

Paint Smart Pilot Program Evaluation and Final Report

**Prepared by Cascadia Consulting Group
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State of Oregon
Department of
Environmental
Quality

Paint Smart Pilot Program: Evaluation & Final Report

I. Introduction

This report summarizes and evaluates Oregon's pilot "Paint Smart" return-to-retail leftover paint prevention and recycling initiative. From August 1997 – July 1998, DEQ implemented a pilot project to test the feasibility of having retail paint stores collect leftover paint from residents for recycling and safe disposal. An additional element of this program was to educate the public about ways to avoid generating leftover paint in the first place. Eleven stores participated in this pilot program, in four communities: 2 stores in the Portland metropolitan region; 4 stores in Eugene; 2 stores in Hood River; and 3 stores in Deschutes County (Bend, Redmond, & Sisters). For the past year these stores have accepted latex and oil based paint in sealed original containers from area residents (up to 10 containers are allowed per customer in five gallon size or smaller). No contractor paint has been permitted in the program. The paint is placed in drums at the stores and then transported to a central facility for processing. Good quality latex paint from this program has been recycled. Bad quality latex paint and all oil-based paint have been either incinerated or safely disposed in a hazardous waste landfill.

The report consists of six sections: I Introduction; II Background; III Program Overview; IV Evaluation; V Future Options and; VI Recommendations.

II. Background: Rationale for the Paint Smart Program

Got old paint? Most of us do – sitting in cans that are stashed in our basement and/or garage. This paint leftover from paint projects past represents a significant waste management problem for Oregon residents – what to do with all those cans of leftover paint? It is illegal to put this paint in liquid form in the trash. So most people end up storing the paint in their houses until they move or die.

In response to this problem, the Oregon Department of Quality (DEQ) since 1991 has sponsored special collection events in communities throughout the state to collect leftover paint and other "problem" household wastes, including used oil, pesticides, and other hazardous materials typically found in the home. In 1996 and 1997, 49,254 gallons of leftover paint were collected through this program, from 47 special collection events. The majority (53%) of this paint was oil based, with the remainder (47%) latex based.

This service comes at a high cost, over \$500,000 for the paint portion of the program. In an effort to reduce this cost and provide more extensive service, the DEQ began exploring alternative approaches to collecting paint. The idea of involving paint companies and retailers who sell paint in developing a solution to the leftover paint problem was first discussed several years ago. DEQ's Leftover Paint Prevention and Recycling Initiative was formulated as a result of those discussions. In late 1996, the DEQ issued an RFP to hire a contractor to assist in starting a return

to retail collection program in Oregon, working in partnership with the paint industry. The Paint Smart pilot project resulted from those efforts, with collection beginning in August 1997.

III. Program Overview

DEQ's leftover prevention and recycling initiative (*The Paint Smart Program*) has consisted of eight main elements:

1. Goal setting
2. Partnerships & Work Group meetings
3. Recruitment
4. Training
5. Promotion
6. Education
7. Operations
8. Monitoring & evaluation

Goal Setting

At the outset of the effort, the DEQ defined its goals, both for the overall paint prevention and recycling program and for the pilot project. These goals are as follows.

Paint prevention and recycling program

1. Increase the number and types of leftover paint collection alternatives for Oregon residents
2. Reduce the cost and increase the efficiency of handling leftover paint
3. Promote leftover paint recycling

Pilot Project

1. Test the feasibility of collecting leftover paint at retail locations
2. Implement the project collaboratively with industry
3. Educate consumers about ways to minimize leftover paint

Partnerships & Work Group Meetings

In recent years, the State of Oregon and private industry have struggled over how to properly manage certain elements of the waste stream. In tackling the problem of leftover paint, DEQ initiated a process to involve industry in the design of a paint prevention and recycling initiative. Meetings were held with key members of the local paint industry and representatives of the Pacific Northwest Paint Council to discuss the leftover paint issue and explain the purpose of the DEQ's initiative.

These discussions led to the formation of a public/private work group to oversee the pilot return to retail paint collection project. This work group was established with three main goals: 1) to facilitate communication between industry on leftover paint recycling and prevention issues; 2) to obtain input on the design and operation of the pilot project; and 3) to review and discuss project activities on an ongoing basis.

Three meetings of this work group were held during 1997 and 1998. The first, held on April 23, 1997, focused on the design of the pilot project. The second, conducted on November 5th 1997, addressed issues that had surfaced in the first 3 months of collection. The third, held on June 23rd 1998, examined 9 months of program results and discussed the future of the retail collection initiative. More than 20 persons representing 12 paint companies and organizations attended these meetings.

Table 1: Paint Smart Work Group Meeting Attendees

John Buckinger	Miller Paint Company
Tom Braden	Rodda Paint
Todd Braden	Rodda Paint
Steve Cole	Forrest Paint
Dale Campbell	Rodda Paint
Chris Davis	Rodda Paint
Mike Jones	Sherwin Williams
Chris Rasmussen	Rasmussen Paint Company
Linda Hayes Gorman	DEQ, Deschutes County office
Bronwyn Evans	Corvallis Disposal
Paul Krebsbach	Philip Services
Derek Howison	Philip Services
Alan Ranf	Philip Services
Pat Vernon	Fred Meyer Company
Bryce Jacobson	Metro
Scott Klag	Metro
Jim Quinn	Metro
Kendall Walden	Metro
Jeff Bishop	Lane County Waste Management
Lauren Cole	King County Solid Waste Division
Mo Steinberger	Steinberger & Associates
Alan Haynie	Cascadia Consulting Group
Marc Daudon	Cascadia Consulting Group
Abby Boudouris	DEQ Paint Smart Program Coordinator
Monica Russell	DEQ Paint Smart Program Coordinator
Paul Slyman	DEQ Manager of Solid Waste Planning and Program Development

Public/private partnership activities extended beyond the work group meetings. Paint companies provided significant in-kind services including transportation of collected paint (Miller in the Metro region), printing of brochures (Rodda Paint Company), and co-op advertising (Forrest Paint in Eugene). In addition, of course, all the participating paint stores provided staff and storage facilities to handle the paint at the retail locations.

Recruitment

Participation in the pilot retail collection effort was, from the outset, open to all stores that sold paint. However, given resource limitations and the objective of determining how the program would work in different parts of the state, recruitment efforts were targeted at stores in a cross-section of counties. Specifically paint stores were recruited in Deschutes, Lane, Lincoln, and

Hood River counties. Based on input from the industry members of the work group, the pilot project was expanded to include stores in the Portland Metro region as well.

Paint stores were recruited by two main methods: 1) contacts from the Pacific Northwest Paint Council and 2) a letter mailed to 50-60 stores listed in the yellow pages as selling paint in the targeted communities. Nineteen possible retail locations were identified through this solicitation effort, representing eleven paint companies.

This initial list was screened to eleven stores clustered in four counties across the state. Participating stores are listed in Table 2.

Table 2: Participating Paint Smart Pilot Program Stores

Paint Store	Location
Miller Paint Company	Eugene, Lane County
Rodda Paint	Eugene, Lane County
Rodda Paint	Eugene, Lane County
Forrest Paint Company	Eugene, Lane County
Fred Meyer	Bend, Deschutes County
Central Oregon Paint Supply	Redmond, Deschutes County
Lutton's Ace Hardware	Sisters, Deschutes County
Franz Hardware	Hood River, Hood River County
Home Town Paint Supply	Hood River, Hood River County
Miller Paint County	Gresham, Multnomah County
Rodda Paint	Hillsboro, Washington County

These stores represent a cross section of the types of places that sell paint from small independent operations (e.g. Home Town Paint and Lutton's Ace Hardware) to paint company chain stores (Miller, Rodda, and Forrest Paint), to large retail centers (Fred Meyer). Retail establishments that were not represented in this pilot phase include national chains, such as Sherwin Williams and Benjamin Moore, and big box stores selling hardware, such as Home Depot. Larger paint chains were approached to participate in the program, but they were not interested in being involved in the pilot.

Training

Management and staff at the participating stores were trained in the proper procedures for accepting, handling, and storing paint. These training sessions, which generally lasted 30-45 minutes and took place at each store occurred in the last week of July 1997, just prior to the official start of the pilot project collection.

The training provided management and staff with an overview of the purpose of the project and instruction on:

- What materials to accept and reject
- How to handle and store paint, including separating oil and latex paint for storage
- Special procedures for reblending
- Who to contact for information and assistance.

In addition, stores were provided with a logbook, to record the quantity of paint accepted and the name, zip code and phone number of each customer bringing paint. Entries in the logbook were to be made by the customers to provide data useful for evaluation.

Promotion

DEQ used a variety of means to inform the residential public about the paint collection program and encourage their participation. First, the program was given an identity with the development of the *Paint Smart* name and the “Got old paint?” tag line. Subsequently the program was promoted through print, radio, point-of-purchase displays, direct mail, co-op advertising, and public relations initiatives:

- **Print:** Advertisements were placed in local newspapers in the fall of 1997, shortly after the program began and in the spring of 1998. These ads, typically 1/4- 1/3 of a page in size featured the “**Got old paint?**” tag line and informed residents where they could take their leftover paint.
- **Radio:** Sixty, thirty and twenty radio spots were developed and placed in the Spring of 1998 in the Hood River and Deschutes County media markets. The radio stations were also provided with public service announcements (PSA’s) to promote the program.
- **Point-of-purchase displays:** Participating stores were given brochures, display racks, and posters to promote the Paint Smart program to their customers. Two thousand brochures were given to the stores at the outset with additional copies provided as needed.
- **Direct Mail:** In late spring 1998, postcards were mailed to residents living in the carrier routes near the participating paint stores in Hood River and Deschutes Counties, and the Metro communities of Hillsboro and Gresham. Approximately five thousand postcards were distributed in each market, for a total of 15,000 (5,000 were divided between Hillsboro and Gresham). The postcards featured a 10% off coupon on new paint for residents bringing in leftover paint.
- **Coop advertising:** Participating paint stores were provided with camera ready art about the Paint Smart program to use in their own paid advertising. In addition, several of the stores promoted the program on their own. For example, Forrester Paint incorporated the Paint Smart collection message into their radio advertising and public relations initiatives.
- **Public relations:** A press release was distributed in early fall, 1997 to media in the communities of the participating stores. A revised press release was developed and distributed in the spring 1998 as well.

In addition to these promotional activities, local governments promoted the program. For example, Lane County mailed flyers to all county residents informing them about stores in the Eugene area participating in the program.

Education

Residents were educated about ways to prevent leftover paint in the first place through the Paint Smart brochure available at the paint stores. This brochure communicated four key messages about paint purchasing and handling practices:

- Buy only what you need.
- Make your leftovers last.
- Give away what you don’t use.
- Safely dispose/recycle what’s left.

The brochure also provided information on what kinds of paint in what form could be accepted by the participating Paint Smart stores

Operations

Alternative approaches were used in different communities and different retail locations to store the paint on site and then transport the collected paint to a central location for processing and disposal or recycling. Also, several stores were encouraged to reblend paint on site and then offer it to their customers, avoiding the expense of transport and centralized processing. The basic operating procedures were as follows:

- Collected paint in its original container was stored loose packed in 55-gallon drums and tub skids at the participating stores. Oil and latex-based paint were stored separately. Eight stores used the drums; 3 stores had the space and loading dock capabilities to use tub skids, which are more efficient.
- The drums and tub skids were collected when full from the paint stores with replacement containers provided. Philip Services collected these containers in the Hood River community. BRING Recycling collected the containers in Eugene and stored them for later transportation by Philip Services to the processing facility (Forrest Paint provided transportation from its store to BRING Recycling for paint collected at its store). Deschutes County Public Works Department picked up and consolidated drums from the three stores in the county.
- Philip Services transported the full drums and tub skids from the depots to their processing facility in Kent Washington. There the paint was separated, with good quality latex paint reprocessed into recycled paint, bad quality latex paint bulked for disposal. Oil based paint was shipped for fuel blending.
- In the Metro region, Miller Paint provided in-kind services transporting paint from the two participating paint stores to Metro's paint processing facility. Metro then recycled the good quality latex paint and safely disposed of the rest.

Monitoring & Evaluation

A fundamental goal of the pilot project period was to learn as much as possible about all aspects of the pilot effort, from the viability of the operational procedures to the effectiveness of the promotional strategies, to the degree of satisfaction of the management and staff at participating paint stores. In addition, the pilot project was designed to learn about how much paint was collected and the associated costs.

These data were collected through a variety of methods:

- DEQ staff visited the paint stores regularly to talk to managers and assess how well the collection and handling procedures were working.
- The contractor, Cascadia Consulting Group, surveyed store managers by phone three times to obtain their feedback on the program.
- Each store maintained a logbook, with entries for each customer bringing paint. Sheets from these logbooks were periodically mailed to DEQ and entered into a database for later analysis.
- Philip Services maintained records on the quantities of paint transported and then processed for recycling and disposal. These data were maintained by type of paint and storage container (tub skid versus 55 gallon drum).

IV. Evaluation

This section evaluates the results of the Paint Smart pilot project in the context of the original project goals and the alternative means of collecting leftover paint from the residential waste stream. The evaluation focuses on core elements of the program and its effectiveness:

- Participation and recovery levels
- Customer, industry, and local government satisfaction
- Promotion
- Cost & efficiency
- Education
- Partnerships
- Training
- Operations

Participation & Recovery levels

In testing the feasibility of retail collection of leftover paint, the pilot project was designed to answer the following important questions:

- How much paint has been recovered? In total and by store?
- How many customers have participated? In total and by store?
- How do these recovery and participation levels compare to the estimates developed at the outset of the project?
- How do recovery and participation levels vary by community and region?
- What are the main factors that appear to affect these results?

Data to answer these questions were obtained from Philip Services and the log books maintained by the participating stores. Specifically, information on the number of participants and the quantity of paint collected is based upon the number of drums and tub skids received by Philip Services and Metro, Metro test data, and the data logs that stores are directed to have all customers complete (see Attachment 1). Data are available from Metro and Philip for the entire Pilot Project, from August 1997 through July 1998; log data are available for 8-12 months for each store. The integration of these sources of data provides a realistic estimate of the total quantity of paint recovered by the program¹.

Key findings about participation and recovery levels are:

¹ For the following reasons, however, no single source provides complete information. Log data are incomplete because 1) stores do not always ensure that customers record their information, and 2) data logs have not been received from several stores for the final months of the pilot year. Test data provided by Metro provide information on the number of gallons per drum collected, but the number of drums collected are not always tracked by store. In this analysis, estimates are made to correct for the missing data based upon straight extrapolation from the existing data for a particular store.

- **Approximately 2,600 customers have brought an estimated 12,000 - 14,000 gallons of paint to the eleven stores participating in the *Paint Smart* pilot program.** This material was received by the stores in an estimated 19,000 – 21,000 containers. A summary of quantity information by store is presented below in Table 3.

Table 3: Customer and Container Total Quantities²

Store	Cust-omers	Reported Containers	Estimated Containers	Estimated Gallons	Containers/ Customer	% of Total Volume
Rodda (Delta Oaks Eugene)	312	1,351	2,027	1,339	6.5	11%
Rodda (West 11 Eugene)	264	1,219	1,829	1,208	6.9	10%
Miller (Eugene)	224	1,634	1,783	1,178	8.0	9%
Forrest (Eugene)	501	4,782	4,782	3,159	9.5	25%
Lutton's (Sisters)	80	325	446	294	5.6	2%
Central Oregon (Redmond)	53	382	447	295	8.5	2%
Fred Meyer (Bend)	243	1,332	1,522	1,006	6.3	8%
Hometown Paint (Hood River)	51	322	368	243	7.2	2%
Franz (Hood River)	24	174	174	115	7.3	1%
Miller (Gresham)	363	1,429	2,286	1,510	6.3	12%
Rodda (Hillsboro)	496	3,135	3,419	2,259	6.9	18%
Non-Metro Total/Avg. ³	1,752	11,521	13,377	8,837	7.6	70%
Totals/Averages	2,611	16,085	19,083	12,606	7.3	100%

- **Participation has been slightly higher than anticipated.** Based upon conversations with program managers and stores participating in similar programs in Illinois and Washington State, DEQ had estimated that the program would collect approximately 10,000 gallons for the year.
- **The average *Paint Smart* customer brought 7.3 containers of paint.** The per-store average number of containers per customer ranges from 5.6 – 9.5, as shown in Table 3.
- **In 1997, HHW events gathered approximately 30,000 gallons of paint compared to an estimated 12,600 gallons collected through *Paint Smart*. The average *Paint Smart* customer brought approximately 7 percent more paint than the average HHW Collection Event attendee.** The 2,600 customers served by *Paint Smart* represents approximately 40 percent of the customers served by the 1997 DEQ Collection Events. As is displayed in Table 4, 6,617 customers attended the DEQ collection events in 1997, compared to 3,641 the previous year.

² These figures are based upon data provided by Metro on the number of containers and gallons placed in collection drums.

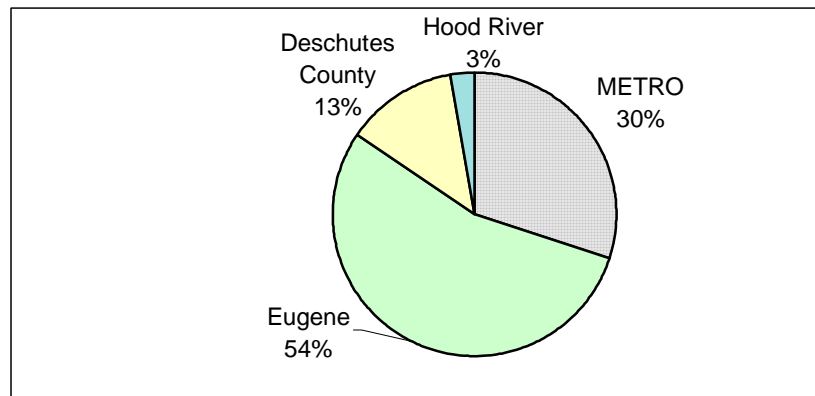
³ Throughout this evaluation data are summarized for the state as a whole and for the nine stores participating outside the Metro area. The Miller Gresham and Rodda Hillsboro stores are excluded from this total.

Table 4: Collection Event/ *Paint Smart* Participant Level Comparison

Year & Program	Participants
<i>1997-1998 Paint Smart Pilot</i>	2,689
1997 DEQ Collection Events	6,617
1996 DEQ Collection Events	3,641
1995 DEQ Collection Events	4,912

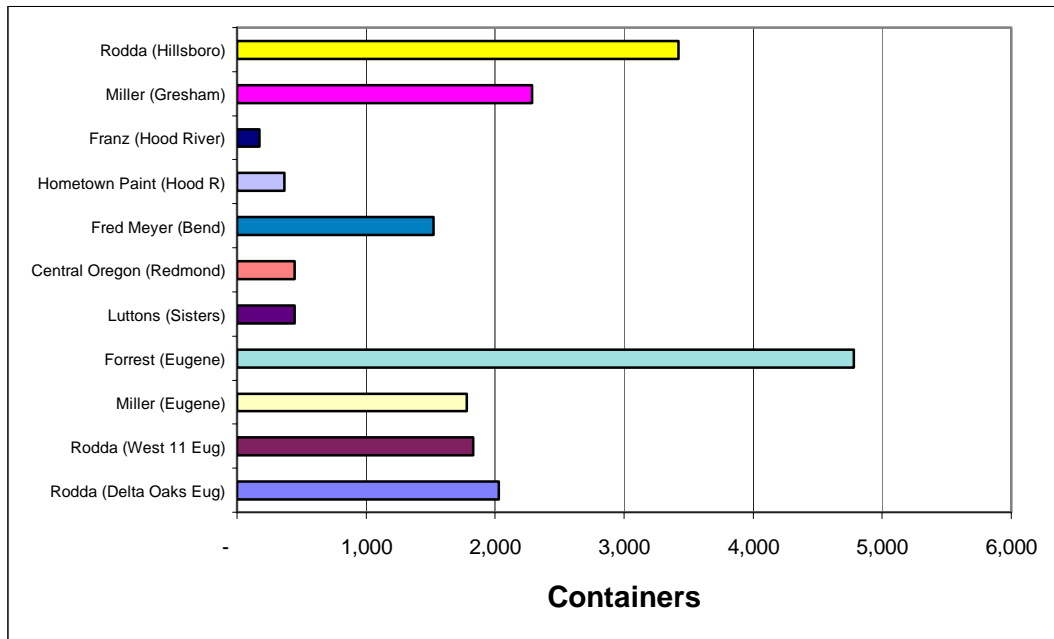
- The amount of paint collected per region varied considerably.** Eugene and Metro account for 84 percent of the material collected. Figure 1 displays the percentage of paint recovered in each region. This variance in the quantity of paint collected is consistent with the variation in the populations of the different communities.

Figure 1: Percentage of Total Containers Collected, by Region



- Within each community or region, the quantity of paint collected per store varies significantly, as is reflected in Figure 2.** Forrest Paint accounts for 30 percent of the paint collected, while the four stores in small cities (Sisters, Redmond, and Hood River) each collected less than 2 percent of the total volume.

Figure 2: Containers Collected Per Store during *Paint Smart* Pilot Project



- **Population and advertising appear to be the largest determinants for the amount of paint collected at a store.** Forrest Paint has run aggressive advertising campaigns about Paint Smart and has collected the highest volume of paint. The six busiest stores in the program are in Eugene or the Metro service area, the urban and expanding metropolitan areas participating in the pilot project. Table 5 displays the populations of the participating communities.

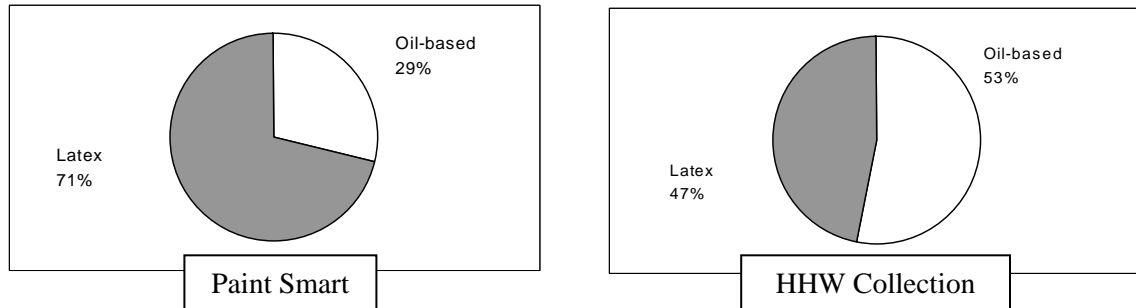
Table 5: Populations of Pilot Project Regions⁴

Community	Population
Deschutes County	46,535
Eugene/Lane County	129,300
Hood River	5,065
Portland/Metro	140,230
Total	321,130

- **Approximately 70 percent of the paint collected through *Paint Smart* is latex paint.** This proportion is in contrast to the 1997 HHW Collection Events, where 47 percent of the paint collected was latex. Throughout the United States, HHW programs are collecting larger percentages of latex paint, which is consistent with the larger percentage of latex paint being sold. Although there are not data to verify the cause of this difference, this trend may account for some of this difference. Alternatively, customers may be more likely to bring certain materials to paint stores (e.g. new paint, non-solvent materials, non-leaky cans).

⁴ Populations for the different regions include only the cities where the stores are located.

Figure 3: Paint Smart and HHW Collection Event Types of Paint Collected



- **Staff from participating stores perceive that very little of the paint they are receiving was purchased from them.** Paint store employees report that they see a mixture of customers and non-customers bringing paint into the store, but that they are surprised by how little of the paint is from their stores.
- **The quantity of paint collected monthly per store in the DEQ program is comparable to the quantity collected in a similar programs in King County, Washington, but less than a program in Snohomish County, Washington.** Both of the other programs operate in a more densely populated region than *Paint Smart* (average collected quantities in Metro and Eugene are closer to the quantities collected in Snohomish County). King County has other HHW disposal options available to all of its residents, while Snohomish County does not.

Customer, industry, and local government satisfaction

The feasibility of collecting paint at retail locations is directly related to the level of satisfaction with the program by the management and staff at the participating stores, the public, and local governments, who stand to benefit from the expanded collection service. The pilot effort was designed to provide information on:

- Retailer satisfaction:
 - ◆ What benefits are associated with providing customers with drop-off services for their leftover paint?
 - ◆ What problems, if any, are associated with collecting paint at retail stores?
 - ◆ What factors affect the level of retailer satisfaction with the program?
- Customer satisfaction:
 - ◆ Do residents appreciate the convenience and added service associated with being able to return leftover paint to retail stores?
 - ◆ How does this level of satisfaction compare to the special collection event service?
- Local government satisfaction:
 - ◆ Does retail collection of leftover paint meet the needs and objectives of local governments?
 - ◆ Are they willing to provide in-kind services to make such collection efforts successful?
 - ◆ What are the most important benefits and problems that the local governments experience associated with retail collection?

To obtain the data needed to answer these questions, local government HHW managers, paint company managers, and paint store staff were interviewed by phone before each of the Workgroup meetings, and informally throughout the Pilot Project. (The questionnaire used for the second round of store interviews is included as Attachment 2 for reference). All information about customer attitudes is also based upon these conversations with store personnel. Key findings from these interviews are:

- **Store managers report that customers generally appear to be extremely pleased with the program.** Customers often profusely thank employees for their help.
- **Store contacts have also encountered customers who are very frustrated by the inability of the paint stores to accept other HHW.** Some customers are accustomed to disposing of all HHW together, and have not received or accepted the “paint only” message.
- **Companies participating in the program all express a high level of satisfaction with *Paint Smart*.** At the corporate level, there appears to be strong support for *Paint Smart*. Individual store managers and personnel indicate different levels of satisfaction with the program, however. In some stores, employees from the manager to the lower level staff take pride and satisfaction in the program, whereas in other stores, all store staff view the program as a burden that must be tolerated because of the preferences of corporate management.
- **Stores have cited a number of benefits of participating in *Paint Smart*.** These include:
 - ◆ Customers are extremely happy—Dale Campbell of Rodda said that he often heard customers exclaim “Now there is something for me to do with my paint!”
 - ◆ Some regular customers are bringing in leftover paint, but many new faces are also coming into the stores.
 - ◆ New Customers occasionally make purchases during visits.
 - ◆ The amount of time and effort required to implement the program has been generally less than expected.
 - ◆ One manager reported that colleagues are envious of his participation in the program.
 - ◆ Staff and management feel good about their contribution to the environment and the community.
- **During the Pilot Project, a number of issues arose that required attention from DEQ and its contractors.** Primary among these issues were:
 - ◆ **Night Drops:** Several of the participating paint stores have had leftover paint placed outside of the stores after business hours. Several store managers have speculated that these drop-offs may have been from contractors. However, as managers of several have noted, night drop-offs happen regardless of a store’s participation in the program. DEQ, local governments, and the HHW service providers have worked with the stores to remove these materials. Several stores were provided with signs to post outdoors to discourage this type of behavior.
 - ◆ **Contractor Waste:** Painting contractors are the biggest customers of many paint stores. Store staff have reported that after initial frustration, contractors have gotten the message that the collection programs are designed to accept only household-generated leftover paint. However, this issue continues to be a concern to many of the participating paint

stores, as they are not able to satisfy the disposal needs of many of their most important customers. It is also highly likely that some of the collected paint has come from contractors.

- ◆ **5-Gallon Containers:** *Paint Smart* has struggled with the issue of whether or not to accept 5-gallon containers. Contractors primarily use these containers, but many homeowners also purchase these containers and have buckets remaining from work performed by professionals. If paint is shipped in 55-gallon drums, 5-gallon containers can lower packing efficiency and therefore increase costs. However, cost is not a factor if the 5-gallon containers are shipped separately, as they were in the Metro area.
- ◆ **Contamination:** Non-paint material has been inadvertently collected during night drops and occasionally under the eyes of inattentive staff. However, this material has been handled through the program, and contamination has not been perceived as an insurmountable problem.
- ◆ **Paint Can Recycling:** Steel cans from the paint processed by Philip Services Corporation are recycled. For many of the remote cities of Oregon, no local recycling options exist for steel cans, and empty paint cans or paint cans from rebled paint must be thrown away. Cans from paint collected in the metro region are not currently recycled.
- **Local governments are very satisfied with the program, but each local government has expressed a different reason for its approval.** In Lane County, *Paint Smart* is minimizing the cost and quantity of paint disposed at County-sponsored roundups and at its fixed HHW facility. In Deschutes County, *Paint Smart* is perceived as a much needed complement to DEQ Collection Events and transfers the burden of addressing the paint problem from the County to DEQ.

Promotion

The Paint Smart pilot effort included a promotional element to raise awareness of the program and encourage the public to bring their paint to the retail collection locations. *Paint Smart* customized its public awareness campaign in each of the regions served by the program. Key evaluation questions are:

- Did the promotion succeed in increasing participation and recovery levels?
- What promotional strategies were the most effective?

Findings related to the promotion campaign include:

- **Eugene has had the largest level of promotion by the private sector and the local government.** In Metro, *Paint Smart* has been mentioned in local shopping store advertisements in Gresham and Hillsboro. In Hood River, *Paint Smart* was mentioned in radio advertisements for the participating stores.
- **In the Metro area, since Rodda and Miller have one advertisement campaign for the whole region, it was difficult for them to advertise their participation in the program.** Both companies have offered to assist in the advertisement of *Paint Smart* if it is extended to all of their Metro stores. *Wasteline*, a Washington County publication, has promoted the program.

- **Advertising appears to have had a direct impact on the quantity of paint collected.** Shortly after advertising, store managers report experiencing an increase in the quantity of paint brought in for *Paint Smart*.
- **Media attention has also been perceived to lead to increased quantities of collected paint.** In Metro, Lane County, and Deschutes County radio, newspaper and television reports have been perceived by stores and local governments to lead to an increase paint quantities.
- **Stores have commented that many customers are unaware of program rules and materials accepted.** However, none of the stores expressed interest in having customers call before bringing in material. Stores have asked that the public sector spend greater resources providing education to the public.

Cost & Efficiency

The pilot effort was designed to provide information on the costs and efficiency of collecting paint at retail locations, in both absolute and relative terms. Questions asked at the outset of the project include:

- How much does it cost to operate Paint Smart? In total and by store and community?
- What are the main factors affecting the cost?
- How could the program be operated to reduce costs?
- How are costs and efficiencies affected by on-site reblending and distribution compared to centralized processing and recycling?
- How does the cost of Paint Smart compare to the special collection event alternative?

Key findings related to cost and efficiency are:

- **The total cost of *Paint Smart* for the first year of operation was approximately \$94,000.** This total excludes project management but includes advertising expenses and Metro’s processing, recycling, and disposal costs.

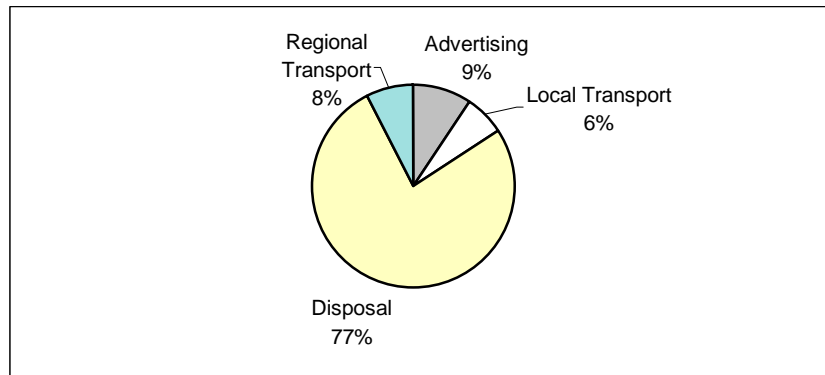
Table 6: Total Program Costs⁵

Type of Activity	Total Costs	Cost per Gallon	Cost per Store
Advertising	\$8,890	\$0.64	\$808
Disposal/Recycling	\$72,022	\$5.14	\$6,547
Local Transport	\$5,968	\$0.43	\$543
Regional Transport	\$7,149	\$0.51	\$650
Total	\$94,029	\$6.72	\$8,548

- **The disposal and recycling of leftover paint represents the largest component of the *Paint Smart* costs.** Disposal/recycling represents 77 % of the total *Paint Smart* costs.

⁵ Please note that this table also included advertising, which is not included in Table 3. The per-gallon price is based upon the 12,606-gallon estimate.

Figure 4 : Paint Smart Program Costs, by Type of Expenditure⁶



- **The total cost per participant for the *Paint Smart* Pilot Project was approximately \$33.** This compares favorably to the overall cost of \$86 per participant at DEQ HHW Collection Events⁷. The following table summarizes per-store and per-customer cost data for the program.

Table 7: Summary of Per-Store Costs

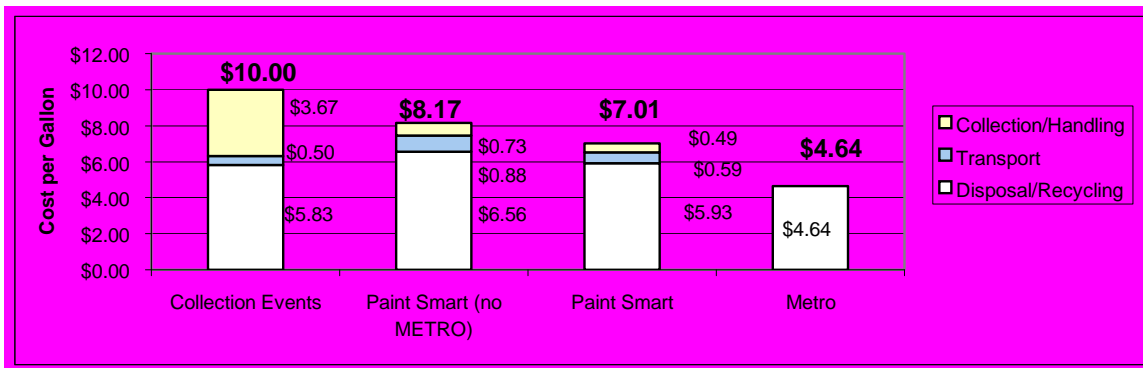
Store	Total Cost	Cost/ customer	Cost/ container	Cost/ month	Cost/ gallon
Rodda (Delta Oaks Eugene)	\$11,246	\$36	\$8.32	\$937	\$8.40
Rodda (West 11 Eugene)	\$10,270	\$39	\$8.43	\$856	\$8.50
Miller (Eugene)	\$10,044	\$45	\$6.15	\$837	\$8.53
Forrest (Eugene)	\$23,566	\$47	\$4.93	\$1,964	\$7.46
Lutton's (Sisters)	\$1,672	\$21	\$5.15	\$139	\$5.68
Central Oregon (Redmond)	\$1,678	\$32	\$4.39	\$140	\$5.68
Fred Meyer (Bend)	\$5,712	\$23	\$4.29	\$476	\$5.68
Hometown Paint (Hood R)	\$1,641	\$32	\$5.10	\$137	\$6.75
Franz (Hood River)	\$776	\$32	\$4.46	\$65	\$6.75
Miller (Gresham)	\$7,426	\$20	\$5.20	\$619	\$4.92
Rodda (Hillsboro)	\$11,106	\$22	\$3.54	\$926	\$4.92
Non-METRO Total/Avg.	\$66,606	\$38.02	\$5.78	\$5,551	\$7.54
Totals/Averages	\$85,138	\$32.60	\$5.29	\$7,095	\$6.75

⁶ Excludes DEQ staff and contractor time and expenses

⁷ For 1997, assuming all HHW Collection Event participants brought paint, the cost per participant for handling paint was \$48.

- **The overall cost of properly recycling and disposing of paint through *Paint Smart* is less than the cost of managing paint through HHW collection events.** However, *Paint Smart* does not handle all of the materials that DEQ Collection Events do. Paint-only collection events would probably be lower in cost than HHW Collection Events, due to the less hazardous nature of the materials being collected. However, the primary driver of the cost difference is not due to that fact that there are fewer materials collected, but that the labor and production costs associated with special events are eliminated. Figure 5 compares the different components of *Paint Smart* to the different aspects of the costs of HHW Collection Events.

Figure 5: Operational Cost Comparison^{8 9}

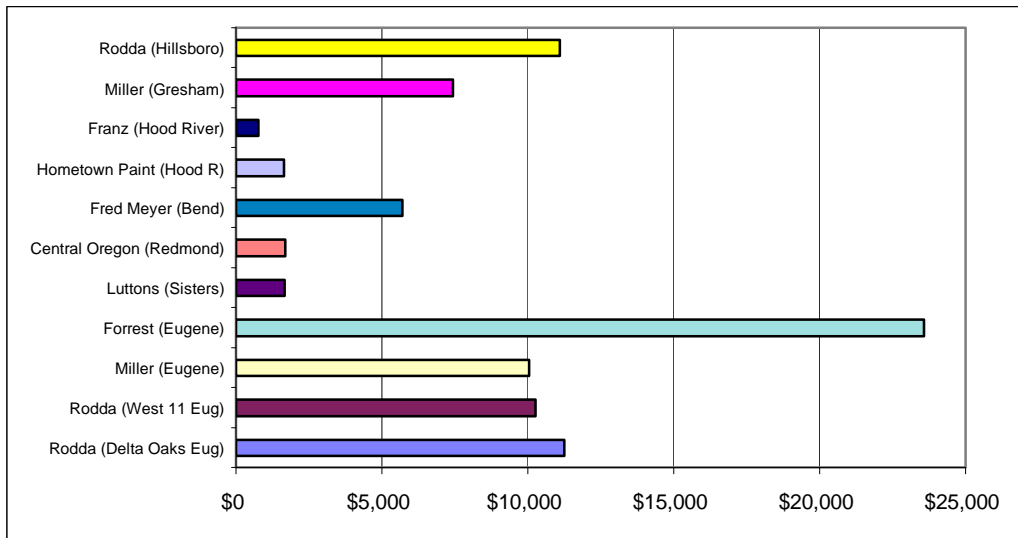


- **The price structure for *Paint Smart* is different than for HHW Collection Events.** None of the labor that is necessary to operate a collection event is necessary to operate *Paint Smart*. Although the DEQ Collection Event contract prices are used for *Paint Smart*, the prices for disposal rise slightly because a large percentage of the paint is handled using drums rather than tub skids. The more frequent need to collect a smaller amount of material also makes the per unit transportation costs higher for *Paint Smart*.
- **The per-store costs of operating *Paint Smart* vary greatly.** Because disposal/recycling is the largest segment of the program costs, the quantity of paint collected has the largest impact on these costs.
- **In-kind transportation contributions by Forrest Paint in Eugene and Miller Paint Company in Metro saved *Paint Smart* approximately \$7,000. On-site reblending at Central Oregon Paint Supply saved the program approximately \$1,000.** Additional in-kind contributions were made by stores and local governments in the form of advertising, printing, labor, storage, and management.

⁸ The prices for disposal of material are significantly different for Metro than the remainder of Paint Smart. Metro recycling and disposal costs for latex paint are much lower than the costs that DEQ pays to Philip Services for recycling/disposal in the other cities. Because Miller Paint Company provides all transportation for the Metro stores, there are no DEQ transportation costs for Metro. The non-Metro total is important, because it provides the current cost of providing service to new communities.

⁹ Excludes advertising and program management expenses, as well as in-kind costs.

Figure 6: Per-store Pilot Project Costs



Education

A core goal of the pilot project was to educate the public about ways to minimize leftover paint in the first place. This message was included in the Paint Smart brochure and in point of purchase brochures. Evaluation questions include: 1) was the prevention message successfully communicated to customers? 2) were customers educated effectively about what type of paint materials to bring? Key findings:

- **A significant number of customers brought paint materials that were not accepted in the program and/or other household hazardous wastes to the Paint Smart stores.** Store managers report that some customers bringing in these materials clearly have not known what is accepted in the program and what is not. The efforts to educate the public about the Paint Smart program's specifications were not completely successful. However, most customers did understand what is allowed, so the message appears to have reached most of the interested public.
- **The pilot program yielded very little direct evidence on the effectiveness of the effort to educate the public about waste prevention.** Managers at some paint stores noted that since the Paint Smart program has started, they have been more careful to sell the appropriate quantity of paint to their customers. However, no data was obtained on whether or not consumers have changed their behavior as a result of the educational messages about prevention in the brochure.
- **Educational brochures were distributed to many of the customers who have visited the stores.**

Partnerships

DEQ's goal from the outset was to implement the pilot program in partnership with the paint industry. Work groups were formed and many discussions held to make Paint Smart a collaborative effort. Questions to be answered assessing the effectiveness of these partnerships include:

- Did the efforts to forge partnerships succeed?
- How, if at all, was the DEQ able to leverage resources through partnership activities?
- How did industry benefit from the partnership effort?

Key findings:

The effort to forge a partnership with industry to address the leftover paint program appears to have been successful. In particular, paint manufacturers based in Oregon have been enthusiastic participants in the program, offering their stores as collection sites, attending all work group meetings, and contributing valuable in-kind services. Management at these companies are vocal about their desire to solve the leftover paint program in a way that shares the burden between industry and government and does not lead to the imposition of a "BC Paint Care" type program in the Northwest.

The willingness of these companies to contribute to the success of the Paint Smart program is demonstrated by several actions:

- Forrest Paint in Eugene promoted the Paint Smart program in radio, print, and TV advertising and public relations initiatives.
- Miller Paint Company handled transportation of the drums of collected paint from the Gresham and Hillsboro stores to Metro's paint processing facility.
- Rodda Paint printed for free the brochures, and mailers that were distributed to all the participating paint stores.

Partnerships were also successfully forged with local governments. For example, Lane County has promoted the program extensively for free to area residents. Lane County has also provided free storage space for the drums and the use of its paint crusher as needed by the program. Deschutes County has transported the full drums of paint at a low cost from the participating stores to a central depot and then provided storage of those drums. This assistance substantially reduced the handling and transportation costs that otherwise would have been incurred by Philip Services and charged to DEQ.

Training

Management and staff at each paint store were provided with training in how the program worked at the outset of the project. Questions: Was this training effective? Is this level of training sufficient?

Key findings:

The training provided by DEQ at the outset of the program appears to have been adequate to give store managers and staff an understanding of the purpose of the program and the procedures to follow in accepting and handling leftover paint. However, there is very little data about how well the managers and employees have followed the procedures. The use of “hidden shoppers” and spending more time visiting the stores would be required to determine the true effectiveness of the training and the ability of the stores to follow the Paint Smart program.

Anecdotal evidence, however, suggests that the participating paint stores generally have followed the procedures whereas the participating “big box” store has had more difficulty. Specifically, Fred Meyer, where there is a large amount of staff turnover and paint is only one of many departments in the store, has had more difficulty implementing the program. DEQ staff has had to return several times to train new employees and create special signs to explain the program to the store staff.

Store staff have not always adhered to sorting protocol. Cans of oil-based paint have appeared in latex-only drums and vice versa.

Operations

Several alternative approaches were used to store the paint on site and then transport the collected paint to a central location for processing and disposal or recycling. Also, several stores were encouraged to reblend paint on site and then offer it to their customers, avoiding the expense of transport and centralized processing. Questions:

- How well did the pick up and transportation systems work?
- What are the relative benefits associated with using tub skids verses drums for on-site storage?
- Did the on-site reblending and recycling efforts succeed? How much material was diverted through this alternative? What cost savings are associated with this approach?

Findings related to these questions are presented below.

Transportation Systems

- **Participating stores were generally pleased with the pick-up of materials.** Stores report that the transportation contractors are courteous and responsive. On one occasion, Deschutes County failed to pick up paint from the Sisters location, which was very disruptive to the operation of the store. The County was able to remedy this problem, and the store reports that it has been otherwise very pleased with the collection service.
- **The local transportation services – pickup and delivery of drums -- appear to have met the needs of the participating stores.** Different approaches were used in each community to transport the full drums of paint from the stores to a central facility and to provide those stores with empty replacement drums.
- In the Portland Metro area, Miller Paint Company provided this service at no charge to the DEQ. Some issues were identified about the timeliness of this service, but those appear to have been resolved between the participating paint companies.

- In Hood River, Philip Services picked up full drums on request and provided replacements as needed. No problems were reported with this service by the paint stores. However, the approach of using Philip to pick up individual drums from each store is very costly on a per unit basis to DEQ¹⁰.
- In Deschutes County, the County picked up the drums from the three participating stores. No problems were reported with this approach.
- In Lane County, DEQ contracted with BRING Recycling, a local recycling service provider, to provide service to the participating paint stores. This arrangement worked smoothly as well.

Tub Skids

- **Using tub skids for disposal provides a 10-20% cost reduction relative to 55-gallon drums.** DEQ went to considerable effort to locate stores that had forklifts that would service tub skids. The HHW Contractor did not always have tub skids available for use by the *Paint Smart* program.

Reblending

- **Central Oregon Paint Supply reblended an estimated 50 percent of the material received in the store.** This material was sold to the public or donated to local charities. Total revenues from the sale of paint were approximately \$500, and the reblending saved DEQ an estimated \$1000 in disposal and transportation costs. Other stores reported that they informally removed paint from the waste stream, but only Central Oregon Paint Supply eliminated such a substantial volume from the waste stream.

Completing Log Forms

- **While stores reported that customers were very willing to provide their name and address, gathering customer information forms from participating stores proved to be more difficult than anticipated.** Although envelopes were included, DEQ had to contact stores many times to remind them to submit completed forms.

¹⁰ For Hood River, Regional transportation represented 14% of the total costs of the program, versus 8 percent for the program as a whole. There are no local transportation costs in Hood River, which represent 6 percent of the total program costs. However, the distance from the Portland processing facilities to Hood River is much less than Deschutes or Lane Counties (114 miles roundtrip versus 338 miles and 262 miles, accordingly).

V Future Program Options

With the conclusion of the pilot phase of Paint Smart, DEQ must decide what to do next with the program. The three main choices are to 1) end the program and stop collecting paint at the 11 participating stores 2) continue the program at the current level or 3) expand the program by recruiting additional stores and providing service to more residents and communities. DEQ has already decided to continue the current level of effort until at least July 1, 1999.

DEQ now must determine:

- 1) how to expand the program to more communities and/or residents;
- 2) the cost associated with expanding the program and ways to minimize those costs;
- 3) the sources of funding for continued or increased service over the long run;
- 4) the role to be played by industry and local governments in the future.

These issues are discussed below.

Expansion alternatives

There are several possible future directions for the Paint Smart program, if DEQ decides to continue the effort. Some of these alternatives were suggested at the final Work Group meeting; others have been identified since then.

- 1) **Focus the program on high population centers**, where the largest number of residents can be served as efficiently as possible.
- 2) **Provide Paint Smart services to smaller communities**, predominantly those in rural areas with less access to household hazardous waste services. The goal here would be to serve as many communities as possible, within the available budget (rather than maximizing population served).
- 3) **Offer Paint Smart to communities who request a HHW collection event**. Recruit stores in those areas to accept paint; do not collect paint at the HHW events, but instead redirect those materials to the local participating Paint Smart stores.
- 4) **Provide Paint Smart to communities on a bid or auction basis**, with those communities willing to pay the most or provide the most in-kind services receiving the Paint Smart program.
- 5) **Provide Paint Smart to communities on a first come, first serve basis**, to as many communities as possible within the available resources.
- 6) **Continue Paint Smart in the current communities only**, with no new service provided to other counties and regions in the state.

These are pros and cons associated with each of these alternatives which will need to be carefully considered by the DEQ. Primary considerations in making these choices include equity – providing all communities in Oregon with an opportunity to receive the Paint Smart service, if interested – and efficiency – delivering Paint Smart services to the maximum number of residents at least cost.

Transportation, processing, and disposal alternatives

The pilot project provided valuable baseline information on the cost, efficiency, and effectiveness of alternative ways of handling and transporting the leftover paint accepted at retail paint stores. Together with data from other programs in the Northwest (e.g. Metro and King and Snohomish Counties, Washington), a set of “best practices” for retail paint take-back programs can begin to be identified. It is clear that there are substantial opportunities to reduce costs in several key aspects of program operation. Some of these alternatives are already being employed in *Paint Smart* to greater or lesser degrees, but further implementation could substantially lower costs.

Options for DEQ to consider for the future of Paint Smart that would result in operating cost savings include:

- **Greater use of tub skids.** Using tub kids instead of drums saves 10-20 percent of the costs of processing material with current disposal methods.
- **Increase on-site reblending.** Central Oregon Paint Supply’s 50 percent reblending rate for latex paint serves as an example of the level possible for other stores. A per gallon driven incentive could potentially be provided to participating stores.
- **Encourage local governments with HHW management facilities to reblend high-quality latex.** Snohomish County, Washington estimates that it reblends 80 percent of the latex that it collects from HHW roundups and retail paint take-back program. This paint is then given away for free to the public at a total cost of approximately 2 dollars per gallon.
- **Repack drums at the local level.** Many stores do not pack drums as efficiently as possible. Additional training and direct feedback to the stores could help minimize this problem. An alternative approach is to repack the paint cans at the regional depot into drums, or better yet into tub skids. This approach could reduce transportation and disposal costs by 40 to 60 percent.¹¹
- **Bulk oil based and poor quality latex paint at the local level.** The majority (60-70%) of the paint that is currently collected from the Paint Smart program is bulked for disposal or energy recovery. A smaller percentage (30-40%) collected paint is actually processed for recycling.¹² The sorting to separate the good and bad latex and the bulking of the oil-based paint now takes place at Philips’ central facilities in Washougal, OR and Kent, WA. Substantial savings could be achieved if these activities took place locally, at the regional depots. Health and safety issues, would, however, have to be addressed at each location where sorting and bulking would be taking place.
- **Transport materials from local government storage facilities to the HHW processing center using a back haul.** Alternate transportation could lower transportation costs. The size and range of the reduction is dependent upon the type of program selected.

¹¹ This estimate is based upon preliminary data from several consolidations of paint in Eugene by BRING Recycling.

¹² Approximately 30 percent of the paint collected is oil-based paint, which cannot be recycled. Of the remaining latex paint, Philip has reported recycling 25-30 percent of the collected paint, though this percentage has varied significantly. Metro reports that it has recycled 60-65 percent of the latex paint that it has collected. Our estimates here are based on the different recovery levels.

- **Use alternative arrangements to process the collected paint.** The cost to have Philip Services process the leftover paint for recycling and disposal is \$6.58 per liquid gallon for latex and \$7.10 per gallon for oil-based paint. For comparison Metro's costs are \$2.90 for latex and \$7.10 for oil-based, and Snohomish County's costs are \$1.93 for latex and \$5.00 for oil. These comparisons suggest that significant savings (30 to 50%) may be possible in this stage of the program.

Funding Options

Continuing and expanding the Paint Smart program after July 1999 will require additional funds, beyond those budgeted for the pilot project and its extension. Alternative funding options and the pros and cons of those options include:

- **Continued funding from the Hazardous Waste program budget.** Funding for the Paint Smart pilot project has come from DEQ's \$800,000 biennial hazardous waste program budget which primarily pays for HHW collection events. Continued funding of Paint Smart would mean fewer such events in the future. The main benefit of this funding source is simply that it exists – and that legislative support exists to continue current level of effort to manage household hazardous wastes.
- **Advanced disposal fee on paint products.** One means of funding Paint Smart as well as other collection and education efforts associated with leftover paint is to impose a small fee on the sale of paint in Oregon. The proceeds of this tax would be used on a dedicated basis to collect, recycle, and properly dispose of leftover paint as well as to educate the public about waste prevention. The primary benefit of this approach is that the funding source would be dedicated and come directly from the sale of the product that creates the disposal problem. The problem with this alternative is that this type of tax has traditionally been opposed by industry. Thus the political viability of this approach is questionable as it may not be in keeping with DEQ's efforts to forge a partnership with the paint industry to solve this problem.
- **Local government funding.** Local governments with direct responsibility for managing household hazardous wastes generated in their jurisdictions are also a potential source of funding. This could occur either through cash outlays or in-kind services or a combination of the two. Under this scenario, DEQ would make the Paint Smart program available to local communities (counties and/or cities) for a fee, based on a cost factor such as the number of stores accepting paint, the quantities of paint collected, or the number of households in the community. The local government could pay this fee directly or could provide services such as transportation, storage, and sorting to cover most of the program's cost.

This approach would allow the DEQ to leverage its available resources to the greatest extent possible. The DEQ could still pay for a portion of the program's costs. However, that percentage could decline over time, with the local government's share increasing. The drawback to this approach is that many local governments either can't afford or don't want to pay for this service. Consequently, some local governments could be strongly opposed to this alternative.

- **Industry funding.** Certain segments of the paint industry have already provided in-kind and out-of-pocket financial support for the Paint Smart program. One option for the future is to have the paint industry fund the program's expansion on either a voluntary or subscription

basis. In this scenario, paint manufacturers or retailers would pay to participate in Paint Smart or would contribute to a fund to make the program available to more households across the state.

There are many challenges associated with this approach. Industry is likely to oppose voluntary funding and may not sign up for the Paint Smart service if it costs money. Also, the paint industry is very diverse. Getting a critical mass of retailers who sell paint to cooperate would be a challenging task. The main benefit of this approach, if it were to succeed, is that it would provide supplemental funds to run the program and it would continue the public/private partnership initiated with the pilot effort.

- **Increased general fund outlays.** Funding for an expanded Paint Smart program could come from an increase in general fund outlays for HHW management. Such an increase is politically difficult to achieve in the current ‘less government/cut taxes’ climate. However, with strong support from industry, such an increase could possibly be achieved.
- **Savings from program cost efficiencies.** A final option for consideration is to reduce the costs to operate the program. The handling, transportation, and disposal alternatives identified above, if fully implemented, could significantly stretch program resources. However, a basic level of funding will still be required from some source to continue the program beyond July 1999, regardless of efficiency.

Partnership Options

The partnerships between DEQ and the private sector and DEQ and local governments have been important to the overall success of the pilot project. Options for the future include:

- Continuing the Paint Smart work group meetings as a formal mechanism to obtain private sector and local government input on the program.
- Discontinuing the work group, but continuing to communicate informally with paint industry representatives.
- Forging a structured partnership with local governments to share the burden of the cost and staff resources required to implement the Paint Smart program.
- Developing a partnership with Metro to allow Paint Smart services to be provided throughout the state regardless of jurisdiction.

Expansion Scenarios and Reference Program Costs

In determining the future of the Paint Smart program, it is useful to understand the likely costs and quantities of paint recover associated with alternative expansion scenarios. It is also valuable for planning purposes to know baseline costs and recovery levels for a typical Paint Smart store and how costs could change if efficiency improvements are implemented.

Reference Costs and Quantities

Table 8 presents estimates of these baseline or reference costs and recovery levels derived from the one-year pilot project. Cost and quantity data are provided for high, medium, and low volume “typical” stores and the average from the pilot project. The “typical” stores are defined as follows:

High Volume: A retailer located in a densely populated area with a high volume of residential (as opposed to commercial) customers. Cost and quantity estimates for this store type were derived by averaging the data from the two stores in the pilot program with the most paint received (Forrest in Eugene and Rodda/Hillsboro). The experience of the pilot program suggests that achieving these volumes requires a substantial level of promotion and a high level of commitment by the store manager to the program.

Medium Volume: A medium sized retail paint store, typically located either in an urban area or in a suburb. Among the pilot project stores, Bend Fred Meyer also falls into this category. Cost and quantity levels for this type of store are derived by averaging the data from the five stores with annual volumes recovered in the 1,100 to 1,400 range.

Small Volume: Smaller stores typically located in rural areas or small communities. Quantities of paint and costs from the four stores with the lowest collected volumes were averaged to determine this store type average.

Table 8: Annual Reference Costs and Quantity Estimations¹³

Annual Costs (per store)	Pilot Average	Rural Small	Urban/Rural Medium	Heavy Promotion/ Urban Large
Advertising	\$808	\$1,000	\$2,500	\$4,000
Local Transport	\$543	\$500	\$1,000	\$2,000
Disposal/ Recycling	\$6,547	\$1,000	\$7,000	\$16,000
Regional Transport	\$650	\$500	\$1,000	\$2,000
Total	\$8,548	\$3,000	\$11,500	\$24,000

Annual Quantities (per store)	Pilot Average	Rural Small	Urban/Rural Medium	Heavy Promotion/ Urban Large
Customers	237	50	275	500
Containers	1,735	350	1,900	4,100
Drums	58	10	60	125
Gallons	1,146	250	1,250	2,700

¹³ These numbers are rounded estimates of the averages from the Pilot Project. They are rounded to indicate that they are not precise numbers, but the best estimates available. The advertising costs are adjusted upward slightly to account for the fact that the substantial advertising provided by Forrest Paint and Lane County may not be repeated in an expanded program.

Expansion Scenarios

To assist the DEQ in planning the future of the Paint Smart program, we have defined several alternative scenarios for offering Paint Smart services to communities throughout Oregon. The total cost and quantities of paint recovered and number of customers served are estimated for each scenario. The scenarios are designed to cover the most likely possibilities of the range of expansion options discussed above.

- 1) **Scenario #1: Provide Paint Smart services only to paint stores in smaller rural communities.** This scenario would involve providing Paint Smart to all of the communities that were served by HHW Collection Events in 1996 and 1997.
- 2) **Scenario #2: Provide Paint Smart services only to paint stores in larger urban communities.** This scenario was suggested by the private sector at the third workgroup meeting. If the primary goal of the program is to recycle and properly dispose of the maximum amount of paint at the lowest cost, this scenario best achieves this goal.
- 3) **Scenario #3: Provide Paint Smart services to a mixture of large, medium and small communities.** The quantities recovered and cost for this mixture are assumed to be similar to the experience of the Pilot Project.

These scenarios assume that the unit costs of each component of Paint Smart equal the costs experienced during the pilot project and that the DEQ has approximately \$200,000 to spend annually on the program. Table 9 displays the quantities and unit costs associated with each of the three scenarios outlined above. The total cost for each scenario is fixed here at approximately \$200,000, with the number of stores being adjusted to fit this total cost.

Table 9: Quantities Collected, Communities Served (By Scenario, Base Case Pricing)

Scenario	Stores	Communities	Annual Gallons	Annual Customers	Total Costs
1. HHW Collection Event Communities	56	44	18,000	3,700	\$200,000
2. Urban Area Collection	14	3	23,300	4,750	\$206,000
3. Diverse Community focus, similar to current program	24	8	21,350	4,350	\$199,000

As is illustrated in Table 9 and Table 10, there are tradeoffs between the number of communities participating and the number of individuals served. The greatest number of individuals will participate and the largest amount of paint will be collected under Scenario 2, which focuses upon large urban areas. The greatest number of stores and communities will be able to participate in the *Paint Smart* under Scenario 1 which assumes Paint Smart will focus upon the smaller communities served by the HHW collection events. Scenario 3, like the pilot project, offers a compromise between these scenarios and the goals of efficiency and equity that they represent.

Table 10: Unit Costs: per Store, Community, Gallon, and Customer; Alternate Scenarios

Scenario	Per Store	Per Community	Per Gallon	Per Customer
1. HHW Collection Event Communities	\$3,571	\$4,545	\$11.11	\$54.05
2. Urban Area Collection	\$14,286	\$66,667	\$8.58	\$42.11
3. Diverse Community focus, similar to current program	\$8,333	\$25,000	\$9.37	\$45.98

Program Cost Reduction Possibilities

The costs reflected in these scenarios are based upon current program costs. The program savings opportunities listed in Table 11 present an opportunity to dramatically lower the costs and/or expand the services provided by *Paint Smart*. The changes that appear to offer the most promise in terms of reducing per stores and overall program costs are local bulking of bad quality latex and oil based paint, alternative processing and disposal arrangements, local repacking of drums, and on site reblending for sale or donation.

Table 11: Savings Associated with Different Savings Options¹⁴

Savings Options	Estimated % Savings
Use more tub skids	10-20%
Increase on-site reblending	50%
Reblend locally	80%
Repack drums locally	30-60%
Bulk non-recyclable paint locally ¹⁵	45-65%
Transport by alternative means	Unknown
Process by alternative means	30-50%

These factors are complementary, and lowering program costs will require implementing a combination of these different factors. It is reasonable to expect that the costs of the program could be cut by 20-40 percent by implementing some of these cost savings. A best-case scenario might involve a 50-65 percent reduction in the program costs, though to achieve this level of reduction greater management resources, unavailable at current spending levels, would have to be invested in promoting savings throughout the program.

¹⁴ Savings apply to the total cost of collecting and processing paint *except* for advertising costs.

¹⁵ This estimate assumes an in contribution of a paint can crusher by local government.

VI Recommendations

Ten recommendations have been developed to guide DEQ as it determines the future of the Paint Smart Program. These recommendations are based upon the lessons learned from the Pilot Program experience.

- 1) **Continue the Paint Smart program as one component of the State's HHW program.** Paint Smart is proving to be a cost-effective way to collect paint and is popular both with residents and paint stores.
- 2) **Establish priorities for the DEQ HHW Program.** The recommendation to continue Paint Smart can only be made in the context of determining how best to use DEQ's limited resources to better manage household hazardous waste in Oregon. Paint Smart appears to be a more cost effective means to collect paint than special collection events, but the program does not provide the same range of services as the HHW events (i.e. only paint is collected). There is a substantial opportunity cost associated with implementing Paint Smart, as fewer collection events can be held in communities across the state. For this reason and others, the DEQ needs to re-examine the basic goals of its HHW program and then determine how to achieve those goals as cost-effectively as possible. Such an assessment will then allow the DEQ to determine the scope of the Paint Smart effort as well as other programs to manage the state's household hazardous waste.
- 3) **Evaluate the costs and benefits of the retail take-back program in the context of other material management opportunities (e.g. on-going collection at transfer stations).** This evaluation is concentrated on the Paint Smart Program, which has focused on developing relationships with businesses. In some cases, relationships could be formed with local governments to explore the efficiency of collecting paint and/or other HHW at fixed facilities, such as transfer stations or landfills.
- 4) **Find ways to fund the continuation and expansion of the Paint Smart program.** DEQ should work with industry and local governments to identify a mechanism that is acceptable to all parties to fund the program.
- 5) **Continue the partnership with the paint industry.** The private sector's willingness to voluntarily provide stores for the pilot period and the participating companies' contribution of substantial in-kind services is highly commendable. Industry representatives also contributed greatly to the effectiveness of the work group meetings. This partnership should be extended and nurtured, with the private sector included in deliberations on how best to expand and fund the continuation of the program.
- 6) **Continue partnerships with local governments.** Partnerships with county governments and Metro will allow the DEQ to leverage resources and extend the identity and service of Paint Smart statewide. Such coverage is important in meeting the needs of the private sector, which does not distinguish between political jurisdictions in distributing and marketing paint.
- 7) **Explore ways to package and sell services to local governments.** DEQ should explore the concept of offering a bundle of HHW services to local governments that are paid for in part by those governments. For example, DEQ could provide a county with a four-

year program consisting of two HHW events and the start up of Paint Smart. Under such a partnership, DEQ would cover the cost of the first event and the first two years of Paint Smart and the local government would pay for the second event and the final two years of Paint Smart.

- 8) **Build equity in the Paint Smart name and identity.** The Paint Smart identify has some marketing appeal and the potential to make customers and retailers think about how they buy and sell paint. Some equity as already been developed in the name. This effort to develop a “brand” identity for the program should continue.
- 9) **Implement efficiency improvements in operating the program; consider providing financial incentives to paint stores and local governments to reduce overall program costs.** Retail-based paint collection programs are in their infancy. Substantial effort should be placed on lowering all of the costs associated with operating *Paint Smart*.
- 10) **Address the processing and marketing issues associated with leftover paint recycling.** The Paint Smart program has focused to date on establishing a viable retail collection option for leftover paint. In the future the DEQ should devote resources to determining how best to market the recovered paint. High value end markets for the good quality latex paint could substantially reduce total program costs and provide customers with another lesson in how to “close the loop”.

7. What benefits have you received from participating in the *Paint Smart* Program? Are you getting additional publicity for your involvement in the Program? Are the people bringing in paint mostly new or regular customers? Have you observed new customers purchasing supplies in your store?

8. Are the volumes that you have collected more or less than you anticipated? How would increased volumes affect your comments about the program – (would that make you feel that your efforts are more worthwhile)?

9. What suggestions do you have for improving the program? What can the DEQ do to make your participation in the Program easier you?

10. Do you feel that your participation in the Program gives you a competitive advantage?

11. Would you recommend participation in the Program to other paint retailers [or other managers in your company]?