



# Site History, Previous Investigations, and Removal Actions



## Chino Airport

- Agricultural Use (Prior to 1940)
- Military Operations (including airfield) (1940s)



- Leased to Pacific Airmotive Corporation (1950 to 1961)
- Public Airport (1961 onwards)



## Previous Investigations

- Soil and Groundwater investigations both on-site and off-site (2003 to 2016)
  - » Drilling and sampling 280+ soil, soil gas, and groundwater borings
  - » Installing and sampling 75 groundwater monitoring wells
  - » Extensive sampling/testing of soil, soil gas and groundwater
- No soil sources identified requiring cleanup
- Two groundwater plumes identified: West Area and East Area
- Additional focused studies for soil gas and groundwater for evaluating cleanup alternatives (2016)



## Removal Actions

- Three separate removal actions
  - » 1991 – 10 underground storage tanks (USTs) and surrounding soil removed
  - » 1992 – 310 drums/containers of hazardous waste removed
  - » 2010 – 51 drums of hazardous waste and 826 tons of impacted soil removed
- Focused on reducing further impacts to soil and groundwater



# Summary of the Remedial Investigations

- 20 areas of concern (AOC) investigated during the Remedial Investigations
- Remedial Investigation Goals
  - » Develop recommended interim remedial alternative
  - » Support feasibility study activities
- Soil Risk Evaluation – Contaminants of concern (COCs) in soil not detected at levels that pose a human health risk that would require cleanup
- Soil Gas Risk Evaluation – Vapor intrusion from groundwater does not pose an unacceptable health risk both on-site and off-site
- Groundwater Investigations
  - » General water chemistry and natural biological degradation (MNA)
  - » Prado Reservoir lake bottom survey
  - » Off-site private production well survey
  - » Shallow soil gas confirmation sampling



# Summary of the Feasibility Study

## Evaluation Criteria

FS Alternative	Alternative Name	Overall Protection of Human Health and the Environment	Compliance with Applicable or Relevant and Appropriate Requirements	Long-term Effectiveness and Permanence	Reduction of Toxicity, Mobility, or Volume through Treatment	Short-term Effectiveness	Implementability	Cost
0 0	No Action							No costs would be incurred. Baseline alternative for comparison with other technologies.
1 1	ICs and MNA							\$9,600,000
2 2A	ICs, MNA, West Area Containment by Groundwater Extraction and Ex-situ Treatment							\$55,000,000
3 3A	ICs, MNA, West Area Containment by Groundwater Extraction and Ex-situ Treatment, and East Area Source Area Treatment by Groundwater Extraction and Ex-situ Treatment							\$60,200,000
4 4A	ICs, MNA, West Area Containment by Groundwater Extraction and Ex-situ Treatment, and East Area Containment by Groundwater Extraction and Ex-situ Treatment							\$60,700,000
5 5A	ICs, MNA, West Area Containment by Groundwater Extraction and Ex-situ Treatment, East Area Source Area Treatment by Groundwater Extraction and Ex-situ Treatment, and East Area Containment by Groundwater Extraction and Ex-situ Treatment							\$65,900,000

- 1 Overall Protection of Human Health and the Environment**  
How the risks are eliminated, reduced, or controlled through treatment, engineering, or institutional controls.
- 2 Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)**  
Federal and state environmental statutes met or grounds for waiver provided.
- 3 Long-term Effectiveness**  
Maintain reliable protection of human health and the environment over time, once cleanup goals are met.
- 4 Reduction of Toxicity, Mobility, or Volume (TMV) through Treatment**  
Ability of a remedy to reduce the toxicity, mobility, and volume of the hazardous contaminants present at the site.
- 5 Short-term Effectiveness**  
Protection of human health and the environment during construction and implementation period.
- 6 Implementability**  
Technical and administrative feasibility of a remedy, including the availability of materials and services needed to carry it out.
- 7 Cost**  
Estimated capital, operation, and maintenance costs of each alternative.
- 8 State Acceptance**  
State concurs with, opposes, or has no comment on the preferred alternative.
- 9 Community Acceptance**  
Community concerns addressed; community preferences considered

**Notes:**

ARARs: Applicable or Relevant and Appropriate Requirements  
 COCs: Chemicals of concern  
 DOT: U. S. Department of Transportation  
 OM&M: Operation, maintenance, and monitoring  
 NPV: Net present value, based on a 1.5% discount factor (Office of Management and Budget, 2015)

ICs: Institutional controls  
 MNA: Monitored natural attenuation  
 TMV: Toxicity, mobility, and volume  
 RAOs: Remedial action objectives

**Does not meet**  
**Low**  
**Medium**  
**High**

## Preferred Remedial Alternative

**4A**

### **Institutional Controls (ICs), Monitored Natural Attenuation (MNA), West Area Containment by Groundwater Extraction and Ex-Situ Treatment, and East Area Containment by Groundwater Extraction and Ex-Situ Treatment**

**To control, contain and reduce contaminants of concern (COCs) in groundwater.**

- ICs (administrative and legal)
  - » On-site and off-site
  - » Land Use Controls (LUCs) prevent/minimize direct exposure to groundwater
  - » LUCs restrict/affect future land use to reduce risk
- Monitoring
- Groundwater Extraction and Treatment (East and West Areas)

# Preferred Remedial Alternative

## Groundwater extraction and treatment

### Aquifer Testing

Spring 2018

### Groundwater Model Update

Summer 2018

### Remedial Design and Remedial Action Work Plan

Fall 2018 to Spring 2019

### Permitting, Planning, and Construction Procurement

Summer to Winter 2019

### Construction of Remedial System

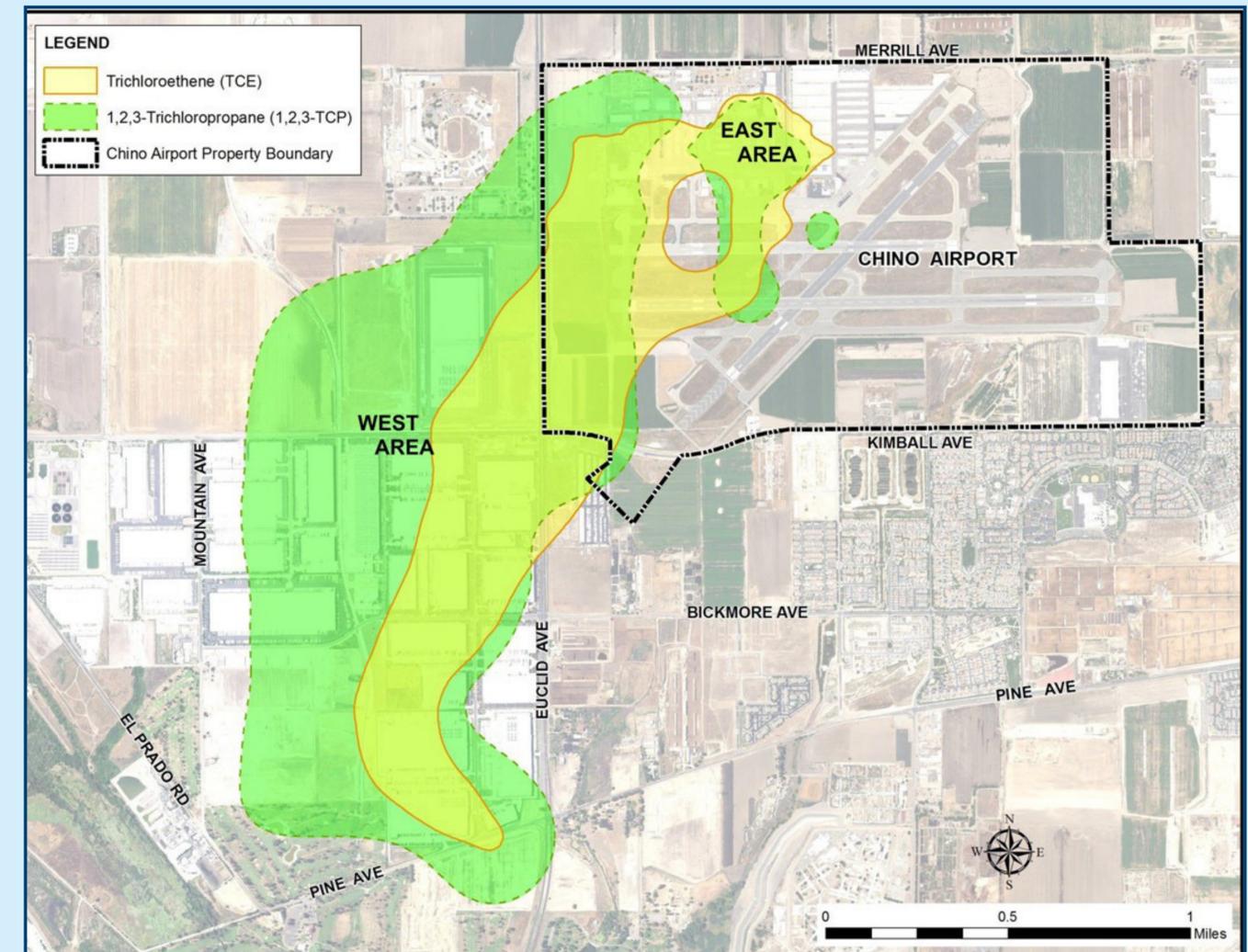
2020-2021

### Begin System Operations & Monitoring

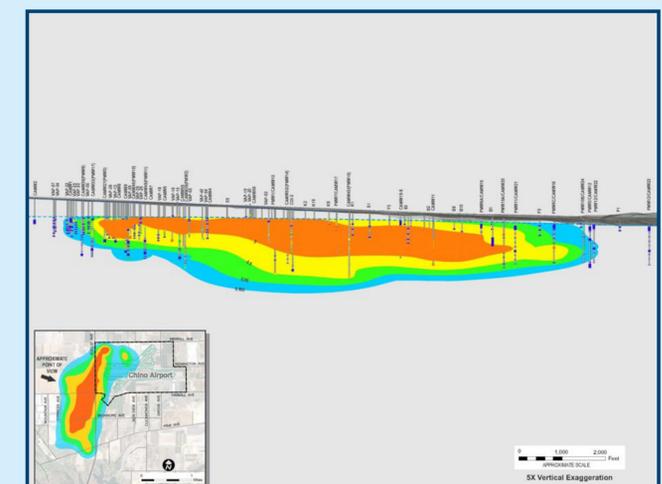
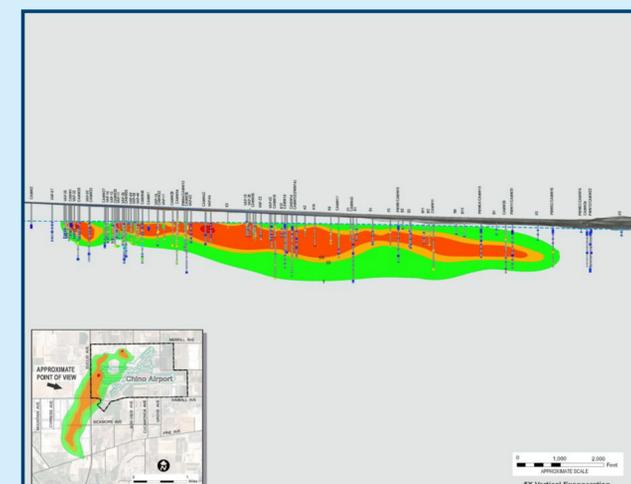
2021

- Two sets of groundwater extraction wells
  - » 8 wells for the West Area
  - » 2 wells for the East Area
- Groundwater treatment options
  - » One on-site water treatment plant
  - » One off-site water treatment plant
- Groundwater treatment would operate for approximately 50 years

Two groundwater areas identified: West Area and East Area



TCE and 1,2,3-TCP Groundwater Areas





# Opportunity to Participate and Next Steps

- Interim Remedial Action Plan (IRAP) written and verbal comments through February 18, 2018.
- Participate in meetings and other community involvement program activities
- Provide advice and solutions that can be incorporated into the cleanup process and decisions
- **Review material on the website:**  
<http://cms.sbcounty.gov/airports/Airports/Chino/CAGRP.aspx>  
» **Get on the mailing list to receive future updates.** There is a spot on the website to sign up for additional information.

**Chino Airport Groundwater Remedial Project**  
**Public Comment Form**  
Chaffey College, Chino Community Center  
5890 College Park Avenue, Chino, California 91710  
**Public Meeting Scheduled for January 18, 2018, 6:00 p.m. to 7:30 p.m.**

**Proposed Plan Comment Form**

The Water Board and County of San Bernardino (County) invite the public to review and comment on the Proposed Interim Remedial Action Plan (IRAP) and the analyses and information supporting the proposed cleanup plan during the 60-day public comment period from **December 18, 2017, through February 18, 2018**. Public comments may be submitted in writing if postmarked or e-mailed no later than February 18, 2018. Please send comments to Ms. Carolyn Hunter, Community Involvement Manager - Tetra Tech Inc., 301 E. Vanderbilt Way, Suite 450, San Bernardino, CA 92408 or carolyn.hunter@tetratech.com. Additionally, public comments may be orally provided or hand delivered in writing during the Public Meeting scheduled for **January 18, 2018, 6:00 p.m. to 7:30 p.m.** You may provide oral comments at the Public Meeting, where all comments will be recorded by a court reporter. Alternatively, you may provide written comments in the space provided below, on your own stationery, or by email. All written comments must be postmarked no later than **February 18, 2018**.

Name: \_\_\_\_\_

Representing: \_\_\_\_\_  
(optional)

Phone Number: \_\_\_\_\_  
(optional)

Address: \_\_\_\_\_  
(optional)

Email Address: \_\_\_\_\_  
Please check the appropriate box if you would like to be added to or removed from the Mailing List for Chino Airport Groundwater Remedial Project:  Add me  Remove me

Comments: \_\_\_\_\_  
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Go to the Information Repository  
**Cal Aero Preserve Public Library**  
15850 Main Street  
Chino, CA 91708