

Phillips 66 Los Angeles Refinery Wilmington Plant AB 2588 Public Meeting

South Coast Air Quality Management District
October 1, 2020



Purpose of Meeting



Who We Are

- **The South Coast AQMD is the regional agency responsible for air quality for areas in LA, Orange, Riverside and SB Counties**
 - Largest of the 35 local air agencies in CA
 - Work with CARB and EPA to meet state and federal standards
- **Responsibilities**
 - Control emissions from stationary sources (e.g., power plants)
 - Comply with U.S. government air quality standards
 - Permit and inspect 28,400 affected businesses
 - Administer \$100 million of incentive funding annually



South Coast AQMD's Air Toxics Program



The Air Toxics “Hot Spots” Information & Assessment Act (AB 2588)

- State law enacted in 1987 (Connelly)
- Public **Right-to-Know** Program
- Purpose
 - Collect emissions data with updates every 4 years
 - Identify facilities having localized impacts
 - Evaluate potential health risks through Health Risk Assessments
 - Notify residents of those potential health risks
 - Reduce health risks below certain thresholds
- Rule 1402
 - Implements requirements of AB 2588
 - More stringent requirements for reducing health risk

Phillips 66 Wilmington

- Oil Refinery in operation since 1919 that converts intermediate oil stock into final product
 - Nearby Phillips 66 Carson plant converts crude oil into intermediate stock.
- Located at 1660 West Anaheim St. in Wilmington, CA.
- HRA required based on 2015 emissions



Boundary of Phillips 66

Operations at Phillips 66 Wilmington

- Primary sources of risk are from portable diesel-fired internal combustion engines, welding, and operation of refinery itself



About Health Risk Assessments

Estimates the chance that a person may experience a health effect from toxic air contaminant emissions

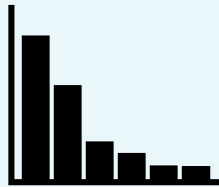


“Snapshot” based on toxic air contaminant emissions from one year of operation

Assumes 2015 emissions levels for 30 years



Snapshot can change if toxic air contaminant emissions are reduced



Conservative assumptions - people are outdoors 24 hours, 7 days a week in one location



3 Key Health Risk Elements of Rule 1402

Cancer Risk

- Estimates the increased probability for cancer
- Expressed in “Chances in a million”

Non-Cancer Risk

- Estimates non-cancer health effects
- Acute non-cancer effects are from short-term exposure
- Chronic non-cancer effects are from long-term exposure
- Expressed using a Hazard Index (HI)

Cancer Burden

- Estimates the increase in the occurrence of cancer cases in a population subject to a cancer risk of 1 in a million or greater
- Cancer burden ≥ 0.5 requires risk reduction

Health Effects of Key Toxic Air Pollutants

Toxic Air Pollutant	Health Effect	
	Exposure	Potential Effects
Diesel Particulate Matter	Long-term	Cancer and non-cancer chronic effects on the respiratory system
Benzene	Short-term and Long-term	Cancer, non-cancer acute, non-cancer chronic, non-cancer chronic 8-hour effects on the human reproductive, blood, and immune systems
PAH*	Long-term	Cancer and non-cancer chronic effects on the respiratory system
Hexavalent Chromium	Long-Term	Cancer and non-cancer chronic effects on the human respiratory and blood systems

*Naphthalene is one component of PAH that also has chronic health effects

Rule 1402 Health Risk Thresholds

Cancer Risk Thresholds

Risk Reduction

Cancer Risk ≥ 25 in one million

Public Notification

Cancer Risk ≥ 10 in one million

Non-Cancer Risk Thresholds

Risk Reduction

Non-Cancer HI ≥ 3

Public Notification

Non-Cancer HI ≥ 1

Cancer Burden Threshold

Risk Reduction

Cancer Burden ≥ 0.5

Cancer Risk Evaluations

Residential Receptor

- Continuous exposure for 30 years
- All age groups evaluated

Offsite Worker Receptor

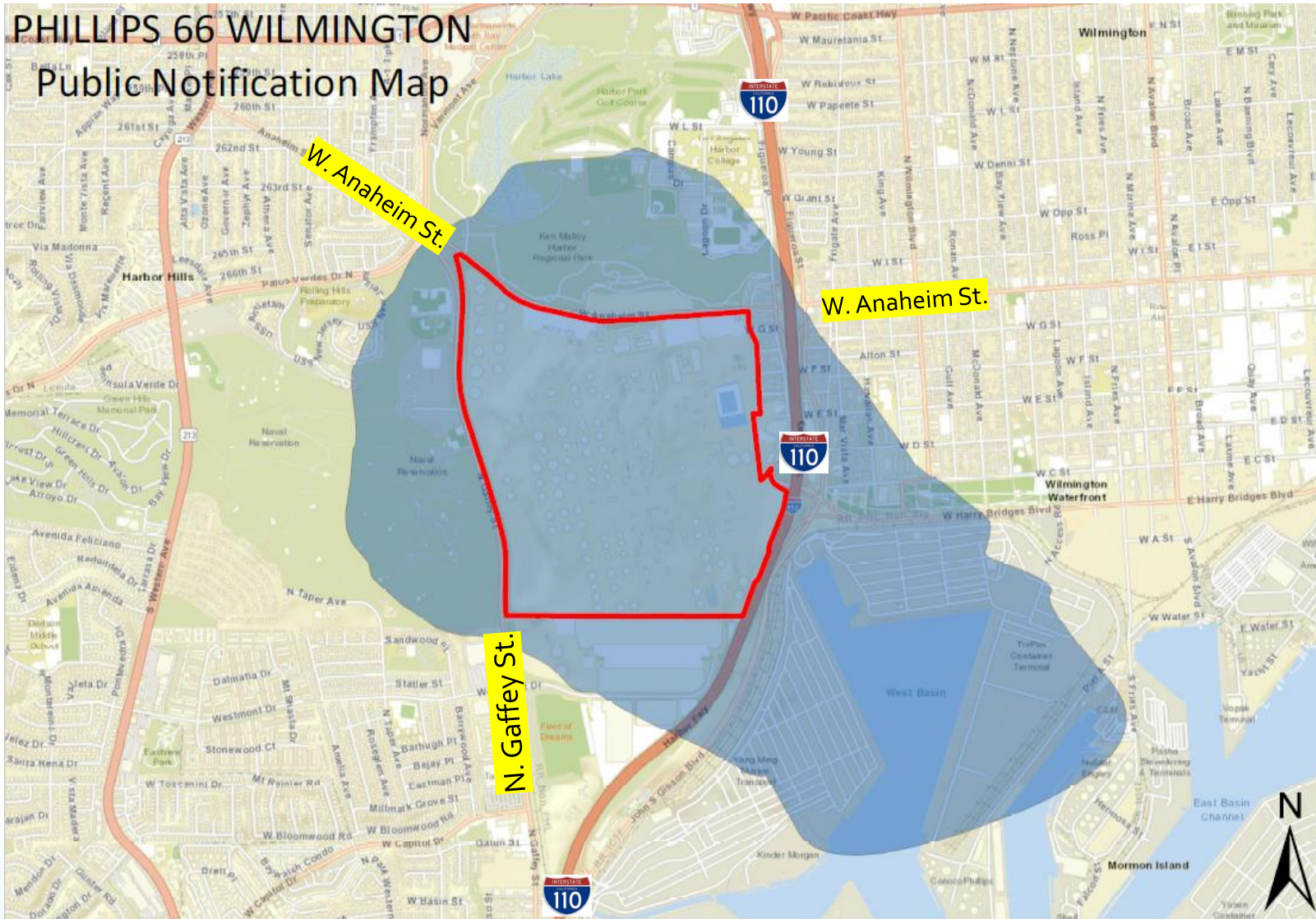
- Exposure for 8 hours per day, 5 days per week for 25 years
- Adult age groups evaluated

Rule 1402 Risk Reduction Plans

Risk Reduction Plan – Required if Risk \geq Risk Reduction Threshold

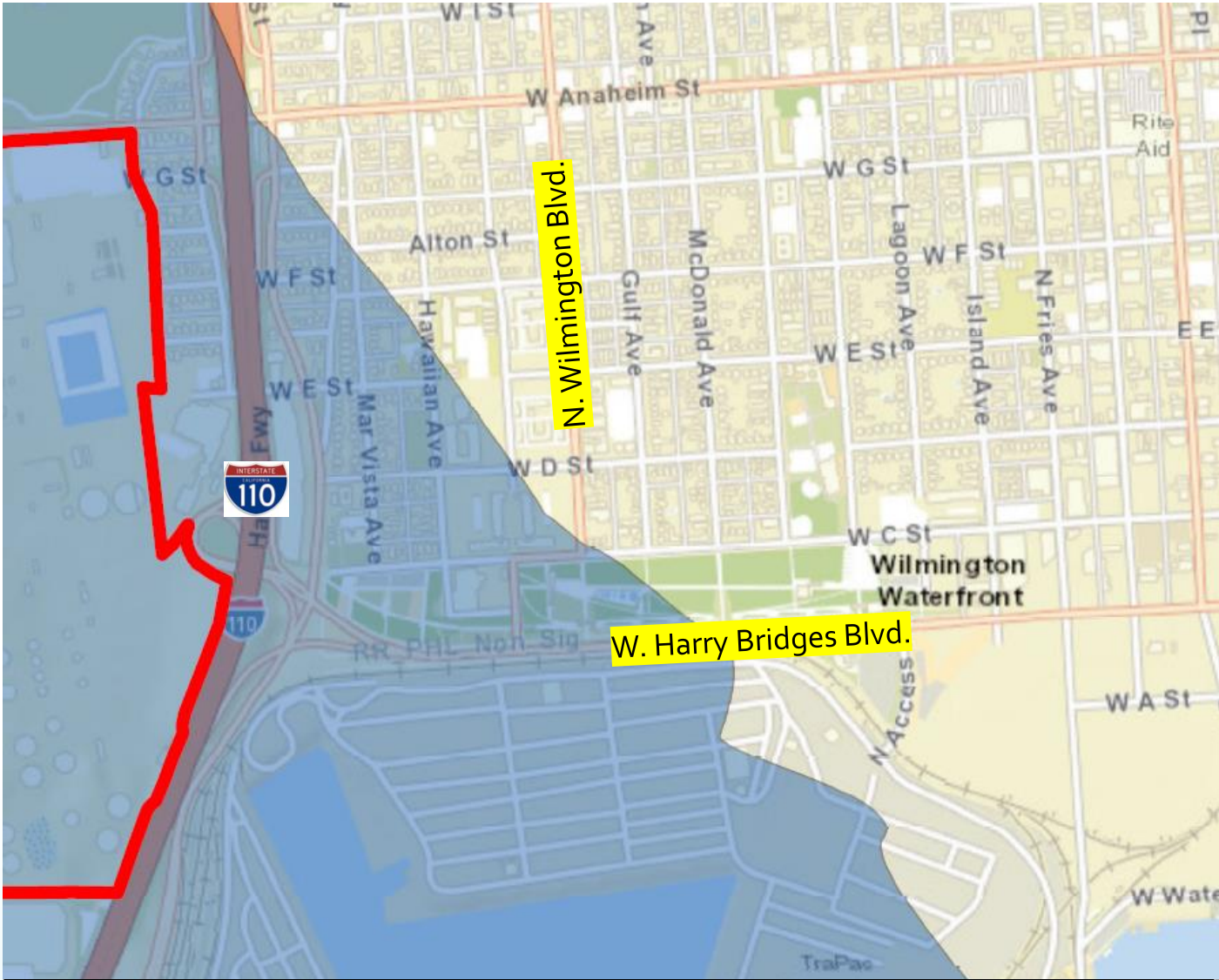
- Permanent, verifiable, and enforceable risk reduction measures
- Must be implemented within 2½ years from the approval of plan or sooner
- Must reduce the facility-wide health risk below 25 in-a-million for cancer risk and a Hazard Index of 3 for non-cancer health effects

Residential Cancer Risk – 2015 Emissions

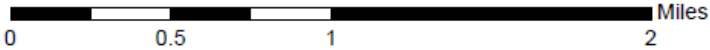


- Phillips 66 Wilmington
- Cancer Risk = 10 in-one-million (Residential)

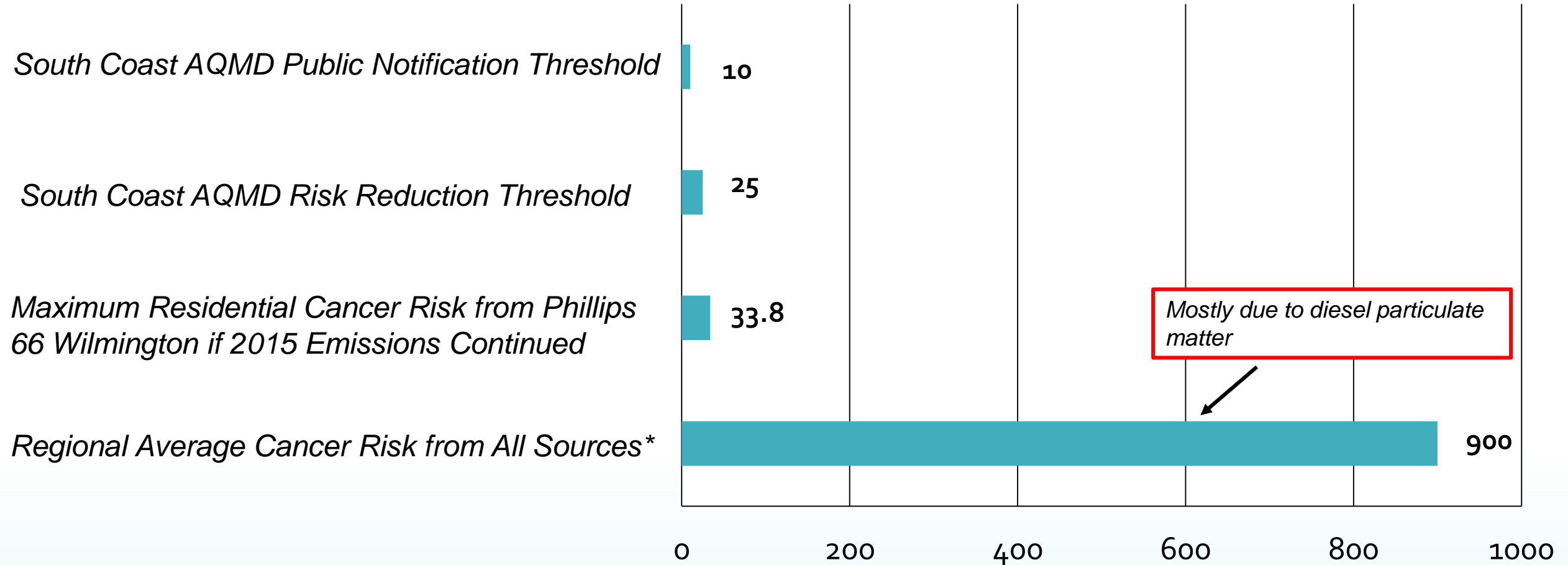
Residential Cancer Risk – 2015 Emissions



— Phillips 66 Wilmington
— Cancer Risk = 10 in-one-million (Residential)



Cancer Risk Context

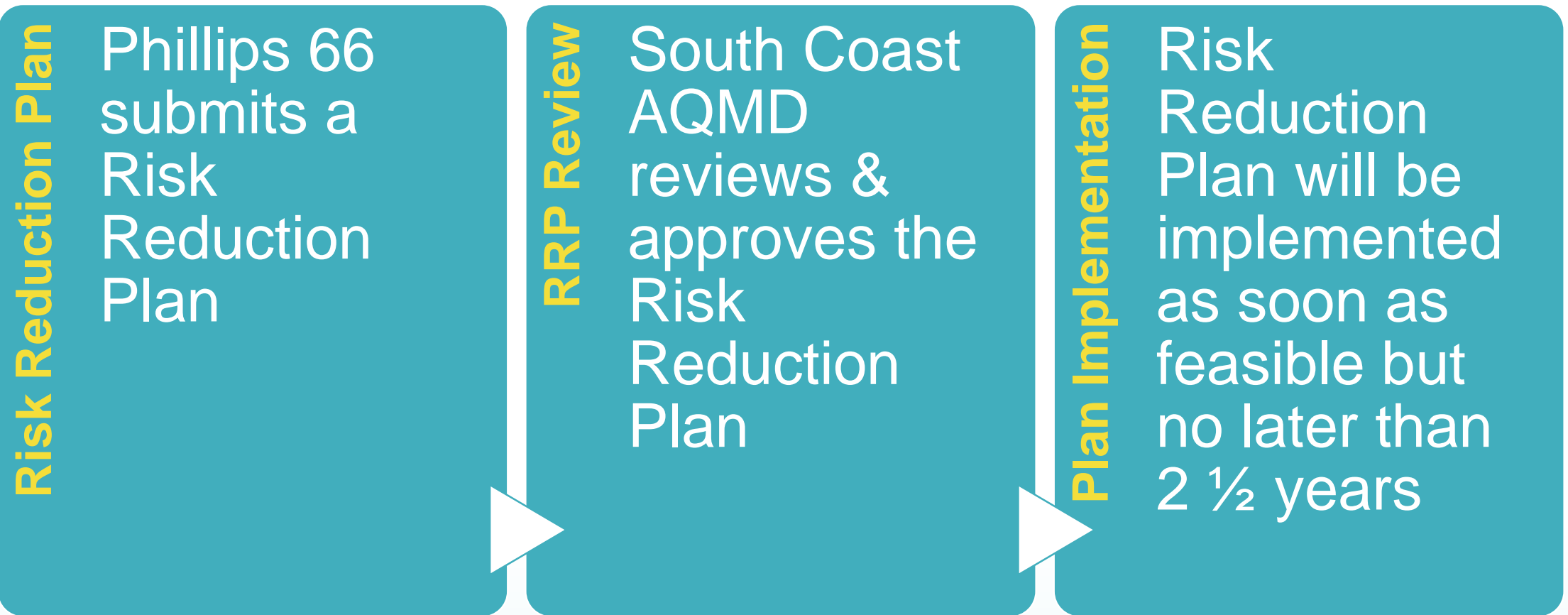


* Based on MATES IV study

Public Notification Process

- AB 2588 Notification
 - Letter sent to ~800 addresses
 - Public meeting: Online

Next Steps



More Information on the AB 2588 Program

- South Coast AQMD AB 2588 Website
 - <http://www.aqmd.gov/home/rules-compliance/compliance/toxic-hot-spots-ab-2588>
- Link to the 2015 Approved HRA
 - [http://www.aqmd.gov/docs/default-source/planning/risk-assessment/phillips-66-larw-2015-hra-\(id-171107\).pdf](http://www.aqmd.gov/docs/default-source/planning/risk-assessment/phillips-66-larw-2015-hra-(id-171107).pdf)
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