

California's Latino Independent Truckers: An Assessment of Used Oil Recycling Attitudes, Practices, and Influencing Factors

Results from Focus Group Interviews and Surveys

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RECYCLE
USED OIL



INTEGRATED
WASTE
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TABLE OF CONTENTS

BACKGROUND AND OBJECTIVES 1
RESEARCH DESIGN 2
Focus Groups 2
Surveys 3
Archival Data 4
RESULTS OF THE FOCUS-GROUP INTERVIEWS 4
Q1. Describe your job and background.* 4
Q2. Who changes your truck oil?*. 5
Q3. How is your used oil disposed?*. 6
Q4. What is the best way to encourage recycling?*. 6
Q5. What is the best way to communicate with Latino truckers?*. 8
RESULTS OF THE SURVEYS 10
Q1. How many trucks do you own and operate? 10
Q2. What type of truck do you operate? 10
Q3. What types of trucking are you most involved with? 10
Q4. How many miles do you typically drive your truck each month? 11
Q5. Where do you operate your truck? 11
Q6. Where do you most often park your truck? 12
Q7. How much engine oil does your truck hold? 12
Q8. How frequently do you change the oil in your truck? 13
Q9. Who changes your oil? 13
Q10. Do you typically get your oil changed at the same location? 14
Q11. How often is your oil changed within the State of California? 14
Q12. Do you have an oil analysis done on your truck? 15
Q13. If you change your own oil, how do you dispose of the used oil? 16
Q14. If someone else changes your oil, how do they dispose of the used oil? 16
Q15. For truckers who change their own oil, what do you believe would be the most convenient method of recycling or disposing of used oil? 17
Q16. Do you believe that most truckers who change their own oil would be willing to take their used oil to an oil collection site? 17
Q17. For truckers who change their own oil, what do you think is the most important factor that would influence them to take their used oil to a collection site? 18
Q18. To which trucking organizations do you belong? 18
Q19. Which trucking trade shows do you attend? 19
Q20. Which magazines do you read regularly? 19
Q21. Choose the medium(s) you frequently rely on for news and information.* 20
RESULTS OF THE ARCHIVAL DATA RESEARCH 20
OBSERVATIONS AND RECOMMENDATIONS 21

*Indicates a shortened or paraphrased version of the question. See the page noted for a full version of the question.

NOTE: Subsequent to the preparation of this report, legislation (SB 63, Strickland) signed into law by Gov. Arnold Schwarzenegger eliminated the California Integrated Waste Management Board (CIWMB) and its six-member governing board effective Dec. 31, 2009.

CIWMB programs and oversight responsibilities were retained and reorganized, effective Jan. 1, 2010, and merged with the beverage container recycling program previously managed by the California Department of Conservation.

The new entity is known as the Department of Resources Recycling and Recovery (CalRecycle) and is part of the California Natural Resources Agency.

For information about this document, contact the CalRecycle Office of Public Affairs by email at opa@calrecycle.ca.gov or call (916) 341-6300.

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BACKGROUND AND OBJECTIVES

California has an estimated 48,000 truck owner-operators, and fully one-third of these drivers change their own oil. Each of these truckers uses and disposes of approximately 300 quarts of oil annually. Tractor-trailers represent less than two percent of vehicles on the road, but generate twenty-five percent of the used oil. Recent focus-group research revealed that truckers, as a group, are environmentally sensitive to the importance of recycling used oil and filters; however, that same report indicated that immigrant truckers may be less so (Plax, Kearney, Ritter, & Jolly, 2004).

Latinos are a rapidly growing segment of the California trucking community. Nationwide, Latinos comprise 15% of the trucker population; that percentage is significantly larger in California. Los Angeles-based *Transporte Latino*, a Spanish-language trade publication for Latino truckers, reports a circulation of 30,000, with most of the subscribers residing in California. Given the large numbers of Latino truck drivers and owner-operators, *Trucking News* launched a Spanish-language version of its publication in 2005.

A recent statewide study and outreach program for trucker owner-operators raised awareness of the importance of used oil and filter recycling, as well as providing information on responsible oil management practices and collection locations. This study, conducted by Plax et al. (2004) and funded by CIWMB, resulted in several findings important to planning this study.

- Convenience is paramount. Both educational materials and collection opportunities must be readily accessible to truckers for the program to be most effective. Truckers are particularly sensitive to any “down-time,” or loss of potential driving time.
- Significant subgroups exist. The study documented the widespread perception that truckers from immigrant groups were most likely to be relatively uneducated about responsible oil management practices. In addition, immigrants, particularly of Hispanic origin, are a fast-growing segment of the owner-operator population.
- Truckers trust truckers. The study found that truckers themselves recommend the use of trucking industry publications, word-of-mouth, and other trucking-relevant media as effective vehicles for outreach into the trucking community.

In extension of these findings, the present study was designed to determine the validity and generalizability of those results to another important segment of California truckers. The overriding goal of this project was to better understand the oil utilization and recycling habits of immigrant truckers. Recognizing that Latinos represent an important segment of the independent truck operators in California, our purpose was to identify how this particular group operates and maintains their trucks and disposes of their oil. Our specific goals were to 1) examine the attitudes of Latino drivers toward oil and filter disposal and recycling, 2) ascertain critical factors that influence their decisions about how to handle used oil, and 3) identify those communication channels to which these truckers might be most receptive.



Specifically, we designed and conducted research that revealed detailed information regarding the following objectives:

1. Discover the current oil change practices of Latino independent truck drivers.
2. Identify current used oil disposal or recycling habits of Latino independent truckers.
3. Determine the availability of oil change and recycling services, and barriers to convenient oil disposal/recycling as it relates to Latino independent truckers.
4. Assess the attitudes and opinions of Latino independent truckers regarding used oil disposal and recycling.
5. Identify patterns of decision-making, and media and outreach preferences of Latino independent truckers.
6. Discover the unique communication needs of Latino truckers, with an emphasis on language, message, and channel considerations.
7. Determine the most effective incentives that might be offered to Latino independent truckers to influence positive oil disposal and recycling behavior.
8. Validate empirically the defined need to develop a strategy for collecting used oil from Latino independent truckers.

In combination with the Plax et al. (2004) findings, these data provide important observations and recommendations that should assist the California Integrated Waste Management Board in its efforts to manage the used oil recycling practices in the trucking industry. In particular, this work will assist in efforts to 1) develop and promote the use of convenient oil collection sites, 2) create and implement effective education and outreach tasks that will encourage Latino truckers to recycle their used oil, and 3) expand convenient oil recycling sites targeted to truckers.

RESEARCH DESIGN

In order to address each of the research objectives, we relied on two types of primary data collection: focus-group interviews and surveys. Whereas interviews provide intensive, in-depth information, surveys yield additional, objective data. In addition, secondary – or already existing – archival research data were collected. In combination, these data provide us with substantive observations and information important to drawing conclusions and making recommendations.

Focus Groups

Four focus-group interviews were conducted with Latino truck owner-operators in December 2005. Two groups were interviewed in Riverside, California and two were interviewed in Long Beach, California.

Group-Participant Demographics. A demographic profile of participants revealed a total of 26 participants, all of whom identified themselves as Latino. Participant age ranged from 23 to 60 years; all but one were males. All participants were screened as licensed independent truck operators. Whereas many of the participants indicated their ability to speak both Spanish and English, a number of them spoke Spanish only, necessitating a translator for all group interviews.

Interview Protocol. The average length of the focus-group interviews was 65 minutes. Each group interview was designed to facilitate answers to a set of standardized questions derived from the research objectives. Each group interview was conducted by a trained facilitator, assisted by a Spanish-speaking translator. Interviews were videotaped at a professional facility. After the interviews were completed, the tapes were translated, transcribed, analyzed, and coded. The coding procedures involved three coders, separately (and then together) analyzing the transcriptions and documenting common, overlapping responses (response themes) to questions posed by the facilitator. When there was a question about the genuineness or validity of a particular response theme, coders viewed the appropriate segments of the videotapes again. Following these coding procedures, conclusions and interpretations were drawn.

Facilitation. The focus groups conducted for this project employed a semi-structured discussion format with relatively small numbers of participants interacting in groups. The groups were designed and facilitated to obtain relevant information based on a protocol derived from the research objectives. Each of the groups conducted for this project successfully provided a milieu where participant disclosures were encouraged and nurtured by a trained, professional focus group interviewer. The interviewer of each group brought focus to the participants' disclosures by posing and moderating the responses to open-ended questions within a permissive and nonthreatening group setting. In these ways, each of the four focus groups was conducted successfully, and thus, produced valuable and revealing participant responses regarding the issues being discussed.

Previous researchers (c.f., California Integrated Waste Management Board, 2002 at www.ciwmb.ca.gov/Publications/default.asp?pubid=935) reported an apparent reluctance of independent truckers to be interviewed and an even greater aversion to being recorded. These researchers perceived that urban independent truckers are particularly suspicious of anything having to do with the government or the regulation of their industry. Moreover, we might anticipate an even greater reluctance or anxiety from Latino immigrants. Our experience with this sample, however, was quite the opposite. All 26 participants indicated their willingness to be interviewed and recorded. Importantly, before each interview, participant anonymity and confidentiality were assured. Moreover, the facilitator made it clear to the groups that he had no direct association with any regulatory or governing agency. Participants were told that the purpose of the interviews was to collect data "to help us better understand issues in and around used motor oil recycling trends among Latino truck owners and operators." Our experienced, professional facilitator reported that he had no trouble eliciting meaningful disclosures from any of the groups. In some instances, group discussion was difficult to end, with some participants wanting to continue the interviews beyond the allotted time. All the participants indicated that they had enjoyed the opportunity to discuss issues important to them.

Surveys

Survey data were collected from both the focus-group participants and a separate, larger sample of Latino truck owner-operators drawn from a variety of meetings and public trucking events. The majority of surveys completed for the larger sample were conducted at the Truck Show Latino, which took place at the Fairplex in Pomona, CA., October 13 – 15, 2005. Approximately 20% of the surveys were completed in conjunction with commercial truck driver enrollment applications in compliance with drug and alcohol testing conducted by the California Drug and Alcohol Testing Alliance (C-DATA).



Survey Participant Demographics. In addition to the 26 truckers interviewed and surveyed, 167 licensed independent truckers responded to a questionnaire. Seventy-two different zip codes were represented in the sample.

Questionnaires. Items included in the survey were designed to assess four topics: truck operations, truck maintenance, used oil disposal, and communicating with Latino truckers. A version of this instrument (Plax et al., 2004) was used previously with California truckers and provided valid, reliable data for analysis. The survey was made available to respondents in either Spanish or English.

Archival Data

An exhaustive search of existing research data was conducted in conjunction with this project. The search focused on topics specific to Latino truckers and Latino media, marketing, and communications.

The electronic-based search relied on a multidisciplinary approach, accessing a wide range of sources from well-known media research outlets such as Nielsen Media Research to lesser-known sources such as Forrester Research, an independent technology and market research organization.

RESULTS OF THE FOCUS-GROUP INTERVIEWS

What follows are representative themes drawn from the analysis of Latino truckers' responses to each of the questions facilitated.

Q1: Describe your job and your background in the trucking industry. Specifically, what type of truck do you drive? What do you typically haul? What are your typical routes? What is your average work week like?

Participants began by sharing information about the circumstances that led them to the trucking business. Many of them started by working for others or because someone in their family was in the business.

Respondents reported driving a number of different commercial trucks and trailers, describing their rigs as Peterbilt, Kenworth, Bobtail, dump, bottom dump, freightliner, two-axel tractor trailer, GMC tow, GMC flat bed, Volvo and Mack.

They hauled a variety of products, including mattresses, cardboard boxes, Sears products, gravel, sand and clean rock for mixers, cement, plants, asphalt, blacktop, pallets, resin, plastics, clothes, plastic bottles, gravel, tortillas, alfalfa, hay, construction, nails, drywall, big tiles, and mail.

Trucker routes were local or regional, with most of them driving to and from their destinations in the same day or over the weekend. They drive from Colorado to Sacramento, from Vernon to Long Beach to the Inland Empire, from Hammer to Barstow to San Diego, from Barstow to Victorville, the entire Los Angeles County, from Los Angeles to



El Paso, and from Santa Fe Springs to the City of Industry and Thousand Oaks. Most of them drive from 120 to 300 miles a day; extended trips require as many as 630 or 820 miles. These drivers work long days, ranging from 8 to 12 hours each day, and from 5 to 7 days each week.

Q2: With regard to oil change practices, do you change your truck's oil and oil filter? How often? At what location do you change your oil and filter?

Most participants indicated that they changed their own oil and did so for primarily two reasons: It saves them a little money and it provides them an opportunity to check over the general maintenance of their truck.

- ◆ *I do it a lot.*
- ◆ *I change it at home.*
- ◆ *The reason why I do it is because I can actually get more fuel for my engine on my truck. Then if I see something that is out of the ordinary that doesn't look right, I can check over my engine.*

When it wasn't convenient to change their own oil some participants also used shops, particularly shops located at truck stops, to change their oil and oil filters. They found this alternative convenient when their schedule didn't permit self-change, and indicated that this alternative eliminated the hassles associated with disposal. They further reported selecting shops where they trusted the quality of service they received. Some even suggested the importance of observing the actual oil and filter change process.

- ◆ *Sometimes I take it to Ryder.*
- ◆ *It's easier for me to pay the shop because I have to take the oil someplace.*
- ◆ *The problem is once you do the oil you gotta dispose of the oil.*
- ◆ *I have [changed my own oil], but it's a hassle. You get the containers from them, after you take the containers in, they tell you, "Well, we only take containers at a certain time. You'll have to come back."*

Participants' frequency of oil changes varied widely, but they agreed that oil filters should be changed when they had their oil changed, too.

- ◆ *Mostly after 3,000 miles.*
- ◆ *Every 3,000 to 4,000 miles.*
- ◆ *Every 5,000 to 6,000 miles.*
- ◆ *I change mine every 15,000 miles.*
- ◆ *I keep it on a rotation, every 90 days, every 16,000 miles.*
- ◆ *I change it every 2 months or every 10,000 miles – whichever comes first.*



Q3: How does the used oil and oil filter from your truck get disposed?

When changing their own oil and filters, individuals often attempted to return it to an auto parts store or Wal-Mart for recycling; however, they reported a five-gallon limit, requiring two or more visits for the disposal.

- ◆ *I take it to Wal-Mart or Sam's Club. They have a recycle place there.*
- ◆ *When I change my oil, there is a program; the city's college and schools on a Saturday – you can take it there. [They'll take] up to 15 gallons.*
- ◆ *I think it's become harder [to dispose of oil]. There used to be gas stations that actually accept it. It's harder to find places to dispose of it.*
- ◆ *I usually take it back to the same place where I bought the oil or I take it to the truck stop, whatever is more convenient.*

When using a shop for oil and filter changes, individuals reported some vague idea of what happens to the used oil.

- ◆ *I've never asked.*
- ◆ *What I've seen at Caterpillar they have a container but I haven't seen what they do with it.*
- ◆ *I think they clean it up and resell it.*
- ◆ *I don't know what they do with it. Maybe they ship it somewhere else, I don't know.*
- ◆ *I'm not sure but I imagine it has to go to a special place where it won't pollute the environment.*
- ◆ *I think it goes to the refinery. They say they re-use it; that is what they say. I really don't know.*

Q4: For truckers who are not currently recycling their used oil and oil filter, let's assume we'd like to encourage them to recycle. What's the best way to encourage recycling? Are you aware of recycling options available to you? What do you think the barriers are to recycling?

Four important and recurring themes emerged that influenced participants' willingness to properly dispose of their oil and filter: convenience, incentives, disincentives, and information. All but the disincentive theme were evidenced in an earlier report with California truckers (Plax et al., 2004). For the convenience theme, participants complained that there were an insufficient number of recycling sites, and site locations were long distances away. Available sites further limited the amount of oil that could be deposited, requiring multiple trips and drop-offs. Too many sites refused deposits, indicating that they had already reached capacity. Sample responses included the following:

- ◆ *We need more recycling places.*
- ◆ *They need to be convenient.*
- ◆ *We need something that was available in all cities, so you don't have to drive across country to drop your oil.*



- ◆ *Auto parts should have to take it. You buy it there and they should have to take it. They exchange everything else you buy not the oil.*
- ◆ *If the auto parts sell the oil, they should have to take it back or not sell it, period.*
- ◆ *It's a hassle to get rid of your filter. There are places to take your oil, but what am I going to do with the filter?*
- ◆ *Make more collection centers; teach people where the places are.*
- ◆ *You take it to the auto parts store, and they are full.*
- ◆ *The government should have its own conscience and just like they have recycling services once a week for the trash, they should have a truck that comes and picks up the recycled oil.*

Participants firmly believed that incentives should be provided for recycling, including free oil and money. Such incentives, they argued, would substantially increase responsible recycling.

- ◆ *If they bring their oil, they should get a quart or two for free.*
- ◆ *[Provide] a program for small truckers where they get some kind of compensation back for the amount they are disposing.*
- ◆ *Give them some compensation for it.*
- ◆ *More people would do it if they get free oil, or a reward or prize.*
- ◆ *Laziness [prevents people from] taking it to the proper place.*
- ◆ *How much do we get paid to recycle, like an extra \$10 or \$15? If we got that back, it might make me want to do it.*

The flip side of incentives is the use of disincentives. Again, participants argued that consequences of failing to recycle should be considered, including fines and detrimental effects on the environment.

- ◆ *Once you see that it's hurtful [to the environment] and you feel something for the birds dying [in reference to Exxon oil spills].*
- ◆ *I think that one of the ways is to show the damage that we are doing to the environment when we drop it on the grass.*
- ◆ *I know that they are fines of even \$10,000.*
- ◆ *Everybody's talking about fines.*

Information was the fourth theme that emerged in response to this question. Interestingly, some participants believed that people already knew the importance of recycling oil to the environment, but others thought it was important to raise people's consciousness about the issue.

- ◆ *Make a documentary like the ones they have on the Discovery Channel. [Tell people] what damage it's causing.*
- ◆ *I think that if you put it on the news, on TV, you can educate people.*
- ◆ *There are no commercials that educate about this issue.*
- ◆ *I think we all know that all chemicals damage the earth.*
- ◆ *Advertise; get the word out.*



- ◆ *The majority [already know what they're supposed to do].*
- ◆ *I think a lot of people understand what the consequences are, but I don't think that a good percentage of people are doing the right stuff anyway.*
- ◆ *Maybe they don't care. Yeah, some don't care.*
- ◆ *Some aren't aware.*

Factors that encouraged or discouraged respondents from recycling overlapped substantially with those factors obtained from the general population of California truckers (Plax et al., 2004). Specifically, factors that increase their willingness to recycle include the following:

- Provide sites that are convenient to them, including hours of operation, location, and proximity.
- Provide free oil disposal sites.
- Require oil distributors and other places that sell oil to also collect used oil and filters.
- Increase the number of oil disposal sites.
- Distribute more information about sites available, ways to dispose of oil, and the importance of proper oil disposal and recycling.
- Provide incentives for oil recycling, including a fee-based return on deposit or free or discounted oil.
- Provide residential and commercial curbside oil disposal and recycling services.
- Remove limits on the amount of oil that can be returned at any one time.

Factors that discourage or decrease their willingness to recycle include:

- Sites that are inconveniently located.
- Fee-based disposal sites.
- Limits on the quantity of oil that can be recycled at any one time.
- Worries about fines associated with EPA-related sanctions.
- A lack of environmental sensitivity or awareness.
- A lack of tangible incentives for recycling used oil.
- The effort required to recycle.

Q5: If we wanted to communicate specifically with Latino truckers regarding their use and recycling of oil ... such as sending them an advertising or educational message ... what would be some of the best ways to do that? How could we communicate with you? And, what language do you prefer is used with those messages?

Because truckers drive so much of their day, newspapers and flyers are not as accessible or consumable to them as radio and road signage/billboards. In addition, Latino truckers noticed that most of the information available about recycling was limited to the English language. They further recognized that Spanish was only one of several other languages that should be employed in mediated messages.

- ◆ *Everybody listens to the radio.*
- ◆ *Billboards.*
- ◆ *Show pictures in a magazine.*



- ◆ *Flyers.*
- ◆ *Advertise on the radio.*
- ◆ *There are two popular radio stations in Southern Los Angeles: El Cucuy – everybody listens to them.*
- ◆ *Most people that drive trucks listen to the radio.*
- ◆ *I don't have time to read.*
- ◆ *Radio. Truck stops. Post them in Spanish.*
- ◆ *Talk stations. KFWB.*
- ◆ *There are a lot of different drivers from different countries...depends on which cities. Glendale is all Armenians....Monterey Park is all Asian....You go to Compton and it's all Mexican now. Multiple languages.*
- ◆ *Something you listen to and see.*
- ◆ *Put it on the oil label and in different languages. It only comes in English.*
- ◆ *Yes, [provide the information in Spanish], especially if you add, "This message is brought to the Spanish people."*

Some participants indicated that Mexican immigrants in particular might require additional education on the benefits of recycling and the hazards of improper disposal. Citing examples from an unregulated disposal program in many areas of Mexico, many immigrant truckers may be unaware or fail to prioritize the importance of responsible recycling behaviors.

- ◆ *We are just not well informed about the damage we are doing to the environment.*
- ◆ *Many times the way we are brought up and where we were raised....Where we come from they don't have these kinds of programs so we don't know how to do it.*
- ◆ *Back in Mexico there are no regulations like the ones we have here, smog check, stuff like that. When you are over there it's easier to overlook these things....I think education is a big deal.*
- ◆ *Post it in school where we go to take license classes; they can give you all information there.*
- ◆ *Let them know that this is bad for the environment. Show pictures in a magazine: "This is what a lot looks like when oil has been spilled all over it."*
- ◆ *Show what can happen with this stuff.*
- ◆ *Like many old people that come from Mexico, they don't get educated on this, so they are just going to keep on doing it how they know.*

Participants also reminded us of an important cultural distinction somewhat unique to Latinos. Recognizing that the Latino community is very protective of their families, these participants observed that any message strategy designed to influence their recycling habits should connect the behavior to the preservation of the family.

- ◆ *I think that the Latino community, we are very over protective of our families. Like, I know my father, I have two kids of my own, and if they come and educate me on what harm will be done down the line on my children and my grandsons, I would definitely make the change.*
- ◆ *I'm not saying other cultures are not like that [supportive of their families]. I see that other cultures can*



be more lenient towards educating their kids [than we are].

- ◆ *I also think that in the sense that we are protecting our families, our licenses and paperwork has to be in order so that they allow us to work.*
- ◆ *I think it works when you make people aware about the damage that it causes dumping the oil on the street, the damage done to the ecology, the damage caused to the family.*
- ◆ *The other day I saw on TV a commercial about the people that take the car ashtray and dump it on the street and the cigarette butts go into the ocean. The commercial said, "Is this the earth that you want your children to inherit?"*

RESULTS OF THE SURVEYS

Analyses of participants' responses to the survey items are organized around truck operations, truck maintenance, used oil disposal, and communicating with truckers.

Truck Operations

Q1: How many trucks do you own and operate?

Most (72.5%) respondents indicated that they owned and operated primarily 1 vehicle, another 23.3% operated 2 to 5 trucks, and the final 4% operated 6 or more.

Q2: What type of truck do you operate?

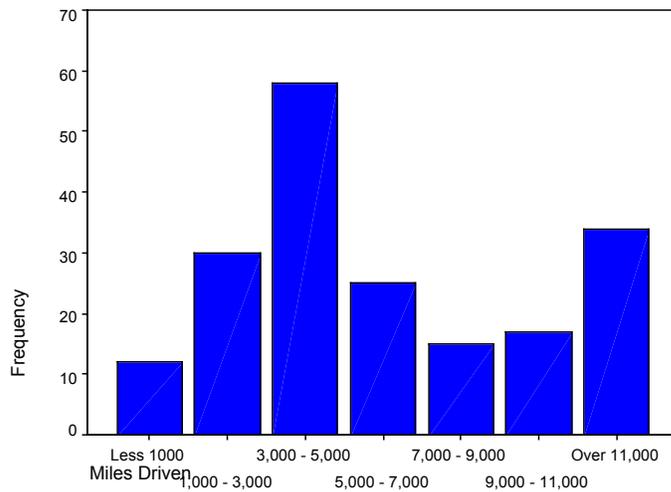
A little over half (53.9%) of those surveyed operated Class 8 trucks, 11.9% operated Class 4 or 5 trucks, 6.7% operated Class 6 trucks, and 3.1% operated Class 7 trucks. The remaining participants indicated "other" (11.9%) or did not indicate (12.4%).

Q3: What types of trucking are you most involved with?

Most respondents reported being involved with freight trucking (42%), either LTL or truckload, followed by construction (26%), intermodal (9%), and agricultural/livestock (4%). The remaining participants reported "other" (15%) or did not indicate (4%).

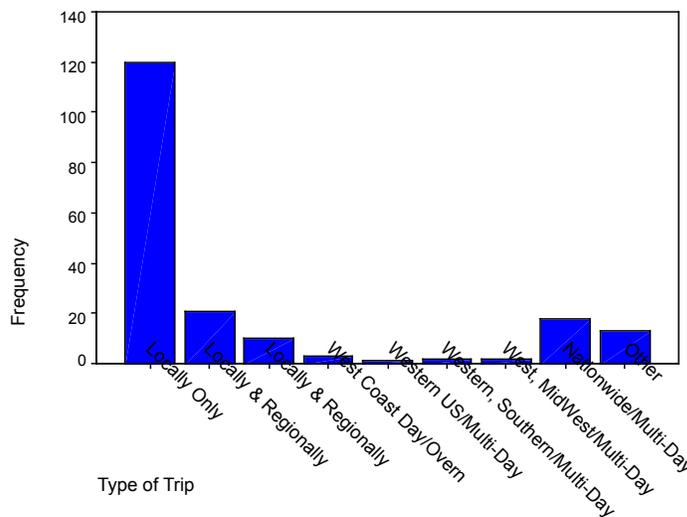
Q4: How many miles do you typically drive your truck each month?

Respondents indicated driving their trucks from 1,000 miles each month to over 11,000 miles, with most (30%) regularly driving between 3,000 and 5,000 miles.



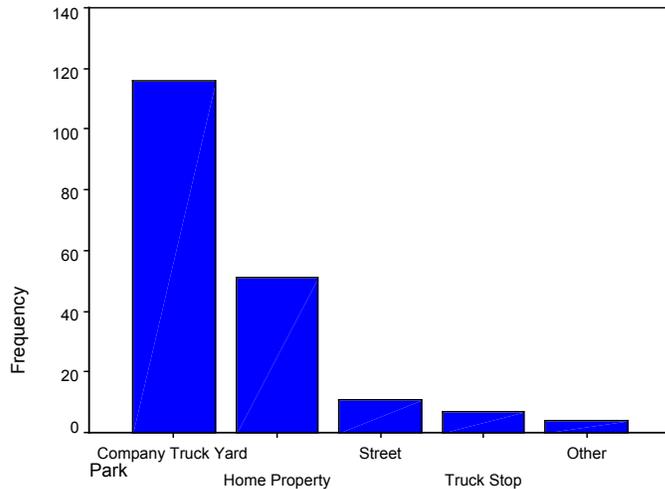
Q5: Where do you operate your truck?

Most of the truckers surveyed operated their trucks locally (62.2%). Another 11% operated their trucks locally and regionally, driving to their destination and back again in the same day, with another 5.2% indicating overnight trips. An additional 9.3% engaged in nationwide, multi-day trips.



Q6: Where do you most often park your truck?

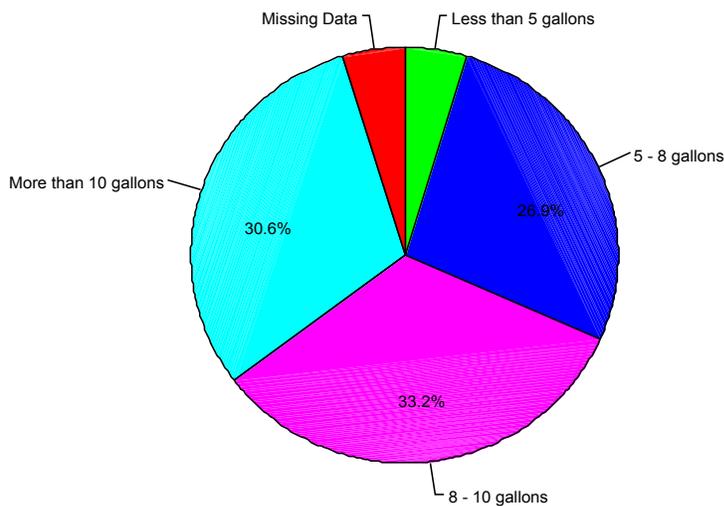
Most truckers parked their vehicles in a company/broker truck yard (60%) or on their home property (26%).



Truck Maintenance

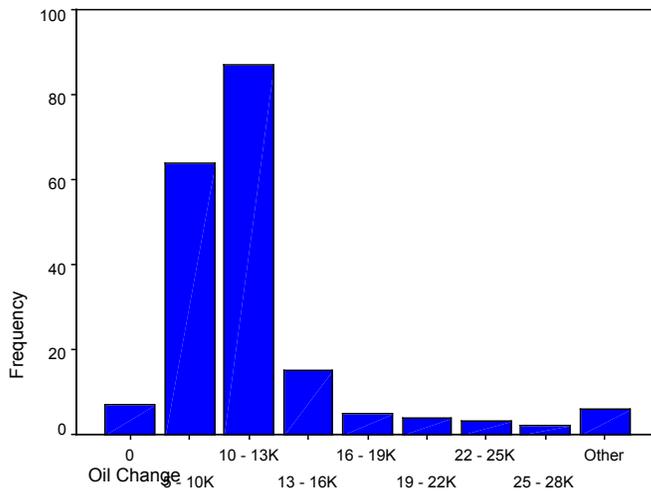
Q7: How much engine oil does your truck hold?

Responses indicated a fairly even distribution with 26.9% of the respondents indicating a 5 – 8 gallon capacity, 33.2% indicating an 8 – 10 gallon capacity, and 30.6% reporting a gallon capacity of more than 10 gallons.



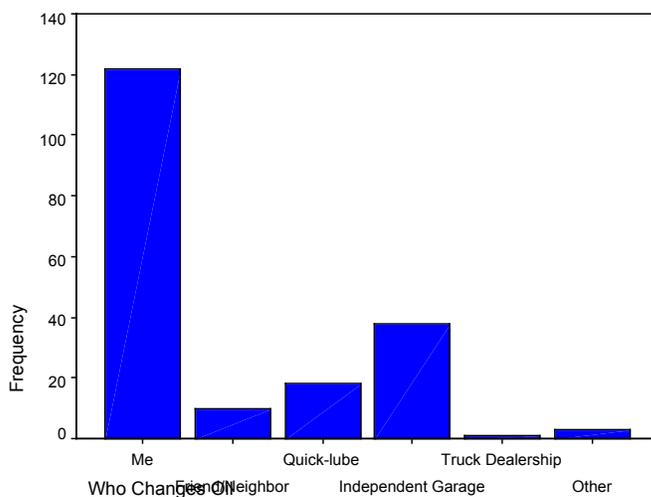
Q8: How frequently do you change the oil in your truck?

Most (78.3%) of the truckers reported changing their oil rather frequently, every 5,000 to 13,000 miles.



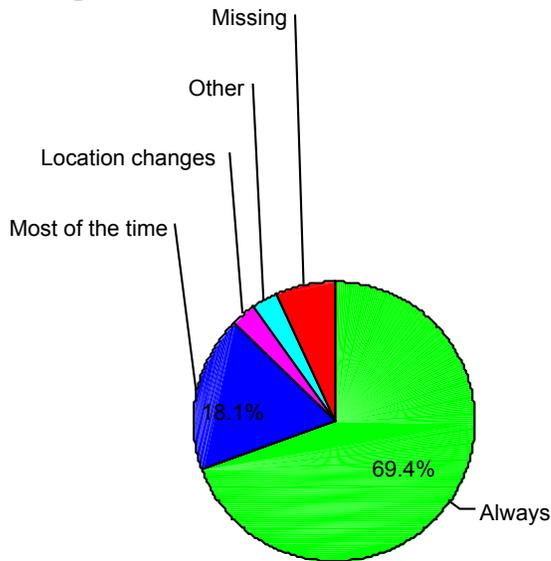
Q9: Who changes your oil?

Truckers predominately relied on themselves to change their truck oil (63.2%). The second and third most frequently cited sources were independent maintenance garages (19.7%) and quick-lube shops at truck stops or other roadside facilities (9.3%).



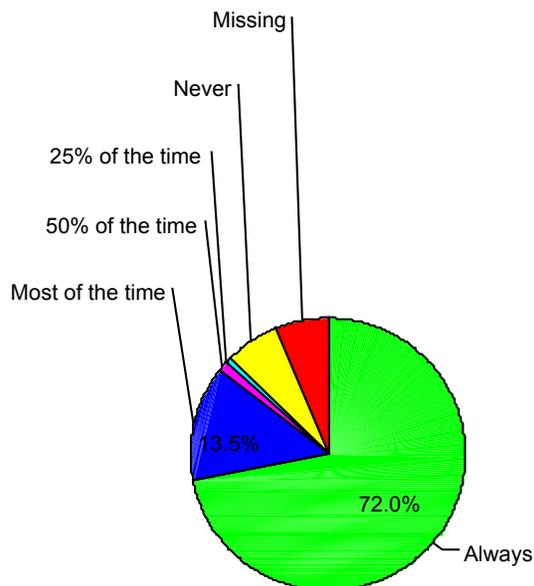
Q10: Do you typically get your oil changed at the same location?

Participants indicated that they “always” (69.4%) or “most of the time” (18.1%) returned to the same location in order to change their oil.



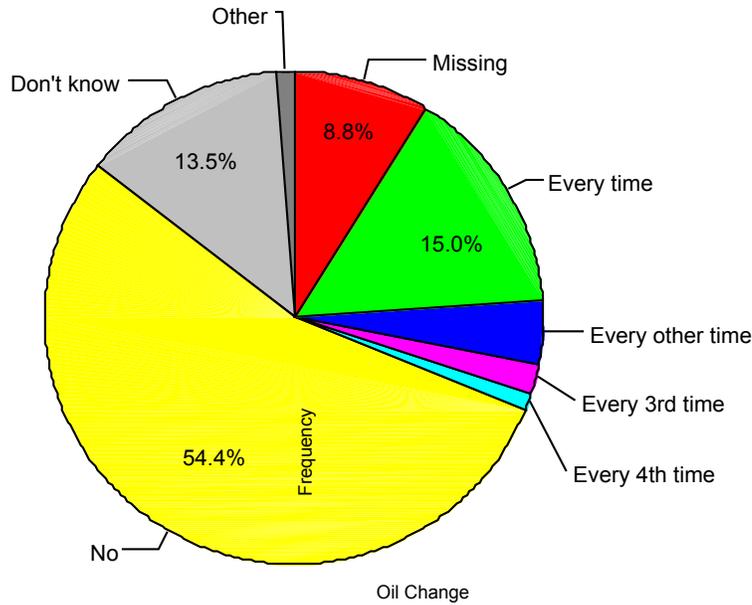
Q11: How often is your oil changed within the State of California?

Almost all of the participants reported that they “always” (72%) changed their oil here in California.



Q12: Do you have an oil analysis done on your truck?

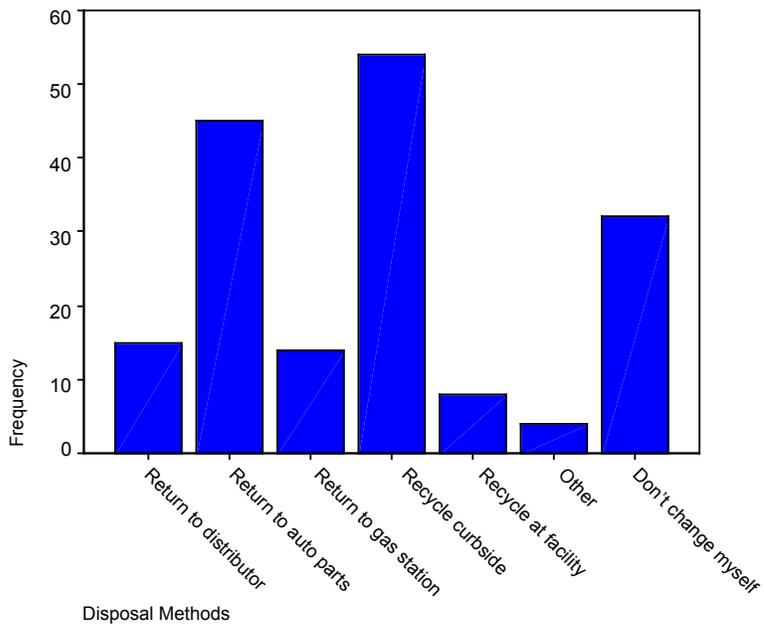
Answers revealed that half of the truckers (54.4%) had no oil analysis done on their trucks at all, with another 13.5% indicating that they did not know. Only 22.2% of the respondents reported doing regular or semi-regular oil analyses.



Used Oil Disposal

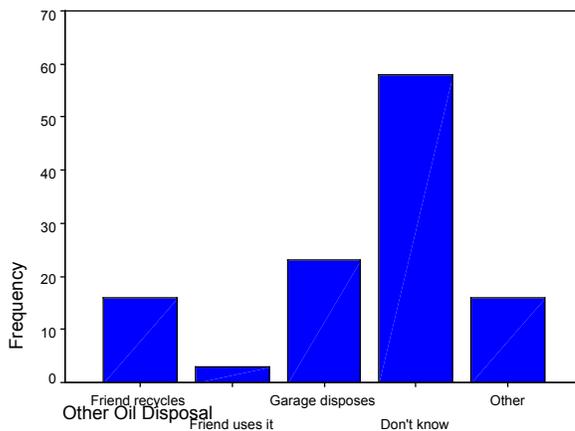
Q13: If you change your own oil, how do you dispose of the used oil?

No consistent response to this question emerged. Truckers disposed of their used oil in a variety of ways, relying primarily on city/county curbside pick-up programs (28%) or returning it to auto parts stores (23.3%), such as AutoZone, Kragen, and Pep Boys.



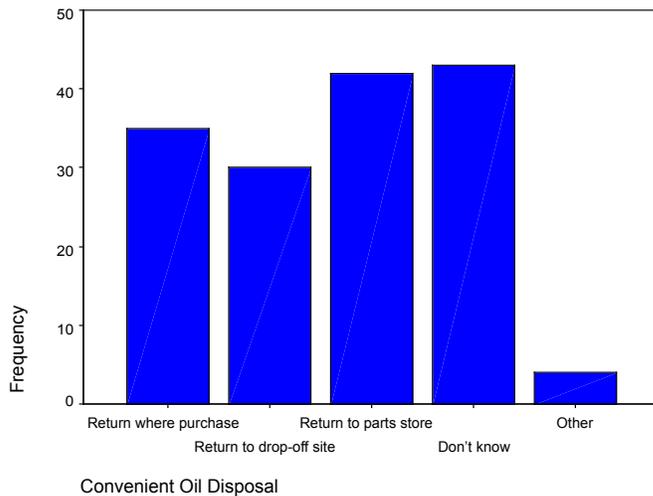
Q14: If someone else changes your oil, how do they dispose of the used oil?

Most of the truckers (30.1%) indicated that when someone else changed their oil, they had no idea how the oil was disposed. Others indicated that either the garage disposed of the oil (11.9%) or their friends recycled the oil (8.3%).



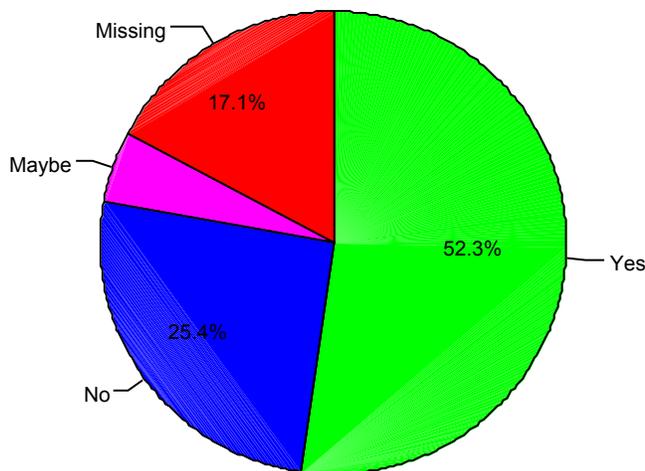
Q15: For truckers who change their own oil, what do you believe would be the most convenient method of recycling or disposing of used oil?

Interestingly, the largest number of respondents (22.3%) indicated that they simply did not know. Remaining participants were divided in their responses: 21.8% recommended that used oil be returned to auto parts stores, 18.1% believed it should be returned to the distributor where the oil was purchased, and 15.5% suggested utilizing city or county drop-off sites.



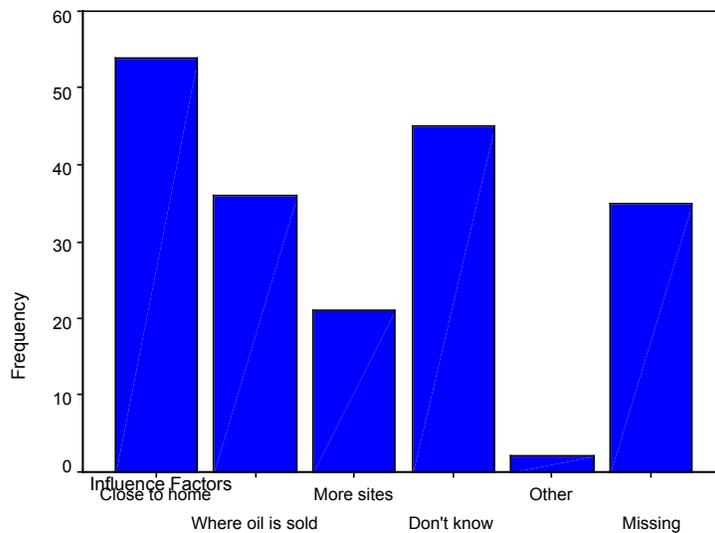
Q16: Do you believe that most truckers who change their own oil would be willing to take their used oil to an oil collection site?

A little over half of the survey participants believed that most truckers would take advantage of an oil collection site for their used oil. Another quarter (25.4%), however, indicated no, they would not use such a site.



Q17: For truckers who change their own oil, what do you think is the most important factor that would influence them to take their used oil to a collection site?

The most important factor (28%) for these respondents was to have oil collection sites situated closer to homes and where they buy oil products (18.7%). Another 10.9% of the respondents indicated that more collection sites was the most important factor influencing them to recycle their used oil. A surprising number of “don’t know” (23.3%) or missing data (18.1%) was obtained to this question, indicating, perhaps, that truckers in this sample fail to prioritize oil recycling or are unaware of the potential implications of improperly disposing of used oil.



Communicating with Truckers

Q18: To which trucking organizations do you belong? (You may choose more than one.)

Five different trucking organizations were represented in this sample, ranging from 1 to 10 members. An overwhelming number of respondents (62%) indicated that they had no organizational affiliation; another 24% provided no response at all (missing data).

Trucking Organization Membership	Count
California Truckers Association (CTA)	10
California Dump Truck Owners Association (CDTOA)	4
America’s Independent Truckers Association (AITA)	1
Owner-Operator Independent Drivers Association (OOIDA)	5
National Trucker’s Association (NTA)	3
Other	2
None	120



Q19: Which trucking trade shows do you attend? (You may choose more than one.)

A little over half (51.8%) indicated attendance at the Truck Show Latino in Pomona, California. A significant number of others attended the International Trucking Shows in Anaheim (17.1%) and the Truck Show in Las Vegas (12.4%). The Dallas trucking show drew little or no attendance from this sample of truckers. Only about a quarter of respondents indicated no attendance at any of the trucking trade shows.

Trucking Trade Shows	Attendance
Truck Show Latino (Pomona, CA)	100
International Trucking Show/CTA (Anaheim)	33
The Truck Show (Las Vegas)	24
The Great American Trucking Show (Dallas)	4
None	49
Other trade shows	5

Q20: Which magazines do you read regularly? (You may choose more than one.)

Almost all participants in this sample indicating regularly reading one or more of the magazines listed. *Transporte Latino* was the most frequently read trade magazine (42%), followed by *El Troquero* (36.8%), and to a lesser extent, *Land Line* (16.6%) and *Truckline* (17.6%).

Magazines	Readership
<i>Land Line</i>	32
<i>Transporte Latino</i>	81
<i>Truckline</i>	34
<i>El Troquero</i>	71
<i>California Transportation News</i>	15
<i>Caltrux Magazine</i>	18
Other	17



Q21: Choose the medium(s) you frequently rely on for news and information. (You may choose more than one.)

Truckers in this sample indicated that they most frequently rely on the radio (55.4%) for their news and information, and to a lesser extent, newspaper (34.7%) and television (27.5%). Few indicated frequent use of the Internet for accessing similar information.

News Media	Regular Use
Newspaper	67
Radio	107
Television	53
Internet	7
Other Media	1

RESULTS OF THE ARCHIVAL DATA RESEARCH

A search of existing research data conducted by recognized national organizations was undertaken in conjunction with this project. The search focused on topics specific to Latino truckers and Latino media, marketing, and communications and revealed the following salient data:

- Hispanic viewers are more engaged by Spanish-language commercials and more receptive to the commercials' messages than are non-Hispanic viewers of English-language commercials (Nielsen Media Research, 2005).
- Hispanic consumers are best reached by delivering messages that resonate with Hispanic culture, such as the importance of family and the enjoyment of Latin music and movie artists (Forrester Research, 2005).
- Hispanics in trucking are among the highest Latino income brackets and high in Hispanic purchasing habits (Newport Communications Group, 2005).
- According to the U.S. Bureau of Labor Statistics, while 10.2% of the U.S. population is Hispanic, a full 15%, or 480,000 of the nation's 3.2 million truck drivers are Hispanic. Among those, about half speak Spanish as their first language (American Business Media, 2005).
- The number of Hispanics entering the trucking industry is growing at a very fast pace. Faced with a significant shortage of drivers in the trucking and commercial vehicle industry, trucking recruiters have found a match between Hispanics and industry workforce requirements; i.e. personnel who are relatively youthful, able-bodied workers, and those looking for good careers and the opportunity to improve their earnings (Ledford & Lagueruela, 2005).
- A recent survey of Hispanic truck drivers revealed that while all those interviewed spoke English and had passed their commercial driver's license exams in English, 42% said they prefer to read in Spanish, as that is their native language. In addition, the study found that 45% said they prefer to read in Spanish and English combined. The researchers believe that the bilingual preference may in part,



be due to the fact that reading in English and Spanish together assists the truckers in improving their English skills (Randall Publishing, 2004).

- Among Univision (Spanish-language television; fifth-largest television network nationally, behind ABC, CBS, NBC, and Fox) viewers, 36% reported they watched entire commercials as compared to 10% for English-language broadcast TV viewers and just 8% for English-language cable viewers (Nielsen Media Research, 2005).
- According to a recent AOL/Roper ASW survey, during the past two years, Hispanic Internet users have grown faster than other Internet users, spending an average of 16% more time online per week than the general Internet population. The majority of Hispanic participants responding to the survey said they placed importance on having online content in Spanish and in English (AOL/Roper ASW, 2002).
- Hispanic-Latino truckers as a group, are well established in trucking, have a strong entrepreneurial spirit, work hard and enjoy their involvement in trucking (Newport Communications Group, 2005).
- Hispanics embrace technology. However, tapping the burgeoning Hispanic market requires marketers to focus on three key success factors: culture, language, and price (Forrester Research, 2005).
- About 52% of Univision viewers said they frequently get information for purchase decisions from commercials, versus 7% for English-language broadcast TV viewers and only 5% for English-language cable viewers (Nielsen Media Research, 2005).
- Just over 75% of Univision viewers said commercials on the network can be trusted more than commercials on other channels (Nielsen Media Research, 2005).

Note: The archival entries shown above are recorded verbatim from sources noted. The use of the label "Hispanics" is attributed to the original sources.

OBSERVATIONS AND RECOMMENDATIONS

This study represents one of the first and most in-depth attempts to understand the Latino trucker owner-operator population in California. Latinos represent one of the largest cultures in the United States. As a group, Latinos tend to be collectivistic or group/family oriented. Traditional Latino males are expected to fill the roles of husband, father, and provider and be responsible for their families. Traditional Latino females are expected to be protected, stay close to home, and nurture and support their families. While not every Latino fits these characterizations, this interpretation of the general Latino culture helps to frame some of the discussion that follows.

After interviewing 26 Latino truckers and surveying a total of 193 licensed independent Latino truckers across 72 different zip codes, we now have a reasonable foundation for making observations and recommendations important to the objective of this project. These recommendations are organized around three goals: 1) To examine the attitudes of Latino trucker owner-operators toward used oil and filter disposal and recycling; 2) To ascertain critical factors that influence their decisions about how to handle used oil; and 3) to identify those communication media to which Latino truckers are most receptive.

What are the attitudes of Latino trucker owner-operators toward used oil and filter disposal and recycling?

As suspected, immigrant trucker owner-operators of Hispanic origin admit to being less knowledgeable, and perhaps less culturally sensitive to responsible oil management practices. Their responses did not reveal any

depth of understanding about either the practices or the implications of those practices for the environment. When asked if they had oil analyses done on their trucks, most said no. When asked how they disposed of their used oil, they indicated a variety of venues, but when asked what they believed would be the most convenient method of disposing of their oil, almost a quarter simply did not know.

When asked if truckers would be willing to use oil collection sites for their used oil, a quarter indicated they would not. Whereas three-quarters of CA truckers indicated that yes, they would take advantage of an oil collection site (Plax et al., 2004), only half of Latino truckers indicated that they would. Fully 41% could not identify the “most important factor that would influence them to take their used oil to a collection site.” Finally, more “missing data” and “don’t know” responses were obtained from Latino than from other California truckers. These survey data suggest that Latino truckers might not fully appreciate the importance of oil and filter disposal and recycling.

Unlike our previous findings which suggested that the proper disposal of oil and filters is an acknowledged and significant problem among California truckers (Plax et al., 2004), Latino truckers only seemed to be vaguely aware of the seriousness of the issue. The problem is not one of attitude either positive or negative towards recycling; instead, the problem appears to be one of relative importance or level of involvement with the issue. In other words, Latino truckers do not similarly prioritize responsible oil management practices the way other California truckers apparently do. The focus-group interviews further support this conclusion. Latino truckers are not opposed to recycling; in fact, they seem to know that they should recycle used oil and filters. Respondents perceived that some of their cohort truckers did not seem all that interested in or committed to recycling.

From these observations, we recommend the following:

- Educational and outreach efforts need to cultivate and go beyond the promotion of favorable attitudes to include the importance or “value” of proper oil disposal and recycling. Latino immigrant truckers need to be socialized into assuming a personal responsibility toward recycling. This socialization process should be designed to help truckers internalize the value of responsible oil management practices.
- Provide specialized educational programs designed to better acquaint, educate, and socialize Latino truckers with environmental protection practices, priorities, and values.
- Educational efforts should be cast in both Spanish and English to meet the needs of the target population and to encourage “buy-in.”
- Develop, implement, and publicize standardized practices for disposal of used oil and filters.
- Utilize media and other communication channels familiar to Latino truckers in an effort to capitalize on the perceived credibility of such media by the target audience.

What are the critical factors that influence Latino truckers’ decision about how to handle used oil?

Four primary factors influence Latino truckers’ decisions about recycling used oil and filters: convenience, incentives, disincentives, and information. Participants reported an insufficient number of sites available, limited hours of operation, and limited disposal capacity. Making the process of recycling convenient is likely to translate



into greater levels of compliance and adherence. Truckers indicated that they preferred recycling sites to be closer to home and to be able to return oil and filters at points-of-purchase. They also wanted the auto parts outlets and trucks stops to allow them to dispose/recycle all of their used oil in a single drop off. Others suggested that city or county recycling programs should add used oil and filter collection to their curbside programs.

Second, respondents wanted some sort of compensation or incentive for oil recycling. Because the process is often time consuming or effortful, truckers thought they should be rewarded for their efforts. They suggested free oil or financial compensation.

Third, truckers indicated that they are influenced by the consequences of having to pay steep fines for noncompliance. They also cited obvious damage to the environment as a possible deterrent to improper disposal.

Fourth, they indicated that more information should be available to increase trucker awareness and to raise their consciousness about the importance of recycling, available sites, and the oil disposal process.

In order to encourage Latino truckers' willingness to recycle, we recommend the following:

- Provide sites that are convenient to them, including hours of operation, location, and proximity.
- Provide free oil disposal sites.
- Require oil distributors and other places that sell oil to also collect used oil and filters.
- Increase the number of oil recycling/disposal sites.
- Distribute more information about sites available, ways to dispose of oil, and the importance of proper oil disposal and recycling. Information should be provided via Latino-focused media and in Spanish and English. Also, provide prizes or rewards in conjunction with outreach efforts.
- Provide incentives for oil recycling, including a fee-based return on deposit or free or discounted oil.
- Provide residential and commercial curbside oil disposal and recycling services.
- Remove limits on the amount of oil that can be returned at any one time.
- Sustain fines and sanctions for noncompliance.
- Make the recycling of truck oil and filters as easy as possible, including curbside pickup and easy access drop off sites.
- Educate Latino truckers to become more environmentally sensitive.

To which communication media are Latino truckers most receptive?

Our survey data indicate that Latino truck owner-operators rely most heavily on the radio for their news and information. Somewhat less preferable are newspaper and television, with almost no respondents indicating the use of the Internet or other electronic media. A surprising number of participants indicated that they regularly read one or more trucker magazines, with *Transporte Latino* and *El Troquero* the most popular. Radio and trucker



magazines appear to be the most viable outlets to distribute important information to this population.

For the most part, our sample of truckers held no membership in trucking organizations; however, over half attend the Truck Show Latino in Pomona, CA. Targeting local trucking trade shows appears to be an important strategy for disseminating recycling information.

Focus-group interviews further reinforced the primacy of radio for news and information, with *El Cucuy* identified as the most popular in Southern California, but they also listened to talk stations, like KFWB. Road signage and billboards were also cited as important media outlets that they could easily consume while driving.

Without exception, group participants stressed the importance of utilizing the Spanish language when targeting Latino truckers. Archival data strongly supported this assertion as well. Posting signage at truck stops and labeling oil containers in Spanish are highly recommended. Even though most of the respondents could speak some English, they preferred and identified more directly with Spanish. One respondent even suggested that informational messages might be prefaced with the statement, "This message is brought to the Spanish people." Employing the Spanish language communicates a respect and affiliation with the Latino culture.

A final observation and recommendation

Any program designed to successfully educate and socialize Latino trucker owner-operators about used oil disposal and recycling should be grounded within the values of the Latino culture. Focus-group participants and archival data revealed that the most important value of the Latino community is the family and its preservation. Messages that demonstrate the consequences of recycling for this generation and the next are desirable. Latino parents are particularly sensitive to messages that are likely to influence their children and their grandchildren. Sustaining a clean and healthy environment for future generations is a theme that Latinos are likely to appreciate.

Recognizing that this population of truckers remains somewhat removed or detached from issues of environmental protection, persuasive messages should be designed that move them to a more mindful recognition of its importance. At best, we have truckers complying with environmental regulations, but how do we get them to internalize these practices? One strategy is to employ visual images that depict the consequences of a clean environment along with one that illustrates the abuses of improper oil disposal. Such visual images are likely to prompt greater attentiveness, create an emotional connection with the message, and sustain a visual memory of the environment. A second strategy is to create multiple messages that rely on principles of repetition and redundancy. Third, messages should emphasize sustaining the values of their culture through environmental preservation for their children and grandchildren.