



Potential Impacts of Court-Ordered Injunctions on Pesticide Use and the Protection of Endangered Species



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In-junc-tion



“A writ granted by a court of equity whereby one is required to do or to refrain from doing a specified act.”

Bay Area Stipulated Injunction and Proposed Order

- ◆ Suit by Center for Biological Diversity charges U.S. EPA with failure to consult U.S. Fish & Wildlife Service (FWS) on the risks from 74 pesticides to 11 listed species in the San Francisco Bay Area.
- ◆ Eight counties affected: Alameda, Contra Costa, Marin, Napa, San Mateo, Santa Clara, Solano and Sonoma.
- ◆ Imposes different “no-use” buffers for some of the 74 pesticides, depending on species.



Species Included



California clapper rail



California freshwater shrimp



California tiger salamander



Salt marsh harvest mouse



Tidewater goby

Species Included



San Joaquin kit fox



Alameda whipsnake



San Francisco garter snake



Valley elderberry
longhorn beetle



Bay checkerspot butterfly



Delta smelt

Active Ingredients Affected

- 
- Acephate
 - Acrolein
 - Alachlor
 - Aldicarb
 - Aluminum phosphide
 - Atrazine
 - Azinphos-methyl
 - Bensulide
 - Beta-cyfluthrin
 - Bifenthrin
 - Brodifacoum
 - Bromadiolone
 - Bromethalin
 - Carbaryl
 - Carbofuran
 - Chlorophacinone
 - Chlorothalonil
 - Chlorpyrifos
 - Cholecalciferol
 - Cyfluthrin
 - Cyhalothrin (lambda)
 - Cypermethrin
 - 2,4-D
 - Deltamethrin
 - Diazinon
 - Difethialone

Active Ingredients Affected (cont.)

- 
- Dimethoate
 - Diphacinone
 - Diquat dibromide
 - Disulfoton
 - Endosulfan
 - EPTC
 - Esfenvalerate
 - Ethoprop
 - Fenpropathrin
 - Fipronil
 - Fluvalinate
 - Imidacloprid
 - Magnesium phosphide
 - Malathion
 - Mancozeb
 - Maneb
 - Metam Sodium
 - Methamidophos
 - Methidathion
 - Methomyl
 - Methoprene
 - Methyl bromide
 - Metolachlor
 - Naled
 - Oryzalin
 - Oxydemeton methyl

Active Ingredients Affected (cont.)

- 
- Oxyfluorfen
 - PCNB
 - Pendimethalin
 - Permethrin
 - Phenotrin
 - Phorate
 - Phosmet
 - Potassium nitrate
 - Propargite
 - Resmethrin
 - S-Metolachlor
 - Simazine
 - Sodium cyanide
 - Sodium nitrate
 - Strychnine
 - Tetramethrin
 - Thiobencarb
 - Tralomethrin
 - Trifluralin
 - Warfarin
 - Zeta-cypermethrin
 - Zinc phosphide

Reference Table Produced by DPR (sample view)

San Francisco Bay Area Draft Stipulated Injunction and Proposed Order (July 1st 2009).

Active ingredients affected and corresponding no-use buffers by species. The first number in each cell is the ground application buffer; the second one following the dash is the aerial application buffer. Buffers are given in feet.

Active Ingredient	Species ¹										
	AW	BCB	CCR	CFS	CTS	DS	SMHM ²	SFGS	SJKF ³	TG	VELB
<u>Acephate</u>		100 - 400	200 - 200	100 - 400			200 - 200	200 - 400	700 - 700		100 - 400
<u>Acrolein</u>	100 - 400										
<u>Alachlor</u>						100 - 400					
<u>Aldicarb</u>									700 - 700		100 - 400
<u>Aluminum phosphide</u>	100 - 400				200 - 400			200 - 400	700 - 700		
<u>Atrazine</u>						100 - 400					
<u>Azinphos methyl</u>		100 - 400	200 - 200		200 - 400			200 - 400	700 - 700		100 - 400
<u>Bensulide</u>		100 - 400	200 - 200	100 - 400	200 - 400	100 - 400		200 - 400		100 - 400	100 - 400
<u>Beta-cyfluthrin</u>		100 - 400	200 - 200	100 - 400	200 - 400	100 - 400		200 - 400		100 - 400	100 - 400
<u>Bifenthrin</u>		100 - 400	200 - 200	100 - 400	200 - 400	100 - 400		200 - 400		100 - 400	100 - 400
<u>Brodifacoum</u>	100 - 400						200 - 200		700 - 700		
<u>Bromadiolone</u>	100 - 400						200 - 200		700 - 700		
<u>Bromethalin</u>	100 - 400			100 - 400			200 - 200				
<u>Carbaryl</u>						100 - 400					
<u>Carbofuran</u>						100 - 400		200 - 400	700 - 700		100 - 400
<u>Chlorophacinone</u>	100 - 400				200 - 400		200 - 200		700 - 700		
<u>Chlorothalonil</u>		100 - 400	200 - 200	100 - 400	200 - 400	100 - 400		200 - 400		100 - 400	
<u>Chlorpyrifos</u>		100 - 400	200 - 200	100 - 400	200 - 400	100 - 400	200 - 200	200 - 400	700 - 700		100 - 400
<u>Cholecalciferol</u>							200 - 200				
<u>Cyfluthrin</u>		100 - 400	200 - 200	100 - 400	200 - 400	100 - 400		200 - 400		100 - 400	100 - 400
<u>Cyhalothrin (lambda)</u>		100 - 400	200 - 200	100 - 400	200 - 400	100 - 400		200 - 400		100 - 400	100 - 400
<u>Cypermethrin</u>		100 - 400	200 - 200	100 - 400	200 - 400	100 - 400		200 - 400		100 - 400	100 - 400
<u>2,4-D</u>	100 - 400										
<u>Deltamethrin</u>		100 - 400	200 - 200	100 - 400	200 - 400	100 - 400		200 - 400		100 - 400	100 - 400
<u>Diazinon</u>						100 - 400				100 - 400	
<u>Difethialone</u>	100 - 400										
<u>Dimethoate</u>		100 - 400	200 - 200	100 - 400	200 - 400			200 - 400		100 - 400	100 - 400
<u>Diphacinone</u>	100 - 400				200 - 400	100 - 400	200 - 200		700 - 700		
<u>Diquat dibromide</u>						100 - 400					
<u>Disulfoton</u>		100 - 400	200 - 200	100 - 400	200 - 400	100 - 400		200 - 400		100 - 400	100 - 400
<u>Endosulfann</u>		100 - 400			200 - 400		200 - 200	200 - 400	700 - 700		100 - 400
<u>EPTC</u>						100 - 400					



Current Status

- ◆ During public comment period, DPR recommended EPA replace proposed interim buffer zones with use limitations specified in our WEB-based database PRESCRIBE:
www.cdpr.ca.gov/docs/endspec/prescint.htm
- ◆ U.S. EPA completed review of public comments and expects final injunction to include minor modifications, and be sent to court with a request to enter it by end of January, 2010.
- ◆ When final injunction is published, DPR will be posting all maps and related materials on the Endangered Species section of our Web site at:
<http://www.cdpr.ca.gov/docs/endspec/index.htm>

Stipulated Injunction and Order for Protection of California Red-Legged Frog



- The suit by the Center for Biological Diversity alleged that U.S. EPA failed to solicit U.S. Fish & Wildlife Service (FWS) formal consultation on the risks from 66 pesticides to California red-legged frog (CRLF)
- Imposes prohibitions for use of 66 active ingredients 200 feet by air, and 60 feet by ground from California red-legged frog's aquatic and upland habitats occurring in 33 counties.
- Effective date 10/20/06.



Active Ingredients Affected

- 
- ◆ 1,3-dichloropropene
 - ◆ 2,4-D
 - ◆ Acephate
 - ◆ Alachlor
 - ◆ Aldicarb
 - ◆ Atrazine
 - ◆ Azinphos-methyl
 - ◆ Bensulide
 - ◆ Bromacil
 - ◆ Captan
 - ◆ Carbaryl
 - ◆ Chloropicrin
 - ◆ Chlorothalonil
 - ◆ Chlorpyrifos
 - ◆ Chlorthaldimethyl
 - ◆ Diazinon
 - ◆ Dicofol
 - ◆ Diflubenzuron
 - ◆ Dimethoate
 - ◆ Disulfoton
 - ◆ Diuron
 - ◆ Endosulfan

Active Ingredients Affected (cont.)

- 
- ◆ EPTC
 - ◆ Esfenvalerate
 - ◆ Fenamiphos
 - ◆ Glyphosate
 - ◆ Hexazinone
 - ◆ Imazapyr
 - ◆ Iprodione
 - ◆ Linuron
 - ◆ Malathion
 - ◆ Mancozeb
 - ◆ Maneb
 - ◆ Metam Sodium
 - ◆ Methamidophos
 - ◆ Methidathion
 - ◆ Methomyl
 - ◆ Methoprene
 - ◆ Methyl parathion
 - ◆ Metolachlor
 - ◆ Molinate
 - ◆ Myclobutanil
 - ◆ Naled
 - ◆ Norflurazon

Active Ingredients Affected (cont.)

- 
- ◆ Oryzalin
 - ◆ Oxamyl
 - ◆ Oxydemeton-methyl
 - ◆ Oxyfluorfen
 - ◆ Paraquat dichloride
 - ◆ Pendimethalin
 - ◆ Permethrin
 - ◆ Phorate
 - ◆ Phosmet
 - ◆ Prometryn
 - ◆ Propanil
 - ◆ Propargite
 - ◆ Propyzamide
 - ◆ Rotenone
 - ◆ Simazine
 - ◆ SSS-tributyl phosphorithiolate
 - ◆ Strychnine
 - ◆ Thiobencarb
 - ◆ Triclopyr (BEE + TEA)
 - ◆ Trifluralin
 - ◆ Vinclozolin
 - ◆ Ziram



Current Status

- ◆ EPA is working on effects determinations for all 66 active ingredients included in this injunction.
- ◆ They are concurrently submitting the above to the US Fish & Wildlife Service for their analysis and resulting Biological Opinions.



Salmonid Injunction

Washington Toxics Coalition vs EPA

- ◆ The suit by environmental and fishery groups alleged that U.S. EPA failed to solicit National Marine Fisheries Service (NMFS) formal consultation on the risks from 38 pesticides to 26 distinct populations of Chinook salmon, Coho Salmon and Steelhead.
- ◆ Imposes prohibitions for use of 38 active ingredients 100 yds by air, and 20 yds by ground from Salmon Supporting Waters.
- ◆ Effective date 2/5/04.

Species Included in California



Chinook Salmon



Steelhead



Coho Salmon

Active Ingredients Affected

- 
- ◆ 1,3-dichloropropene
 - ◆ 2,4-D
 - ◆ Acephate
 - ◆ Azinphos-methyl
 - ◆ Bensulide
 - ◆ Bromoxynil
 - ◆ Captan
 - ◆ Carbaryl
 - ◆ Carbofuran
 - ◆ Chlorothalonil
 - ◆ Chlorpyrifos
 - ◆ Coumaphos
 - ◆ Diazinon
 - ◆ Diflubenzuron
 - ◆ Dimethoate
 - ◆ Disulfoton
 - ◆ Diuron
 - ◆ Ethoprop
 - ◆ Fenamiphos
 - ◆ Fenbutatin-oxide

Active Ingredients Affected (cont.)

- 
- ◆ Lindane
 - ◆ Linuron
 - ◆ Malathion
 - ◆ Methamidophos
 - ◆ Methidathion
 - ◆ Methomyl
 - ◆ Methyl parathion
 - ◆ Metolachlor
 - ◆ Metribuzin
 - ◆ Naled
 - ◆ Oxyfluorfen
 - ◆ Pendimethalin
 - ◆ Phorate
 - ◆ Prometryn
 - ◆ Propargite
 - ◆ Tebuthiuron
 - ◆ Triclopyr (BEE + TEA)
 - ◆ Trifluralin

Salmonid Injunction - Current Status



- ◆ Consultation for Chlorpyrifos, Diazinon and Malathion completed 10/2008.
- ◆ DPR expressed disagreement with Draft Bio. Op., posted comments on Public Docket (9/16/08).
- ◆ NMFS' Biological Opinion proposed buffers of 500' for ground applications and 1000' for aerial apps. plus other requirements for fish kill reporting, runoff prevention, etc.
- ◆ EPA decided to impose variable buffers depending on application rate + droplet size + size of adjacent body of water. For aerial apps. still almost 1000'. For ground, the minimum is 100'.
- ◆ Draft bulletins for California reviewed by DPR (11/09) and comments sent to U.S. EPA.
- ◆ EPA is asking registrants to voluntarily modify labels for Chlorpyrifos, Diazinon and Malathion or face cancellation proceedings.
- ◆ Restrictions will be voluntary until labels are modified.



Complaint for Declaratory and Other Relief Under the Administrative Procedure Act

- ◆ Registrants of chlorpyrifos, diazinon and malathion filed a legal action to vacate the salmonid biological opinion because they allege the opinion was arbitrary, capricious, an abuse of discretion and otherwise in violation of law.
- ◆ Judge ruled this request was made at the wrong time

http://www.nmfs.noaa.gov/pr/pdfs/consultations/dow_complaint.pdf



Complaint for Declaratory – contd.

- ◆ NMFS failed to clearly define the action it was evaluating, improperly relied heavily on information concerning abandoned or soon-to-be-abandoned historical uses,
- ◆ NMFS failed to use the best commercial and scientific information available,
- ◆ Also failed to provide lawful RPAs and RPMs or a lawful incidental take statement,
- ◆ NMFS also failed to follow procedures required under the ESA, the APA, its own regulations and guidance, and fundamental principles of administrative law when developing the Biological Opinion.



U.S. EPA Draft Bulletins for Affected Counties

- ◆ Sent to affected states for internal review – Nov 2009
- ◆ 40 bulletins for California
- ◆ Specific for Chlorpyrifos, Diazinon and Malathion only
- ◆ No exemptions for Vector Control or Weed Eradication Programs

Common Denominators on All these Injunctions

- ◆ Result from lack of consultation by EPA on the effects of “pesticide x” on “species y”.
- ◆ Impose a consultation schedule between EPA and The Services (FWS or NMFS) – 4 to 6 years minimum.
- ◆ Public vector control and invasive weed control programs are exempt (thus far).
- ◆ Can only be enforced through citizen lawsuits. Federal, State, County and other local authorities are “vacated” from enforcing them.

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Common denominators – contd.

- ◆ As products go through consultation, if deemed “not likely to adversely affect” a species they’re taken off the injunction list.
- ◆ If deemed “likely to adversely affect” a species, EPA may impose restrictions to be enforced through labeling.
- ◆ Lawsuits continue: CBD’s Notice of Intent to Sue U.S. EPA – SFO Bay-Delta Area (10/15/09)- difethialone, difenacoum – San Joaquin Kit fox, salt marsh harvest mouse, Alameda whipsnake.

Collateral Damage

- 
- ◆ DPR's comprehensive, programmatic approach to protection of endangered species is being impacted by a multitude of injunctions and their litigation-derived buffers: exceptions to PRESCRIBE
 - ◆ The injunctions might drive users to seek other products not included in the injunctions.

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Collateral Damage - continued

- ◆ Absolute no-use buffers discourage good land stewardship and habitat protection.
- ◆ Even with exemptions, some invasive weed programs are faced with no-use zones that become refuges for noxious weeds like *Arundo sp.*
- ◆ NMFS biological opinions on the first 6 active ingredients consulted upon do not provide for exemptions to vector control or invasive weed programs as provided within the injunctions.