

APPENDIX M. Additional Use and Usage Information for Bifenthrin

Mitigation Measures

Agricultural products mitigation measures: The agricultural mitigation measures are included in the following website: <http://www.epa.gov/oppsrrd1/reevaluation/epa-letter.pdf>, accessed 08/10/2012.) “In the reregistration process for permethrin and cypermethrin [synthetic pyrethroids like bifenthrin], the Agency determined that the existing spray drift language for pyrethroid agricultural products needed to be updated to comply with FIFRA. Because of similarities in use patterns, and concern for exposure to aquatic resources, the Agency believes that this updated label language is necessary for all pyrethroid products used on agricultural crops. In a [letter from the Agency](#), dated February 21, 2008, registrants were instructed to incorporate the revised spray drift language onto their agricultural labels, and submit the amended labels to the Agency.” (Information obtained from the following site accessed 08/10/2012: <http://www.epa.gov/oppsrrd1/reevaluation/pyrethroids-pyrethrins.html#eco>.) Label restrictions included the use of a 10 ft vegetative filter strip of grass or other permanent vegetation “between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries; and commercial fish farm ponds).” Furthermore, the agricultural products should not be applied by ground equipment within a distance of 25 ft, or by aerial equipment within a distance of 150 ft, or by ULV within a distance of 450 ft from freshwater or estuarine/marine bodies of water (*e.g.* lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds). Other restrictions regarding wind direction and speed, temperature inversions and, particularly droplet size, were required. A medium or coarser droplet (ASAE S572) should be used in agricultural settings. The chemical should not be applied when wind speed exceeds 15 mph.

Non-agricultural products mitigation measures: The non-agricultural mitigation measures are included in: <http://www.epa.gov/oppsrrd1/reevaluation/environmental-hazard-statement.html>, accessed 08/10/2012. “To reduce exposure from residential uses of pyrethroids, EPA is requiring revised Environmental Hazard Statements and general Directions for Use for pyrethroid pesticide products used in non-agricultural outdoor settings. The label statements spell out good stewardship and best-management practices and clarify how these types of products are intended to be used.

These label statements will serve to reduce the potential for runoff and drift to water bodies that can result from applications of pyrethroid end-use products in residential, commercial, institutional, and industrial areas, applied by both professional pesticide control operators and residential consumers.”

“The revised “Environmental Hazard Statements” and “Directions for Use” label language are captured in the Environmental Hazard and General Labeling for Pyrethroid Non-Agricultural Outdoor Products [Label Table](#).” “A [notification letter](#) was sent to all pyrethroid registrants on June 4, 2009, requesting that they adopt these label statements on their products containing pyrethroid active ingredients with registered uses on non-agricultural outdoor areas by June 4, 2010.” The statements should be found in the Environmental Hazards or Directions for Use

sections of the labels (refer to the [Label Table](#)). Mitigation and instructions in the labels are summarized below:

- For liquid applications (*i.e.*, liquid concentrate or liquid ready to use, except aerosols), and dust consumer products, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters, further, suggest applying in calm weather and when rain is not forecasted for the next 24 hours. For ready to use granular products, besides the above, the following language should appear in the labels: “Sweeping any product that lands on a driveway, sidewalk, or street, back onto the treated area of the lawn or garden will help to prevent run off to water bodies or drainage systems.”
- For products labeled for preconstruction termiticide applications (such as bifenthrin), the treatment site must be covered prior to a rain event in order to prevent runoff of the pesticide to non-target areas, the applicator must cover the treated soil within 24 hours of application (or in lieu of the applicator, a contractor must do it). Furthermore, the labels state, “[d]o not apply within 10 feet of storm drains. Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or ponds; estuaries; and commercial fish farm ponds),” among other restrictions.
- For granular applications, the product should be applied directly to the lawn or garden area. General directions for outdoor products: “Treated area should be watered as directed on this label, but do not water to the point of run-off.
- The following is a restriction for general outdoor surface and space sprays, except for foggers: “All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:
 - (1) Treatment to soil or vegetation around structures;
 - (2) Applications to lawns, turf, and other vegetation;
 - (3) Applications to building foundations, up to a maximum height of 3 feet.”“Other than applications to building foundations, all outdoor applications to impervious surfaces such as sidewalks, driveways, patios, porches and structural surfaces (such as windows, doors, and eaves) are limited to spot and crack-and-crevice applications, only.”
- Applications to sewers or drains or to areas where drainage to sewers, storm drains, or bodies of water or aquatic habitat can occur are prohibited.

Additional Usage Tables

A summary of bifenthrin usage for all California use sites is provided below in **Table M1** and for California counties in **Table M2**. According to the usage summary in **Table M1**, the uses that appear to have the highest application rates are alfalfa, almond, cantaloupe, corn, and melon, nursery greenhouse plants in containers, nursery outdoor plants in containers, peppers, and winter squash. Of these uses, the nurseries/outdoor plants in containers are singled out as a use with an unusually high application rate. It is also noted that for some of the uses, the rate is in “miscellaneous units” (*e.g.*, animal premise) while for others, it is expressed in units lb/ft² or lb/ft³ (*e.g.*, regulatory pest control).

According to **Table M2**, the counties reporting the highest average pounds applied ($\geq 3,000$ lb bifenthrin) are Contra Costa, Fresno, Kern, Kings, Los Angeles, Orange, Riverside, Sacramento, San Diego, San Joaquin, and Stanislaus. Counties with maximum application rates ≥ 2 lb a.i./A

include Fresno, Lassen, Los Angeles, Merced, Monterey, Orange, Placer, Riverside, San Benito, San Bernardino, San Diego, San Joaquin, San Luis Obispo, San Mateo, Solano, Tulare, Ventura, and Yolo. The following counties overlap from the above two lists: Fresno, Los Angeles, Orange, San Diego, and San Joaquin.

Table M1. Summary of California Department of Pesticide Registration (CDPR) Pesticide Use Reporting (PUR) Data from 1999 to 2010 for Currently Registered Bifenthrin Uses by Site Name¹

SITE NAME	UNIT AREA TRTD	AVERAGE APP RATE	95 TH PCNTL APP RATE	99 TH PCNTL APP RATE	MAX APP RATE
ALFALFA	Acres	0.1	0.1	0.1	5.0
ALMOND	Acres	0.3	1.7	1.7	13.3
ANIMAL PREMISE	Acres	0.0	0.0	0.0	0.0
ANIMAL PREMISE	Misc. unit	0.0	0.1	0.1	0.1
ARTICHOKE, GLOBE	Acres	0.1	0.1	0.8	0.9
BARLEY	Acres	0.1	0.1	0.1	0.1
BEAN, DRIED	Acres	0.2	0.8	0.9	0.9
BEAN, SUCCULENT	Acres	0.1	0.8	0.8	0.8
BEAN, UNSPECIFIED	Acres	0.1	0.8	0.9	0.9
BEET	Acres	0.9	0.9	0.9	0.9
BLACKBERRY	Acres	0.1	0.1	0.1	0.1
BOK CHOY	Acres	0.8	0.8	0.8	0.8
BOYSENBERRY	Acres	0.1	0.1	0.1	0.1
BROCCOLI	Acres	0.1	0.1	0.8	0.9
BRUSSELS SPROUT	Acres	0.1	0.1	0.1	0.1
CABBAGE	Acres	0.2	0.8	0.8	0.9
CANOLA (RAPE)	Acres	0.2	0.3	0.3	0.3
CANTALOUPE	Acres	0.1	0.1	0.8	8.5
CARDOON	Acres	0.0	0.0	0.0	0.0
CARROT	Acres	0.1	0.1	0.1	0.8
CAULIFLOWER	Acres	0.1	0.1	0.8	1.9
CELERY	Acres	0.1	0.1	0.1	0.1
CHICORY	Acres	0.1	0.2	0.2	0.2
CHINESE CABBAGE (NAPPA)	Acres	0.3	0.8	0.8	0.8
CHRISTMAS TREE	Acres	0.1	0.1	0.1	0.1
CILANTRO	Acres	0.0	0.0	0.0	0.0
CITRUS	Acres	0.0	0.0	0.0	0.0
CLOVER	Acres	0.1	0.1	1.2	1.5
COLLARD	Acres	0.1	0.1	0.1	0.1
CORN (FORAGE - FODDER)	Acres	0.1	0.8	0.8	1.9
CORN, HUMAN CONSUMPTION	Acres	0.3	0.8	0.8	12.7
CORN, HUMAN CONSUMPTION	Square feet	0.0	0.1	0.1	0.1
COTTON	Acres	0.1	0.7	0.8	8.6
COTTON (FORAGE - FODDER)	Acres	0.1	0.1	0.1	0.1
CUCUMBER	Acres	0.2	0.8	0.9	1.3
DAIRY EQUIPMENT	Acres	0.0	0.1	0.1	0.1

¹ Based on data supplied by BEAD (Kaul, M. dated February 23, 2012). All values in pounds of active ingredient. PCNTL=percentile; TRTD=treated; APP=application; MAX=maximum; Misc.=miscellaneous.

SITE NAME	UNIT AREA TRTD	AVERAGE APP RATE	95 TH PCNTL APP RATE	99 TH PCNTL APP RATE	MAX APP RATE
DAIRY EQUIPMENT	Misc. unit	0.1	0.1	0.1	0.1
DATE	Misc. unit	0.0	0.0	0.0	0.0
EGGPLANT	Acres	0.2	0.8	0.8	0.8
FOOD PROCESSING PLANT	Square feet	0.0	0.0	0.0	0.0
GAI LON	Acres	0.0	0.0	0.0	0.0
GRAPE	Acres	0.1	0.1	0.1	0.1
GRAPE, WINE	Acres	0.1	0.1	1.0	1.0
GRAPEFRUIT	Acres	0.1	0.1	0.1	0.1
GREENHOUSE FUMIGATION	Square feet	0.0	0.0	0.0	0.0
GREENHOUSE FUMIGATION	Acres	0.0	0.0	0.0	0.0
GREENHOUSE FUMIGATION	Cubic feet	0.0	0.0	0.0	0.0
INDUSTRIAL SITE	Square feet	0.0	0.0	0.0	0.0
JOJOBA BEAN	Acres	0.1	0.1	0.1	0.1
KALE	Acres	0.8	0.8	0.8	0.8
KOHLRABI	Acres	0.1	0.1	0.1	0.1
LANDSCAPE MAINTENANCE	Acres	0.0	0.1	1.0	1.0
LANDSCAPE MAINTENANCE	Square feet	0.0	0.0	0.0	0.0
LEMON	Acres	0.2	0.3	0.3	0.3
LETTUCE, HEAD	Acres	0.1	0.1	0.8	0.9
LETTUCE, LEAF	Acres	0.4	0.8	0.8	0.8
MELON	Acres	0.1	0.1	0.8	12.7
N-GRNHS FLOWER	Acres	0.2	0.4	0.5	2.5
N-GRNHS FLOWER	Misc. unit	0.0	0.0	0.0	0.0
N-GRNHS FLOWER	Square feet	0.0	0.0	0.0	0.0
N-GRNHS PLANTS IN CONTAINERS		0.0	0.0	0.0	0.0
N-GRNHS PLANTS IN CONTAINERS	Acres	0.2	0.5	1.3	5.5
N-GRNHS PLANTS IN CONTAINERS	Misc. unit	0.0	0.0	0.0	0.0
N-GRNHS PLANTS IN CONTAINERS	Square feet	0.0	0.0	0.0	0.0
N-GRNHS TRANSPLANTS	Acres	0.1	0.2	0.9	1.1
N-GRNHS TRANSPLANTS	Square feet	0.0	0.0	0.0	0.0
N-OUTDR FLOWER	Misc. unit	0.0	0.0	0.0	0.0
N-OUTDR FLOWER	Square feet	0.0	0.0	0.0	0.0
N-OUTDR FLOWER	Acres	0.1	0.2	0.7	2.7
N-OUTDR PLANTS IN CONTAINERS	Acres	1.2	8.4	16.8	104.9
N-OUTDR PLANTS IN CONTAINERS	Cubic feet	0.0	0.0	0.0	0.0
N-OUTDR PLANTS IN CONTAINERS	Misc. unit	0.0	0.1	0.1	2.2
N-OUTDR PLANTS IN CONTAINERS	Square feet	0.0	0.0	0.0	0.0
N-OUTDR TRANSPLANTS	Acres	0.1	0.2	0.8	1.6
N-OUTDR TRANSPLANTS	Misc. unit	0.4	2.5	2.5	2.5
N-OUTDR TRANSPLANTS	Square feet	0.0	0.0	0.0	0.0
OAT (FORAGE - FODDER)	Acres	0.5	0.8	0.8	0.8
ONION, DRY	Acres	0.1	0.1	0.1	0.1
ONION, GREEN	Acres	0.1	0.1	0.1	0.1
ORANGE	Acres	0.1	0.1	0.2	0.2
PARSLEY	Acres	0.1	0.1	0.1	0.1
PEAR	Acres	0.1	0.2	0.2	0.2
PEAS	Acres	0.7	0.9	0.9	9.9

SITE NAME	UNIT AREA TRTD	AVERAGE APP RATE	95 TH PCNTL APP RATE	99 TH PCNTL APP RATE	MAX APP RATE
PECAN	Acres	0.1	0.1	0.1	0.1
PEPPER, FRUITING	Acres	0.2	0.8	0.9	10.9
PEPPER, SPICE	Acres	0.4	1.1	1.1	1.1
PISTACHIO	Acres	0.3	1.7	1.7	1.7
PUMPKIN	Acres	0.2	0.8	0.8	1.0
RADISH	Acres	0.3	0.8	0.8	0.8
RASPBERRY	Acres	0.1	0.2	0.2	0.3
REGULATORY PEST CONTROL	Acres	0.1	0.2	0.2	0.2
REGULATORY PEST CONTROL	Cubic feet	0.0	0.0	0.0	0.0
REGULATORY PEST CONTROL	Misc. unit	0.0	0.0	0.0	0.0
REGULATORY PEST CONTROL	Square feet	0.0	0.0	0.0	0.0
RESEARCH COMMODITY	Acres	0.2	0.8	0.8	0.8
RESEARCH COMMODITY	Square feet	0.0	0.0	0.0	0.0
RIGHTS OF WAY	Acres	0.1	0.1	0.1	0.1
SAFFLOWER	Acres	0.1	0.1	0.1	0.1
SOIL FUMIGATION/PREPLANT	Acres	0.1	0.7	0.8	0.8
SOIL FUMIGATION/PREPLANT	Cubic feet	0.0	0.0	0.0	0.1
SOIL FUMIGATION/PREPLANT	Misc. unit	0.0	0.0	0.0	0.0
SOIL FUMIGATION/PREPLANT	Square feet	0.0	0.0	0.0	0.0
SOYBEAN	Acres	0.1	0.1	0.1	0.1
SPINACH	Acres	0.3	0.3	0.3	0.3
SQUASH	Acres	0.2	0.8	0.8	1.1
SQUASH, SUMMER	Acres	0.1	0.8	0.8	0.8
SQUASH, WINTER	Acres	0.2	0.8	4.2	4.2
SQUASH, ZUCCHINI	Acres	0.2	0.8	0.8	0.8
STRAWBERRY	Acres	0.1	0.2	0.2	3.3
STRAWBERRY	Misc. unit	0.0	0.0	0.0	0.0
STRAWBERRY	Square feet	0.1	0.1	0.1	0.1
STRUCTURAL PEST CONTROL	Acres	0.1	0.2	0.2	0.2
SUNFLOWER	Acres	0.7	0.8	0.8	0.8
TANGERINE	Acres	0.1	0.1	0.1	0.1
TOMATO	Acres	0.2	0.7	0.8	1.1
TOMATO	Square feet	0.0	0.0	0.0	0.0
TOMATO, PROCESSING	Acres	0.3	0.8	0.8	0.9
TURF/SOD	Acres	0.1	0.3	0.3	0.3
TURF/SOD	Misc. unit	0.0	0.0	0.0	0.0
UNCULTIVATED AG	Acres	0.2	0.7	1.0	1.0
UNCULTIVATED NON-AG	Acres	0.1	0.2	0.2	0.2
VEGETABLE	Acres	0.0	0.0	0.0	0.0
VEGETABLE	Square feet	0.0	0.0	0.0	0.0
VERTEBRATE CONTROL	Acres	0.1	0.1	0.1	0.1
WALNUT	Acres	0.1	0.2	0.2	1.2
WALNUT	Misc. unit	0.0	0.0	0.0	0.0
WATERMELON	Acres	0.1	0.8	0.8	2.4
WHEAT	Acres	0.1	0.1	0.1	0.1
WHEAT (FORAGE - FODDER)	Acres	0.1	0.1	0.1	0.1

Table M2. Summary of California Department of Pesticide Registration (CDPR) Pesticide Use Reporting (PUR) Data from 1999 to 2010 for Currently Registered Bifenthrin Uses by County²

COUNTY	AVE ANNUAL POUNDS APPLIED	NUMBER OF RECORDS POUNDS	AVE ANNUAL AREA TREATED	UNIT AREA TREATED	NUMBER OF RECRDS AREA	AVE APP RATE	95 TH PCNTL APP RATE	99 TH PCNTL APP RATE	MAX APP RATE	NUMBER OF RECRDS RATE
ALAMEDA	0.00	2	1,500.00	Cubic feet	2	0.00	0.00	0.00	0.00	2
ALAMEDA	0.94	51	4,142.56	Acres	52	0.04	0.21	0.38	0.38	51
ALAMEDA	831.25	7,848			0					0
ALAMEDA	1.28	99	109,385.42	Square feet	99	0.00	0.00	0.00	0.00	99
ALPINE	0.52	53	0.00		0					0
AMADOR	12.08	645			0					0
AMADOR	0.54	2	1.67	Acres	2	0.55	1.00	1.00	1.00	2
BUTTE	283.10	1,233	3,183.52	Acres	1,235	0.10	0.15	0.16	1.27	1,233
BUTTE	0.11	66	41,764.00	Square feet	66	0.00	0.00	0.00	0.00	66
BUTTE	126.00	2,728			0					0
CALAVERAS	41.98	905			0					0
CALAVERAS	2.54	4	27.08	Acres	4	0.09	0.10	0.10	0.10	4
COLUSA	1,943.80	2,643	9,072.41	Acres	2,643	0.20	0.85	1.70	1.70	2,643
COLUSA	17.65	929			0					0
CONTRA COSTA	3,231.91	9,133			0					0
CONTRA COSTA	1,359.19	1,401	3,424.05	Acres	1,401	0.37	0.85	0.85	1.70	1,401
CONTRA COSTA	0.37	43	162,571.08	Square feet	43	0.00	0.00	0.00	0.00	43
DEL NORTE	13.88	230	0.00		0					0
DEL NORTE	0.22	56	71,389.17	Square feet	56	0.00	0.00	0.00	0.00	56
EL DORADO	0.00	1	0.01	Acres	1	0.12	0.12	0.12	0.12	1
EL DORADO	411.69	5,347			0					0
EL DORADO	0.01	7	1,497.33	Square feet	7	0.00	0.00	0.00	0.00	7
FRESNO	9,412.40	6,036	41,190.36	Acres	6,033	0.19	0.85	1.70	2.37	6,033
FRESNO	996.02	5,298			0					0
FRESNO	0.01	2	1,145.83	Misc. unit	2	0.00	0.00	0.00	0.00	2
FRESNO	0.00	1	10.67	Square feet	1	0.00	0.00	0.00	0.00	1
GLENN	20.62	956			0					0
GLENN	717.42	1,444	5,897.22	Acres	1,444	0.12	0.16	0.85	1.49	1,444
HUMBOLDT	0.02	13	0.29	Acres	13	0.07	0.11	0.11	0.11	13
HUMBOLDT	0.00	1	0.17	Misc. unit	1	0.00	0.00	0.00	0.00	1
HUMBOLDT	563.56	1,025			0					0
IMPERIAL	1.79	82	537.17	Misc. unit	82	0.01	0.03	0.34	0.34	82
IMPERIAL	972.66	3,228	11,005.06	Acres	3,220	0.08	0.10	0.60	1.13	3,220
IMPERIAL	49.33	764			0					0
INYO	1.39	204	0.00		0					0
KERN	679.63	2,930			0					0
KERN	0.00	2	666.25	Misc. unit	2	0.00	0.00	0.00	0.00	2
KERN	0.01	6	11,753.33	Square feet	6	0.00	0.00	0.00	0.00	6

² Based on data supplied by BEAD (Kaul, M. dated February 23, 2012). All values in pounds of active ingredient. AVE=average; PCNTL=percentile; RECRDS=records; APP=application; MAX=maximum; Misc.=miscellaneous.

COUNTY	AVE ANNUAL POUNDS APPLIED	NUMBER OF RECORDS POUNDS	AVE ANNUAL AREA TREATED	UNIT AREA TREATED	NUMBER OF RECRDS AREA	AVE APP RATE	95 TH PCNTL APP RATE	99 TH PCNTL APP RATE	MAX APP RATE	NUMBER OF RECRDS RATE
KERN	11,668.18	6,459	41,946.08	Acres	6,459	0.20	1.01	1.70	13.28	6,459
KINGS	29.71	1,225			0					0
KINGS	6,191.57	2,972	33,237.52	Acres	2,972	0.16	0.85	1.70	1.70	2,972
LAKE	68.72	807			0					0
LASSEN	12.80	172	0.00		0					0
LASSEN	10.67	33	40.50	Acres	33	0.29	0.41	4.97	4.97	33
LOS ANGELES	156.49	3,196	1,278.35	Acres	3,196	0.14	0.51	1.26	11.85	3,196
LOS ANGELES	4.16	1,178	143,534.89	Misc. unit	1,178	0.00	0.00	0.00	2.21	1,178
LOS ANGELES	6,346.89	39,211			0					0
LOS ANGELES	11.66	46	25,531.35	Cubic feet	46	0.00	0.01	0.08	0.08	46
LOS ANGELES	45.73	1,241	2,136,261.94	Square feet	1,241	0.00	0.00	0.00	0.02	1,241
MADERA	1,800.04	1,687	7,660.72	Acres	1,687	0.22	1.70	1.70	1.73	1,687
MADERA	132.70	2,890			0					0
MARIN	68.34	2,745			0					0
MARIN	0.01	6	3,250.00	Square feet	6	0.00	0.00	0.00	0.00	6
MARIPOSA	12.91	594			0					0
MENDOCINO	21.79	884			0					0
MENDOCINO	0.01	1	833.33	Square feet	1	0.00	0.00	0.00	0.00	1
MENDOCINO	0.17	2	1.67	Acres	2	0.10	0.10	0.10	0.10	2
MERCED	2,512.85	4,038	16,248.17	Acres	4,028	0.13	0.15	1.70	12.69	4,028
MERCED	0.00	1	0.08	Misc. unit	1	0.01	0.01	0.01	0.01	1
MERCED	325.09	2,116			0					0
MODOC	0.02	15	0.00		0					0
MONO	1.69	136	0.00		0					0
MONTEREY	229.15	1,945			0					0
MONTEREY	946.30	5,025	8,700.14	Acres	5,026	0.13	0.21	0.85	9.93	5,025
MONTEREY	8.06	592	2,125,853.78	Square feet	592	0.00	0.00	0.00	0.10	592
MONTEREY	0.14	5	291.80	Misc. unit	5	0.72	2.53	2.53	2.53	5
NAPA	82.76	2,994			0					0
NEVADA	238.91	1,894			0					0
ORANGE	4,111.89	23,955			0					0
ORANGE	279.75	9,993	2,430.14	Acres	9,993	1.96	11.06	21.06	104.90	9,993
ORANGE	153.65	1,070	1,523,936.95	Square feet	1,070	0.00	0.00	0.00	0.00	1,070
ORANGE	11.11	586	33,419.84	Misc. unit	586	0.04	0.13	0.21	1.05	586
ORANGE	1,682.78	1,689	3,833,281.21	Cubic feet	1,689	0.00	0.00	0.01	0.03	1,689
PLACER	860.81	9,000			0					0
PLACER	0.00	1	166.67	Misc. unit	1	0.00	0.00	0.00	0.00	1
PLACER	4.58	138	48.00	Acres	138	0.19	0.11	0.53	12.64	138
PLUMAS	6.02	99			0					0
RIVERSIDE	3,984.32	21,256			0					0
RIVERSIDE	473.25	3,300	6,861.69	Acres	3,300	0.12	0.13	0.86	18.32	3,300
RIVERSIDE	0.17	1	1,113.75	Cubic feet	1	0.00	0.00	0.00	0.00	1
RIVERSIDE	2.39	158	447,308.45	Square feet	158	0.00	0.00	0.00	0.00	158
RIVERSIDE	6.65	1,535	17,186.67	Misc. unit	1,535	0.00	0.01	0.03	0.08	1,535
SACRAMENTO	3,068.99	11,366			0					0
SACRAMENTO	337.90	1,345	1,730.77	Acres	1,347	0.16	0.80	0.85	1.61	1,345

COUNTY	AVE ANNUAL POUNDS APPLIED	NUMBER OF RECORDS POUNDS	AVE ANNUAL AREA TREATED	UNIT AREA TREATED	NUMBER OF RECRDS AREA	AVE APP RATE	95 TH PCNTL APP RATE	99 TH PCNTL APP RATE	MAX APP RATE	NUMBER OF RECRDS RATE
SACRAMENTO	0.01	8	1,125.00	Square feet	8	0.00	0.00	0.00	0.00	8
SACRAMENTO	0.01	4	1,291.67	Misc. unit	4	0.00	0.00	0.00	0.00	4
SAN BENITO	77.48	1,184			0					0
SAN BENITO	82.18	307	415.58	Acres	307	0.12	0.10	0.11	10.90	307
SAN BENITO	0.55	81	195,666.67	Square feet	81	0.00	0.00	0.00	0.00	81
SAN BERNARDINO	2,121.95	14,835			0					0
SAN BERNARDINO	11.51	277	95.78	Acres	277	0.29	0.40	16.85	16.85	277
SAN BERNARDINO	0.15	6	169.83	Misc. unit	6	0.04	0.08	0.08	0.08	6
SAN BERNARDINO	0.58	58	106,486.83	Square feet	58	0.00	0.00	0.00	0.00	58
SAN DIEGO	4,198.00	16,322	350.00		1	0.00	0.00	0.00	0.00	1
SAN DIEGO	160.60	5,347	1,084.64	Acres	5,324	0.15	0.50	1.26	7.90	5,324
SAN DIEGO	175.91	185	614,284.71	Cubic feet	185	0.00	0.01	0.01	0.01	185
SAN DIEGO	17.33	82	32,187.03	Misc. unit	82	0.01	0.01	0.04	0.04	82
SAN DIEGO	40.80	2,337	4,317,240.78	Square feet	2,337	0.00	0.00	0.00	0.01	2,337
SAN FRANCISCO	37.25	2,080			0					0
SAN JOAQUIN	787.57	5,420			0					0
SAN JOAQUIN	2,695.15	4,129	12,579.71	Acres	4,129	0.23	0.85	1.07	12.75	4,129
SAN JOAQUIN	0.27	10	51,500.67	Misc. unit	10	0.00	0.00	0.00	0.00	10
SAN JOAQUIN	4.84	140	618,941.67	Square feet	140	0.00	0.00	0.00	0.00	140
SAN LUIS OBISPO	1,224.97	2,867			0					0
SAN LUIS OBISPO	145.72	992	1,137.53	Acres	992	0.12	0.25	0.44	2.70	992
SAN LUIS OBISPO	0.08	1	2.33	Misc. unit	1	0.04	0.04	0.04	0.04	1
SAN LUIS OBISPO	0.62	267	350,888.67	Square feet	267	0.00	0.00	0.00	0.00	267
SAN MATEO	170.07	5,283			0					0
SAN MATEO	13.10	665	101.64	Acres	665	0.29	0.64	2.70	5.53	665
SAN MATEO	4.03	342	727,258.92	Square feet	342	0.00	0.00	0.00	0.00	342
SANTA BARBARA	242.25	4,150			0					0
SANTA BARBARA	529.69	3,290	5,051.87	Acres	3,291	0.10	0.20	0.28	1.26	3,290
SANTA BARBARA	0.04	12	3,270.17	Misc. unit	12	0.00	0.00	0.00	0.00	12
SANTA BARBARA	2.51	346	1,524,432.67	Square feet	346	0.00	0.00	0.00	0.00	346
SANTA CLARA	971.52	7,991			0					0
SANTA CLARA	131.48	993	1,439.96	Acres	993	0.09	0.13	0.23	1.20	993
SANTA CLARA	0.58	157	148,309.50	Square feet	157	0.00	0.00	0.01	0.01	157
SANTA CLARA	0.01	3	60.00	Misc. unit	3	0.00	0.00	0.00	0.00	3
SANTA CRUZ	195.02	2,106			0					0
SANTA CRUZ	197.82	1,475	1,846.09	Acres	1,475	0.11	0.20	0.42	1.05	1,475
SANTA CRUZ	0.01	1	166.67	Misc. unit	1	0.00	0.00	0.00	0.00	1
SANTA CRUZ	6.92	365	968,886.17	Square feet	365	0.00	0.00	0.00	0.00	365
SHASTA	68.60	1,990			0					0
SHASTA	3.31	80	41.86	Acres	80	0.07	0.16	1.16	1.16	80
SHASTA	0.00	2	250.00	Square feet	2	0.00	0.00	0.00	0.00	2
SIERRA	0.96	61	0.00		0					0

COUNTY	AVE ANNUAL POUNDS APPLIED	NUMBER OF RECORDS POUNDS	AVE ANNUAL AREA TREATED	UNIT AREA TREATED	NUMBER OF RECRDS AREA	AVE APP RATE	95 TH PCNTL APP RATE	99 TH PCNTL APP RATE	MAX APP RATE	NUMBER OF RECRDS RATE
SISKIYOU	57.92	316	0.00		0					0
SISKIYOU	0.01	5	11,470.67	Square feet	5	0.00	0.00	0.00	0.00	5
SOLANO	293.73	5,593			0					0
SOLANO	934.65	970	2,608.67	Acres	970	0.57	2.17	6.07	31.59	970
SONOMA	576.54	3,859			0					0
SONOMA	0.71	71	5.79	Acres	71	0.10	0.30	0.42	0.42	71
SONOMA	2.73	298	709,884.00	Square feet	298	0.00	0.00	0.00	0.00	298
STANISLAUS	2,347.93	4,138			0					0
STANISLAUS	3,076.83	4,676	20,732.98	Acres	4,677	0.14	0.83	0.85	8.50	4,676
STANISLAUS	0.00	1	250.00	Square feet	1	0.00	0.00	0.00	0.00	1
SUTTER	1,675.71	2,036	8,900.93	Acres	2,042	0.15	0.85	0.85	1.24	2,036
SUTTER	68.77	1,943			0					0
TEHAMA	28.88	1,303			0					0
TEHAMA	191.64	803	1,878.08	Acres	803	0.10	0.15	0.20	1.00	803
TRINITY	1.30	178	0.00		0					0
TULARE	350.42	2,186			0					0
TULARE	1,624.70	4,759	10,178.10	Acres	4,759	0.29	0.68	1.70	2.72	4,759
TUOLUMNE	130.37	928			0					0
TUOLUMNE	0.01	1	2.75	Acres	1	0.00	0.00	0.00	0.00	1
VENTURA	599.73	6,160	0.00		0					0
VENTURA	663.14	2,594	6,671.71	Acres	2,594	0.10	0.20	0.43	3.30	2,594
VENTURA	0.80	8	2,705.34	Misc. unit	8	0.00	0.00	0.00	0.00	8
VENTURA	1.72	51	238,578.19	Square feet	51	0.00	0.00	0.00	0.00	51
YOLO	664.11	5,644			0					0
YOLO	2,012.57	2,011	8,298.08	Acres	2,011	0.23	0.85	0.85	2.55	2,011
YOLO	0.13	40	25,257.25	Square feet	40	0.00	0.00	0.09	0.09	40
YUBA	59.92	1,859			0					0
YUBA	102.29	198	872.02	Acres	198	0.13	0.78	0.85	0.85	198

Table M3. Uses Not Assessed

USE	SINGLE APP. RATE (lb a.i./A)	MAX. NUMBER OF APPS. AT MAX. RATE	SEASONAL APP. RATE (lb a.i./A)	MINIMUM INTERVAL BETWEEN APPS. (days)	APP. METHOD	INCORPO- RATION DEPTH (inches)	PHI
Crops Not Allowed or Not Grown in California							
Leafy Brassica and Turnip Greens: broccoli raab, bok choy, collards, kale, mizuna, mustard greens, mustard spinach, rape greens, turnip greens	At plant or foliar 0.1	4	0.4	7	Ground or aerial	0	7
Cilantro, Coriander	At plant or foliar 0.1	5	0.5	7	Ground or aerial	0	3

USE	SINGLE APP. RATE (lb a.i./A)	MAX. NUMBER OF APPS. AT MAX. RATE	SEASONAL APP. RATE (lb a.i./A)	MINIMUM INTERVAL BETWEEN APPS. (days)	APP. METHOD	INCORPORATION DEPTH (inches)	PHI
Okra	At plant or foliar 0.0773 in CA; 0.1 not allowed in CA	2-3	0.202	7	Ground or aerial	0	7
Tobacco	0.1 pre-transplant, at transplant or foliar; 0.2	1-2	0.2	Not specified; do not make more than 2 foliar applications/season; N/A	Pre-transplant soil application, at transplant water treatment application, and foliar application	4 for pre-transplant soil applications; 0 for foliar applications	Do not apply later than lay-by
Soybeans	0.1	3	0.3	30	Foliar	0	18
Peanut	0.1	5	0.5	14	Foliar	0	14
Other Uses Not Assessed							
Processing Handling Equipment³	0.0408	NS	NS	NS	Dust	0	N/A
Refuse/Solid Waste Containers (garbage cans)⁴	0.23	NS	NS	NS	Spot treatment, crack & crevice and/or spot treatment	0	N/A
Greenhouses (empty or in use)⁵	0.2	2-3	0.5	Assume 7	Ground	0	N/A
Facilities various uses as shown in the footnote⁶	44.6	Assume 1	Assume 44.6	NS	Soil treatment (subslab injection) ⁷	NA	N/A

³ Dust application, at a lower rate than other processing/handling establishments, should yield estimated exposure concentrations that are lower as well.

⁴ Other uses of bifenthrin, on the same sites (perimeter treatment and outdoor general surface spray), with similar application rates, were assessed.

⁵ This use was not assessed, since it is an indoors use only. Exposure to wildlife should be minimal.

⁶ Uses as follows: Commercial/ Institutional/ Industrial Premises/ Equipment (outdoor), Commercial Storages/ Warehouses Premises/ Commercial Transportation Facilities-Non-feed/Non-food/ Diaries/Cheese Processing Plant Premises (Non-food Contact)/ Dairy Farm Milk Storage Rooms/Houses/Sheds/ Eating Establishments (food and non-food areas)/Egg Handling Rooms/Egg Packing Plants (Commercial)/Feed Mills/Feed Processing Plants/Food/ Grocery/Marketing/Storage/ Distribution Facility Premise/ Food Processing Plant Equipment (food contact)/(non-food handling areas)/(non-food contact)/Food Stores/Markets/ Supermarkets Premises/Hospital/ Medical Institutions Premises (Human/Veterinary)/Household/ Domestic Dwellings (and Contents/Premises)/ Industrial Construction Areas (Outdoor)/ Meat Processing Plant Premises (food and non-food contact)/ Non-agricultural Outdoor Buildings/Structures/ Public Buildings/Structures/ Storage Areas (empty or full).

USE	SINGLE APP. RATE (lb a.i./A)	MAX. NUMBER OF APPS. AT MAX. RATE	SEASONAL APP. RATE (lb a.i./A)	MINIMUM INTERVAL BETWEEN APPS. (days)	APP. METHOD	INCORPORATION DEPTH (inches)	PHI
Hospitals/Medical Institutions Premises (Human/Veterinary); Household/Domestic Dwellings Indoor Food Handling Areas; Household/Domestic Dwellings Indoor Premises⁸	0.236 or NDC 21.8	NA	NA	7	Indoors general surface treatment, crack & crevice and/or spot treatment, foam application, void treatment, brush-on, soil treatment (subslab injection or trenching); Perimeter treatment, barrier treatment	0	N/A
Pet Living/Sleeping Quarters⁹	0.0053 lb/1 gal	NS	NS	NS	Indoor general surface treatment	0	N/A
Seed Houses/ Stores/ Storage Areas/ Warehouses¹⁰	0.223	NS	NS	NS	Spray, crack & crevice and/or spot treatment	0	N/A
Ships and Boats¹¹	0.236	NS	NS	NS or 7	Crack & crevice and/or spot treatment, foam application, indoor general surface spray, void treatment, dust, surface treatment	0	N/A
Wood Protection Treatment to Buildings/ Products (Indoor)¹²	0.0565 or units other than lb/A	NS	NS	NS	Broadcast, crack & crevice and/or spot treatment, foam application, void treatment	0	N/A

⁷ It is highly unlikely that substantial drift or runoff would occur from this use. The trench/rodding applications, which were assessed (see **Table 2-3**), should yield higher EECs.

⁸ Not assessed because they are indoor uses.

⁹ Not assessed because it is an indoor use.

¹⁰ Not assessed because they are indoor uses.

¹¹ Not assessed because it is an indoor use.

¹² Not assessed because it is an indoor use.