



Draft Sampling and Cleanup Program Fiscal Year 15/16

Residential Properties Surrounding Exide

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Cleanup

October 28, 2015

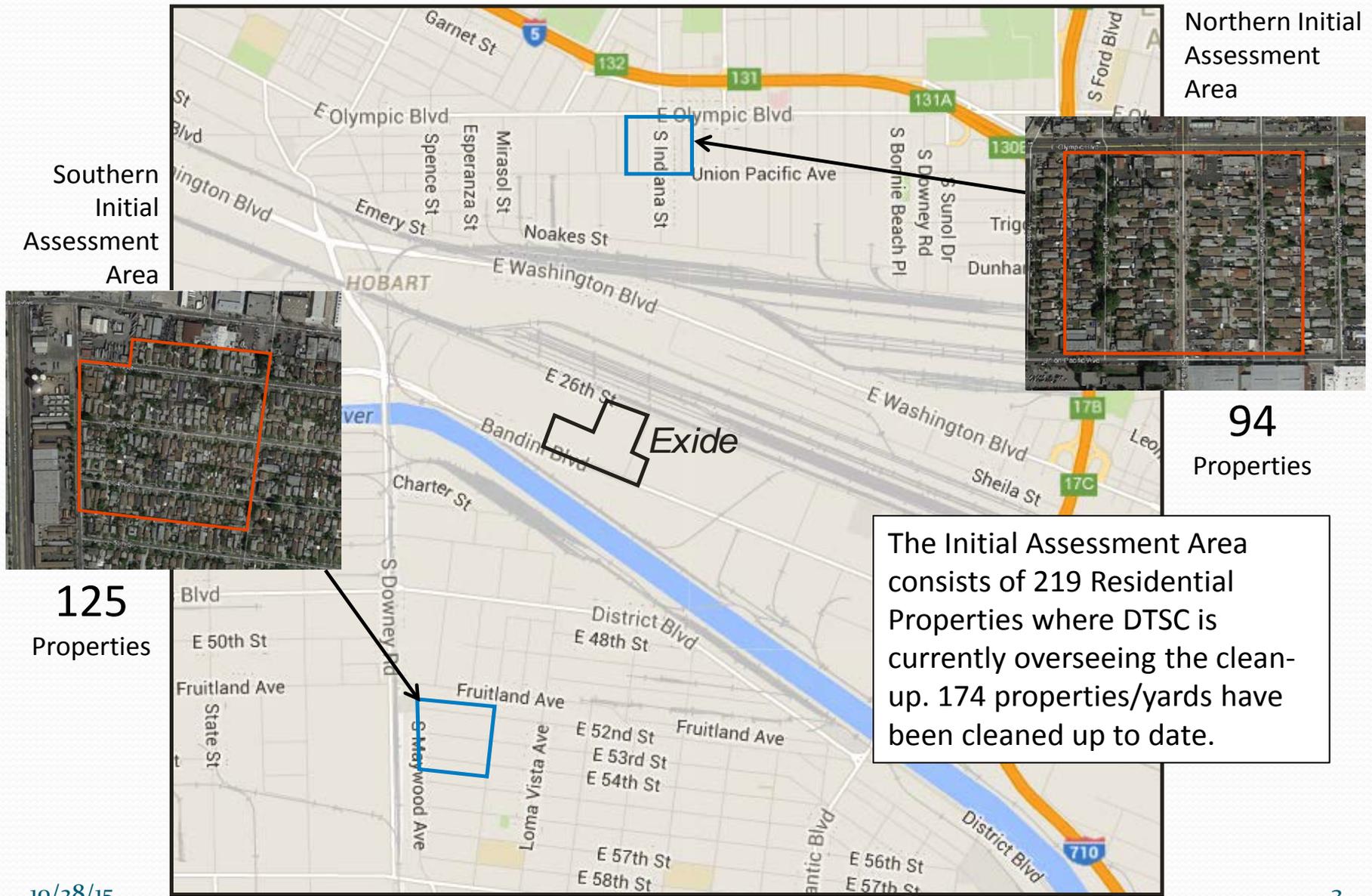


Draft Sampling and Cleanup Plan Fiscal Year (FY) 15/16

- Overview of Previous Sampling Efforts [*Video*]
- Draft Plan to Continue Sampling
- Draft Plan for Focused Cleanup of Already Sampled Expanded Area Properties - FY 2015/2016
- Draft Prioritization Plan for Comprehensive Cleanup

Overview of Previous Sampling Efforts

Initial Assessment Area



Northern Initial Assessment Area

Southern Initial Assessment Area

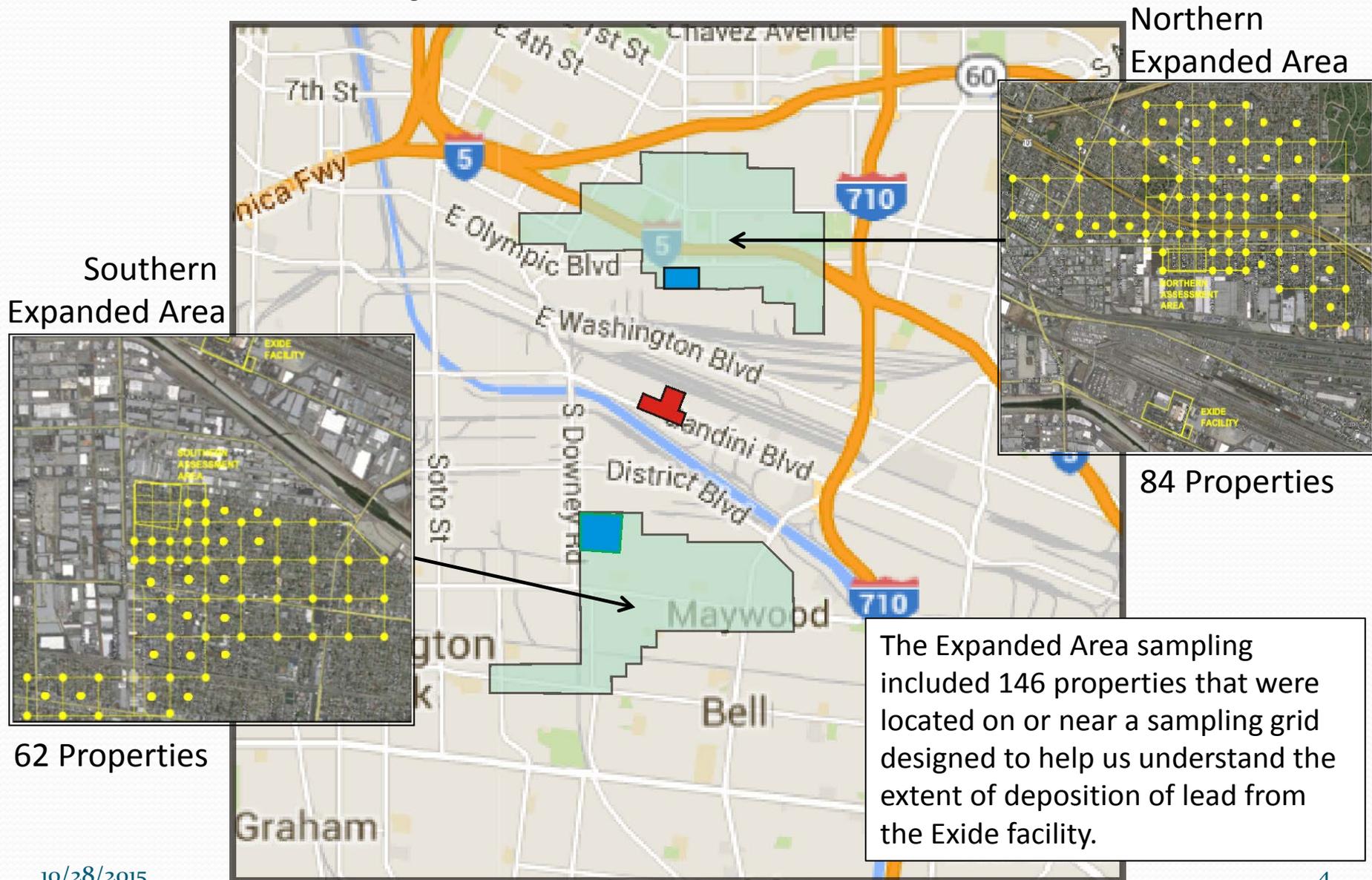
94 Properties

125 Properties

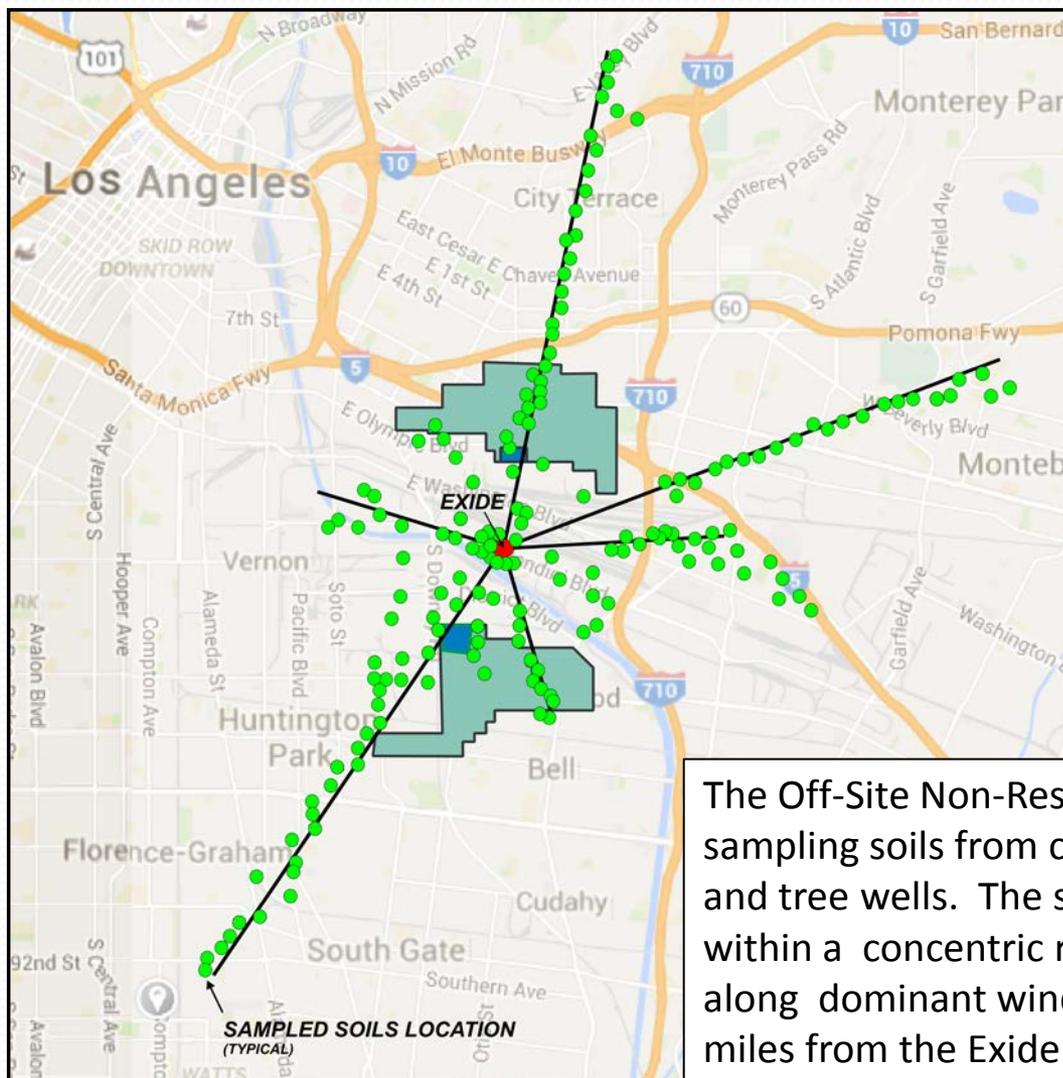
The Initial Assessment Area consists of 219 Residential Properties where DTSC is currently overseeing the clean-up. 174 properties/yards have been cleaned up to date.

Overview of Previous Sampling Efforts

Expanded Assessment Area



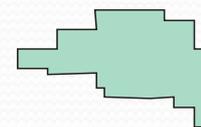
Off-Site Non-Residential Sampling



Initial Assessment
Area Soils (Residential)



Expanded Areas

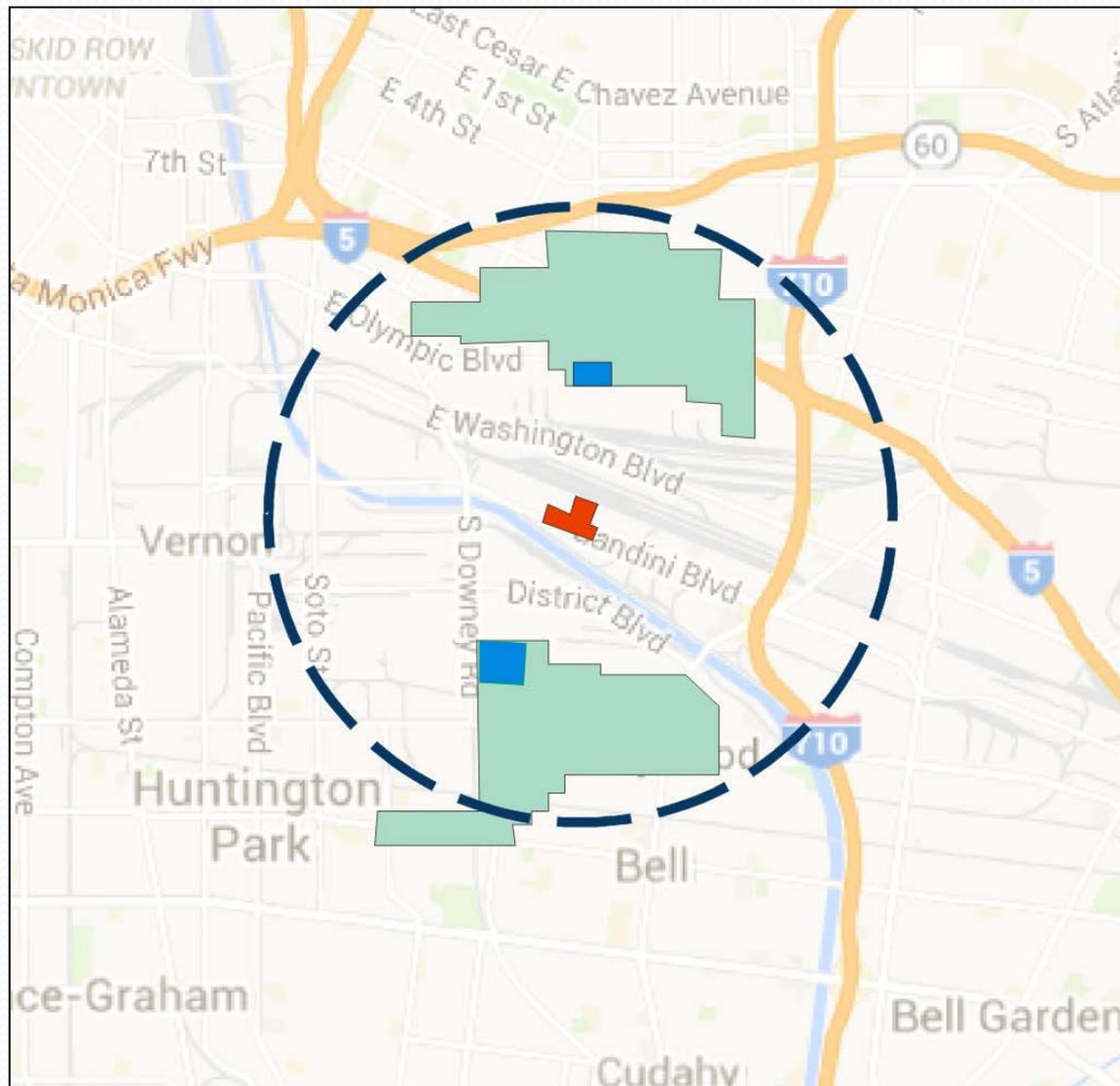


Sampling Transects
Wind Directions



The Off-Site Non-Residential soil sampling consisted of sampling soils from common areas such as medians and tree wells. The sampling began by collecting soils within a concentric radial pattern to 7500 feet, then along dominant wind transects to approximately 4.5 miles from the Exide Facility.

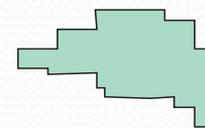
Overview of Sampling Programs



Initial Assessment
Area Soils (Residential)



Expanded Area
Soils (Residential)



DTSC's Preliminary
Analysis of the Extent of
Lead in Soils from Exide's
Emissions





Draft Plan to Continue Sampling

Goal

- Rapidly screen properties with proven technology.
 - Identify those properties with lead contamination very quickly.
 - Prioritize properties so we can address those properties with the highest lead and exposure potential first.
- Review sampling techniques to identify an available method that is:
 - Recognized by Environmental Professionals
 - Reliable
 - Easily deployed
 - Capable of providing immediate results
 - Supportive of additional analysis as needed

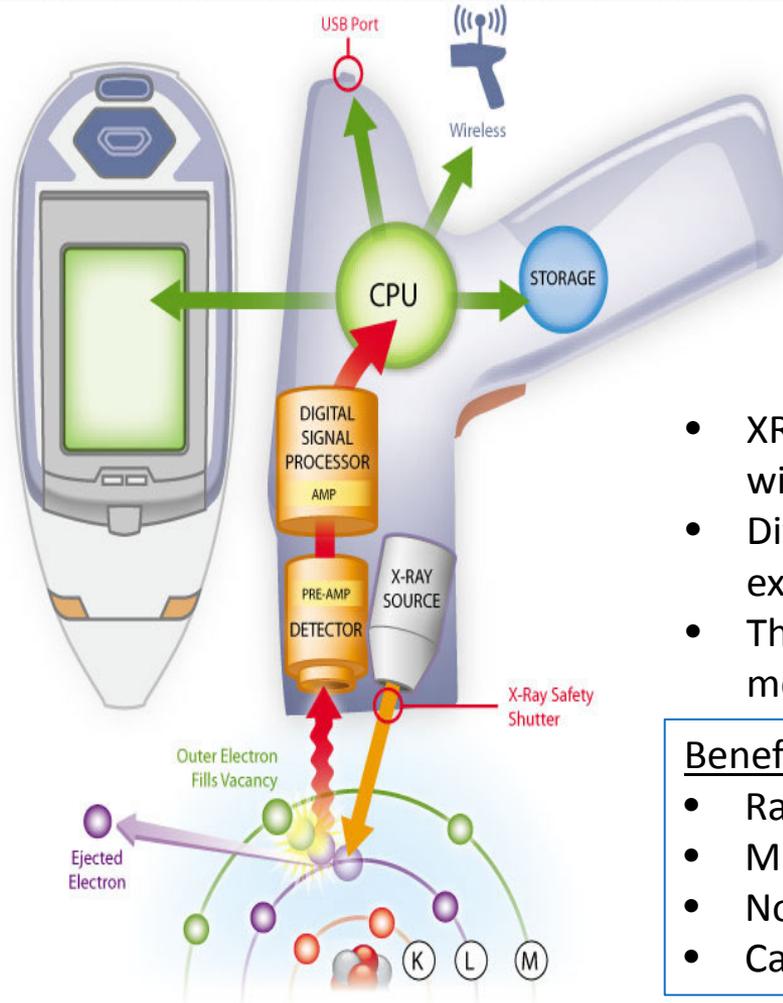
Draft Plan to Continue Sampling

Comparison of Current Sampling Protocol to XRF

<u>Current Sampling Protocol</u>	<u>X-Ray Fluorescence Analyzer (XRF)</u>
<ul style="list-style-type: none">- Collecting discrete samples for laboratory (lab) analysis- Typically one crew can sample 1 - 2 properties/day- Turn-around-time for lab results 2 to 4 weeks typically	<ul style="list-style-type: none">- Collect discrete samples for instant field analysis, and confirmation lab samples- One crew can sample 4 – 6 properties/day- Instant results

Draft Plan to Continue Sampling

What is an X-Ray Fluorescence Analyzer?



- XRF is a result of the changes that take place within an atom.
- Different metals behave in unique ways when exposed to x-ray energy.
- The XRF measures this behavior and identifies the metals present and at what concentrations.

Benefits:

- Rapid analysis – results in minutes
- Minimal or no sample preparation
- Non-destructive analysis
- Can analyze multiple metals

Draft Plan to Continue Sampling - Process

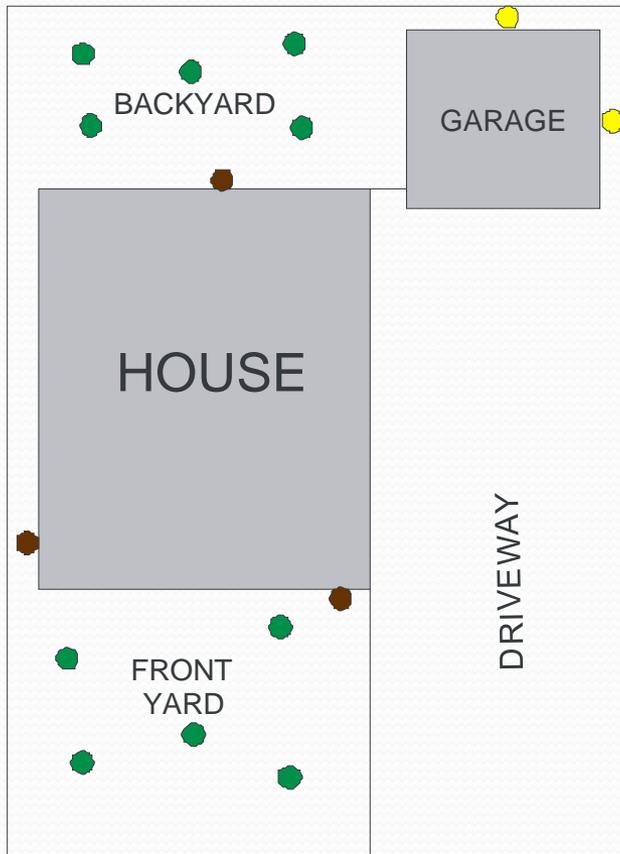
Public Outreach and Obtain Access Agreement

- Send out mass mailing based on sampling options
- Partner with community organizations and local government partners to maximize outreach efforts
- Meet with property owners and tenants once access is obtained
- Meet with Priority 1 property owners and tenants after sampling
- Discuss results of data and clean-up program with owners

Document Property Conditions for Sampling

- Sample crew will create a sketch of property and determine the appropriate sampling locations
- ~ Ten (10) sample locations in front and back yard
- ~ Five (5) other sample locations such as near garages, gardens, and play areas

Draft Plan to Continue Sampling- Process



STREET

Typical Sampling Locations

- Yard Area
- Drip Zone or Downspout
- Other Areas

Soil Sampling with XRF

- We propose to sample 0-3" depth at all sample locations on the property.
- We propose to sample 2 locations from front and Back yards to 18" and analyze depths from 3-6", 6-12", and 12-18".
- We propose to collect 10% of the total samples which will be sent under a chain-of-custody for confirmation by laboratory analysis.

Exterior Paint Sampling with XRF

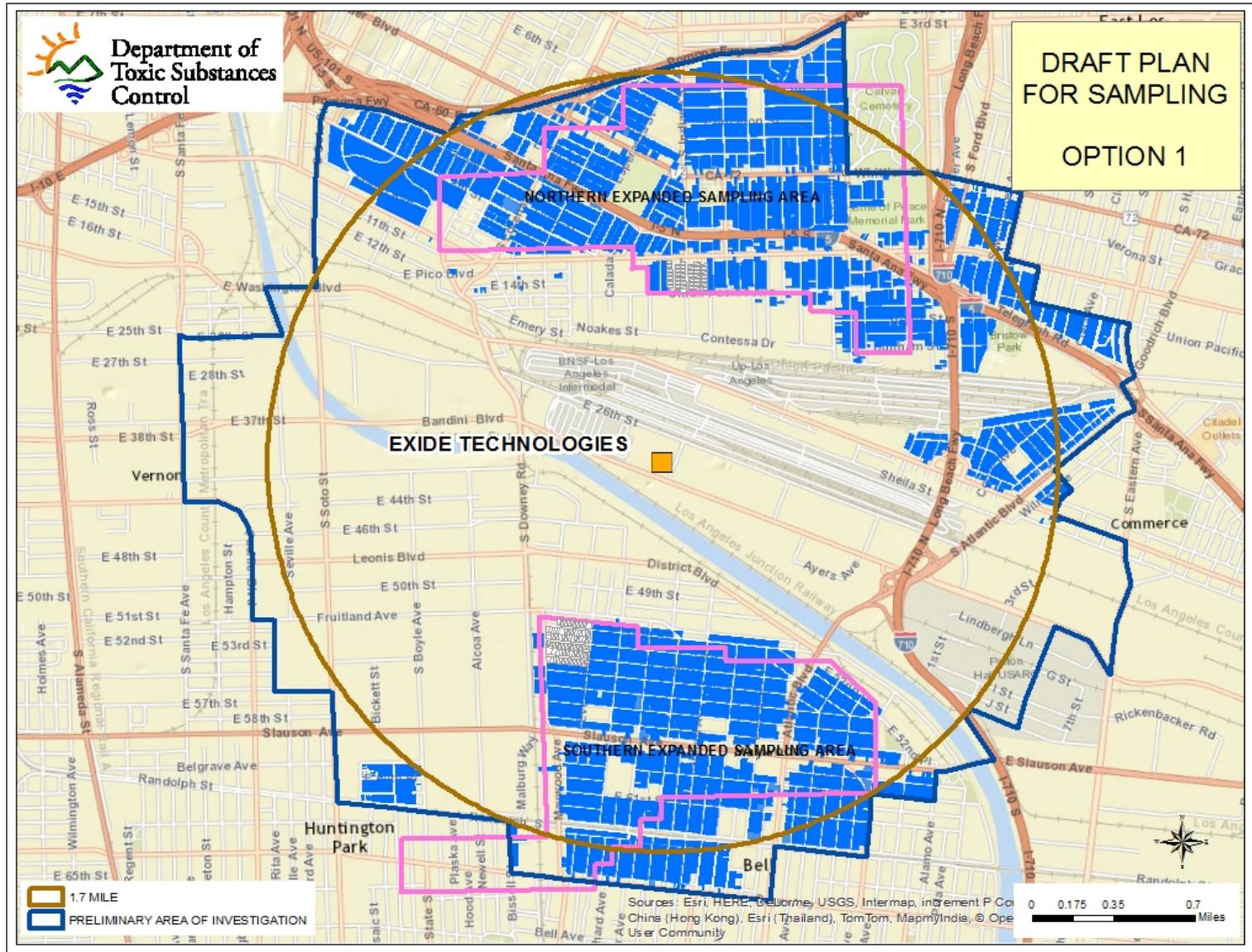
- We propose up to 6 samples of exterior painted surfaces of structures.
- We propose to collect 2 paint chip samples for laboratory analysis.

Draft Plan to Continue Sampling

Sampling Order Options

- **Option 1 – Sample on First Come First Served Basis**
 - Post information on DTSC website and social media
 - Notify by mail to ALL Properties within the Preliminary Area of Investigation
 - Work with our co-regulators and local governments
 - Sample ANY property with the Preliminary Area of Investigation in the order that we received a signed access agreement
- **Option 2 – Phased Sampling Only in Focused Areas**
- **Option 3 – Option 1 and Option 2 Combined**

Draft Plan to Continue Sampling



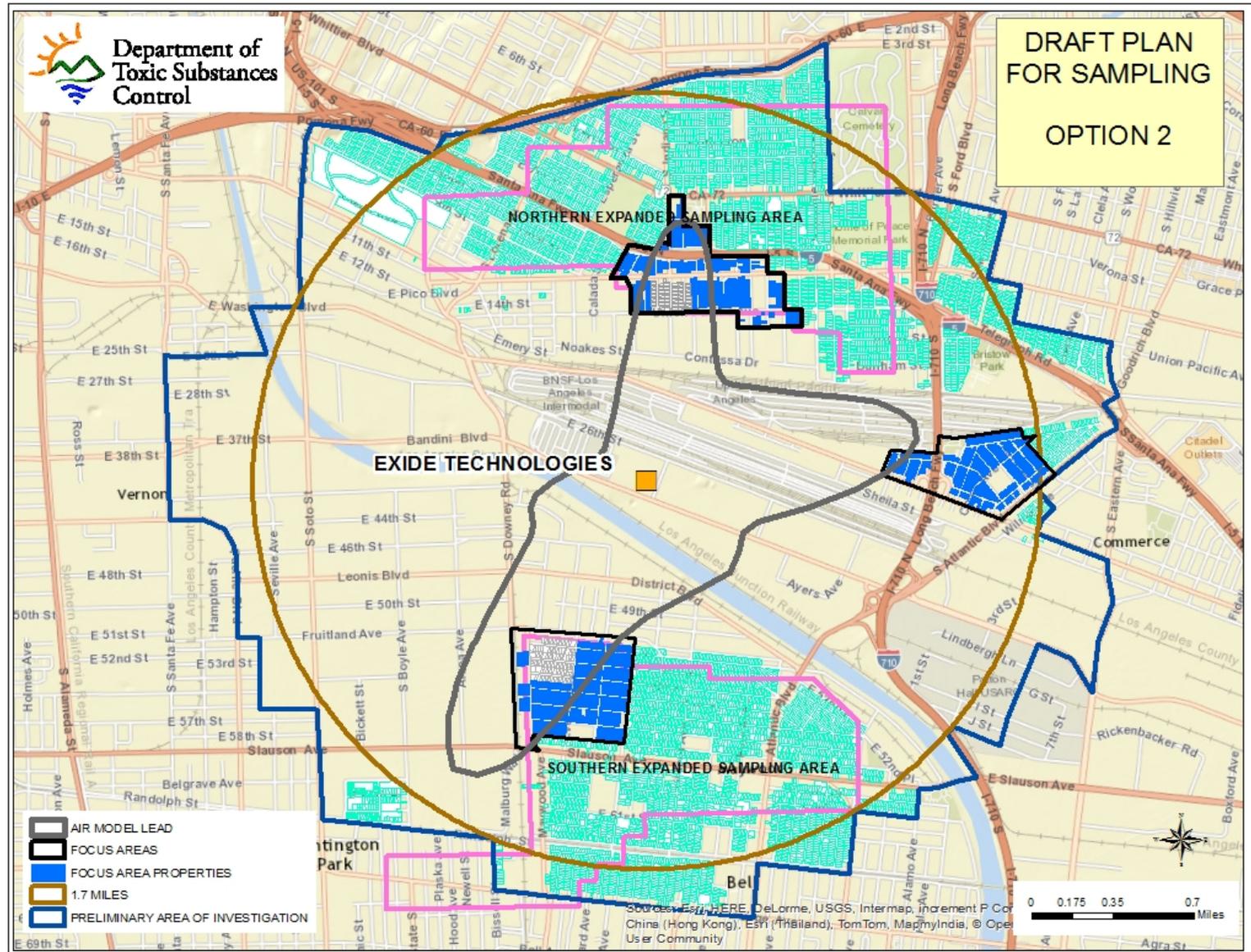


Draft Plan to Continue Sampling

Sampling Order Options

- Option 1 – Sample on First Come First Served Basis
- **Option 2 – Phased Sampling Only in Focused Areas**
 - Identify Focused Areas based on expected impact
 - Work with community organizations and to canvas neighborhoods
 - Finish sampling in the focused area before moving on to new areas
- Option 3 – Option 1 and Option 2 Combined

Draft Plan to Continue Sampling

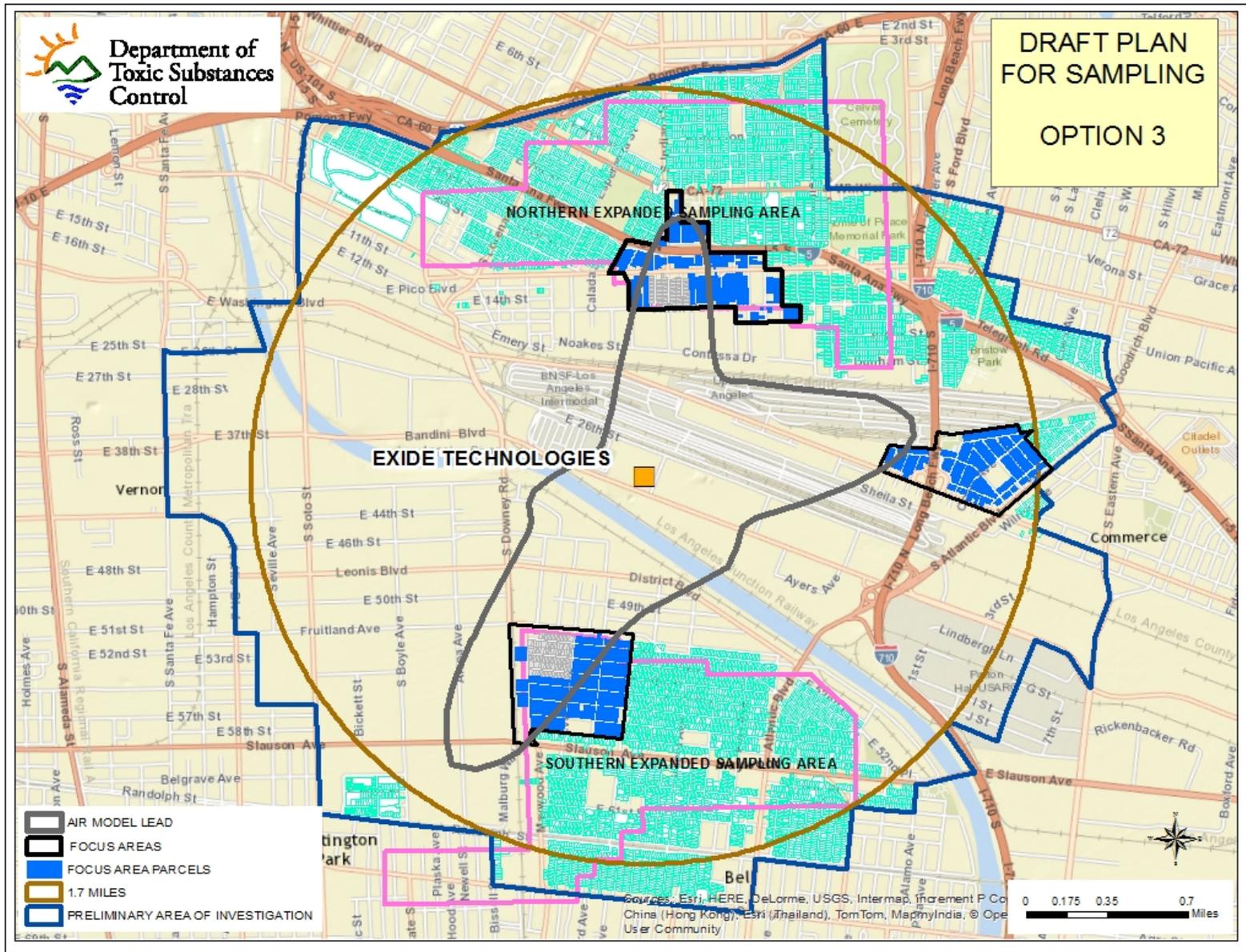


Draft Plan to Continue Sampling

Sampling Order Options

- Option 1 – Sample on First Come First Served Basis
- Option 2 – Phased Sampling Only in Focused Areas
- **Option 3 – Option 1 and Option 2 Combined (Preferred)**
 - Broad notification
 - Identify Focused Areas based on expected impact
 - Work with community organizations to canvas neighborhoods
 - Prioritize sampling in the Focused Areas first
 - Also sample other areas on First Come First Served Basis as resources are available

Draft Plan to Continue Sampling





Questions on Draft Sampling Plan ?

Plan for Prioritization of Cleanup in FY 2015/2016

Prioritization used in the Initial Assessment Area

- Priority 1 Properties
 - One sample with lead greater than or equal to 1,000 ppm in the upper 3 inches or two or more soil samples at any depth.
- Priority 2 Properties
 - One sample with lead greater than 400 ppm in the upper 3 inches or two or more soil samples at any depth.
- Priority 3 Properties .
 - Sampling identifies lead in soil greater than 80 ppm in the upper three inches based on a property wide average.

- **Priority for cleanup in FY 2015/2016 are the properties already sampled in Expanded Area and identified as Priority 1 based on the above criteria.**
- **Additional Priority 1 properties identified in the proposed sampling plan will be addressed in this Fiscal Year (15/16) as resources allow.**
- **Remaining properties will be cleaned up, beginning next Fiscal Year (16/17), under a Comprehensive Cleanup Plan.**

Draft Plan for Proposed Cleanup FY 15/16

Outreach

- Meet with Priority 1 property owners and tenants after sampling
- Discuss results of data and cleanup program

Schedule and Then Begin Excavation

- Verify sampling results, determine lead-based paint impacts, and determine yard-specific excavation.
- Excavate to a depth corresponding to a statistical averaging of 80 ppm
- Maximum depth of excavation to 18" unless tree roots or structures will be compromised.
- High Efficient Particulate Air (HEPA) vacuum exterior hardscapes during excavation and post-excavation.

Restoration

- Backfill with clean structural soil, and top six inches with topsoil.
- Re-landscape with sod, mulch, or xeriscape

Interior Cleaning

- Interior HEPA cleaning offered to property owner/tenant

Lead-Based Paint

- In 1977 the United States banned lead-based paint (LBP) for residential properties.
- Homes built before 1977 are likely to have LBP unless it was already removed.



If lead-based paint is not addressed,
exposure will continue

Why is addressing LBP Important?

- LBP on houses & structures is a continuing health risk, especially to children
- Deterioration of LBP over time is a continuing source of contamination inside the home and in the yard

What can be done?

- LBP can be removed before soil removal work.
 - No long term maintenance issues
- or
- LBP can be stabilized before soil removal work.
 - Short-term solution
 - Requires regular maintenance
 - Future soil contamination remains a concern if stabilization deteriorates or if LBP is not removed appropriately

Agencies with jurisdiction related to LBP Issues

- City & County Public Health Departments
- CA. Dept. of Community Development Services
- U.S. Housing and Urban Development (HUD)

Draft Prioritization Plan for Comprehensive Cleanup

There will be a large number of properties within the Preliminary Area of Investigation that will require cleanup. Because of this, there is a need to establish a more detailed prioritization plan in order to address properties with greater exposure potential first.

Based on highest lead concentrations in soil and greater exposure potential within each Priority

- Priority 1
 - P1-A: Properties with a child that has an elevated Blood-Lead level (≥ 5 ug/L)
 - P1-B: >1000 ppm in Play Areas within: Daycares, Schools, Parks
 - P1-C: >1000 ppm with bare soils; children 0-7 years; pregnant woman
 - P1-D: >1000 ppm with bare soils; no children
 - P1-E: >1000 ppm, no bare soils
- Priority 2
 - Same Priority as P1 above but based on lead concentrations between 400 and 1000 ppm.
- Priority 3
 - Same Priority as P1 above but based on a site wide average lead concentration above 80 ppm.

Draft Prioritization Plan for Comprehensive Cleanup

Questions to Consider

Based on highest lead concentrations in soil and a variety of exposure factors:

- Should we give greater priority to properties with lower concentrations of lead, but where bare soils and children are present, compared to properties with higher lead levels of lead with no children present?
- What other factors should be considered?

For Example:

P-1: Properties with a child that has an elevated Blood-Lead level (≥ 5 ug/L)

P-2: > 1000 with bare soils; children 0-7 years; pregnant woman

P-3: > 400 with bare soils; children 0-7 years; pregnant woman

P-4 > 1000 ppm with bare soils; no children

etc.

Higher Priority with Blood Lead Testing

- Blood lead testing can determine if a child is being impacted by lead
- If DTSC is notified of a property with a child that has an elevated blood lead level, we will respond immediately
- A coordinated effort by state and local agencies will be needed. A coordinated response should include:
 - Sampling to determine source of lead
 - Abatement of lead-based paint sources
 - Removal of contaminated soil

California Environmental Quality Act (CEQA)

What is CEQA?

- A California statute passed in 1970 to institute a statewide policy of environmental protection.
- Requires state and local agencies within California to follow a protocol of analysis and public disclosure of environmental impacts of proposed projects and adopt all feasible measures to mitigate those impacts.

What DTSC is Proposing

Initial Assessment Area - An Initial Study (IS) and Negative Declaration were prepared and approved following a 45 day public comment period in October 2014.

- For Cleanup of the Priority 1 Properties in FY 15/16, DTSC has determined that a Addendum to the Initial Assessment Area IS and Negative Declaration will comply with CEQA.
- For Comprehensive Cleanup in the Preliminary Area of Investigation, DTSC has determined an Environmental Impact Report (EIR) is required under CEQA.



Questions on Draft Cleanup Plan?