RFI Data Gap Work Plan
Boeing RFI Subarea 10
Santa Susana Field Laboratory
Technical Meeting

9:30 AM to Noon
August 1, 2013

Today's Agenda

- Introductions
- Ground Rules
- Recap: Boeing RFI Data Gap Characterization Process
- Subarea 10
  - Chemical Use Areas (CUAs)
  - Potential Chemical Use Areas
  - Features Recommended for Conditional No Further Action (CNFA)
- Schedule
- Wrap Up/Questions
- Site Visit

Ground Rules

Please:

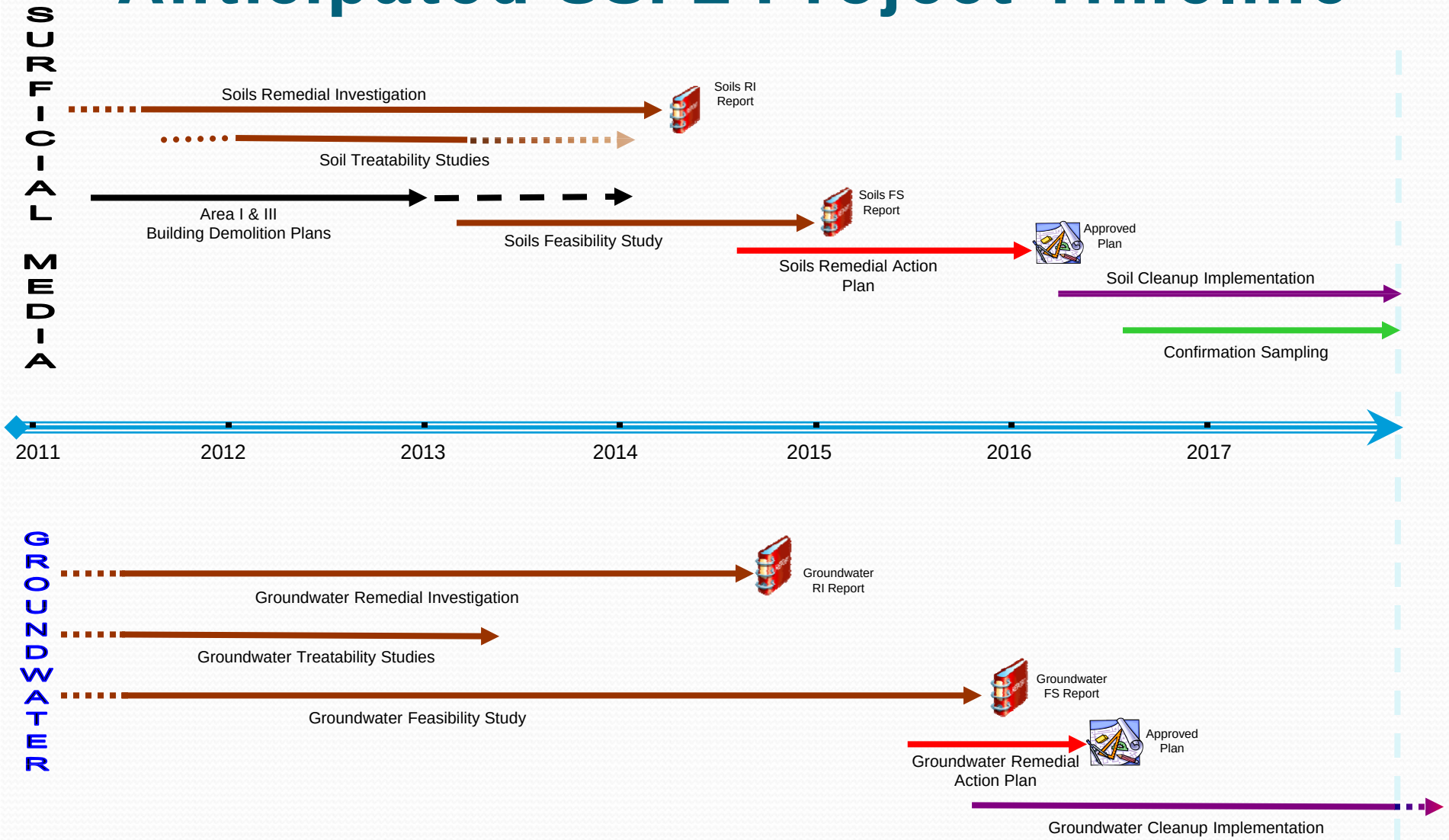
- Silence all mobile phones, personal digital assistants (PDAs), tablets and electronics.
- Limit cross conversation during the meeting.
- Treat other people with the same level of respect you expect from others.
- Hold all questions until the designated question and answer period(s).

Photography, sound and video recording may occur during this meeting. If you do not wish to be filmed or photographed, please inform the photographer/videographer directly.

Recap: Boeing RFI Data Gap Characterization Process

- **Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Goal:**
  - To obtain sufficient information on the nature and extent of contamination so that the need for Corrective Measures Study (CMS) can be determined
- **Data Gap Characterization Process Purpose:**
  - To collect and evaluate data to fill Data Gaps identified after submittal of the Draft Group RFI Reports
- **Data Gap Characterization Process Timeline:**
  - **Work Plan Approval -10 weeks after submittal**
    - Includes Public Meeting, input
  - **Sampling and Data Evaluation, 1st Round – 20 weeks**
    - Field Sampling and Analysis
    - Data Evaluation
    - Data Quality Objective (DQO) Evaluation, Identify Data Gaps
  - **Sampling and Data Evaluation, 2nd Round – 8-9 weeks**
    - If Data Gaps are identified
  - **Data Summary Report**

Anticipated SSFL Project Timeline



Recap: Boeing RFI Data Gap Characterization Process - Status

Subarea	Work Plan Status	1st Round of Field Work Status	Data Evaluation Status
5/9 South	Approved	Complete	In Progress
1A North	Approved	In Progress	
5/9 North	Review in progress		
10	Review in progress		
1A Central	Review in progress		

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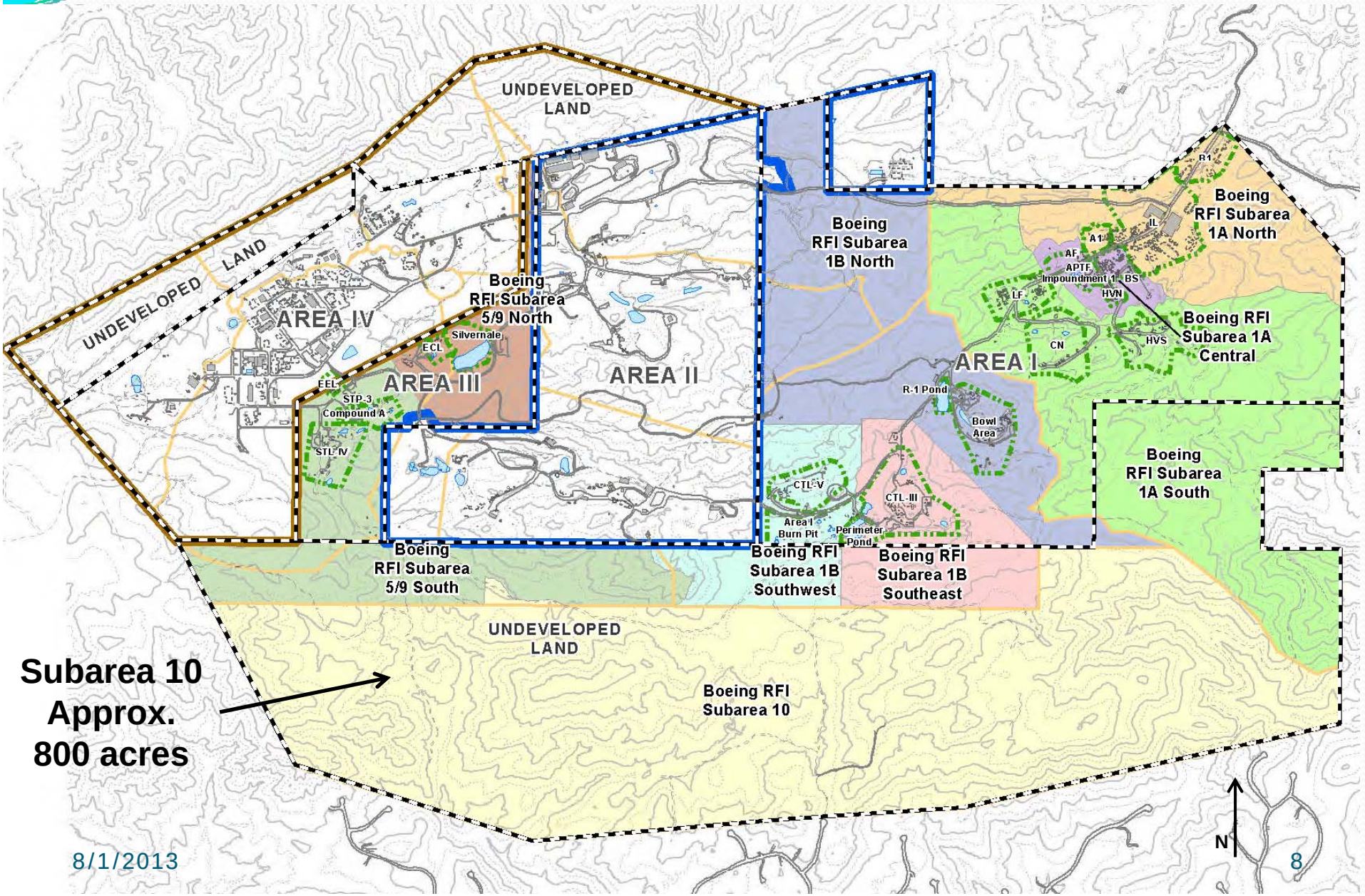
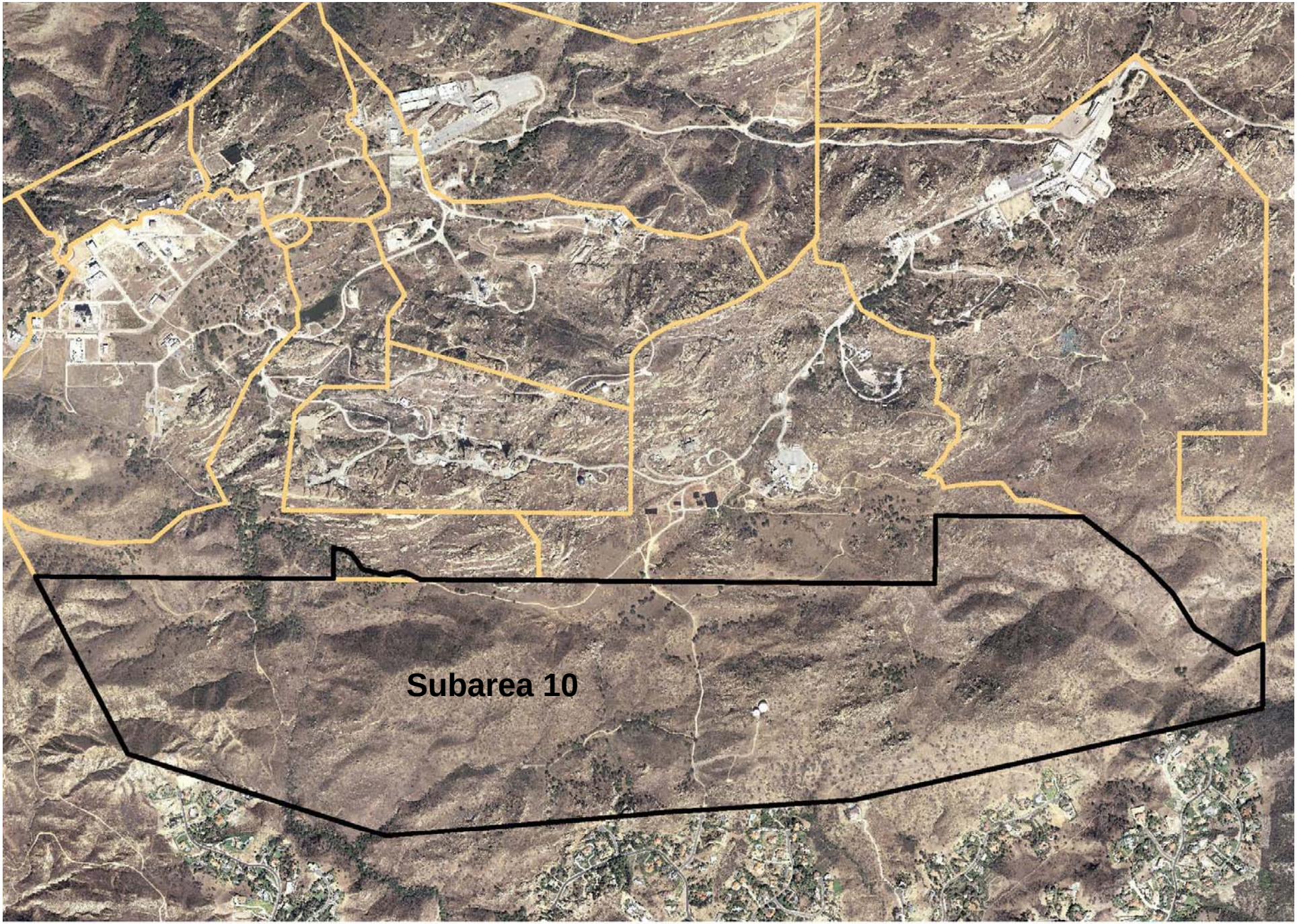
Subarea 10 Overview



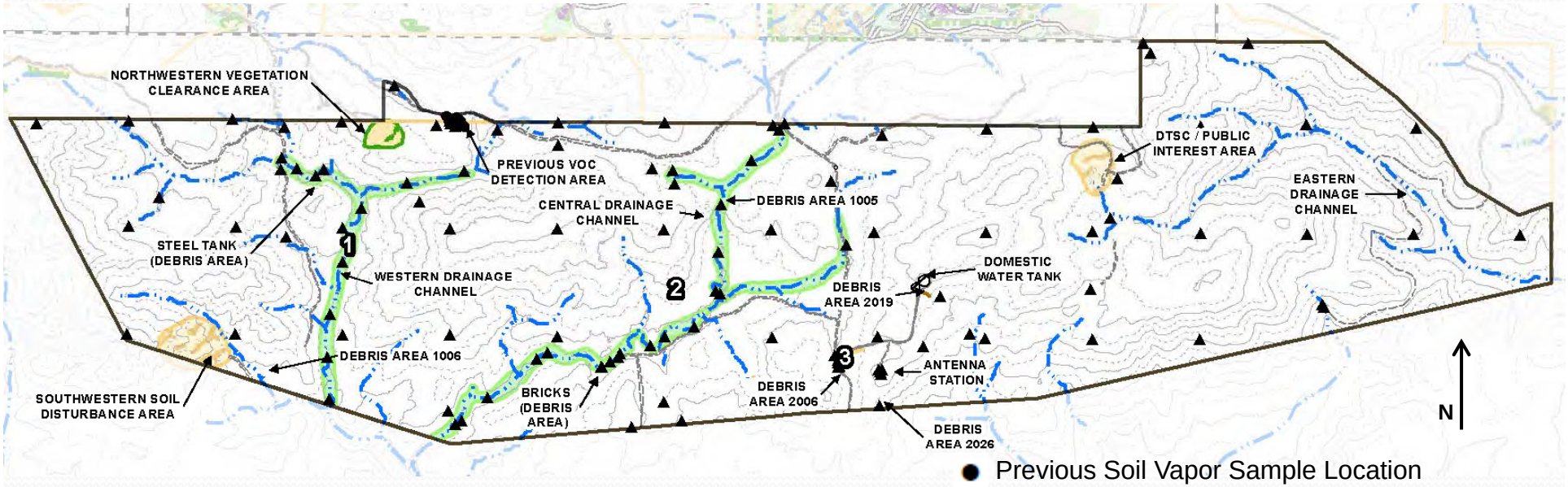

Subarea 10

Subarea 10 Overview

- Open, undeveloped land
  - Historically used for cattle grazing
- Property improvements limited to:
  - Access roads
  - National Pollutant Discharge Elimination System (NPDES) outfalls (001/019 & 002)
  - Aboveground domestic water storage tanks
  - Antenna station
- No RFI sites present
- No CMS areas
- Entire Subarea 10 was investigated in 2008, including several features that were identified during the investigation

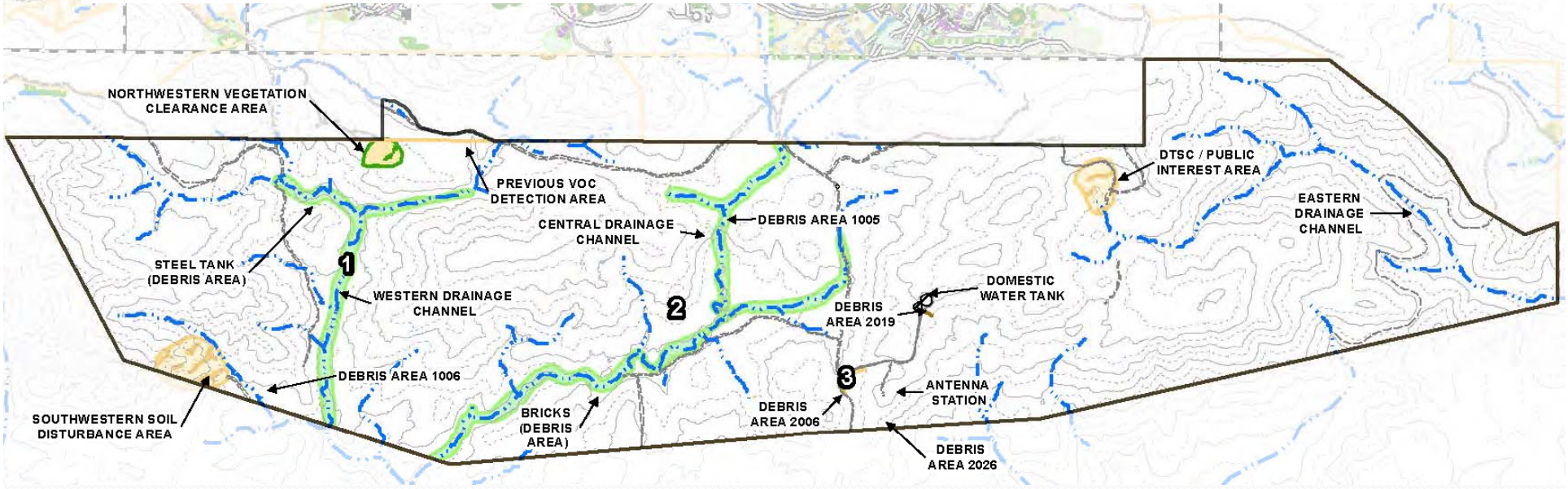
Subarea 10 Overview

- 2009: Draft Group 10 RFI Report submitted to DTSC
- 1993-2008: Previous Sampling Efforts
  - 161 Soil Samples
  - 51 Soil Vapor Samples



Subarea 10 Overview

- Current Work Plan for Subarea 10 identifies:
  - 4 CUAs
  - 9 Potential CUAs
  - 3 features recommended for CNFA



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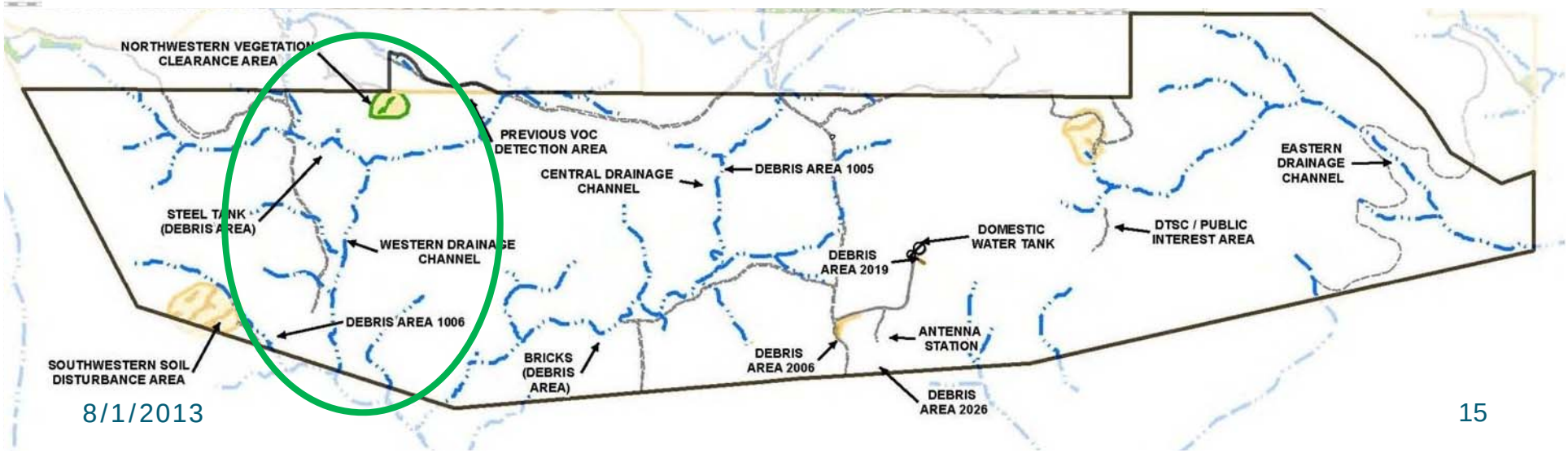
CUA 1
Western Drainage

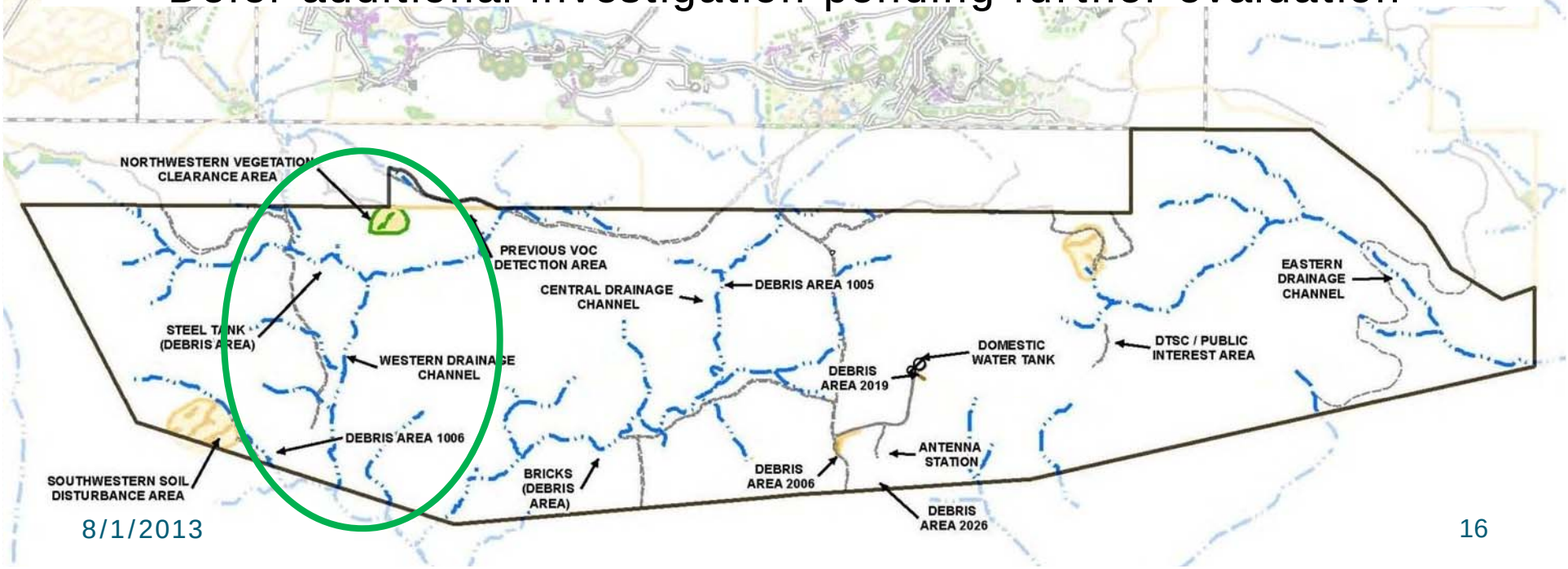
CUA 1 - Western Drainage

- Receives drainage from Administrative Areas II, III, and IV
- Sampled to assess migration of contaminants from SSFL operational areas
  - Total of 16 samples collected from 13 locations
  - 2008 Group 10 RFI - Samples collected every 500 feet and analyzed for comprehensive analytical suite



CUA 1 - Western Drainage

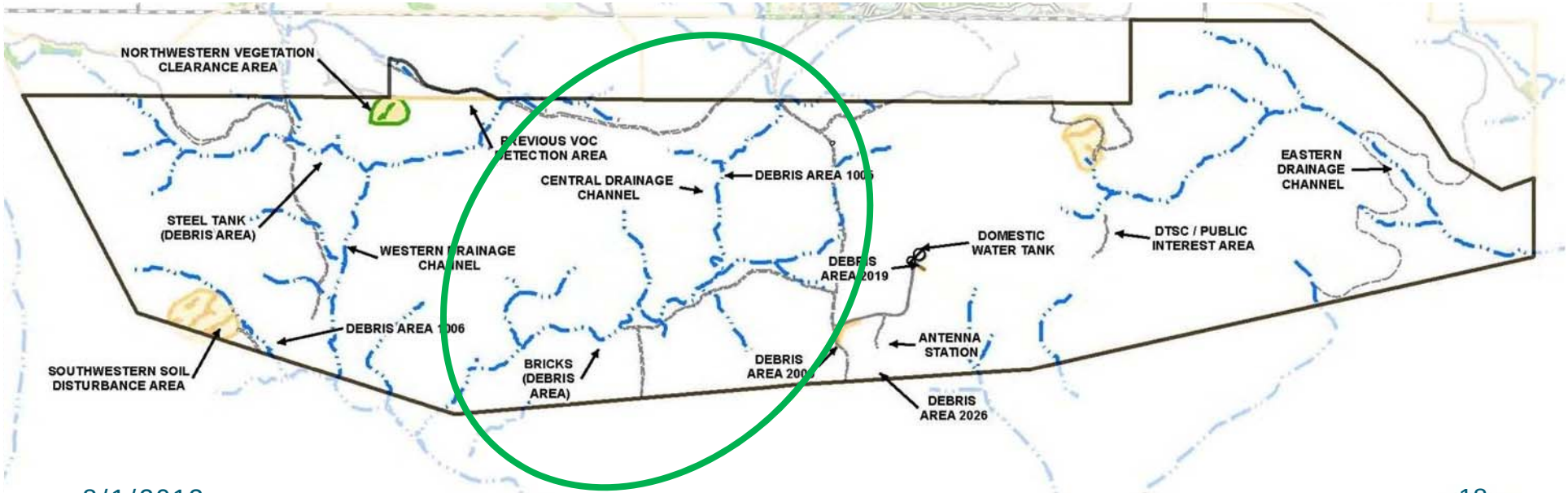
- Metals and inorganics exceed soil characterization levels (SCLs) at two locations in northern portion
- Plan to address Western Drainage
  - Collect step-out bank samples at two locations
  - Total of four soil samples proposed
  - Defer additional investigation pending further evaluation



CUA 2
Central Drainage

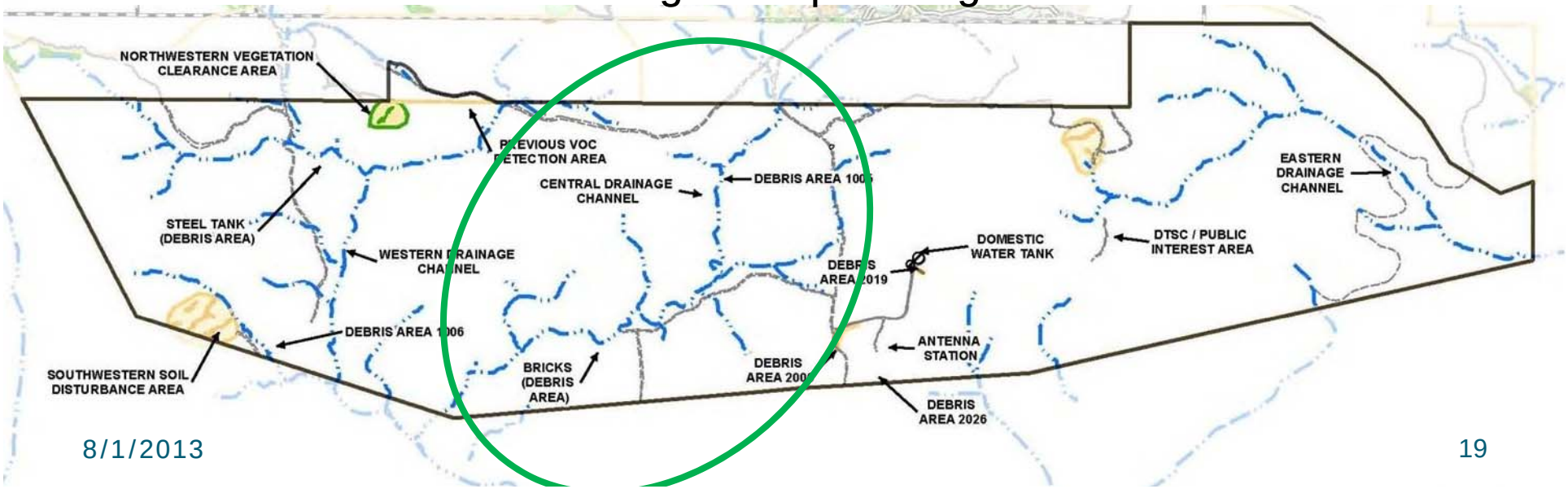
CUA 2 - Central Drainage

- Receives drainage from Administrative Areas I and II
- Sampled to assess migration of contaminants from SSFL operational areas
  - Total of 26 samples collected from 21 locations
  - 2008 Group 10 RFI - Samples collected every 500 feet and analyzed for comprehensive analytical suite



CUA 2 - Central Drainage

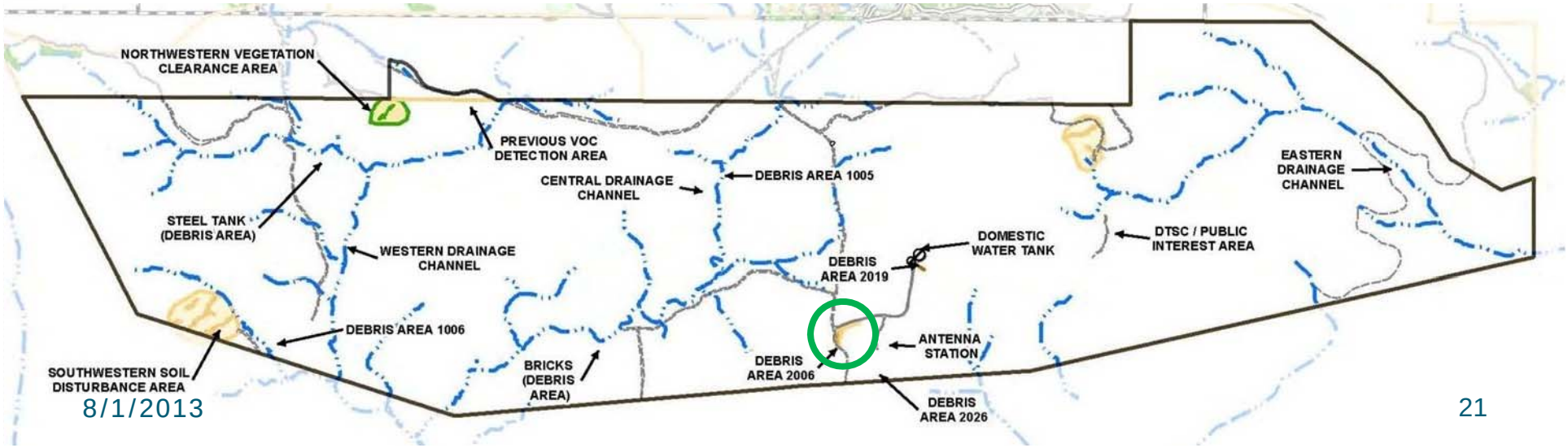
- Polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), dioxins/furans, pesticides, metals, and cyanides exceed SCLs
- Plan to address Central Drainage
  - Collect step-out bank samples
  - Total of 20 soil samples proposed
  - Defer additional investigation pending further evaluation



CUA 3
Debris Area 2006

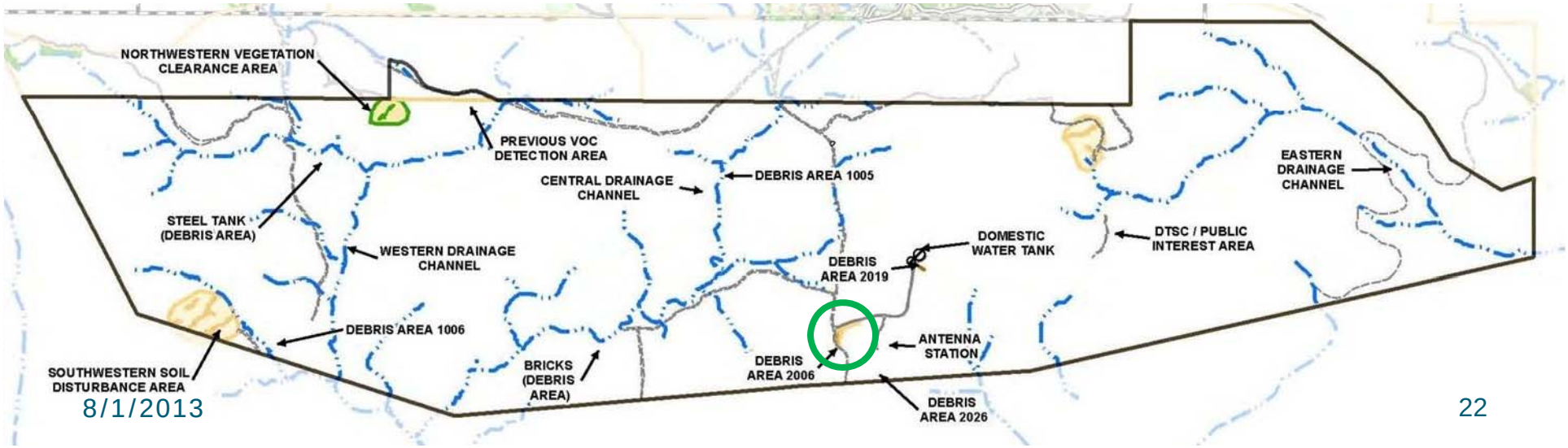
CUA 3 - Debris Area 2006

- Identified during 2007 debris survey
  - Seven soil stockpiles near location where road to domestic water tanks had been paved
  - Material intermixed with soil included concrete, metal and polyvinyl chloride (PVC) pipes, wood, scrap metal, and plastic
- 2008: One sample collected from each stockpile for waste disposal purposes
- All seven piles were subsequently removed as non-hazardous waste



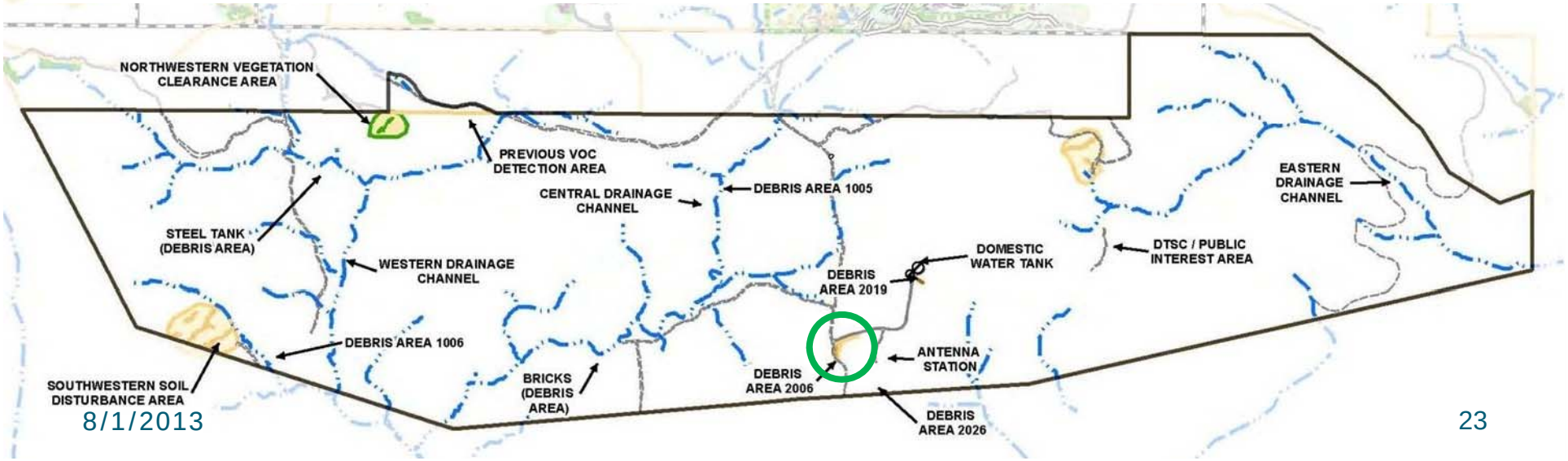
CUA 3 - Debris Area 2006

- Two stockpile samples exceeded 2008 screening levels for metals
- During 2008 Group 10 RFI samples collected from beneath the two stockpiles for those specific metals
  - Molybdenum detected beneath one location >current SCLs
  - Cadmium detected beneath 2nd location > current SCLs
- 2008 stockpile results against current SCLs
  - Cadmium >SCLs in three stockpiles
  - Cadmium, molybdenum, silver, selenium, and vanadium >SCLs in one other stockpile



CUA 3 - Debris Area 2006

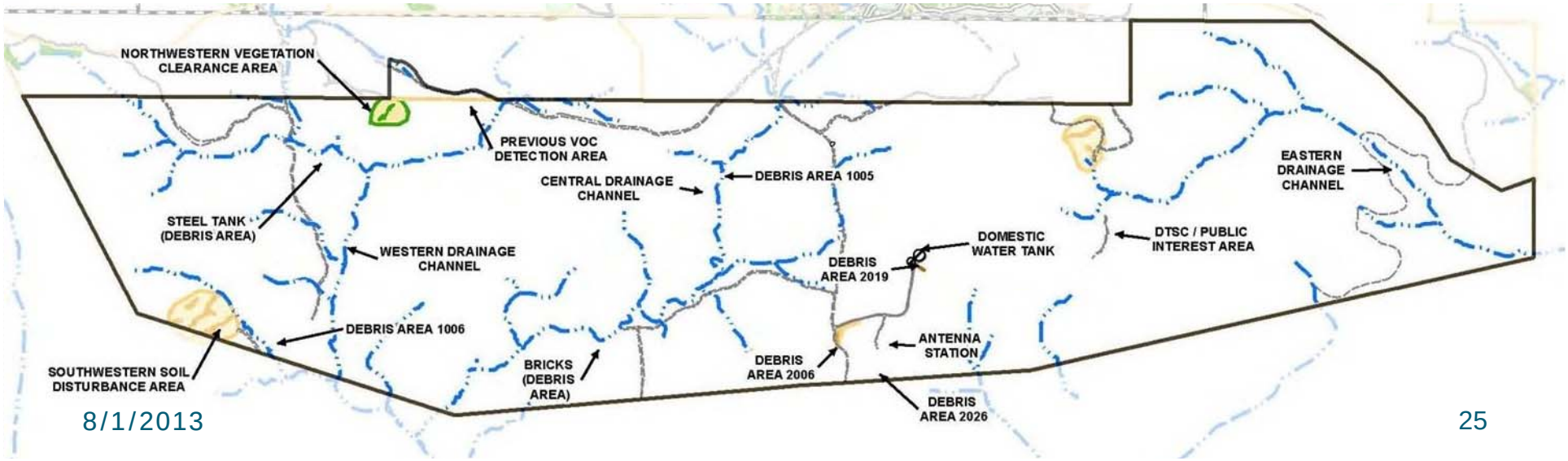
- Plan to address Debris Area 2006
  - Collect step-out samples for metals that exceed SCLs in soil underlying previous stockpiles
  - Collect samples beneath former stockpiles for additional metals that exceed current SCLs in previous stockpile samples
  - Collect downslope samples
  - Total of 26 soil samples proposed



CUA 4
Subarea 10-Wide
Surface Soil

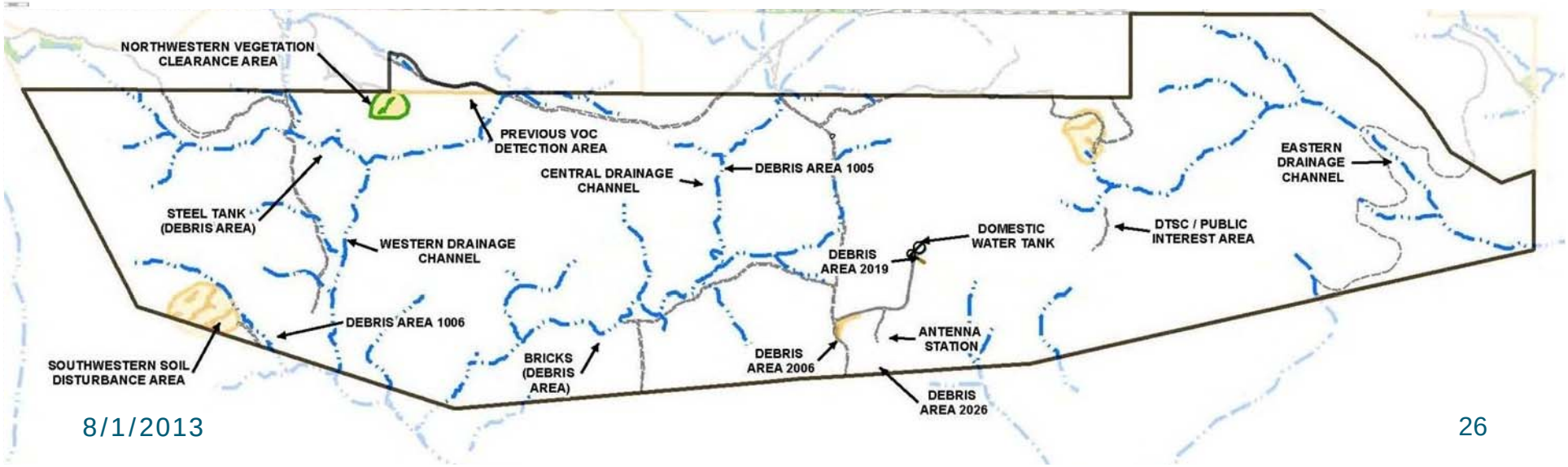
CUA 4 - Subarea 10-Wide Surface Soil

- Subarea 10 surface soil not associated with specific investigation area
- Includes samples collected from 1993-2008
  - 37 samples collected prior to 2008 RFI for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), metals, PCBs, dioxins, energetics
  - 50 samples collected in 2008 for metals, dioxins
- Sampled for metals on 1,000-foot grid in 2008 to assess potential chemical impacts from air deposition



CUA 4 - Subarea 10-Wide Surface Soil

- Dioxin/Furans > SCLs at 3 locations
- Metals > SCLs at 27 locations
  - Antimony
  - Cadmium
  - Molybdenum
  - Selenium
  - Silver
  - Thallium
- Plan to address surface soil
  - Defer further evaluation until air deposition modeling of potential onsite sources is complete



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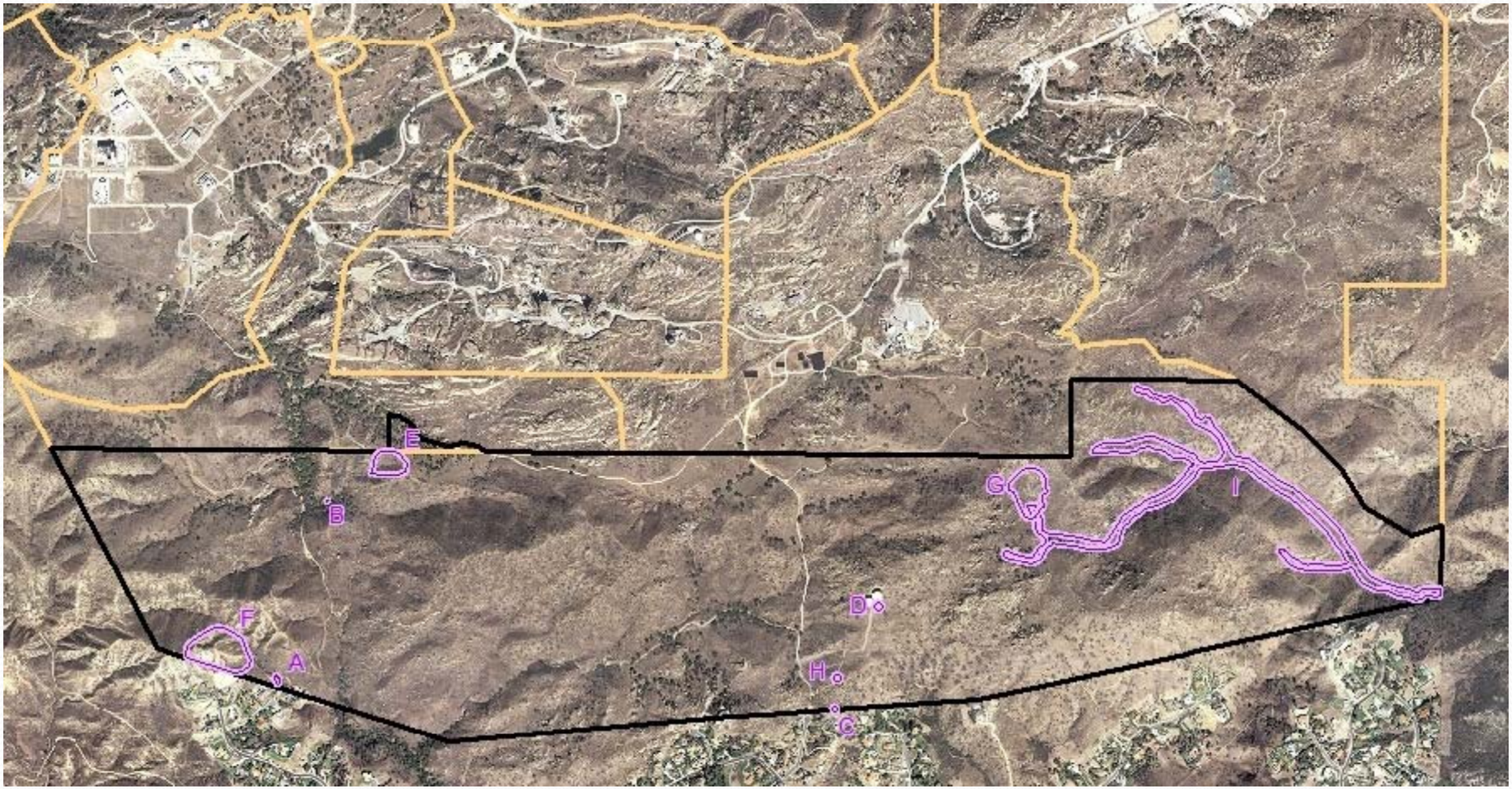
Potential CUAs



Potential CUAs

Potential CUA	Name	Description	New Feature	Previous Samples	Previous Analyses	SCL Exceedances	Plan to Address	Proposed Soil Samples	Proposed Soil Vapor Samples
A	**Debris Area 1006**	Empty, crushed tank identified during removal of Debris Area 1006 and removed	Yes	Not Applicable	Not Applicable	Not Applicable	One soil boring/soil vapor sample location at feature plus two downslope. Total of eight soil samples and two soil vapor samples	8	2
B	**Crushed Steel Tank in Western Drainage**	Empty, crushed tank identified in Western Drainage and removed	No	One drainage sample 95 feet downdrainage	Comprehensive suite used for western drainage samples	None	One soil boring at former tank location and one location 30 feet downdrainage	6	0
C	**Debris Area 2026**	Soil pile with intermixed concrete and small, dark surficial deposits (possibly tar) on the ground surface and rock outcrops	No	One sample collected from the soil pile	VOCs, SVOCs, TPH, Metals	None	Two soil boring locations downslope	4	0
D	**Debris Area 2019**	Two empty 55-gallon drums, metal pipe, scrap plastic, and broken concrete pipe pieces at top of drainage below domestic water tanks	No	One sample collected from drainage channel downslope	VOCs, SVOCs, TPH, Metals	None	One additional downslope location	2	0

Potential CUAs

Potential CUA	Name	Description	New Feature	Previous Samples	Previous Analyses	SCL Exceedances	Plan to Address	Proposed Soil Samples	Proposed Soil Vapor Samples
E	**Northwestern Vegetation Clearance Area**	Vegetation clearance area Identified during 2010/2011 sitewide historical aerial photograph review	Yes	Not Applicable	Not Applicable	Not Applicable	Soil and soil vapor at feature plus two downslope	40	18
F	**Southwestern Soil Disturbance Area**	Soil disturbance area Identified during 2010/2011 sitewide historical aerial photograph review	Yes	Not Applicable	Not Applicable	Not Applicable	Soil and soil vapor at feature plus two downslope	28	12
G	**DTSC/Public Interest Area[1]**	Soil disturbance area Identified during 2010/2011 sitewide historical aerial photograph review	Yes (soil disturbance area)	Five samples from two locations south of soil disturbance area	VOCs, SVOCs, TPH, Metals	None	Soil and soil vapor at feature plus two downslope	60	28
H	**Antenna Station Former Equipment Shed**	Historical equipment shed associated with previous antenna station	Yes (location of former shed)	Five samples from four locations	VOCs, SVOCs, TPH, Metals, PCBs	None (Barium >SCL in one sample but confirmation and stepout samples indicated barium <SCL)	One soil boring at historical shed plus two downslope locations	8	0
I	**Eastern Drainage**	Drainage not connected to onsite areas	Yes	Not Applicable	Not Applicable	Not Applicable	Evaluate after air deposition modeling, evaluation of CUA 4	0	0

1 = This area was brought to the attention of DTSC prior to the 2008 Group 10 RFI report by a member of the public.

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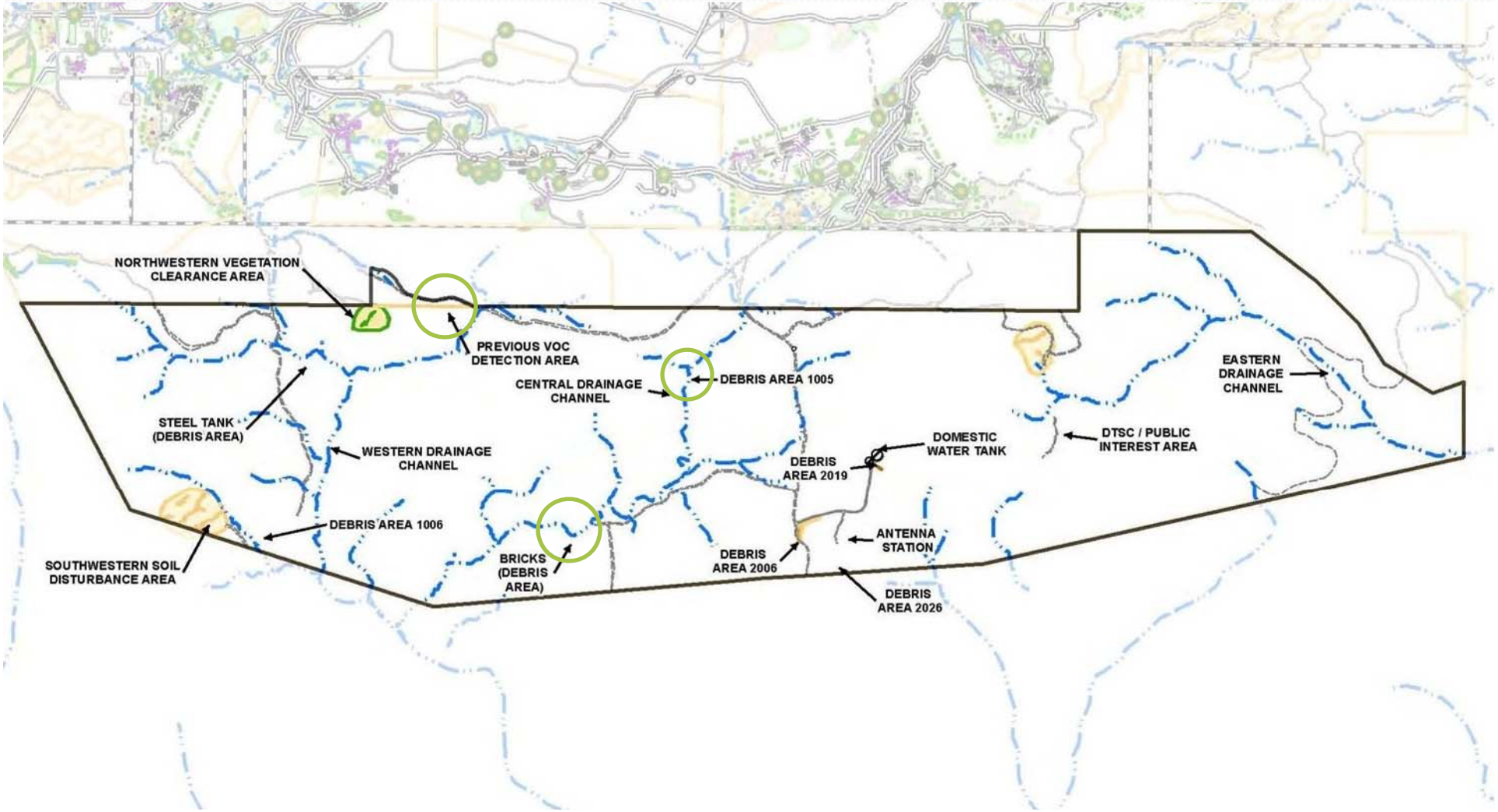
Features Recommended for CNFA

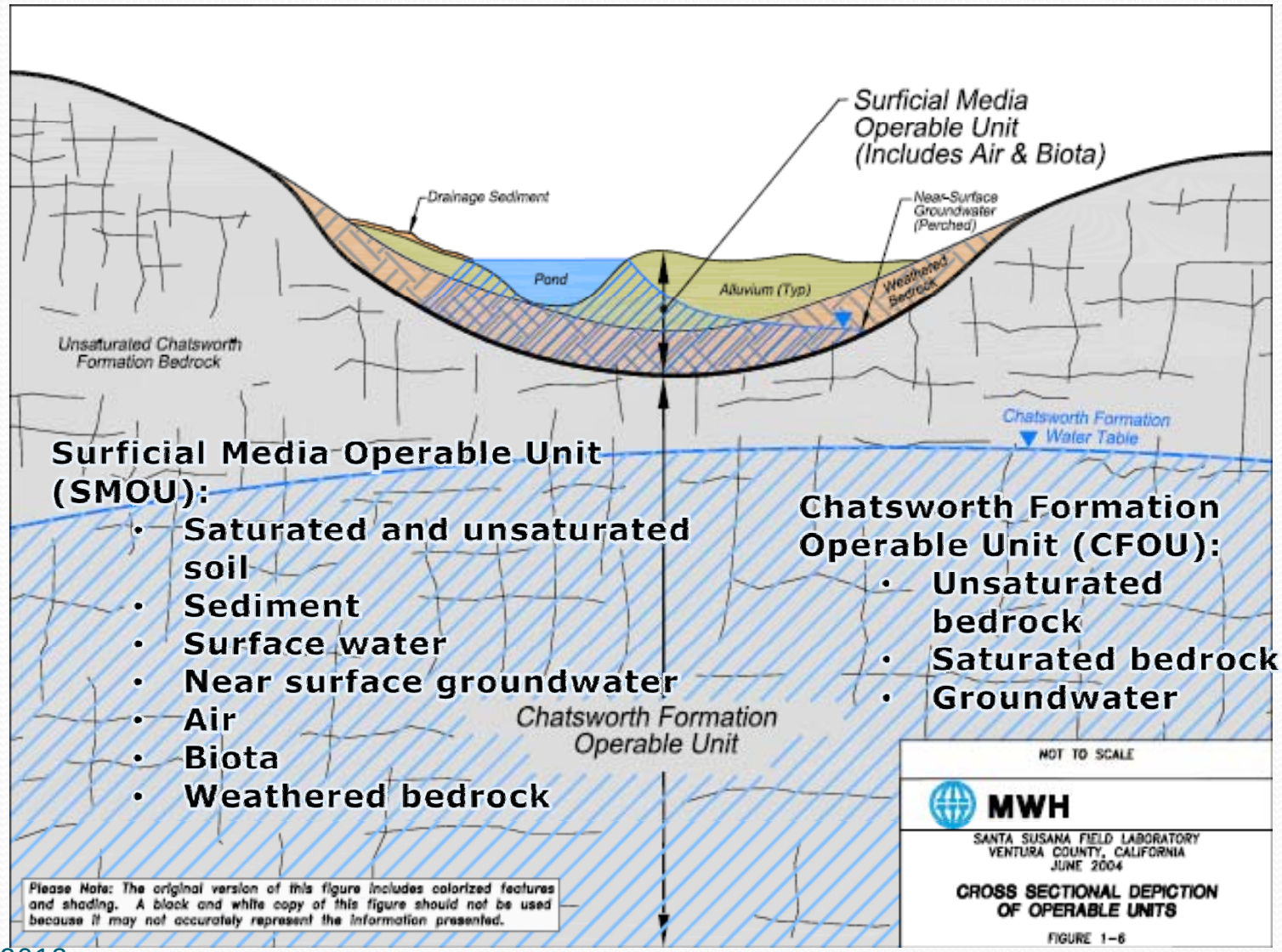


Features Recommended for CNFA

Name	Description	New Feature	Previous Samples	Previous Analyses	SCL Exceedances	Plan to Address	Proposed Soil Samples	Proposed Soil Vapor Samples
Debris Area 1005	An empty 55-gallon drum caught on rocks in the Central Drainage	No	One drainage sample collected immediately downstream of the drum	Comprehensive suite used for central drainage samples	Dioxins, but not attributable to Debris Area 1005; dioxins also above SCLs in upstream samples	CNFA	0	0
Bricks in Central Drainage	15 pumice-like "bricks" in a 30-ft diameter area lodged in rocks in the Central Drainage; bricks were removed	No	One sample collected from a brick for disposal purposes	Metals	None	CNFA	0	0
Previous VOC Detection Area	Area named for two historical unexpected VOC detections, in a 1993 surface soil sample and in 2006 soil gas samples	No	Soil sample to confirm benzene detection; soil vapor and soil samples to confirm and delineate soil vapor detections;	VOCs, PAHs, TPH, Metals	Cadmium in one surface soil sample; will be addressed as part of CUA 4 (surface soil)	CNFA	0	0

Subarea 10 Overview

Vadose Zone Evaluation



Subarea 10 Overview

Vadose Zone Evaluation

- Goal – Identify if any chemicals found in vadose zone pose a threat to groundwater or if chemicals found in groundwater pose a threat to surface receptors through vapor migration
- Vadose Zone Evaluation will be performed after collection of proposed samples

Groundwater Evaluation

- Goal: Evaluate Groundwater data gaps, extent, and impacts on plume scale
- Groundwater evaluation will be performed after collection of proposed samples

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Schedule

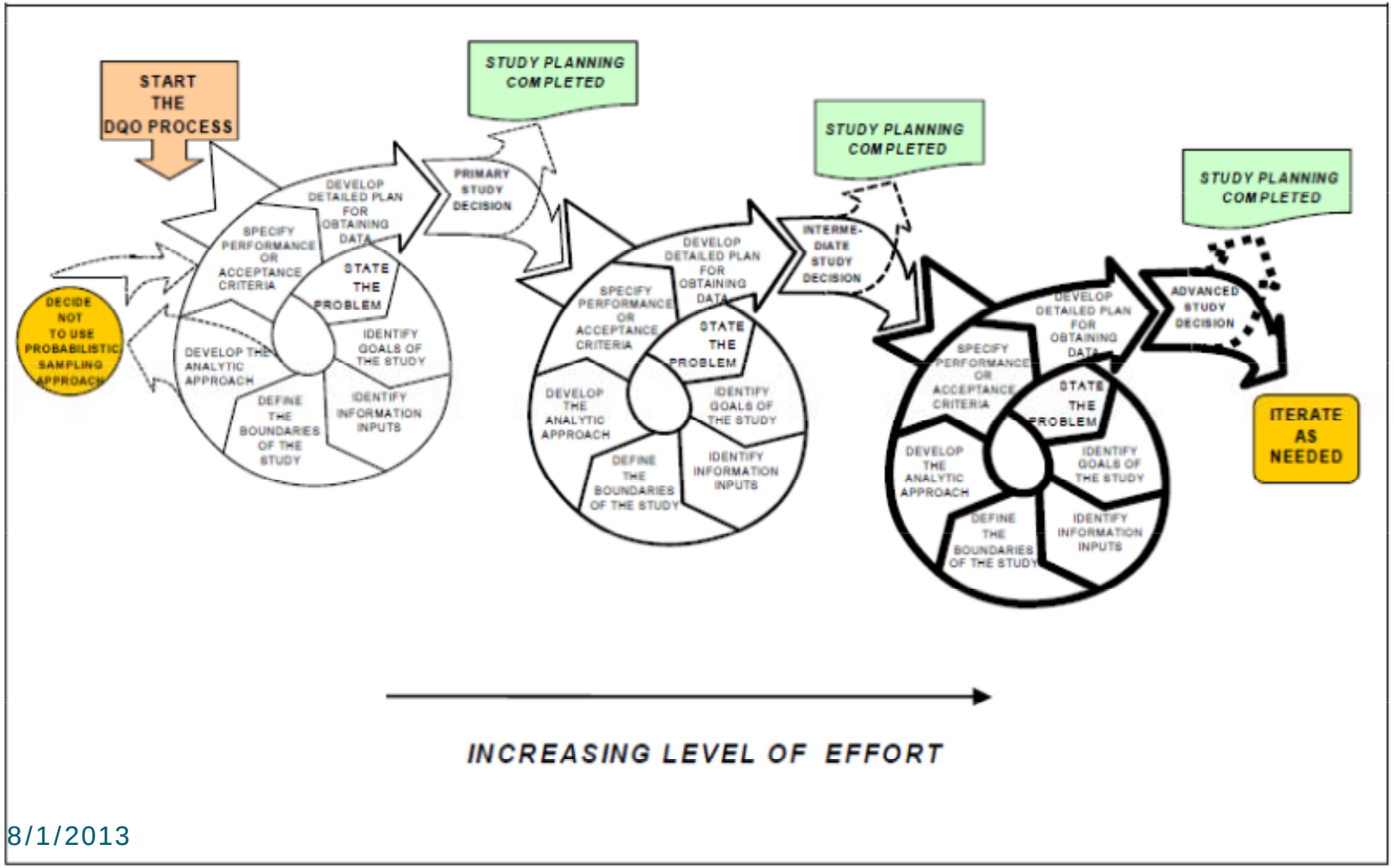
Upcoming Work for Boeing RFI Subarea 10 Characterization

Time Period	Activity
September – November 2013	Field investigation to implement the Subarea 10 Work Plan
November 2013 – January 2014	Evaluation of field investigation results, assess remaining data gaps through comprehensive DQO process
January 2014	Additional field investigation to address identified data gaps

DQO evaluation and data collection efforts continue in an iterative fashion until all data gaps have been addressed

Data Review & DQO Confirmation

- DQOs will be reviewed in iterations and additional field work performed until all DQOs are achieved.



Schedule

Upcoming Boeing SSFL Public Meetings

Date	Activity
September 5	Master RFI Data Gap Work Plan Addenda for Boeing RFI Subarea 1A Central
September 26	Master RFI Data Gap Work Plan Addenda for Boeing RFI Subareas 1B North and 1B Southeast
November 14	Master RFI Data Gap Work Plan Addenda for Boeing RFI Subareas 1A South and 1B Southwest

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Wrap Up/Questions

- Questions
- Community Involvement
  - Subscribe to the SSFL e-list
  - Monthly SSFL Progress Report via e-list
  - Request for Notification of document uploading

For questions regarding SSFL and Community Involvement contact:

marina.perez@dtsc.ca.gov

- Site Tour Safety Briefing