Survey Analysis Report

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4/1/2013
## Table of Contents

**Introduction** ......................................................................................................................... 2

**Survey Design** ......................................................................................................................... 2

**Booth Survey** .......................................................................................................................... 3
  - Gender and Age Distribution ............................................................................................... 4
  - Frequency of Internet Access ............................................................................................. 5
  - Knowledge and visitation of Agency website ...................................................................... 6
  - Use of Social Media .............................................................................................................. 6
  - Use of Email Newsletters .................................................................................................... 7
  - Knowledge of REAP Mobile and Permanent Facility ........................................................ 8
  - Knowledge of ABOP Facility ............................................................................................ 9

**Community Member Survey** ................................................................................................ 9
  - Gender and Age Distribution ............................................................................................ 9
  - Purchasing and Storage Habits .......................................................................................... 10
  - Knowledge about Reuse ..................................................................................................... 12
  - Knowledge about HHW Disposal ..................................................................................... 13

**Industry Representative Survey** ............................................................................................. 13
  - Gender and Age Distribution ............................................................................................ 13
  - Purchasing and Storage Habits .......................................................................................... 14
  - Knowledge about Reuse ..................................................................................................... 17
  - Reuse is Cost Effective ....................................................................................................... 17
  - Program Duplication .......................................................................................................... 18

**Discussion and Conclusions** .................................................................................................. 19

**Appendices** ............................................................................................................................. 21
Introduction

As part of the 19th cycle Cal Recycle Household Hazardous Waste (HHW) Discretionary grant the Agency developed, dispersed, and analyzed three surveys given to three different target groups as described below:

- **Booth survey** - A thirteen question survey was administered to event participants of the 2012 Tehama District Fair and Dairyville Festival. A total of 74 surveys were compiled and analyzed. A copy of the survey is presented in Appendix A.

- **Community Member Presentation Survey** - A fourteen question survey was administered to residents attending presentations held at the Tehama County Board of Supervisors, Corning Chamber of Commerce, and Red Bluff City Council. A total of 18 surveys were compiled and analyzed. A copy of the survey is presented in Appendix B.

- **Industry Representative Survey** - A thirteen question survey was administered to solid waste, recycling, and HHW facility representatives at the Household Hazardous Waste Information Exchange presentation given on September 26, 2012, Environmental Services Joint Powers Authority presentation given on December 6, 2012, California State University, Chico This Way to Sustainability Conference on March 7, 2013, and the Northern California Recycling Association Recycling Update presentation on March 19, 2013. A total of 18 surveys were compiled and analyzed. A copy of the survey is presented in Appendix C.

The experiences and background of audience members varied significantly, requiring three different surveys.

Survey design

The **Booth, Community Member and Industry Representative** surveys were designed to follow a standard structured approach. Under this approach, each respondent was presented with exactly the same questions in the same order, ensuring that responses could be reliably aggregated and compared with confidence between populations. This structured approach also systemizes the order in which questions are asked, so the questions are always answered by survey respondents within the same context prior to presentation and post presentation. This practice is important for mitigating the impact of context effects where the answers given to a survey question can depend on the nature of preceding questions.

The **Community Member and Industry Representative** surveys offered closed-response questions, which were formatted using a Likert scale. A Likert scale is a scale of attitude measurement that offers a means of determining attitudes along a continuum of choices, such as “strongly agree,” “agree,” and “strongly disagree.” The closed-response questions sought to obtain key demographic information in addition to assessing how several factors acted upon the participant’s knowledge. These factors were grouped into
several themes, including: household hazardous product purchasing habits and knowledge, and household hazardous waste disposal and reuse knowledge. The pre-presentation survey questions aimed to answer a central question: “do respondents over purchase hazardous products.” The post-presentation survey questions aimed to answer two central questions: “do respondents’ value reuse opportunities” and “do respondents know where to find reuse opportunities”.

The Booth survey offered closed-response questions, which were formatted in two ways: multiple choice (i.e. yes/no/not sure) and a Likert scale. The Likert scale offered a means of determining attitudes along a continuum of choices, such as “daily,” “weekly,” “monthly,” and “never.” The closed-response questions sought to obtain key demographic information, assess internet and social media use, and assess knowledge of Agency reuse and Household Hazardous Waste disposal programs.

Booth Survey

The purpose of the Booth Surveys was to:

1. Determine the frequency Tehama County residents access the internet and whether they use social media sites such as, Facebook and Twitter.
2. Determine whether outreach efforts regarding the REAP (Reuse of Available Products Facility) is successful.
3. Determine whether residents know how to dispose of HHW and ABOP (Antifreeze, Batteries, Motor Oil and Filters, and Paint) waste.
4. Gain residents’ email addresses to send a monthly e-blast newsletters.
5. Educate residents about the Landfill website

In order to receive REAP program products, an oil drain container, funnel, or reusable grocery bag, Tehama District Fair and Dairyville Festival attendees were required to complete the Booth Survey. The surveys were administered by Agency staff working at the booths. A total of 74 surveys were received from 32 females (43.2%), 39 males (52.7%), and three decline to state (4.1%). 61% of survey respondents lived in Red Bluff, 23% lived in the unincorporated County, 7% lived in Corning, 5% declined to state, 3% lived in the City of Tehama, and 1% lived outside of the County in the City of Redding.
**Gender and Age Distribution**

More males than females completed the survey as 43% of respondents were female, 53% were male, and 4% declined to state.

The majority of the respondents were 46-62 (38%) years of age. 26% and 24% of respondents were between the ages of 31-45 and 63 or older, respectively. Less than ten percent (9.46%) of respondents were 18-30 years of age. 2.7% of respondents...
declined to state their age category. The age distribution of the respondents generally agrees with the age/population statistics reported in the 2000 United States Census.

![Age Distribution of Respondents (%)](chart.png)

**Frequency of Internet Access**

86% of respondents reported they access the internet at least one time per week. More than 47% of respondents reported they access the internet ten or more times per week. Less than 14% of respondents’ reported they do not access the internet at all during a one week time period. More than 53% of respondents that were between the ages of 46-62 report they access the internet ten or more times per week. 50% of respondents 63 and older report they access the internet ten or more times per week. More than 42% of respondents between the ages of 31-45 report they access the internet ten or more times per week. Due to heavy usage of the internet by the public, internet outreach may be an effective medium. Females access the internet more regularly than males, as 63% and 33% report they access the internet more than ten times per week, respectively.
Knowledge and visitation of Agency website

Respondent bias and leading may have affected the results of the question ‘Have you ever visited the Tehama County/Red Bluff Landfill website?’, as 47% of respondents reported they had visited the Agency website and 46% were aware the website events page lists upcoming free events. Agency staff realized the question was leading when designing the survey, but wanted to use the survey to educate the public. As such, one of the purposes of the study is to educate residents about the landfill website.

Use of Social Media

Social media websites such as Facebook and Twitter may be effective outreach methods as more than 55% of respondents use social media at least weekly. 24% of respondents reported they do not use social media sites and 19% reported they utilize social media on a monthly basis.
Use of Email Newsletters

The use of email newsletters (e-blasts) may be an effective outreach method as 38% of respondents’ provided their email address and indicated they were interested in receiving one email per month about upcoming free disposal/ recycling events and tips.
Knowledge of Reuse of Available Products (REAP) Mobile and Permanent Facility

The REAP mobile trailer was present at the Tehama District Fair and the Dairyville Festival in September and October 2012 where the survey was administered. This may have affected the results of the survey question, ‘Did you know you can access unwanted, but usable paints, stains, cleaning products, automotive fluids and much more for free at the landfill’s REAP facility and during select Farmers’ Markets?’. 53% of survey respondents reported they knew about the REAP mobile and permanent facility. 47% reported they did not know about the REAP facilities.

Overall knowledge of the REAP mobile and Permanent Facility is highest among residents 63 and older, as 67% of this age category reported they knew you can access paints, stains, cleaning products, automotive fluids and much more for free at the landfill’s REAP facility and during select Farmers’ Markets. Less than 43% of respondents in the 18-30 age bracket knew they could access reuse products for free at the landfill’s REAP facility and during select Farmers’ Markets. This may be due a larger frequency of persons 63 and older at events where the Agency conducts outreach. Residents of the unincorporated County were not as knowledgeable about the REAP mobile and permanent facility as residents of the cities of Red Bluff, Corning, and Tehama, as only 35% of unincorporated County respondents knew of the facility. This may be attributed to unincorporated County residents lack of attendance at community events the Agency conducted REAP outreach at.

Males were slightly more knowledgeable about the REAP mobile and permanent facility than females, as 54% of males and 47% of females knew you can access paints, stains, cleaning products, automotive fluids and much more for free at the landfill’s REAP facility and during select Farmers’ Markets. This may be attributed to a greater frequency of males utilizing the landfill.
Knowledge of ABOP Facility

68% of respondents reported they knew residents may drop-off use oil, filters, latex paint, antifreeze and auto batteries at the landfill (ABOP facilities) at no charge. Residents of the incorporated cities of Red Bluff, Corning and Tehama were more knowledgeable of the ABOP facilities than residents of the unincorporated County, as 53% of respondents from the unincorporated area knew about the ABOP facilities at the landfill. 73%, 80%, and 100% of the respondents from the cities of Red Bluff, Corning, and Tehama knew about the ABOP facility free disposal opportunities, respectively.

72% of male and 59% of female of respondents reported they knew residents may drop-off use oil, filters, latex paint, antifreeze and auto batteries at the landfill (ABOP facilities) at no charge. This may be attributed to a greater frequency of males utilizing the landfill.

Community Member Presentation Survey

Gender and Age Distribution

Of a total of 18 respondents, 56% reported they were male, 17% were female, and 28% declined to state. 61% of respondents reported they were over the age of 61. 17% and 22% responded they were between the ages of 31-45 and 46-60, respectively, the preponderance of male respondents over the age of 61 may be due to the age distribution and gender of City Council members, Board of Supervisors, and members of the Chamber of Commerce.
Purchasing and Storage Habits

Over 44% of respondents report they agree or strongly agree with the statement ‘when purchasing paint, I buy more than I need for my project’. 28% of respondents report they disagree or strongly disagree with the same statement.

67% of respondents disagreed or strongly disagreed with the statement ‘I purchase products that are on sale, even if I don’t necessarily need the item at the moment’.
22% of respondents have 1-5 gallons of paint stored. 67% of respondents have six or more gallons of paint stored. 11% of respondents have no paint at all stored. Survey respondents appear to be storing quite a bit of paint.

![Number of gallons of paint respondents' have stored (%)](chart)

39% of respondents reported they agree or strongly agree with the statement ‘I research Household Hazardous Waste (HHW) products before purchasing, such as cleaning supplies and paints’. 33% report they are neutral, and 28% state they disagree or strongly disagree with such a statement.

![Research before purchasing HHW products](chart)

72% of survey respondents reported they agree or strongly agree with the statement “I read caution labels on products before purchasing them’. Less than 28% of survey respondents disagreed or strongly disagreed with such a statement.
**Knowledgeable about Reuse**

After listening to the presentation sixty-seven percent (67%) of survey respondents could name a place how to gain unwanted but usable hazardous products. Six percent (6%) could not name a place to gain hazardous products for reuse and twenty-eight percent (28%) did not respond.
Knowledge about HHW disposal

After listening to the presentation 67% of survey respondents knew where to dispose of their HHW. 6% did not list a correct place to dispose of the HHW and 28% did not respond.

% of Respondents that Knew where to take HHW Post Presentation

Industry Representative Survey

Gender and Age Distribution

Of a total of 18 respondents, 28% reported they were male, 67% were female, and 5.6% declined to state. 39% of respondents reported they were between the ages of 18 and 30. 22% and 28% of respondents stated they were between the ages of 31-45 and 46-60, respectively. The large percentage of respondents between the ages of 18 and 30 may be due to a younger audience at the California State University, Chico ‘This Way to Sustainability’ conference.
Purchasing and Storage Habits

Over 44% of respondents report they agree or strongly agree with the statement ‘when purchasing paint, I buy more than I need for my project’. 39% of respondents were neutral with the statement, and 17% report they disagree with the same statement.
39% of respondents equally agreed and disagreed with the statement ‘I purchase products that are on sale, even if I don’t necessarily need the item at the moment’.

![Purchase Products on Sale without Need](chart)

44% of respondents have 1-5 gallons of paint stored. 33% of respondents have six or more gallons of paint stored. 17% of respondents have no paint at all stored. The percentage of respondents with very little paint stored at home may be due to the younger demographic responding to the survey from the CSU, Chico ‘This Waste to Sustainability’ conference presentation.

![Quantity of Paint in Gallons Stored (% of respondents)](chart)
39% of respondents reported they agree or strongly agree with the statement ‘I research Household Hazardous Waste (HHW) products before purchasing, such as cleaning supplies and paints’. 17% report they are neutral, and 45% state they disagree or strongly disagree with such a statement.

78% of survey respondents reported they agree or strongly agree with the statement ‘I read caution labels on products before purchasing them’. Less than 12% of survey respondents disagreed or strongly disagreed with such a statement. This may be due to a higher knowledge of hazardous products by industry representatives and the student populace.
Knowledge about Reuse

Prior to listening to the presentation 56% of survey respondents could name a place to gain unwanted but usable hazardous products. 11% could not name a place to gain hazardous products for reuse and 33% did not respond. The high percentage of respondents’ that are knowledgeable about reuse opportunities may be due to their involvement in the solid waste field.

Reuse is Cost Effective

72% of respondents agreed or strongly agreed with the statement ‘seeking alternative reuse opportunities before purchasing products is cost effective for me and my community’. No respondents agreed or disagreed, and 6% were neutral with such a statement.
Program Duplication

44% of respondents agreed with the statement ‘A mobile reuse facility for hazardous products is feasible in my community’. 28% of respondents felt such a facility was unfeasible in their community, and 28% did not respond. Those that stated a mobile reuse facility was unfeasible commented their population numbers are so low that such a facility is unwarranted, and that they have a hard time keeping their permanent reuse facility stocked.
Discussion and Conclusions

Highlighted below is a brief discussion of the results of the three surveys.

**Booth Survey**

Internet and social media are being used heavily amongst the general Tehama County populace. 86% of respondents’ reported they access the internet at least one time per week. More than 47% of respondents reported they access the internet ten or more times per week. Due to heavy usage of the internet by the public, internet outreach may be an effective medium, especially to females. Females access the internet more regularly than males, as 63% and 33% report they access the internet more than ten times per week, respectively. Social media websites such as Facebook and Twitter may also be effective outreach methods as more than 55% of respondents use social media at least weekly.

The use of email newsletters (e-blasts) may be an effective outreach method as 38% of respondents’ provided their email address and indicated they were interested in receiving one email per month about upcoming free disposal/ recycling events and tips.

Overall knowledge of the REAP mobile and Permanent Facility is highest among residents 63 and older, as 67% of this age category reported they knew you can access paints, stains, cleaning products, automotive fluids and much more for free at the landfill’s REAP facility and during select Farmers’ Markets. Less than 43% of respondents in the 18-30 age bracket knew they could access reuse products for free at the landfill’s REAP facility and during select Farmers’ Markets. This may be due to a larger frequency of persons 63 and older at events where the Agency conducts outreach. Further outreach is needed to educate the 18-30 age demographic.

Residents of the unincorporated County were not as knowledgeable about the REAP mobile and permanent facility as residents of the cities of Red Bluff, Corning, and Tehama, as only 35% of unincorporated County respondents knew of the facility. Further outreach is needed in the unincorporated County area.

**Community Member Survey**

Over 44% of respondents report they agree or strongly agree with the statement ‘when purchasing paint, I buy more than I need for my project’. Further educational efforts may encourage residents to purchase the ‘right amount’ of paint for their projects. These efforts will lead to a reduction in end-of-life management costs.

72% of survey respondents’ reported they agree or strongly agree with the statement “I read caution labels on products before purchasing them”. While this response rate may
be due to respondent bias, it does appear the respondents’ are cautious about the products they purchase.

The presentations to the community members appear to be effective, since after listening to the presentation, 67% of survey respondents knew where to dispose of their HHW.

*Industry Representative Survey*

Over 44% of respondents report they agree or strongly agree with the statement ‘when purchasing paint, I buy more than I need for my project’. Further educational efforts statewide may need to be conducted to encourage residents to purchase the ‘right amount’ of paint. These efforts will lead to a reduction in end-of-life management costs.

78% of survey respondents reported they agree or strongly agree with the statement “I read caution labels on products before purchasing them’. While this response rate may be due to respondent bias, it does appear industry representatives may be cautious about the products they purchase.

Prior to listening to the presentation only 56% of survey respondents could name a place to gain unwanted but usable hazardous products. Further educational efforts aimed at the importance of ‘reuse’ may be warranted, as it is second on the 4R hierarchy.

It appears respondents’ felt reuse is cost effective, as 72% of respondents agreed or strongly agreed with the statement ‘seeking alternative reuse opportunities before purchasing products is cost effective for me and my community’.

44% of respondents agreed with the statement ‘A mobile reuse facility for hazardous products is feasible in my community’. This is positive news for reuse. Perhaps more communities will duplicate the efforts of the mobile REAP program in their communities.
Appendix B
Appendix C