# Residential Pesticide Use in Northern California: 2002-03 Surveys

Mary Louise Flint
UC Statewide IPM Program and Extension
Entomologist

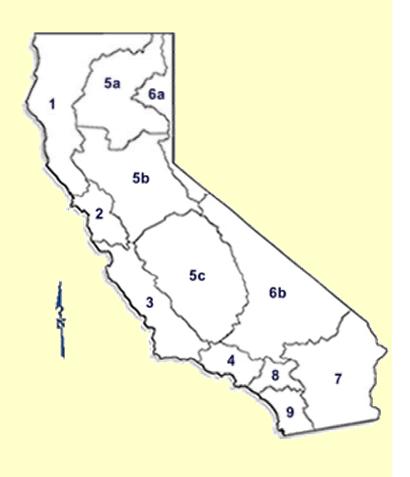
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#### Goals of 2003 residential surveys

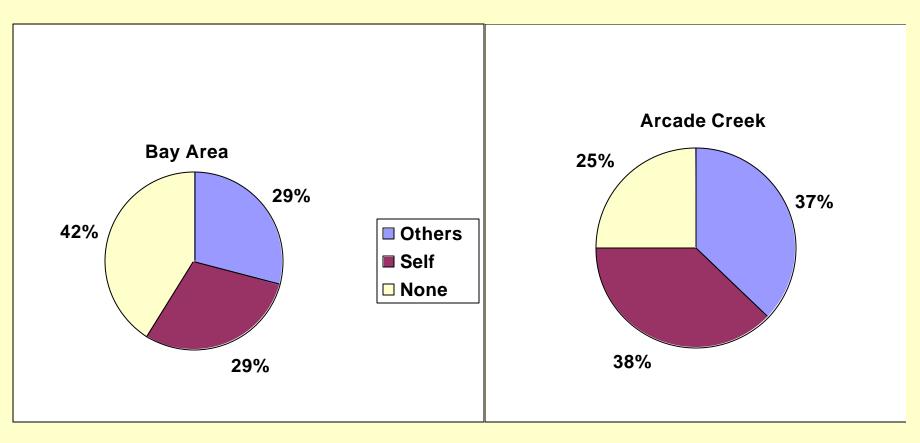
- Identify who is applying pesticides in residential areas
- Why are they applying pesticides?
- Where would education efforts be best focused to reduce water quality problems?
- Shelf survey: What types of pesticide products being sold in N. California?

## 2003 Urban Pesticide Telephone Survey Areas (n=3200)

- Arcade Creek Watershed/
  - Sacramento County
- Five Mile Slough Watershed/
  - San Joaquin County
- San Francisco Bay Area
  - (parts of 9 counties)
- San Diego Creek Watershed
  - (Orange County)\*
  - \*comparison survey done in 2000 by Wilen



## Who applies pesticides in residential landscapes & outdoor areas?



## Who\* has applied pesticides in last 6 months?

- 78% of San Diego Creek residents
- 59% Arcade Creek residents
- 58.2% Bay Area residents
- 51% of Five Mile Slough Residents
  - \*% of those who state they or other family members apply pesticides

Very few people could recall the product they used. Some could recall brand names such as Raid or Ortho, but not full product name or a.i.

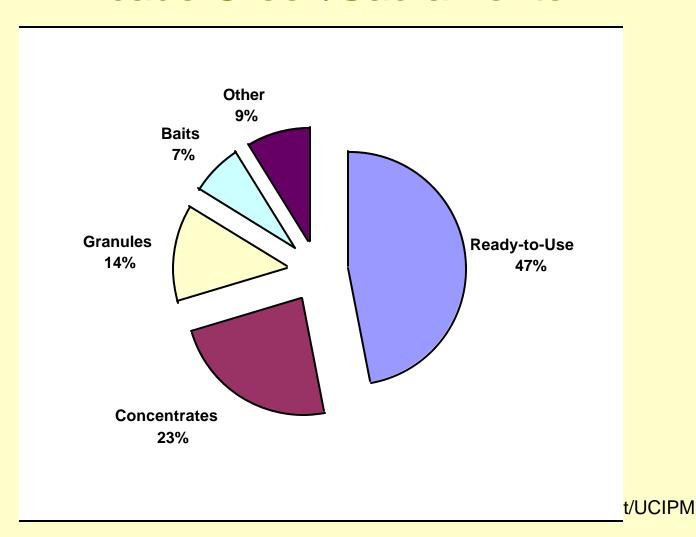
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# Most Common Pest treated: Ants

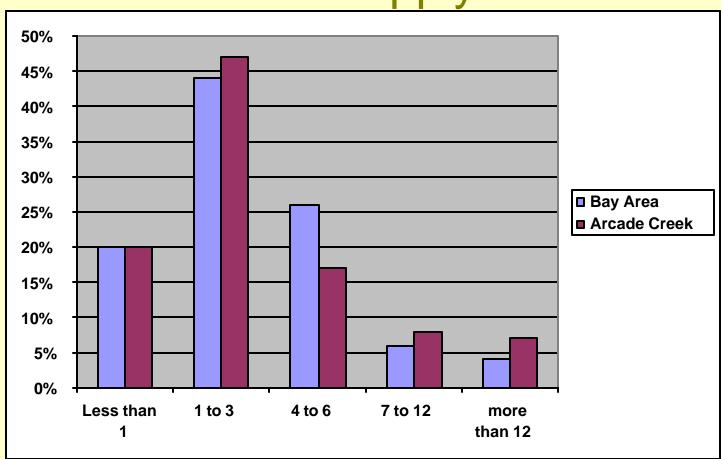


- By far the most common pest that people treated for themselves (w/in 6 mo.) 51-60% (78%SDC)
- Also the most common pest PCOs were hired to control (56-67%)
- Other top pests: insects (general), snails & slugs, spiders, rodents and weeds

## Pesticide Formulations Purchased Arcade Creek/Sacramento



No. Applications a year by those who self-apply



\* San Diego Creek residents used pesticides more frequently with 29.4% making 7 or more applications a year.

# Disposal of unused portions of mixed pesticides

Method	Five Mile Slough	SF Bay Area	San Diego Creek	Arcade Creek
In trash	12.5%	8.9%	8%	10%
Down d rain inside	10%	3.3%	3.4%	5%
Down outside drain	7.5%	1.6%	(included in gut ter)	0%
Gutter	5%	2.2%	1.1%	0%

# Disposal of unused pesticides in product containers

Method	Five Mile Slough	SF Bay Area	Arcade Creek
Trash	52.7%	49.5%	51.6%
In drain/g utter	2.2%	3.0%	2.1%
Use up	12.4%	11.7%	8.9%
Hazardous waste disposal sites	26.8%	23.9%	25.2%

## Where do you get your pest control information? 4 top sources:

- Word-of-mouth
- Product labels
- Store employees
- Advertisements



## Where pesticides purchased

Type of	Five	Bay	San	Arcade
Store	Mile	Area	Diego	Creek
	Slough		Creek	
Large Home	42.2%	42.0%	55.1%	51.4%
<b>Supply Store</b>				
Grocery/	15.0%	15.7%	18.0%	18.9%
<b>Drug Store</b>				
Hardware	27.2%	19.9%	6.9%	8.8%
Discount	11.0%	7.9%	N.A.	10.1%
Dept.				
Retail	1.2%	6.7%	8.1%	5.4%
Nurseries				

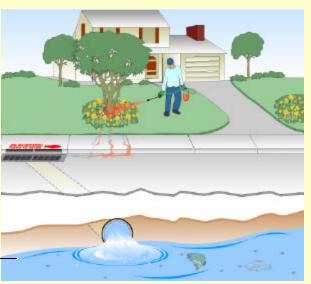
## Do employees at the store where you purchase pesticides influence your decision?

I purchase pesticides at this type of store:	Five Mile Slough	Arcade Creek	SF Bay Area
Nursery		27.3%	55.6%
Hardware	21.6%	17.4%	44.4%
Large home supply	17.4%	19.5%	25.7%
Grocery/drug	4.0%	13.2%	20%
Discount Department Store	0		0

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To what extent do you think pesticides used around homes, yards and gardens in your area make it into local creeks, rivers and bays?

	Arcade	Five Mile	SF Bay
	Creek	Slough	Area
Not at all	17%	23%	18%
To a small	28%	28%	24%
extent			
To some	31%	28%	31%
extent			
To a large	24%	21%	27%
extent			



## Shelf survey

- Conducted in Sacramento & Contra Costa Counties
- Between Feb 15 & March 7, 2003
- 14 stores in each area:
  - 2 large home supply stores (Home Depot, Lowes),
  - 2 grocery/drug stores,
  - 3 discount department stores (WallMart, Kmart, Target),
  - 3 hardware stores
  - 4 retail nurseries
- All home products recorded except pet products and insect repellents for people.

#### Results

- 542 active products
- 112 active ingredients
- Only 13 diazinon products
- Many products contained the same active ingredient
  - 78 permethrin products
  - 25-32 products each: talomethrin, metaldehyde, dicamba, pyrethrin, glyphosate



#### **Inactive Products**

- We found 26 inactive products on shelves (4.5% of products)
- 19 of these were in violation of 2-year retail grace period.
- Found in 7 of 8 retail nurseries surveyed.

## Store employee knowledge ratings on safer alternatives

Store Type:	Mean Knowledge Rating:	Hand-outs on alternatives?:
Hardware	2.83: Very Knowledgeable	Yes in 6 of 6 stores
Retail Nursery	2: Knowledgeable	Yes in 6 of 8 stores
<b>Home Supply</b>	2 Knowledgeable	Yes in 2 of 4 stores
Grocery/Drug	1.25: Not Knowledgeable	None in any stores
Discount Department	1.12: Not Knowledgeable	None in any stores



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## Preliminary conclusions about types of stores and pesticide products

- Hardware stores featured the most variety with products for indoor and outdoor use.
- Nurseries carried mostly outdoor products so had fewer--but many had more selection in garden and less toxic products.
- Home supply stores were 2nd to hardware stores in terms of # products.
- Discount department stores, groceries and drug stores had less variety.

#### Recommendations

- More education about pesticide disposal.
- Smaller pesticide containers would discourage long term storage & improper disposal.
- Ready-to-use formulations may reduce environmental and health hazards.
- Labels need to more prominently display active ingredients, potential env. problems and proper disposal. Trade names confusing.
- Retail employees important info source--better education would enhance extension of information on alternatives and safety. Also hand-outs in stores.
- Ant control accounts for major pesticide use, education programs on alternatives should be a priority.

## Cooperators

- Cheryl Wilen, UC IPM, San Diego
- Shelly Osborn and Greg Robinson, CSU Fullerton
- Nan Singhasemanon, CA DPR
- Christine Joshel, UC OPIC (shelf survey)
- Advisory committee:
  - Gene Davis and Christy Spector, CVRWQCB;
  - Bill Johnson, SFBRWQCB;
  - Kathy Russick, Sacramento Stormwater Management
     Program

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