

## "TOP 5" Steps Our Community Can Take to Increase Recycling... NOW!!! Fact Sheet

Many communities and counties want to increase recycling, but frankly, don't know where to start. There are LOTS of feasible steps you can take to increase recycling... <u>A brief description of our countdown of the "TOP 5" steps to outstanding recycling follows.</u>

⇒ #5 - Establish a citizen recycling / sustainability committee
 ⇒ #4 - Measure current recycling levels and set goals
 ⇒ #3 Implement Key Programs and Ordinances
 ⇒ #2 - Education and Outreach
 ⇒ #1 - PAYT

#5. Citizen Committee: Establishing a "recycling" or "sustainability" citizen committee in your community (or county) can: 1) provide advice to the elected Council on recycling / sustainability issues; 2) harness the volunteer efforts of interested citizens to increase diversion in the community and do so in a contributory way. The requirements for the

#5: Establish a
Citizen
Committee



citizen committee are small - a small budget, a meeting room, and a few hours of staff time - and the benefits to the community can be very large. Most communities involve staff support; a few also include a Board / council member as a liaison. The community may task them with examining options, setting goals, providing advice on specific programs, or other objectives. You may be surprised at the well-informed, high quality resources you likely have in your community.

#4. Identify the Status Quo and Set / Monitor Community Diversion Goals: A great deal of information on the Community's current recycling level -- and its potential - can be achieved with very little effort. Here's what it takes:

 "Set out" survey: Select a random sample of homes around your community, and use staff, the recycling committee, volunteers, or temp #4: Measure Status
Quo and Set
Recycling Goal



staff to weigh and observe the garbage and recycling set outs for the selected homes You will be visiting those homes with a clipboard and a scale to collect data on trash and recycling "set outs"! Enter and analyze the data to assess percentage of recycling, education needs (what materials people don't seem to realize they can recycle, or materials they are recycling that they shouldn't), where

progress has been made, etc. By tracking this over time<sup>iii</sup>, you can <u>monitor the progress</u> in recycling encouraged by your strategies.<sup>iv</sup> Your committee may also wish to consider an occasional waste sort<sup>v</sup>, to see what materials still remain in the disposal stream that might be good candidates for "next" programs, or to identify currently eligible materials that households aren't recycling well.<sup>vi</sup>

- Conduct surveys of households and businesses, and use the surveys to understand current recycling opportunities and barriers in your community. Include questions about 1) current recycling and trash habits; 2) current opportunities and barriers to recycling; 3) attitudes; and 4) willingness to recycle and preferences among possible program options. These surveys can be very low cost, and bring important information for "next steps".
- a) Residential survey A mail or web survey examining current recycling behaviors and awareness, preferences for new programs, willingness to pay for new efforts. Linking these results with the set out / weight data can be especially powerful in crafting programs and education efforts.
- b) Commercial Survey One of the most useful exercises is to conduct a commercial sector survey, geared toward understanding current trash practices and relative volumes, what recycling / reduction behaviors are already in place, barriers and needs, and other topics. Helping solve a problem is easier when you understand the situation. Viii
- Develop a Plan and set a Community Diversion Goal<sup>ix</sup>: The Committee is almost there. It has information about current recycling levels and the interest, opportunities, barriers, and options. The data from the set out survey (and possibly waste sort) provides key information on "needs". The committee may wish to review "recycling plans" from other communities, or invite local / regional "experts' to talk about program options. Using this information, the committee may be able to craft a local recycling action plan, possibly including some of the strategies suggested in this fact sheet. Write a memo or report summarizing the recommendations and present to your Town / City / County Council, asking them to adopt the recommended diversion goal. Don't forget to plan to monitor progress each year!
- Apply for Grants and Funding: Many states have grant programs, and your staff and
  citizen committees can apply for grants to help with the remaining steps, or you may
  request funds from your local government maybe to support recycling education, help
  buy containers for recycling or yard waste drop-off programs\*, develop a commercial
  program, or, perhaps, implement PAYT in your community!



# #3: Implement Key Programs and Ordinances to Improve Opportunities to Recycle



- 3. Pass Programs and Ordinances to Improve Opportunities to Recycle Locally: Your community can pass ordinances that will directly and quickly increase recycling, but keep a level playing field as well. Find a "champion" on the City / Town council and work on passing the ordinances and programs described below.
  - Pass an ordinance requiring space for recycling: Pass an ordinance that requires space for recycling that equals the space set aside for trash. This should be designed to cover at least all new commercial construction and significant remodels; many communities also include new and remodeled

- multifamily buildings in the ordinance.\* This ordinance removes one of the largest reported barriers to recycling in the commercial sector space!
- Residential Recycling and Yard Waste: If the community does not have a drop-off recycling drop-off site, work with the town/city government and local hauling companies to try to establish one. A yard waste collection site may also be a popular program. Funding will be needed, perhaps augmented by grants for setting up the site. If curbside / curb-alley recycling is available, consider the changes recommended as part of the #1 Top Tip.
- Commercial program ordinances: Some communities pass ordinances requiring all businesses to include requirements to recycle in the lease. Several communities require all businesses to file recycling "plans", using checklist forms provided on the community's website. \*ii
- Implement straightforward commercial programs: Attention usually focuses on residential recycling, but on average, commercial waste represents 40-60% of the waste produced in a community. There are several "easy" commercial programs that a community may consider (potentially working with their recycling committee). Relatively low-key programs include:
  - "Green" audit programs for commercial businesses, coordinated with a "green" recognition program<sup>xiii</sup>,
  - o Small business "sweeps"xiv or technical assistance.
- Certainly there is an array of additional commercial sector strategies as well.
- 2. Education & Outreach: Communities (or counties) can easily develop flyers, brochures, web pages, newsletter articles, magnets, and other educational tools to keep citizens (and businesses) informed about recycling. Good education efforts can increase recycling by 1-3 percentage points (increasing recycling by 5-15%).\* This is a great potential area for work by your citizen committee.

#2: Undertake
Education &
Outreach Efforts



Be sure to translate the pieces into Spanish or other relevant languages. \*vi

#### → → → → → AND THE NUMBER ONE OPTION FOR YOUR COMMUNITY IS... →

#1 – TOP TIP Implement Pay As You Throw (PAYT) – One of the Most Effective Options!!

Put in PAYT - most easily by passing a local PAYT Ordinance!



Pay As You Throw (PAYT) is a program in which households pay more to put out more trash for collection, and pay less if they put out less trash - behavior affects bill, like electric, water, and other service. This system provides an incentive to recycle more, and in fact, PAYT has been shown to be the <u>most effective</u> way to increase recycling.\*\*\*

Pay As You Throw (PAYT)\*\*\*\*

Pay As You Throw (PAYT)\*\*\*

Pay As You Throw (PAYT)\*\*

 Increases recycling by 50% or more - even in places with drop-off only recycling programs - and increases composting and waste reduction;



- Decreases waste disposed to the landfill by 17%;
- Is a fairer system, charging households only for the service they use like a utility;
- · Doesn't increase costs for most cities; and
- PAYT is among the cheapest and fastest methods of reducing green house gas emissions!\*\* (even cheaper than many of the most common energy efficiency programs, and it creates jobs too!)

#### HOW to do it?

- ⇒ IF the community uses municipal staff to collect trash, then the change to PAYT is straightforward. Select a PAYT system, choosing from among a subscribed variable can, or bag, tag / sticker-based systems,\*\*\*i and educate residents about the new system.\*\*\*i
- ⇒ IF the community contracts with a hauler/carter to provide service, then revised PAYT service can be easily implemented at the next contract revision, or may potentially be negotiated.
- ⇒ IF trash is collected by one or more private haulers in the competitive marketplace, then the easiest option is to pass a PAYT ordinance\*\*\*iii that requires all haulers operating within town / city / county limits to provide service using a PAYT rate structure.\*\*\*\* This maintains a level playing field, doesn't "take" any hauler customers, and brings the strong recycling performance. The key elements of the ordinance are outlined below\*\*\*, and sample language can be found at <a href="https://www.payt.org">www.paytwest.org</a>. A second option is to undertake a districting, franchising, or contracting process, requiring PAYT for the successful / selected hauler(s). \*\*\*\*i

### THAT'S IT - THE "TOP 5" STEPS your community can take NOW to increase recycling!!

Your town will see MUCH more recycling if you undertake these steps. Additional help and guidance is provided below in the tips and end notes – and don't forget to look on the websites mentioned. Good luck, and feel free to call or email for additional help.

Prepared by Skumatz Economic Research Associates, Inc. (SERA) with support from American Beverage Association For more PAYT information, tools, fact sheets, talking points, and other materials, see: <a href="www.paytwest.org">www.paytinfo.org</a> or contact:

Lisa A. Skumatz, Ph.D., Skumatz Economic Research Associates, Inc. 762 Eldorado Drive, Superior, CO 80027 Phone: 303/494-1178 fax: 303/494-1177,

Email: <u>Skumatz@serainc.com</u>



#### APPENDIX - IMPORTANT TIPS AND END-NOTES

#### Tips for a Successful, Comprehensive PAYT Ordinance

Happily, there is a very easy and workable option for communities served by private haulers... a hauler PAYT ordinance, passed at the local level... and it can be implemented fairly quickly. Based on a study of ordinances in more than 100 communities and counties, we suggest the following key elements for a comprehensive and successful ordinance.

#### Key Elements of the Ordinance xxvii

- Safety Issues: Requirements for truck and operator safety issues, avoiding leakage, etc.
- Recycling Opportunities: All haulers providing service within the community's/county's boundaries must:
  - 1. offer curbside recycling to every single family (or up to X-plex) household with garbage service:
  - 2. provide recycling service at least every other week;
  - must collect at least a base set of materials that the community lists (usually newspaper, waste paper, cardboard, chipboard / paperboard, aluminum and steel / bimetal cans, glass bottles, and #1 and #2 plastics, but the list will vary based on your local markets / MRF); and
  - 4. must provide recycling container(s) that are at least 64 gallons in total size, and are covered (preferred);
- Fees and PAYT: The cost of the recycling program must be embedded in the trash rate, with no separate charge, fee, or line-item for recycling. The cost for trash service must be in a PAYT structure. The PAYT system must:
  - 1. Offer, as its smallest container, a container no larger than 32 gallons, and must offer service in 32 gallon increments above this service;
  - 2. The cost of the trash container service must be set so that, throughout the service levels available, double the service volume cannot cost less than 80% \*\*xviii more in total to the household.\*\*
  - 3. The community should establish auditing rights.
- Reporting and Audit Authority: The community should require haulers to report the trash and recycling tons collected within the community's boundaries, with reporting at least quarterly. This will allow the community to monitor progress in recycling. Establishing the authority to audit compliance with the ordinance is also important.
- Educational responsibilities: The community should designate minimum requirements for frequency of recycling education (e.g. requiring haulers to provide annual outreach or mailers to customers).\*\*\*

#### Advantages of a Local PAYT Ordinance:

- Covers all haulers, establishing a level playing field for haulers (which they are generally satisfied with) and the new programs bring them business opportunities;
- Better levels of service for residents;
- Better participation and diversion from recycling and other programs;
- More equitable rates;
- Safety, health, and other benefits to the community.



#### ENDNOTES (and "How To's"):

SERA has developed some simple methods you can apply in your town, described in this section. Select a random sample of 16-64 homes, randomly distributed around your community, and use staff, volunteers, or temp staff to weigh and observe the garbage and recycling set out for those homes and the following 5 homes. Find out the garbage (and recycling) collection days for those houses. You will be visiting those homes and the 5 homes following them with a clipboard and a scale to collect data on trash and recycling "set outs"! To select random homes, you can enter all addresses into Excel and make a new column and use the function "=rand()". Then copy and save this column as "values" (otherwise the random values change) and sort to select the 16-64 lowest numbers. Another method is to select every "nth" home on a list of addresses in your town or similar effective, but simple, methods - where "N" is your total addresses divided by 16, 45, or 64. The number of homes you select affects the accuracy of your results. 16 homes with the 5 after it leads to a total of 96 measurements; 45 provides 270 households, and 64 measures 383 households. These provide the following accuracy levels for your responses: 96 responses=+/-10% with 95% confidence; 270 measurements provides +/-5% at 90% confidence, and 383 measurements provides +/-5% at 95% confidence. The higher the number (within this range) the better your accuracy at portraying what is happening in your community. The 300 addresses need not EACH be random (and it is impossible to "beat the trash truck" to more than 300 addresses); instead we've picked random "clusters" of homes, and it is possible to "beat the truck" to 50 clusters of houses, and this approach is also random enough for this type of work!

"Gather a set of volunteers, staff, or others, and download the measurement form from www.paytwest.org. You can also make your own form! Make a form with the following columns: address; number of garbage containers; weight of garbage containers; how full garbage containers are (in percentage ranges - 25%, 50%, etc.); number of recycling containers out; weight of recycling containers; eligible materials not set out; other notes. Arm the workers with a reflective safety vest, a laminated badge, a small information sheet describing the project (and noting their information will be kept anonymous, and that the materials are legal to be looked at once they are on the curb - check this in your town), and a clipboard and portable scale. While bathroom scales can work, better are the heavier-duty postal scales available at office supply stores that cost about \$100-\$250 each. They are hardy and weigh consistently. Split up the addresses by area of town and assign them to workers. Walk through the procedures, and send the workers out - alone or in pairs, depending on your town and the number of workers you have - to their addresses. They will need to be at the addresses starting as close to 7am as possible. In towns we've worked in, we usually find we need to go out 2 weeks of collection days, because on the first day we learn what areas are collected really early and go to those early the next week. The "window" during which data can be collected is usually 7am (after cans are set out in the morning) to about 11am, when too many are collected by the trucks to get much more data. On data collection day, notify your town staff, the hauler, and the police about the project so they can be aware if complaints come in. Our data collection sheets usually include: address, whether recycling & trash were out, number / size / %full for trash containers and weights; number and weights of recycling containers by stream; visual inspection of recyclables that aren't being recycled at the home (key indicators might be recently-added materials); and items they are recycling that they shouldn't (most commonly yogurt containers in many areas). A "notes" section is useful if people are missing containers (indicated by using non-standard containers, etc.). The fullness and weight information provide valuable data in planning PAYT programs and for computing recycling / diversion rates. The last elements (legal / illegal recycling, etc.) can guide educational messages!

- Low cost options are to do this work once per year; better would be collecting the data seasonally to understand what happens during yard waste season, etc. If once a year is the choice, use the same time of year each year.
- iv These data may also possibly be augmented by tonnage reports from haulers.
- YAn alternative to this sort is to "borrow" data from a nearby community, or access waste sort data from the web. Some sources include EPA, California Integrated Waste Management Board, and data from scores of communities and counties. Use keywords like ""waste sort", "waste characterization" or similar.
- "Contact the authors / SERA at <u>Skumatz@serainc.com</u> for a description of some simple procedures for waste sorts. To keep it manageable, consider either arranging to have a garbage truck dump a partial load at a safe area at a local transfer station, and sort several hundred pounds. Another option is to use a pickup truck and dump the waste from the first house in each of the randomly selected "set out" homes (select enough to get at least 30 homes) and sort this material. You will need safety glasses, helmets, safe shoes, gloves, and vests (and potentially paper masks) and labeled 5-gallon buckets. Don't sort into more categories than you need for planning purposes! The following categories may be enough: cardboard; current recyclable paper, current recyclable containers, commingled (or separated if you prefer); yard waste; food waste (maybe); some "next" materials you may be considering adding to your program; hazardous materials; and "garbage". Record weights of the 5 gallon buckets throughout the day (we usually conduct the work in about 4 hours), emptying the material into a "done/ remove" pile after weighing it. Adding up the weights will give a good idea of the amount (percent) of recyclables not being recycled, the potential from new materials, etc. This is valuable information for planning, and can be tracked over time to see if your programs or education are helping!

- vii Contact the authors / SERA at Skumatz@serainc.com for tips on surveys or a sample of surveys used in other communities.
- viii To minimize costs, you might advertise the survey in the community's newsletter, and/or include a link to a web survey on the community's web site. Discussions of surveys of this type are found in Skumatz, Lisa A., Ph.D., "Seven Steps to Increase Recycling Cost-Effectively", MSW Management, September/October 2002; Skumatz, Lisa A., Ph.D., "Increase diversion cost-effectively Step 2: Look beyond curbside toward the commercial sector", Resource Recycling, August 2002, and other sources.
- The word "diversion goal" is used to go beyond just recycling and include composting / yard waste, and source reduction broader types of diversion from the landfill. Source reduction or waste prevention includes donations of goods to charity, careful purchasing in bulk, buying / using less, and minimizing packaging in items purchased, and similar.
- \* Some communities have applied for grants to start yard waste drop-off sites, and the community absorbs the operating costs, including staffing the site (e.g. one community has the site open partial weekend days and one evening for non-winter seasons to improve affordability). This provides a realistic option for yard waste diversion and good service for residents that want to "do the right thing" with their small branches and green materials.
- xi Examples of ordinances of this type are found on www.paytwest.org.
- xii There are templates for plans available on the web providing checklists of key materials by business type or other basic documents that have served many communities quite well. Check websites for Portland Metro, or contact the authors.
- xiii There are a number of waste audit "checklists" available on the web that can be adapted to your community, and can be delivered using your staff or citizen committee members that become trained; or you can work with the local energy utility and try to piggyback on an existing energy audit program. Audits can provide practical suggestions for businesses and the visit can provide tailored information or advice for getting past specific barriers at the business. Some communities provide decals or recognition (listing in newsletter, awards, etc.) for businesses that "pass" the audit or meet specific threshold green requirements for the business sector. Call the contacts on <a href="https://www.payt.org">www.payt.org</a> or <a href="https://www.paytwest.org">www.paytwest.org</a> for more information on these program options.
- xiv Volunteers or staff bring small cardboard "deskside" recycling containers, go "door-to-door" to small businesses in business districts and drop the containers off, explaining the benefits of recycling and bringing a list of service vendors and various "fact sheets". Door-to-door lowers the cost and administrative "set up" for the program avoiding the headaches of appointments, call backs, etc. A call-in program could also be set up, or the traditional approach of calling businesses to set up appointments to help advise and set up recycling is also very successful.
- xv Skumatz, Lisa A., Ph.D., and John Green, "Evaluating the Impacts of Recycling / Diversion Education Programs Effective Methods and Optimizing Expenditures", Skumatz Economic Research Associates, Inc, Superior, CO, 2001, and Skumatz and Green, "Evaluating the impact of recycling education", Resource Recycling, August 2001..
- xvi Many outreach staff rely on pictures to maximize understanding by those not speaking the main languages. Quantitative research on recycling education programs has shown that, even with the same types of diversion programs, diversion percentages tend to be lower in areas with high percentages of English as a Second Language (ESL). Education may counteract this effect. Skumatz, Lisa A., "Achieving 50% in California: Analysis of Recycling, Diversion, and Cost-Effectiveness", (1999), for California Chapters of SWANA by Skumatz Economic Research Associates, Inc (SERA), Superior, CO.
- xvii Skumatz, Lisa A., ""Beyond Case Studies: Quantitative effects of recycling and variable rates programs", Resource Recycling, September 1996, Skumatz, Lisa A., "Nationwide Diversion Rate Study Quantitative Effects of Program Choices on Recycling and Green Waste Diversion: Beyond Case Studies" Skumatz Economic Research Associates, Superior, CO, July 1996, and other publications noted in this document.
- PAYT systems fit with many different collection systems. The program may charge more for bigger cans of trash or for multiple cans of trash. Some communities use special "pre-paid" logo-ed trash bags or fee for special logo-ed bags or stickers.
- xix These quantitative benefits come from Skumatz, Lisa A. and David Freeman, "Pay as you Throw (PAYT) in the US: 2006 Update and Analyses", Prepared for Skumatz Economic Research Associates and USEPA, SERA, Superior, CO, 2007; or Skumatz, Lisa A. "Frequently-Asked Questions about PAYT", Skumatz Economic Research Associates, Superior, CO, 2000; Skumatz, "Variable Rates in Solid Waste: ...", for the Reason Foundation, Los Angeles, 1993, and other citations).
- xx Skumatz, Lisa A., Ph.D., "Recycling and Climate Change: Finding the "Biggest Bang" Community Strategy for Reducing Greenhouse Gas Emissions", 2007, revised 2008, Skumatz Economic Research Associates, Inc. Superior, CO, 2008. Jobs impacts illustrated in Skumatz, Lisa A., Ph.D. and David Juri Freeman, "Colorado Roadmap for Moving Recycling and Diversion Forward: Strategies and Implications", Prepared for State of Colorado Department of Public Health and Environment, Denver, CO, by Skumatz Economic Research Associates, Superior, CO, February, 2008.



- xxi For detail about these choices, see PAYT frequently asked questions on <a href="www.payt.org">www.paytwest.org</a> or see PAYT manuals or toolkits from SERA, from EPA, or from a number of states (including California, Iowa, Wyoming, Illinois, Massachusetts, or many other states). These provide information on technical / administrative / rate aspects of the new system, and implementation and education tips.
- xxii Note that all the research on PAYT indicates that technical issues related to the adoption of PAYT are very straightforward; political aspects can be more complicated. The Citizen's committee may be helpful. Other political "cover" for adopting PAYT may be provided from the results of the household survey (PAYT is usually a fairly high-scoring option in the survey) or from households on fixed incomes that can save money under a PAYT system. The equity of a utility-type system for trash collection is usually very popular with households. Research shows that after the program has been in place, 89-95% of the population prefers the new system and doesn't want to go back to the hold program. (Skumatz, "Frequently-Asked Questions about PAYT", Skumatz Economic Research Associates, Superior, CO, 2000; Skumatz, "Variable Rates in Solid Waste: ...", for the Reason Foundation, Los Angeles, 1993, and other citations).
- rates rates that charge more for households that put out more trash for collection. This turns trash into a utility like electricity fee for service. Studies show this is the <u>single most effective strategy that can be implemented to increase recycling</u> and it is a continual reminder to recycle more every time the household gets a bill. A summary of the key elements of this highly recommended ordinance is found on the back of this fact sheet, and examples are provided on <u>www.payt.org</u> or <u>www.paytwest.org</u>. If your community does its own collection, the program should be designed to meet the criteria within the ordinance.
- xxiv The ordinance does NOT "set" PAYT rate levels, but requires a PAYT rate "structure", which is generally legal.
- xxv The "best-performing" ordinance includes Curbside recycling for all households with the cost embedded in the trash rate; PAYT implemented with an option for a small (lower-cost) trash container; and significant differentials between trash service rates for different volumes of trash. See details below. Note that the system can also work very well in communities without curbside recycling service.
- xxvi Ordinance or process for districting / contracting / franchising: A somewhat more complex but also beneficial option to achieve PAYT is to undertake an initiative to district or franchise trash collection, or alternatively to contract with a hauler (usually one hauler, or if your town is large, two or more haulers may be selected) for trash service. This is more complex because the political issues are more prickly. The new system may lead to some local haulers being "winners" and others "losers", and the losers will not usually stay quiet, because their livelihood is affected. However, if your community has multiple haulers providing service, an ordinance establishing districts, franchises, or undertaking a contracting process for collection service can lead to: 1) PAYT rates and better recycling; 2) lower rates because of economies of scale and collection from all households in an area; 3) lower wear and tear on streets from fewer trash trucks plying the same neighborhoods and lower greenhouse gas emissions, and 4) "neater" streets, with trash containers out on one day instead of multiple collection days, among other benefits. This type of ordinance can lead to strong benefits for your community; however, it requires political will to pass because haulers will tend to prefer the "status quo" and fear possibly losing some of their customers or all their customers if they are an unsuccessful bidder. Examples of these ordinances and the process are found on www.payt.org or www.paytwest.org.
- \*\*vii See sample PAYT ordinances from other towns and counties on <a href="www.payt.org">www.payt.org</a> or <a href="www.paytwest.org">www.paytwest.org</a>; or use the template ordinance your town may want to adapt and adopt!
- Examination of the community may, of course, set a different percentage increment. This value 80% -- is based on statistical studies that balance two objectives: 1) providing a strong recycling incentive, and this value was found to provide almost the same recycling incentive to households as rates that double for double the service; and 2) backing off from very aggressive rates to recognize the fact that the largest cost in providing trash or recycling service is getting the truck to the door arguing for flatter rates. This differential tries to provide incentives, but also help decrease the risk of not covering fixed costs of the operations. If a community selects a lower percentage, be careful to provide enough incentive to modify behavior perhaps not less than 50% extra.
- xxix For example, if a 32-gallon container costs \$10/month, then a 64-gallon container would cost \$18, and a 96 gallon container would cost \$26, etc. Note that the ordinance sets rate <u>structure</u>, but not rate <u>levels</u>, and thus, is not rate-<u>setting</u>. Haulers may increase the level of the rates they need in order to cover the cost of recycling and the PAYT rate structure.
- \*\*\* Often the best programs have both the hauler and the community providing education to households. This establishes the portion for which the hauler is responsible. This can augment community outreach efforts and provide a coordinated message.

