Updated Shafter Community Monitoring Plan
June 2019

Up to this point, it is clear that a few specific areas around Shafter should be monitored for various levels of pollutants. Here is the current list which is subject to additions at any time:

1. **Golden Oak Elementary School** along Lerdo Hwy. There are two stop signs along Lerdo Hwy, and immediately adjacent to playgrounds for very young children. The separation is only a sidewalk and a chain link fence. Many trucks pass through there daily. Monitoring for exposure to diesel pollutants is important at this location.

2. **Sequoia Elementary** at Mannel and Fresno. The playground at this school is adjacent to agricultural operations and very near to several oil wells. The playground is also about 3,200 ft from the CRC crude oil processing facility. Within 1,000 ft of the playground are three different oil well locations with one or more wells. Monitoring for VOC emissions plus NOx and diesel soot are important at this location. The ongoing pesticide monitoring is also elemental to this process.

3. **The Mexican Colony** at Burbank and Mannel plus **Cherokee Strip** along Beech between Burbank and San Diego. A large segment of South Shafter lives in these two unincorporated communities. Cherokee Strip is ¾ mile north of the Plains LPG facility also on Beech. La Colonia is ⅔ mile from the JP Oil crude oil processing facility on Imperial. Both areas are surrounded by agriculture. Monitoring should be similar to Sequoia Elementary for VOC, NOx, and diesel soot, plus potential toxic emissions.

4. **Airport Industrial Area** near Lerdo and Zerker Rd plus Hwy 99 on the east side. Monitoring in this area should be for NOx, diesel soot, VOC and PM2.5 plus potential toxic emissions. Many different industries are in this area including carrot and garlic processing and manufacturing of asphalt roofing material and tar paper.

5. **Dairy monitoring** on Wildwood between Riverside and Burbank. There are two large, freestall type dairies at this location, across the road from each other. One has received CDFA funding and built a digester with a natural gas generator. Monitoring for quantities of ammonia, VOC, NOx, hydrogen sulphide, ethanol, methanol, methane, and N2O would all give useful information at this location. Also, an analysis of all the trucking emissions at this location would be important. Note: while this location is 9 miles from the center of Shafter it is less than 6 miles from Maple School which is attended by many Shafter residents. It has been selected, in part, because it has a bio-digester.

6. **Plains LPG,** already mentioned in reference to La Colonia and Cherokee Strip, needs special fenceline monitoring because of its apparent history of violations with the air district the past few years. Monitoring for VOC and NOx is important here plus more frequent inspections would be appropriate.

7. **CRC and JP Oil** processing facilities should also be monitored directly and receive more frequent inspections for any violations of their permits.

8. **High Speed Rail** construction activity should be monitored for diesel soot, NOx, PM10, PM2.5, etc. When construction is heavy some special monitoring should take place. This area is along the current BNSF railroad tracks between Poplar and Poso (in Wasco).

9. **Late Summer and Fall agricultural harvest activity** should be monitored beginning August 1 through November 1 to see what the changes in PM10, NOx, diesel soot, and PM2.5 might be locally. Monitoring locations should be selected early with some baseline information gathered in June and July and then random sampling during this harvest time period to look for changes.

10. **PM10** monitoring year around, perhaps at the same location as the PM2.5 and Ozone monitors on the roof of the DMV building.

11. **Wood Smoke monitoring** This is especially important in the cool months of the year but wood smoke level detection should be done on an annual basis. Both from open agricultural burning and residential burning, there is a need to see how much smoke is in Shafter's neighborhoods. Hopefully, there is a way for a monitor to distinguish wood smoke, and general smoke from perhaps trash burning, from other contaminants found in Shafter's air.

Proposed CERP for Shafter

Introduction: Combustion is the enemy of clean air in the Shafter area. The biggest sources of combustion are mobile sources, both on and off road, heating of buildings, and stationary engines. Conversion of these combustion sources to electricity solves two problems at once. It reduces local air pollution burdens and it transitions the City of Shafter to the future where greenhouse gas emissions have to be reduced at least 80% by 2050. By 2045, grid electricity should be 100% renewable in California. Some of the rest of the needed reductions need to come from converting current fossil fuel use to electricity. Obviously, low income residents of Shafter will not be able to transition to this non-combustion future without a lot of help. Current programs are insufficient, and a just transition is essential. Additional Emission Reduction Strategies include a 2,500ft Health and Safety Buffer zone on all new oil and gas production in Shafter and the 7-mile radius along with a robust pipeline mapping and enforcement process is needed to monitor and stop fugitive emission that go unchecked.

1. 100 electric car replacements for private vehicles 15 years or older including SUV's. There are at least 2,000 light passenger vehicles of this age registered in Shafter. Qualifying low-income residents with these vehicles can turn them in for an EV at no cost. The EV would be similar to the basic Nissan Leaf with 150 mile range which costs around $30,000. An electric vehicle charging outlet will also be provided either in their garage or in a driveway or curbside so the vehicle may be charged overnight. Main expenses of the recipient are the cost of electricity for charging, insurance, registration fees and vehicle maintenance. The federal tax credit, current trade-in programs, CA and SJV rebates, will already cover $20,000 of the total cost. This program would need another $10,000 to $15,000 per vehicle.

2. 250 low-income homes to have solar installed. The federal tax credit and the DAC-SASH program would pay nearly 100% of the cost. This funding should be made available with either current sources or AB617 funds. The homes receiving this solar will also have an electric heat pump installed for heating and cooling, electric hot water heater and an electric induction stove.

3. The Community Solar Green Tariff program should be put in place in Shafter. Low income residents subscribing should also receive electric heat pump installations for heating and cooling, an electric hot water heater, and an electric induction stove.

4. 20 EV's placed around Shafter neighborhoods with charging stations. These vehicles with 150 to 250 mile range are made available for rent at a subsidized cost by low-income residents. A cost of 20 cents per mile should be reasonable. Many Programs like this already exist all over the State of California.

5. Heavy duty trucks using Laredo Hwy through the two stop signs adjacent to Golden Oak Elementary must be routed somewhere else. Perhaps Tulare and Riverside Avenues may be used for westbound and eastbound routes respectively.

6. Shafter community transportation services, Dial-a-ride, should receive two EV's. There are programs like these already in the Central Valley that work great.

7. Richland Elementary should receive 5 electric school buses.

8. Oil wells and related equipment within the 7 mile radius which use stationary internal combustion engines should convert to electric motors if the electrical grid is available within 1,000 feet.

9. Farmers using internal combustion engines to pump water within the 7 miles and located within 500 feet of the electrical grid should be given a 90% subsidized electric motor conversion opportunity for a period of one year. These farmers have not taken advantage of current programs to replace these engines. After one year, if they have not converted to electricity, they will lose all opportunity to participate in any incentive program for such conversions and hopefully state programs will force them to convert in the future.

10. No agricultural burning will be allowed within the 7-mile radius. A subsidy will be available for grinding this material including small amounts of material due to attrition.

11. High Speed Rail construction within the 7-mile radius must use Tier 4 engines in all off-road construction equipment.

12. JP Oil must reduce current flaring levels, averaged over the past five years, by 90%.

13. The ten factory dairies to the west of Shafter will agree not to empty or aerate their manure lagoons during the months of December and January to reduce ammonia in the air during the worst months of PM2.5. An incentive may be appropriate initially and if effective a rule should be made.

14. No more EPA wood stoves or inserts will be subsidized in Shafter for the replacement of old wood stoves and fireplaces. These new stoves are still large sources of pollution. Instead, no burn days will be strictly enforced in the Shafter area and all fines collected. Likewise, no natural gas inserts will be subsidized, instead electric heat pumps will be subsidized at 75% of their total cost for everyone and 100% of their total cost for low-income residents.

15. No new oil wells will be drilled within 2,500 feet of residents, schools and all environmental sensitive locations

16. Conduct monthly inspections of Plains LPG and maximum fines imposed for each violation over the next five years.

17. 1,000 appropriate trees will be planted in Shafter residential lots with willing residents paid to care for them for 5 years. Total cost of $500 per tree.

18. The almond huller just north of Shafter on Hwy 43 will be given incentives of 80% to purchase two electric yard trucks

Special Pesticide Program

Specific measures regarding pesticides for the Community Emission Reduction Plans:

1. Ban all untarped applications of 1,3-D (very important for Shafter where 1,3-d is the primary pesticide TAC problem)

2. Reduce 1,3-d annual township cap (the cap is currently 136,000 pounds per 6x6 mile township) and/or establish cap reductions on a more granular basis to address 1,3-d spikes we see in certain sections.

Approximately 14 million pounds of the carcinogenic fumigant TAC 1,3-dichloropropene were applied to California fields in 2016, with similar amounts applied in prior years. In addition to being a TAC, 1,3-d produces Volatile Organic Compounds, contributing to the development of ozone. Just this year, the Superior Court of Alameda County found that the Department of Pesticide Regulation had improperly adopted an underground regulation[16], which had resulted in a relaxed cancer risk level of 0.56 ppb, which is 4.4 times DPR's previous cancer risk level of 0.14 ppb and 5.6 times higher than OEHHA's recommended level of 0.1 ppb to protect children. This underground regulation raised township caps from 90,250 pounds of 1,3-d that could be used per township to now 136,000 pounds per township. It is vital that for the public's health, this township cap be reduced to coincide, at least, with OEHHA's recommended safety level of 0.1 ppb.

3. Notification:

- Make Notices of Intent (NOIs), required for restricted pesticide applications, publicly available online, along with CAC approvals/denials of these NOIs. Notices of Intent are what farmers who intend to use a restricted pesticide have to submit to the local CAC at least 48 hours in advance of applying a restricted pesticide. CACs can deny an NOI, essentially prohibiting the farmer from carrying out that particular pesticide application. Once NOIs are public, there will be no further need for growers to produce lengthy and onerous lists of annual planned pesticide use near schools, nor to take additional steps before using any pesticides not included on their annual lists.

- Provide real-time 48-hour notification via text and email on an opt-in basis for all drift- prone applications within a mile of schools.

4. Ban all aerial applications of pesticide TACs

5. Establish 24/7 buffer zones of 1 mile for all pesticide TACs for all sensitive sites, including homes, hospitals, labor camps and schools

6. Ask for an evaluation of all carcinogenic TACs including, pesticides, and then create emissions reduction plans in line with that analysis

7. Ask for an evaluation of all reproductive toxicity TACs, including pesticides, and then create emissions reduction plans in line with that analysis