South Sacramento – Florin Community Air Protection Steering Committee Meeting

Location: Florin Creek Recreation Center 7460 Persimmon Ave, Sacramento, CA 95823 March 26, 2019



Agenda

6:30 - 6:35 6:35 - 6:40 6:40 - 7:00 7:00 - 7:10 7:10 - 7:30 7:30 - 8:30

Welcome Recap and approve meeting notes Finalize objectives and actions Public Comments Air Monitoring Presentation Identify and discuss potential areas impacted by air pollution Adjourn

8:30

Recap and Approve Meeting Notes

<u>Overall Goal</u>: Assist in the development of a community air monitoring plan for the South Sacramento – Florin Community

Meeting Dates	Key Takeaways/Decisions
December 11, 2018	 Overview of air quality, the District, and AB 617 Developed air quality steering committee charter
January 25, 2019	Approved the charter, selected Chair and Vice ChairRecommended new community boundary
February 26, 2019	Finalized community boundaryDeveloped a list of air quality concerns
March 19, 2019	 Prioritized air quality concerns (via survey) Established general monitoring objectives and scope of actions
March 26, 2019	 Finalize objectives and actions Develop a list of potential areas impacted by air pollution

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Finalize Objectives and Scope of Actions

March 26, 2019

Survey Results

Air Quality Concerns

- I. Need to increase education and outreach efforts, especially to minority population
- 2. Emissions from highway 99
- 3. Increasing rates of asthma and respiratory problems in the community, and for sensitive groups
 - Emissions in and from small businesses
- 4. Idling trucks/traffic on Mack Road and Stockton Boulevard
 - Children walking to school and crossing intersections where these are located at high traffic areas or the highway 99 corridor
 - Indoor air quality/air pollution
 - Airport emissions
- 5. Traffic on Franklin Boulevard
 - Vehicles idling at light rail and train crossing
 - Fireplaces
 - Effects on the many underserved population, including your children, need to be better understood
 - Economic ramifications
 - Campbell Soup (no longer active)

Objectives and Scope of Actions- March 19, 2019



Monitoring Development Process





South Sacramento – Florin Community

Concerns	Objectives	Monitoring	Desired Actions
Need to increase air quality education and outreach efforts	 Increase air quality awareness in the community Make air quality information easily accessible Make information easy to understand 	 Monitor at schools PM 	 Partner with Sac City and Elk Grove School Districts to educate students on air quality Develop a public air quality awareness plan, which include methods to notify the community Develop central repository/place to go where public can find out more information Provide information in multiple languages
Increasing rates of asthma and respiratory problems in the community	 What are the air pollution exposures to sensitive receptors? How do the impacts change with respect to seasons and locations? 	 Monitor at/around sensitive groups (i.e. children, elderly, disabled) Seasonal monitoring PM Ozone 	 Partner with local health officials to evaluate if there's a correlation between adverse health impacts and air quality Provide air quality information to the public so they can make informed decisions (i.e. information on mask when air quality is poor)





South Sacramento – Florin Community

Concerns	Objectives	Monitoring	Desired Actions
Emission impacts from Hwy 99/traffic	 What portion of emissions from traffic are from heavy duty vehicle vs light duty vehicle? On-road vs. offroad? How far does the impact of trafficrelated pollutants from Hwy 99 extend? Do the emissions from traffic impact schools/hospitals? 	 Particulate Matter Black Carbon Toxics from diesel and gasoline engines Monitoring along the freeway and at different distances from the freeway Monitor for other types of pollutant emissions (this aligns with business emission impact concern) 	 Electrical infrastructures should be located at the most used off-ramps Provide incentive funding for alternate mode of transportation such as carpooling/telecommuting More truck enforcement in the community
Emission impacts from small businesses Suggestion: Emission impacts from businesses	 Determine which source categories the emissions are coming from and do they have a significant impact? 	 Monitor areas near clusters of stationary sources 	If there are emission impacts: • •



Public Questionnaire on Objectives and Actions

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Air Monitoring Equipment

LEVI FORD, PROGRAM SUPERVISOR MARCH 26, 2019

Air Quality Measurements



Sou<mark>rce</mark> Categ<mark>ories</mark>

Meteorological Measurements

Source Attribution

Mobile Sources

Cars, Trucks, Buses, Trains, Aircraft, Boats, Farm Equipment

Area-Wide Sources

Residential Wood Burning, Construction, Architectural Coating, Cooking

Natural Sources

Wildfire, Prescribed Burning, Volcanoes, Dust

Stationary Sources

Electric Utilities, Gas Stations, Food/Ag Industrial Processes



Air Monitoring Equipment – March 26, 2019

Measure What You Are Breathing

Air monitoring **bridges the gap** between emissions from sources and what you're actually breathing



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Air Monitoring Equipment



IR QUALITY

Professional Grade Instruments

\rightarrow Continuous (gas and particulates)

- Diurnal (AM vs. PM)
- Seasonal (winter vs. summer)
- Real time
- Chemical species
- \rightarrow Non-continuous (gas or particulate)
 - Sent to a laboratory
 - Delay in data
 - Chemical species





Air Monitoring Equipment – March 26, 2019

Low Cost Sensors

- Screening tools
- Complement the professional grade equipment
- Broad scale & general trends



Siting for Equipment



- \rightarrow Open areas
- → Minimal space
- \rightarrow Minimal power



- Area of impact
 - \rightarrow Open areas
 - → Secure location
 - \rightarrow Source of power



Meteorological equipment

- \rightarrow Continuous (real time):
 - Wind direction & speed
 - Precipitation & humidity
 - Temperature
 - Others (solar radiation)
- \rightarrow Helps with:
 - Source attribution
 - Identifying meteorological patterns





Air Monitoring Equipment – March 26, 2019

Sources & Monitors

Source	Potential Pollutants of Concern	Method Options	Equipment Type	
Diesel Combustion (Internal Combustion Engine, Heavy Duty Trucks, Rail, Construction)	BC, CO, NOx, NO ₂ , Speciated PM (metals), VOCs, PM mass	Continuous, Canister, Filter	Professional Grade and / or Low Cost (PM only)	
Coating Operations/Auto Body Shops	VOCs, aromatics, chlorinated compounds	Continuous, Canister	Professional Grade	Кеу:
Gasoline Dispensing Facilities	VOCs	Continuous,	Professional Grade	PM - Particulate Matter
(GDF)	1000	Canister		BC - Black Carbon
Posidential Wood Smake	Cresided DM DMmans, DO Javandaraan	Continuous Filtor	Professional Grade and /	CO - Carbon Monoxide
Residential Wood Smoke	Specialed Fivi, Fivi mass, BC, levoguicasan	Continuous, Filter	or Low Cost (PM only)	NOx - Nitrogen Oxide
	VOCs, Speciated PM (toxic metals), PM mass, BC, CO, NOx, CO ₂	Continuous, Canister, Filter	Professional Grade and /	VOCs - Volitile Organic Compounds
Light Duty Vehicles			or Low Cost (PM only)	Pb - Lead
Aircraft	Speciated PM (Pb), PM Mass	Continuous, Filter	Professional Grade	
Wildfire	Speciated PM, PM mass, BC, levogulcasan	Continuous, Canister, Filter	Professional Grade and / or Low Cost (PM only)	



Air Monitoring Equipment – March 26, 2019





Deliverable: Identify general areas of concern

- Steering Committee break up into two groups
- Poster sized maps provided
- Start with top identified objectives
- Provide at least ½ mile radius for each general area



Requested Information

- Wind Speed and Direction (Annual, Seasonal)
- Truck routes
- Available traffic information
- School Population and Locations
- State Air Board's modeling results

Sacramento Wind Speed and Wind Direction

30 – Year Average (1987 – 2017)



Wind direction and speed matters



http://www.airquality.org/Residents/CEQA-Land-Use-Planning/Mobile-Sources-Air-Toxics-Protocol



STAA Truck Routes (Surface Transportation Assistance Act) http://www.dot.ca.gov/trafficops/trucks/local-truck-routes.html



http://www.sacdot.com/Pages/TruckRoutes-STAA.aspx



Traffic Information



Source:

- Sacramento County Department of Transportation: <u>http://data.saccounty.net/datasets/f4bff048ea274e07a4fd9</u> <u>03ea2ac3c2e_0</u>
- Sacramento City Transportation Division: <u>https://www.cityofsacramento.org/Public-</u> Works/Transportation/Traffic-Data-Maps/Traffic-Counts
- 3. Elk Grove Traffic Engineering: <u>http://www.elkgrovecity.org/UserFiles/Servers/Server_109</u> 585/File/average-daily-traffic-report.pdf
- California Department of Transportation: <u>http://www.dot.ca.gov/trafficops/census/volumes2017/Ro</u> <u>ute99.html</u>

Label	On Street	Direction	Cross Street	Count Data Source
1	Franklin Blvd	North of	47th Ave	15,300 Sacramento County DOT
2	Franklin Blvd	North of	Florin Rd	24,300 Sacramento County DOT
3	Franklin Blvd	South of	East Pkwy	25,700 Sacramento County DOT
11	65th St	North of	Florin Rd	15,000 Sacramento County DOT
12	Stockton Blvd	South of	Florin Rd	26,500 Sacramento County DOT
13	Stockton Blvd	North of	Elsie Ave	38,600 Sacramento County DOT
14	Power Inn Rd	North of	Florin Rd	29,300 Sacramento County DOT
15	Power Inn Rd	North of	Gerber Rd	26,300 Sacramento County DOT
16	Power Inn Rd	South of	Elsie Ave	18,900 Sacramento County DOT
17	Power Inn Rd	South of	Stevenson Ave	20,500 Sacramento County DOT
18	Power Inn Rd	North of	Calvine Rd	33,300 Sacramento County DOT
20	French Rd	South of	Florin Rd	18,000 Sacramento County DOT
Α	47th Ave	East of	Martin Luther King Blvd	41,400 Sacramento County DOT

School Population & Locations



Source: http://data.sacog.org/datasets/schools-2018

District	Туре	School Name	Address	Grade Span	Level	Enrollment 2016-2017
ELK GROVE UNIFIED	Public	MONTEREY TRAIL HIGH	8661 POWER INN R	9-12	High	2237
ELK GROVE UNIFIED	Public	LAGUNA CREEK HIGH	9050 VICINO DR	9-12	High	1828
SACRAMENTO CITY UNIFIED	Public	LUTHER BURBANK HIGH	3500 FLORIN RD	9-12	High	1735
ELK GROVE UNIFIED	Public	VALLEY HIGH	6300 EHRHARDT AV	9-12	High	1556
ELK GROVE UNIFIED	Public	FLORIN HIGH	7956 COTTONWOOD	9-12	High	1503
	Private	CHRISTIAN BROTHERS HIGH SCHOOL	4315 MARTIN L KING BL	9-12	High	1149
ELK GROVE UNIFIED	Public	EDWARD HARRIS, JR. MIDDLE	8691 POWER INN R	7-8	Middle	1103
ELK GROVE UNIFIED	Public	HARRIET G. EDDY MIDDLE	9329 SOARING OAKS DR	7-8	Middle	1043
ELK GROVE UNIFIED	Public	SAMUEL JACKMAN MIDOLE	7925 KENTWAL DR	7-8	Middle	1019
ELK GROVE UNIFIED	Public	DAVID REESE ELEMENTARY	7600 LINDALE DR	K-6	Elementary	1005
ELK GROVE UNIFIED	Public	MARY TSUKAMOTO ELEMENTARY	8737 BRITTANY PARK DR	K-6	Elementary	970
SACRAMENTO CITY UNIFIED	Public	JOHN H. STILL	2250 JOHN STILL DR	K-8	Middle	963
ELK GROVE UNIFIED	Public	ROY HERBURGER ELEMENTARY	8670 MARANELLO DR	K-6	Elementary	924
ELK GROVE UNIFIED	Public	MAEOLA E BEITZEL ELEMENTARY	8140 CAYMUS DR	K-6	Elementary	918
ELK GROVE UNIFIED	Public	SAMUEL KENNEDY ELEMENTARY	7037 BRIGGS DR	K-6	Elementary	913
ELK GROVE UNIFIED	Public	PRAIRIE ELEMENTARY	5251 VALLEY HI DRIVE	K-6	Elementary	912
ELK GROVE UNIFIED	Public	JOSEPH KERR MIDDLE	8865 ELK GROVE B	7-8	Middle	906
ELK GROVE UNIFIED	Public	JAMES RUTTER MIDDLE	7350 PALMER HOUSE DR	7-8	Middle	905
ELK GROVE UNIFIED	Public	ISABELLE JACKSON ELEMENTARY	8351 CUTLER WY	K-6	Elementary	898
ELK GROVE UNIFIED	Public	FOULKS RANCH ELEMENTARY	6211 LAGUNA PARK DR	K-6	Elementary	895
ELK GROVE UNIFIED	Public	ARTHUR C. BUTLER ELEMENTARY	9180 BROWN RD	K-6	Elementary	877
ELK GROVE UNIFIED	Public	CHARLES E MACK ELEMENTARY	4701 BROOKFIELD DR	K-6	Elementary	873
ELK GROVE UNIFIED	Public	JOHN EHRHARDT ELEMENTARY	8900 OLD CREEK DR	K-6	Elementary	872
ELK GROVE UNIFIED	Public	IRENE B. WEST ELEMENTARY	8625 SERIO WY	K-6	Elementary	857
SACRAMENTO CITY UNIFIED	Public	WEST CAMPUS	5022 58TH ST	9-12	High	862
ELK GROVE UNIFIED	Public	ELK GROVE ELEMENTARY	9373 CROWELL DR	K-6	Elementary	854
SACRAMENTO CITY UNIFIED	Public	ROSA PARKS ELEMENTARY	2250 68TH AV	K-8	Elementary	829
SACRAMENTO CITY UNIFIED	Public	BOWLING GREEN ELEMENTARY	4211 TURNBRIDGE DR	K-6	Elementary	815
ELK GROVE UNIFIED	Public	UNION HOUSE ELEMENTARY	7850 DEERCREEK DR	K-6	Elementary	807
TWIN RIVERS UNIFIED	Public	SAVA: SACRAMENTO ACADEMIC AND VOCATIO	5330 POWER INN RD	7-12	Jr/Sr High	803
ELK GROVE UNIFIED	Public	RAYMOND CASE ELEMENTARY	8565 SHASTA LILY DR	K-6	Elementary	799
ELK GROVE UNIFIED	Public	MARION MIX ELEMENTARY	4730 LAGUNA PARK DR	K-6	Elementary	792
ELK GROVE UNIFIED	Public	JOSEPH SIMS ELEMENTARY	3033 BUCKMINSTER DR	K-6	Elementary	774
ELK GROVE UNIFIED	Public	STONE LAKE ELEMENTARY	9673 LAKEPOINT DR	K-6	Elementary	763
FLK GROVE UNIFIED	Public	ANNA KIRCHGATER FLEMENTARY	8141 STEVENSON AV	K-6	Elementary	762

State Air Board's Modeling Results



CARB's Air Toxics Modeling

- Based on 2012 Emission Inventory
- Census tract-level information
- CARB is working on an update

Source Type	Cancer Risk (in a million)
Diesel PM from on-road sources	261-917
Diesel PM from area-source and off-road sources	128-238
Diesel PM from point source	0.5-2.6
Heavy metals	0.2-0.5
Toxic VOCs	58-80
All risk	447-1192

Deliverable: Identify general areas of concern

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Steering Committee Report back

Public Comments

Next meeting: April 23, 2019 Meeting location: ?

