

# Regional IPM Partnership *Our Water, Our World* Promotion



## Regional Evaluation Report 2002 - 2003

Prepared by the Regional IPM Partnership Committee

Bay Area Pollution Prevention Group

Bay Area Stormwater Management Agencies Association

Alameda Countywide Clean Water Program

Central Contra Costa Sanitary District

Contra Costa Clean Water Program

Fairfield-Suisun Urban Runoff Management Program

City of Hayward

Marin Countywide Stormwater Pollution Prevention Program

Regional Water Quality Control Plant—Palo Alto

Salinas Valley Solid Waste Authority

City and County of San Francisco

San Mateo Countywide Stormwater Pollution Prevention Program

Santa Clara Valley Urban Runoff Pollution Prevention Program

County of Santa Cruz

City of Santa Rosa

Union Sanitary District / City of Fremont

City of Vacaville

Vallejo Sanitation & Flood Control District

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## Introduction

This report covers the fifth year (FY 02/03) of the Regional IPM (Integrated Pest Management) Partnership – a collaboration among regional and local water pollution prevention agencies in eight San Francisco Bay Area counties and locally owned nurseries and hardware stores. The Partnership encourages less-toxic methods of pest prevention and control by means of a point-of-sale program called the *Our Water, Our World* Promotion. During this fifth year, the Partnership had these main goals:

- Build on relationships with independent nurseries and hardware stores developed since 1999 through the IPM Partnership promotion
- Improve implementation in participating stores
- Continue to educate about water quality problems related to residential pesticide use
- Educate the public about safe use and disposal of pesticides and the value of IPM approaches to pest control

The ultimate aim of the program is to protect surface water quality in local creeks, San Francisco Bay, and the Sacramento/San Joaquin River Delta. Concerns about water quality and pesticides stem from the finding that commonly used organophosphate pesticides (diazinon and chlorpyrifos) are found in Bay Area storm water discharges and wastewater effluent, often at levels toxic to *Ceriodaphnia dubia*, a commonly used test organism similar to other animals at the base of the food web. After planning for the regional program began in 1998, thirty-five Bay Area creeks (changed to 60 in 2003) and San Francisco Bay were listed by the Environmental Protection Agency as impaired due to diazinon.

The regional *Our Water, Our World* Promotion builds on the pilot IPM Partnership, which the Central Contra Costa Sanitary District (CCCSD) started in 1997 with input/financial contribution from the Regional Water Quality Control Plant (RWQCP) in Palo Alto and grant support from the California Department of Pesticide Regulation and the National Foundation for Integrated Pest Management Education (USEPA funding). The pilot was implemented in three stores in Contra Costa County and one store in Palo Alto during 1998. Using the materials developed in the pilot, the Marin County Stormwater Pollution Prevention Program also implemented an IPM Partnership in 1998. Starting in FY01/02, the *Our Water, Our World* Promotion was complemented by another project – the *Pesticide Distributors Project*, which involves working with key account managers and sales reps from the pesticide distributor companies to promote less-toxic products in the stores.

### Program Elements

*Our Water, Our World* is an educational program for employees and customers of locally owned nurseries, drug stores, and hardware stores. Program elements include:

- Development of an extensive list of less-toxic methods and products to diazinon and chlorpyrifos for various applications
- Development and production of 22 fact sheets (13 in English, 9 in Spanish) on less-toxic pest management strategies for the public
- Design and production of a program logo and in-store promotion materials including “end cap” displays, posters, “shelf-talkers,” shelf signs, and banners
- Training sessions for store employees focusing on principles of integrated pest management (IPM) and successful application strategies and sales techniques for products on the less-toxic list
- Program evaluation by a San Francisco State University-affiliated survey research and data analysis firm (Public Research Institute)

Although not an original program element, many of the agencies participating in the *Our Water, Our World* Promotion also support a regional media relations project, which has been successful at generating publicity for the program, including media stories (newspaper, radio, TV), and public service announcements (radio).

#### Participation in the Program

Large and small agencies have joined the program with varying amounts of resources. During 2002-2003 the partner agencies were:

<b>Partner Agency</b>	<b>Stores</b>
Alameda Countywide Clean Water Program	21
Central Contra Costa Sanitary District	17
Contra Costa Clean Water Program	8
Fairfield-Suisun Urban Runoff Management Program	4
Marin Countywide Stormwater Pollution Prevention Program	23
Salinas Valley Solid Waste Authority	16
City and County of San Francisco	8
San Mateo Countywide Stormwater Pollution Prevention Program	18
Santa Clara Valley Urban Runoff Pollution Prevention Program	30
County of Santa Cruz	12
City of Santa Rosa	2
Union Sanitary District / City of Fremont	8
City of Vacaville	3
Vallejo Sanitation & Flood Control District	1
<b>Total</b>	<b>171 stores</b>

#### Standards for Participation

In order to ensure consistency throughout the region, agencies and stores participating in 2003 met the following general criteria:

##### *Local agency commitment*

- Attend regional coordinating meetings
- Provide stores with program educational materials (e.g., fact sheets and reference books) for the public
- Facilitate installation of display materials, shelf talkers, and fact sheets
- Provide training for significant majority of employees who interact with customers in the garden department or nursery
- Maintain in-person contact with stores over the duration of the promotion

##### *Store management commitment*

Participating stores are required to:

- Stock a significant number of recommended less-toxic products
- Use program shelf talkers to identify these products on the shelves
- Send a critical mass of employees (or, for hardware stores, garden department employees) to training
- Make program fact sheets containing specific less-toxic pest management strategies available to customers.

Stores are encouraged to use other program display elements.

### Program Planning and Management

Early in 1998 and every year since two regional consortia of water pollution prevention agencies, the Bay Area Stormwater Management Agencies Association (BASMAA) and the Bay Area Pollution Prevention Group (BAPPG), have agreed to spend funds to support the regional program. The program is managed by a regional committee, with monthly meetings, to facilitate planning and decision-making, and to ensure as much consistency as possible throughout the Bay Area. The committee also serves as a resource for small agencies or those that are less experienced in collaborating with local businesses. Early in the regional planning process it became clear that a program of this scope would require significant coordination, and that it would be necessary to have a regional coordinator with the necessary skills to moderate meetings, prepare minutes, and facilitate inter-agency coordination. The Regional Water Quality Control Plant (Palo Alto) provides resources for a coordinator for the regional committee.

### Program Materials

Over the years, the regional program has used materials designed for the pilot:

- Posters/end cap signs
- Shelf signs and poster “headers”
- Shelf talkers
- Weatherproof banners
- “Ask me about less-toxic pest control” t-shirts for employees
- Person-size cardboard “spokesturtles” for use in store displays
- Pest-specific fact sheets
- Recognition decals for stores

Fact sheet topics were originally chosen based on common uses and target pests for diazinon and chlorpyrifos. Fact sheets were also developed for other topics not directly related to diazinon or chlorpyrifos but that were seen by consumers as natural parts of the program such as “use and disposal of pesticides,” “snails and slugs,” and “weeds.”

In addition to these specially created materials, agencies have also purchased posters illustrating beneficial insects and reference books for participating stores.

### **Background**

In previous years, producing information about the program for annual reports required of wastewater and storm water agencies was left up to the partner agencies. The one exception being April 2000, when the IPM Partnership published its report on the 1999 promotion including qualitative and quantitative evaluations and sales data tracking (BAPPG and BASMAA, 2000). Recently, a few partner agencies have suggested that it would be quite useful if the regional Committee produced a regional report on the promotion that partner agencies could use in their annual reporting to the Regional Water Quality Control Board (Regional Board).

The Committee explored the best way to further evaluate the program including discussions with a professional research firm. Unfortunately, each of the evaluation mechanisms (e.g., customer surveys, shelf space surveys, sales data) had advantages and disadvantages with no one mechanism being clearly the best. Committee members agreed that since no one mechanism was ideal for evaluating the program a compilation of evaluations should be produced. The compilation would form the basis of the regional report that partner agencies could use for their annual reports to the Regional Board. Agencies were requested to send in any relevant evaluations they have done in the last year or so. These evaluations were compiled and organized as described in the next section.

## Evaluations

The evaluations conducted to-date tend to fall into two categories: surveys of people (attitudes, opinions, behaviors) and surveys about the products. The “people” surveys are either specifically conducted to garner information about the *Our Water, Our World* Promotion or they are more general surveys that include questions about pesticides. The respondents to the more general surveys are picked either randomly or non-randomly. Two kinds of product surveys have been conducted: shelf space surveys and sales data analyses. This organization of evaluations is reiterated below with the names of the evaluations provided by partner agencies shown in *italics*.

- People Surveys
  - Program / Store – These are surveys of program participants in either the stores, events, or both and provide specific information about the program.
    - *CCCSD Program Effectiveness Survey*:
    - *SVSWA Store Manager Survey*
    - *SVSWA Event / Clinic Evaluation*
  - General – These are surveys of the general public and not specific to the program.
    - Non-random selection
      - *MCSTOPPP Calendar Survey*
    - Random selection
      - *UCD Residential Pesticide Use in California*
- Product Surveys
  - Shelf space
    - *Regional Board / DPR sponsored Shelf Surveys*
  - Sales data
    - *Pesticide Distributors Project*

Copies or excerpts of these evaluations are provided in the Appendices. The most pertinent results are provided below:

### People Surveys

#### *Program / Store*

*CCCSD Program Effectiveness Survey* – Central San conducted a survey of store staff and Master Gardeners regarding the effectiveness of the program.

- 100% of the respondents felt that people are more aware, and more willing to try less-toxic methods.
- 83% of store staff felt that customers responded to the *Our Water, Our World* Promotion displays by showing more interest in less-toxic pest control methods/information but also through increased sales of less-toxic pest control products.
- 100% of the store staff felt that their participation in the program has been beneficial to both their store as well as their customers.
- 82% of store staff responded that the store employees would benefit from additional training in IPM.
- 100% of store staff thought the display materials are effective.

*SVSWA Store Manager Survey* – Salinas Valley Solid Waste Authority conducted a manager survey in the fall of 2002.

- 64% of store managers rated the shelf talkers as most effective at educating customers on less-toxic products.

- Store managers gave the program an overall effectiveness rating of 6.6 out of 10 possible.
- Store managers estimated a 15% increase in the sales of products endorsed by the program.
- The most important reason by far that store managers gave for participating in the program was the possibility of increased sales (40%). Personal interest in less-toxic products (20%) and customer demand / advertising (15%) were secondary reasons.

*SVSWA Event / Clinic Evaluation* – Throughout the 2002 promotion, Salinas Valley Solid Waste Authority also surveyed participants in events and clinics for the general public and training workshops for store staff.

- At least 95% of participants in events and clinics for the general public said they were helpful and they were willing to try less-toxic methods/products.
- 100% of the store staff found the training workshops helpful, and 93% were willing to try less-toxic methods/products.
- 100% of the store staff would recommend the workshop to a friend.

#### *General*

*MCSTOPPP Calendar Survey* – MCTOPPP distributed a survey along with 15,000 of its 2003 calendars to members of the general public through 50 local businesses and 48 public agencies and community groups. About 600 teachers and an undetermined number of individuals also received the calendars on request as a result of news articles appearing in local papers.

- 86% of respondents believe that non-toxic or less-toxic pesticides can replace conventional pesticides, at least some of the time.
- 30% of respondents said they would look for a product that is the least toxic if they were to buy a product to manage a pest in their home or garden.
- 21% of respondents had heard of either 1-800 CLEANUP or [www.cleanup.org](http://www.cleanup.org).
- 30% of respondents knew that IPM helps to determine whether, when, and how to treat a pest problem.

*UCD Residential Pesticide Use in California* – The University of California Statewide IPM Program sponsored a telephone survey to gather information about outdoor pesticide use, pest control practices, and attitudes of residents. Between September 2002 and January 2003, approximately 2,600 households were surveyed in three areas of northern California – Bay Area, Sacramento, and Stockton. Some of the draft results are:

- About 40% of Bay Area residents indicated that they had heard or saw something in the media or on posters, brochures, or billboards about pesticide use and water quality within the last year or so. Of these 40%, more than 79% were able to describe the informational message and/or source of the information.
- Well over half of the respondents in the three northern California areas were aware that pesticides used around homes and gardens affect water quality in local creeks, rivers, and bays. However, only about a quarter of them had made changes in their pest control practices as a result.
- Large home supply stores accounted for 43% of all pesticide sales to residential users in the San Francisco Bay Area. Hardware stores were the second most important source (20%). Retail nurseries accounted for less than 7% of sales.
- The top reason in the Bay Area for choosing a specific product was how fast it works (40.4%) with human health concerns second (32.3%), followed by how long it lasts (27.2%), pet safety (24.4%), and cost (22%). Environmental concerns were significantly higher in the Bay Area (16%) than elsewhere (10%).

- Word-of-mouth was the top source of information (35.1%) regarding pesticide products with store employees being second (26.3%). Store employees were significantly more influential to those older than 30 (all age classes 31 and up were greater than 19% and as high as almost 33%) than those between 18 and 30 (8.6%) as sources of information. Analyses were performed to examine the relationship between reliance on store employees and the types of stores. Store employees were a greater factor in choice among people who purchased pesticides in nurseries (55.6%) and hardware stores (44.4%) than those who purchased them elsewhere (all other store types less than 26%).

### Product Surveys

#### *Shelf Space*

*Regional Board / DPR sponsored Shelf Surveys* – The Regional Board sponsored a survey of insecticide products available for sale in two major pesticide retailers in the San Francisco Bay Area in March 2002.

- In general, the nature of the insecticide product mix changed substantially since a previous shelf space survey was conducted a little over a year before in late 2000. Retail sales of chlorpyrifos were phased-out by December 31, 2001 but retail sales of diazinon were not required to be phased-out until December 31, 2002 (indoors) and December 31, 2004 (outdoors).
- By March 2002, all chlorpyrifos products were gone as were most diazinon products. Remaining diazinon products included concentrates, granules and dusts in small and large quantities. The dusts were especially surprising, as these dust products—including the large quantity product in a 5-pound bag—were not previously observed. Some products were accompanied by shelf talkers saying “Looking for Dursban?” and recommending the product as a replacement.
- A relatively large number of active ingredients are replacing diazinon and chlorpyrifos in retail insecticides. Most of these ingredients are from the pyrethroids family of insecticides.

#### *Sales Data*

*Pesticide Distributors Project* – This project involves working with key account managers and sales representatives from the pesticide distributor companies to promote less-toxic products in the stores. The distributors helped to assess percent increase and decrease of product sales during 2002.

- The major organophosphates of concern showed decreased sales (diazinon –9%; malathion –23%) and another pesticide of concern – carbaryl – showed a 24% decrease.
- One of the emerging pesticides of concern – cyfluthrin – showed an 11% increase in sales.
- Imidicloprid, which is one of the conventional pesticides mentioned as an alternative by the program showed a 20% increase.
- Other alternative products also showed increased sales (neem oil + 36%; soaps +33%; whitefly traps + 11%, iron phosphate baits +10%, and horticultural oil +7%).

### **Discussion**

A review of the evaluations shows the following general results:

***Promotion is well designed and positioned*** – Store managers and other program participants (e.g., Master Gardeners) give the program favorable to very favorable ratings. The display materials and training workshops received very high marks for their effectiveness. The importance of the program being in the stores where purchases are made was reinforced by the



result that store employees are the second most important source of consumer information, and that they are particularly important in nurseries and hardware stores, and to adults over 30.

**What many customers want** – A significant proportion of both residents and consumers are not only receptive to but are actually asking for information and products for less-toxic pest control. Significant percentages are aware of the issue of pesticides and water quality (about 40%). Among program participants or informed residents, the vast majority is not only willing to try less-toxic methods / products but also believes that less-toxic pesticides can often replace conventional pesticides. Although environmental concerns are not the top reason for choosing a product, it is almost as important as cost to Bay Area residents. And of those that hire someone else to control their pests, more than 80% were somewhat likely or very likely to hire an environmentally friendly pest control operator (PCO).

**Promotion is having intended impact** – Store managers report that the program is effective at both increasing interest in, as well as the sales of less-toxic products. And the vast majority of program participants (80 – 100%) view the program as beneficial to the stores, their employees, and their customers.

**A market in transition** – All of the data on products show a market that is in the midst of a major and relatively rapid change or turnover. The turnover is from a few very popular active ingredients (i.e., diazinon and chlorpyrifos) to a number of active ingredients and /or methods for pest control. The change can also be grossly characterized as a split or move from a market dominated by conventional pesticides to one in which conventional pesticides are still the major product type but also a market in which less-toxic products and methods are increasingly available and important.

**Remaining challenges** – The evaluations also revealed some remaining challenges including:

- Despite the awareness of over half of survey respondents that pesticides used around homes and gardens affect water quality in local creeks, rivers, and bays, only about a quarter of them had made changes in their pest control practices as a result.
- The incomplete and inconsistent presence of the program in large home supply stores – where reportedly 43% of pesticide sales occur – continues to limit the program's effectiveness.
- The top reason in the Bay Area for choosing a specific product is how fast it works (40%).

## Conclusions

There are numerous drivers for the relatively rapid change in the number and types of pest control products. Certainly, the phase-outs of diazinon and chlorpyrifos accelerated the process. But other factors include:

- listing and subsequent publicity around Bay Area waters being impaired by common household pesticides;
- release of information regarding human health impacts of not just organophosphate pesticides but of conventional pesticides and pest control, in general;
- relatively high importance Bay Area residents place on their environment; and
- ready (albeit not well promoted) availability of "alternative" pest control products / methods.

Given all these drivers, it is virtually impossible to isolate the contribution and impact of the *Our Water, Our World* Promotion and its complementary *Pesticide Distributors Project*. However, there is the following indirect evidence of the program's impact:

- The phase-out decisions as well as the listings and release of human health impacts information occurred after the program had been piloted and completed its first year, so the *Our Water, Our World* Promotion was well positioned to take advantage of the “opportunity” presented by these other drivers.
- Absent the existence of the program and the relationships it established and fostered between the agencies and the stores and the distributors, it is hard to imagine the pesticide manufacturers, distributors, and stores seeing the opportunity, let alone taking advantage of it on their own.
- The fact that the pesticide market did not change almost automatically from one being dominated by organophosphates to one being dominated by the next conventional pesticide type seems significant – given that this would be the most efficient business model for the pesticide manufactures and the stores.
- The appearance of less-toxic pesticides as effective “alternatives” and their documented increases in sales, while sales of conventional pesticides decreased appears to be a significant and direct result of the program.

The weight of this evidence suggests that the *Our Water, Our World* Promotion has had an important maybe even a vital role in changing the types and amounts of pesticides marketed and sold, and therefore the program has decreased the potential for pesticides to cause water quality problems.

## Recommendations

The following recommendations are made based on the results of these evaluations.

- The partner agencies should continue to conduct a variety of evaluations related to various aspects of the program and compile these into a regional report on a regular basis.
- The popularity of the trainings and the critical role employees in some types of stores play as important sources of consumer information means that these trainings should continue, and be enhanced, as needed and feasible.
- The regional Committee should continue to strive to export and “institutionalize” the program in the large home supply stores, perhaps by working with a specific chain or with a subset of stores on a pilot basis.
- The preference of a significant number of pesticide users for fast results should be addressed by pointing out that IPM methods tend to be lasting pest control (which was the third most important reason for choosing a specific product).
- The *Our Water, Our World* Promotion should continue to be complemented by the *Pesticide Distributors Project* to maximize the information and choices available to consumers as well as the market share of less-toxic pest control methods and products.
- Word-of-mouth was the top source of information (35%) regarding pesticide products so although store employees are influential, the *Our Water, Our World* Promotion needs to be complemented by other general public education that helps create the awareness and demand for less-toxic pesticides.
- The regional Committee should help PCO customers who were somewhat likely or very likely to hire an environmentally friendly pest control operator to find one.

## Reference

BAPPG and BASMAA, 2000. *Regional IPM Partnership: Our Water, Our World Promotion, Final Report, 1999.*

# Appendices

**Central Contra Costa Sanitary District  
Integrated Pest Management (IPM) Program/  
Our Water Our World (OWOW) Campaign**

**2002 Program Effectiveness Survey**

We always strive for continuous improvement. Please help us to evaluate the effectiveness of our Program by completing the following questions. Some questions apply to all of you, some to Master Gardeners and some to Store Staff. ***Your opinions and advice are very valuable to us!***

**ALL**

1. From your personal observations, do you feel the IPM/OWOW Program is having an effect on the pest control methods used by the public?

- Yes, people are more aware, and more willing to try less-toxic methods **100%**
- No, I haven't noticed any changes in attitude or behavior

2. What do you feel is the best way to educate the public about the benefits of switching to less-toxic pest control methods/products? *(Check all that apply)*

- Free public workshops on less-toxic gardening **78%**
- Educational materials placed in stores where people buy pesticides **79%**
- Newspaper articles **85%**
- Other: **Radio/TV PSAs; put info in ALL stores; target PCOs & lawn service people; get more Master Gardeners trained in IPM; teach in schools; advertise less-toxic products.**

3. What can Central San do to improve the benefits of the IPM Program partnership for you, and better support your efforts to encourage the use of less-toxic pest control methods?

**Create posters of good bugs/bad bugs & native plants; continue IPM training for Master Gardeners; get more retailers to buy into the program; more fact sheets (gophers, earwigs, cucumber beetles); schedule more workshops.**

**MASTER GARDENERS**

4. Evaluation forms completed by people attending *Less-Toxic Gardening* workshops indicate the vast majority of attendees are already using less-toxic pest control methods. Based on your interaction with them at the workshops, do you feel this is:

- True. Most attendees are already aware of and using less-toxic methods. **74%**
- False. Many people may just be giving the answer they think we want to hear, or they may have a different idea of what *less-toxic* means. **23%**

5. Do you feel the *Less-Toxic Gardening* workshops are adequately advertised/promoted?

- Yes **46%**
- No **54%**

6. How can we reach out to audiences we are missing? Are there particular groups you feel we should target?

**Put signs in nurseries/stores; target rich people who hire gardeners; do workshops in high schools/colleges; target fishermen & landscapers; put info in Welcome Wagon packets; target garden clubs; put articles in garden section of newspapers.**

### **STORE STAFF**

7. How have your customers responded to the IPM/OWOW displays in your store? (*Check all that apply*)

- |   |            |
|---|------------|
| <input type="checkbox"/> More interest in less-toxic pest control methods/information | <b>83%</b> |
| <input type="checkbox"/> Increased sales of less-toxic pest control products          | <b>83%</b> |
| <input type="checkbox"/> Decreased sales of the more toxic products                   | <b>17%</b> |
| <input type="checkbox"/> No change noticed in sales or customer interest              | <b>0%</b>  |

8. Do you feel your store's participation in the IPM/OWOW campaign has been beneficial for your store? Has it been beneficial for your customers?

- |  |  |
|--|--|
| <input type="checkbox"/> Yes <b>100%</b> | <input type="checkbox"/> Yes <b>100%</b> |
| <input type="checkbox"/> No              | <input type="checkbox"/> No              |

9. Do you feel your store's employees would benefit from additional training in IPM principles and methods?

- |                              |            |
|------------------------------|------------|
| <input type="checkbox"/> Yes | <b>82%</b> |
| <input type="checkbox"/> No  | <b>8%</b>  |

10. Are the display materials (fact sheets, posters, shelf-talkers, etc.) effective?

- |                              |             |
|------------------------------|-------------|
| <input type="checkbox"/> Yes | <b>100%</b> |
| <input type="checkbox"/> No  |             |

Any suggestions on how they can be improved? **Run a looped video in stores.**

11. What else can Central San do to encourage the use of less-toxic pest management methods and products?

**More news stories; signage in stores about product effectiveness vs. conventional pesticides; keep finding ways to protect our planet; get info into vet offices & pet stores; advertise less-toxic products.**

# Salinas Valley Solid Waste Authority

## Store Manager Survey Results 2001-2003

### OWOW In-Store Partnership

#### Top 3 OWOW Campaign Components

Campaign Item	Very Effective	Somewhat Effective	Not Effective
1. Shelf Talkers	64%	27%	9%
2. Literature Racks	45%	45%	10%
3. In-store promotions	50%	50%	0%

**Overall program effectiveness (Scale of 1-10):** 6.6

**Estimated Increase in Sales:** 15%

**Adequate contact with OWOW Representative?** 100% Yes

#### Top 3 Store Promotions through Media

1. Radio Commercials
2. Newspaper Articles
3. T.V. Commercials

#### Top 3 Reasons to Participate in OWOW program

1. Possibility of increased sales	40%
2. Personal Interest in Less-Toxic products	20%
3. Customer Demand/Media Advertising	15%

**Outreach Summary and Survey Results**  
**OWOW SVSWA 2002**

**Table 1: Event Participation and Demographics**

	<u>Total #</u>	<u>Total hours</u>	<u># people attended</u>	<u>Avg # / hour</u>	<u># Spanish</u>	<u>% Spanish</u>	<u>%English</u>
School Events	5	9.5	459	48	294	64.07	35.93
Community Events	9	41	845	20	310	56.81	43.19
Store Events	10	21.5	161	8	48	44.09	55.91
IPM Trainings	2	8	57	7	7	13.00	87.00
<b>Totals:</b>	<b>26</b>	<b>80</b>	<b>1522</b>		<b>659</b>	<b>51.65</b>	<b>46.29</b>
Employee Trainings	7	6.5	90	14			
<i>Informal Employee Trainings</i>			36				
<b>Totals:</b>	<b>33</b>	<b>86.5</b>	<b>1648</b>				

**Table 2: Combined Workshop/Event Survey Results (211 Surveys Total)**

	<b>Not enough info</b>	<b>Just about right</b>	<b>Too much detail</b>
General Info?	4%	91%	6%
Beneficial insects?	4%	85%	12%
Product Use?	6%	86%	8%
	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>
Quality of exhibits/displays?	0%	34%	66%
Quality of presentation?	1%	28%	71%
	<b>Yes</b>	<b>No</b>	<b>Undecided</b>
Was the clinic helpful?	96%	1%	3%
Willing to try less-toxic method/product?	95%	1%	4%
Know about HHW services before today?	54%	45%	1%
Learn about HHW services today?	77%	21%	2%

**Table 3: Workshop/Training Survey Results (59 Surveys Total)**

	<b>Not enough info</b>	<b>Just about right</b>	<b>Too much detail</b>
General Info.?	2	96	2
Beneficial insects?	14%	84%	2%
Product Use?	16%	82%	2%
	<b>Poor</b>	<b>Good</b>	<b>Excellent</b>
Overall Impression of Workshop?	0%	30%	70%
Quality of facilitator's presentation?	0%	27%	73%
	<b>Yes</b>	<b>No</b>	<b>Undecided</b>
Was the clinic helpful?	100%	0%	0%
Willing to try less-toxic method/product?	93%	0%	7%
Know about HHW services before today?	74%	30%	0%
Learn about HHW services today?	100%	0%	0%
Know about the term IPM before today?	68%	30%	2%
Recommend this workshop to a friend?	100%	0%	0%

**Table 4: Top 10 Reported Target Pest Problems**

<b>Rank</b>	<b>Pest</b>	<b>% total</b>	<b>Eng %</b>	<b>Span %</b>
1	Ants	30.33	26%	37%
2	Snails & Slugs	21.8	29%	19%
3	Aphids & Whiteflies	13.7	22%	2%
4	Spiders	6	11%	7%
5	Gophers & Rats	4.7	7%	5%
6	Cockroaches	4.3	2%	16%
7	Earwigs	3.3	4%	0%
8	Wasps	2.8	5%	0%
9	Thrips/Mites/Scales	1.9	4%	2%
10	Moths	1.4	2%	0%



### MCSTOPPP CALENDAR SURVEY 2003

1. DO YOU OR A FAMILY MEMBER OWN A VEHICLE- E.G. CAR, TRUCK OR MOTORCYCLE?  
(IF "YES" CONTINUE TO THE NEXT QUESTION. IF "NO" GO TO QUESTION 6.)

609	23
YES	NO

2. DO YOU, OR A FAMILY MEMBER OR FRIEND CHANGE THE OIL IN THAT VEHICLE?  
(IF "YES" CONTINUE TO THE NEXT QUESTION. IF "NO" GO TO QUESTION 6.)

147	460
YES	NO

3. WHEN THE OIL IS CHANGED IN YOUR VEHICLE, DO YOU:

129	BRING TO A COLLECTION STATION
5	TOSS IT IN THE TRASH
23	OTHER

4. WHEN THE OIL FILTER IS CHANGED IS IT:

110	TAKEN TO A COLLECTION STATION
21	TOSSED IN TRASH
20	OTHER

5. WHEN YOU BUY MOTOR OIL WHERE DO YOU BUY IT?

35	GAS STATION
8	GROCERY STORE
113	AUTO SUPPLY STORE
30	OTHER

6. DO YOU BELIEVE CONVENTIONAL PESTICIDES CAN BE REPLACED WITH NON-TOXIC OR LESS TOXIC ALTERNATIVES THAT ARE JUST AS EFFECTIVE - IF NOT BETTER?

13	NO
223	SOME OF THE TIME
310	ALL OF THE TIME
76	DON'T KNOW

7. IF YOU WERE TO BUY A PRODUCT TO MANAGE A PEST IN YOUR HOME OR GARDEN, WOULD YOU LOOK FOR: (CHECK ALL THAT APPLY.)

52	AN AEROSOL SPRAY
469	A PRODUCT THAT IS THE LEAST TOXIC
172	TRAPS
133	THE PRICE OF THE PRODUCT
93	BAIT STATIONS
73	NAME RECOGNITION
595	OTHER

8. HAVE YOU HEARD OF 1-800 CLEAN UP OR WWW.CLEANUP.ORG WHERE YOU CAN GET INFORMATION ON THE PROPER DISPOSAL OF HOUSEHOLD PRODUCTS LIKE MOTOR OIL, OIL FILTERS, PAINT, PESTICIDES, SOLVENTS, ETC.?

130	YES
495	NO, NOT BEFORE TODAY!!!

9. DID YOU KNOW THAT IPM (INTEGRATED PEST MANAGEMENT) HELPS PEOPLE DETERMINE WHETHER, WHEN AND HOW TO TREAT A PEST PROBLEM?  
(SEE INSIDE FRONT COVER OF CALENDAR.)

182	9. YES
431	9. NO, NOT BEFORE TODAY!!!

10 .WHEN YOU BUY PESTICIDES (TOXIC OR NON-TOXIC),WHERE DO YOU GO?  
(CHECK ALL THAT APPLY.)

133	GROCERY STORE
321	NURSEY
261	HARDWARE STORE
166	HOME DEPOT OR COSTCO
173	LONG'S
73	RITE AID
44	DON'T BUY
66	OTHER

11. DID YOU KNOW THAT A WATERSHED INCLUDES ALL THE LAND THAT WATER FLOWS OVER ON ITS WAY TO THE BAY OR OCEAN; AND, THAT WE ALL LIVE IN A WATERSHED?  
(SEE INSIDE FRONT COVER OF CALENDAR.)

453	YES
169	NO, NOT BEFORE TODAY!!!

12. IF YOU RECEIVED A CALENDAR LAST YEAR, DID YOU:  
(CHECK ALL THAT APPLY.)

154	READ AT LEAST SOME OF THE INFORMATION
76	FIND THE RESOURCES SECTION ON THE BACK COVER HELPFUL
41	ONLY LOOK AT PHOTOS AND/OR READ CAPTIONS
7	FIND THE TEXT TOO SMALL TO READ
330	NEVER GOT A CALENDAR LAST YEAR

**Residential Pesticide Use in California:  
A Report of Surveys taken in the Sacramento (Arcade Creek),  
Stockton (Five-Mile Slough) and San Francisco Bay Areas with  
Comparisons to the San Diego Creek Watershed of Orange County, California**

**Prepared for the California Department of Pesticide Regulation**

**Mary Louise Flint, PhD  
Director, IPM Education and Publications and Extension Entomologist  
University of California Statewide IPM Program  
University of California Davis**

**March 15, 2003 Draft**

The University of California Statewide IPM Program sponsored a telephone survey to gather information about outdoor pesticide use, pest control practices, and attitudes of residents. Between September 2002 and January 2003, approximately 2,600 households were surveyed. The final report has not been issued so what are reported herein are draft results.

Pertinent draft findings:

**Awareness of advertising, media, and education about water quality** – About 40% of Bay Area residents indicated that they had heard or saw something in the media or on posters, brochures, or billboards about pesticide use and water quality within the last year or so. Of these 40%, more than 79% were able to describe the informational message and/or source of the information.

**Awareness of water quality impacts and behavior change** – Well over half of the respondents in the three northern California areas were aware that pesticides used around homes and gardens affect water quality in local creeks, rivers, and bays. However, only about a quarter of them had made changes in their pest control practices as a result.

**Where pesticides purchased** – Large home supply stores accounted for 43% of all pesticide sales to residential users in the San Francisco Bay Area. Hardware stores were the second most important source (20%). Retail nurseries accounted for less than 7% of sales.

**Choosing pesticides products** – The top reason in the Bay Area for choosing a specific product was how fast it works (40.4%) with human health concerns second (32.3%), followed by how long it lasts (27.2%), pet safety (24.4%), and cost (22%). Environmental concerns were significantly higher in the Bay Area (16%) than elsewhere (10%).

**Sources of information on pesticide products** – Word-of-mouth was the top source of information (35.1%) with store employees being second (26.3%). Store employees were significantly more influential to those older than 30 (all age classes 31 and up were greater than 19% and as high as almost 33%) than those between 18 and 30 (8.6%) as sources of information. Analyses were performed to examine the relationship between reliance on store employees and the types of stores. Store employees were a greater factor in choice among people who purchased pesticides in nurseries (55.6%) and hardware stores (44.4%) than those who purchased them elsewhere (all other store types less than 26%).

**Potential use of pest control operators (PCOs) that provide IPM services** – Of the survey respondents that currently hire PCOs, between 81 and 83% said they were somewhat likely or very likely to hire an environmentally friendly PCO. Of the willing, a significant percentage was also willing to do so: if repeat visits were required (more than half of the willing), if it meant slower pest control (about half), and if it cost more (41%).



## MEMO

**TO:** Bill Johnson **DATE:** March 15, 2002  
**FROM:** Kelly D. Moran **PROJECT:** 33a  
**SUBJECT:** Shelf Surveys at Orchard Supply Hardware and Home Depot

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On March 7 and 13, I visited two major pesticide retailers in the San Francisco Bay Area (Orchard Supply Hardware in Foster City and Home Depot in San Mateo) to survey insecticide products available for sale. These informal shelf surveys focused on identification of the products coming on the market to replace diazinon and chlorpyrifos. I obtained product brand name, insecticide active ingredient, formulation type, and application location<sup>1</sup> for insecticides. I omitted all non-chemical insect controls, all baits, and all diazinon products from the survey. I also omitted soaps, neem extract, and oils. This was a wintertime survey, so the selection of lawn care products was relatively smaller than previously observed during summer and fall surveys.

In general, the nature of the insecticide product mix has changed substantially since I last surveyed the shelves of these stores a little over a year ago (December 2000<sup>2</sup>). Major findings were:

- Diazinon and chlorpyrifos phase out is evident. All chlorpyrifos products were gone as were most diazinon products. Remaining diazinon products included concentrates, granules and dusts in small and large quantities. The dusts were especially surprising, as these dust products—including the large quantity product in a 5-pound bag—were not previously observed. Some products were accompanied by shelf talkers saying “Looking for Dursban?” and recommending the product as a replacement.
- Brand mix has changed. Ortho had substantially reduced shelf space at both stores. At one store, it was replaced by a new display of least-toxic controls and additional shelf space for the Bayer Advanced brand. At the other store, Real-Kill and Spectracide products were the primary replacements.
- Formulation mix has changed. The most important change was that there were far more dusts and far fewer granules. Foggers have also obtained much more shelf space in the last year. At one store, there were fewer concentrate products and more shelf space was devoted to ready-to use products (both hand pump liquids and aerosol cans); however, this change was not observed at the other store. Some of these observations may be seasonal.
- Application instructions on new products are similar to instructions on diazinon and chlorpyrifos products. Many products had “band around the structure”

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<sup>1</sup> Application location was not obtained for aerosols and foggers.

<sup>2</sup> Described in *Diazinon & Chlorpyrifos Products: Screening for Water Quality Implications*, TDC Environmental, May 15, 2001.

application instructions. All formulations were also available for applications on lawns and ornamental landscaping. Many products have instructions for indoor applications, also similar to those observed for now phased out chlorpyrifos products. Several liquid and dust products that appear to be intended primarily for other uses also had instructions for applications directly to dogs and cats.

- Use of synergists was much less than anticipated. Only six products at each store contained one of the two observed synergists (PBO and n-octylbicycloheptene dicarboximide). None of these products was labeled for outdoor structural pest control or lawn uses; only two were outdoor use products (for ornamental landscaping). Ten of the 12 products with synergists were foggers or aerosols. One fogger product and one flea shampoo contained both synergists. Four of five products with pyrethrins contained synergists. Other active ingredients in products with synergists were allethrin, permethrin, S-methoprene, prallethrin, esfenvalerate, tetramethrin, and phenothrin.

On the basis of the results of the previous related study,<sup>3</sup> the most important products from a water quality perspective are those:

- Sold in containers with larger volumes of active ingredient
- Concentrates (require mixing, more active ingredient per container)
- With application instructions for “band around structure” and lawn applications.

Products of lower water quality concern are:

- Containerized baits
- Aerosols (because they have a small volume of active ingredient)
- Products with limited application locations in landscaping (e.g., products specifically for roses)

A total of about 60 products meeting the survey criteria were on sale at each store, some in multiple container sizes. The products contained 27 individual insecticide active ingredients (two of which are simply selected stereoisomers of other insecticides, for a total of 25 different substances) and two synergists. All ready-to-use liquid were in volumes of 24 ounces or more; most also were available in 128-ounce size. No concentrates were observed in volumes greater than 32 ounces. Dusts and granules were in 1-pound shaker cans and in 5 and 10 pound bags.

Attached tables summarize the active ingredients, formulations, and sites of use most important for water quality purposes. The tables show a relatively large number of active ingredients are replacing diazinon and chlorpyrifos in retail insecticides. Most of these ingredients are from a family of insecticides known as “pyrethroids.” Because these insecticides have similar chemical structures and a common mode of action, it is likely that they will have cumulative effects in the environment.

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<sup>3</sup> *ibid*

## Ingredient Analysis: Home Depot Survey March 13, 2002

*Number of Observed  
Products*

Active Ingredient	Number of Observed Products			Grand Total	Product Type						
	Structure- Outdoors	Lawn	Indoor non- aerosol		Aerosol Only	Dust	Granule	Concentrate	Fogger	RTU Liquid Fertilizer	Foam
Acephate	2	1		5			3				
Allethrin				8	X						1
Bifenthrin	2	2	2	4			1		2	1	
Carbaryl		1		1			1				
Cyfluthrin	2	2		3			1	1		1	
Cypermethrin				1	X						
Dimethoate (being cancelled)	1			1			1				
Disulfoton				1			1				
Esfenvalerate	1	1		1			1				
Imidacloprid				2			1		1		
Imiprothrin				1	X						
Malathion	2	1		2			2				
Mint Oil				2	X						
Nylar			1	1						1	
Permethrin	6	3	4	16		2	2	3	4	2	
Phenothrin/Sumethrin			1	7		1					
Pyrethrins			2	6					1	3	
Resmethrin				3	X						
S-Methoprene				1	X						
Tetramethrin				5					1		
Tralomethrin	1		3	8					2	1	1
<b>Synergist</b>											
n-octylbicycloheptene dicarboximide			1	4					1	1	
PBO			1	4						2	

## Ingredient Analysis: OSH Survey, March 7, 2002

Active Ingredient	Number of Observed Products					RTU					
	Structure-Outdoors	Lawn	Indoor non-aerosol	Total excluding aerosols	Grand Total	Aerosol Only	Dust	Granule	Concentrate	Fogger	Liquid
Acephate	0	1	0	3	4				3		
Allethrin/D-Trans Allethrin	0	0	0	0	8	X					
Bifenthrin	2	2	1	3	3				1		2
Boric Acid	0	0	0	1	1				1		
Carbaryl	1	2	1	3	3		1		1		1
Cedar oil	0	0	0	0	1	X					
Cyfluthrin/Beta Cyfluthrin	6	4	1	8	8			2	2		3
Cypermethrin	0	0	1	1	3					1	
Disulfoton	0	0	0	2	2			2			
Esfenvalerate	2	1	0	2	3				1		1
Hydramethylnon	1	0	0	1	1			1			
Imidacloprid	0	0	0	3	3				2		1
Imiprothrin	0	0	0	0	2	X					
Malathion	1	0	0	1	1				1		
Mint oil	0	0	0	0	1	X					
S-Methoprene	0	0	1	1	1					1	
Permethrin	4	3	7	12	16		2	2	3	3	2
Phenothrin	0	0	0	0	4	X					
Prallethrin	0	0	0	0	1	X					
Pyrethrins	0	0	2	3	4					2	1
Resmethrin	0	0	0	0	2	X					
Tetramethrin	0	0	1	1	3					1	
Tralomethrin	1	0	1	1	3						1
<b>Synergist</b>											
n-octylbicycloheptene dicarboximide	0	0	2	2	4	X					
PBO	0	0	1	2	3						1



## Pesticide Distributor Project Results 2002 Increase / Decrease in Sales

