

# IPM Partnership *Our Water, Our World* Program



## San Francisco Bay Regional Evaluation Report 2003 - 2004

Prepared by the IPM Partnership Committee

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Bay Area Stormwater Management Agencies  
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Fairfield-Suisun Urban Runoff Management  
Program  
City of Hayward  
City of Healdsburg  
Marin Countywide Stormwater Pollution  
Prevention Program  
Napa County Stormwater Management Program

Regional Water Quality Control Plant—Palo Alto  
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City and County of San Francisco  
San Mateo Countywide Stormwater Pollution  
Prevention Program  
Santa Clara Valley Urban Runoff Pollution  
Prevention Program  
Santa Cruz County  
City of Santa Rosa  
City of Sonoma  
Sonoma County  
Union Sanitary District / City of Fremont  
Vallejo Sanitation & Flood Control District  
City of Windsor

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## Introduction

This report covers the sixth year (FY 03/04) 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* Program. During this sixth year, the Partnership had these main goals:

- Build on relationships with nurseries and hardware stores developed since 1999 through the IPM Partnership
- 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* Program 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 (U.S. Environmental Protection Agency (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* Program 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. And in 2003, Marin County received a Proposition 13 grant from the State to expand the program into State Water Board regions 1 (north coast) and 3 (central coast) as well as create a website for the program ([www.ourwaterourworld.com](http://www.ourwaterourworld.com)).

### 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 products that contain an active ingredient with identified or threatened water quality impacts (e.g., diazinon), as defined by water quality protection agencies; as well as less-toxic or non-toxic product types (e.g., mulch, tree/bird netting) that are not direct alternatives to pesticides, if the product types help prevent pest problems
- Development and production of 24 fact sheets (15 in English, 9 in Spanish) on less-toxic pest management strategies for the public, including two new fact sheets – *Keeping*

*Mosquitoes Away from You and Your Yard and Finding a Company that can Prevent Pest Problems*

- Re-design and production of a program logo and in-store program materials including “shelf-talkers,” literature rack signage, 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. In FY 03/04, approximately 500 store employees attended at least one of about 44 training sessions that were sponsored and held throughout the region by participating agencies. Also, about 590 individuals attended one of about 25 workshops held throughout the region for the general public and Master Gardeners.

In addition, participating agencies hold a variety of tabling events, information booths, and promotional events throughout the year to educate the general public about the program.

Although not an original program element, many of the agencies participating in the *Our Water, Our World* Program 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 2003-2004 the partner agencies in the San Francisco Bay Area were:

<b>Partner Agency</b>	<b>Stores</b>
Alameda Countywide Clean Water Program	20
Central Contra Costa Sanitary District	17
City of Cloverdale	1
Contra Costa Clean Water Program	8
City of Cotati	1
Fairfield-Suisun Urban Runoff Management Program	4
City of Healdsburg	1
Marin Countywide Stormwater Pollution Prevention Program	23
Napa County Stormwater Management Program	6
City of Petaluma	3
City of Rohnert Park	1
City and County of San Francisco	10
San Mateo Countywide Stormwater Pollution Prevention Program	18
Santa Clara Valley Urban Runoff Pollution Prevention Program	30
Santa Cruz County	12
City of Santa Rosa	4
City of Sonoma	1
Sonoma County	5
Union Sanitary District / City of Fremont	7
Vallejo Sanitation & Flood Control District	1
City of Windsor	1
Total	174 stores

The expansion of the program through the Proposition 13 grant has brought the total number of stores involved to about 225, with additional stores being added through the efforts of individual agencies in the Central Valley and south Coast.

### 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 program

#### *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 committee, with monthly meetings, to facilitate planning and decision-making, and to ensure as much consistency as possible throughout the Bay Area. The IPM Partnership 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 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 program including qualitative and quantitative evaluations and sales data tracking (BAPPG and BASMAA, 2000). In early 2003, a few partner agencies suggested that it would be quite useful if the Committee produced a regional report on the program that partner agencies could use in their annual reporting to the Regional Water Quality Control Board (Regional Water 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 Water Board. Agencies were requested to send in any relevant evaluations they had done in the previous year or so. These evaluations were compiled, organized, reviewed, and summarized in the first regional report (BAPPG and BASMAA, 2003). The same process was used for this – the second annual report – 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 Program* 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.
    - *USD / Fremont Store Employee Training Survey*
    - *SCVURPPP Store Employee Training Survey*
  - General – These are surveys of the general public and not specific to the program.
    - Non-random selection
      - *USD / Fremont Event Survey*
      - *Alameda Zone 7 Event Survey*
      - *Livermore Event Survey*
      - *Hayward Calendar Survey*
      - *Marin Calendar Survey*
      - *San Francisco Calendar Survey*
    - Random selection

- CCCSD Customer Survey
- Fairfield-Suisun Sewer District Survey
- Product Surveys
  - Shelf space
    - USEPA-sponsored Shelf Survey
    - San Jose-sponsored Shelf Survey

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

### People Surveys

#### *Program / Store*

*USD / Fremont Store Employee Training Survey* – The Union Sanitary District conducted a survey of store staff regarding training they received on the program. Twenty-two responses were received.

- 100% of the respondents agreed (14%) or strongly agreed (86%) that the training handouts were useful.
- 100% of store staff agreed (23%) or strongly agreed (77%) that they had learned enough to manage some common pests in less-toxic ways.
- 100% of the store staff agreed (23%) or strongly agreed (77%) that, as a result of the training, they knew more about less-toxic pest management, even though 92% said they were aware of less-toxic pest management prior to the training.
- 50% of store staff noted that customers frequently ask them about less-toxic pest control, while 36% said that customers do so occasionally.
- 96% of store staff feels more comfortable about talking to customers about less-toxic pest control as a result of the training workshop.

*SCVURPPP Store Employee Training Survey* – The Santa Clara Valley Urban Runoff Pollution Prevention Program conducted a survey of store staff regarding training they received on the program. One hundred thirteen employees attended the trainings and 107 responses were received.

- 97% of the respondents agreed that the training information was useful.
- 51% of the respondents agreed that the information changed their attitude about pesticides.
- 88% of the respondents agreed that the information will help them sell less-toxic products.
- 90% of the respondents agreed that they will recommend the training to co-workers.

*General – Non-random selection* – The Alameda Countywide Clean Water Program (ACCWP) developed a general survey for use by stormwater co-permittees in Alameda County. The following agencies used the survey as described below:

*USD / Fremont Event Survey* – The Union Sanitary District conducted the ACCWP survey at the Mission Creek Restoration Celebration in Fremont. Fifty-nine surveys were filled out.

- 24% of respondents rated “damage to the environment caused by pesticides” as one of the two most critical environmental issues facing the community, which tied for fourth highest among six given choices.
- 59% of respondents rated “pesticides” as a stormwater pollutant – tied for the third most common answer out of seven given choices.

- 83% of respondents said that they believed “conventional” pesticides can be replaced some of the time (50%) or all of the time (33%) with non-toxic or less-toxic alternatives that are just as effective, if not better.
- 68% of respondents answered a factor that most influences their decision to buy a pest control product is the product being less-toxic, which was the highest rated answer of the seven given choices. The second most popular answer was “price” (41%).
- 47% of respondents answered “hardware store” as a place where they buy pesticides, followed by “nursery” (35%), “home improvement center” (33%), and “grocery/drug/variety store” (28%).
- 98% of respondents thought pesticides as well as other materials can run off into storm drains and harm aquatic life.
- 67% of respondents have not heard the term “IPM” or “Integrated Pest Management.”

*Alameda Zone 7 Event Survey* – Alameda’s Zone 7 Water Agency used the ACCWP survey at an Earth Day 2004 event.

- 36% of respondents rated “damage to the environment caused by pesticides” as one of the two most critical environmental issues facing the community, which was the third highest among six given choices.
- 62% of respondents rated “pesticides” as a stormwater pollutant – tied for the third most common answer out of seven given choices.
- 64% of respondents said that they believed “conventional” pesticides can be replaced some of the time (31%) or all of the time (33%) with non-toxic or less-toxic alternatives that are just as effective, if not better.
- 68% of respondents answered a factor that most influences their decision to buy a pest control product is the product being less-toxic, which was the highest rated answer of the seven given choices. The second most popular answer was “price” (34%).
- 53% of respondents answered “home improvement center” as a place where they buy pesticides, followed by “hardware store” and “grocery/drug/variety store” (35% each), and then “nursery” (22%).
- 84% of respondents thought pesticides as well as other materials can run off into storm drains and harm aquatic life.
- 68% of respondents have not heard the term “IPM” or “Integrated Pest Management.”

*Livermore Event Survey* – The City of Livermore used the ACCWP survey at the Lawrence Livermore National Laboratory Earth Day event and the City of Livermore Earth Day event. Twelve Alameda County residents were surveyed at Lawrence Livermore National Lab Earth Day event and five (all Livermore residents) were surveyed at the City of Livermore Earth Day event, for a total of 17 respondents.

- 24% of respondents rated “pesticides” as a stormwater pollutant – the least common answer out of seven given choices.
- 82% of respondents said that they believed “conventional” pesticides can be replaced some of the time (29%) or all of the time (53%) with non-toxic or less-toxic alternatives that are just as effective, if not better.
- 41% of respondents answered a factor that most influences their decision to buy a pest control product is the product being less-toxic, which was the highest rated answer of the seven given choices. The second most popular answers were “price” and “quick acting vs. long term” (18% each).
- 59% of respondents answered “hardware store” as a place where they buy pesticides, followed by “nursery” and “home improvement center” (41% each), and then “grocery/drug/variety store” (18%).

- 100% of respondents thought pesticides as well as other materials can run off into storm drains and harm aquatic life.
- 65% of respondents have not heard the term “IPM” or “Integrated Pest Management.”

*Hayward Calendar Survey* – The City of Hayward inserted the ACCWP survey into their 2003 Caring for the Environment calendar (issued December 2002) as a mechanism for distribution. To promote the return of the survey, the survey form included a return postage-paid mailer. Hayward residents as of December 31, 2003 returned a total of 47 completed surveys. In addition, the survey was distributed to City of Hayward employees during Pollution Prevention Week events. City employees as of December 31, 2003 returned a total of 63 completed surveys.

- 23% of residents and 17% of City employees rated “damage to the environment caused by pesticides” as one of the two most critical environmental issues facing the community, which was fourth highest among six given choices.
- 79% of residents and 78% of City employees rated “pesticides” as a stormwater pollutant – the fourth most common answer out of seven given choices.
- 78% of residents and 84% of City employees said that they believed “conventional” pesticides can be replaced some of the time (38% - residents / 54% – employees) or all of the time (40% residents / 30% – employees) with non-toxic or less-toxic alternatives that are just as effective, if not better.
- 55% of residents and 51% of City employees answered a factor that most influences their decision to buy a pest control product is the product being less-toxic, which was the highest rated answer of the seven given choices. “Price” was the fourth most popular answer (40%) for residents and the second most popular answer (40%) for employees.
- 60% of residents and 62% of City employees answered “home improvement center” as a place where they buy pesticides. The top answer was followed closely by “hardware store” (55%) for residents and somewhat less closely (48%) for City employees. “Grocery/drug/variety store” (40% residents / 32% – employees) and “nursery” (38% residents / 24% – employees) were the third and fourth most popular answers of the five given choices.
- 94% of residents and 95% of City employees thought pesticides as well as other materials can run off into storm drains and harm aquatic life.
- 70% of residents and 79% of City employees have not heard the term “IPM” or “Integrated Pest Management.”

*Marin Calendar Survey* – The Marin County Stormwater Pollution Prevention Program distributed 15,000 calendars that included a survey inserted between the calendar pages. Four hundred and twenty-five responses were returned for a response rate of 2.8%.

- 91% of respondents said that they believed “conventional” pesticides can be replaced some of the time (37%) or all of the time (54%) with non-toxic or less-toxic alternatives that are just as effective, if not better.
- 35% of respondents answered “nursery” as the place where they buy pesticides, followed by “hardware store” (19%) and “Home Depot or Costco” (16%), and then “Longs, Rite-Aid” (10%).
- 31% of respondents knew that IPM (Integrated Pest Management) helps people determine whether, when and how to treat a pest problem.
- 35% of respondents said that in the last two years they had switched from using a conventional pesticide to a safer alternative, and 48% said that they hadn’t used pesticides in the last 2 years.

*San Francisco Calendar Survey* – All customers who receive a water bill also received information on how to get a free calendar from the City and County of San Francisco. An insert in the water bill provided information on how customers could call or e-mail the city to receive the calendar. The calendars were also made available at San Francisco's *Our Water, Our World* Program stores, all public library branches, various community centers, garden and flea markets, and outreach events. Overall, about 25,000 were distributed, and 1,161 responses were received back. A survey card was inside each calendar.

- 21% of respondents said that they had seen the *Our Water, Our World* Program logo at their local nursery or hardware store.
- 81% of respondents answered that they do not (35%) or very rarely / only as a last resort (46%) apply chemicals to control pests, weeds, or as a fertilizer.

#### *General – Random selection*

*CCCSD Customer Survey* – CCCSD conducted a survey through their customer newsletter in fall 2003. The newsletter was sent to about 150,000 households/businesses in their service area; 433 were returned.

- Almost half (47%) of respondents had heard or seen information about less-toxic pest control like the *Our Water, Our World* campaign.
- Of the respondents who had heard or seen the information, 26% saw it in a city or special newsletter, 22% in a newspaper, and 15% in the nursery or hardware store itself. "TV" was listed as the source by only 7% of respondents, which is a very positive and significant result since most people when asked for the source of their information by surveys invariably say TV, even when TV was not used as a source by the information provider.
- 48% of respondents said that the information about less-toxic pest control influenced how they garden or what pest control method they use.

*Fairfield-Suisun Sewer District Survey* – Fairfield-Suisun Sewer District conducted a baseline survey among residents in the District's watershed. 550 residents were surveyed by telephone.

- 57% of respondents said they had seen or heard "less-toxic products" in the last year – more than double the percentage that said they had seen or heard "our water, our world" (27%).
- 80% of respondents were aware that putting pesticides down the drain could harm their local sewer system.

#### Product Surveys

##### *Shelf Space*

*USEPA and San Jose-sponsored Shelf Surveys* – The U.S. Environmental Protection Agency and the City of San Jose sponsored surveys of insecticide products available for sale in two major pesticide retailers in the San Francisco Bay Area in September 2003 and May 2004, respectively. Both surveys were conducted using the methods used in the March 2002 survey reported on in the 2002-2003 Regional Evaluation Report (BAPPG and BASMAA, 2003).

- Retail sales of chlorpyrifos were phased-out almost two years (by December 31, 2001) before the September 2003 survey and retail sales of indoor diazinon products were phased-out about nine months before (by December 31, 2002). Retail sales of outdoor diazinon products are not required to be phased-out until December 31, 2004. In general, the results of both runs of the survey reflect widely anticipated changes as a result of the

phase-outs in the insecticide market away from organophosphorous pesticides and to pyrethroids.

- September 2003 Survey
  - All chlorpyrifos products were gone as were almost all diazinon products. The few observed diazinon products appeared to be remainders based on the low number of containers, absence in other stores of the same chain, and shelf placement in irregular locations. Several pyrethroid products were accompanied by shelf talkers saying “Looking for Diazinon?”.
  - Pyrethroids are now dominating the insecticide marketplace. Among products with outdoor structural pest control uses, permethrin is the most common insecticide, followed by cyfluthrin, bifenthrin, and esfenvalerate. Many of these pyrethroid products have the same brand and product names as previous products (with different registration numbers) formulated with diazinon or chlorpyrifos. Displays generally highlight pyrethroid insecticides; in contrast, malathion, carbaryl and other possible diazinon substitutes were not observed in promotional displays. Imidacloprid appears to have lost the urban market inroads it had previously appeared to be making.
  - Participation in the *Our Water, Our World* program may correlate with stocking less-toxic alternative pest control products. It was qualitatively observed that stores participating in the *Our Water, Our World* program had a relatively broad selection of less-toxic products, and a much greater selection than observed in the surveys in the late 1990s, just after when the *Our Water, Our World* program was initiated. The fewest less-toxic products were observed at a store that is not currently participating in the *Our Water, Our World* program.
- May 2004 Survey
  - Pyrethroids are now dominating the insecticide marketplace. Most of the insecticide shelf space at both stores is populated with pyrethroids. While up to one-third of insecticide products do not contain pyrethroids, non-pyrethroid insecticides are more likely to be specialty products like products for house plants, cockroaches, mosquitoes, or snails and thus given limited shelf space.
  - Seasonal displays generally highlighted pyrethroid insecticides or weed-and-feed herbicides. Less-toxic products, such as baits and traps were observed in several promotional displays.
  - Diazinon and chlorpyrifos phase out is evident. No diazinon or chlorpyrifos products were observed.
  - Product mix has not changed meaningfully in the last year. Compared to the previous survey (September 2003), the list of products identified was relatively similar. Between 10 and 20% of the products had been replaced, generally by similar products with different brand names. The changes in product active ingredients, formulations, and sizes were relatively minor and did not appear to reflect any meaningful trend. Product instructions were similar to those observed in recent surveys.

## Discussion

A review of the evaluations shows the following general results:

***Training is well designed and important*** – Store employees give the training workshops very high marks for their effectiveness. The importance of the training is reinforced by the result that store employees are an important source of consumer information (50% are asked frequently and 36% occasionally by customers about less-toxic pest control), and that virtually all of the

trainees feel more comfortable about talking to customers about less-toxic pest control as a result of the training workshop.

**What many customers want** – A significant proportion of non-randomly selected residents believe “conventional” pesticides can be replaced some of the time or all of the time with non-toxic or less-toxic alternatives, and a majority rated a product being less-toxic as the most influential factor in their decision to buy a pest control product – even above price.

**Program is having intended impact** – According to one random selection survey, almost half of respondents have heard or seen information about less-toxic pest control like the *Our Water, Our World* campaign, and the information about less-toxic pest control influenced how they garden or what pest control method they use. According to the other random selection survey, somewhat more than half of respondents had seen or heard information about less-toxic pest control and about one-quarter had seen or heard the term *Our Water, Our World*. Appropriately, a significant majority of non-randomly selected residents have not heard the term “IPM” or “Integrated Pest Management.” “Appropriately” because the *Our Water, Our World* program has purposely downplayed the use of these terms. In addition, although pesticides are not rated as one of the top environmental problems, a very significant majority of non-random respondents to the surveys understands that pesticides are a stormwater pollutant and can harm aquatic life.

**A changed market** – In contrast to the situation a year ago, as reported in the 2002-2003 Regional Evaluation Report (BAPPG and BASMAA, 2003), the transition from diazinon and chlorpyrifos-based products to pyrethroid-based products is complete. In fact, other conventional active ingredients like malathion, carbaryl, and imidacloprid that appeared to be poised to gain market share during the transition away from diazinon and chlorpyrifos now appear not to have done so and maybe even to have declined in importance. As noted in last year’s report, 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 – especially in stores participating in the *Our Water, Our World* program.

**Remaining challenges** – The surveys also revealed probably the remaining challenge to the program achieving its full potential – the need to be in the stores where the vast majority of pesticide sales occur – given the fact that home improvement centers were the top or one of the top locations to buy pesticides and the direct correlation between the presence of the *Our Water, Our World* Program and the number and variety of less-toxic products available to consumers.

## 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 Program* 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 Program* 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.
- In the stores participating in the *Our Water, Our World program*, the fact that the pesticide inventory 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 and appears to be the case in the stores without the *Our Water, Our World Program*.

The weight of this evidence suggests that the *Our Water, Our World Program* 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 surveys.

- 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.
- To complement this compilation of evaluations, the IPM Partnership Committee should follow through with their plans to attempt a direct evaluation of the program through a survey of participating store customers.
- 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 IPM Partnership Committee should continue to strive to export and “institutionalize” the program in the large chain and home supply stores.
- The *Our Water, Our World Program* should continue to be complemented by the work with the pesticide distributors to maximize the information and choices available to consumers as well as the market share of less-toxic pest control methods and products.
- The IPM Partnership Committee should decide whether it is important to increase the recognition of the *Our Water, Our World* name and logo, and if it is, consider ways to do so.

## References

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