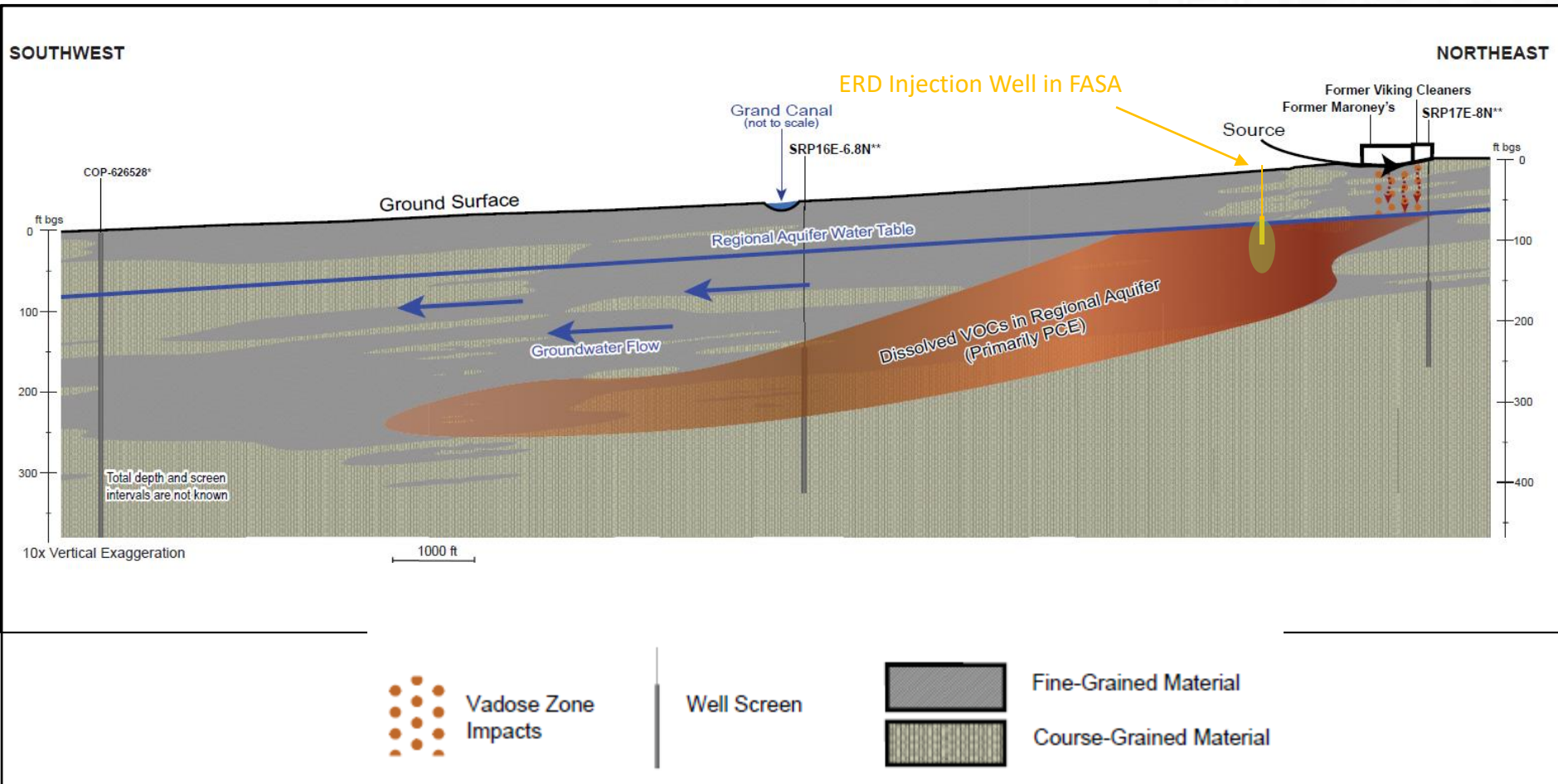


- In-situ treatment
- Step1:
Biostimulation (provide the right environment)
- Step 2:
Bioaugmentation (provide microbial culture [bugs])
- Focus limited to Fairmount Avenue Study Area (FASA)
- Pilot Study Implemented in February 2020

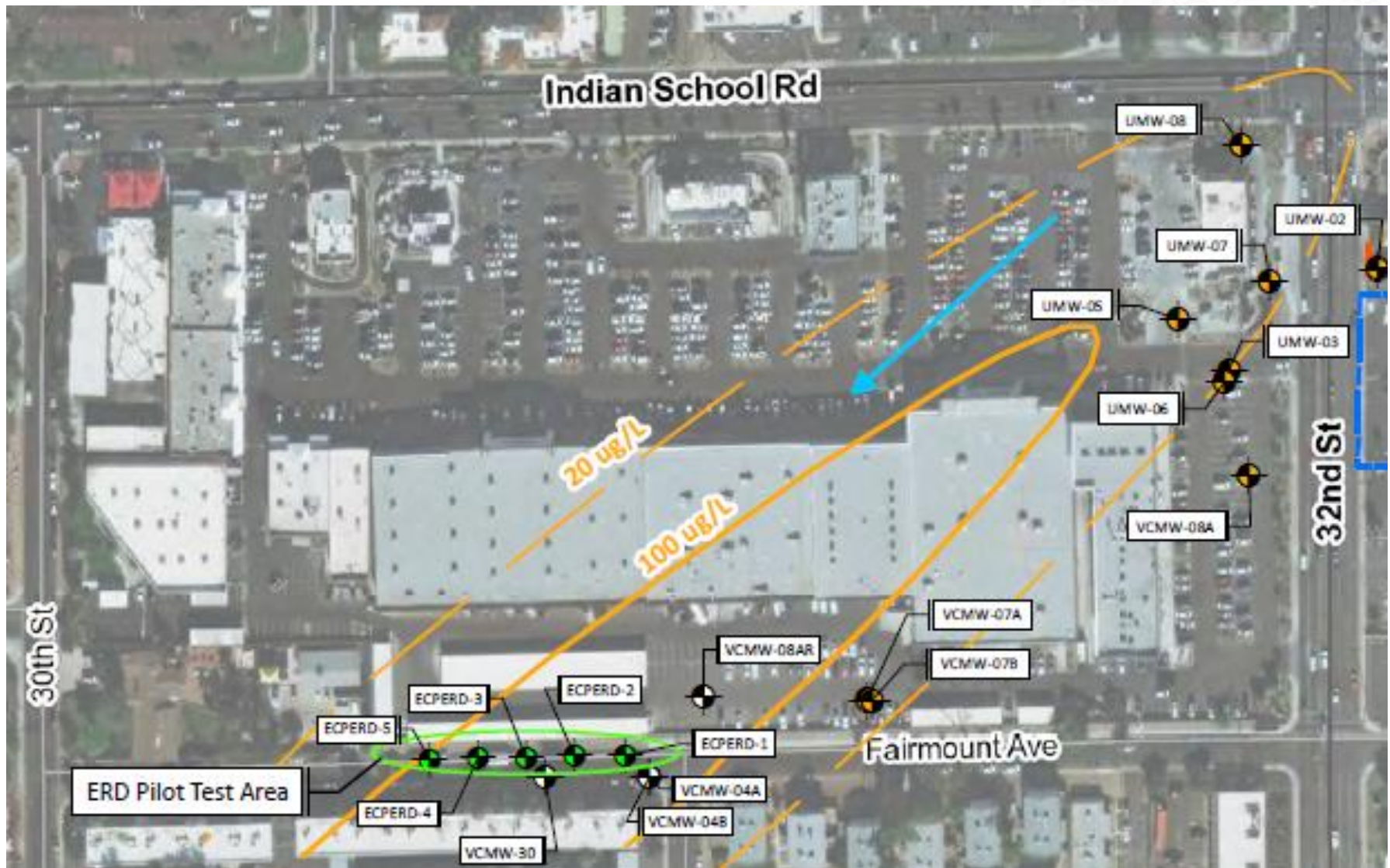


ERD Conceptual Design

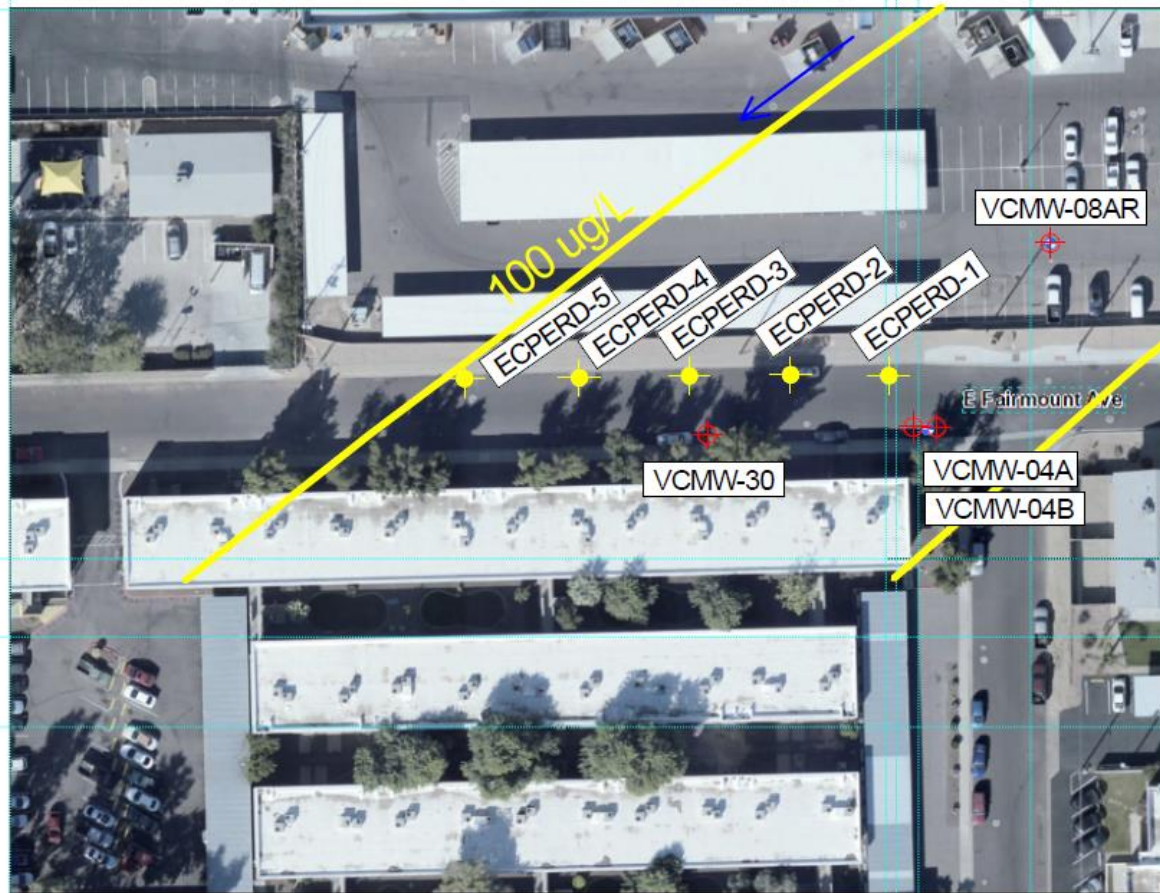
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ERD Pilot Study on Fairmount Avenue



ERD Pilot Study on Fairmount Avenue



ERD-3

Date	PCE	Cis-1,2-DCE
4/23/2020	5.54	<1.00
6/15/2020	4.24	1.52
09/09/2020	1.66	4.52

VCMW-30

Date	PCE	Cis-1,2-DCE
4/23/2020	34.2	<1.00
6/15/2020	34.5	<1.00
07/31/2020	34.5	<1.00
07/31/2020	34.3	<1.00
09/09/2020	18.9	1.78
09/09/2020	19.5	2.06



Legend

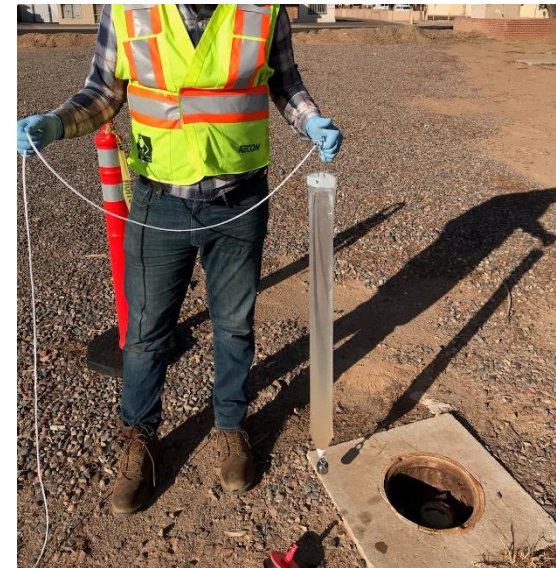
- Existing Monitoring Well
- New ERD well
- Groundwater Flow Direction

0 50 100
SCALE IN FEET

Well Locations East Central
Phoenix WQARF Site

All well locations are approximate. PCE contour is from Site RI & contour locations are approximate

- Groundwater Monitoring & Sampling
- Data Used to Evaluate Plume Migration, Plume Stability, & Natural Attenuation of Plume
- Data Used to Trigger Proposed Contingency Action(s)



Proposed Contingencies

Remedial Component	Duration (Years)	Future Cost
SVE – Extended Treatment	1 Year	\$64,000
MNA – Extended Monitoring	10 Years	\$1,672,000
ISCO Ozone Sparge Along Grand Canal	6 Years	\$2,876,000
Hydrogen Peroxide Injections Along Grand Canal	1 Year	\$166,000
Wellhead Treatment (SRP Supply Well)	10 Years	\$3,799,000
Wellhead Treatment (COP Supply Well)	10 Years	\$3,799,000
<i>SUBTOTAL</i>	<i>10 Years</i>	<i>\$12,376,000</i>

- Proposed Remedy:
 - Meets Remedial Objectives
 - Consistent with Current & Future Land & Water Use
 - Protects Public Health & the Environment
 - Provides Control, Management, & Cleanup of Contamination to Allow Maximum Beneficial Use of the Waters of the State
 - Is Reasonable, Necessary, Cost-Effective, & Technically Feasible

- Comment period on the PRAP Report ends Wednesday, December 2, 2020.
- **How to view:**
https://static.azdeq.gov/wqarf/ecp_32is_prap.pdf
- **How to comment:**
 - **By Email:** morales.mikel@azdeq.gov (*timestamped December 2, 2020*)
 - **By Mail** (*Must be postmarked by December 2, 2020*):

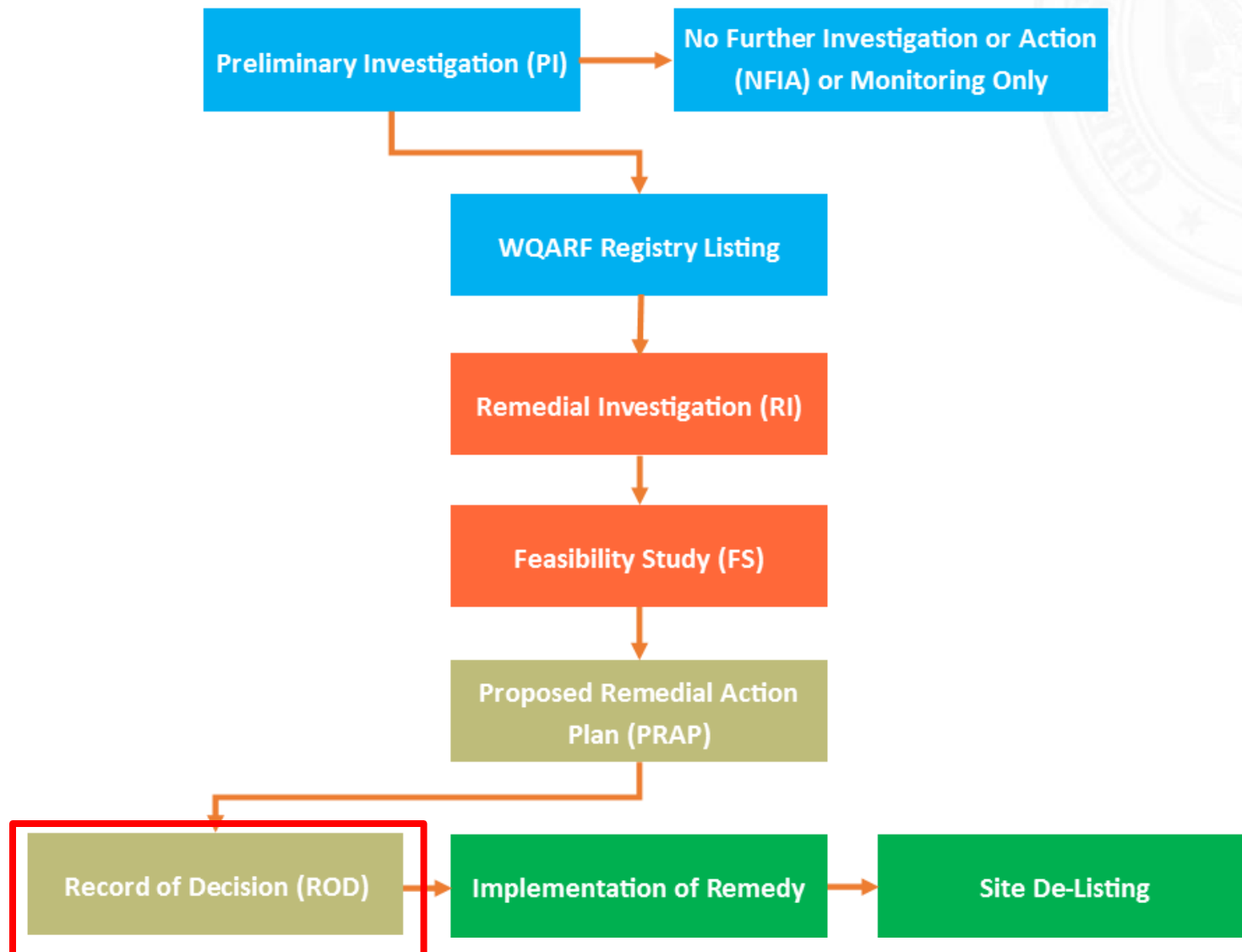
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Questions?

Upcoming Work



Contact Us!

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SVE Photos

