AB 617 Community Air Protection Program Steering Committee Meeting Notes

07/23/2019

6:00 p.m. - 8:00 p.m.

Perkins Elementary School (1770 Main Street, San Diego, CA 92113)

Opening Remarks

- o Approval of 6/25/19 Meeting Notes and tonight's agenda
 - Meeting notes and agenda were approved
- o Jon Adams
 - Governor signed this year's budget
 - ✓ The funding for AB617 implementation and incentives stayed at last year's levels
 - ✓ Districts lobbied for more funding
 - Bi-weekly calls with CARB continue
 - Gave an AB617 update to the IEA Air Committee
 - Gave AB617 update to Victor Avina of County Supervisor Cox's Office
 - Weekly calls with CARB about the License Reader Program continue
 - A request for a professional facilitator is out for bid

Public Questions/Comments

- Concern: I could not read the data presented by Aclima.
 - ✓ Answer: Aclima will come back to our next meeting to explain their community app tool and there will be a breakout session.
- Question: Can we wait to finalize charter until Sandy Naranjo is present as she brought the issue up?
 - ✓ Answer: Yes
- Recommendation from Joy Williams: wait until we have a facilitator to finalize the committee bylaws.
- Question: Can my company, Park-to-Bay, present for 15 minutes?
 - ✓ Answer: Will consider for next meeting, leave name and contact.
- Question: You mentioned that there was a training for emissions reductions based on guidelines can you explain?
 - ✓ Answer: ARB will be providing training to the District on how to develop a Community Emission Monitoring Plan (CERP)
- Follow Up: CARB will be present to the steering committee on developing a CERP as well.

Presentation:

Jonathan K. London, Ph.D., Associate Professor and Vice Chair: Human Ecology/Community and Regional Development Faculty Director: Center for Regional Change

UNIVERSITY OF CALIFORNIA, DAVIS

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA
 SANTA CRUZ

JONATHAN K. LONDON
ASSOCIATE PROFESSOR
DEPARTMENT OF HUMAN ECOLOGY/COMMUNITY AND REGIONAL DEVELOPMENT
CENTER FOR REGIONAL CHANGE

ONE SHIELDS AVENUE DAVIS, CALIFORNIA 95616-8571 2335 HART HALL/ HE 530-219-9082 JKLONDON@UCDAVIS EDU

AB 617 Community Engagement Evaluation Plan Jonathan K. London, Ph.D.,

Goal: Assist CARB, regional air districts, and other stakeholders in enhancing the role of community engagement in the implementation of AB 617 through an analysis of the engagement experiences by all stakeholders.

Overall evaluation question: How and to what extent has the community engagement elements of AB 617 met the objectives of the policy (to focus on the needs of the most disadvantaged and vulnerable communities; to encourage meaningful participation of residents and other stakeholders of these communities; to inform the development of effective emission reduction strategies)?

Guiding themes: How do the varied perspectives of CARB, the regional air districts, community organizations, businesses, residents, and other stakeholders get reflected in the monitoring and emissions reduction plans? To the extent that there are tensions between these perspectives and parties how are they addressed and resolved? How do the processes used reflect environmental justice principles (focus on disadvantaged communities; authentic community voice; address structural issues)? What are ways in which each element of the policy implementation can be improved?

Importance of Diverse Perspectives: All AB 617 Stakeholders have important and unique experiences and vantage points on the policy that need to be included to fully represent the range of views on the policy implementation process. This involves a degree of self-assessment by all of the parties as well as reflections on the roles of the other collaborators and elements of the process as a whole. This is invaluable because it allows all groups to provide their own interpretation of the process that together will allow for a holistic analysis.

The evaluation team will keep all identities confidential and will check with the participant if a quote from the survey or interview is selected for potential inclusion in the study. The participant has the option to withhold approval of inclusion of the quote or to request other steps to safeguard their identity.

Confidential AB 617 Participant Survey link: https://tinyurl.com/y5eilu8g

For questions about the study, please contact the project director, Dr. Jonathan London iklondon@ucdavis.edu

Question: What is your method in interview selection?

- ✓ Answer: We try for a cross-selection of Steering Committee members and residents of the community.
- Question: How many communities have you visited?
 - ✓ Answer: This our 5th community.
- Question: Do you have a limit on how many interviewees?
 - ✓ Answer: No limit but we are only in San Diego today. We could Skype or do phone interviews. We would like the Spanish speaking community to be a part of this, so it can be an inclusive process.
- Updates from Planning and Incentives
 Kathy Keehan- Supervising Air Resources Specialist

Open solicitation first week of August!

- Question: Who is eligible to apply?
 - ✓ Answer: Any eligible company who owns diesel equipment.
- Presentation:
 San Diego Clean Cities Coalition
 Kevin Wood
 Geoffrey Cook

State of Heavy Duty Zero Emissions Technology Presenting Zero-Emission Options to Improve Portside Air Quality Man Diego Clean Cities Coalition State of Heavy Duty Zero Emissions Technology Rechnology Center for Sustainable Energy™

One simple mission —

DECARBONIZE.

Our vision is a future with sustainable, equitable and resilient transportation, buildings and communities.

Why are we here?

- San Diego is ranked 6th worst air quality in the nation for ground-level ozone.
- Transportation contributes the largest proportion of climate/air pollutants in CA.
- Poor air quality disproportionately impacts disadvantaged communities.
- Transportation technologies exist *today* to help mitigate these negative impacts.







Electric Vehicle & Infrastructure Deployment In Disadvantaged Communities

Consumer ZEV Market



Numerous Models

Manufacturers such as Tesla, BMW, Nissan, Chevrolet, Ford, VW, and Kia



Price Competitive

Pricing options from \$25,000-\$35,000 plus incentives/rebates



Multiple Charging Options

Home, Workplace, Shopping and Recreation Destinations



Reduced Cost Barriers

Costs are comparable to other new vehicles ZEVs require less maintenance and are less expensive to fuel.



Infrastructure

- Most charging happens at homechallenges for renters and apartments
- Region Needs 8-11K more public L2 Stations 800-3000 DCFC
- Event: July 27th EVgo DC Fast charging station ribbon-cutting event at Northgate Market, 43rd st.
- For Heavy duty vehicles dedicated infrastructure is required







"25% of proceeds from
Cap and Trade Program to go
Funding Projects in
Disadvantaged Communities"

AB 1550

Clean Mobility Options Voucher Funding

Program Goal

Improve disadvantaged communities access to clean mobility options that are safe, reliable, convenient, and affordable

Timeline¹

Program details late 2019, available early 2020

Incentive Amounts:

\$14 Million total funding, \$1 million max per project

Example Projects

- Carsharing
- Bike/scooter-sharing
- Carpooling and Vanpooling
- Innovative Transit Services
- Ride on Demand Services (Singleoccupant or high-occupant)





Heavy Duty Vehicles and Funding/Incentives

Funding Opportunities

Sources of Funding:

- California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Program (HVIP)
- Carl Moyer Program
- Volkswagen Mitigation Trust

HVIP Eligibility:

Medium/Heavy duty ePTO, Hybrid, Zero-Emission, and Low-Nox Engines (Funding also available for retrofits)

Timeline:

Available now

Incentive Amounts:

Approx. \$45,000–150,000 for portside use cases





Current Electric Truck Options (HVIP Eligible)



BYD 8TT Tandem-Axle Tractor

Up to 124 mi range

HVIP Incentives: \$150,000



Kalmar Ottawa Terminal Tractor

Range: 3 shifts/day

HVIP Incentives: \$150,000



BYD T5 Class 5 Delivery Truck

Up to 155 mi range (half-load)

HVIP Incentives: \$80,000







Electric Fleet Vehicle Demonstrations



- 21 built and deployed to date 18 additional units in 2019-2020

Hybrid-electric and fuel cell trucks

- 4 CNG hybrids to date (3 Class 8, 1 Class 7) 7 fuel cell Class 8 trucks (2 to date, 5 in 2019)

- 16 electric Kalmar tractors built to date
- 38 electric Dina tractors to be built in 2019-2020 27 commercial "kit" orders received from Kalmar

Other vehicles

- 5 electric Class 8 refuse trucks (3 built, 2 in 2020) 5 electric high-tonnage forklifts (2 built, 3 in 2019) 9 Class 6/7 trucks with E-axles to be built by 2020







Development of 10 Kenworth T680 FCEVs

- Partnered with Toyota Motor North America
- Rollout will include interaction with multiple ports of
- · Port of Los Angeles/ Long Beach

Fleet transit will cover most of Southern California

- Part of \$41 million grant
- Zero and Near-Zero Emissions Freight Facilities

Performance targeted to meet or exceed that of diesel fleet vehicles

Only tailpipe emissions are water vapor



Test eHighway created in partnership with Siemens

- Currently being tested in Carson, CA near port of Long Beach 1-mile of electrified phantographs Provides proof of concept for short-haul transport
- via fleet vehicle electrification
- Minimizes idling and mitigates "last-mile" environmental issue for heavy duty transport





Multiple Upfit Manufacturers

- · Motiv, Lightning, and Phoenix
- · Built on existing platforms

Market Deployment Example:

Super Store Industries

- · First dairy manufacturer to deploy heavyduty yard trucks, more than a 12 on order
- One Orange EV-T series yard truck abates 166 tons of CO₂ and 1.7 tons of NO₂ annually
- HVIP discounts of \$150,000+ per truck



Motiv EV Up-fit









eCanter Mitsubishi





Future Electric Truck Alternatives





Up to 300 mi range

Release Date: Unknown







Tesla Semi

Up to 500 mi range

Release Date: Unknown

*Currently Accepting Pre-orders



Cummins Electric Drivetrain

#1 Diesel Engine Installed across North America

Purchased Electric Drivetrain Company, Brammo



Natural Gas Engine Manufacturers and Modifiers

Advantages to Natural Gas

- 90-99% cleaner than Diesel
- · Renewable gas available
- · Numerous Manufacturers
- · Greater Air Quality Mitigation Per Dollar
- · Longer Range

Challenges to Natural Gas

- Lack of infrastructure
- · Tanks reduce cargo capacity







the 0.02 Near Zero
Certification







Off-Road Vehicles and Funding/Incentives

Funding Opportunities (CORE)

Eligible Vehicles (new or retrofitted):

- On-and off-road Terminal Tractors
- Transport Refrigeration Units
- Forklifts (*8k lb. lift capacity)
- Container Handling Equipment
- Railcar Movers
- Rubber-Tired Gantry Cranes

Sources of Funding:

 Clean Off-Road Equipment Voucher Incentive Program (CORE)

Timeline for Funding:

• Available Later In 2019

Total Funding Amount:

\$40 Million

Individual Vehicle Incentive Amounts:

As of present date, vehicle incentive amounts are *still being determined*.







Transitioning Vehicles to Zero-Emission

Two Primary Options:

Hydrogen Fuel Cell & Electric

Advantages:

- · Both are zero-emission
- · Reduced noise
- Retrofits available to current equipment

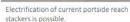
Trade-offs:

- Electric loses power on low charge
- Both require infrastructure access











Three 21-ton Kalmar Forklifts Converted to BEV for port of San Diego and Los Angeles



Hydrogen fuel cell (FCEV) lift trucks and forklifts provide fast-fueling options without loss of power at the end of a charge like electric.

Potential Vehicles

Name	Hydrogen/Electric/Hy brid	ОЕМ	Vehicle Incentives (HVIP)	Approved Vendors	New or Conversion	Battery	Model Years	Gross Vehicle Weight Rating (GVWR)		Electric Range	Total Range	Charge Time	Website	Notes
BYD Q3M (8TT) Class 8 Battery-Electric Tractor Trailer	Electric	BYD Motors	\$150,000.001	BYD Motors	New	188 kWh	2017, 2018	> 33,000	Terminal Truck, Truck	124	12-	13 hrs	https://www.california hvip.org/vehicles/byd- g3m-tt-class-8-battery- electric tractor trailer/	Zero Emission. DC charging 1.5 hrs. Range with half-load 167 miles
BYD T5 Class 5 Cab- Forward Delivery Truck	Electric	BYD Motors	\$80,000.008	BYD Motors	New	145 kWh	2016, 2017, 2018	14,001 - 19,500	Delivery, Truck	155	15	55 hrs	https://www.california hvip.org/vehicles/byd- 5f-t5-calls-5-cab- forward-truck/	Zero Emission. Annual fuel savings \$15- 20K
BYD T7 Class 6 Cab- Forward Truck	Electric	BYD Motors	\$90,000.008	BYD Motors	New	175 kWh	2016, 2017, 2018	19,501 - 26,000	Truck	124	12	14.5 hrs	https://www.california hvip.org/vehicles/bvd- 6f-t7-class-6-cab- forward-truck/	Zero Emission. DC charging 1.5 hrs
Kalmar Ottowa T2E 4x2 Terminal Tractor	Electric	Kalmar Ottawa	\$150,000.0	Kalmar Global	New	220 kWh	2019	80,000	Tractor	3 Shifts a Day	N/A	Unkno wn		Zero Emission
Motiv EPIC 4 Dearborn on Ford E450 Platrofm - Truck	Electric	Motiv Power Systems	,	South Bay Ford, WorkTruck Direct, Inc	New	106 kWh, 127 kWh	2018, 2019	14,001 - 19,500	Truck	75	7	S8 hrs	http://www.motivps.co m/motivps/wp- content/uploads/2018/ 03/Motiv M134 D5 E PIC4 Dearborn E450 WorkTruck 20180320.pdf	Zero Emission. 50% charge 2.5 hrs, 75% charge 4 hrs
Orange EV T-Series 4x2 All-Electric Terminal Truck, Conversion of Kalmar Ottawa Truck	Conversion/Electric	Orange EV	\$71,250.000	Orange EV	Conversio n	160 kWh	2018	81,000	Terminal Truck	20072	24+ hours	2 hrs	https://orangeev.com/t -series-reman/	Zero Emission. Conversion
Orange EV T-Series 4x2 All-Electric Terminal Truck	Conversion/Electric	Orange EV	\$71,250.000	Orange EV	Conversio n	80 kWh	2018	81,00	Truck		24+ hours	2 hrs	https://orangeev.com/t -series-reman/	Zero Emission. Conversion

Fleet Electrification Trade-Offs

Advantages

- Zero Emission
- · Retrofits Available
- Pilot Deployment Shows Promise
- Incentives/Rebates Exist
- Potential for grid integration

Disadvantages

- Model Choice is Limited
 - Vehicles are not on dealer lots
- Cost
- Heavy Duty Infrastructure Is Sparse
- Natural Gas may Provide Greater Air Quality Mitigation



- Question: (Referring to Slide 11) First truck is On-Road, 2nd truck is terminal only and 3rd truck is on-road, correct?
 - ✓ Answer: Yes.
- Question: What is total cost of rebate?
 - ✓ Answer: Don't have actual cost, could be north of \$250,000.

- Question: How many vehicles are currently available?
 - ✓ Answer: Ordered from China, parts are shipped over and assembled here.
- Question: What is the cost of charging infrastructure?
 - ✓ Answer: Dependent on the vehicle and power needs.
- Question: The incentive is based on cost-effectiveness, right?
 - ✓ Answer: Incentives based on weight class, not usage.
- Question: Do incentives apply to trucks that cross from Mexico?
 - ✓ Answer: After further research there may be opportunity for cross-border trucks to qualify for HVIP but it would require special permission from CARB.
- Question: Is there a way to know if re-charging by clean energy?
 - ✓ Answer: Yes, over 40% renewable. SDG&E may also offer incentive.
- Comment: State-mandated that by 2045 the grid to be 100% renewable.
- Question: What is the typical weight of the batteries?
 - ✓ Answer: Don't have a specific weight due to batteries, but for longer range trucks, battery weight does impact how much the truck can carry and still be within the road weight limits.
- Question: There are less goods that can be carried because of the weight?
 - ✓ Answer: Yes.
- Question: Have Toyota and Siemens built trucks yet?
 - ✓ Answer: Siemens has 4 trucks on the road and Toyota has produced 10 trucks.
- Question: What are the logistics? How much can San Diego do?
 - ✓ Answer: This will be discussed later.
- Question: Citing locations, where will trucks be plugged in?
 - ✓ Answer: Will be discussed further.

Presentations:

Vehicle License Reader Project:

SDSU Graduates: Liliana Jaime, Beverly Caceres, Ronald Isabel, Nandana Mitra Jennifer Topps, Vian Oraha

- 11 intersections were monitored starting on June 10th, 2019, Monday through Friday.
 - Location #1: E. 30th Street & National City Blvd
 - ✓ Reported: Moderate traffic. Regular vehicles. No trailer trucks just pick-up trucks.
 - Location #5: Civic Center & Cleveland
 - ✓ Reported: Big heavy-duty trucks. One day there was 5-6 trucks that passed by. Quiet neighborhood.
 - Location #13: 30th & Commercial
 - ✓ Reported: 2 recycling centers nearby. Little traffic, heavy-duty trucks parked. Idling was occurring.
 - Location #2: W. 18th Street & Wilson Avenue
 - ✓ Reported: Residential neighborhood. Passenger cars. This location was eliminated as students were there 3x with no appreciable activities. May consider during school year as school is nearby.

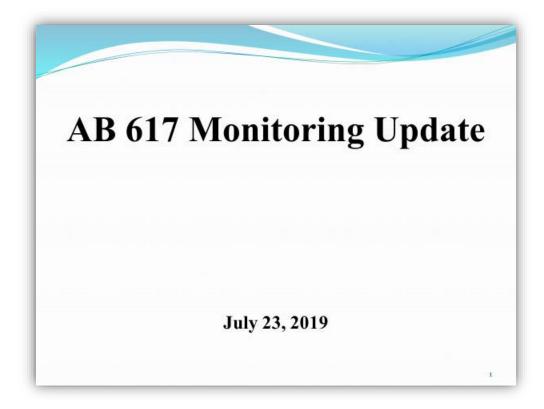
- Location #6: Boston & 28th Avenue
 - ✓ Reported: Busy intersection, heavy traffic with passenger cars and big rigs. Noticed strong smells and smoke from restaurants.
- Location #3: Bay Marina & Cleveland
 - ✓ Reported: Not heavy intersection with trucks and passenger vehicles.
- Location #12: National Avenue & Cesar E. Chavez Parkway
 - ✓ Reported: Heavy traffic but with passenger cars and trucks.
- Location #8: E Harbor & Cesar E. Chavez Parkway
 - ✓ Reported: Heavy traffic, noticed Dole trucks, pick-up trucks and location in front of Restaurant Depot.
- Location #4: E Harbor Drive & Cesar E. Chavez Parkway
 - ✓ Reported: Heavy traffic, noticed big rigs and motorcycles.
- Location #11: Main Street & Rigel Street
 - ✓ Reported: Not too much traffic, big trucks.
- Location# 7: Logan Avenue & Sampson Street
 - ✓ Reported: Noticed delivery trucks, heavy traffic.
- Location #9: E Harbor Drive & Park Blvd
 - ✓ Reported: Noticed delivery trucks and idling.
- Question: What time was the monitoring done at E. 30th and National City Blvd?
 - ✓ Answer: 8 am -2 pm. Equipment only allows 6 hours of recording.
- Question: Were locations monitored from 8 am- 2pm?
 - ✓ Answer: Yes, with the exception of location #8, which was monitored from 10 am-2pm.
- Question: Was it easy it to differentiate delivery trucks?
 - ✓ Answer: Yes, most trucks had logos.
- Question: Did you monitor off the Westside coming off Interstate 5 and into the Portside Community?
 - ✓ Answer: Yes, we monitored traffic coming off and going onto the freeway.
- Question: Do you have a tally sheet of the different vehicles?
 - ✓ Answer: The information will be downloaded through the computer-based reader program.
- Question: What was the number of times recorded per site?
 - ✓ Answer: 6 to 7 times.
- Comment: There were shifts that were missed. Early morning, 5:30 am and afternoon shifts, 2:30 pm, 3:00 pm-4:00pm.
 - ✓ Jon Adams: This was the first attempt of this program and we are not finished.
- Question: How did being outside affect you?
 - ✓ Answer: At location #4 and #6 experienced headaches.
- Question: Are you allowed to change locations? Trucks are more present on Logan Avenue turning right to get on Interstate 5, up Cesar Chavez bridge and left on Kearney Avenue.
 - ✓ Answer: Yes.
- Comment: Trucks are idling about 15-20 minutes on Logan Avenue and Cesar Chavez.
 - ✓ Mahiany Luther: Mobile Source Group will follow up with inspections.
- Question: What is the most important detail that is needed?
 - ✓ Answer: The location and truck license plate, not trailer license plate.

Do we Nominate Portside Community for a Community Emission Reduction Plan (CERP)?

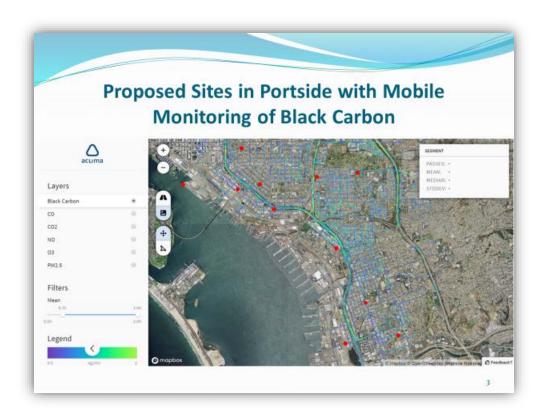
- Jon Adams: Nominations for the second-year community selections go out in September and to the CARB Board for approval in December. Would you like to nominate the Portside Community for the emissions reduction program?
- Question: Define Portside Community.
 - ✓ Answer: The four neighborhoods of Sherman Heights, Logan Heights, Barrio Logan and W. National City.
- Question: What are the guidelines that you mentioned?
 - ✓ Answer: There was a link to the CARB guidelines sent out to the committee members a few weeks ago. The District would write the plan and submit it based on these guidelines.
- Question: What new information would we have without the data from the stationary monitoring equipment?
 - ✓ Answer: We will have the Aclima data and vehicle data from the grad students' work.
- Question: Do we know enough to go ahead?
 - ✓ Answer: We have a good understanding where emissions are coming from.
- Sara Giobbi: It seems like we don't have the data necessary to submit a plan. Its like the doctor trying to find a cure before the problem is known.
- Larry Hofreiter: I agree with what Sara is saying, but I am inclined to move forward. The District needs to synthesize the data and information that would make us more competitive.
- Joy Williams: We should move forward. EHC will be submitting a nomination for Portside to become an Emissions Reduction project.
- Salvador Abrica: We should submit the plan.
- Question: Can we modify the plan as we evolve?
 - ✓ Answer: Yes. It would be a dynamic document where changes will be made as we learn more
- Question: What is the schedule for developing the plan?
 - ✓ Answer: The District would submit a nomination in September. CARB staff would review in October and November, and CARB staff would provide recommendations to their Board in December, who would vote on it.

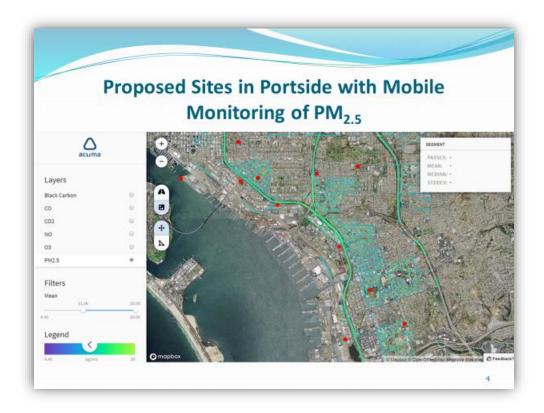
Committee Members Present voted in favor of nominating the Portside Community

- ✓ In favor: 12 of 13 who voted
- Jon Adams asked permission of the committee if he could contact the committee members not present at meeting to collect their votes, and the committee approved.









North Portside



Addresses (North Portside)

Sherman Elementary School

301 22nd St., San Diego, 92102

10th Ave. Pier

The intersection of Waters St. & Terminal St. (no physical address currently)

CALTRANS Property at Chicano Park

1995 Newton Ave, San Diego 92113

CALTRANS Property at top of I-5 on ramp

29th St and Boston Ave (no physical address at this time)

Navy - MWR Parking lot

The intersection of Yama St and Main St, San Diego 92136 (no physical address currently)

San Diego Community College Educational Cultural Complex

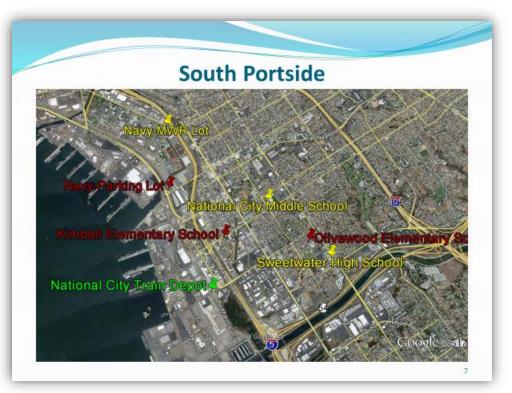
4343 Ocean View Blvd, San Diego 92113

Burbank Elementary School

2146 Julian Ave, San Diego 92113

San Diego Fire Station 19

3434 Ocean View Blvd, San Diego 92113



Addresses (South Portside)

- National City Train Depot
 - 922 West 23rd St, National City 91950
- National City Middle School

1701 D Ave, National City 91950

Sweetwater High School

2900 Highland Ave, National City 91950

Equipment

- On-hand
 - √ 3 Metals Samplers
 - √ 3 Black Carbon Analyzers
 - √ 3 Elemental Carbon Samplers
- On-order
 - √ 8 VOCs Samplers
 - √ 6 Metals Samplers
 - √ 6 Black Carbon Analyzers + Communication system
 - √ 6 Elemental Carbon Analyzers
 - √ 6 3-d Meteorological Sensors + Communication system

9

Laboratory Services

- Metals (Core) + Source Apportionment Metals
 - ✓ Scope of Work is written and at County Purchasing
 - ✓ In discussions with Purchasing to put this contract out for Bidding (Best Value)-delivery time unknown; about 3 months
- VOCs
 - ✓ Scope of Work is written and at County Purchasing
 - ✓ Has not been assigned a Purchasing agent
- Elemental Carbon/Organic Carbon + Source Apportionment Ions
 - ✓ Scope of Work is written and at County Purchasing
 - Purchasing agent is in contact with the Contractor-delivery time unknown, but less than 3 months.

10



- Question: Are the monitors in the living area of the community?
 - ✓ Answer: Yes.
- Question: Which part of Chicano Park will the monitor be stationed?
 - ✓ Answer: Under the bridge.
- Question: The Navy doesn't want the fence line monitored?
 - ✓ Answer: The Navy is developing at that location.
- Question: Is there a risk of capturing the idling emissions from the fire station?
 - ✓ Answer: The fire station has lots of room and should not be affected.
- Committee members approved monitoring stations listed being installed in the North and South Portside Community.

Next scheduled meeting is 08/27/2019 at Perkins Elementary School Cafeteria (1770 Main Street, San Diego, 92113 from 6:00 pm – 8:00 pm