



East Central Phoenix - 24th Street & Grand Canal Proposed Remedial Action Plan (PRAP)

May 28, 2020



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



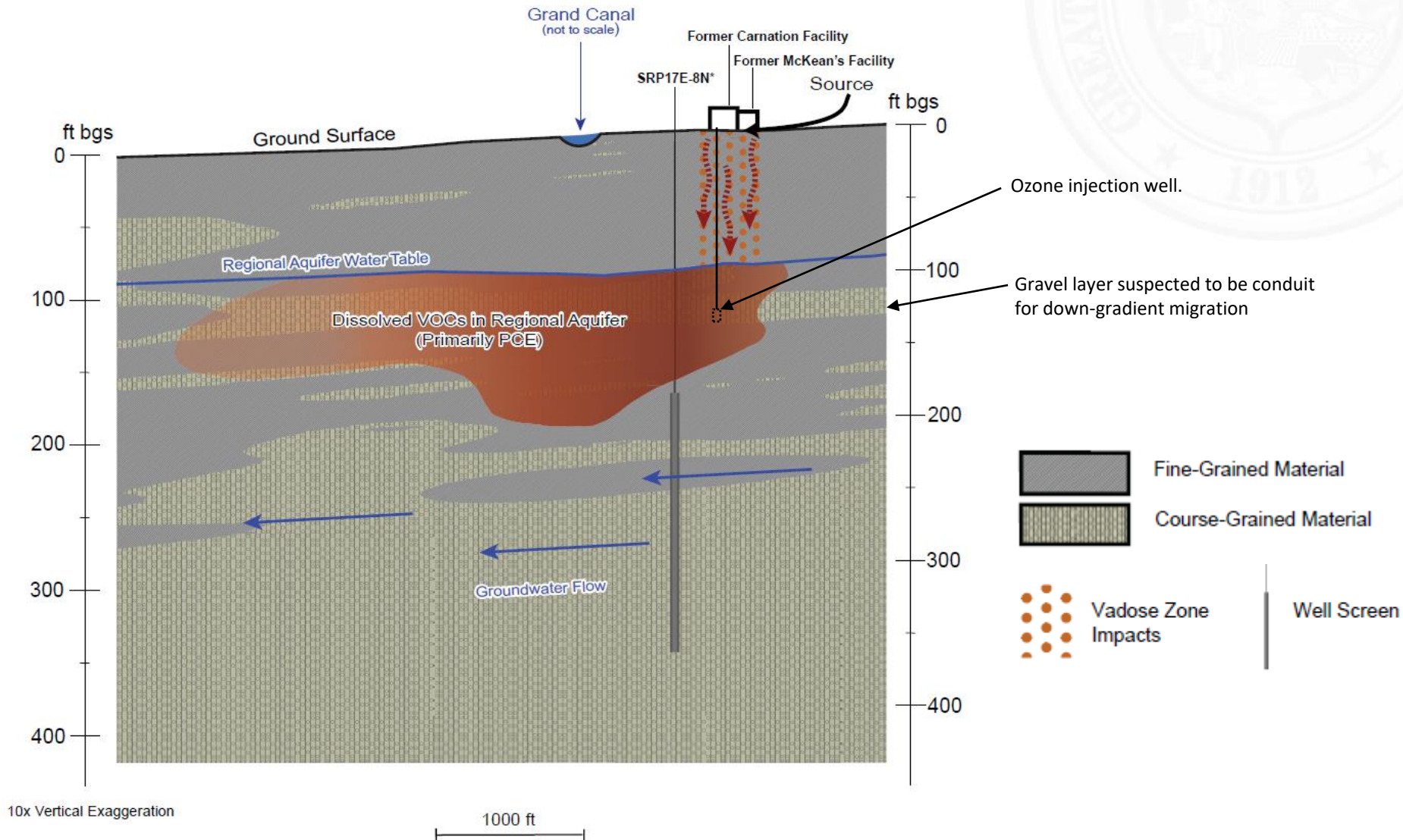
Source Area Map



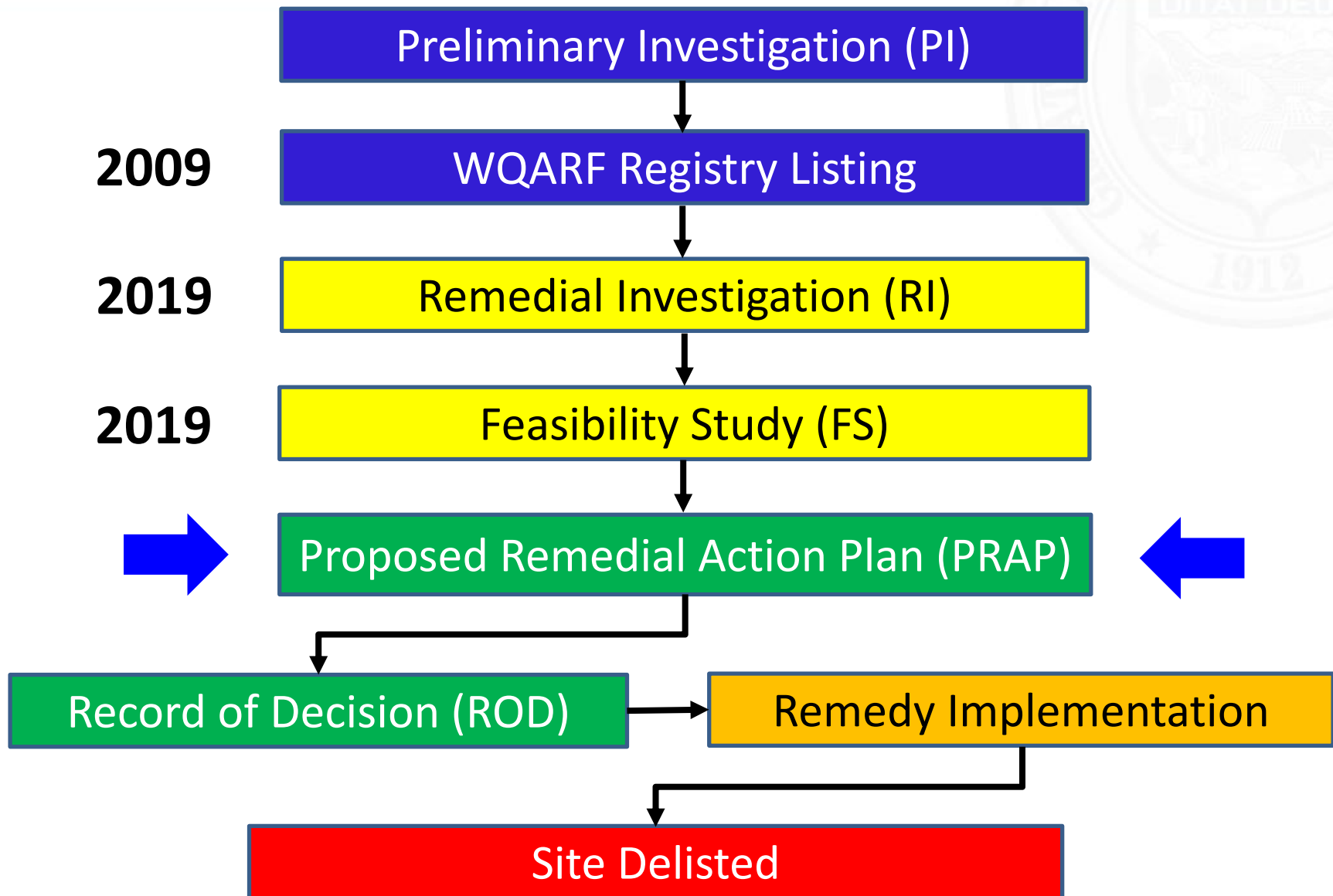
Conceptual Site Model

SOUTHWEST

NORTHEAST



2019 C S San Diego 015 NC 158 32nd St Groundwater Reports\Projects\Study Area 24th\With Wells.mxd.Cordon



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 24th Street and Grand Canal WQARF Site is:

Protect against the loss or impairment of land threatened by contaminants of concern at the 24th Street and Grand Canal WQARF site and restore land that has been impaired by contaminants of concern at the 24th Street and Grand Canal 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 24th Street and Grand Canal WQARF Site is:

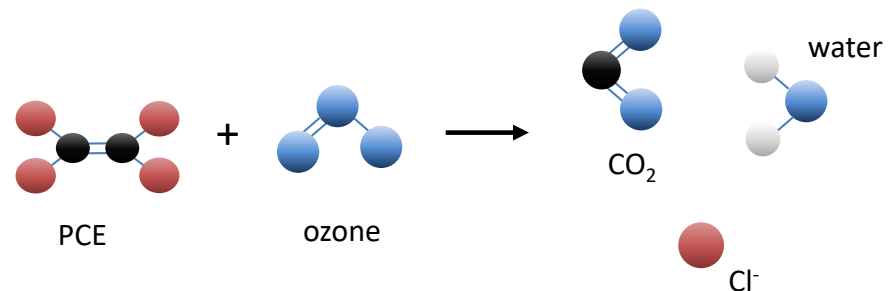
Protect against the loss or impairment of irrigation/potable water threatened by contaminants of concern at the 24th Street and Grand Canal WQARF site. Where protection cannot be achieved in a reasonable, necessary or cost-effective manner; restore, replace, or otherwise provide for potable water that is lost or impaired by contaminants of concern at the 24th Street and Grand Canal 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

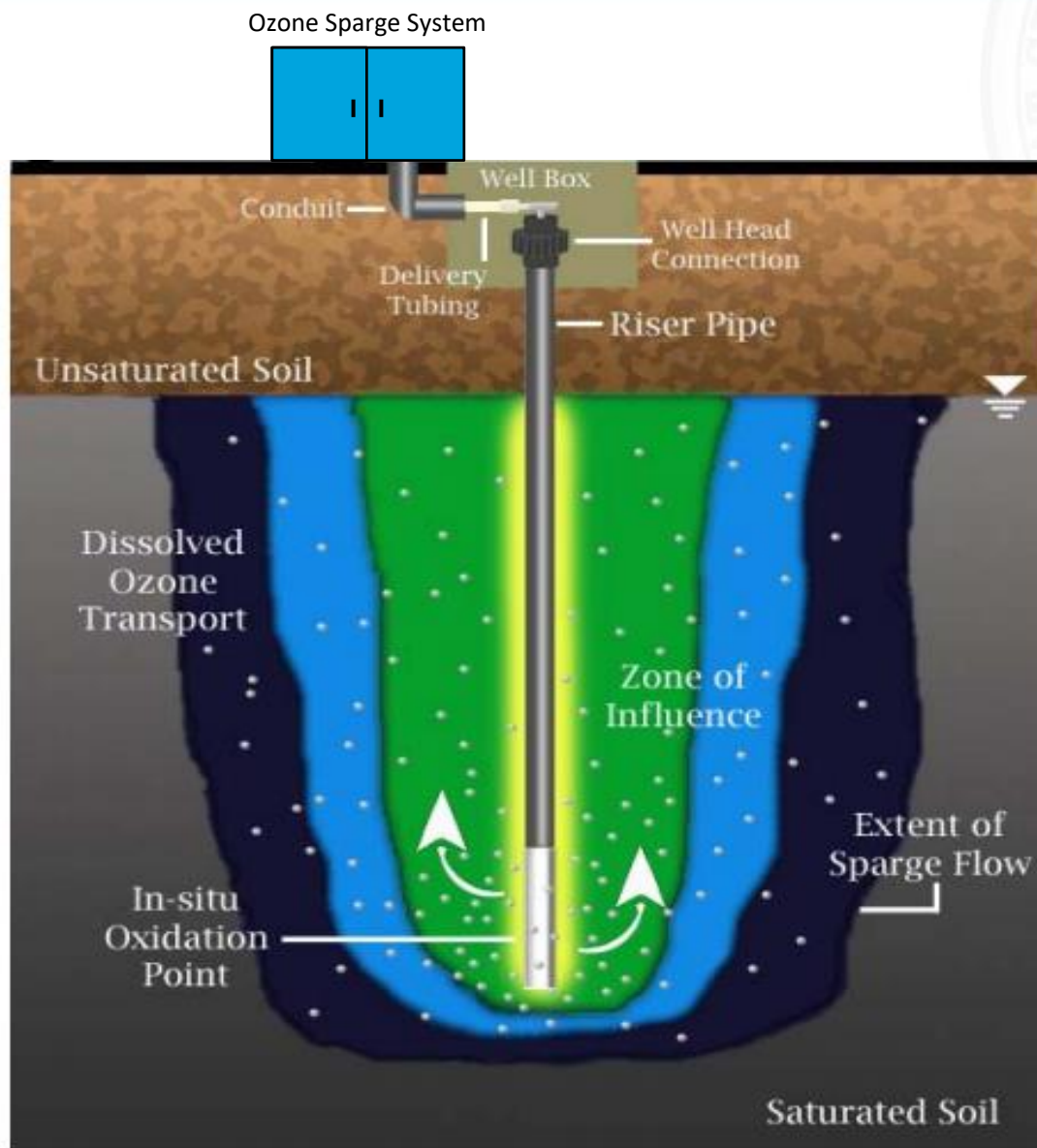
Remedial Component	Duration (Years)	Future Cost
In-Situ Chemical Oxidation (ISCO) ozone sparge treatment at source area property (Current CVS location)	3 Years	\$1.2M
Monitored Natural Attenuation (MNA)	6 Years*	\$652K
Decommissioning	1 Year	\$308K
<i>SUBTOTAL</i>	<i>7</i>	<i>\$2.2M</i>

* - MNA conducted concurrent to ISCO treatment.

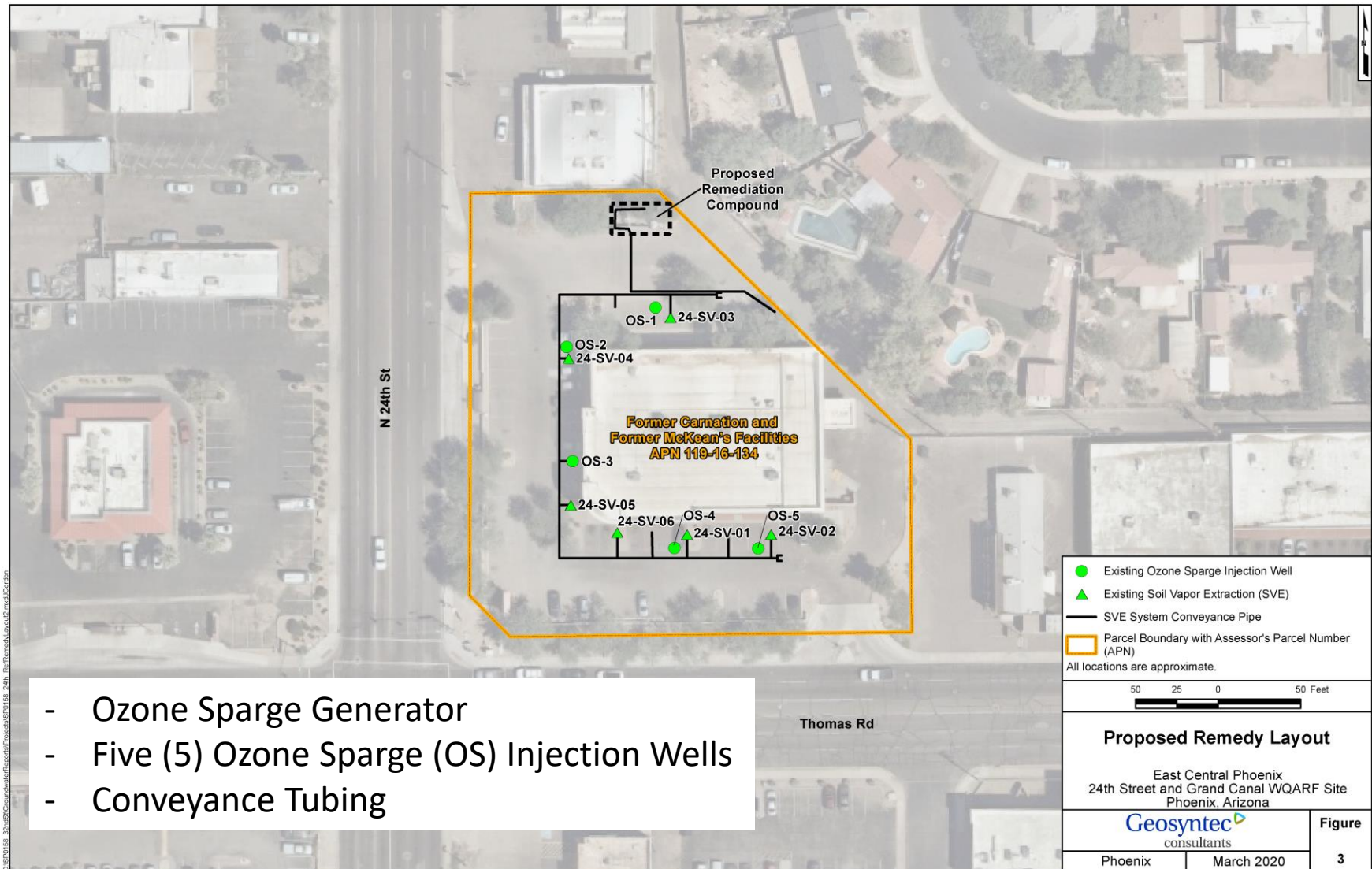
- In-Situ Chemical Oxidation (ISCO)
- Injection of oxidant (ozone) to remediate groundwater
- Pilot Study Implemented in February 2020



ISCO – Conceptual Design



Ongoing ISCO Ozone Sparge Pilot Study



- 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
Ozone sparge along the Grand Canal	6	\$2.2M
Hydrogen peroxide injections	3	\$325K
Liquid oxidant injections south of Grand Canal	1	\$652K
Ozone sparge near receptors (production wells)	7	\$1.3M
Additional MNA	4	\$527K
SVE (ozone in vadose zone)	3	\$56K
Wellhead Treatment (Public Supply Well)	11	\$3.8M
<i>SUBTOTAL</i>	<i>11</i>	<i>\$8.8M</i>

Proposed Remedy Contingency Layout

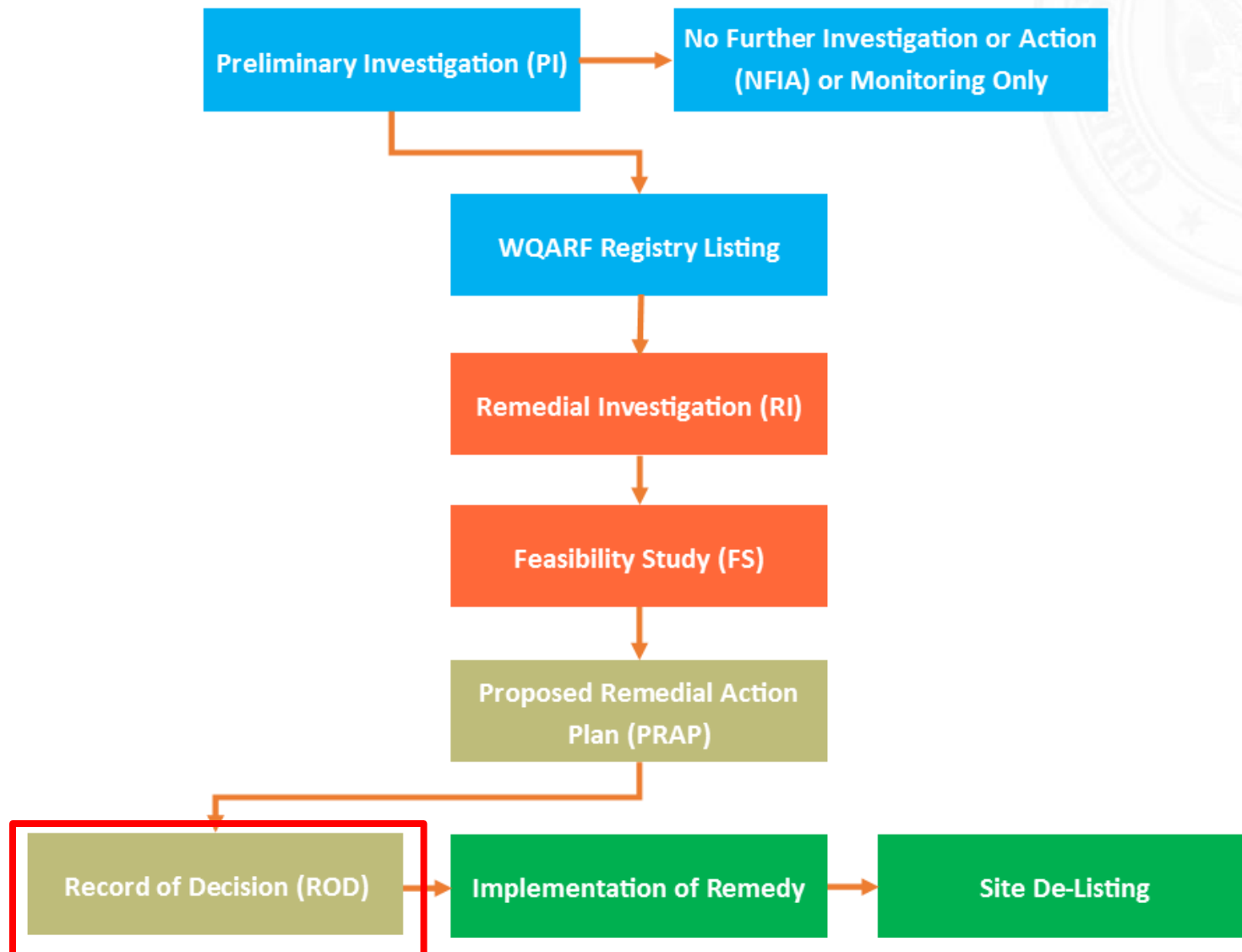


- Proposed Remedy:
 - Meets Remedial Objectives
 - Consistent with Current & Future Land & Water Use
 - Protects Public Health & the Environment
 - Provides Control, Management, & Cleanup of Contamination to Allow Maximum Beneficial Use of the Waters of the State
 - Is Reasonable, Necessary, Cost-Effective,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



Questions?

Upcoming Work



Contact Us!

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