



Memo on Pesticide Comments for ILRP

The legacy fumigants that contaminate the drinking water supplies of our communities tomorrow are caused by inadequate protection programs today. We have a continuous history of DBCP, 123 TCP, and other pesticide contamination that has cost local governments, communities, families, schools and businesses millions of dollars. In addition, our most disadvantaged, environmental justice communities often have contaminated, unsafe water in their homes for decades as new sources and treatment remain too expensive or in accessible. As a result, for example, one local school in Tulare County just last year still had DBCP, a pesticide that was banned in the 1970s due to sterilization and other health impacts, above the legal limit in their sole well source. Additionally, private wells are even more vulnerable and already research has linked pesticide contamination of private wells to elevated levels of Parkinson’s disease locally in the San Joaquin Valley.¹ There are very real health impacts to local residents as well as very significant economic impacts of pesticide contamination of groundwater.

The key is to prevent widespread contamination, not wait to detect after widespread damages have already occurred. Already, pesticides and pesticide degradates have been detected in 59 percent of wells in the Central-Eastside San Joaquin Basin in 2006 and 30% of wells in the Madera-Chowchilla Study Unit in 2008 – despite the fact that many pesticides designated as having the potential to contaminate groundwater that have been and continue to be used have never been tested for in local vulnerable groundwater environments.

In Stanislaus and Merced Counties, 56 of the pesticides on the 6800(b) list were applied in 2010 on agricultural land, for a total of roughly 375 tons. Of this, nearly 220 tons of applied pesticides were part of either a CDPH or DPR monitoring program, while the balance of 157 tons came from the list of pesticides for which DPR is not conducting monitoring. A few of the pesticides on the unmonitored list do have application restrictions.

The Pesticide Contamination Protection Act.

The Pesticide Contamination Prevention Act directs DPR to create and maintain a “Groundwater Protection List”, i.e., a list of pesticides with “the potential to pollute groundwater.”² The Act further requires that DPR monitor the soil and groundwater in areas where pesticides on the Groundwater Protection List are applied to determine whether these pesticides have migrated to

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<http://www.sierraclub.org/sierra/201201/parkinsons-pesticides.aspx>
<http://aje.oxfordjournals.org/content/169/8/919.full.pdf+html>

² Cal. Food & Ag. § 13145(d).



deep soil or groundwater.³ The Act specifically directs that “monitoring shall commence within one year after the pesticide is placed on the Groundwater Protection List”.

In 2010, DPR monitored groundwater for only six of the 98 pesticides on the Groundwater Protection List.⁴ DPR relied on CDPH’s groundwater monitoring program for data on 37 more pesticides. The remaining 55 pesticides were not monitored at all.

DPR seems to believe that it is not required to monitor for every pesticide on the Groundwater Protection List. The Revised Protocol For Selecting Ground Water Protection List Pesticide Active Ingredients To Be Monitored Under Certain Agricultural Conditions [“Revised Protocol”], a document published by DPR, provides that a committee (the “Environmental Hazards Assessment Program”) will evaluate the pesticides on the Groundwater Protection List and recommend one or more for monitoring each year.

However, the monitoring program established by the Revised Protocol does not meet the requirements of the PCPA. The language of the Act’s monitoring provisions demonstrates that the Act envisions monitoring for each pesticide according to a strict timeline. For example, Section 13148(a) provides that groundwater monitoring “shall commence within one year after the pesticide is placed on the Groundwater Protection List.” The use of the definite article “the” in “the pesticide” (as opposed to “as pesticide” or “any pesticide”) implies that monitoring for each pesticide is to begin at the latest one year after each pesticide is listed. A monitoring program that does not start monitoring for a pesticide within one year of its listing is in violation of the PCPA.

Moreover, the PCPA requires both soil and groundwater monitoring.⁵ To the extent that DPR is monitoring for pesticides at all, it appears that it is only monitoring groundwater, not soil.

Current state of pesticide monitoring in East San Joaquin Region

Where the California Department of Public Health (CDPH) and DPR has conducted the required monitoring, they have done an excellent job. However, there are significant gaps that the Regional Water Quality Control Board must address through the Irrigated Lands Regulatory Program in order to ensure groundwater is protected from irrigated agricultural activities.

In 2010, Department of Pesticide Regulation monitored groundwater for only six of 98 actively registered pesticides on the Groundwater Protection List. DPR relies entirely on Department of Public health’s public supply wells for data on another 37 pesticides. That leaves 55 actively registered pesticides that have been identified as having the potential to contaminate groundwater

³ *Id.* § 13148(a)

⁴ *See* 3 C.C.R. 6800(b); DPR, *2010 Update of the Well Inventory Database* 56-59 (2010)

⁵ Cal Food & Ag. § 13148(a)



that were not monitored for at all. Of those unmonitored chemicals, 37 were applied to agricultural crops the East San Joaquin region in 2010, some in very small quantities. In total, these unmonitored pesticides totaled over 155 tons or 40% of the 6800 (b) list chemicals applied in the region in 2010 by weight.

Importantly, monitoring that relies only on public supply wells is sampling aquifers too late to detect contamination before it has polluted on a widespread basis. Chemicals on the CDPH required monitoring list either have an established regulatory standard or are being monitored because a regulatory standard is under consideration. That is, a problem has been detected, and CDPH is taking steps to protect the public. If CDPH must regulate for the presence of a pesticide in drinking water, either the contamination occurred prior to the adoption of the PCPA, or the actions of DPR are inadequate to prevent groundwater contamination.

Need for regulation in the ILRP

It is critical, in order to meet mandate of this Board to protect water quality, that the ILRP require that where growers use pesticides on the Groundwater Protection List in vulnerable groundwater areas, and those pesticides are not monitored for in shallow groundwater or soil by DPR's program, that the growers be required to sample for those pesticides within their monitoring program. This would allow us to use DPR's program and expertise, but also have a backstop on the gaps of that program, and allow the exact sampling requirement to evolve along with DPR's program.

Currently orders say that DPR's program is "sufficient to identify any emerging pesticides of concern and to track water quality trends of identified pesticides of concern." The order also states that the Board may require third party to conduct studies or implement a monitoring plan. It is clear from DPR's own data that a significant and critical data gap exists. Therefore it is imperative that the order require the collection of information to fill that gap. It can do this in a way that allows the plans to change as DPR's program evolves in order to avoid duplicative effort.



Appendix: B-list pesticides

55 unmonitored (56%); 9 individually monitored (dates monitored in parentheses)

34 monitored by DPH or DPR in 2010 WID; * - subject to regulation.

Those chemicals with strikethroughs were not applied to agricultural crops in 2010, according to the DPR database for Stanislaus and Merced Counties

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| 1. acephate | 50. imazapic, ammonium salt |
| 2. alachlor | 51. imazethapyr |
| 3. aldicarb* | 52. imazethapyr, ammonium salt |
| 4. azinphos-methyl (1994-1995)* | 53. imidacloprid (2009) |
| 5. azoxystrobin | 54. iprodione |
| 6. bensulfuron methyl | 55. isoxaben |
| 7. bensulide | 56. linuron |
| 8. carbaryl | 57. malathion |
| 9. carbofuran* | 58. mefenoxam |
| 10. chloropicrin* | 59. metalaxyl (1995-1996) |
| 11. chlorothalonil | 60. metaldehyde |
| 12. chlorsulfuron | 61. methiocarb |
| 13. clomazone | 62. methomyl |
| 14. cyanazine | 63. methyl isothiocyanate |
| 15. cycloate | 64. methyl parathion |
| 16. 2,4-D, 2-ethylhexyl ester | 65. metolachlor (2000-2001) |
| 17. 2,4-D, diethanolamine salt | 66. (S)-metolachlor (2000-2001) |
| 18. 2,4-D, dimethylamine salt | 67. metribuzen |
| 19. 2,4-D, isoctyl ester | 68. molinate |
| 20. 2,4-DP-p [R enantiomer of dichlorprop], dimethylamine salt | 69. napropamide |
| 21. dazomet* | 70. naptalam, sodium salt |
| 22. diazinon | 71. nitrpyrin |
| 23. dicamba, diglycolamine salt* | 72. oryzalin |
| 24. dicamba, dimethylamine salt* | 73. oxydemeton-methyl (1995-1996) |
| 25. dicamba sodium salt* | 74. parathion |
| 26. dichlobenil | 75. pebulate |
| 27. dichloran | 76. penoxsulam |
| 28. diethatyl-ethyl | 77. phorate |
| 29. diflufenzopyr, sodium salt | 78. piperonyl butoxide |
| 30. dimethenamid-P | 79. prometryn |
| 31. dimethoate | 80. propanil* |
| 32. dinotefuran | 81. propyzamide (1995-1996) |
| 33. diquat dibromide | 82. pyrazon |
| 34. dithiopyr | 83. rimsulfuron |
| 35. endothall, dipotassium salt | 84. siduron |
| 36. endothall, mono-(N,N-dimethyl-alkylamine) salt | 85. sulfometuron-methyl |
| 37. EPTC (S-ethyl dipropylthiocarbamate) | 86. tebuthiuron |
| 38. ethofumesate | 87. terrazole |
| 39. ethoprop | 88. thiamethoxam |
| | 89. thiazopyr |



CLEAN WATER ACTION

CALIFORNIA



- 40. fenamiphos (2001-2002)*
- ~~41. fenoxycarb~~
- 42. fludioxonil
- ~~43. fluometuron~~
- ~~44. flutolanil~~
- ~~45. fonofos (1994-1995)~~
- 46. fosetyl-Al (aluminum tris)
- 47. halosulfuron-methyl
- 48. hexazinone**
- 49. imazamox, ammonium salt

- 90. thiobencarb**
- 91. thiophanate methyl
- ~~92. triallate~~
- 93. triclopyr, butoxyethyl ester
- 94. triclopyr, triethylamine salt
- 95. triflumizole
- ~~96. uniconazole-P~~
- 97. vernolate**
- ~~98. vinelozolin~~