Possible WOCAP strategies thus far - Steering Committee suggestions from Jan 9,2019 exercise in blue.			Strategy addresses:		
Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
Section 1: Land Use	**1-**				
Nonconforming Uses	1	Amend existing City of Oakland Ordinances and policies to accelerate the relocation out of West Oakland of nonconforming auto and truck-related activities that create conflicts in neighborhood.		**x**	
	2	New Ordinance to address need for building design to address filtration.		**x**	
	3	Provide loans and subsidies to move freight services and non-conforming businesses out of West Oakland.		**x**	
Conditional Use Permits	4	Amend the Building Codes and/or Zoning Ordinance to list freight and trucking related businesses as prohibited uses within West Oakland.		**x**	
Green Infrastructure	5	Require on-site renewable energy generation of at least 5% of a project's energy use.	**x**	**x**	
	6	Require the implementation of as many transportation demand management (TDM) strategies as feasible by developers of new buildings.	**x**	**x**	
	7	Advocate for the City to require City projects to include green infrastructure.	**x**	**x**	
	8	Incentives for local businesses and homeowners to install solar power coupled with energy storage systems (e.g. batteries).	**x**	**x**	
	9	Incentives to improve residential energy efficiency.	**x**	**x**	
	10	Incentives for discounts on pedal and electric bicycle and cargo bicycle rental and purchase.	**x**	**x**	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
	11	Work with local business support agencies and community members to develop a Plan to attract innovative green companies.	x	x	
	12	Create Green West Oakland Guidelines.	x	x	
	13	Set aside land for green infrastructure and truck charging stations.	x	x	
	14	Implement a program for temporarily closing streets next to schools to keep cars and trucks away from arriving and departing students.		x	
	15	Expand Safe Routes to Schools program.	x	x	
	16	Advocacy for West Oakland Specific Plan (adopted) and West Oakland Truck Management Plan (proposed) measures	x	x	
	17	Create an area-wide urban canopy/forest plan; advocate for City to make commit to maintaining street trees		x	
	18	Support request for a neighborhood lobbyist to advocate for West Oakland's fair share of resources	x	x	
	19	Remove barriers to adoption of zero-emission trucks, such as cost, land, and issues around ownership of charging equipment	x	x	
	20	Advocate for the City to address gentrification and the pricing out of long-term residents			
	21	Construct vegetative biofilters between pollution sources and land uses that serve people		x	
Intra-Agency Collaboration	22	Create a Sustainable Freight Advisory Committee within the City of Oakland Mayor's office that includes representatives from each of these agencies to provide recommendations to each agency's governing board or council.	x	x	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
	23	Undertake participatory budgeting with West Oakland community members to allocate local health improvement grants.	**x**	**x**	
	24	Coordinate with DMV, Caltrans and PG&E regarding discussions about air quality in West Oakland.	**x**	**x**	
	25	Include truckers (including owner-operators) in discussions about air quality in West Oakland, specifically about how to improve the Port appointment system, develop charging infrastructure and suitable rates, and develop land-use restrictions in industrial areas.	**x**	**x**	
	26	Support better communication between Oakland Police Department, Oakland Parking Department, Bay Area Air Quality Management District (BAAQMD) and California Air Resources Board (CARB) regarding enforcement	**x**	**x**	
Section 2: Truck Strategies (On-road)	**2-**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
Truck, Equipment and Bus Idling	1	Encourage CARB to amend the existing truck idling regulation to be consistent with the current school bus idling restrictions.	**x**	**x**	
	2	Ban trucks that are not complying with CARB regulations	**x**	**x**	
	3	Develop a joint task force with City and Port of Oakland, Air District, and CARB to enhance/increase enforcement activity of existing and future idling regulations.	**x**	**x**	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
	4	Work towards more coordination and education, including for the Oakland Police Department (OPD). For example, to address roles and expectations for CROs (Community Resource Officers) on duty/patrol vs. on call.	x	x	
	5	Connect idling violations with enforcement of the Urban Blight/Nuisance Ordinance.	x	x	
	6	Work towards idling enforcement spot inspections weekly or more frequently.	x	x	
	7	Require “Clean Idle” trucks to meet the 5-minute idling regulation when within the Port area and within an AB617 designated community	x	x	
	8	Encourage the City of Oakland to require by ordinance or via conditions of approval for building permits the installation of infrastructure to allow trucks to run transportation refrigeration units with electricity	x	x	
	9	Require the electrification of all loading docks to facilitate plug-in capability and require trucks to utilize grid power to deliver goods	x	x	
	10	Consider using GPS to identify where trucks idle.	x	x	
	11	Determine if trucks in West Oakland are registered in California, have the required emissions equipment, and consider if low-NOx CNG trucks are a better technology fit for businesses in West Oakland and drayage operators.	x	x	
	12	In partnership with CARB, develop a program to “find and fix” trucks that will idle and run cleaner with equipment fixes	x	x	
	13	Advocate and support CARB rule-making activities	x	x	
Truck Parking	14	Advocate for expedited implementation of existing parking ordinances and parking policies in the West Oakland Specific Plan		x	
	15	Work with City of Oakland on strengthening the parking related measures in the proposed draft West Oakland Truck Management Plan.	x	x	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
	16	Encourage a program of continuous improvement of parking control strategies in cooperation with trucking firms and owner-operators, beneficial cargo owners, and local residents.		x	
	17	Work with the Port of Oakland to strengthen the parking related measures in the proposed draft 2020 and Beyond Air Quality Plan.		x	
	18	Enforcement should include 7th Street and spots off main streets (such as Maritime) where trucks lay-over between container moves.		x	
Truck Routes	19	Create Mayor's Sustainable Freight Advisory Committee to provide oversight and input on Port and City Planning efforts	x	x	
	20	Advocacy for expedited implementation of existing ordinances and policies related to truck routes	x	x	
	21	Work with City of Oakland on revising the truck routes and enforcement measures in the proposed draft West Oakland Truck Management Plan.	x	x	
	22	Determine if the Grand Avenue Bus Rapid Transit project will create more emissions due to more truck and car idling/congestion and mitigate with policies if needed.	x	x	
	23	Determine if I-580 should allow truck traffic, if I-880 should include a designated truck lane. Advocate for these changes if determined to reduce emissions and exposure to air pollution in West Oakland	x	x	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
Zero and Lower Emissions Trucks	24	Advocate for an amendment to CARB regulations or for new legislation to require zero emission drayage trucks by 2030.	x	x	
	25	Advocate for AC Transit to convert its fleet to zero emissions busses.	x	x	
	26	Advocate for the City to revise its draft Truck Management Plan and the Port to revise its draft 2020 and Beyond Air Quality Plan to aggressively phase in zero emission trucks and infrastructure.	x	x	
	27	Promote use of Class 5-7 zero-emission trucks	x	x	
	28	Advocate for PG&E and other utilities to rationalize electric rates.	x	x	
	29	Support development of fast-charging facilities, better land use support for electric trucks, and an infrastructure plan to address implementation of charging facilities.	x	x	
	30	Funding for electric buses is needed. Advocate for AC Transit to apply for all available funding to convert its fleet to zero emissions busses.	x	x	
	31	Streamline the State and Air District's process for small fleet owners to obtain funding to buy new trucks. Prioritize, streamline, and assist small businesses with applications	x	x	
	32	Seek other funding sources in coordination with the Port of Oakland, the City of Oakland, Alameda County Transportation Commission, the Metropolitan Transportation Commission, and the State of California.	x	x	
	33	Funding for electric vehicles is needed. Support the continuation of the West Oakland Zero-Emission Grant Program by BAAQMD	x	x	
	34	The BAAQMD and California Air Resources Board will increase Incentives for low-emission and electric Transportation Refrigeration Units.	x	x	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
	35	Support the development of incentives for zero-emission drayage trucks before the drayage rule is implemented between 2026 and 2028; this could include intermediate measures instead of full zero-emission trucks.	x	x	
Charging Stations & Infrastructure	36	Advocate for the City of Oakland to amend its development codes/ordinances to require electric truck charging stations at the Port and where trucks are allowed in West Oakland.	x	x	
	37	Work with the Port of Oakland to revise their draft 2020 and Beyond Air Quality Plan to require all tenants to install truck charging stations	x	x	
	38	Support trucker services and parking to keep trucks off West Oakland streets.	x	x	
	39	Address the effects of increasing visits from larger container ships at the Port, which can change truck flow, points of congestion, require more truck movements in a short period of time, and increase the need for space for trucks to dwell.	x	x	
	40	Support additional parking for trucks at Jack London Square.		x	
	41	Consider new technology, such as GPS data collection, that may help mitigate truck parking impacts.	x	x	
	42	Consider a shuttle load alternate (an offsite location where trucks can unload instead of at the Port, followed by a separate shuttle truck transfer of the load to the Port).	x	x	
	43	Collaborate with owner-operators on electric infrastructure design	x	x	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
Roadways	44	Advocacy for West Oakland Specific Plan (adopted) and West Oakland Truck Management Plan (proposed) measures	**x**	**x**	
	45	Support the West Oakland Walk (W.O.W.), a proposed pedestrian and bicycle-friendly route connecting Lake Merrit to Wood Street via 18th St and 14th St. www.westoaklandwalk.org			
	46	The City of Oakland's Pedestrian Plan recommends eight (8) measures or treatments of intersections with signals: 1) Add Exclusive Pedestrian Phasing; 2) Restrict Right turns on red; 3) Protected right turn phase; 4) Modify Signal Timing; 5) Protected/Permissive Phasing; 6) Install Pedestrian Countdown Timers; 7) Implement Leading Pedestrian Interval; 8) Implement Flashing Yellow Arrow			
	47	The City of Oakland's Pedestrian Plan recommends seven (7) measures or treatments of intersections with Stop Signs: 1) Install Raised intersections or Pedestrian Crossings; 2) Install raised pedestrian refuge islands; 3) Install "Yield for Pedestrians" signs; 4) Stripe advance yield lines; 5) Restrict parking at intersection approaches; 6) Provide better lighting; 7) Reduce Corner Radii.			
	48	The City of Oakland's Pedestrian Plan recommends eight (8) measures or treatments for mid-block crossing: 1) Install a pedestrian signal; 2) Install a pedestrian hybrid beacon; 3) Install rectangular rapid flashing beacon; 4) Install a crossing island; 5) install curb extensions; 6) Install a raised pedestrian crossing; 7) Install high visibility crosswalk markings; 8) Implement a "road diet" by reducing the number of vehicular lanes			
	49	Improve safety at street intersections near the Port, including Union St at 5th and 7th Sts and Adeline St. at 3rd, 5th, and 7th Sts. for pedestrians and cyclists. Possible improvements include high-visibility crosswalks and bike crossings, ped/bike signals, improved signage, and ped refuges/islands			
	50	Change allowable weight limits on local streets in City and Port ordinances to allow single-axle trucks to move containers on Maritime and other public streets within the Port.		**x**	
	51	Consider creating incentives for “truck turns,” the practice of hauling loaded containers on each leg of a Port roundtrip	**x**	**x**	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
	52	Address deferred maintenance issues, such as pot holes			
Section 3: Other Mobile Sources	**3-**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
Transit	1	Funding for electric buses is needed. Advocate for AC Transit to apply for all available funding to convert its fleet to zero emissions busses	**x**	**x**	
	2	Determine if the Grand Avenue Bus Rapid Transit project will create more emissions due to more truck and car idling/congestion and mitigate with policies if needed	**x**	**x**	
	3	Set aside land for green infrastructure, transit and truck charging stations.	**x**	**x**	
	4	Advocate and support CARB rule-making activities	**x**	**x**	
Ships	5	Advocate for amendments to the CARB At-Berth Regulation to require the control of emissions from 100% of container ship visits by 2021	**x**	**x**	
	6	Advocate and support CARB rule-making activities	**x**	**x**	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
Rail	7	Work with U.S. EPA to adopt requirements for railways to phase in higher tier long-haul and switcher locomotives	**x**	**x**	
	8	Work with the Port of Oakland to strengthen measures in the proposed draft Beyond 2020 Air Quality plan	**x**	**x**	
	9	Conduct research to determine the state of clean rail technology	**x**	**x**	
	10	Develop a memorandum of understanding with Union Pacific and BNSF railways to progressively reduce fleet average locomotive emissions to Tier 3 levels by 2023 and Tier 4 levels by 2028	**x**	**x**	
	11	Install sensors above rail track in West Oakland to monitor decreases in emissions from locomotive operations	**x**	**x**	
	12	Support funding for electrification of railyard switcher operations	**x**	**x**	
Cargo Handling Equipment	13	Work with the Port of Oakland to strengthen measures in the proposed draft Beyond 2020 Air Quality plan	**x**	**x**	
	14	Support incentives for zero emissions top/side pick cranes	**x**	**x**	
	15	Support incentives to build capacity for electric infrastructure and power storage	**x**	**x**	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
Construction Equipment	16	Work with the Port of Oakland to strengthen measures in the proposed draft Beyond 2020 Air Quality plan	**x**	**x**	
	17	Work with the City of Oakland to require all construction used in West Oakland be zero emission equipment if available	**x**	**x**	
	18	Provide incentives for zero-emissions construction equipment	**x**	**x**	
Section 4: Fixed & Stationary Source Strategies	**4-**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
Air District Permitted Stationary Sources	1	Investigate amending existing metal recycling and material handing regulations.	**x**	**x**	
	2	Develop a rule to reduce emissions of ROG and other toxic compounds from liquid storage tanks	**x**	**x**	
	3	Seek legislative authority to regulate and develop a regulation to set a cap on emissions from the Port of Oakland, including the Oakland Army Base.	**x**	**x**	
	4	Incentives to replace older back-up diesel emergency generators with new, EPA/CARB Tier 4 engines	**x**	**x**	
	5	Incentives to reduce emissions at waste water treatment plans via systems to improve efficiency	**x**	**x**	
	6	Require an Electrical Infrastructure Plan for the maritime waterfront areas of Oakland	**x**	**x**	
	7	Undertake an engineering study of exhaust stack/vent locations	**x**	**x**	
	8	Develop a rule to reduce emissions of CO2, Methane, ROG & NOx from waste water treatment plants and anaerobic digestion facilities	**x**	**x**	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
Fixed Source Nuisances	9	Incentives to remove existing wood-burning stoves	**x**	**x**	
	10	BAAQMD will work with the City of Oakland, the Port of Oakland and other public agencies to improve referral and follow-up on nuisance and odor complaints	**x**	**x**	
	11	BAAQMD will work with the City of Oakland on joint enforcement of open burning regulations and use of firepits	**x**	**x**	
	12	Research ROG reductions from vanishing oils and rust inhibitors used by local auto body repair shops, metal workers and other manufacturing facilities.	**x**	**x**	
	13	Install more air monitoring sensors to assess additional controls on stationary or "fixed" sources	**x**	**x**	
Section 5: Health Programs	**5-**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
Exposure Reduction	1	Require the electrification of all loading docks to facilitate plug-in capability and encourage or require trucks to utilize grid power to deliver goods	**x**	**x**	
	2	Incentives for car share programs and expansion of light-duty vehicle retirement program	**x**	**x**	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
	3	Incentives to install high-efficiency air filtration systems at schools, day care facilities, hospitals, and residences in West Oakland		**x**	
Health in All Policies	4	Expanded programs: Asthma Management at Schools		**x**	
	5	Expand programs: Access to Medicine/Medical Services (measures to address child health and health equity)		**x**	
	6	Expand Programs: Healthy Heart/Diabetes Program (hypertension and diabetes support and classes)		**x**	
	7	Improve access to medical services: Pilot taxi voucher program		**x**	
	8	Expand the existing West Oakland Senior Shuttle program to include seniors in single family homes and smaller multi-family homes		**x**	
Healthy Development	9	New development project-wide smoking ban		**x**	
	10	Build residential units and/or sensitive land uses that are closest to emissions sources at the latest date in the future		**x**	
	11	Locate sensitive land uses as far away from emission sources (including loading docks, busy roads, etc.) as is feasible		**x**	

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Section	**Strategy Number**	**Short Description**	**Emissions**	**Exposure**	**Zone(s)**
	12	Consider incorporating solid barriers into site design, like a sound wall, between buildings and sources of air pollution (for example, a freeway)		**x**	
	13	Plant dense rows of trees and other vegetation between sensitive land uses and emission source(s); protect existing trees		**x**	
	14	Avoid locating residences, schools, medical facilities on the ground floor of buildings near sources of pollution		**x**	
	15	Expand HDG to include existing buildings, such as requiring HEPA filters.		**x**	
	16	Align West Oakland zoning with HDG.		**x**	
	17	Work with various agencies to better track health impacts so data are centralized and consistently reported	**x**	**x**	