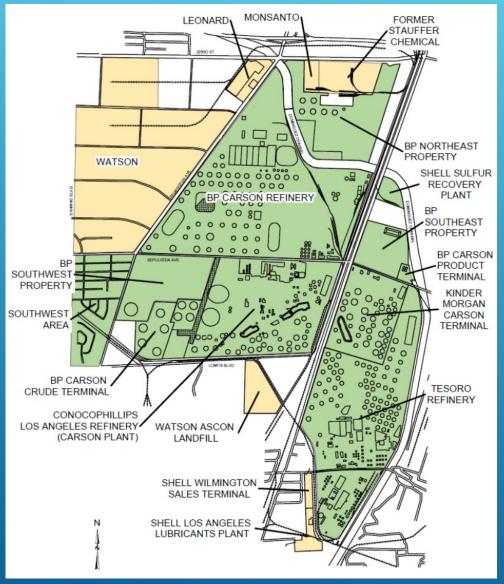
THE SITE CLEANUP PROGRAM-ADDRESSING GROUNDWATER QUALITY AND CLEANUP IN THE REGION

Cary Wicker, PG October 11, 2018

## **PRESENTATION OUTLINE**

- Common polluted sites
- How pollution spreads
- Public Participation
- Our five step cleanup process
- Our cleanup programs
- Program challenges
- Interagency collaboration

## **COMMON POLLUTED SITES**

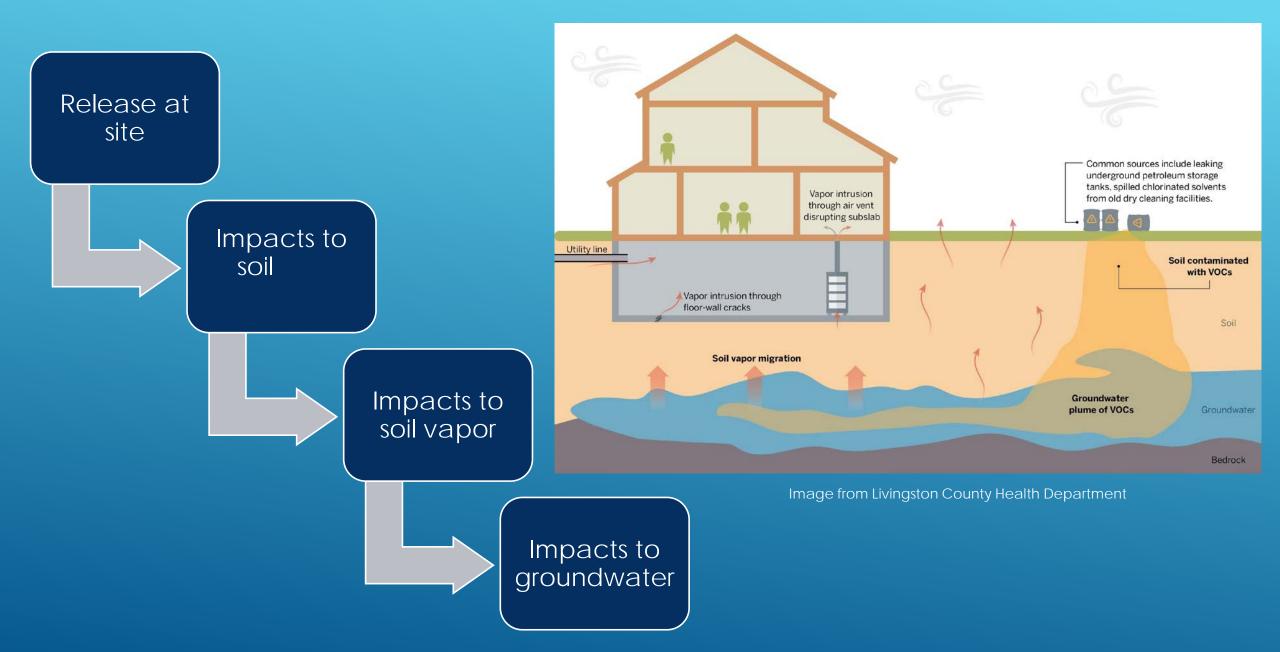




Aerospace industry Image from Huntington-USC Institute on CA and the West Commercial and industrial Image from Smiths Plastics (PTY) Ltd

Oil refineries and tank farms

## **HOW DOES POLLUTION SPREAD AT A SITE?**







#### Caravael Tract Site - Gearup Process Timeline May 2014 Insess Gendles Lead upon surveying positate 9 ~ 9 Carousel Tract Update May 2014 Regional Board Rejects Shell Oil Co.'s **Cleanup Plan** The posts of the Los Angeles Regional Water Quality Control Reard's respons of the can repeaks Replaner Waters Quality Control Reserve (Replaner Board) are cleaning program on its protect and relative water resources and extended informed quality as protect. Numer in health, water quality, and the environment, today and into the follow. minist MAR and trappet error for throws, first legitary laters for throws and the second later for the second later throws and the second laters. Fine AMA benefits (bits), first, first, and and an analytic field to small on the second laters and an analytic field to small be a sequence barried. Explane 13 Provide Autors Free (MA's) transitions flowly (FIS) and instances results this transmission to payor (IDMA) (they payd) resear of the MA's, the FI and the other handhold on March 117", the Repre-finest mesonic before (FIS) of the HI and HI and HI and HI field (they) present dama pairs for and and psycholater tra-ers for the Vield's of paties ratio pairs in a sessingle low, data Glossary of Terms the Public Comment The Arginnal Board will hold meetings on the BVP, 15 and mittle for community residents, and sectores and assess subject must California Environmental Quality Act (CEQA) - a state low that requires a angle of visual agency to the significant environmental effects of proposed remedial actions. not be sufficient to attain the log gives to a reserved channes given much, the flaging these registred theft preserved channes given and dimensi field to scheric a network NAP which complex with the much flags of the scheric a network NAP which complex with the inpact Report (BR) - a report that other is governmental agencies a month of a securit and also proposes religation measures to reduce entryp on the Druft EX for ohmunity molecule, and B botto of Violation (NON) in addition to its relation of Shell's 2) Instead of Valuese (PRO) is address to inspection of ProVI stars a give A Regard Search Beneric Period ProVI for the special LMP Stars of or the Regard Search Province's generation between (V events gives he provide the stars). The Search Period Provide Period Provide Period Search Period Period Period Period Period Period Period Period Period Regard Period MSprim - actions or methods used to morning the impact of a proposed project. Notice of Violation - a notice that asserts that requirements were not complied with and advising that follow to comply may result to monetary penalties. Remedial Action Plan (HAP) - a deam-gatheting for soil and groundwater contamination. a programed Railt, FL, while, size for found at. She Specific Ceanup Goal (SSCE) - grant for the cleanup to assure protection of the health of people in the



## PUBLIC PARTICIPATION

## **STEP 1: INITIAL SITE INVESTIGATION**

Historical Records Review + Chemical Use Questionnaire

If pollution suspected

Perform soil, soil vapor, and groundwater sampling



Image from Environmental Sampling, Inc.



Image from SMR Resources, LLC

If no pollution suspected

### End investigation

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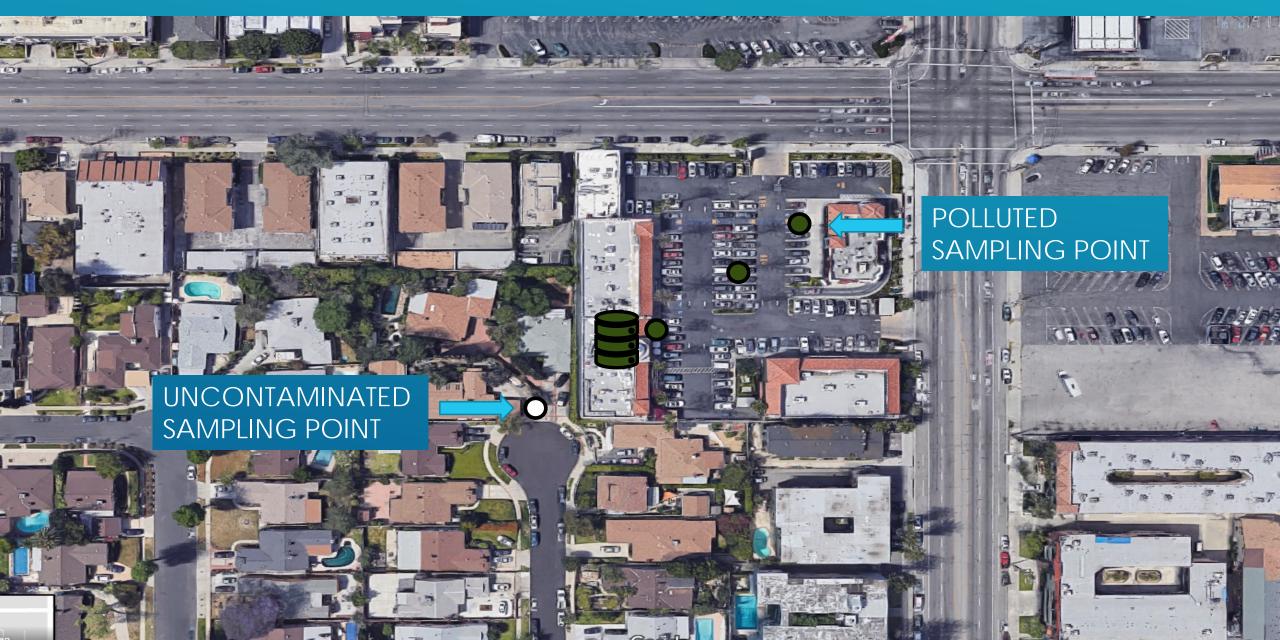
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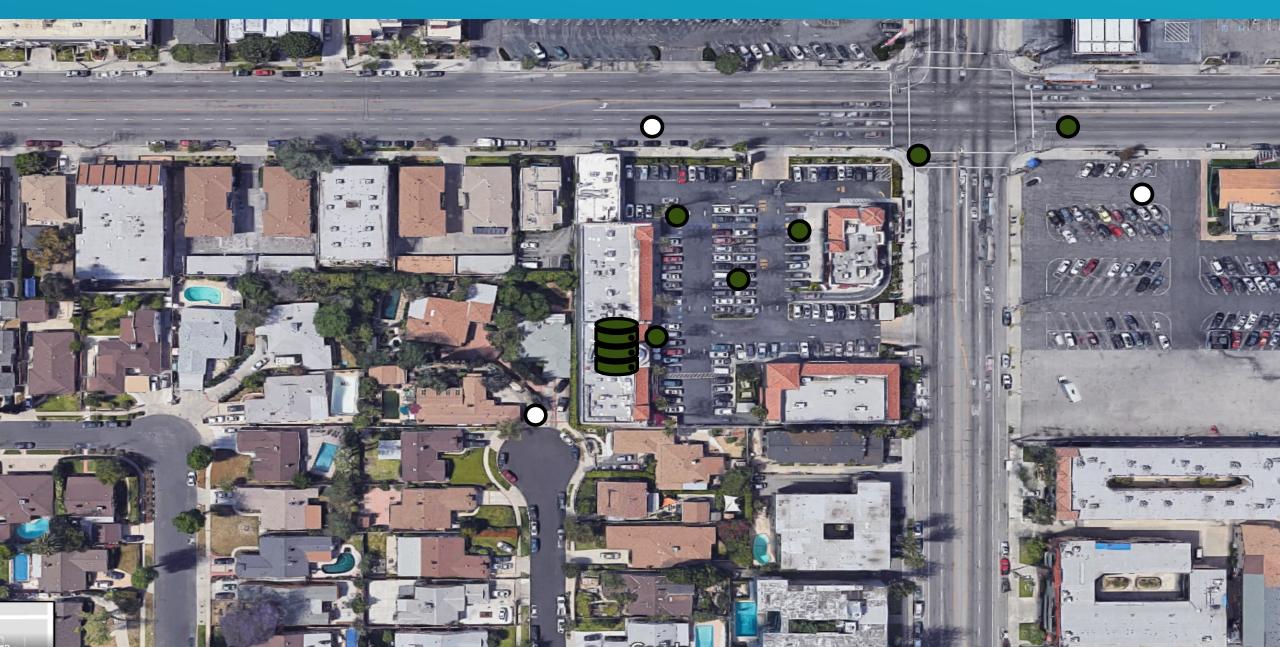
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### POLLUTION SOURCE

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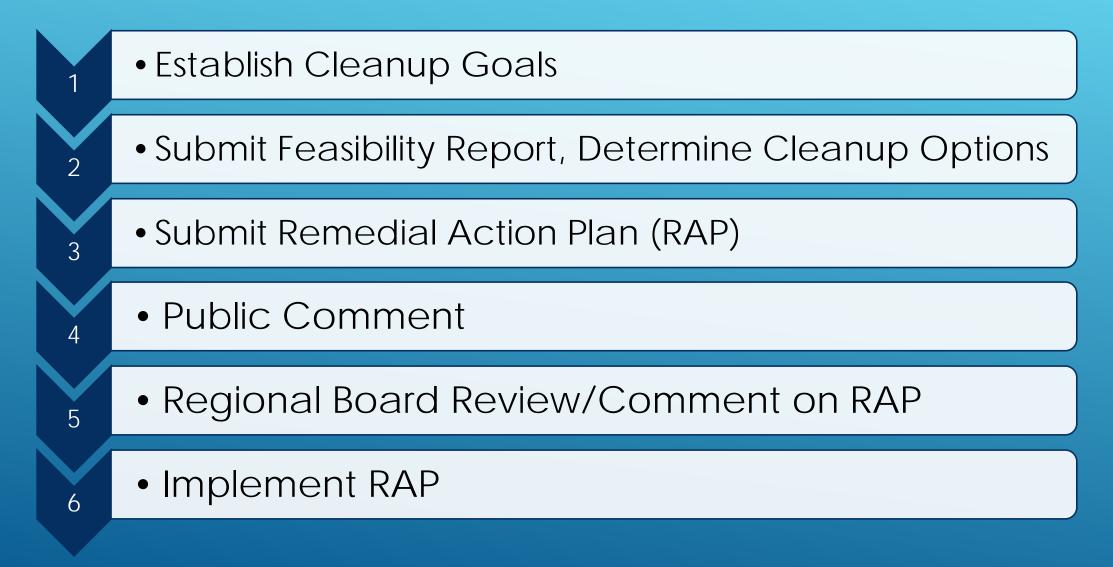
## **STEP 3: ASSESS IMPACTS OF POLLUTION**

# Assess soil, soil vapor, groundwater pollution

Assess impacts to human health and the environment

Engage in community outreach

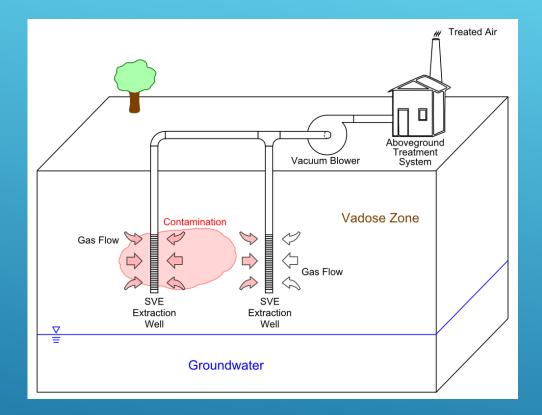
## **STEP 4: CLEANUP**



## **STEP 4: CLEANUP**



Soil Excavation



Soil vapor extraction

## **STEP 5: SITE CLOSURE**

Post Remediation Monitoring, Confirmation Sampling, Risk Assessment



Monitoring and/ or continued remediation



## LA REGIONAL BOARD CLEANUP PROGRAMS

### Cost Recovery

### SB445

### Prop 1

Interagency Memorandum of Understandings (MOUs)

#### PROPOSITION 1 GROUNDWATER GRANT PROGRAM GUIDELINES



Adopted by the State Water Board May 18, 2016

Amended by the Deputy Director on May 24, 2016 and October 24, 2016

Amended by the State Water Board on December 19, 2017



## **PROGRAM CHALLENGES**

- PFASs and emerging contaminants of concern
- Identifying pollution sources
- Potential Responsible Party searches
- Backlogged sites
- Orphan sites/financial hardship sites

## **REGIONAL BOARD INTERAGENCY COLLABORATION**

- Water Replenishment District (WRD)
- San Gabriel Basin Water Quality Authority (WQA)
- Los Angeles Department of Water and Power (LADWP)
- United States Environmental Protection Agency (USEPA)
- Division of Drinking Water (DDW)
- State Board Division of Financial Assistance (DFA)
- Department of Toxic Substances Control (DTSC)
- Los Angles County