



# **Chemical Soil Background Study for the Santa Susana Field Laboratory**

## **Draft Sampling and Analysis Plan**

**Department of Toxic Substances Control  
SSFL Project Team**

**September 2, 2010  
Chatsworth**



# Chemical Soil Background Study Project Overview

- **Workplan Development**
  - **Sampling & Analysis Plan (SAP)**
  - **Quality Assurance Project Plan (QAPP)**
- Select Consultant
- Field Plan Implementation
- Locations Addendum
- QAPP Addendum
- Lab Analyses & Data Reporting
- Data Validation
- Data Evaluation Plan (DEP)
- Statistical Evaluations
- Results Report Development



# **Chemical Soil Background Study Meeting's Main Goals & Topics**

- **Draft Sampling & Analysis Plan (SAP)**
- **Draft Quality Assurance Project Plan (QAPP)**
- **Contracting Status**
- **Project Timing**



# **Chemical Soil Background Study**

## **Draft Sampling & Analysis Plan**

- **Chemical Background Reference Areas**
- **Geology and Soil Descriptions**
- **“Strata” (statistical)**
- **Numbers of Samples**
- **Target Analytes**



# Chemical Soil Background Study

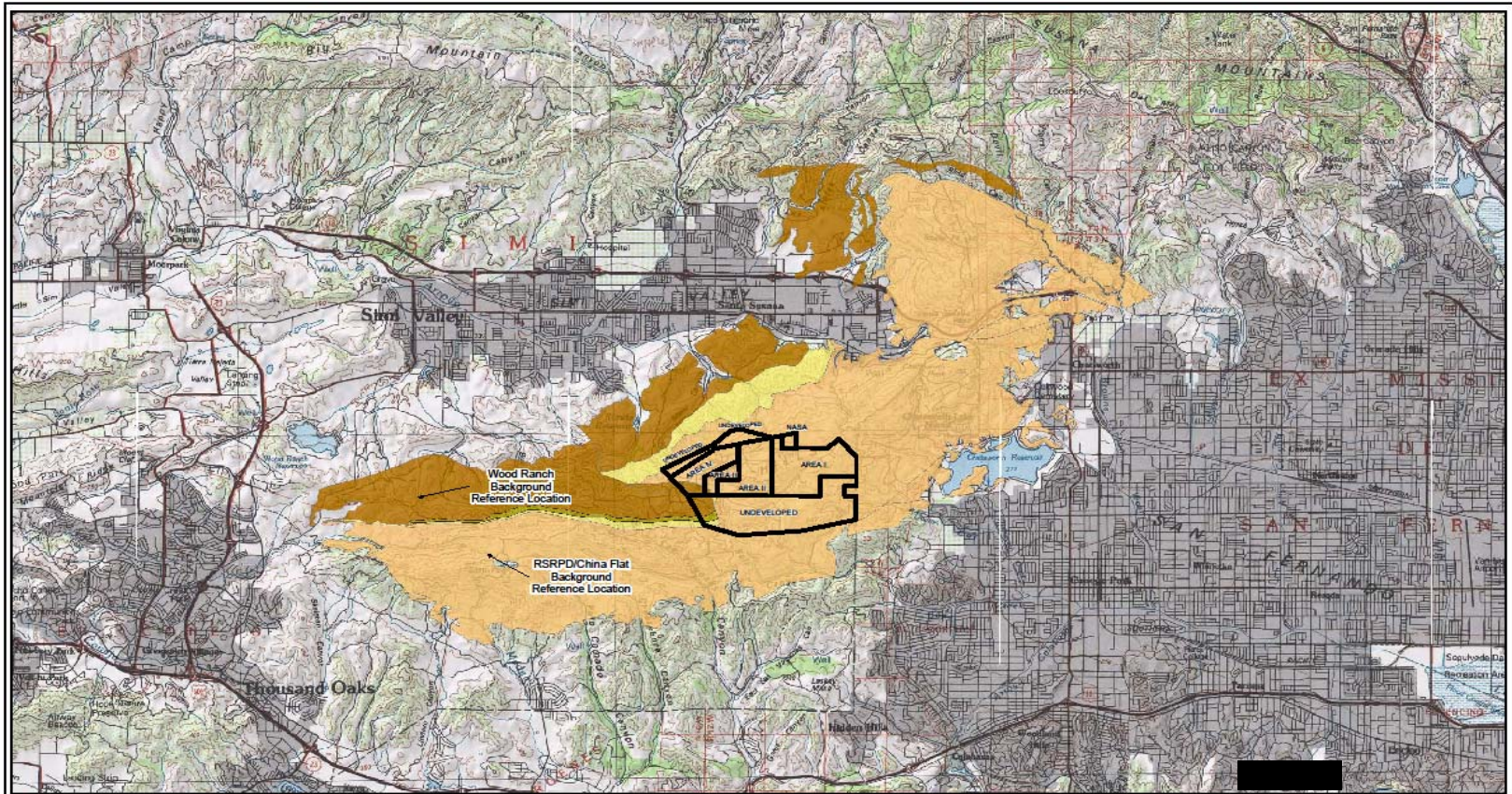
## Draft Sampling & Analysis Plan

- **Chemical Background Reference Areas**
  - China Flat
  - Wood Ranch
- **Randomized locations (including added drainage samples)**

<b>Formation</b> → <b>Terrain</b> ↓	<b>Santa Susana</b>	<b>Chatsworth</b>	<b>Totals</b>
<b>Non-Drainage</b>	30 Surface 30 Subsurface	30 Surface 30 Subsurface	120
<b>Drainage</b>	60 Surface	60 Surface	120
<b>Total Primary Samples =</b>			<b>240</b>



# Regional Map



SANTA SUSANA FIELD LABORATORY

Division: Mtn, Subdiv: Geology, Background, Regional

Date: Oct 13, 2009

Geology and Background Reference Area Locations

FIGURE 2-1

# Wood Ranch Santa Susana Formation

DRAFT

## Wood Ranch Chemical Background Reference Area Conceptual Sampling Map

### Legend

- Background Reference Area With Conceptual Sampling Grid
- Parcel Boundaries
- Streams
- Random Generated Sample Location
- Systematic Generated Transect Location for Drainage Sample

### Notes:

- Background reference area based on criteria set forth in the Sampling and Analysis Plan
- Non-drainage sampling stations (30) will comprise samples from surface and subsurface intervals for a total of 60 samples
- Drainage sampling stations (60) will comprise samples from surface interval only
- Grid spacing based on the desired number of sampling stations and the extent of the background reference area
- Non-drainage sampling stations located at random within each grid cell using GIS Spatial Analyst
- Drainage sampling transects located systematically; sampling stations will be located in the field at random along a transect perpendicular to the channel (see Sampling and Analysis Plan)

1 inch = 200 feet



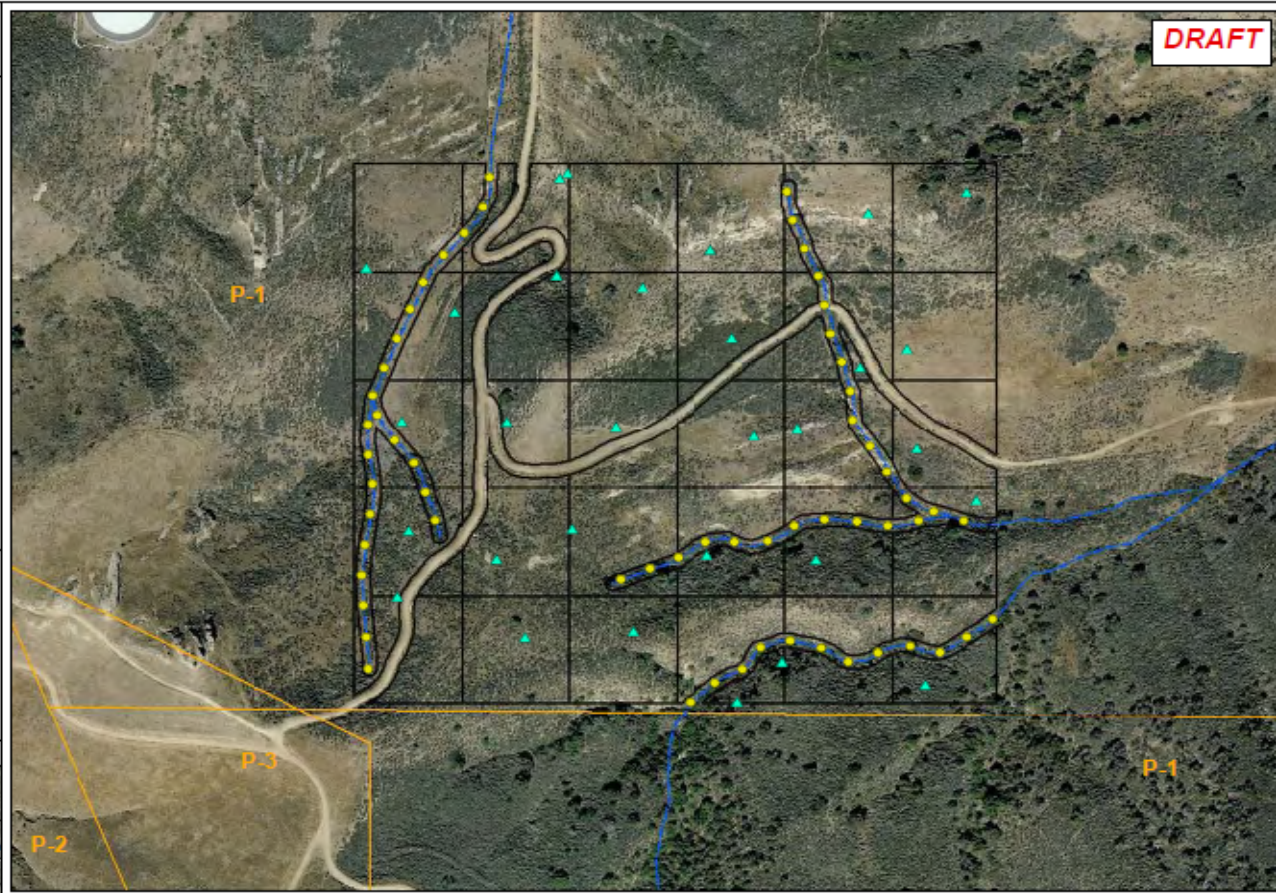
- P-1: Mountains Recreation and Conservation Authority (MRCA)
- P-2: City of Thousand Oaks
- P-3: Conejo Open Space Conservation Agency (COSCA)

Aerial Imagery from 2004

Source: MWH, Air Photo, Civil Design, Systems

Date: May 11, 2010

0 1.25 2.5 Miles



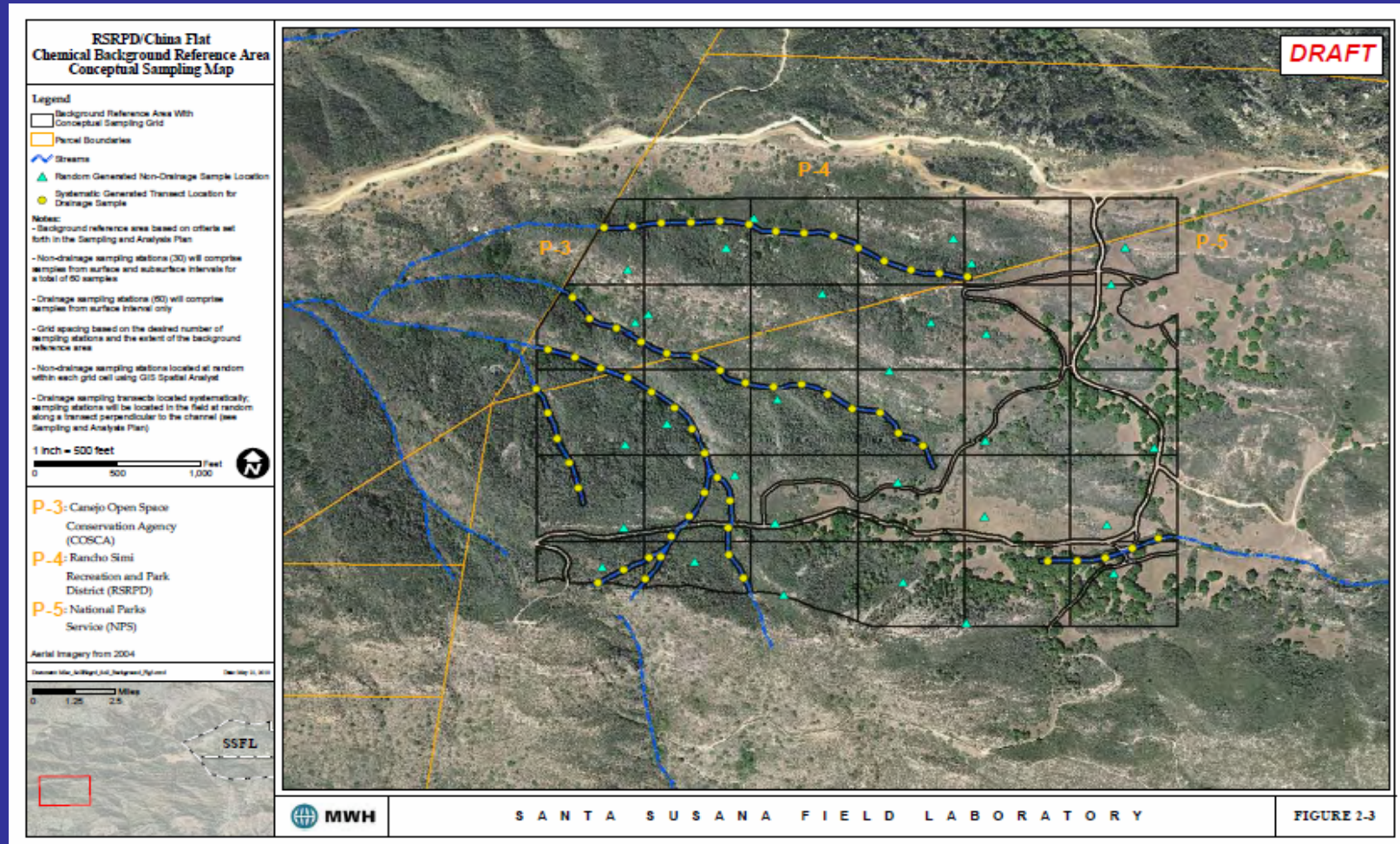
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FIGURE 2-4

Note: all sample locations shown are conceptual.



# RSRPD & China Flat Chatsworth Formation



Note: all sample locations shown are conceptual.





# **Chemical Soil Background Study Draft Quality Assurance Project Plan**

- **Field Procedures & QA/QC Requirements**
- **Personnel & Documentation Requirements**
- **Sampling Methods & Management Requirements**
- **Laboratory Analytical Methods; QA/QC and MDL Requirements**
- **Laboratory Reporting Limits (RLs)**
- **Reporting & Data Management Requirements**
- **Oversight & Response Actions**
- **Data Validation**



# Chemical Soil Background Study

## Target Analytes & Analytical Methods

### Constituents & Analytical Methods:

- Fluoride - Method 300.0
- Herbicides - Method 8151
- Hex Chrome - Method 3060A/7199/7196A
- Mercury - Method 7471A
- Metals - Method 6010B/6020
- PAHs - Method 8270C-SIM
- Pesticides - Method 8081A
- Dioxins/Furans - Method 1613B



# Chemical Soil Background Study Project Timing

## September

- Retain Consultant
- Flag Sample Locations

## October

- Issue SAP “Locations Addendum”
- Identify Laboratories and Specify MDLs/RLs
- Issue “QAPP Addendum”
- Final SAP and QAPP
- Field Sampling



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