

Surface Water Regulations for Nonagricultural Pesticides

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Outline

- What are we proposing?
- Why?
- Specific requirements
- Timeline
- Bifenthrin
- What's next?



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Proposal

- Regulate the
 - outdoor
 - nonagricultural use of
 - specified pyrethroid pesticides applied by
 - pest control businesses to
 - protect surface water

Main focus

- Reduce amount of pesticides applied
- Reduce exposure of pesticides to rainfall

Nonagricultural use

- Outdoor institutional use
(office complexes, schools)
- Outdoor industrial use
(factories, water treatment plants,
retail nurseries)
- Outdoor structural use
- Outdoor residential use



Uses we are not proposing to regulate at this time

- Parks, city owned trees
- Cemeteries
- Golf courses



Uses we are not proposing to regulate at this time

Rights of way



Which pyrethroids? Those:

- Subject to U.S. EPA's Environmental Hazard and General Labeling for Pyrethroid Non-Agricultural Outdoor Products Notification of June 4, 2009, and
- Registered for outdoor structural, residential, industrial, or institutional use in California

Pyrethroids most impacted (sample products)

- bifenthrin (Talstar, Bisect G[®])
- cyfluthrin (Tempo 20 WP Insecticide[®])
- beta-cyfluthrin (Cyguard[®])
- gamma-cyhalothrin (Proaxis[®])
- lambda-cyhalothrin (Cyonara, Demand G[®])
- cypermethrin (Demon Max[®])

Pyrethroids most impacted (continued) (sample products)

- deltamethrin (Deltagard, Enforcer)
- esfenvalerate (Ortho Bug B Gon)
- fenpropathrin (Danitol, Tame)
- tau-fluvalinate (Mavrik Perimeter[®])
- permethrin (Ambush, Pounce)

Pyrethroids least impacted (sample products)

Because:

- use exempted
- use sites protected from rainfall
- very low reported use
- very short half lives

Pyrethroids least impacted (sample products)

- bioallethrin (Ace Wasp and Hornet Killer[®])
- S-bioallethrin (Zep Ant & Roach Spray[®])
- phenothrin (Wasp & Hornet Killer[®])
- prallethrin (Flying Insect Spray[®])
- resmethrin (Black Flag Fogging Insecticide[®])
- tetramethrin (Ortho Hornet & Wasp Killer 4[®])

Applications covered

- by pest control businesses, including maintenance gardeners



Applications not covered

- by agency and school employees
- by business and institutional employees
- by homeowners

Main use reporting categories covered

- Landscape maintenance
- Structural pest control

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Why regulate pyrethroids?

- Many pyrethroid detections in sediment

Are levels detected toxic?

- Registrants and others develop aquatic life LC₅₀ values for pyrethroids in sediment

Examples of aquatic life

- Fish



Examples of aquatic life

- Invertebrates such as
 - *Daphnia* spp. (water fleas)
 - *Hyallela* spp. (amphipod crustaceans)



Examples of aquatic life

- Nonvascular plants such as algae



Aquatic toxicity

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- Pyrethroids are mainly associated with sediment
- Hyallela is the main indicator of sediment toxicity
- Hyallela is the most sensitive aquatic species to pyrethroids (LC₅₀ is the lowest)
- Therefore, pyrethroid concentrations in sediment are usually compared to Hyallela LC₅₀ values
- Pyrethroid concentrations in sediment often exceed Hyallela LC₅₀ values

Why adopt regulations if EPA is requiring label changes?

- Labels changes won't be completed until 2016
- In some cases, DPR regulations more stringent than label requirements

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Specific requirements

- There are five categories addressed by the proposed regulations

I. Applications allowed to the soil surface, mulch, gravel, lawn, turf, or groundcover

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- Pin stream treatments of 1" wide or less

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Limited to:

- Spot treatments
- Pin stream treatments of 1" wide or less
- Perimeter band treatments of 3 feet or less from the base of a building

I. Applications allowed to the soil surface, mulch, gravel, lawn, turf, or groundcover

Limited to:

- Spot treatments, or
- Pin stream treatments of 1" wide or less
- Perimeter band treatments of 3 feet or less from the base of a building
- Broadcast treatments but not within 2 feet of horizontal impervious surfaces

I. Applications allowed to the soil surface, mulch, gravel, lawn, turf, or groundcover

- Pin stream treatments of 1" or less can be made within the 2-foot no-treatment zone



I. Applications allowed to the soil surface, mulch, gravel, lawn, turf, or groundcover

- Must sweep granules that land on horizontal impervious surfaces back on to the treatment site

II. Applications allowed to horizontal “impervious surfaces”

"Impervious surfaces"

- means hard surfaces, such as concrete or asphalt streets, sidewalks and driveways.

Impervious surfaces



II. Applications allowed to horizontal impervious surfaces

Limited to:

- Spot
- Crack and crevice
- Pin stream of 1 inch or less

III. Applications allowed to “vertical surfaces”

Vertical surfaces

Examples

- Walls
- Foundations
- Windows and doors
- Fencing

III. Applications allowed to vertical surfaces

Limited to:

- Spot
- Crack and crevice
- Pin stream of 1 inch or less
- Perimeter band treatment up to a max. of 2 feet above grade level

Band treatments up to 2 feet from ground level



IV. Prohibited applications

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1. No applications during rainfall



Exception

- applications to areas under a structure and protected from rainfall



IV. Prohibited applications

1. No applications during rainfall
2. No applications to surface areas, including soil, lawn, turf, groundcover, with standing water



IV. Prohibited applications

3. No applications to plants, trees, or shrubs if standing water in dripline or perimeter



IV. Prohibited applications

4. No applications to preconstruction termiticide treated soil unless covered (such as with a polyethylene tarp) or the slab is poured, before rainfall



IV. Prohibited applications

5. No applications to sewer or storm drains or curbside gutters



IV. Prohibited applications

6. No applications to constructed drainage systems that drain to a sewer or storm drain, curbside gutter or aquatic habitat

“Aquatic habitat”

- means bodies of water, such as lakes, reservoirs, rivers, perennial or intermittent streams, wetlands or ponds, sloughs, and estuaries.

Constructed drainage systems

- Visible drainage grate connected to drain pipe



Constructed drainage systems

- Visible french drain, or landscaped dry river bed, swale or trench filled with gravel or rock



IV. Prohibited applications

7. No applications to any horizontal surface (soil, turf, etc., or impervious or preconstruction) within 25 feet of aquatic habitat located downgradient from the application



IV. Prohibited applications

8. No applications to a preconstruction termiticide site within 10 feet of a storm drain located downgradient from the application

V. Exempt applications

V. Exempt applications

- Injections into soil or structural materials (concrete, wood)
- Post-construction rod or trench termiticide applications
- Applications to below-ground insect nests or nests made of mud or paper combs
- Applications of baits to weather-proof stations or of gel baits

V. Exempt applications

- Applications to receiving waters that are regulated by NPDES Permits for Pesticide Discharges to Waters of the U.S. from Spray Applications and Vector Control Applications
- Applications to the underside of eaves
- Fogger or mist applications

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Timeline

- Plan to notice regulations for public comment in late October 2011
- If accepted, regulations would be adopted by Fall 2012

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Bifenthrin

- Most widely detected pyrethroid
- Very long lived
- Working with registrants and EPA to adopt more stringent label requirements

Bifenthrin – label changes

- Horizontal impervious surfaces
- Vertical impervious surfaces that abut horizontal impervious surfaces

Horizontal impervious surfaces

- Prohibit bifenthrin applications to these surfaces unless protected from rainfall or spray from sprinklers

Vertical impervious surfaces abutting horizontal impervious surfaces

- Prohibit bifenthrin applications to these surfaces unless
 - protected from rainfall or spray from sprinklers, or
 - do not drain into sources of stormwater (the abutted driveways or walkways do not drain into the street)

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What's next?

- Monitoring for fipronil to determine scope of problem
- Fipronil registrant considering stewardship program with pest control businesses to educate them on proper use

What's next?

- Expand the current dormant spray regulations to include applications during the growing season
- Discuss ideas for expanding the current regulations with stakeholders in 2012

Thanks!