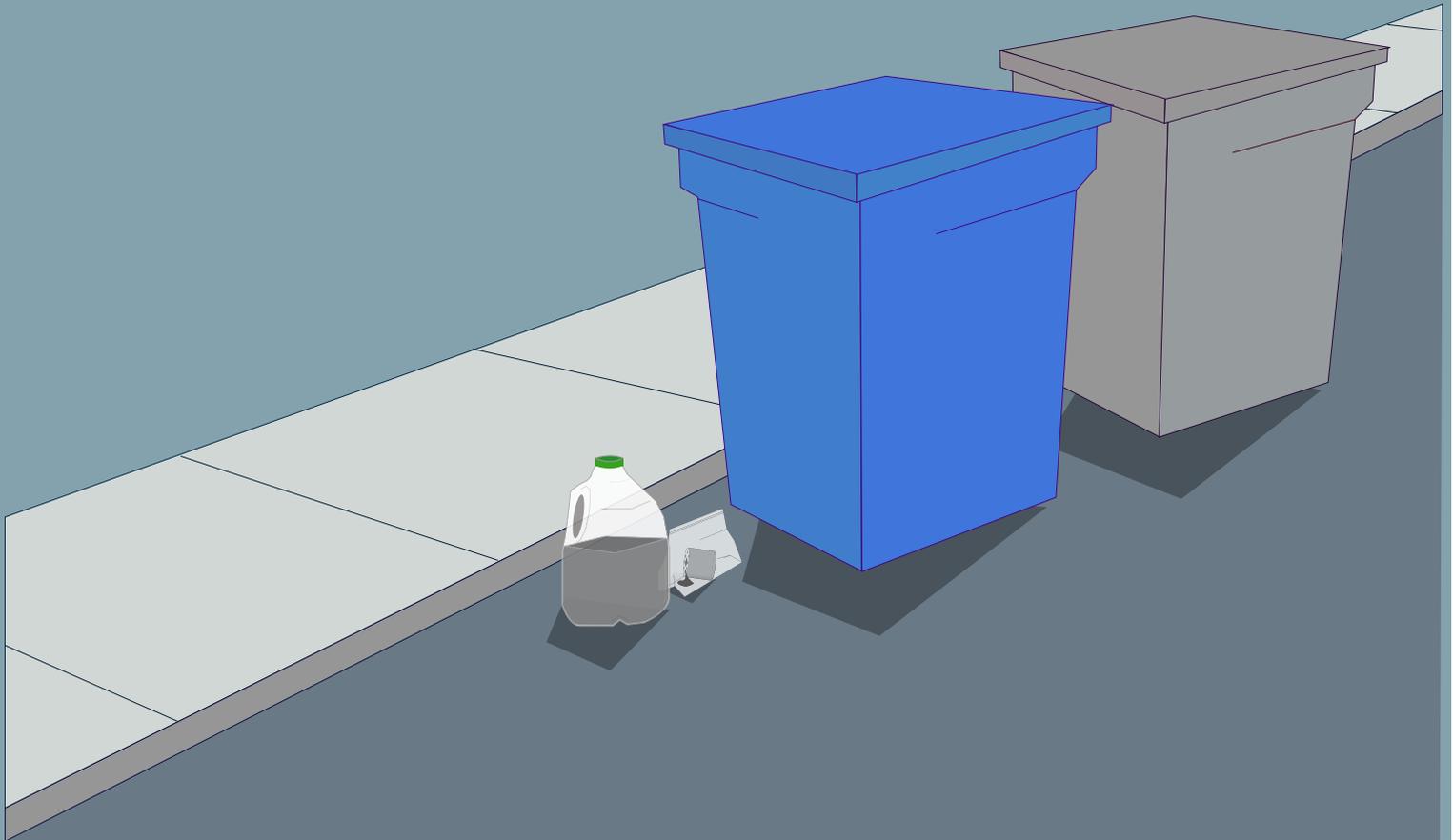


# Curbside Collection of Used Oil and Oil Filters

Targeting Success: Guidance for California Jurisdictions



Prepared for:



California Department of Resources Recycling and Recovery

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## Preface

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This document is based on research on factors affecting the success of used oil/filter curbside collection programs, sponsored by CalRecycle and conducted by Cal Poly during the period 2014 to 2016. The methodology consisted of a search of existing literature and other information sources; discussions with attendees at Household Hazardous Waste Information Exchanges and at the 2015 Used Oil/HHW Training & Conference; an online survey of jurisdictions; follow-up interviews with a selection of survey respondents; a statistical analysis of demographic variables associated with high collection rates; and additional information-gathering from jurisdictions, waste haulers, and others involved in used oil/filter collection.

After pre-testing, the online jurisdictional survey was distributed in August 2014 to contacts identified by CalRecycle staff in about 216 jurisdictions. Following reminders, a total of 112 completed questionnaires were received (slightly more than a 50 percent response rate). About 46 percent of jurisdictions that returned completed questionnaires have existing used oil/filter curbside collection programs, compared to 44 percent of all jurisdictions on the contact list, i.e., the responders and non-responders do not differ significantly in whether or not they have existing programs.

Results of the survey are provided throughout the document in gray boxes where applicable.



# Introduction

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***The purpose of this guidebook is to help local jurisdictions in California implement curbside collection of used oil and/or filters or to improve existing programs.***

This guidebook provides readers with knowledge of:

1. The State's reasons for seeking to prevent the improper disposal of used oil and used oil filters.\*
2. The potential benefits of establishing and/or maintaining a used oil/filter curbside collection program.\*
3. Factors likely to affect whether a used oil/filter curbside collection program is right for a particular jurisdiction.\*
4. The basic steps involved in establishing and maintaining a used oil/filter curbside collection program, the options commonly used to perform these steps, and the advantages/ disadvantages associated with each of these options.
5. Opportunities, challenges, and constraints likely to be encountered in establishing, maintaining, and evaluating a used oil/filter curbside collection program.

*\*Outcomes marked with an asterisk are likely to be “refreshers” for those jurisdictions with existing curbside collection programs.*

## ***The Importance of Curbside Collection Programs***

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### **1. Curbside collection programs help to prevent improper disposal.**

- Motor oil is a hazardous waste. Poured onto the ground or into storm drains or tossed into trash cans (even in a sealed container), it can pollute soil, groundwater, streams, and rivers.
- It takes only 1 gallon of used motor oil to pollute 1 million gallons of water! Oil is insoluble and if not recycled properly finds its way into oceans, lakes, and other bodies of water, harming fish and other aquatic life.
- Used motor oil never wears out; it just gets dirty. However, it can be recycled, cleaned, and used again. Recycling used motor oil conserves a natural resource (oil) and is good for the environment, too.

- Most oil filters contain used oil and steel, and are completely recyclable.<sup>1</sup>

- California generates 67 million used automotive filters per year.
- Most filters have about a pound of reusable steel. All the filters sold annually in California can be recycled into 67 million pounds of steel, enough to build three large sports stadiums.



- Even after draining, used oil filters contain on average more than 10 ounces of used oil. They are therefore a hazardous waste (banned from landfills) and must be properly recycled.
- All of the trapped motor oil in filters that aren't properly recycled adds up to more than 2 million gallons of used oil going into the environment, the water system, or landfills in California each year.

**2. Curbside collection *complements* the availability of collection centers (including Certified Collection Centers, which are certified by the State as meeting certain operating requirements; see the link to Certified Collection Center Basics in the Bibliography), i.e., it results in more used oil/filters collected than via collection centers alone.**

- Collection centers and curbside collection are the two main mechanisms for collecting used oil and filters in California.
- Past research by the Public Research Institute (2005) suggests that:
  - “Both center collection and curbside collection substantially reduce improper disposal by those DIYers (Do It Yourselfers) for whom they are both convenient and available.”
  - “Collection via centers has been more widely implemented and receives much more used oil in total, but curbside collection is much more effective at reducing improper disposal.”

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<sup>1</sup>In some oil filters, the steel is replaced by cardboard or plastic. These filters are not recyclable.

- “Where curbside collection is available to DIYers, it is very effective, reducing estimated improper disposal to zero ... Its shortcoming at present is that it is typically not available to DIYers who reside in multi-family dwellings and typically not available to younger DIYers ... who generate most of the improperly disposed used oil.”

### 3. Other considerations

- Anecdotally, customers appreciate curbside collection, according to several jurisdictions (interviewed during preparation of this guidance) that have implemented it.
- Curbside collection provides a good public relations opportunity for private haulers that offer it, because it suggests that the haulers are interested in protecting the environment and because the service is typically popular among those who use it.

### ***Using This Guide***

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This guide is intended to present a series of implementation steps that jurisdictions can follow to assist in: determining the appropriateness of starting a used oil and oil filter curbside collection program; developing an operations program; understanding related regulations and administrative requirements of operating such a program; and ensuring proper outreach and long term sustainability of the program.

Throughout the guide, relevant survey results (survey details are discussed in the preface) are presented in **gray boxes** and helpful program tips are included in **red boxes**. Links to useful websites are provided in white boxes with **blue outline**.

Some of the implementation steps are further divided into sub-steps and include additional discussions with helpful supporting information related to the step, and well as operational information from jurisdictions currently offering used oil and oil filter curbside collection programs.

While the order of these steps was developed based on the results of research findings, jurisdictions may choose to change the order in which they follow the implementation process. Research findings do suggest, however, that use of all implementation steps presented in this guidance may contribute to increased program success.

A summary of the implementation steps highlighting the core component of each step is included in Appendix C.

“It’s probably the most rewarding program we have done to date.”

*Bob Douthitt, speaking about curbside oil collections  
Imperial Valley Resource Management Agency*

NOTES:

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# Implementing a Curbside Used Oil/Filter Collection Program

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## During the Implementation Process

Involve all relevant stakeholders in the preparation of a written plan, including civic leaders, staff members with solid waste management responsibilities, community residents, owners/managers of multi-family complexes, and private haulers (as applicable). For this purpose you may want to enlist the help of a professional in your planning department, who can bring specialized expertise to the process.

## *An Overview of Implementation Steps*

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The following implementation steps have been identified as the key elements to achieving success with a curbside collection program for used oil and oil filters. While implementation of these steps will vary from jurisdiction to jurisdiction, following some aspect of each step is likely to help the implementation and long term operation of a successful program.

1. Decide if curbside collection is right for your jurisdiction
2. Identify the program champion
3. Set goals and objectives
4. Develop support for your program
5. Contact private hauler(s)
6. Determine curbside operations
7. Determine outreach strategies
8. Consider Community Based Social Marketing
9. Develop program financing
10. Understand administrative and regulatory requirements
11. Evaluate your program
12. Ensure program sustainability

## ***1. Decide if curbside collection is right for your jurisdiction***

---

**If your jurisdiction currently offers curbside garbage collection, it is likely to be a good candidate for implementing a curbside used oil/filter collection program unless its population includes very few DIYers.**

*As part of this decision-making process, jurisdictions should consider the following:*

### **1.1 Is curbside collection of garbage (and possibly recyclables and/or green wastes) already offered in all or some areas of your jurisdiction?**

This is not a prerequisite, but it does help to demonstrate the feasibility of offering curbside used oil/filter collection in the areas served and may provide the means of doing so. Typically, the same trucks may be used, with modifications.

However, curbside collection of garbage/recyclables/green wastes, as well as of used oil and filters, is less likely to be feasible in very rural areas where residences are widely dispersed.

### **1.2 How many DIYers are located in your jurisdiction and, of these, how many are likely to dispose of oil improperly?**

Knowledge of DIYers in California counties - who they are and their disposal habits - is based largely on a statewide survey conducted in 2001 for the former California Integrated Waste Management Board. Key findings, reported by the Public Research Institute (2005), were as follows:

- “Most DIYers change oil only for vehicles in their own households, but ‘shade-tree mechanics’ (STM - see List of Acronyms) change oil on vehicles outside their households as well.”
- Many STMs dispose of 25 gallons or more of used oil per year (p.1).
- “At least among US-born DIYers, STMs are more likely than other DIYers to dispose improperly.”
- “High-volume oil changing and improper disposal, mainly by STMs, is concentrated at younger ages and in households with low and moderate income.”

## Targeting Success – Guidance for California Jurisdictions

- “Both DIY and STM activity decline with age, especially over age 50. However, there are still a great many middle-aged DIYers.”
- “DIY and STM rates are not strongly related to income except that they both drop off sharply in households with incomes of \$100,000 or more. Households with incomes under \$70,000 dispose of about four-fifths of improperly disposed oil.”
- “The DIY rate is greater in rural counties” but “most STMs, other DIYers, and improperly disposed oil are in the most urban counties, partly because of the distribution of population but also because average gallons of oil improperly disposed are higher in the most urban counties.”
- New immigrants to California typically arrive without knowledge of used oil recycling and dispose improperly at substantially higher rates.



Source: San Benito County <http://www.cosb.us/county-departments/integrated-waste-management/oil-recycling/#.V4apvaJBnXA>

Estimates of DIY households and STM households in 2004 by county are provided in the Public Research Institute report, which includes (in the text and an appendix) information about the estimation methodology. The report provides guidance to counties and cities on how to use the estimates, indicating some of the challenges involved.

Because of the time that has elapsed since the survey and publication of the report, the validity of the estimates for the present day is uncertain, even if adjustments are made for changes in overall and immigrant populations.

Other circumstances have changed too. For example, because of increasing complexity of engine design, it has become more difficult for an unskilled car owner to be a DIYer, and there are many, relatively inexpensive, commercial “fast-lube” services available. Nevertheless, CalRecycle estimates that large quantities of DIY and STM oil are still generated and, in many cases, improperly disposed.

### **Survey Results: Household Participation**

Some jurisdictions believe that household participation would be too low to justify a curbside collection program (69% of survey respondents without such a program [n=59] cited this as a “significant” or “extremely significant” reason for not currently offering a program), but it is unclear how this is known unless a detailed study has been conducted.

## **1.3 Are there DIY populations—especially those living in single-family residences - that are not well served by collection centers?**

### **Survey Results: Drop-Off Centers**

A perception that existing drop-off centers (such as CCCs and Antifreeze, Battery, Oil, and Paint collection facilities—ABOPs) are convenient and adequate was cited by 6 survey respondents [n=59] as a justification for not offering curbside collection while a few others mentioned it in phone interviews.

There is no generally agreed-upon understanding of what “well served” means in this context. Distance of the nearest collection center from a residence is likely to be a factor, but whether there is a threshold of 1 mile, 5 miles, or some other number is unknown. Past research has measured “convenience” directly by asking residents subjectively to apply a rating of 0-10 in which 0 is “not at all,” 5 is “somewhat,” and 10 is “very.” You might check if your jurisdiction has performed such a measurement, or perform one yourself.

You might be able to reach a conclusion as to whether the DIYers in your jurisdiction are “well served” by collection centers by looking at their geographical distribution on a map. A GIS layer has been developed for this purpose and may be viewed interactively at <http://www.calrecycle.ca.gov/usedoil/maps/>

Even if there are collection centers within easy reach of most residences, it may be possible by means of a curbside program to increase the quantities of used oil and filters collected.

For information on Certified Collection Center locations around the state, visit: <http://www.calrecycle.ca.gov/UsedOil/CertCenters/>

#### **1.4 Does your jurisdiction have demographic characteristics that suggest it might be successful in offering a used oil/filter curbside collection program?**

The study used statistical analysis to explore whether a jurisdiction’s demographic characteristics (such as median household income, median age, percent foreign-born, percent urban, percent of housing units that are single) are associated with success in offering a curbside collection program. Unfortunately, because of the relatively small number (in absolute terms) of jurisdictions with CC programs, it proved difficult to reach firm conclusions as to which of many possible characteristics might be the most relevant.

Nevertheless, the analysis suggested that a jurisdiction trying to decide whether to implement a curbside collection might pay special attention to:

- The percentage of its population having a high school education or more since, holding other variables constant, a higher percentage seems to be associated with more oil being collected curbside; and
- The population’s median age, the percentage of the population that is foreign-born, and the percentage of single-family residences in the jurisdiction<sup>2</sup> since, holding other variables constant, higher numbers in each case seem to be associated with less oil being collected curbside.

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<sup>2</sup> It is unexpected that a larger percentage of single family residences would be associated with less oil being collected curbside (implying that more oil is collected curbside in jurisdictions with a larger percentage of multi-family residences) since curbside usually doesn't extend to multi-family residences.

A jurisdiction wishing to apply the results of this analysis might compare its values for the characteristics identified here with the values of other jurisdictions known to offer more or less successful CC programs, with the caveat that the underlying statistical evidence for the results is not strong.

So, for example, if your jurisdiction’s population has a median age higher than that of a neighboring jurisdiction, you might expect that, other things being equal, a CC program offered by you would be less successful than your neighbor’s. Of course, in practice, many factors other than demographics are also likely to influence success.

Of further note is the finding that median household income does not appear to be a significant factor. This finding is counter to the notion that fewer DIYers (and therefore less used oil at households) are likely to be present in more affluent jurisdictions.

In an effort to identify a list of jurisdictions without existing curbside programs that might be the best candidates for implementing one (i.e., that might be expected to collect the most used oil curbside per household), a different statistical approach was employed. Specifically, the approach looked for a match between a combined set (or “vector”) of demographic characteristics of jurisdictions known to offer successful CC programs and the same set of characteristics of other jurisdictions without programs.

More details of the demographic analyses and results are presented in Appendix A.

### **1.5 Is there evidence of improper disposal of used oil and/or filters in your jurisdiction?**

Evidence of improper disposal may come directly from reports of abandoned oil (e.g., in containers by the roadside, in fields, etc.) or the consequences thereof (e.g., contamination of land, waterways, etc.).

Through their own or public observation, governmental agencies such as fire, police, environmental protection (especially water resources), public works, transportation, and public health are likely to be aware of significant damage caused by improper oil disposal.

To obtain used oil collection data around the state, visit:  
<http://www.calrecycle.ca.gov/UsedOil/recycle.htm> Census  
data on numbers of households are available from  
<http://www.census-charts.com/HF/California.html>

If the relevant data can be obtained (e.g., from reports made to the State), the total used oil quantities that are currently being collected per household at CCCs, HHW facilities, agricultural oil collection sites, marinas, special events, and non-certified collection centers might be compared to the total quantities collected per household in other, similar jurisdictions, with or without existing curbside collection programs.

This information might provide a means of estimating whether a significant amount of used oil is being disposed improperly.

Although many factors may influence the quantities of used oil generated and collected in different places, significant differences in these quantities might suggest the need for more opportunities for collection and recycling—such as curbside collection—in your jurisdiction.

“We’ve been doing this [program] for 20 years. I don’t think there is anything I would change, because this works very well.”

*Rexie LeStrange, City of Manteca  
Speaking about Manteca’s used oil/filter  
curbside collection program*

**NOTES:**

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## 2. Identify the program champion

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If curbside collection seems like a possible option for your jurisdiction, identify one or more people who will lead the efforts to further assess the option.

**Enthusiastic** and **sustained leadership** at both management and operational levels, is an **important ingredient of successful curbside collection programs**.

### Key Ingredient - An Enthusiastic Champion

Project research suggests that **having a champion for the program may be the most important element of a successful program**.

Many of the more successful programs currently are championed by **enthusiastic individuals**, some of whom have been in their positions for a long time.

Furthermore, anecdotal evidence suggests that jurisdictions that do not believe in the value and importance of offering an oil/filter curbside collection program, or simply don't want to do it, generally seem to find reasons for not offering one.

However, the converse also seems to be true: **Jurisdictions that do believe in a curbside collection program's value and importance seem to have little or no difficulty in offering one**.

A special issue may arise when the responsibility for used oil/filter management is held by a different leader than the one who is responsible for the management of garbage and recyclables such as paper, metals, glass, and plastics.

It is essential for such individuals to communicate internally with one another, so that opportunities for adding used oil/filter curbside collection to the regular pick-up of garbage/recyclables are not inadvertently overlooked.

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### 3. Set goals and objectives

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Decide on goals and objectives for a collection program in your jurisdiction. In addition to providing direction for program implementation, having explicit goals and objectives in place provides a reference point for subsequent evaluation of the program (see discussion in Implementation Step 11).

To the extent possible, objectives (at least) should be *measurable*, and steps should be taken before and during implementation to establish both baseline and ongoing measurements.

#### Examples of possible goals are:

- “Reduce the illegal disposal of used oil and recycle and reclaim used oil to the greatest extent possible” (italics added). This is the wording used in the California statute that governs used oil recovery and in many locations is most likely to be achieved using curbside collection. Note that cost is not explicitly mentioned.
- Offer households curbside collection of used oil and filters at the lowest cost possible.

#### Examples of possible objectives are:

- Maximize the quantities of used oil/filters collected per year.
- Collect similar quantities of oil and/or filters annually per household to those collected by other jurisdictions with similar demographic characteristics (such as median household income, median age, percent foreign-born, percent urban, percent of housing units that are single).
- Provide used oil/filter curbside collection to all households with existing garbage/recyclables pick-up service with no increase (or minimal increase) in existing fees.



**NOTES:**

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## ***4. Develop support for your program***

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**Develop a support network for implementing your curbside collection program. The support team can come from:**

- Political and administrative leadership
- Residents
- Waste hauler(s)
- Local non-governmental organizations (NGOs) including environmental and other community groups
- Other jurisdictions

### **Key Ingredient: Support Network**

Strong support from your network **will be essential** if the program is to be **successfully implemented**.

#### **4.1 Do your homework so you can make convincing arguments as to why the collection of used oil and filters needs to be increased and why curbside collection is likely to help in your jurisdiction.**

- Be ready to compare the likely cost per household of adding curbside collection to the costs likely to result from improper disposal. Point out that the addition of used oil/filter collection to an existing garbage/recyclables/green waste pick-up service (where applicable) would result in only a small increase, if any, to the existing pick-up fee.
- Be prepared to explain that the improper disposal of used oil to land or water can cause irreparable damage to the environment, including the loss of wildlife, and can cost thousands of dollars or more in cleanup expenses.
- Be ready to explain that curbside pick-up results in more used oil and filters being collected than is accomplished by collection centers alone, in part because curbside collection is much more convenient.

#### **4.2 Communicate with prospective supporters, individually or collectively, preferably face to face. A well-publicized community workshop is an option.**

### 4.3 Try to anticipate and prepare valid counter-arguments to likely objections.

- The survey revealed that those offering programs often use used oil payments to help pay for capital equipment (e.g., trucks or racks on trucks), supplies of containers, and labor. A few make cash payments to haulers. Those offering programs generally believe that the incremental cost of picking up used oil/filters is relatively small if pick-up is already provided for garbage/recyclables/green waste.

#### Survey Results: Program Cost

95 percent of survey respondents without curbside collection programs [n=59] cited cost as a “significant” or “extremely significant” reason that they are not currently offering this service because it would be “too costly.” **However, those who currently offer such programs typically do not cite costs as an issue**, even if they operate their own pick-up vehicles rather than using a private hauler.

#### How Much Does Curbside Collection Cost?

Unfortunately, very little reliable data are available, partly because jurisdictions and haulers differ in their accounting systems and the ways in which costs are allocated among different categories of expenditures.

A simple calculation suggests that the costs in a typical jurisdiction are unlikely to amount to a significant proportion of the overall costs of picking up garbage/recyclables/green waste. Assume that:

- A typical collection route involves pick-up from 700 households.
- 17.6 percent of all households in California are DIY.  
*(This estimate is based on a 2005 study by San Francisco State University; the percentage has possibly decreased since then.)*
- California households had an average of 2.3 vehicles each in 2012.  
*(This information was retrieved at noon on Nov. 17, 2015, from <http://www.clrsearch.com/Sacramento-Demographics/CA/Number-of-Vehicles-per-Household>.)*
- Oil and filters are changed in each vehicle twice per year on average.  
*(This estimate is probably high; the frequency may be dropping as it has become better known that necessarily requiring an oil change every 3,000 miles is a myth.)*

### **How Much Does Curbside Collection Cost?** *(continued)*

- **Based on these assumptions, there are**
  - about 570 oil changes per year by DIYers,
  - requiring about 11 pick-ups per weekly route, and
  - taking about 6 minutes per weekly route.

Obviously, the assumptions underlying this calculation may not hold in your jurisdiction. For example, the number of households on a collection route may be significantly different. Furthermore, in one community many of the DIYers seem to be located on a single collection route (and not on others), causing the amount of time spent on picking up used oil/filters on that particular route to be unusually large. You are recommended to do your own calculation based on local circumstances.

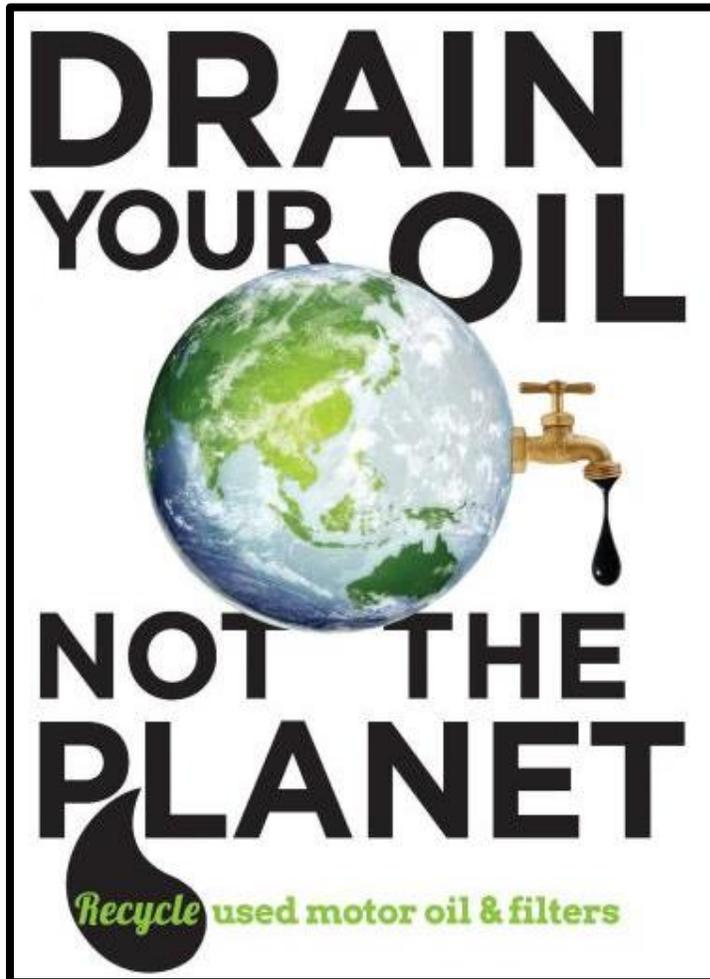
**There are also one-time costs, as applicable (numbers given as illustrations only):**

- Storage racks for used oil/filters on vehicles used to collect trash or recyclables (*approximately \$600 per vehicle*)
- Pickup truck specifically for used oil/filter curbside collection (approximately \$65,500 for vehicle outfitted with a 100-gallon tank and pneumatic pumping system as well as a stake bed and lift gate to accommodate the hauling of abandoned oil barrels)
- Tanks (roughly \$14,000 for a 1,000-gallon, double-wall, steel waste oil storage tank with pumping system, delivered)
- Filter crusher (prices range from about \$1,300 to more than \$10,000)
- Contamination “sniffer” (about \$1,000)

Additionally, if the jurisdiction provides containers for used oil and filters:

- \$4,000 for 10,000 filter bags
- \$19,000 for 3,000 containers

- If a curbside collection program is not offered, there remains the question of what happens to the used oil and filters not collected – they are possibly illegally disposed of, potentially causing more damage. Additionally, project research found no evidence of water contamination of oil being a significant problem in jurisdictions offering curbside collection programs.
- Emphasize (especially to residents) the convenience of curbside collection.



Source: San Mateo County - <http://www.flowstobay.org/usedoil>

#### 4.4 Address concerns about spills.

- Breakages of hydraulic hoses on trucks appear to be a common problem. Most programs use or require screw-top closures for used oil containers or ask that closures be taped down. Some “messy containers” or minor spills were reported, but none were reported that were major or that threatened storm water runoff.

- Drivers are (or should be) ***trained to clean up spills and carry spill kits***. When spills occur, members of the public usually report them immediately so they can quickly be addressed.

### **Survey Results: Potential for Spills**

85 percent of survey respondents without curbside collection programs [n=59] cited “fear of oil spills and/or water contamination of oil at the curbside” as a “significant” or “extremely significant” reason for not currently offering this service. However, there is no evidence that spills are a problem for existing programs.

### **Support Through Networking**

Some jurisdictions belong to active networks with other jurisdictions, often resulting in ideas and information being shared; staff being inspired to continue reaching for success as they see other jurisdictions successfully implementing curbside collection programs; and resources being pooled for outreach campaigns.

The networks include not only the HHW Information Exchanges facilitated by the jurisdictions, but also county or multi-county (regional) consortia such as the Sacramento Regional Recycling Group.

**NOTES:**

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## ***5. Contact private hauler(s)***

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**If your jurisdiction uses one or more private haulers to pick up garbage/recyclables, contact each one to discuss possible used oil/filter curbside collection pickup programs.**

Recognize that some haulers may be resistant to adding used oil/filter pickup, while others will be less resistant or even enthusiastic, provided that they do not lose money as a result.

Resistance may occur because some haulers may be understaffed; they may not want their drivers to get out of their trucks; or they may not want to place racks on their trucks.

**5.1 Point out that the number of used oil/filter pickups on a particular route on any given day is likely to be relatively small compared to the number of households placing out garbage and mixed recyclables, since individual DIYers are typically unlikely to make oil/filter changes more than a few times each year.**

**5.2 If you have franchise agreements with your haulers, you may want to consider the following in negotiating for an additional program:**

- Request that used oil/filter collection be added to the existing or a new franchise agreement, recognizing that the existing agreement may not expire for many years.
- Consider offering to pay equipment costs such as racks on trucks, oil storage tanks, etc. (See the subsequent section on Financing.)
- Be prepared to renegotiate the fee. It is typically best to do this during a routine rate review. Recognize that there may be all kinds of (typically political) barriers to doing this.
- Define parameters, such as the minimum frequency of service and other factors affecting residents' convenience, and provide examples of best practices, as appropriate, but leave operational details as much as possible to the hauler.

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- Build accountability into any agreement, i.e., ways of ensuring compliance with the parameters that you have defined. One way of doing this might be to require the establishment of a website or questionnaire inserted in the bill periodically to receive customer feedback, with regular reporting to your jurisdiction of comments received.



*San Miguel curbside oil collection program truck  
Photo: Bill Worrell*

- 5.3 If you have competing private haulers without franchise agreements, consider enacting a local ordinance requiring those who pick up trash in your jurisdiction also to pick up used oil and filters.**
- 5.4 Consider the option of having used oil/filter collection provided under a separate “turnkey” contract, if offered by the same or a different hauler.**

- A separate contract might be made contingent upon, and coterminous with, the jurisdiction’s receipt of a competitive grant from CalRecycle that would be used to pay for it, if the agency allows this (see Implementation Step 9). However, the approach might create a problem with regard to the long-term sustainability of used oil/filter collection (see discussion in Implementation Step 12).

### **Survey Results: Hauler Negotiations**

Less than half of the survey respondents without curbside collection programs (45 percent, n=55) cited “private hauler not willing to offer program” as a “significant” or “extremely significant” reason for not currently offering such a program.

Anecdotally, some haulers have no objection to picking up waste oil/filters as long as they at least break even, while some haulers were described as “enthusiastic” about participating.

However, the opinion that it may be “too difficult or costly to renegotiate contract with hauler” (64 percent of survey respondents without curbside collection programs [n=56]) was cited as a “significant” or “extremely significant” reason for not currently offering such a program. Hauler contracts are often long-term (more than 10 years) and may lack provisions to make renegotiation straightforward under changing circumstances.

In general, contract negotiation may be contentious, politically charged, and time-consuming. Implementing a curbside collection program might raise issues for drivers in unions.

**NOTES:**

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## 6. Curbside operations

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**Determine the type of curbside operation that might best suit your jurisdiction. Keep in mind that in general, the greater the convenience to households, the more used oil/filters will be collected. It also helps if everyone comes to view as “the normal way of doing things” that used oil/filters are collected curbside on a regular basis, along with trash and recyclables.**

*Note that, based on the survey and interviews, no single set of operational types is “the best” for all jurisdictions or even for jurisdictions having similar demographic or other characteristics.*

### **Summary of Needed Decisions About Curbside Operations:**

1. Same truck versus separate truck
2. Secure storage of used oil and filters on collection truck during pick-up
3. Requiring a call or online request in advance versus automatic pick-up
4. Standardized or unrestricted containers
5. Empty into tank on collection truck or transport in containers to consolidation and storage facility
6. System for dealing with spills
7. System for handling/storing oil/filters at consolidation and storage facility
8. Disposition of oil/filters collected
9. Incremental staffing needs

Note: A *consolidation and storage facility* is a facility where used oil is transferred from collection trucks and stored in a tank, and used oil filters are fully drained and held in storage, both awaiting transportation for recycling.

**6.1 Decide whether to collect oil and filters on the same truck used to pick up trash, recyclables, or green waste, or on a separate vehicle.**

- This decision depends, in part, on whether oil containers are emptied into a tank on the truck or standardized containers are used (see below).
- Determine if it is more efficient to minimize the number of truck runs by using the same vehicles to pick up used oil and filters as to pick up trash, recyclables or green waste, rather than using a separate vehicle for oil/filter collection.
- Note that if an automated collection vehicle is used, used oil/filter curbside collection requires the driver to stop the vehicle, apply brakes, jump down from the cab, make the pick-up, and return to the cab.
- Space on a standard truck for carrying used oil/filters is limited; a separate vehicle may have greater capacity.
- A separate vehicle may be on the route anyway, delivering containers for trash and recyclables, picking up those that are damaged or no longer needed, etc.



City of Paso Robles collects used oil on a separate truck  
Photo: Bill Worrell



*City of Manteca collects used oil on a recycling truck  
Photo: Cal Poly San Luis Obispo*

Standard oil container rack on recycling truck

**6.2 If you decide to use the same truck that is used to pick up trash, recyclables, or green waste, then you must also decide how to provide secure storage for oil and filters.**

- It is typically possible to add a rack, box, and/or tray, which may be off-the-shelf or custom-built, to a standard truck.
- Consider the age and condition of existing trucks since replacements, if likely to be purchased soon, may already be fitted with storage or may be easier to modify.

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*City of Ceres custom used oil container rack added to a recycling truck  
Photo: City of Ceres*

Rack added to truck



*City of Vallejo pre-fabricated used oil container rack added to a recycling truck  
Photo: Cal Poly San Luis Obispo*

rack added to trucks



*Used oil container rack on an “alley” recycling truck in American Canyon  
Photo: Cal Poly San Luis Obispo*

**6.3 Decide whether to require households to request pickup by phone or online, rather than automatically picking up any used oil/filters left at the curbside.**

- Regardless of whether pickup is automatic or whether a call or online request is required in advance, households may have to register one time before receiving the service.
- It is more convenient—meaning that more oil/filters are likely to be collected—if the household is required to do no more than leave used oil/filters at the curbside on a designated day.
- If a call or online request is not required, the driver of the regular garbage or recyclables truck—on seeing the used oil and/or filter placed out for collection on the designated day—may call in by radio or phone for a separate truck (if used) to be dispatched for pickup.
- Requiring a call or online request in advance means that staff time must be assigned to record requests and plan pickups.
- Requiring a call or online request in advance facilitates record-keeping and may allow more efficient deployment of equipment and labor to make pickups.

**Survey Results: Automatic Pick-Up versus Requested Pick-Up**

Note that, of those jurisdictions with the most oil collected curbside in 2012-13 that responded to the survey (n=30), 50 percent stated that oil/filter curbside pick-up is on request only.

Note also that 77 percent of all survey respondents (n=128) cited “oil/filter collected when placed on curb, without household having to request pick-up” as “likely” or “most likely” to “make a difference in achieving a successful curbside used oil/filter collection program.”



*City of Manteca used oil pickup  
Photo: Cal Poly San Luis Obispo*

**6.4 Decide whether to recommend or require households to use particular kinds of containers for placing used oil/filters at the curbside.**

- For example, you might specify standardized containers for used oil and/or filters, or you might allow the use of milk jugs for used oil.
- With standardized oil containers there is the option of incorporating a drain pan into the container. Standardized containers can also have information/instructions for their use printed directly on them or on labels.
- Not requiring standardized containers may be more convenient for residents but may result in the use of those that are less secure, heightening the risk of spills.
- At a minimum, a screw-top container is generally preferred for oil and a sturdy resealable bag for a filter. Black plastic oil containers appear to last longer than white or translucent ones, which tend to degrade more rapidly when exposed to sunlight. On the other hand, it is easier to spot contamination in a white or translucent container.



Standard Used Oil Container employed by San Luis Obispo County Integrated Waste Management Authority  
Photo: Cal Poly San Luis Obispo

### Curbside Oil Collection Program

1. Drain oil and oil filter directly into this oil container.
2. Place oil filter into an oil filter plastic bag or a regular plastic bag.
3. Call 805-543-0875 for San Luis Obispo, 805-489-4246 for south county communities, 805-528-7430 for north coast communities to schedule your pick-up.
4. Place full oil container and/or oil filter bag **curbside by 8:00am** on the morning of your regular collection day not before.
5. Your full container/bag will be exchanged for a new container/bag.

**Do not put antifreeze, brake fluid or other fluids in this container!**

This container is the property of the garbage company and is not for resale!  
Funding for this program is provided by CalRecycle and the SLO Co. IWMA

Container Use Label by San Luis Obispo County Integrated Waste Management Authority  
Photo: Bill Worrell

- Decide what to do if a household leaves out used oil and/or a filter without using the required standardized container[s] (options might include leaving the improper container[s] at the curb or picking up once while—in both cases—leaving an explanation of the correct procedure).
- Decide whether to supply the containers to households free of charge. One jurisdiction expressed concern about the possibility that residents of other jurisdictions would take advantage of a free supply of containers. This problem was not reported by any of those surveyed and, if encountered, could presumably be addressed by limiting the distribution to documented residents.
- Identify the distribution mechanism for the containers (e.g., the household should call to request drop-off or pick them up at an office or depot).



**Resealable oil filter bag with instructions provided by San Luis Obispo County Integrated Waste Management Authority**  
*Photo: Cal Poly San Luis Obispo*

### Survey Results: Collection Containers

Of those jurisdictions with the most oil collected curbside in 2012-13 that responded to the survey (n=30), 73 percent stated that containers are supplied to household free of charge. Furthermore, 88 percent of all survey respondents (n=130) cited “household provided with used oil container and filter bag” as “likely” or “most likely” to “make a difference in achieving a successful curbside used oil/filter collection program.”

**6.5 Decide whether to empty the oil into a tank on the route, or transport filled containers to a consolidation and storage facility.**

- If the oil is emptied on the route into a tank on the collection vehicle, the oil container(s) may be left on the curb for the households to reuse (some households apparently prefer to retain the same containers).
- If the filled oil containers are taken for emptying elsewhere, jurisdictions that supply containers may leave fresh unfilled ones at the curb.

**Survey Results: Emptying Containers On the Route**

Of those jurisdictions with the most oil collected curbside in 2012-13 that responded to the survey (n=30), 50 percent stated that oil-filled containers are emptied on the route and the same containers are returned to the households. Furthermore, 70 percent of all survey respondents (n=128) cited “if container provided, it is emptied on the route and the same container returned to household” as “likely” or “most likely” to “make a difference in achieving a successful curbside used oil/filter collection program.”



Standard Container Used by City of Folsom

Source: [http://www.folsom.ca.us/city\\_hall/depts/admin/solid\\_waste/hazmat/used\\_oil.asp](http://www.folsom.ca.us/city_hall/depts/admin/solid_waste/hazmat/used_oil.asp)

## 6.6 Anticipate spills

Spills are always possible, but no major spills were reported by jurisdictions/haulers offering existing curbside collection programs.

### Spills Are Not Typically Common

Problems with ruptures of hydraulic hoses on collection vehicles may be much more common than oil spills.

Includes a spill kit on the truck



*Spill Kit on Used Oil Pickup Truck  
Photo: Cal Poly San Luis Obispo*

- Spills/leakages may be limited by requiring screw-top oil containers and sturdy, tightly fastened filter bags, and encouraging households to lay containers flat with openings uphill.
- Collection vehicles should carry spill kits, with drivers trained in proper spill response.
- Your jurisdiction should have a plan (communicated up-front to all relevant staff) of what to do if a spill were to occur that could not readily be handled by the collection vehicle driver.

## 6.7 Establish a System for Handling/Storing Used Oil and Filters after Collection

- After curbside pickup, oil/filters are typically brought to a consolidation and storage facility or depot. Once at the facility they are handled differently depending on whether the oil containers were emptied on the route or transported full.
- If the oil containers were emptied on the route, the tank on the collection vehicle may be emptied (either by lifting and pouring, if feasible, or via hose) into a transfer tank from which the oil is pumped to a larger storage tank.

### Permitting and Storage Tank Size

The storage tank, which must be approved by the state (see Implementation Step 10), is typically no larger than 1,000 gallons in volume since a larger tank requires a special permit. The tank must have double walls or some other form of containment for spill control.



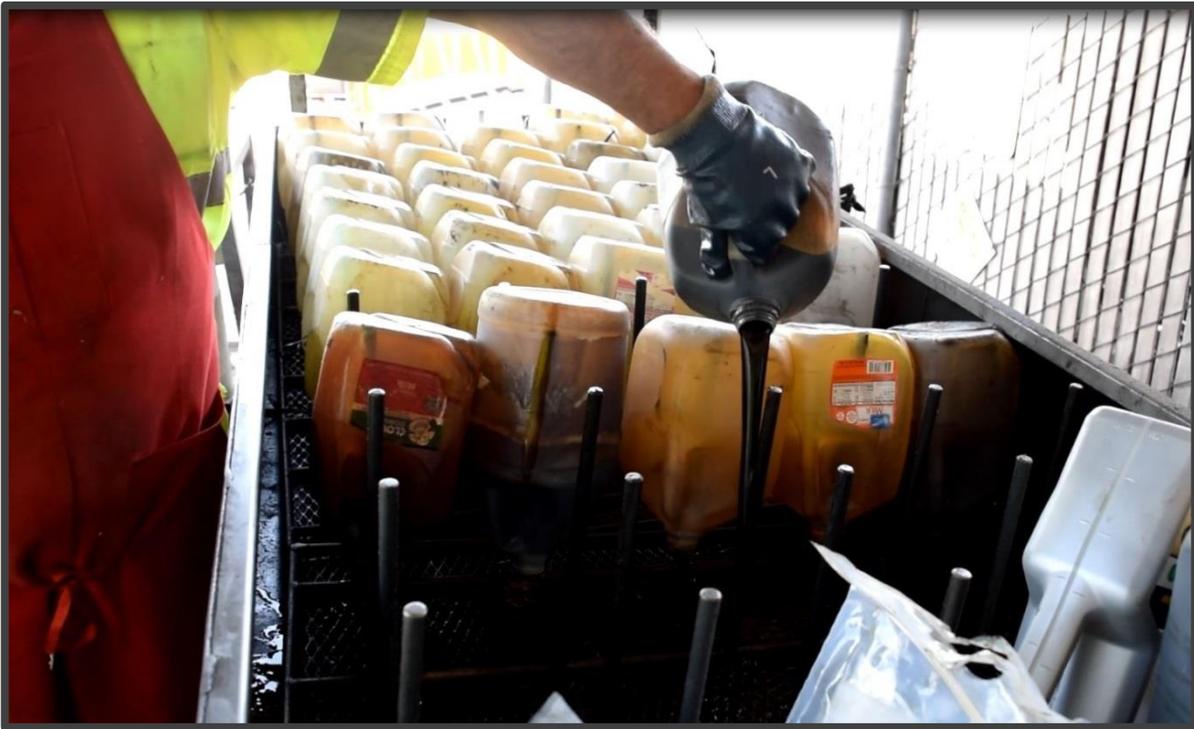
City of Manteca  
Used Oil Storage  
Tank

Photo: Cal Poly San  
Luis Obispo

- If the containers were transported full, they may be emptied by the driver or placed in a secure shelf/rack and/or in a fenced off area for processing by another employee.

## Targeting Success – Guidance for California Jurisdictions

- If containers are emptied by the driver, the system might include establishing a transfer tank with drain rack where the driver opens and pours containers and then places them upside-down to drain completely. The oil drained into this transfer tank is then pumped to a larger storage tank (as specified above).
- If containers are placed in a holding area, on a set schedule (e.g., daily or every other day, depending on demand), a facility employee takes them to a transfer tank with a drain rack, pours out the oil, and then places each container upside-down to drain completely. Oil draining into this transfer tank is pumped to a larger storage tank.



*City of Vallejo Used Oil Transfer Station and Container Drain Rack  
Photo: Cal Poly San Luis Obispo*

- Once completely drained, containers intended for reuse may be examined by a facility employee. Unless damaged or worn out, the emptied containers are then subjected to high-pressure spraying with hot water<sup>3</sup> or dipped into a cleansing bath (e.g., a 55-gallon drum containing solvent) before being placed in a holding area for pick-up by drivers to restock their trucks.

<sup>3</sup> The drain has a separator, and the waste water subsequently goes to a treatment plant.



*City of Manteca used oil drainage  
Photo: Cal Poly San Luis Obispo*

- A 55-gallon drum placed in the general vicinity of the transfer tank may be used to collect oil filters after they have been removed from their plastic bags, which are also recycled.
- If desired (especially if space for storage is tight and/or if this helps in negotiating pickup for recycling), oil filters may be crushed first using a mechanical filter crusher. Oil captured during crushing is poured into the transfer tank. The filter drums each hold approximately 250 uncrushed oil filters or 750 crushed filters.

## **6.8 Determine disposition of oil/filters collected**

- Identify/negotiate with companies offering to pick up bulk used oil and filters for recycling. (They may be different companies.) Depending on current market conditions, used oil may be sold for a per-gallon payment with free pickup, while filters may be picked up at no cost. However, based on the demand for used oil/filters at any particular time, the hauler could require the facility to pay for pickup of one or both commodities.



City of Vallejo Filter Crusher  
Photo: Cal Poly San Luis Obispo

- Identify and keep separate contaminated used oil. Most likely contamination is by halogens (possibly from poly-chlorinated biphenyls, i.e., PCBs), which may not exceed 1,000 ppm total. Ideally, the analytical test known as SW-846, Method 8021 or 8260 is used, but a chlorinated compound detection test kit (aka “Chlor-D-Tect”) is less expensive and is approved by the U.S. Environmental Protection Agency (U.S. EPA).
- In practice, a hand-held halogen detection instrument (aka “sniffer”) is often used, even though it is not approved by U.S. EPA, especially for conducting a quick check of oil picked up curbside before it is added to (and might potentially contaminate) a larger quantity of oil stored on the vehicle and/or in a tank at the consolidation and storage facility.

A sniffer manufacturer acknowledges that the device may produce unreliable results when applied to used oil since it was designed to detect leaks in air pollution control equipment and its accuracy may be adversely affected by acid in the oil.<sup>4</sup> However, the manufacturer states that any error is likely to be a false

<sup>4</sup>Automotive Service Solutions, Robinaire Technical Support, personal communication, July 11, 2016.

positive rather than a false negative, which means that, despite its shortcomings, the sniffer may still be useful as a first check for the presence of halogens. If the reading is positive, the oil should be retested with one of the EPA-approved methods to confirm that halogens are indeed present and, if so, to determine whether the oil's addition to the larger tank at the facility would cause the halogen concentration there to exceed the acceptable level under current regulations. In any event, an EPA-approved test is generally performed by the company collecting the oil from the larger tank for subsequent recycling.

It should be noted that jurisdictions with existing programs typically report that contamination is not a significant problem, in part perhaps because residents have been educated to avoid mixing their used oil with other fluids.

- California law provides for funding to help pay for the disposal of halogen-contaminated oil inadvertently collected from residents (up to \$5,000 per year), or to help pay no more than the net additional costs to dispose of PCB-contaminated oil, subject to the availability of funds (no more than \$200,000 per year).



*"Sniffer" Use by San Luis Obispo County Integrated Waste Management Authority  
Photo: Cal Poly San Luis Obispo*

## 6.9 Determine incremental staffing needs

- If used oil/filters are collected entirely by private hauler(s), this may not be an issue for your jurisdiction, beyond the need for a liaison.
- Depending on other elements of the collection program, staff may be needed to register households, distribute containers, schedule pickups, etc.
- The staff time needed for these tasks will depend on the size of your operation (how many households served), the number of DIYers in the population, whether households must request pickup in advance, etc., but is unlikely to add much to the time already needed to handle new garbage service requests, missed pickups, and so on.

## 6.10 Decide whether to serve multi-family residences (more than 4 units) as well as single-family residences, duplexes, triplexes, and fourplexes. This is likely to be a special challenge since multi-family residences often contract independently with haulers for pickup of garbage and recyclables.

- State legislation passed in 2011 (AB 341, Chesbro, Chapter 476, Statutes of 2011) mandates recycling by commercial entities, including multi-family residences, but does not specifically state that used oil and filters must be recycled. Nevertheless, as previously mentioned, many younger DIYers live in multi-family residences, generate a lot of used oil, and are more likely than others to dispose of this oil improperly. Consequently, they are an important target for curbside collection efforts.
- Some owners/managers of multi-family complexes (and occasionally the jurisdictions in which they are located) prohibit the changing or storing of oil on the premises, possibly driving these practices “underground” and preventing the open collection of oil/filters.
- Jurisdictions are encouraged to explore possible solutions with the owners/managers, the haulers, and the residents themselves.

### Designated Oil Changing Locations at Multi-Family Properties

Owners/managers might be encouraged to designate a location on their properties for oil changing; to provide short-term storage for the used oil and filters; and to contract for pick-up by their regular (or another) hauler.

However, ***under existing hazardous waste regulations, it is likely that the owners/managers would then be classified as generators and would have to meet applicable regulatory requirements.*** They would not benefit from the exemption given to jurisdictions or their contractors that pick up used oil directly from residences. See Implementation Step 10 and/or contact the Regulatory Assistance Office of the Department of Toxic Substances Control or your local Certified Unified Program Agency.

Some jurisdictions have local ordinances that grant autonomy to the owners of multi-family dwellings in matters of waste management and disposal. A possible option would require the use of an approved waste and recycling hauler who offers curbside collection of used oil and filters.



Photo: Cal Poly San Luis Obispo

### Survey Results: Curbside Collection for Multi-Family

Nearly 30 survey respondents indicated that they offer used oil/filter curbside collection to multi-family as well as single-family dwellings. In follow-up communications, however, it became apparent that some had misunderstood the question (e.g., they counted duplexes, triplexes, etc., as “multi-family”), while others pick up used oil/filters as part of a door-to-door (not curbside) household hazardous waste collection program.

### **New Developments in Used Oil Curbside Collection for Multi-Family**

Santa Cruz County has attempted to extend its used oil/filter curbside collection service to occupants of multi-family residences, many of which use wheeled cans to put out their trash and recyclables. Sturdy jugs have been supplied free by the jurisdiction, and residents are urged to place full jugs next to their cans with used oil filters in resealable bags placed on top of the cans (to increase the likelihood that the driver will see and safely collect each bag).

Unfortunately, the county and its hauler (Green Waste) have found it challenging to get the message out to residents so that they use this service properly. According to the hauler, some landlords and property managers worry that if they allow used oil/filter pick-up, their properties will be used more generally for vehicle servicing, with other wastes being generated such as brakes and brake fluid, exhausts, etc. Among other things, potential liability is a concern. Nevertheless, some used oil/filter curbside collection from multi-family residences does continue to occur in the county.

A pamphlet published by Oakland's haulers titled "Oaklanders Recycle Right: Apartment and Condominium Recycling Guide" describes services that started in July 2015 and instructs apartment/condominium residents as follows: "Where permitted by property owner, put Motor Oil Recycling Kit next to cart. Request kit from property manager." However, no evidence emerged in this study that this service is being used.

***Ultimately, it was not possible to identify any jurisdiction in the state that could be said with confidence to provide curbside collection on a significant scale to multi-family dwellings.***

**NOTES:**

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## **7. Outreach strategies**

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**Effective outreach to the community is essential if a used oil/filter curbside collection program is to be successful. At a minimum, residents need to know about the program if they are to use it. Outreach efforts cannot be one-time; they need to be sustained, especially in communities with rapid population turnover.**

### **Survey Results: Outreach Makes a Difference**

Ninety-five percent of all survey respondents (n=131) cited “sustained outreach to public, to promote program” as “likely” or “most likely” to “make a difference in achieving a successful curbside used oil/filter collection program.”

#### **7.1 Examine the population of your DIY community, decide upon the main “targets” for your outreach efforts, and offer the materials in the target population language as needed.**

If there are significant numbers of non-English speakers in your jurisdiction, you should conduct outreach in more than one single language.

#### **7.2 Decide whether outreach will be conducted by your jurisdiction or by your hauler(s), or both.**

- If outreach is to be conducted by private hauler(s), minimum expectations for the efforts to be expended on this task should be spelled out in the franchise agreement.

#### **7.3 Collaborate with other nearby jurisdictions (if possible) in conducting outreach.**

- Pooling resources may permit a more effective outreach campaign.
- Check to see if a regional consortium already exists for this purpose.

#### **7.4 Select outreach method(s), with the target DIY residents in mind.**

Systematic evidence regarding the success of different methods of outreach seems to be virtually nonexistent, although it appears that no single approach can be relied upon to get the word out to likely users of the service. You might consider conducting a community survey in the hope of finding out which methods would be more effective than others.

### **Survey Results: Most Effective Outreach Methods**

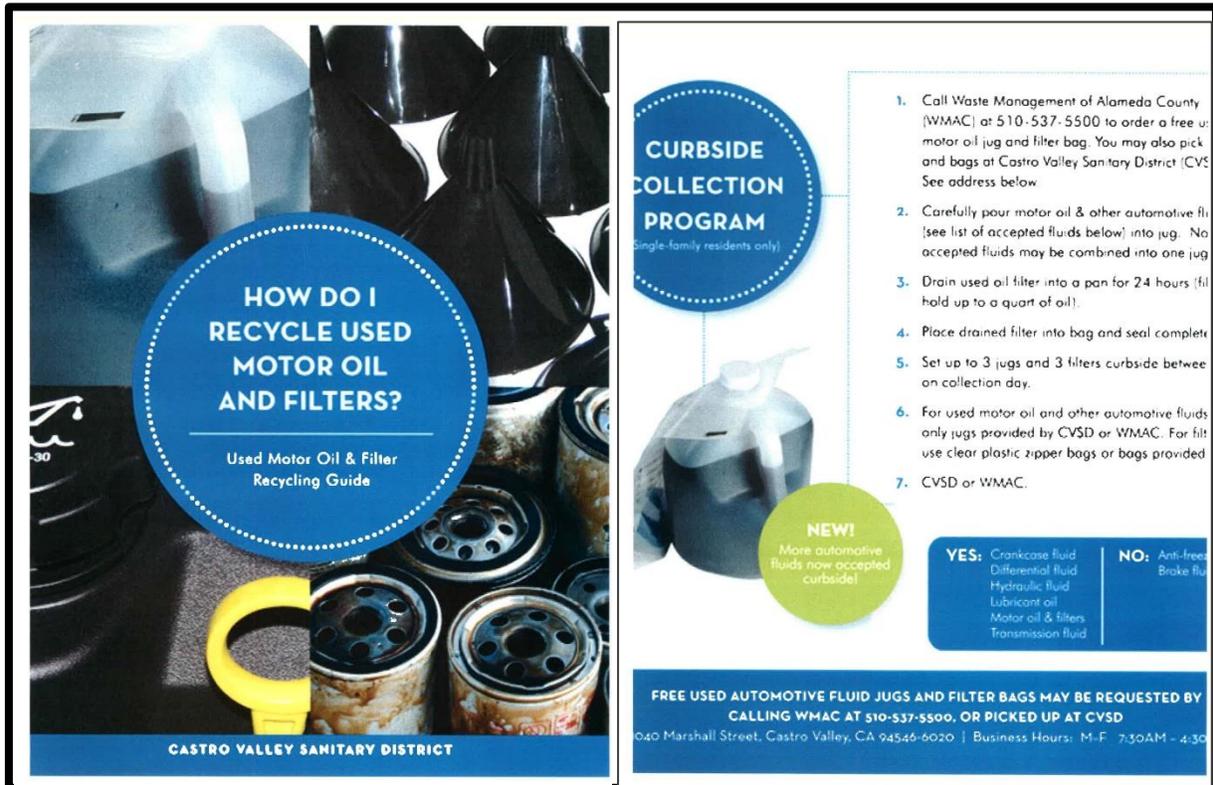
According to the survey findings, several jurisdictions with successful curbside collection programs believe that the following methods are “effective” or “very effective:”

- Paper fliers in mailed utility bills
- Direct paper mailings to households, including newsletters
- In-person presentations or booths at car shows, schools, farmers markets, fairs, community events, etc. (children are often good ambassadors for recycling programs; you may also target adult classes, e.g., English as a second language)

### **Survey Results: Other Moderately Effective Outreach Methods**

The following results were less commonly rated as “effective” or “most effective”

- Signs in stores (these may be time-consuming to arrange)
- In-person presentations at filter exchanges (at which free filters are given in exchange for used ones)
- Handouts/presentations at sporting events, including motor races
- Radio announcements
- TV announcements (may be costly)
- Announcements in social media (Twitter, Facebook, etc.), especially for younger residents
- Posters on or in vehicles such as garbage trucks, buses, trains, etc.
- Announcements in phone directories
- Billboards
- Announcements in advertising mailers such as the PennySaver (which stopped publishing in May 2015 but resumed, with a limited initial distribution, in May 2016)
- Announcements in electronic mailings



Pages from Castro Valley's Used Oil and Filters Recycling Guide  
 Source: Castro Valley Sanitation Website: <http://www.cvsan.org/usedoil>

**Other possible outreach methods include:**

- Informational magnets mailed out (costly but, according to some jurisdictions, very effective; may be less so now that many refrigerators have non-magnetic doors)
- Door-to-door (face-to-face) marketing
- Calendars (e.g., one month devoted to oil/filters)
- Word of mouth
- Availability of oil container, filter bag, and instructions at multiple locations, including locations for paying utility bills
- Signs on shopping carts
- Announcements on jurisdiction's website
- Street banner
- Use of advertising premiums (filters, funnels, rags, etc.)

### Outreach Funding Opportunities

You may be able to use funds from CalRecycle (e.g., Used Oil Payments; see discussion in Implementation Step 9) to pay for outreach, but not all costs are eligible expenditures. You should check on this with the agency itself, since eligibility requirements are subject to change.

**Free Pickups**  
**Batteries, Motor Oil & Oil Filters**

Residential customers of Republic Services can recycle household batteries with FREE pickup service on their recycling collection day. Place batteries in a clear, sealed, quartsize plastic bag (such as a Ziploc bag), and place the bag on top of your recycling cart on your recycling collection day. Types of household batteries accepted include dry cell, rechargeable, alkaline and the small, button-shaped and lithium batteries. (Please NO automotive batteries). Please note: Lithium batteries must be taped at the ends to prevent a fire or an explosion.

**Curbside Collections Make it Easy to Recycle Used Motor Oil and Oil Filters**

Citrus Heights residents can recycle used motor oil and filters curbside FREE on their recycle collection day.

- Pour motor oil into a clear, plastic milk or water jug or a container provided free by Republic Services.
- Tape lid to close it securely.
- Place oil filters in a sealable plastic bag, i.e., Ziploc, or an oil filter bag provided free by Republic Services.
- Place jugs and/or filters on curb next to your recycle cart.
- Maximum 3 gallons of oil per pickup.
- Drain filter 24 hours before bagging. One filter per bag.
- Wipe excess oil off bag, seal.
- Place filter bag beside your recycling cart or, if recycling used oil, hang the bag on the oil container using the precut hole at the top of the bag provided by Republic Services.
- Republic Services will leave replacement bags and containers.
- To obtain an oil recycling jug or an oil filter bag, call (916) 638-9000 or 725-9060.

**Motor Oil Facts**

- Motor oil does not wear out. It gets dirty. Recycling it saves a valuable resource.
- Used motor oil can be refined into fuel oil. A gallon of used oil, when reprocessed, can generate enough energy to power a home with electricity for half a day.
- Disposed of improperly, one gallon of used motor oil can pollute 1 million gallons of drinking water. That's a year's supply of water for 50 people.

**REMEMBER:** Used oil and filters are collected only on your recycling day.

**March**

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

REPUBLIC SERVICES (916) 638-9000 OR (916) 725-9060

This calendar produced by the City of Citrus Heights includes details on the city's free used oil and oil filter curbside collection program as one of its monthly features.

Source: City of Citrus Heights

**7.5 Decide on the content of your outreach message(s). Suggested elements include:**

- Facts about oil recycling and reasons to recycle
- A statement that pickup is free of charge
- A list of what is allowed and what is not (Yes: used motor oil, used oil filters; No: antifreeze, brake fluid), and maximum quantities per residential pickup
- Directions on proper containers (if applicable, note that free oil containers and filter bags are provided and how to obtain them)
- Directions on when and how to place filled containers for collection (in particular, emphasize that in most jurisdictions containers should not be placed on top of bins for trash or recyclables)
- If applicable, directions on how to register for the service and/or to request pickup
- If applicable, a statement that filled oil containers will be replaced with empty ones at pickup
- Agency name, phone number, address, website
- Other contact information and website, as applicable (e.g., hauler that will do the pickup)
- If desired, a statement about the funding source (For example: “This brochure was funded by a grant from ...”)
- Used oil recycling logos used by CalRecycle:



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## ***8. Community-based social marketing***

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**Using variations of some of the methods listed in Implementation Step 7 above and other techniques as appropriate, your jurisdiction may choose to go beyond traditional outreach and to adopt an approach known as community-based social marketing, or CBSM), in which knowledge regarding behavior change is used to overcome barriers to the activity being promoted—in this case, participating in a used oil/ filters curbside collection program.**

*Following are examples of CBSM efforts:*

### **CBSM Pilot Project in Napa County**

In a pilot project in Napa County, direct-mail brochures were redesigned in two versions to better inform and motivate residents to participate in the county's curbside collection program. In both versions, testimonials from residents with photos were included, advocating use of the program, along with procedural information about how to participate.

One version provided only the hauler's telephone number to call and sign up for the program, while the other provided a mail-in card for residents to use both in signing up and to make a commitment to use the program. Postcards were sent subsequently to follow up.

Enrollment in the program significantly increased in areas where the intervention (using either of the revised brochures) took place, and the number of **curbside pick-ups grew by 248 percent** in the month following. However, the long-term impact of the intervention, if any, is currently unknown.

For more information on CBSM, go to  
<http://www.calrecycle.ca.gov/homehazwaste/Grants/Profiles/CBSM.htm>.

### **A CBSM Used Oil Campaign in the City of Irvine**

In 2012, the marketing company S. Groner Associates, Inc. (SGA) helped the City of Irvine create a multi-faceted used oil campaign targeting DIYers with the intent of increasing recycling rates throughout the city.

Irvine does not currently offer curbside collection of used oil and filters, relying instead on DIYers' bringing them to one of several collection centers, but the campaign offers another example of applying the CBSM approach. Citizens could be encouraged to use a curbside collection program, if and when one is implemented, through a campaign similar to Irvine's, with adjustments as needed.

Building on the mantra "begin with the end in mind," SGA set out to understand the audience that would be doing the recycling, recognizing that the "program would need to engage those DIYers and create a new habit that would persist beyond the life of the campaign." A survey revealed that most DIYers in Irvine already recycled their used oil, but a majority were not doing the same with their filters; many stated that they lacked motivation. SGA "also learned that our audience liked to communicate in more old-fashioned ways: in person, via billing inserts and email. Social media wasn't their thing."

Based on this research, SGA decided to focus on filters and to have fellow car enthusiasts deliver the message, helping to "create a sense of community doing the right thing." Ingredients of the approach included the creation of a brand; posters; an email marketing campaign; partnerships with local O'Reilly Auto Parts stores; outreach via car shows and car clubs; and a monthly raffle intended both to motivate filter recycling and to provide the campaign with DIYers' email addresses for further communication via a monthly newsletter.

DIYers were asked to pledge to recycle in the future, a tactic known to help in changing behavior. Using billing inserts, Waste Management distributed coupons on SGA's behalf for new filters to replace used ones brought in for recycling. The coupons were given in pairs so a DIYer could spread the message by giving one to another DIYer. Finally, a humorous and informative public service announcement was produced and aired at local gas stations, on TV, and on YouTube, while Irvine's used oil website "was renovated to tie all of the various outreach materials together."

Source: <http://www.sga-inc.net/portfolio/city-of-irvine-environmental-programs/> (retrieved 7/14/16)

## **9. Program financing**

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Consider what new funding, if any, might be required by you and/or your hauler(s) to pay capital and operating costs, after allowing for possible changes in revenue.

**9.1 If your jurisdiction operates its own collection service, you need to estimate capital expenditures including replacements (e.g., adding racks to trucks; oil/filter containers, if supplied to residents; storage of used oil/filters after pick-up) and operating costs (e.g., labor; disposal of oil/filters, if applicable) over the expected life of the program.**

**9.2 You also need to estimate any revenues the program might produce and/or might be applied to it, such as**

- Annual used oil payments to jurisdictions from the State
- Per gallon used oil recycling incentive from the State
- Price paid for recovered oil and/or filters, if applicable<sup>5</sup>
- Discretionary grant funding (e.g., competitive grants from the State)
- Any shortfall would need to be made up from an increment to the garbage/recyclables collection fee paid by households, or from another source

### **Permanent vs. Temporary Funding**

Note the risks of relying on any kind of temporary funding (“soft money”) for payment of operating costs, in light of concerns about the long-term sustainability of your program (see Implementation Step 12). A wiser course might be the use of such funding to offset capital expenditures.

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<sup>5</sup> Depending on market conditions, you may be able to generate revenue from the sale of recovered oil (most likely) and/or filters (less likely). Alternatively, these materials may be picked up at no cost. In the worst case, you may have to pay for pickup.

**9.3 If the program is to be conducted in its entirety by one or more franchised haulers, financing may be a matter of negotiating an appropriate increment to the garbage/recyclables collection fee charged to households, taking into account any revenues that go to the hauler, such as the per gallon used oil recycling incentive from the State.**

Your jurisdiction may choose to share responsibility for financing with your hauler(s).  
For example:

- Your jurisdiction might pay for some or all capital costs and/or supply equipment directly (e.g., racks for trucks; oil and filter containers; etc.)
- Your jurisdiction might make cash payments to your hauler(s), either fixed allocations or variable amounts depending on the quantities of oil/filters collected

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## 10. ***Administrative and regulatory requirements***

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**Administrative requirements must be met in order to qualify for any kind of used oil recycling funding from the State. Used oil is managed as a hazardous waste in California, but specific regulatory requirements apply when used oil is collected at the curbside from households and is destined for recycling. Filters containing recyclable metal are also subject to specific provisions. To learn more about the latest administrative requirements, consult with CalRecycle’s Used Oil Program; to learn more about the latest regulatory requirements, consult with a California Department of Toxic Substances Control Regulatory Assistance Officer and/or your Certified Unified Program Agency (CUPA).<sup>6</sup>**

### **Important to Note**

While every effort has been made to ensure that the information in this section is accurate at the time of publication, the description of legal requirements is paraphrased and not necessarily complete. It is intended to provide informal guidance and is not binding upon the enforcement agency (DTSC), nor does it have the force of law.

### **10.1 Administrative Requirements**

- If your jurisdiction uses private hauler(s) for garbage/recyclables pickup, in order to establish a used oil/filter collection program, you may need to negotiate or renegotiate your franchise agreement(s). If you go out for bids, it is important that you specify up front—and in detail—the parameters of the service you expect.
- You may use a used oil/filter curbside collection program to help qualify your jurisdiction for receipt of annual per capita-based used oil payments, if you do not already receive them (see Implementation Section 9). You may also seek competitive funding to support your program.

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<sup>6</sup> For up-to-date information, refer to the California Health & Safety Code (HSC) article 10.8 commencing with section 25218 and article 13 commencing with section 25250; and the California Code of Regulations (CCR) title 22, division 4.5, including chapter 12 commencing with section 66262.10; chapter 16, section 66266.130; and chapter 29 commencing with section 66279.1. See page 69 for DTSC and CUPA contact information).

### Survey Results: Administrative Requirements and Reporting

Nearly 77 percent of survey respondents without existing used oil/filter curbside collection programs (n=57) stated that “simpler state administrative requirements” would likely be an effective way to increase the likelihood of their offering such a program in the future. However, evidence that current requirements are burdensome is lacking. Some of the reporting may have to be done anyway. A few jurisdictions with existing programs have commented that reporting is not a problem as long as requirements remain consistent (rather than frequently changing, as happened in the past).



*Photo: Cal Poly San Luis Obispo*

- In order to qualify for any kind of used oil recycling funding from the State, your jurisdiction needs to make an online annual report of the quantities of used oil and filters that are collected.

- Information in the annual report is also likely to be used in program evaluation (see Implementation Step 11). Typically, the information is gathered in one of the following ways:
  - By maintaining a log of pick-ups in the field, with the truck operators recording estimates of the quantities collected. If not separately recorded, filter collection is sometimes assumed to be one per used oil pickup.
  - By measuring and recording (by weight or volume) the relevant quantities that accumulate at a central location following collection, which are subsequently picked up for recycling.
- The jurisdiction that reports to the State (and is the recipient of used oil payments) may be an individual city or it may be a county acting on behalf of unincorporated areas as well as all, some, or none of the cities within the county. In any event, the reporting jurisdiction needs to ensure that the information is collected in a timely manner from the program operators (including itself, if applicable).
- The State's per gallon recycling incentive may be claimed by the jurisdiction or the haulers, but not both. Appropriate documentation must be provided (see <http://www.calrecycle.ca.gov/UsedOil/Claims/>).

## 10.2 Regulatory Requirements

- In California, **used oil is managed as a hazardous waste** (HSC section 25250.4). Residents who change their own oil (do-it-yourselfers) are subject to regulatory requirements that are less stringent than those applied to used oil generators in general. They must, however, manage their used oil appropriately (e.g., by taking it to a used oil collection center and never disposing of it to land, water, storm drains, etc.).
- HSC section 25218.1 defines a “curbside household hazardous waste collection program” as “a collection service authorized by a public agency” that is operated in accordance with certain specified conditions (see Section 25163 and subdivision (d) of Section 25218.5) and that collects one or more of the following types of household hazardous waste: (1) Latex paint. (2) Used oil. (3) Used oil filters.” Such a program is distinct, for example, from one that collects household hazardous wastes (including but not necessarily limited to used oil and used oil filters) from residences on a “door-to-door” basis rather than at the curbside.

## Targeting Success – Guidance for California Jurisdictions

- Provided that certain conditions are met (as specified in HSC section 25218.8), your jurisdiction does not require a license or other form of approval from the State of California to establish a program that picks up used oil and filters at the curbside and takes them to a consolidation and storage facility. However, before commencing operations, you must provide information to your Certified Unified Program Agency (CUPA) or other designated individual or agency, including a certification that you will operate in accordance with applicable regulations (HSC 25218.2 (a)). Thereafter, you must provide notification of significant changes in your operating schedule (HSC 25218.2 (b)), and you must provide copies annually of CalRecycle’s Form 303 (HSC 25218.9).
- **Not more than 5 gallons of used oil and not more than a total combined weight of 10 pounds of used oil filters may be collected from a single residence at one time.** The volume of each individual container of used oil collected **shall not exceed 5 gallons** (HSC section 25218.5).
- A jurisdiction (or hauler acting under contract to a jurisdiction) collecting oil at the curbside **does not require an EPA identification number or a hazardous waste manifest for transportation to the consolidation and storage facility** (HSC section 25250.15 (a)).



Photo: <http://cityofwatsonville.org/public-works-utilities/garbage-recycling-waste-reduction/recycling-services>

- However, whoever consolidates the used oil at the consolidation and storage facility is classified as a generator and is required to meet applicable hazardous waste requirements. A facility set up by a jurisdiction to handle only used oil and used oil filters from a curbside collection program (no other hazardous wastes) and which meets the conditions laid out in HSC section 25218.8 (including sending all of the used oil and filters for recycling) is not required to obtain a hazardous waste facilities permit (HSC 25250.15 (b)). Nevertheless, depending on the quantities of used oil and filters brought to the facility per month, the operator must meet applicable generator requirements such as:
  - Applying to DTSC for a hazardous waste identification number.
  - Meeting requirements for portable containers or tanks. For example:
    - Portable containers must be kept in good condition and have adequate structural support to contain the used oil. There must be no severe rusting, no apparent structural defects or deterioration, and no leaking. All containers must have tight-fitting lids that are kept closed except when used oil is being added or removed. Regular inspection and routine maintenance of all containers is required, as is appropriate labeling. Faulty containers must be repaired or replaced. (22 CCR § 66265.170 et seq.)
    - Tanks that are used for the accumulation of used oil must be kept in good condition. Tanks must be made of non-earthen, non-absorbing, rust-resistant material such as steel or oil-resistant plastic, and they must have adequate structural support to contain the used oil. There must be no severe rusting, no apparent structural defects or deterioration, and no leaking. Regular inspection and routine maintenance of all storage tanks is required, as is appropriate labeling. Faulty tanks must be repaired or replaced. Most tanks, tank systems, and appurtenances must have secondary containment, which can include a liner, vault, or double-walled tank and must be certified by a professional engineer registered in California (22 CCR § 66265.190 et seq.).
  - Having the used oil transported by a registered hazardous waste transporter using a hazardous waste manifest, which may under certain circumstances be a consolidated manifest (HSC section 25160.2). In order to be managed under the less restrictive used oil regulations, the used oil must be transported to an authorized (i.e., permitted) recycling facility. The recycling facility may be located outside of California, as long as the facility is authorized under the statutes and regulations of the state in which the facility is located.



*San Miguel curbside oil collection program truck  
Photo: Bill Worrell*

- In California, **used oil filters are also classified as a hazardous waste**. However, reduced management requirements apply if used oil filters are drained and sent for recycling as scrap metal.<sup>7</sup> Whoever consolidates the collection of used oil filters must (22 CCR § 66266.130):
  - Drain and collect the free-flowing oil from the filters, typically crushing or perforating each filter to ensure adequate drainage (a hazardous waste treatment permit is not required to drain filters).
  - Manage the collected oil according to the requirements for used oil.
  - Properly contain, label, and store the used filters to prevent leakage of residual used oil.
  - Transport under a bill of lading to an appropriate destination for eventual metal recycling.

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<sup>7</sup>As mentioned in a previous footnote in the introduction of this document, some filters are not recyclable since they contain no metal. These filters must be collected and managed as hazardous waste. A copy of DTSC's September 2016 Advisory: Draining of Used Oil Filters is included in Appendix B.

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## 11. Evaluate your program

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Once your program has been up and running for a while (at least a year), and thereafter on a regular basis, it should be evaluated.

**11.1 Program evaluation will help you to modify your program as needed to better meet your clients' needs and/or to determine if the program is successful enough to continue.**

- Evaluation may be conducted in-house or by a consultant. Regardless, every effort must be made to avoid conflicts of interest (real or perceived) or any other kind of bias.
- **The starting point for an evaluation is the set of goals and objectives adopted for the program by your jurisdiction.** With these in mind, seek to determine the extent to which the program has achieved what the jurisdiction intended.



Source: Fresno County  
<http://www.co.fresno.ca.us/DepartmentPage.aspx?id=16359>

- For example, if an objective is to collect similar quantities of oil and/or filters annually per household as are collected by other jurisdictions with similar demographic characteristics (such as median household income, median age, percent foreign-born, percent urban, percent of housing units that are single-family), then the evaluation is likely to focus primarily on the quantities actually collected.

- 11.2 As previously mentioned, you should give thought to how you intend to evaluate the program before it is implemented, so provisions can be made in a timely manner for collecting relevant information (e.g., baseline data and changes following implementation).**

Without the appropriate data in hand, performing a meaningful evaluation may be difficult or impossible.

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## **12. *Ensure program sustainability***

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**Do what you can to ensure that your program will be sustainable to prolong the benefits of protecting the environment and conserving resources into the future.**

- A curbside collection program that runs for only a year or two before being discontinued might do more harm than good, especially if it results in some residents' becoming accustomed to the service and permanently discontinuing past practices of taking used oil and filters to collection centers.
- Some centers may shut down when faced with a productive curbside program, and if the program ends, residents won't have a place to take their used oil.

### **Key Items to Consider When Planning for Program Sustainability**

- Plan for the **long term**—at least 5 to 10 years or more
- Plan for a **continuity of leadership** that is committed to the program
- Plan for a **continuity of financing** (e.g., try to avoid relying on “soft money” to pay operating costs)
- Make curbside collection a **habitual part of the community's fabric** (i.e., try to reach the point at which residents take it for granted that this is the way to dispose of used oil and filters).

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## For More Information

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- **Visit** the Used Oil Program’s website at <http://www.calrecycle.ca.gov/UsedOil/>
- **Share** information with other jurisdictions.
- **Attend** Household Hazardous Waste Information Exchanges held in your part of the state, organized by CalRecycle in collaboration with the Department of Toxic Substances Control. CalRecycle also organizes an annual Used Oil/HHW Training and Conference.



- **Establish** formal or informal relationships with other jurisdictions similar to yours.
- **Contact** DTSC Regulatory Assistance Officers (RAOs) and/or your local Certified Unified Program Agency (CUPA). RAOs can be reached by phone at 800-728-6942, by email at [RAO@dtsc.ca.gov](mailto:RAO@dtsc.ca.gov), or online through the Regulatory Assistance webpage at <http://www.dtsc.ca.gov/ContactDTSC/Regulatory-Assistance-Officers.cfm/>

## ***List of Acronyms***

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ABOP	Antifreeze, Battery, Oil, and Paint Collection Facility
CBSM	Community-Based Social Marketing
CCC	Certified Collection Center
CCR	California Code of Regulations
CUPA	Certified Unified Program Agency
DIYer	Do It Yourselfer (someone who changes his/her own motor oil)
DTSC	California Department of Toxic Substances Control
HHW	Household Hazardous Waste
HSC	California Health & Safety Code
RAO	Regulatory Assistance Officers (suppliers of DTSC regulatory information)
STM	Shade-Tree Mechanic
UOP	Used Oil Program, California Department of Resources Recycling and Recovery

# Appendix A

## Demographic Analysis of Programs with Successful Used Oil/Filter Curbside Collection Programs

### ***Regression Analysis***

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This analysis was intended to identify demographic variables characterizing jurisdictions with successful used oil/filter curbside collection (CC) programs that might be used to predict which jurisdictions without existing programs might successfully implement them in the future.

Using data from the 2010 Census as well as other sources, regression analysis was attempted using used oil or oil filters collected per household (CC Oil per HHU or CC Filters per HHU) as dependent variables and the following demographics in various forms as independent variables: population, number of households, income, education level, national origin, age, housing type, degree of urbanization, rainfall.

Unfortunately, the relatively small number of jurisdictions currently running CC programs reduced the number of variables that could be included in any particular model run. After repeated unsuccessful attempts to produce meaningful results, this approach was abandoned.

### ***Vector Analysis***

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A form of vector analysis was used to compare the characteristics of the jurisdictions without curbside collection programs to a) those jurisdictions with curbside programs, and b) those jurisdictions with curbside programs achieving 2012 CC Oil per HHU in the top 25 percent. Jurisdictions without programs whose characteristics best “match” those of jurisdictions with programs and those jurisdictions in the top 25 percent are potential candidates for a curbside program.

The characteristics were defined by the following variables:

- percent foreign-born
- median age
- median household income
- percent high school educated or above
- percent college educated or above
- total number of housing units
- percent urban

- percent of housing units that are single-family

Potential candidate jurisdictions were identified based on (a) only the eight characteristics listed above, or (b) 10 characteristics comprising those listed above plus Total Gallons per HHU and Total Filters per HHU.

The method required us to find the “Mahalanobis” distance between the vector of values of the listed variables of the jurisdictions without a program and the vector of means of the same variables for jurisdictions with curbside collection programs in the top 25 percent (based on collections per household). Jurisdictions without programs with small distance (D) values are more “similar” to (or are good matches with) typical jurisdictions with curbside programs in the top 25 percent.

City of Alameda	City of Martinez
City of Antioch	City of Palmdale
City of Benicia	City of Pleasant Hill
City of Ceres	City of Rolling Hills Estates
City of Citrus Heights	City of Vallejo
City of Compton	City of Watsonville
City of Dublin	City of West Sacramento
City of Elk Grove	Monterey County
City of Fairfield	Nevada County
City of Folsom	San Luis Obispo County IWMA
City of Hayward	Santa Clara County
City of Livermore	Santa Cruz County
City of Manteca	

Tables (1) and (2) provide results of the analyses using the eight or 10 characteristics as described above, respectively. The rightmost column in the following tables contains the distance (D) values to measure the similarity between a jurisdiction without a program and the “typical” jurisdiction with a program in the top 25 percent. Thirty potential candidates are listed.

Targeting Success – Guidance for California Jurisdictions

Table 1: Top 30 Jurisdictions without curbside collection programs that best match the characteristics of jurisdictions with curbside programs in the top 25 percent in terms of CC Oil/HHU collection (Does not include: total gallons and total filters collected per HHU).

Rank	Jurisdiction	D Value (Distance)
1	City of Glendora	0.7986271
2	Ventura County	0.8076665
3	City of Whittier	0.8363388
4	City of Lake Forest	0.9454396
5	City of Camarillo	0.9726606
6	City of Simi Valley	1.0827886
7	City of Upland	1.1499905
8	City of Lakewood	1.2316663
9	City of La Mirada	1.2497494
10	City of Oceanside	1.2961503
11	City of San Buenaventura (Ventura)	1.3563027
12	City of Rancho Cucamonga	1.3833527
13	City of Covina	1.3903019
14	City of Dixon	1.5023997
15	City of Poway	1.7126027
16	City of Cypress	1.7155022
17	Santa Barbara County	1.7792104
18	City of West Covina	2.1362338
19	City of Carson	2.1636740
20	City of Ontario	2.3192987
21	City of Novato	2.4934765
22	San Joaquin County	2.4989351
23	City of San Marcos	2.5775991

Targeting Success – Guidance for California Jurisdictions

Rank	Jurisdiction	D Value (Distance)
24	City of Pico Rivera	2.7960289
25	City of Oxnard	2.9080488
26	City of Vista	2.9278674
27	City of Brentwood	2.9303065
28	City of Beaumont	2.9346124
29	City of Thousand Oaks	2.9408046
30	City of Downey	2.9732932

Table 2: Top 30 Jurisdictions without curbside collection programs that best match the characteristics of jurisdictions with programs in the top 25 percent in terms of CC Oil/HHU collection (Includes total gallons and total filters collected per HHU).

Rank	Jurisdiction	D Value (Distance)
1	City of Whittier	0.9146412
2	City of Glendora	1.0331624
3	City of Lake Forest	1.0651065
4	City of Simi Valley	1.1748936
5	City of La Mirada	1.2977828
6	City of Lakewood	1.3064458
7	City of San Buenaventura (Ventura)	1.3972997
8	City of Covina	1.4532042
9	City of Oceanside	1.5086915
10	City of Upland	1.5411640
11	City of Rancho Cucamonga	1.5426369
12	City of Dixon	1.6630628
13	City of Cypress	1.9192952
14	Ventura County	2.2833171

Targeting Success – Guidance for California Jurisdictions

Rank	Jurisdiction	D Value (Distance)
15	City of Poway	2.3375080
16	City of Ontario	2.4093736
17	San Joaquin County	2.6780236
18	City of Pico Rivera	2.8313316
19	City of Novato	2.8348412
20	City of Thousand Oaks	2.9460774
21	Santa Barbara County	2.9806489
22	City of Downey	3.0267471
23	City of Brentwood	3.0655250
24	City of San Marcos	3.1480080
25	City of Oxnard	3.1983845
26	City of Vista	3.2126572
27	City of Santa Paula	3.3325420
28	City of Lancaster	3.3535852
29	City of Lompoc	3.3541167
30	City of Beaumont	3.3701498

The analysis cannot yield a “correct” list of jurisdictions that are potential candidates for curbside used oil/filter programs, but it does suggest different possibilities depending on the criteria that are judged to be most important.

Table 2 is included because it provides an extra dimension, also taking into account the Total Gallons per HHU and Total Filters per HHU, i.e., the oil and filters collected by all means including Certified Collection Centers. To some extent, these variables presumably reflect the overall level of DIYer activity in each jurisdiction, which may be considered relevant as an additional factor to be considered.

## Targeting Success – Guidance for California Jurisdictions

The following jurisdictions are listed in both tables (all but three of the jurisdictions in each table separately) and might therefore be considered likely prospects for success in implementing a used oil/filter curbside collection program:

City of Whittier	City of Poway
City of Glendora	City of Ontario
City of Lake Forest	San Joaquin County
City of Simi Valley	City of Pico Rivera
City of La Mirada	City of Novato
City of Lakewood	City of Thousand Oaks
City of San Buenaventura (Ventura)	Santa Barbara County
City of Covina	City of Downey
City of Oceanside	City of Brentwood
City of Upland	City of San Marcos
City of Rancho Cucamonga	City of Oxnard
City of Dixon	City of Vista
City of Cypress	City of Beaumont
Ventura County	

It may be noted that this list contains more jurisdictions in the south of the state than in the center or north. This is not surprising since the greatest proportion of jurisdictions with existing used oil/filter curbside programs is in the north.

## Appendix B

### Used Oil and Used Oil Filter Collection – Related Forms from CalRecycle and Guidance from Department of Toxic Substances Control

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Used oil and oil filter collection related forms and requirements included in this appendix are sourced from the CalRecycle and Department of Toxic Substances Control websites. PDF copies of these forms and other forms and information related to used oil and oil filter collection and recycling can be downloaded at the following URLs:

<http://www.calrecycle.ca.gov/UsedOil/Forms/>

[https://www.dtsc.ca.gov/HazardousWaste/Used\\_Oil.cfm](https://www.dtsc.ca.gov/HazardousWaste/Used_Oil.cfm)

# Appendix C

## Implementing a Curbside Used Oil and Filter Collection Program

### *Summary of Implementation Steps*

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The intent of this guidance is to help local jurisdictions in California implement curbside collection of used oil and/or oil filters, or to improve existing curbside collection programs. Curbside collection complements the availability of collection centers (including Certified Collection Centers [CCCs]), resulting in more used oil/filters collected than via collection centers alone.

*The collection and subsequent recycling of used oil and oil filters is important as a means of preventing pollution and conserving valuable resources. Poured onto the ground or into storm drains or tossed into trash cans (even in a sealed container), used oil can pollute soil, groundwater, streams, and rivers. Even after draining, used oil filters contain on average more than 10 ounces of used oil. Used oil can be recycled, cleaned, and used again, while most oil filters also contain steel, itself recyclable.*

The following implementation steps have been identified as the key elements to achieving success with a curbside collection program for used oil and oil filters. While implementation of these steps will vary from jurisdiction to jurisdiction, following some aspect of each step is likely to help the implementation and long-term operation of a successful program.

1. **Decide if curbside collection is right for your jurisdiction**
2. **Identify the program champion**
3. **Set goals and objectives**
4. **Develop support for your program**
5. **Contact private hauler(s)**
6. **Determine curbside operations**
7. **Determine outreach strategies**
8. **Consider community-based social marketing**
9. **Develop program financing**
10. **Understand administrative and regulatory requirements**
11. **Evaluate your program**
12. **Ensure program sustainability**



Photo: Cal Poly San Luis Obispo

### **1. Decide if curbside collection is right for your jurisdiction**

If your jurisdiction currently offers curbside garbage collection, it is likely to be a good candidate for implementing a curbside used oil/filter collection program unless its population includes very few DIYers.

As part of this decision-making process, jurisdictions should consider the following:

- Is curbside collection of garbage (and possibly recyclables and/or green wastes) already offered in all or some areas of your jurisdiction?
- How many DIYers are located in your jurisdiction and, of these, how many are likely to dispose of oil improperly?
- Are there DIY populations—especially those living in single-family residences—that are not well served by collection centers?
- Does your jurisdiction have demographic characteristics that suggest it might be successful in offering a used oil/filter curbside collection program?
- Is there evidence of improper disposal of used oil and/or filters in your jurisdiction?

## **2. Identify the program champion**

**If curbside collection seems like a possible option for your jurisdiction, identify one or more people who will lead the efforts to further assess and, if appropriate, implement the option.**

- Enthusiastic and sustained leadership at both management and operational levels is an important ingredient of successful curbside collection programs.
- Many of the more successful programs currently are championed by very enthusiastic individuals, some of whom have been in their positions for a long time.
- Those jurisdictions that believe in a curbside collection program's value and importance seem to have little or no difficulty offering one.

## **3. Set goals and objectives**

**Decide on goals and objectives for a collection program in your jurisdiction. In addition to providing direction for program implementation, having explicit goals and objectives in place provides a reference point for subsequent evaluation of the program (see discussion in Implementation Step 11).**

- To the extent possible, objectives (at least) should be measurable, and steps should be taken before and during implementation to establish both baseline and ongoing measurements.
- Example goal: "Offer households curbside collection of used oil and filters at the lowest cost possible."
- Example objective: "Provide used oil/filter curbside collection to all households with existing garbage/recyclables pickup service with no increase (or minimal increase) in existing fee."

#### **4. Develop support for your program**

**Develop a support network for implementing your curbside collection program. The support team can come from political and administrative leadership; residents, waste hauler(s); local nongovernmental organizations (NGOs) including environmental and other community groups; or other jurisdictions.**



- Successful implementation requires such support.
- Do your homework so you can make convincing arguments as to why the collection of used oil and filters needs to be increased and why curbside collection is likely to help in your jurisdiction.
- Communicate with prospective supporters, individually or collectively, preferably face to face. A well-publicized community workshop helps to create face-to-face networks that can be used to build support.
- Try to anticipate and prepare valid counter-arguments to the most likely objections.
- Emphasize (especially to residents) the convenience of curbside collection.

#### **5. Contact private hauler(s)**

**If your jurisdiction uses one or more private haulers to pick up garbage/recyclables, contact each one to discuss possible used oil/filter curbside collection pickup programs.**

- Recognize that some haulers may be very resistant to adding used oil/filter pickup while others will be less resistant or even enthusiastic provided that they do not lose money as a result.
- Point out that the number of used oil/filter pick-ups on a particular route on any given day is likely to be relatively small compared to the number of households placing out garbage and mixed recyclables, since individual DIYers are typically unlikely to make oil/filter changes more than a few times each year.
- If you have franchise agreements with your haulers, you may want to consider such options as requesting that used oil/filter collection be added to the existing or a new franchise agreement; offering to pay equipment costs; renegotiating the fee; defining parameters such as the minimum frequency of service while leaving operational details to the hauler as much as possible; and building accountability into any agreement.

#### **6. Determine curbside operations**

**Determine the type of curbside operation that might best suit your jurisdiction. Keep in mind that in general, the greater the convenience to households, the more used oil/filters will be collected. It also helps if everyone comes to view as “the normal way of doing things” that used oil/filters are collected curbside on a regular basis, along with trash and recyclables.**

Summary of needed decisions about curbside operations:

- Same truck vs. separate truck
- Requiring a call or online request in advance vs. automatic pick-up
- Standardized or unrestricted containers
- Empty into tank on truck or transport in containers to consolidation and storage facility
- System for dealing with spills
- System for handling/storing oil/filters at consolidation and storage facility
- Disposition of oil/filters collected
- Incremental staffing needs
- Serve multi-family as well as single-family dwellings



Standard Container Used by City of Folsom

Source: [http://www.folsom.ca.us/city\\_hall/depts/admin/solid\\_waste/hazmat/used\\_oil.asp](http://www.folsom.ca.us/city_hall/depts/admin/solid_waste/hazmat/used_oil.asp)

Based on survey and interviews, there is no single set of operational types that is “the best” for all jurisdictions.

A detailed discussion of each of these operational decisions is provided in the complete document *Curbside Collection of Used Oil and Oil Filters: Targeting Success*, including overviews of various types of equipment used for transporting and processing used oil and oil filters by jurisdictions around California currently operating curbside used oil and oil filter collection services.

## 7. Determine outreach strategies

**Effective outreach to the community is essential if a used oil/filter curbside collection program is to be successful. At a minimum, residents need to know about the program if they are to use it. Outreach efforts cannot be one-time; they need to be sustained, especially in communities with rapid population turnover.**

## Targeting Success – Guidance for California Jurisdictions

- Examine the population of your DIY community, decide upon the main “targets” for your outreach efforts, and employ the language of each target population, as needed.
- Decide whether outreach will be conducted by your jurisdiction or by your hauler(s), or both.
- Select outreach method(s), with the target DIY residents in mind.
- Decide on the content of your outreach message(s).

This calendar produced by the City of Citrus Heights includes details on the city’s free used oil and oil filter curbside collection program as one of its monthly features.



Graphics available on the CalRecycle website:  
<http://www.calrecycle.ca.gov/UsedOil/Graphics/>

**Free Pickups**  
**Batteries, Motor Oil & Oil Filters**

Residential customers of Republic Services can recycle household batteries with FREE pickup service on their recycling collection day. Place batteries in a clear, sealed, quart size plastic bag (such as a Ziploc bag), and place the bag on top of your recycling cart on your recycling collection day. Types of household batteries accepted include dry cell, rechargeable, alkaline and the small, button-shaped and lithium batteries. Please note: automotive batteries must be taped at the ends to prevent a fire explosion.

**Curbside Collections Make It Easy to Recycle Used Motor Oil and Oil Filters**

Citrus Heights residents can recycle used motor oil and filters curbside FREE on their recycle collection day.

- Pour motor oil into a clear, plastic milk or water jug or a container provided free by Republic Services.
- Tape lid to close it securely.
- Place oil filters in a sealable plastic bag, i.e., Ziploc, or an oil filter bag provided free by Republic Services.
- Place bags and/or filters on curb next to your recycle cart.
- Maximum 3 gallons of oil per pickup.
- Open filter 24 hours before tagging. One filter per bag.
- Wipe excess oil off bag, seal.
- Place filter bag beside your recycling cart or, if recycling curbside, hang the bag on the oil container using the pre-cut hole at the top of the bag provided by Republic Services.
- Republic Services will leave replacement bags and containers.
- To access an oil recycling bag or an oil filter bag, call (916) 638-9000 or 725-9060.

**Motor Oil Facts**

- Motor oil does not wear out. It gets dirty. Recycling it saves a valuable resource.
- Used motor oil can be refined into fuel oil. A gallon of used oil, when reprocessed, can generate enough energy to power a home with electricity for half a day.
- Disposed of improperly, one gallon of used motor oil can pollute 1 million gallons of drinking water. That's a year's supply of water for 50 people.

**REMEMBER:** Used oil and filters are collected only on your recycling day.

**March**

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

REPUBLIC SERVICES (916) 638-9000 OR (916) 725-9060

### 8. Consider community-based social marketing

Using variations of some of the methods listed in Implementation Step 7 above, and other techniques as appropriate, your jurisdiction may choose to go beyond traditional “outreach” and to adopt an approach known as community-based social marketing (CBSM), in which psychological knowledge regarding behavior change is used to overcome barriers to the activity being promoted—here, participating in a used oil/ filter curbside collection program if offered.

### 9. Develop program financing

Consider what new funding, if any, might be required by you and/or your hauler(s) to pay capital and operating costs, after allowing for possible changes in revenue.

If your jurisdiction operates its own collection service, you need to:

## Targeting Success – Guidance for California Jurisdictions

- Estimate capital expenditures including replacements (e.g., for adding racks to trucks; for oil/filter containers, if supplied to residents; for tanks to store used oil/filters after pickup; etc.).
- Estimate operating costs (e.g., labor; transportation of oil/filters to recycling facilities if applicable; etc.) over the expected life of the program.
- You need also to estimate any revenues that the program might produce and/or might be applied to it.
- If the program is to be conducted in its entirety by one or more franchised haulers, financing may be a matter of negotiating an appropriate increment to the garbage/recyclables collection fee charged to households.



Photo: Cal Poly San Luis Obispo

### **10. Understand administrative and regulatory requirements**

Administrative requirements must be met in order to qualify for any kind of used oil recycling funding from the State. Used oil is managed as a hazardous waste in California, but specific regulatory requirements apply when used oil is collected at the curbside from households and is destined for recycling. Filters containing recyclable metal are also subject to specific provisions. To learn more about the latest administrative requirements, consult with CalRecycle’s Used Oil Program; to learn more about the latest regulatory requirements, consult with a California Department of Toxic Substances Control Regulatory Assistance Officer and/or your Certified Unified Program Agency (CUPA).

### **11. Evaluate your program**

Once your program has been up and running for a while (at least a year), and thereafter on a regular basis, it should be evaluated.

Program evaluation will help you to modify your program as needed to better meet your clients’ needs and/or to determine if the program is successful enough to continue.

- The starting point for an evaluation is the set of goals and objectives adopted for the program by your jurisdiction.
- Evaluation may be conducted in-house or by a consultant. Regardless, every effort must be made to avoid conflicts of interest (real or perceived) or any other kind of bias.



Source: Fresno County  
<http://www.co.fresno.ca.us/DepartmentPage.aspx?id=16359>

## 12. Ensure program sustainability

**Do what you can to ensure that your program will be sustainable, in order to prolong the benefits of protecting the environment and conserving resources into the future.**

Key considerations for program sustainability:

- Plan for the **long term**, at least 5-10 years or more.
- Plan for the **continuity of leadership** that is committed to the program.
- Plan for the **continuity of financing** (e.g., try to avoid relying on “soft money” to pay operating costs).
- Make curbside collection **a habitual part of the community’s fabric** (i.e., try to reach the point at which residents take it for granted that this is the way to dispose of used oil and filters).

### For More Information

Visit the Used Oil Program website at:  
<http://www.calrecycle.ca.gov/UsedOil/>



*San Miguel curbside oil collection program truck  
Photo: Bill Worrell*

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