



# Public Draft Removal Action Workplan

Proposed Richmond Bay  
Campus Site  
RES Area and  
Groundwater

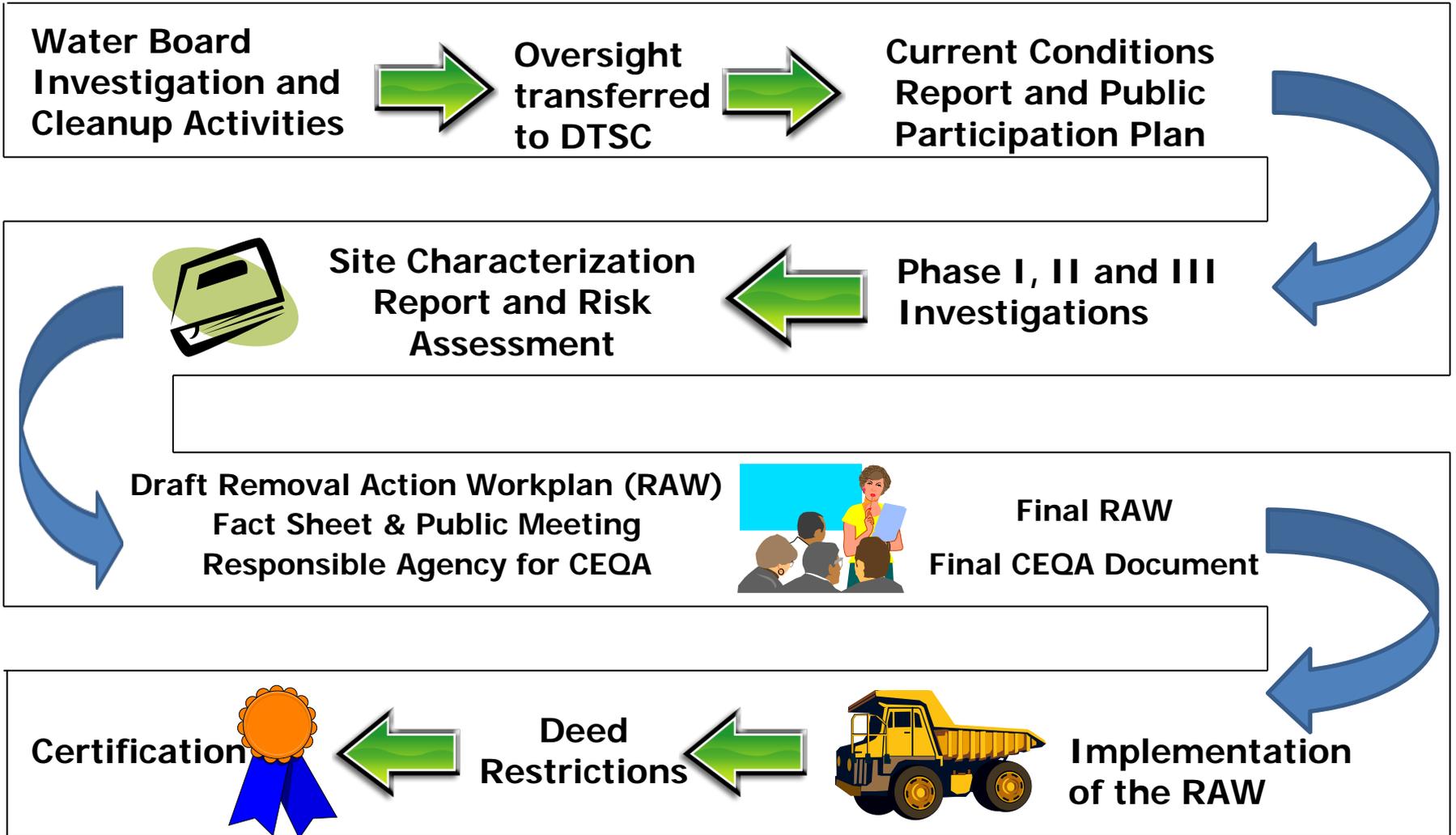
Public Meeting  
December 5, 2013



# Agenda

- Regulatory Process
- Site History
- Proposed Campus Land Uses
- RAW Overview
- Proposed Cleanup
- Soil Management Plan Overview
- Public Comments

# Site Investigation and Cleanup Process

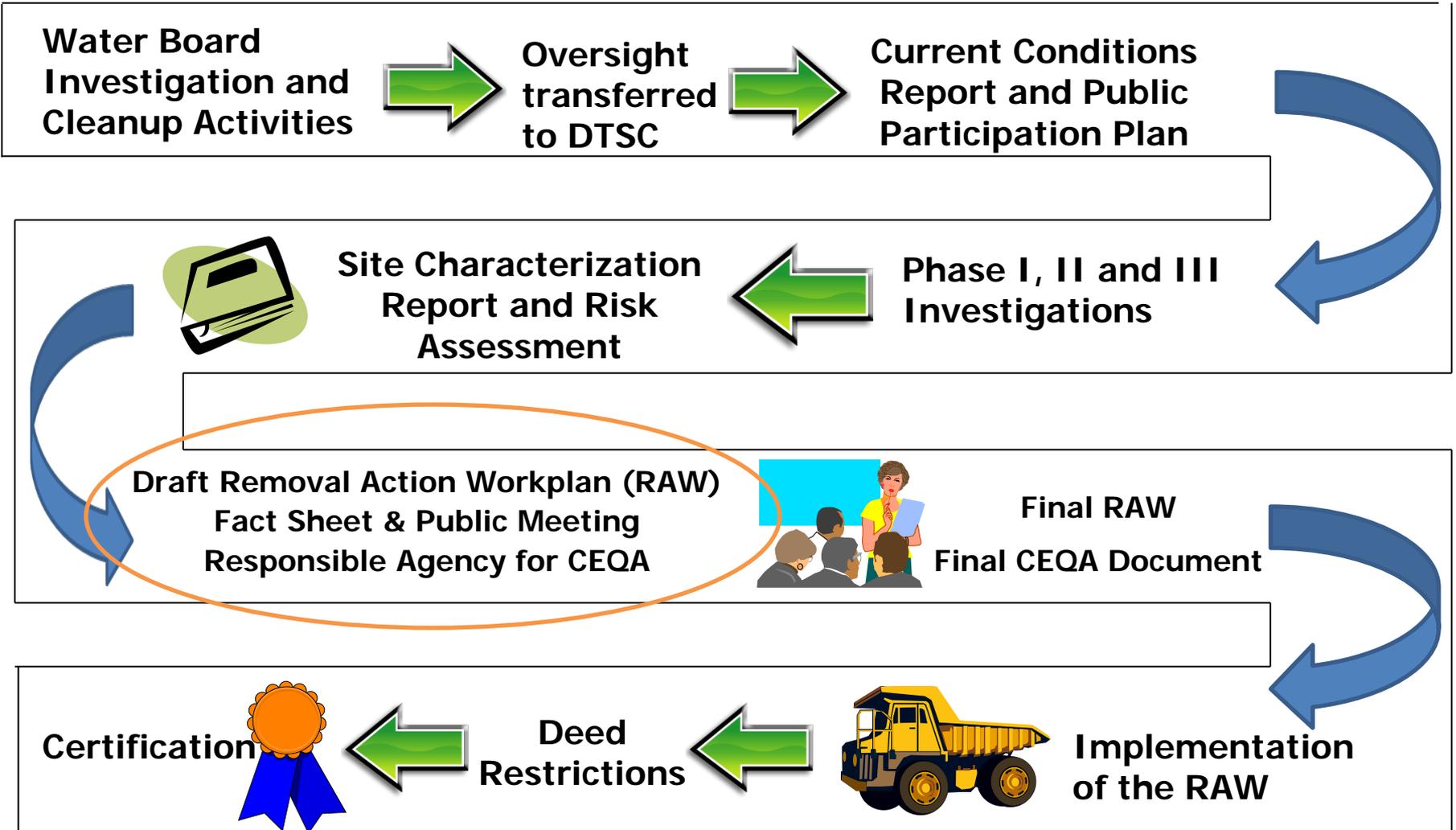


# California Environmental Quality Act

- Under CEQA a project is evaluated to determine if it will cause significant negative environmental impacts
- UC is the Lead Agency and DTSC is a Responsible Agency
- DTSC will use UC's Environmental Impact Report (EIR) as the basis to assess impacts associated with the RAW
- UC will certify their EIR and DTSC will determine if the EIR sufficiently evaluates DTSC's project



# Site Investigation and Cleanup Process





San Francisco

Brooks Island

Marina Bay

Stege Marsh

Meeker Slough

EBRPD Bay Trail

Former Zeneca

EPA

3300 Regatta

RFS

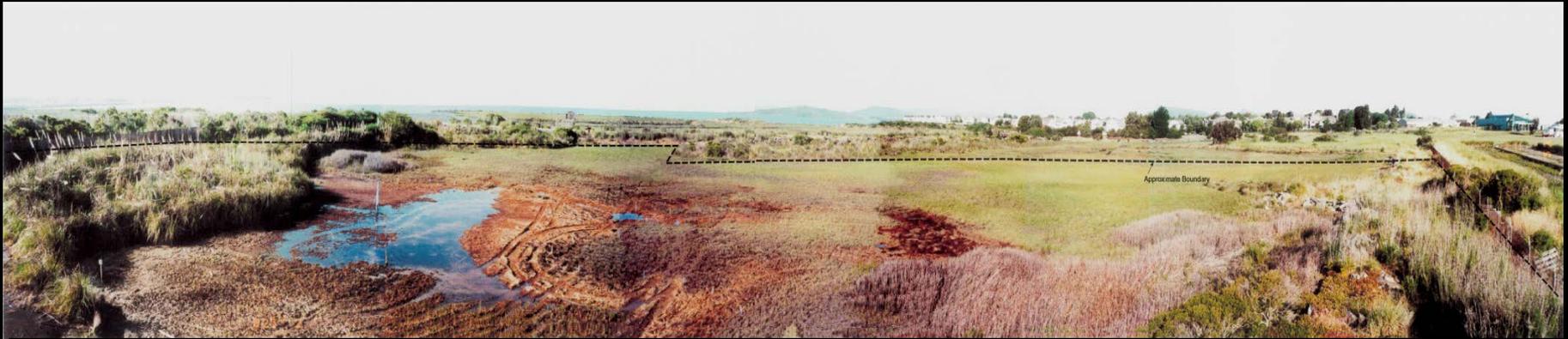
NRLF

PEER

B445

FPL





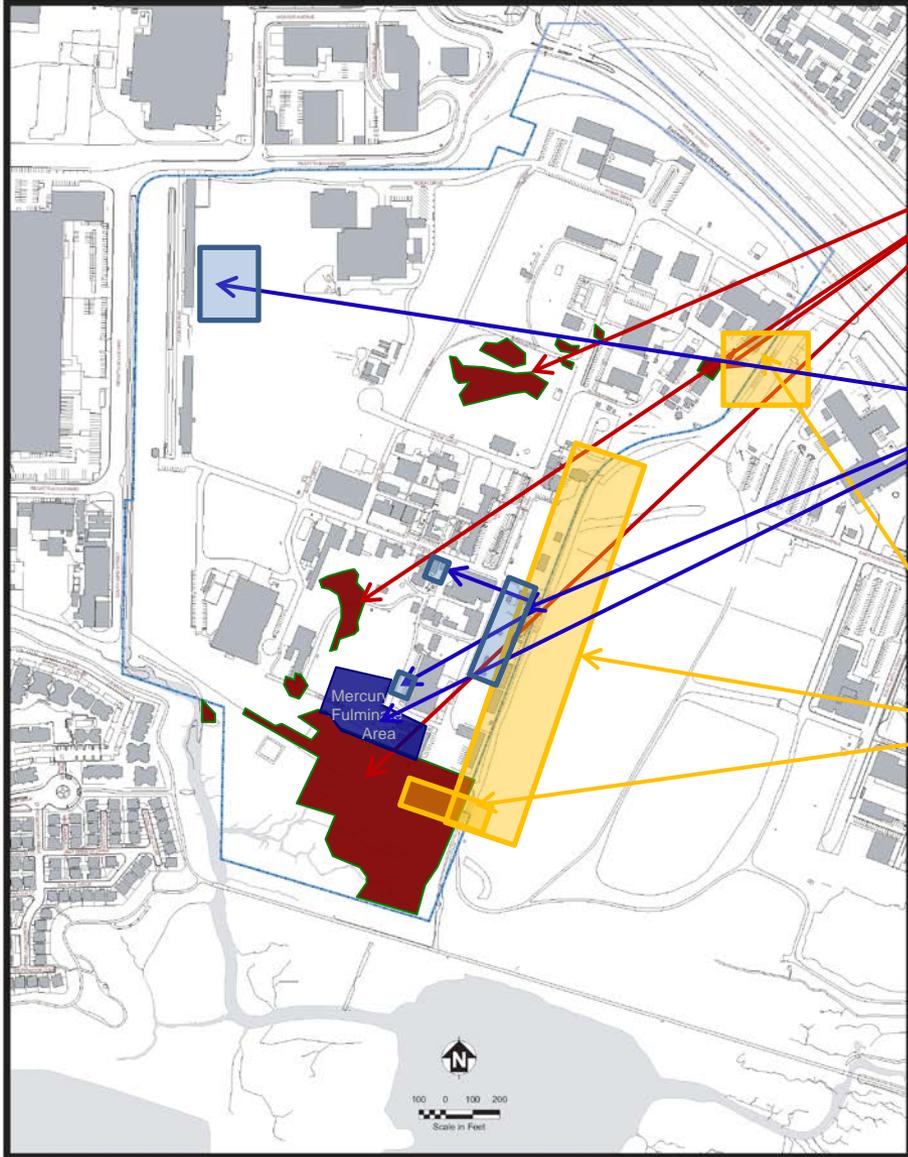
Contaminated Western Stege Marsh prior to clean up



Former Zeneca Site

RFS

Western Stege Marsh cleanup 2002-2004



RFS Remediation Summary  
Current Status

Most principal sources removed

Site Characterization Results  
Phase I, II, III

Soil: Mercury fulminate area  
Soil: Corporation Yard and PCBs  
GW: Carbon tetrachloride

Contaminants From Former Zeneca Site

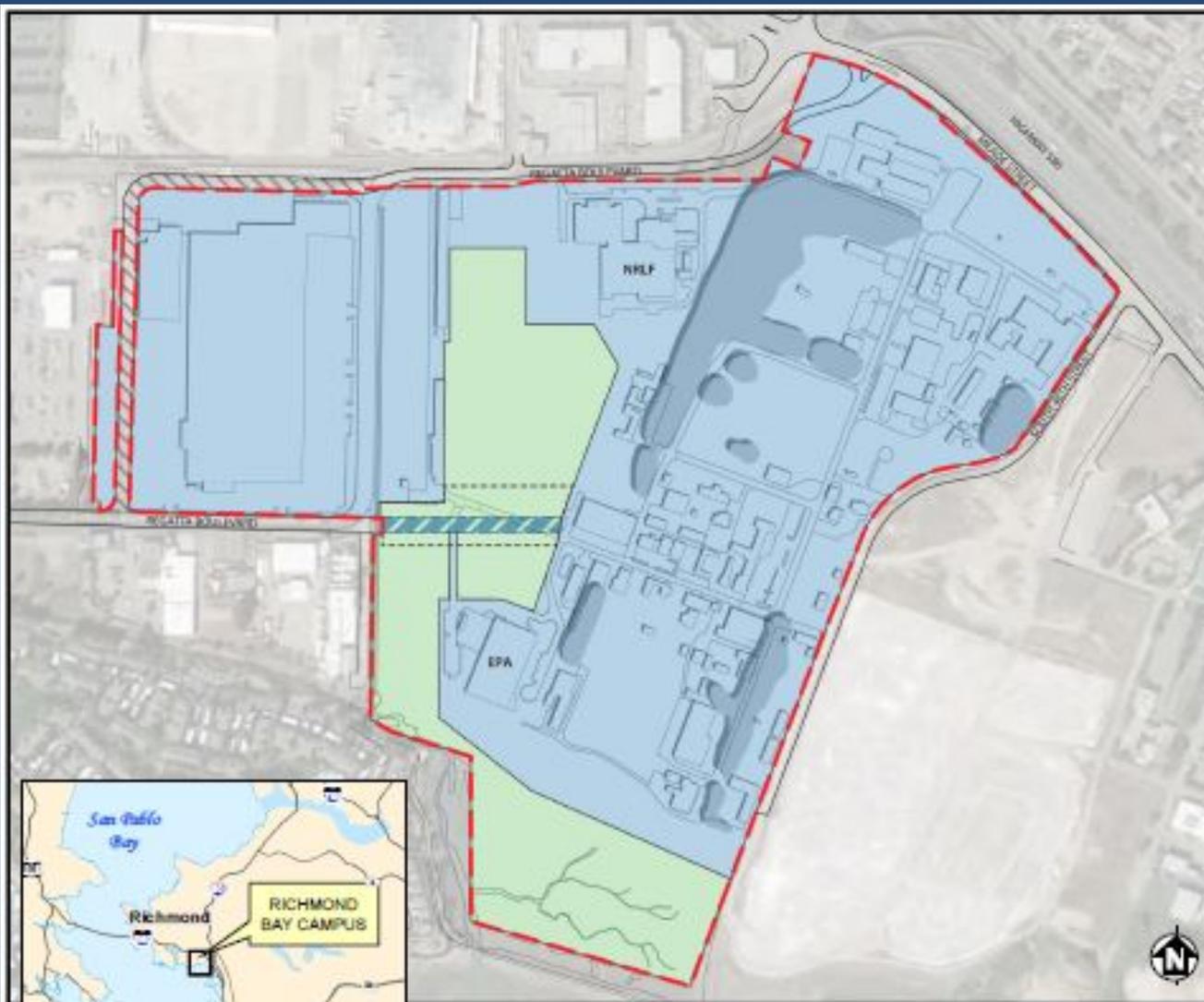
- Property Boundary
- Biological Active Permeable Barrier

Addressed by Upcoming FS/RAP

## The Richmond Bay Campus –

A new research campus to be cooperatively developed by the University of California, Berkeley and the Lawrence Berkeley National Laboratory





**LEGEND**

-  Property Boundary  
133.4 acres
-  Research, Education & Support  
107.4 acres
-  Natural Open Space - Bay Campus  
25.2 acres
-  Zone of Potential Road Crossing  
Natural Open Space
-  Potential Road Alignment  
Through Natural Open Space  
0.8 acres
-  City of Richmond Realigned  
Regatta Boulevard

NOTE: The potential road alignment is illustrative. A road with similar dimensions may be aligned differently but will fall within the Zone of Potential Road Crossing Natural Open Space.

Source:  
Adopted from Figure 1, LRDP Land Use Plan, in: LBNL, 2013. Notice of Preparation, Draft Environmental Impact Report, Richmond Bay Campus 2013 Long Range Development Plan and Phase 1 Development, Richmond Bay Campus, Richmond Field Station. January 4.



**Richmond Bay Campus**

**FIGURE 1-1  
RICHMOND BAY CAMPUS  
LOCATION MAP**

Removal Action Workplan

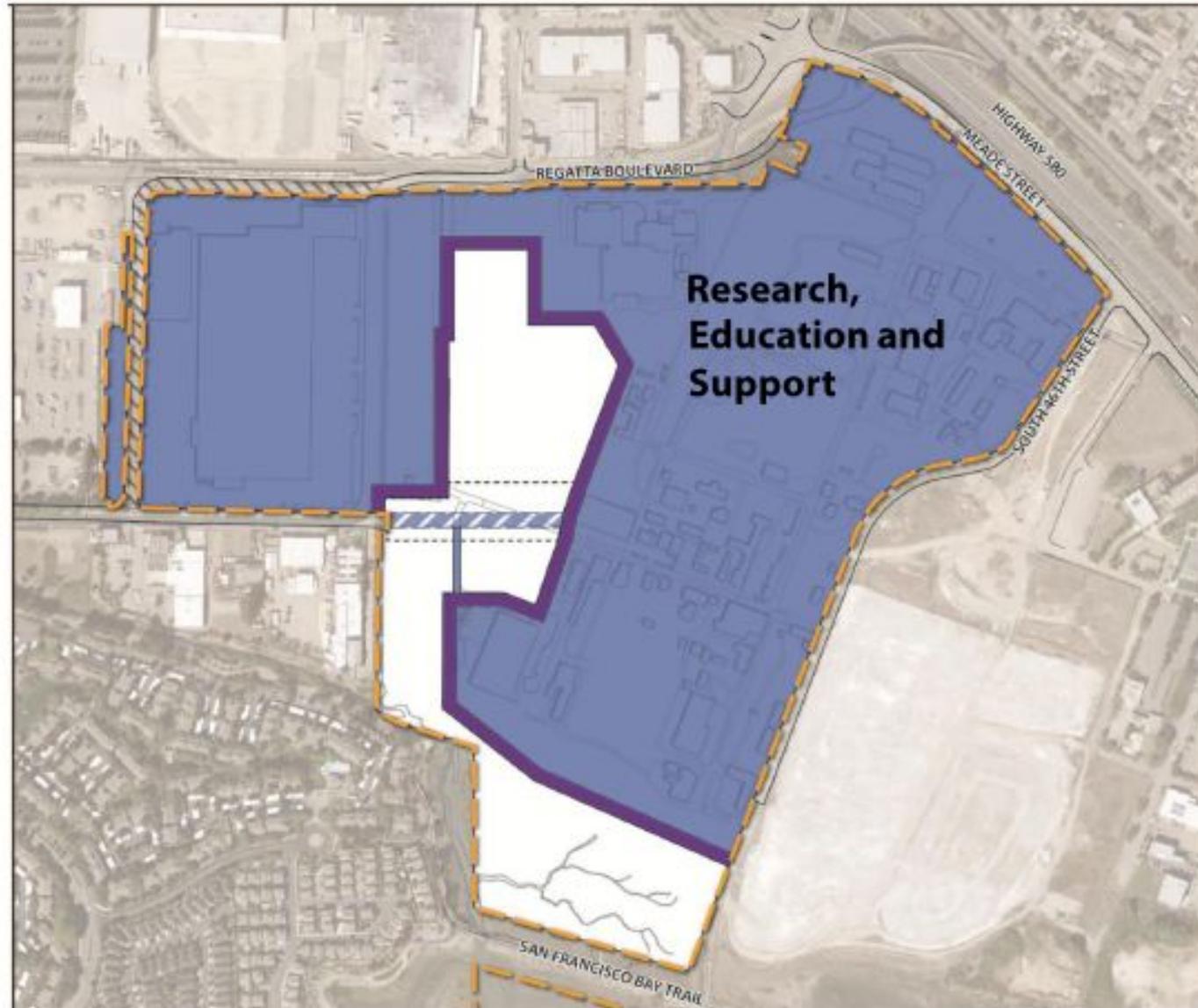
# LAND USE PLAN

## Research, Education and Support

108 acres

Facilities and Activities:

- Lab, classroom, office, admin. buildings
- Support infrastructure
- Community space
- Dining, visitor accommodation, retail
- Recreation
- Transportation infrastructure
- Open space (plazas, courtyards)
- Buffers for natural open space areas



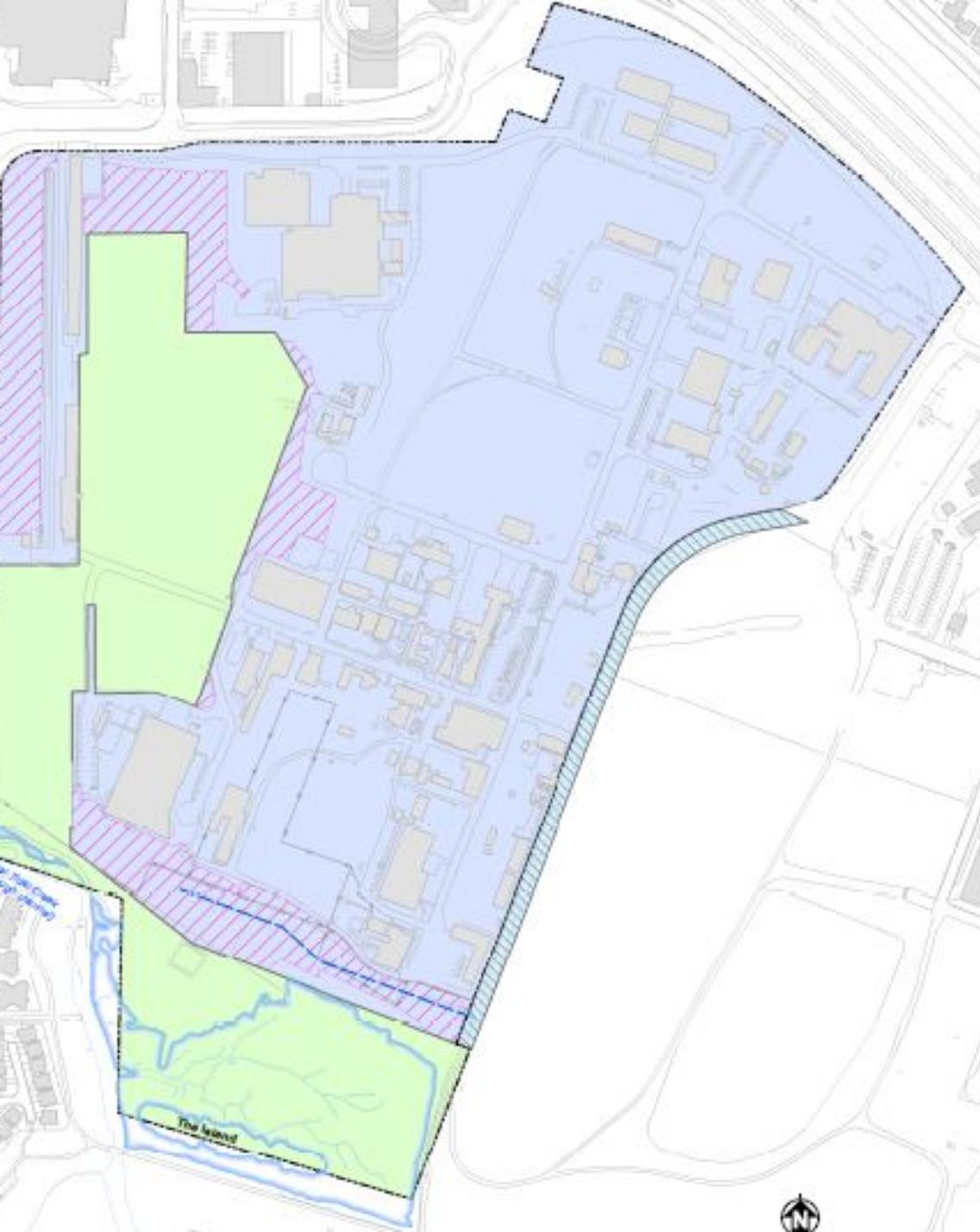
# LAND USE PLAN

## Natural Open Space

25 acres

- Western Stege Marsh and coastal grasslands to be protected
- Minimum 12 acres of natural preserve for coastal terrace prairie
- Connected
- Limited human intrusion





## RAW Scope

- RES Area Soils within RFS
- Groundwater within RFS
- NOS Area addressed separately
- Regatta Property not included

# Key RAW Milestones

## Site Characterization Report

Final May 2013

## Removal Action Workplan

Public Draft November 2013

## Public Review Period

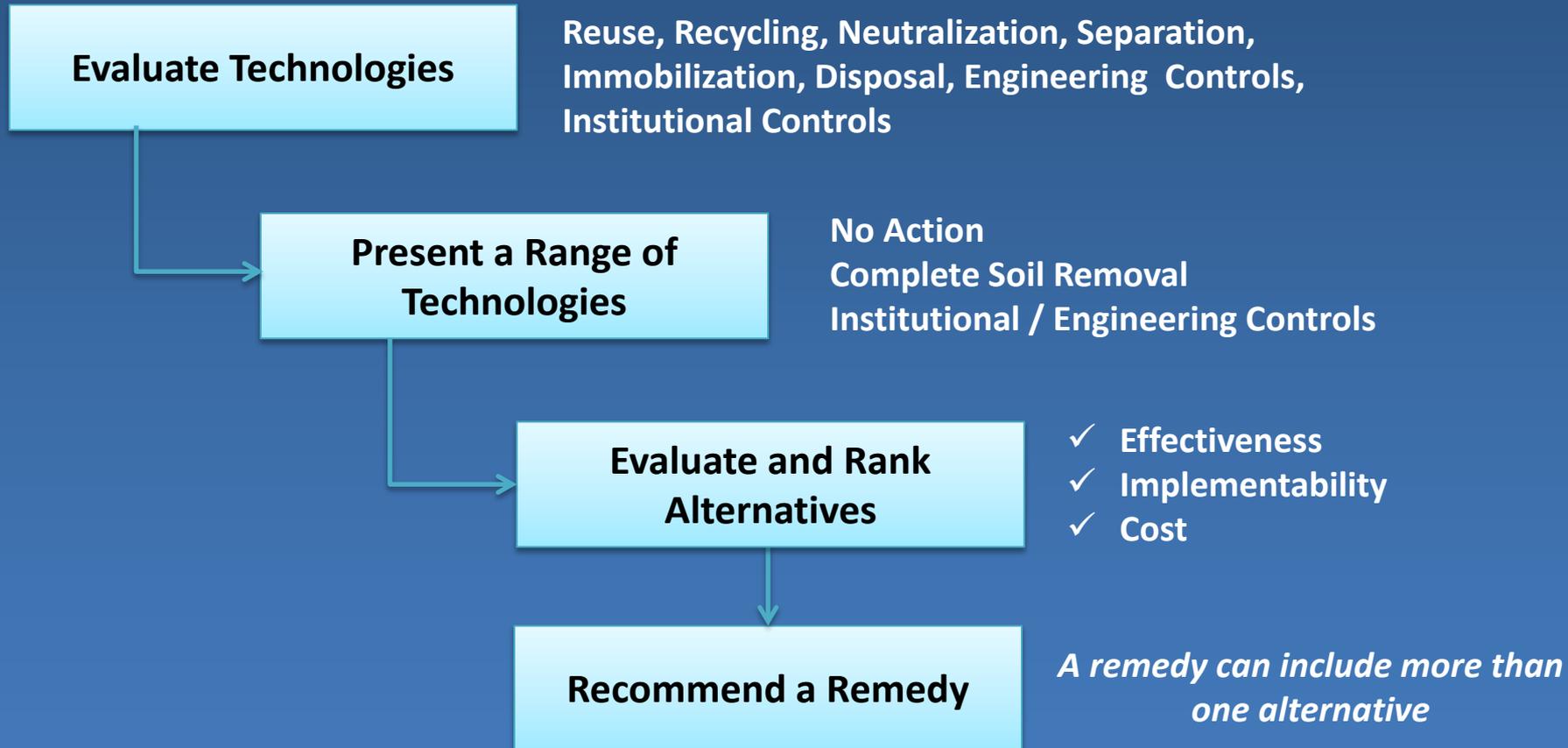
November 26, 2013 – January 10, 2014

*6,000 mailers, emails, newspaper announcement, Dec 5 meeting*

## Final Removal Action Workplan

Following UC Regent Approval of Proposed Richmond Bay Campus EIR, proposed May 2014

# RAW Roadmap



# Soil Alternatives

ALTERNATIVE	DESCRIPTION
Soil 1	<b>No Action:</b> Not Proposed
Soil 2	<b>Excavation to Unrestricted Use and Off-Site Disposal:</b> Not Proposed
Soil 3	<b>Excavation to Commercial Use, Off-Site Disposal, SMP, and Land Use Controls:</b> <i>Proposed</i>
Soil 4	<b>Land Use Controls:</b> Not Proposed
Soil 5	<b>Asphalt Cap, SMP, and Land Use Controls:</b> Not Proposed

# Groundwater Alternatives Carbon Tetrachloride Area

ALTERNATIVE	DESCRIPTION
Groundwater 1	<b>No Action:</b> Not Proposed
Groundwater 2	<b>Permeable Reactive Barrier, Land Use Controls, Monitoring:</b> Not Proposed
Groundwater 3	<b>Bioremediation, Land Use Controls, Monitoring:</b> Not Proposed
Groundwater 4	<b>Monitored Natural Attenuation, Land Use Controls, Monitoring:</b> <i>Proposed</i>

- TCE addressed within upcoming Campus Bay remedy
- All groundwater subject to ongoing monitoring program

# Cleanup Areas

## Soil

*Mercury Fulminate Area*

*Corporation Yard*

*PCB Areas*

*Deed Restrictions*

*Soil Management Plan*

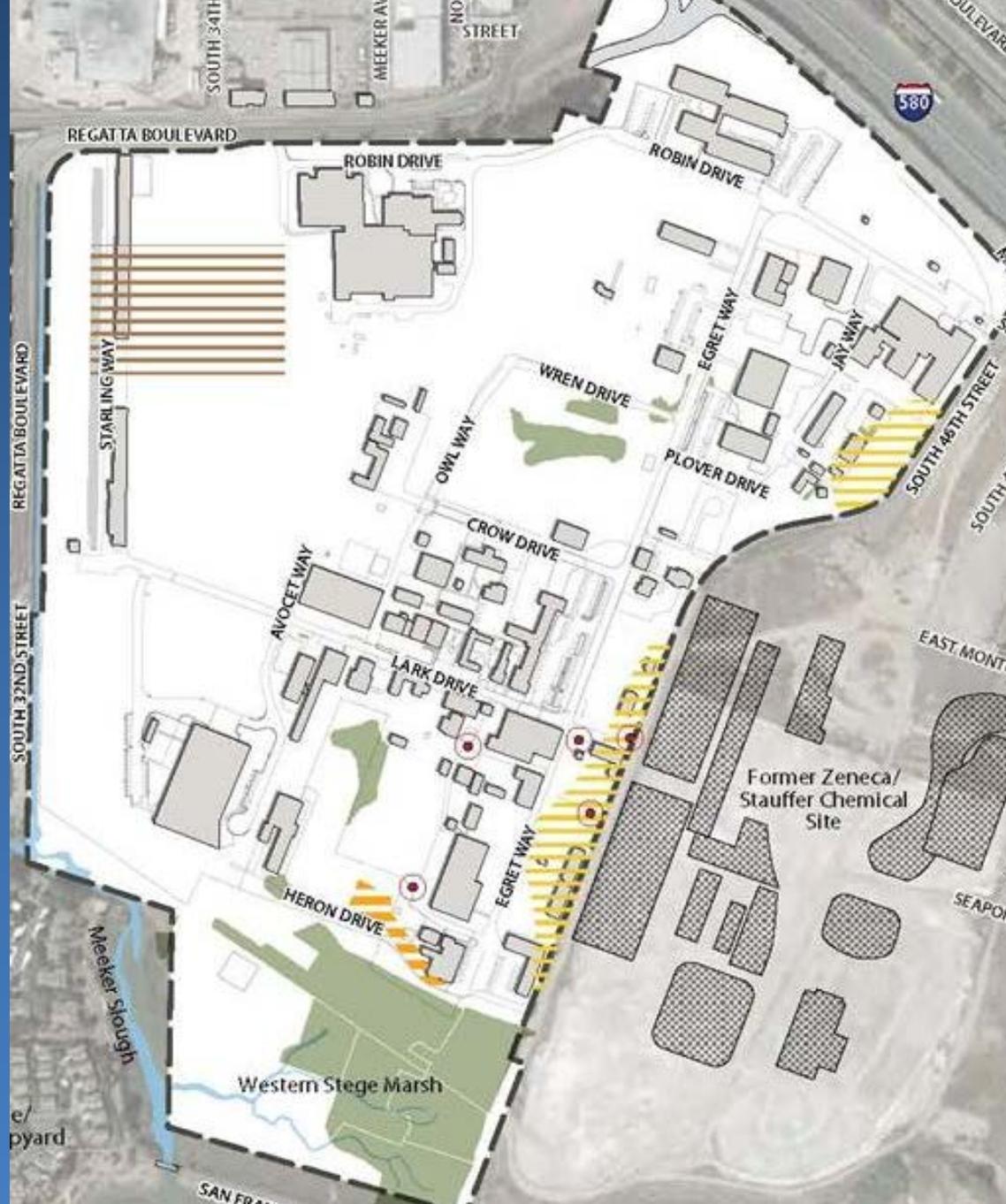
## Groundwater

*Carbon Tetrachloride Area*

*TCE Areas*

*Deed Restrictions*

*Annual Monitoring*



# Soil Management Plan

- Guidance for soil investigation prior to future construction or subsurface activities
- Ensures no unsafe conditions are present for construction workers, on-site tenants, or off-site communities
- Ensures no exposure to unsafe soil or groundwater contaminants for future tenants and workers
- Provides rigorous documentation, UC EH&S oversight, and DTSC approval throughout process
- Constantly monitored and updated

**Public Draft**

## **SOIL MANAGEMENT PLAN**

### **Removal Action Workplan, Attachment C**

**Richmond Bay Campus, Richmond, California**

**Research, Education, and Support Area within the Former  
Richmond Field Station**

*Prepared for:*

**University of California, Berkeley**

November 25, 2013

*Prepared by*

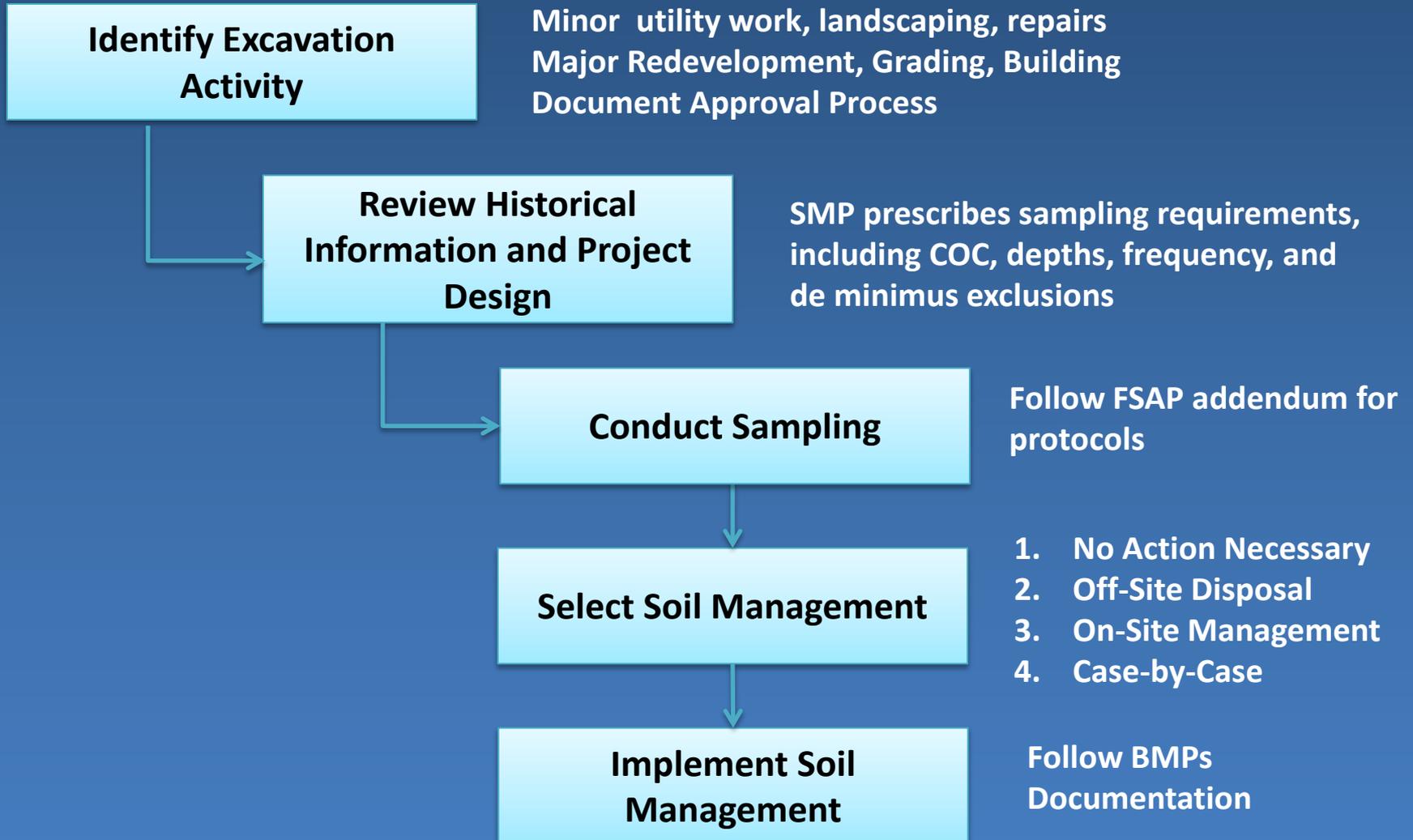


**TETRA TECH, INC.**

1999 Harrison Street, Suite 500  
Oakland, California 94612



# SMP Roadmap





<p><b>Resources</b></p> <ul style="list-style-type: none"> <li><a href="#">Home</a></li> <li><a href="#">About RFS</a></li> <li><a href="#">Contacts</a></li> <li><a href="#">For Faculty, Staff &amp; Students</a></li> <li><a href="#">Community Advisory Group</a></li> <li><a href="#">Remediation Project</a> <ul style="list-style-type: none"> <li><a href="#">Fact Sheet</a></li> <li><a href="#">Technical Documents</a></li> <li><a href="#">Air Monitoring Data</a></li> </ul> </li> <li><a href="#">Current and Future Activities</a></li> <li><a href="#">Restoration</a></li> <li><a href="#">Regulatory Agencies</a></li> <li><a href="#">FAQ</a></li> </ul>	<p><b>Welcome</b></p> <p>The RFS Environmental Website serves as a principal and current source for environmental news, monitoring data and resources for the UC Richmond Field Station community (UC staff, faculty and students, non-UC tenants, and visitors). This website allows for convenient access to information.</p>  <p><i>Flock of seventy American coots ( Fulica americana) Richmond Field Station Meeker Slough February 17, 2010</i></p> <p>If you have questions, concerns or suggestions related to the environmental remediation project, we're here for you.</p> <p>If you have any questions - from human resources issues to environmental health inquiries - please <a href="#">contact</a> us. A <a href="#">list</a> of names, phone numbers and other resources are available for you.</p>	<p><b>News</b></p> <p><b>Current News</b> <b>UPCOMING PUBLIC MEETINGS</b></p> <p><b>December 5, 2013 6:30- 8:30 PM</b> RAW Public Meeting B445 RFS See <a href="#">DTSC Public Notice</a></p> <p><b>December 11, 2013 7- 9 PM</b> Draft RBC LRDP EIR Public Hearing City of Richmond Council Chambers</p> <p>November 26, 2013 <a href="#">Removal Action Workplan Public Draft Published- Public Review Period Starts Today</a></p> <p>November 15, 2013 <a href="#">Draft EIR for Proposed Richmond Bay Campus Public Review Period Starts</a></p> <p>October 31, 2013 <a href="#">Latest RFS Groundwater Sampling Results</a></p>
---	--	--

# More information

RFS Environmental Website  
<http://rfs-env.berkeley.edu>

DTSC Envirostor  
<http://www.envirostor.dtsc.ca.gov/public/profile>

Richmond Public Library  
325 Civic Center Plaza, Richmond  
(510) 620-6554

Department of Toxic Substances Control  
700 Heinz Avenue, Berkeley, CA 94710  
Call for appointment (510) 540-3800

Richmond Field Station  
Building 478, (510) 665-3401

Public Draft RAW Comments by January 10, 2014

Lynn Nakashima  
[Lynn.Nakashima@dtsc.ca.gov](mailto:Lynn.Nakashima@dtsc.ca.gov)

# Information Online

Department of Toxic Substances Control

Website

[www.dtsc.ca.gov](http://www.dtsc.ca.gov)

EnviroStor

Site Information Database



PROTECTING FUTURE GENERATIONS

Alternatives Analysis

Perfumers reformulate to prevent worries over ingredients in fragrances



Latest News



Public



Business



Government



Media



Press

Office of Governor  
**Edmund G. Brown Jr.**  
Visit his Website

Director  
**Debbie Raphael**  
Visit her webpage

Safer Consumer  
Products Regulations

File an  
Environmental  
Complaint

- ◆ Envirostor
- ◆ Green Business Program in Pollution Prevention
- ◆ Regulatory Assistance Office
- ◆ Waste Generators
- ◆ Hazardous Waste and Environmental Fees
- ◆ Laws, Regs and Policies
- ◆ Find a Green Station
- ◆ Metal Finishing Model Shop Program
- ◆ Transporters
- ◆ Hazardous Waste Facilities
- ◆ ID Numbers and Manifest
- ◆ Registered Environmental Assessors
- ◆ Certified Unified Program Agencies (CUPA)
- ◆ SB14 Overview

★ Popular Pages

- ◆ Annual Fee Summary
- ◆ Green Ribbon Science Panel Meetings
- ◆ (CCR), Title 22
- ◆ E-Waste
- ◆ Hazardous Waste

↑ Top Searches This Month

- ◆ P2 Week 2011 Video Contest
- ◆ Fluorescent Lights
- ◆ Mercury in Thermostats
- ◆ Lead in Plumbing
- ◆ Universal Waste

➔ Quick Links

- ◆ Western Environmental, Inc. Updates
- ◆ Exide
- ◆ Santa Susana Field Lab
- ◆ Kettleman
- ◆ Topock
- ◆ Envirostor
- ◆ Hazardous Waste & Environmental Fees

### TOOLS

- » [Site / Facility Search](#)
- » [Advanced Search](#)
- » [Download Data](#)
- » [Subscribe to Email Alerts](#)
- » [EnviroStor Survey](#)

### REPORTS

- » [By Program](#)
- » [Mandated Reports](#)
- » [By District](#)
- » [Land Use Restrictions](#)
- » [Permitted Facilities](#)
- » [Commercial Offsite](#)

## SITE / FACILITY SEARCH

**CITY:**

El Cerrito And **Richmond**

**COUNTY:**

**SITE CODE, ENVIROSTOR ID #, EPA ID #, HWIS ID CODE:**

**SITE / FACILITY NAME:**

**Filter By Site / Facility Type**

**Cleanup Sites**

- Federal Superfund Sites (NPL)
- State Response Sites
- Voluntary Cleanup Sites
- School Cleanup Sites
- Corrective Action Sites
- Tiered Permit Sites
- Evaluation / Investigation Sites

**Hazardous Waste Facilities**

- Permitted - Operating
- Best Closure Permitted

<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	RICHMOND TANK DEPOT	EVALUATION	EVALUATION		RICHMOND		COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	RICHMOND TOWNHOUSE APARTMENTS	STATE RESPONSE	CERTIFIED / OPERATION & MAINTENANCE - LAND USE RESTRICTIONS	2887 AND 2989 PULLMAN AVENUE	RICHMOND	94804	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	RICHMOND VEHICLE FACILITY- BNSF RAILWAY AKA: FORMER BNSF MAINTENANCE SHOP AND SIDING	EVALUATION	NO FURTHER ACTION	861 WHARF STREET	RICHMOND	94804	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	ROSE	EVALUATION	INACTIVE - ACTION REQUIRED	2701 GOODRICK AVENUE	RICHMOND	94801	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	SANTA FE LOT OF POINT ISABEL	EVALUATION	REFER: RWQCB	CENTRAL AVENUE @ I-580, POINT ISABEL	RICHMOND	94804	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	SARKISIAN PROPERTY	EVALUATION	NO FURTHER ACTION	555 A ST	RICHMOND	94801	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	SEACLIFF MARINA	STATE RESPONSE	CERTIFIED O&M - LAND USE RESTRICTIONS ONLY - LAND USE RESTRICTIONS	1312 CANAL BLVD	RICHMOND	94804	CONTRA COSTA
<a href="#">[REPORT]</a>		SHADELIGHT MARQUEE CO. OF CALIFORNIA	HISTORICAL	REFER: OTHER AGENCY	2 19TH AVENUE	RICHMOND	94801	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	SIMPSON FILTRATION	EVALUATION	REFER: RWQCB	81 PARR BLVD	RICHMOND	94804	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	STAUFFER CHEMICAL CO., MAAS AVE.	EVALUATION	REFER: RWQCB	525 MAAS AVE	RICHMOND	94801	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	SUMMER DEL CARIBE, INC.	STATE RESPONSE	CERTIFIED O&M - LAND USE RESTRICTIONS ONLY - LAND USE RESTRICTIONS	2020 WRIGHT AVENUE	RICHMOND	94804	CONTRA COSTA
<a href="#">[REPORT]</a>		TEXACO REFINING AND MARKETING INC.	HISTORICAL	REFER: RWQCB	100 CUTTING BOULEVARD	RICHMOND	94806	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	TRANSFER STATION INC	HAZ WASTE - RCRA	CLOSED	2565 GOODRICK AVE	RICHMOND	948010000	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	TRANSFER STATION INC	CORRECTIVE ACTION	NO ACTION REQUIRED	2565 GOODRICK AVE	RICHMOND	948010000	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	UNITED HECKATHORN	FEDERAL SUPERFUND - LISTED	ACTIVE - LAND USE RESTRICTIONS	8TH & WRIGHT	RICHMOND	94804	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	UNIVERSITY OF CALIFORNIA, RICHMOND SE	STATE RESPONSE	ACTIVE	1301 SOUTH 46TH STREET	RICHMOND	94804	CONTRA COSTA
<a href="#">[REPORT]</a>	<a href="#">[MAP]</a>	VEOLIA ES TECHNICAL SOLUTIONS LLC	CORRECTIVE ACTION	NO ACTION REQUIRED	1125 HENSLEY ST	RICHMOND	948012118	CONTRA COSTA

**UNIVERSITY OF CALIFORNIA, RICHMOND SE (07730003)** [SIGN UP FOR EMAIL ALERTS](#)

1301 SOUTH 46TH STREET RICHMOND, CA 94804 CONTRA COSTA COUNTY <b>SITE TYPE:</b> STATE RESPONSE OR NPL	<b>PROJECT MANAGER:</b> <b>SUPERVISOR:</b> <b>OFFICE:</b>	<a href="#">LYNN NAKASHIMA</a> BARBARA COOK CLEANUP BERKELEY
--	---	--

- Summary
- Activities
- Community Involvement
- Map
- Related Site Information

**Site Information**

**CLEANUP STATUS**  
**ACTIVE AS OF 7/20/2005**

<b>SITE TYPE:</b> STATE RESPONSE OR NPL	<b>ENVIROSTOR ID:</b> 07730003
<b>NATIONAL PRIORITIES LIST:</b> NO	<b>SITE CODE:</b> 201605
<b>ACRES:</b> 162 ACRES	<b>SPECIAL PROGRAM:</b>
<b>APN:</b> 560060007, 560060008, 560270030	<b>FUNDING:</b> RESPONSIBLE PARTY
<b>CLEANUP OVERSIGHT AGENCIES:</b>	<b>ASSEMBLY DISTRICT:</b> 15
DTSC - SITE CLEANUP PROGRAM - <b>LEAD</b>	<b>SENATE DISTRICT:</b> 09

**Regulatory Profile**

**PAST USE(S) THAT CAUSED CONTAMINATION**  
ILLEGAL DUMPING, LABORATORIES- UNSPECIFIED, MANUFACTURING - OTHER, RESEARCH - OTHER, SCHOOL - COLLEGE

<b>POTENTIAL CONTAMINANTS OF CONCERN</b> CONTAMINATED SOIL <a href="#">METALS</a> <a href="#">ORGANOCHLORINE PESTICIDES (8081 OCPS)</a> POLYCHLORINATED BIPHENYLS (PCBS)	<b>POTENTIAL MEDIA AFFECTED</b> SEDIMENTS, SOIL
--	--

**Site History**



Skip to: [Content](#) | [Footer](#)

[Envirostor Home](#) [Tools](#) [Reports](#) [Community Involvement](#) [Information](#) [DTSC Home](#)

# UNIVERSITY OF CALIFORNIA, RICHMOND SE (07730003)

[SIGN UP FOR EMAIL ALERTS](#)

1301 SOUTH 46TH STREET  
 RICHMOND, CA 94804  
 CONTRA COSTA COUNTY  
**SITE TYPE:** STATE RESPONSE OR NPL

**PROJECT MANAGER:**  
**SUPERVISOR:**  
**OFFICE:**

[LYNN NAKASHIMA](#)  
 BARBARA COOK  
 CLEANUP BERKELEY

[Summary](#) [Activities](#) [Community Involvement](#) [Map](#) [Related Site Information](#)

## Community Involvement Documents

### DRAFT DOCUMENTS FOR REVIEW [HIDE DOCUMENTS > 1 YEAR OLD](#)

	<a href="#">DOCUMENT TITLE</a>	<a href="#">DOCUMENT TYPE</a>	<a href="#">DOCUMENT DATE</a>
<a href="#">[VIEW DOCS]</a>	Public Draft Removal Action Wokrplan, Richmond Bay Campus	Removal Action Workplan	11/26/2013

### FACT SHEETS [HIDE DOCUMENTS > 1 YEAR OLD](#)

	<a href="#">DOCUMENT TITLE</a>	<a href="#">DOCUMENT TYPE</a>	<a href="#">DOCUMENT DATE</a>
<a href="#">[VIEW DOCS]</a>	Fact Sheet for RES Removal Action Workplan	Fact Sheet	11/26/2013

### UPDATES AND INFORMATION [HIDE DOCUMENTS > 1 YEAR OLD](#)

	<a href="#">DOCUMENT TITLE</a>	<a href="#">DOCUMENT TYPE</a>	<a href="#">DOCUMENT DATE</a>
<a href="#">[VIEW DOCS]</a>	April 2007 Monthly Report	Project Status Update	4/11/2007
<a href="#">[VIEW DOCS]</a>	April 2008 Monthly Report	Project Status Update	4/15/2008
<a href="#">[VIEW DOCS]</a>	April 2009 Monthly Summary Report	Project Status Update	4/15/2009
<a href="#">[VIEW DOCS]</a>	April 2012 Monthly Summary Report	Project Status Update	4/16/2012
<a href="#">[VIEW DOCS]</a>	April 2007 Monthly Update	Project Status Update	4/15/2007

# Open Discussion

## Questions

## Comments



Clapper rail chicks at Meeker Slough- photographed August 21, 2008 (photo courtesy of Denise White)