

Household Hazardous Waste Management in Contra Costa County
Recommendations for Improvement

Contra Costa County Hazardous Materials Commission

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Introduction

Many of the products commonly used in and around households have toxic properties. This includes such products as motor oil, paint, cleaning products, pesticides, batteries, fluorescent light bulbs, electronic products, used syringes and pharmaceuticals. These types of products can harm the environment or human health if disposed of improperly on the ground and down storm drains, or even when sent to landfills or flushed into the sewer system. As a result, laws have been passed at the federal, state and local level to encourage the proper management of these wastes, called Household Hazardous Wastes (HHW).

In Contra Costa County, three regional government-run household hazardous waste collection facilities, and other public and private services, have been established to provide residents with opportunities to properly manage their household hazardous wastes. The materials collected by these facilities and services are sorted by type, and either reused, recycled, incinerated or landfilled, depending on the type of waste, regulatory requirements and existing markets. In theory, this system provides every resident of the County with at least one option for properly managing most types of the household hazardous waste they generate.

One of the responsibilities of the Hazardous Materials Commission is to develop recommendations involving hazardous materials issues to the County Board of Supervisors. In reviewing the various hazardous materials issues facing the County, several members of the Hazardous Materials Commission expressed concern that this level of HHW management service may not be adequate for all county residents or for all types of HHW. As a result, the Commission chose to investigate this issue.

The Hazardous Materials Commission developed recommendations for this issue by studying the current household hazardous waste management system in Contra Costa County. It also solicited input from the public through a survey and two workshops addressing potential shortcomings with the existing management system, and potential ways to address these shortcomings. The recommendations in this report are for the Contra Costa County Board of Supervisors to consider for direct implementation by the County, or through their role as board members on other appropriate Boards and Commissions.

Background

In 1989 AB 939, the state's Integrated Waste Management Act, was passed. It required the development of County-wide plans to reduce the amount of solid waste entering State landfills. It included two recommendations specific to HHW:

- Create public education programs to effectively raise public awareness of HHW issues.
- Create adequate/suitable accessibility and siting of HHW disposal facilities.

A related bill, AB 2707, called for each jurisdiction to have a HHW element in their solid waste plan. The 19 cities and the unincorporated areas of the County all adopted elements that were similar to one another and included some combination of permanent facilities collection and/or mobile drop-off events. These were approved by the State in 1993. Contra Costa Health Services operated a mobile HHW

program in the early to mid-90's as an interim step while permanent facilities were being developed. This program involved periodic collection events in different parts of the County that were funded by fees from Keller Canyon landfill, but this system was found not to be cost-effective.

The first permanent facility was built by Central Contra Costa Sanitary District in 1997. The next facility to be built was in West County in 1999 by West County Resource Recovery in cooperation with the West Contra Costa Integrated Waste Management Authority. The East County facility was built by Delta Diablo Sanitation District in 2003. Each regional facility is intended to only serve residents from that region of the County. The cost of staffing and running these HHW facilities is paid for by garbage or sewer fees levied on the residents in the areas served by the facilities.

Description of Current Collection Programs

In addition to the services of the three regional collection facilities mentioned above, the following services are provided to Contra Costa residents to manage household hazardous wastes:

- One-day collection events are periodically conducted by the regional facilities for the remote communities of their service areas.
- Over 90 private drop-off locations for used oil and used oil filters exist throughout the county to augment collection of these wastes at the three regional facilities. These collection facilities are reimbursed the cost of collection and disposal by CalRecycle (formally the California Integrated Waste Management Board).
- Used oil and oil filters are collected curbside in some areas in the County by the solid waste management company serving those areas.
- Electronic waste is collected through a variety of mechanisms in the county, supported through a fee on certain electronic items that reimburses collectors and recyclers, or by a direct fee for service. There are 19 CalRecycle approved E-waste recycling facilities in the County, including the East and West County HHW collection facilities.
- The Central Contra Costa Solid Waste Authority and the West County Integrated Waste Management Authority sponsor programs to collect used batteries at various retail sites in their services areas.
- The Central Contra Costa Sanitation District and the Delta Diablo Sanitation District sponsor retail collection sites for fluorescent lamps and spent batteries in their service areas.
- The East and West County facilities take non-controlled pharmaceuticals and the Central County facility has established 10 collection sites within their service area at local police departments for non-controlled pharmaceuticals.
- The East and West HHW facilities offer used syringe or medical sharps collection and disposal. The Central County HHW facility does not offer sharps collection. There are two sharps collection points in Central County. One is at the San Ramon Regional Medical Center and the other is at the John Muir Rossmoor Pharmacy in Walnut Creek. Both are paid for by their respective agencies.
- The West County Integrated Waste Management Authority offers a door-to-door HHW collection program for the elderly and disabled.

A comprehensive listing of all of these collection programs can be found at the County's Waste Reduction and Recycling web page at: <http://www.co.contra-costa.ca.us/depart/cd/recycle/>.

Table 1 contains information on the amount of hazardous waste collected in the 2007/2008 fiscal year from the three HHW programs, the number of households served and the costs associated with operating their programs. Each program had some differences in the way they calculated their costs and the amount of wastes they collected, so comparing the costs and collection amounts from the facilities to each other can't be done precisely. Also, the costs provided for the West County facility were only estimates. Some households may have visited the facility more than once during the fiscal year, so the participation rates may be slightly overestimated. Overall, approximately 3,625,906 pounds of hazardous waste were collected from 46,917 customers for an approximate cost of \$2,978,668 by the three facilities in fiscal year 2007/2008. This represents an approximate usage rate of 12% of eligible households in the County for that period. State-wide, annual participation rates are 4.8%.

Table 1 – Summary of Contra Costa Regional HHW Collection Results, 2007/2008

	West Co.	Central Co.	East Co.	Totals
Agency	WCCIWMA	CCSD	DDSD	
# of customers	9255	27,940	9722	46,917
% participation	9.7 % of 95,790 homes	14.5% of 192,280 homes	10% of 96,815 homes	12.2% of 384,885 homes
Pounds per car	98	67	85	77
Cost per car	@ \$70	\$66	\$48	@ \$63
Total pounds collected	912,121	1,891,363	822,422	3,625,906
Total cost	@\$645,000	\$1,864,868	\$468,800	@ \$2,978,668
Cost per pound	@\$ 0.71	\$0.99	\$0.57	@ 0.82
Annual cost per home in service area (assessed through fees by the regional entities)	@ \$6.73	\$9.70	\$4.84	@ \$7.74

Public Input

I. Surveys

The Hazardous Materials Commission collected input on people's perception and use of the HHW management system through surveys of the general public collected at 9 public events throughout the County in 2008 and 2009. 152 surveys were conducted. The survey tool (Attachment 1) asked questions about the County's Community Warning System and overall hazardous materials issues, as well as questions about HHW management.

The survey found that 55 respondents (36%) did not know the location of the nearest place for them to properly dispose of their HHW. The survey also found that 61 respondents (40%) did not think their disposal options for HHW were adequate. When asked if they knew how to tell if a product is hazardous, 84 respondents (55%) said no or they were not sure. At the same time, 128 respondents (84%) expressed an interest in learning about less-toxic alternatives for household products containing hazardous materials. When asked to describe how they disposed of specific household products, the responses varied, but notably, 50 (33%) said they put pharmaceuticals down the drain or in the garbage, and 38 (25%) said they put cleaning products down the drain or in the garbage. About one-third of residents did not answer this question, so the actual number managing their HHW improperly may be higher. In total, the number of instances of respondents indicating that they improperly disposed of their HHW was slightly more than one per respondent. The complete survey results can be found in Attachment 2.

The results of the survey showed some differences in perception, knowledge and practice between regions of the County (Attachment 3). Most notably, in West County 55% of respondents did not think their options for HHW disposal were adequate, while the majority of residents in the rest of the County felt they were adequate. Also, when asked how they disposed of their HHW, the number of responses indicating improper disposal varied from region to region. West County had the lowest number of such responses (0.8 per respondent), Central County had the next lowest (1.1 per respondent), South County had the second highest (1.9 per respondent) and East County had the highest level of respondents indicating they had improperly disposed of a HHW (2.3 per respondent).

II. Community Workshops

The Hazardous Materials Commission held two workshops to solicit public input about Household Hazardous Waste management in 2008 and 2009. In each of these workshops, the current HHW management system was described in terms of the location and availability of the permanent facility for that area, the types of waste that could be brought to that facility, and any other collection opportunities available in that particular area. The residents were asked to discuss their questions or concerns. Below are the summaries of the comments made during these two workshops.

Comments from the November 15, 2008 Household Hazardous Waste Community Forum in Richmond

- HHW services need to be more convenient.
- HHW services need to be advertised more.
- Health providers could be used to provide information about services.
- Schools should be involved in promoting the proper disposal of HHW.
- Face-to-face outreach is the best form.
- We need to help people see the benefits of proper HHW disposal.
- Churches can be used to promote the proper disposal of HHW.
- Campaigns to promote proper HHW disposal should be made part of community building.
- The garbage collection company can become educators on proper HHW disposal.
- Announcements could be made at City Council meetings about HHW services.
- Mobile collection of HHW should be considered.
- We need to think about the whole life cycle of toxic products, not just proper disposal.
- One day collection events should be considered.

Comments from the March 25th, 2009 Household Hazardous Waste Community Forum in Concord

- More needs to be done to get the word out about the facility in the community. 20 – 25 of the residents in attendance, out of about 40, had not heard of the HHW facility before this meeting.
- There is a need for a community collection point in the Monument Corridor because many residents do not have cars.
- There should be containers for hazardous waste at local businesses like the Food Max or at the schools.
- Hazardous waste is disposed of in the trash at many of the apartments in the area.

In addition to the information collected from the surveys and the workshops, the Hazardous Materials Commission received numerous presentations and reviewed extensive information concerning HHW management.

They received presentations from:

- The County's recycling manager about the history of HHW management in the County.
- The West Contra Costa Integrated Waste Management Authority's HHW program manager about their HHW pick-up program.
- Curbside Inc., a private vendor, about their HHW pickup programs.
- A private citizen who conducts personal watercraft inspections for the Coast Guard Auxiliary on disposal options for boat flares.
- Sustainable Moraga concerning battery collection.
- Monument Futures about their Green Cleaning Program.

They reviewed information from:

- The California Integrated Waste Management Board.
- The California Department of Toxic Substances Control.
- The Alameda County HHW program.
- The Teleosis Institute.
- The annual reports of the three regional HHW collection facilities in Contra Costa County.

Commission members also received input from members of the organizations they represent, and their friends and neighbors. Finally, in addition to all of this input, Commission members relied on their own experiences as members of the public utilizing these HHW management options to form their findings and recommendations.

Findings

For the purpose of this report, the Hazardous Materials Commission has organized their concerns about the existing HHW management system into two categories, Program Utilization and Challenges to Overcome. Each is discussed below.

I. Program Utilization

Two issues consistently arose during the Commission's review of the utilization of the HHW facilities and other services, these were the lack of knowledge about the availability of the facilities and services; and the lack of accessibility of these facilities and services to certain segments of the population.

The results of the Commission's survey and feedback at the two community workshops indicated that community knowledge about the HHW facilities and other services is inadequate. Approximately half of the residents that attended the Concord workshop and 36% of the survey respondents did not know the location of the nearest place for them to properly dispose of their HHW. While participation rates at the three regional facilities have been steadily rising since they began operation, participation rates still only range from 10 – 15% of eligible residents each year. The lack of knowledge about these facilities and the limited participation on an annual basis increases the chances that people may improperly dispose of the HHW they are generating in their home. As noted above, the survey indicated that the number of instances of respondents indicating that they improperly disposed of their HHW is already slightly more than one per respondent.

The Commission is also concerned that some residents of the County that speak English as a second language, or don't speak English at all, may be less aware of their options than English-speaking residents. Currently, only two of the three HHW collection facilities provide educational information in languages other than English. The Commission sees this as an Environmental Justice issue because it unfairly hinders the ability of one group of people to manage their HHW in a proper manner, and increases their risk of harm, and their neighborhood's risk of harm from improperly disposed of HHW due to this lack of knowledge.

More importantly, the Commission is concerned that certain segments of the population are limited in their ability to utilize these facilities and services. Residents of Contra Costa County must be able to drive to utilize the three HHW collection facilities. Certain segments of the County's population, such as older and disabled people, are less able to carry heavy and dangerous materials into their cars to take to a collection facility. Many poor residents, older and disabled residents, and others don't own cars or are unable to drive. This issue was raised at both community workshops, and the Commission feels the same concern applies for poor residents, older residents and the disabled throughout the County.

The Commission believes that this is also an Environmental Justice issue. Not only has the HHW collection system been designed in such a way that certain residents are unable to use it, but these residents are still required to pay for the service year after year as part of their sewer or garbage bill. The Commission believes that the door-to-door collection program currently being offered in West County, and other door-to-door collection programs described to the Commission by a private vendor, could serve as a model for providing a way for residents that can't use the permanent collection facilities to properly manage their HHW. The Commission also believes that more one-day collection events could

be conducted in targeted neighborhoods where there are a high percentage of non-drivers and designed in such a way that residents could deliver their HHW on foot. Current state law prohibits people from delivering HHW on foot, so providing for these types of services might require amendments to existing laws and regulations governing the management of HHW.

Another issue that needs to be addressed is the lack of policies which support the collection and transportation of small amounts of HHW from residents within the service area of a HHW facility to that facility by entities that don't charge a fee for this service. One example of where such a policy would be beneficial was provided to the Commission by the manager of an apartment complex that used a private company to sort the recyclable material out of the garbage generated by its residents. In the process of sorting out recyclable material from the garbage, this company would occasionally find hazardous products that had been thrown out by residents of the apartment complex. However, the HHW collection facility that served the area where this apartment complex was located would not allow the company to drop off the materials as residential HHW. The only option given to them was to register as a small quantity generator of hazardous waste and pay a fee to drop off the material at the HHW facility. Policies that would support this type of practice would result in HHW that may otherwise have been thrown in the trash or disposed of down the drain to being properly disposed of. Establishing such policies may require changes to current laws and regulations governing the management of HHW.

II. Challenges to Overcome

While most types of HHW can be accepted at the regional collection facilities, more needs to be done to provide opportunities to manage specific HHW. During its investigation, the Commission learned that no realistic options exist for properly managing certain types of HHW, and opportunities for others are too limited.

One type of waste for which no good management options exist is controlled pharmaceuticals. These are medications such as narcotics and tranquilizers. Common controlled substances include codeine, phenobarbital, and anabolic steroids. All other prescription medications and over-the-counter medications can be accepted, and are accepted, by the East and West regional HHW facilities and the 10 pharmaceutical collection sites set up in Central County. HHW collection facilities are prevented from accepting controlled substances by Federal law. No real options exist for residents in Contra Costa County to properly manage unwanted or expired controlled substances. Residents are commonly advised to throw them in the garbage. Law enforcement agencies are allowed to accept these materials if they follow specific guidelines, but none in the County currently do. Options need to be developed so residents with unwanted or expired controlled substances can properly manage these wastes.

Another HHW for which no proper disposal option currently exists is aerial distress flares. Boaters are required to have specific types of flares onboard their craft. These types of flares expire after 42 months. Because these flares are considered explosive, the three regional HHW facilities do not accept them. No other options exist for a boater to dispose of these flares properly. It is thought that many boaters keep these flares onboard as backups, but this can be a hazard in itself. These flares are of concern if they are improperly managed because of their explosive nature and because many of them contain perchlorates, which can contaminate groundwater.

The final challenging type of wastes is what is known as Universal Wastes. These are things such as household batteries, fluorescent tubes, mercury thermometers and many electronic devices that are considered hazardous and cannot be put in the garbage. These wastes are problematic because they can be generated in large numbers, such as with household batteries, and because historically they have been thrown in the trash. Also, Universal Wastes can not be “used-up” as can most other hazardous household products, so they will always exist as long as the products exist. These wastes can be collected by facilities other than HHW collection facilities and, as described earlier, several special collection programs already exist to collect these wastes. The Commission believes these programs should be expanded so that more places that sell these products can collect them when they become wastes.

Recommendations

The Hazardous Materials Commission has the following recommendations concerning the management of Household Hazardous Wastes in Contra Costa County. The Commission recommends that the Contra Costa County Board of Supervisors can take direct action on some of these recommendations, and for others, the Commission recommends they can advocate for their implementation as members of other appropriate Boards and Commissions on which they serve. For some of these recommendations, the Commission recommends that the Board of Supervisors advocate their implementation to independent agencies or public bodies.

1. Establish and support more opportunities for door-to-door collection of HHW for older and disabled residents, and for residents that do not have their own means of transportation. This may require supporting changes to current laws and regulations governing the management of HHW.
2. Conduct more one-day collection events in areas where there are high numbers of residents that do not have vehicles, and design these events so they can accept materials brought in on foot. This may require supporting changes to current laws and regulations governing the management of HHW. Also, increase one-day events in areas of the County farthest away from the permanent facilities.
3. Provide more resources to increasing public awareness of the permanent HHW facilities and other collection services to increase participation rates. This outreach should be universally done in English and Spanish, and other languages where appropriate.
4. Provide more support to existing programs that educate residents to generate less HHW by purchasing non-toxic products and by only purchasing the amount they need.
5. Encourage manufacturers to make non-toxic or less toxic alternatives to products that become HHW, promote green chemistry concepts and encourage County purchasing policies that create less hazardous waste. This recommendation is consistent with the recently adopted Board Resolution No. 2010/225 supporting the concept of Extended Producer Responsibility.
6. Establish and support programs to enable the collection of controlled substances and boat flares. This could include point-of-sale collection opportunities or point-of-sale educational information about where to dispose of these materials properly. Support changes in legislation or additional sources of funding that may be needed to enable this to occur.

7. Support increasing the number of public or private collection options for Universal Wastes such as household batteries, fluorescent tubes, mercury thermometers and many electronic devices throughout the County.
8. Support the creation of policies that would allow for the collection and transportation of HHW, and the use of HHW facilities, by entities not charging a fee for such services. This may require supporting changes to current laws and regulations governing the management of HHW.