# Department of Pesticide Regulation: Update on State and Community-Specific Strategies

July 8, 2019

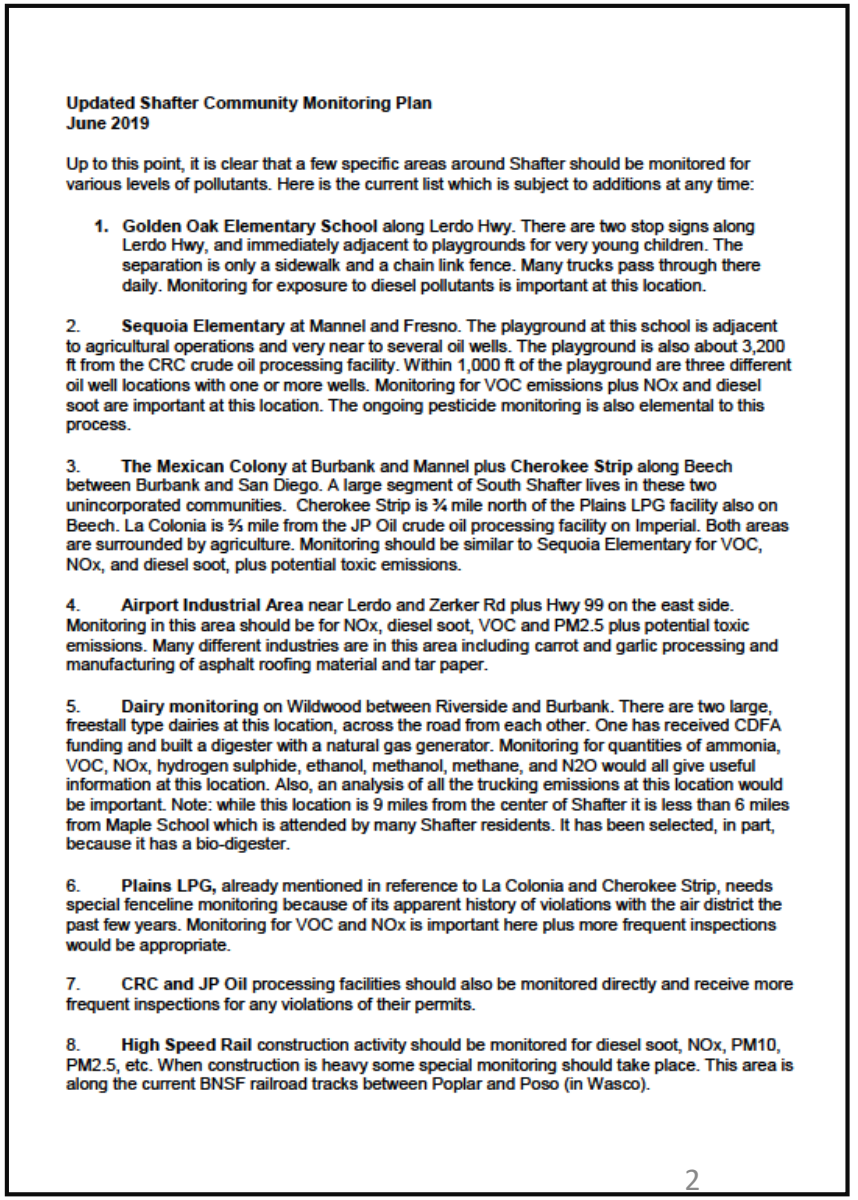
# Proposed Measures Evaluated by DPR

**Specific measures regarding pesticides for the Community Emission Reduction Plans:**

1. Ban all untarped applications of 1,3-D

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.

3. Notification:
   - Make Notices of Intent (NOIs), required for restricted pesticide applications, publicly available online, along with CAC approvals/denials of these NOIs.
   - 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.



**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 ⅘ 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).

# Proposed Measures Evaluated by DPR

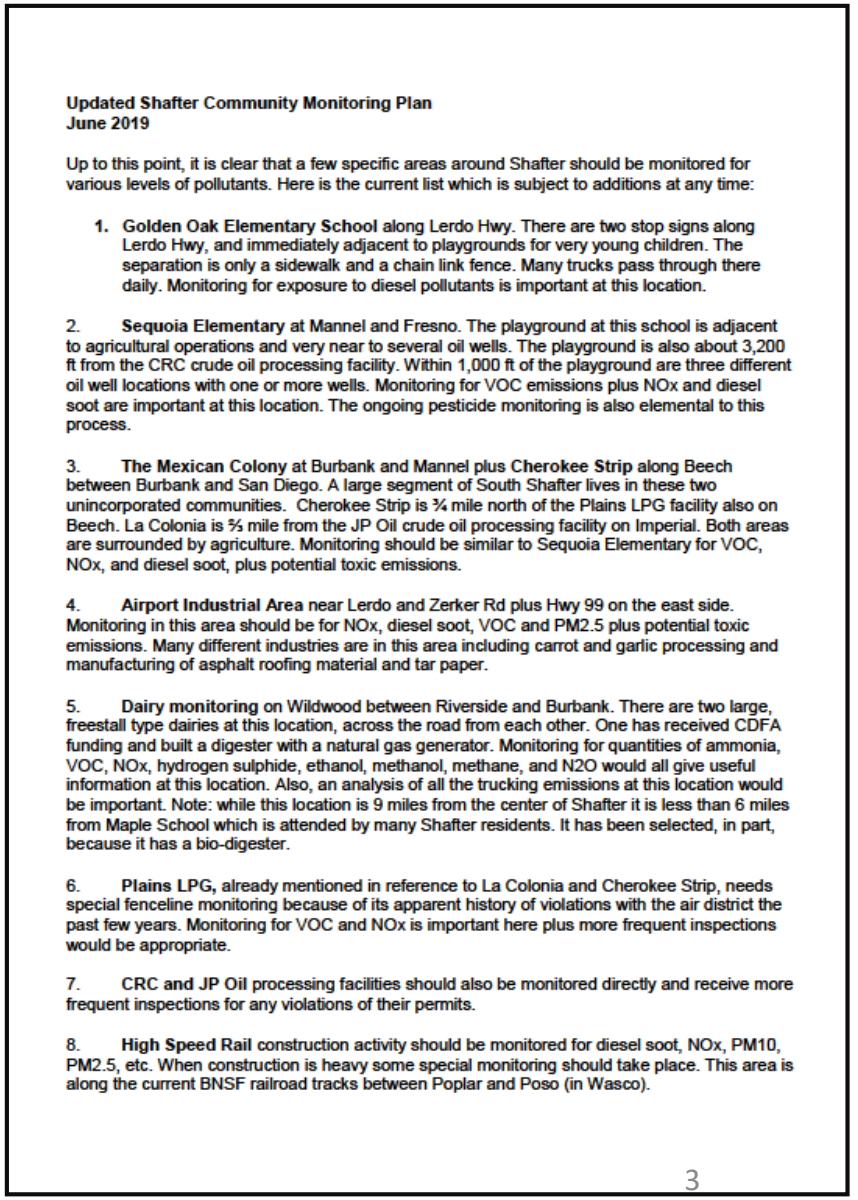
**Specific measures regarding pesticides for the Community Emission Reduction Plans:**

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



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# Pesticide Toxic Air Contaminant Regulatory Process

State law requires DPR to follow a specific process to evaluate and develop control measures for pesticide TACs.

The pesticide TAC process includes:

- Analyses of available data,
- Consultation with other agencies (including the Office of Environmental Health Hazard Assessment, OEHHA),
- Scientific peer review,
- Development and implementation of control measures, and
- Opportunity for public comment.

DPR must follow this legal process; therefore, it cannot arbitrarily introduce emission reduction measures including reduction of township caps, prohibition of applications, or establishment of buffer zones without strong scientific analysis.

# Top 100 pesticides used on agricultural crops within 7 miles of Shafter during 2013-2017.

| Rank of Pounds Used | Pesticide | Number of Applications Annual Avg | Pounds Used Annual Avg | Group | Toxic Air Contaminant | Restricted Material | Proposition 65 |
|---|---|---|---|---|---|---|---|
| 1 | MINERAL OIL | 933 | 837,419 | Oil | | | |
| 2 | PETROLEUM OIL, UNCLASSIFIED | 493 | 795,875 | Oil | | | |
| 3 | 1,3-DICHLOROPROPENE | 31 | 244,616 | Fumigant | ✓ | ✓ | Cancer |
| 4 | SULFUR | 988 | 228,710 | | | | |
| 5 | GLYPHOSATE, POTASSIUM SALT | 1,558 | 181,833 | | | | Cancer |
| 6 | POTASSIUM N-METHYLDITHIOCARBAMATE (MITC) | 7 | 86,314 | Fumigant | ✓ | ✓ | |
| 7 | ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY(OXYETHYLENE) | 2,378 | 56,556 | Adjuvant | | | |
| 8 | PARAQUAT DICHLORIDE | 1,081 | 54,947 | | | ✓ | |
| 9 | GLYPHOSATE, ISOPROPYLAMINE SALT | 490 | 46,136 | | | | Cancer |
| 10 | METHYLATED SOYBEAN OIL | 1,178 | 43,572 | Adjuvant | | | |
| 11 | PENDIMETHALIN | 371 | 34,212 | | | | |
| 12 | AMMONIUM SULFATE | 817 | 27,988 | Adjuvant | | | |
| 13 | CHLOROTHALONIL | 129 | 22,943 | | | | Cancer |
| 14 | LIME-SULFUR | 19 | 21,889 | | | | |
| 15 | CHLORPYRIFOS | 197 | 21,273 | OP | ✓ | ✓ | Developmental |
| 16 | CHLOROPICRIN | 8 | 20,337 | Fumigant | ✓ | ✓ | |
| 17 | ZIRAM | 38 | 20,285 | | | | |
| 18 | PETROLEUM OIL, PARAFFIN BASED | 178 | 19,784 | Oil | | | |
| 19 | FATTY ACIDS, C16-C18 AND C18-UNSATURATED, METHYL ESTERS | 550 | 18,179 | Adjuvant | | | |
| 20 | OXYFLUORFEN | 1,019 | 17,860 | | | | |

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|---|---|---|---|---|---|---|---|
| 21 | OLEIC ACID, METHYL ESTER | 279 | 16,264 | Oil | | | |
| 22 | GLUFOSINATE-AMMONIUM | 445 | 16,021 | | | | |
| 23 | HYDROGEN CYANAMIDE | 21 | 15,178 | | | | |
| 24 | PETROLEUM DISTILLATES, REFINED | 4 | 12,355 | Oil | | | |
| 25 | BIFENAZATE | 227 | 11,107 | | | | |
| 26 | KAOLIN | 8 | 10,641 | | | | |
| 27 | METHYL BROMIDE | 2 | 9,515 | Fumigant | ✓ | ✓ | |
| 28 | METAM-SODIUM (MITC) | 4 | 8,703 | Fumigant | ✓ | ✓ | |
| 29 | METHOXYFENOZIDE | 336 | 8,558 | | | | |
| 30 | COPPER HYDROXIDE | 178 | 8,183 | | | | |
| 31 | PROPARGITE | 33 | 7,924 | | | | Cancer, Dev |
| 32 | POTASSIUM PHOSPHITE | 73 | 7,355 | | | | |
| 33 | CYPRODINIL | 325 | 6,729 | | | | |
| 34 | 4-NONYLPHENOL, FORMALDEHYDE RESIN, PROPOXYLATED | 644 | 6,484 | Adjuvant | | | |
| 35 | COPPER OXYCHLORIDE | 100 | 6,241 | | | | |
| 36 | DIMETHYLPOLYSILOXANE | 1,085 | 5,749 | Adjuvant | | | |
| 37 | SODIUM CHLORATE | 21 | 5,464 | | | | |
| 38 | ORYZALIN | 43 | 5,397 | | | | Cancer |
| 39 | N,N-BIS-(2-OMEGA-HYDROXYPOLY(OXYETHYLENE)ETHYL) ALKYLAMINE, ALKYL DERIVED FROM TALLOW FATTY ACIDS | 801 | 5,293 | Adjuvant | | | |
| 40 | LECITHIN | 340 | 5,280 | Adjuvant | | | |

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|---|---|---|---|---|---|---|---|
| 41 | PETROLEUM DISTILLATES, AROMATIC | 72 | 5,245 | Oil | | | |
| 42 | ISOPROPYL ALCOHOL | 450 | 4,768 | | | | |
| 43 | PROPYLENE GLYCOL | 234 | 4,707 | Adjuvant | | | |
| 44 | PHOSPHORIC ACID | 414 | 4,652 | | | | |
| 45 | CITRIC ACID | 580 | 4,469 | | | | |
| 46 | TALL OIL FATTY ACIDS | 479 | 4,366 | Adjuvant | | | |
| 47 | COPPER SULFATE (BASIC) | 77 | 4,312 | | | | |
| 48 | SETHOXYDIM | 204 | 4,094 | | | | |
| 49 | IPRODIONE | 133 | 4,056 | | | | Cancer |
| 50 | BUPROFEZIN | 85 | 3,923 | | | | |
| 51 | ALPHA-UNDECYL-OMEGA-HYDROXYPOLY(OXYETHYLENE) | 235 | 3,522 | Adjuvant | | | |
| 52 | UREA DIHYDROGEN SULFATE | 41 | 3,424 | | | | |
| 53 | POLYBUTENES | 551 | 3,315 | | | | |
| 54 | BIFENTHRIN | 265 | 3,301 | | | | |
| 55 | ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY(OXYETHYLENE), PHOSPHATE ESTER | 516 | 3,242 | Adjuvant | | | |
| 56 | CRYOLITE | 12 | 3,104 | | | | |
| 57 | AMMONIUM PROPIONATE | 333 | 3,056 | Adjuvant | | | |
| 58 | CHLORANTRANILIPROLE | 403 | 2,949 | | | | |
| 59 | METCONAZOLE | 343 | 2,861 | | | | |
| 60 | HYDROTREATED PARAFFINIC SOLVENT | 65 | 2,851 | Oil | | | |

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|---|---|---|---|---|---|---|---|
| 61 | METHYL ESTERS OF COTTONSEED OIL | 52 | 2,793 | Adjuvant | | | |
| 62 | MANCOZEB | 32 | 2,754 | | ✓ | | Cancer |
| 63 | CALCIUM HYDROXIDE | 2 | 2,721 | Adjuvant | | | |
| 64 | ALPHA-ALKYL (C9-C16)-OMEGA-HYDROXYPOLY(OXYETHYLENE) | 203 | 2,687 | Adjuvant | | | |
| 65 | ALPHA-ALKYL (C9-C11)-OMEGA-HYDROXYPOLY(OXYETHYLENE) | 450 | 2,661 | Adjuvant | | | |
| 66 | FATTY ACIDS, METHYL ESTERS | 50 | 2,646 | Adjuvant | | | |
| 67 | PENTHIOPYRAD | 123 | 2,612 | | | | |
| 68 | SPIRODICLOFEN | 35 | 2,585 | | | | Cancer |
| 69 | ETOXAZOLE | 303 | 2,502 | | | | |
| 70 | MODIFIED PHTHALIC GLYCEROL ALKYD RESIN | 274 | 2,438 | Adjuvant | | | |
| 71 | EPTC | 15 | 2,433 | | | | |
| 72 | BUTYL ALCOHOL | 421 | 2,262 | | | | |
| 73 | GLYCEROL | 103 | 2,240 | Adjuvant | | | |
| 74 | ALPHA-ALKYLARYL-OMEGA-HYDROXYPOLY(OXYETHYLENE) | 16 | 2,195 | Adjuvant | | | |
| 75 | FLUOPYRAM | 274 | 2,104 | | | | |
| 76 | CYFLUMETOFEN | 171 | 2,096 | | | | |
| 77 | DODINE | 28 | 2,094 | | | | |
| 78 | HEXYTHIAZOX | 113 | 2,075 | | | | |
| 79 | FENPYROXIMATE | 184 | 2,019 | | | | |
| 80 | PYRACLOSTROBIN | 278 | 1,947 | | | | |

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|---|---|---|---|---|---|---|---|
| 81 | ALPHA-PINENE BETA-PINENE COPOLYMER | 115 | 1,893 | Adjuvant | | | |
| 82 | BOSCALID | 167 | 1,859 | | | | |
| 83 | PROPIONIC ACID | 99 | 1,776 | | | | |
| 84 | ETHEPHON | 57 | 1,761 | OP | | | |
| 85 | LINURON | 38 | 1,733 | | | | Developmental |
| 86 | FATTY ACIDS, MIXED | 284 | 1,671 | Adjuvant | | | |
| 87 | TEBUCONAZOLE | 232 | 1,662 | | | | |
| 88 | S-METOLACHLOR | 22 | 1,626 | | | | |
| 89 | 2-(3-HYDROXYPROPYL)-HEPTA-METHYL TRISILOXANE, ETHOXYLATED, ACETATE | 100 | 1,619 | Adjuvant | | | |
| 90 | DIETHYLENE GLYCOL | 240 | 1,555 | | | | |
| 91 | IMIDACLOPRID | 99 | 1,500 | | | | |
| 92 | POTASSIUM BICARBONATE | 9 | 1,410 | | | | |
| 93 | CLOFENTEZINE | 81 | 1,410 | | | | |
| 94 | SAFLUFENACIL | 521 | 1,393 | | | | |
| 95 | PYRIMETHANIL | 93 | 1,390 | | | | |
| 96 | METHOMYL | 30 | 1,314 | | | ✓ | |
| 97 | DIFENOCONAZOLE | 100 | 1,301 | | | | |
| 98 | BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN ABTS-351, FERMENTATION SOLIDS AND SOLUBLES | 25 | 1,256 | | | | |
| 99 | POLYOXIN D, ZINC SALT | 321 | 1,243 | | | | |
| 100 | TRIFLOXYSTROBIN | 198 | 1,208 | | | | |

# Pesticides classified as TACs, RMs, or are included in Proposition 65, and which are used on agricultural crops within 7 miles of Shafter during 2013-2017.

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| 3 | 1,3-DICHLOROPROPENE | 31 | 244,616 | Fumigant | ✓ | ✓ | Cancer |
| 6 | POTASSIUM N-METHYLDITHIOCARBAMATE (MITC) | 7 | 86,314 | Fumigant | ✓ | ✓ | |
| 8 | PARAQUAT DICHLORIDE | 1,081 | 54,947 | | | ✓ | |
| 15 | CHLORPYRIFOS | 197 | 21,273 | OP | ✓ | ✓ | Developmental |
| 16 | CHLOROPICRIN | 8 | 20,337 | Fumigant | ✓ | ✓ | |
| 27 | METHYL BROMIDE | 2 | 9,515 | Fumigant | ✓ | ✓ | |
| 28 | METAM-SODIUM (MITC) | 4 | 8,703 | Fumigant | ✓ | ✓ | |
| 62 | MANCOZEB | 32 | 2,754 | | ✓ | | Cancer |
| 96 | METHOMYL | 30 | 1,314 | | | ✓ | |

**Considerations:**

- DPR does not currently receive NOIs only local CAC office receives them.
  - Additionally, CAC does not receive confirmation that application that an application has occurred until a PUR has been submitted (range: a few days to a month after)
- A total of eight (8) pesticides used within 7 miles of Shafter are classified as RMs, with an average of 1,359 applications each year.