

# ***FREQUENTLY ASKED QUESTIONS ON PAYT / VR***

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## **What is PAYT / VR?**

Pay as you throw (PAYT) or variable rates (VR) provide a different way to bill for garbage service. Instead of paying a fixed bill for unlimited collection, these systems require households to pay more if they put out more garbage – usually measured either by the can or bag of garbage. Paying by volume (like you pay for electricity, water, groceries, etc.) provides households with an incentive to recycle more and reduce disposal.

## **Are there different kinds of PAYT / VR Systems? How do they work?**

The consulting firm Skumatz Economic Research Associates, Inc. (SERA) categorized the PAYT / VR systems into five major types (Skumatz, “Variable Rates in Solid Waste...” manual, 1990):

- **Variable can or subscribed can:** In this system, households sign up for a specific number of containers (or size of container) as their usual garbage service, and get a bill that is higher for bigger disposal volumes.
- **Bag programs:** Households purchase special logo-ed bags (city or hauler logo, depending on the collection arrangement). The price of the bag includes some or all of the cost of collection and disposal of the amount of waste in the bag. Some programs have a customer charge or base fee in addition to the bag fees to help make sure they cover fixed costs. For convenience, bags are usually sold at convenience and grocery stores in addition to City hall-type outlets.
- **Sticker or tag programs:** Households purchase special tags or stickers to put on their bags of garbage. The sticker price includes some or all of the cost of collection and disposal of the amount of waste in the bag. As with bag programs, some programs have a customer charge or base fee in addition to the sticker fees to help make sure they cover fixed costs. Bags are usually sold at convenience and grocery stores in addition to City hall-type outlets.
- **Hybrid programs:** In this system, households only pay for waste beyond some “base” set out volume. They pay a fixed bill or a tax bill that entitles them to a first can or bag of garbage (size limits are usually around 30 gallons). Then, additional waste is charged on a per-bag or per-sticker system as described above. This system is a “hybrid” between existing garbage programs and the new incentive-based approach, and minimizes billing and collection changes.
- **Weight-based:** Under this program – SERA first piloted and tested the system in the US in 1989 and called it “Garbage by the Pound” – customer garbage cans are weighed on the back of retrofitted collection trucks, and the household is charged for the pounds of waste it actually disposes. This system is fairer, and communities can use large cans but still provide a strong recycling incentive.
- **Other systems:** In addition, some communities have a drop-off program, where customers pay by the bag or weight at transfer stations using fees, bags, stickers, or pre-paid punch cards. In addition, some haulers offer PAYT / VR as one option, or customers may choose unlimited collection for a fixed fee.

## **How common are PAYT or Variable Rates Programs?**

SERA maintains the most extensive listing of PAYT / VR communities, a list we update every other year. Our latest count (2006) finds more than 7,100 (Skumatz and Freeman, “Pay As You Throw (Payt)

In The US: 2006 Update And Analyses”, Skumatz Economic Research Associates, Superior, CO, December 30, 2006). These programs are available to about 25% of the population. We have found PAYT / VR programs in all but 3 states (Kentucky, Hawaii, and Mississippi) and the District of Columbia (Skumatz, *Resource Recycling*, 6/2001). The leading states in PAYT / VR include MN, CA, WI, WA, IA, NY, OR, VT, MI, OH, among others. Dramatic growth occurred in the 1990s – the first program we found was implemented in 1916.

### *Do most communities use the same system?*

Overall, SERA’s PAYT / VR community inventory finds about 30% of the programs are cans, 25% bags, 15% hybrid, 15% drop-off, 10% sticker/tag, and 5% optional (Skumatz, *Resource Recycling*, 8/97). Over time, the percent of hybrid, tag, and drop-off programs have increased. This reflects the fact that the programs are expanding to more rural areas (Skumatz, *Resource Recycling*, 6/2001)

There are also regional patterns. The west and southeast is predominantly can-based programs (they are often automated); hybrid programs are more common in the Rockies, bag/tag/sticker in the Midwest and northeast, midatlantic, and south central. (Skumatz, 1999)

### *Are all the programs in small communities?*

Actually, SERA’s inventory of PAYT / VR communities finds programs are in places with populations ranging from 100 to over a million (Skumatz, *Biocycle*, 11/95). Our computations find that the average sizes of communities adopting variable can programs is 20,000, and between 10-15,000 for sticker and tag programs. (Skumatz, *Biocycle*, 11/95).

### *Why are communities adopting these programs?*

These programs increase equity, dramatically reduce disposal, and allow recycling households to save money (as well as offering environmental, and cost benefits). Our community surveys find common reasons for adopting VR/PAYT include: rising landfill/disposal costs; adoption of diversion goals; reports of successful programs, and legislative mandates. Most commonly cited sources for information on variable rates from communities adopting the programs were: case studies, neighboring community (hence the regional patterns in adoption), and trade journal articles about successful programs (Skumatz, *Biocycle*, 11/95).

### *Aren’t these programs mandated in some states?*

SERA conducted the first inventory of state regulations and policies regarding PAYT / VR, and repeats the survey every other year. Four states mandate PAYT / VR with some caveats (WA, MN, WI, IA). One state includes PAYT as one of a menu of program choices from which communities must select (OR). Thirteen states offer financial incentives or grants with PAYT / VR preference, and 33 actively offer promotion or education about PAYT / VR, and many others have voluntary recommendations (Skumatz, *Resource Recycling*, 6/2001).

### *Why should communities consider implementing PAYT / VR? Do they really reduce disposal?*

SERA concentrated a great deal of research time on this question. We feel it is critical for communities to have realistic expectations about what will happen if they implement PAYT / VR. Review of articles in the journals would imply communities would see a 25% to 60% reduction in disposal, but this result is not accurate because those programs add together the impacts from PAYT / VR AND new recycling, and yard waste programs all mixed together.

SERA used data from more than 1,000 communities to conduct unique statistical work to measure the impacts attributable to adding PAYT / VR. Our results showed:

- Disposal decreases by 16%-17% (Skumatz, *Resource Recycling*, 8/2000)
- Increases in recycling of 5-6 percentage points or 5-6% of disposal (usually about a 50% increase in current recycling) (Skumatz, *Resource Recycling*, 9/96; Skumatz, *Resource Recycling*, 8/2000)
- Increases in yard waste diversion of about 4-5% of disposal (Skumatz, *Resource Recycling*, 9/96; Skumatz, *Resource Recycling*, 8/2000).
- Source reduction of about 6% of disposal (Skumatz, *Resource Recycling*, 8/2000).
- Overall, we would expect a town with 100,000 tons of residential disposal to see a reduction to about 84,000 tons. Recycling tonnage would increase by about 5,500 tons, and yard waste programs would see an additional 4,500 tons. About 6,000 tons would be avoided through waste prevention, based on SERA's estimates (Skumatz, *Resource Recycling*, 8/2000).

Our research indicates that adding a PAYT / VR program is the single most effective change a community can make to increase recycling. The research shows that PAYT / VR adds more recycling than adding a new material, changing collection, or many other potential changes (Skumatz, *Resource Recycling*, 9/96).

### What about impacts on costs, customer acceptance, and other changes?

- **Cost impacts:** Based on detailed interviews, communities report that long term system costs are reduced; and the majority of communities in state surveys report short term system costs did not increase either (Skumatz, manuals, 1994 on). In two state surveys (WI, IA), 2/3 of the communities reported that short-term system costs were lower or stayed the same after VR was implemented. Only 1/3 reported increases. These results show you can make "sensible" choices in PAYT / VR that minimize costs and "fit" well with the community.
- **Disposal Savings:** Don't forget that in addition to savings in disposal tipping fees (perhaps 16%, but net out the recycling and yard waste program cost impacts), the programs can also allow communities to delay building a new landfill, and this results in real financial savings. Reducing 16% of the disposal extends the lifetime of the facility by one-sixth – and similarly decreases the money that needs to be set aside for a new facility because the funds can be accumulated over a longer period.
- **Buying habits:** Reported results of customer survey research indicated 76% have purchasing decision-making affected by PAYT / VR, and that PAYT / VR has a demonstrable effect on waste-generation and buying habits (Skumatz, "Variable Rates for Municipal Solid Waste...", 1993).
- **Cans set out:** Households put out fewer garbage cans for collection after PAYT / VR is implemented – partly because of declines in tonnage, and partly because cans are "stuffed". (dubbed the "Seattle Stomp"). Seattle cans reduced from 3.5 30-gallon cans to 1.0 with PAYT and new programs; Hoffman Estates, decreased from 3.1 units to 1.3 stickered bags. Many

communities report 1-1.5 30-gallon equivalents after a variable rates program -- important for setting rate levels (Skumatz, "Variable Rates for Municipal Solid Waste...", 1993).

- **Customer Satisfaction:** Multiple community surveys indicate more than 90% of customers are pleased with systems after they are implemented – and they don't want to return to the old system because PAYT / VR is fairer (Skumatz, "Variable Rates for Municipal Solid Waste...", 1993). However, the challenge is getting the systems accepted prior to implementation. Change is always difficult.

### *Aren't there environmental benefits too?*

SERA estimated the tons of emissions reduced through PAYT / VR programs, and then computed the dollar value of these green house gas (GHG) reductions using valuations from the environmental literature. We estimated that these environmental benefits were worth an additional \$1 to \$6 per ton (Skumatz, WasteCon presentation, 2001).

### *Don't the programs lead to increased illegal dumping?*

Illegal dumping is one of the first worries when communities consider going to PAYT / VR. However, in reality, dumping does not appear to be a serious problem (based on research in PAYT/VR communities). Illegal dumping exists in virtually every community now -- the question is whether illegal dumping will increase significantly in response to a new PAYT / VR system. One complicating issue is that very few communities have quantitative information on how big a problem illegal dumping is before they put in new rates – making it tough to compare changes. However, because illegal dumping is almost always a fear, and because people will be looking for dumping, illegal dumping will be noticed, whether or not it actually increases over pre-PAYT/VR levels.

Several SERA studies have attempted to address the illegal dumping issue (including interviews with more than 500 PAYT communities), and the conclusions are:

- **Low Incidence:** Illegal dumping is a problem in a minority of communities (about ¼), and all the communities surveyed said the problem was short term and illegal dumping should not be considered a barrier to PAYT / VR. The research showed the program was a much bigger fear up-front than real experience after implementation (Skumatz, "Variable Rates for Municipal Solid Waste Officials, 1993).
- **Strategies:** The illegal dumping problem can be addressed and can through a variety of enforcement strategies (see Skumatz, et.al. "Illegal Dumping...", 1994, [www.serainc.com](http://www.serainc.com))
- **Not Caused by PAYT / VR:** The majority of illegally dumped material is not residential in origin – indicating residential PAYT/VR programs are not a large source of the problem (Skumatz, et.al., "Illegal Dumping...", 1994, [www.serainc.com](http://www.serainc.com)).
- **Bulky Items:** Incorporating a bulky waste collection program can go a long way toward reducing the potential illegal dumping problem, and helps make sure the PAYT / VR program works for all residents, not just the "average" resident (Skumatz, et.al., "Illegal Dumping...", 1994, [www.serainc.com](http://www.serainc.com)).

### *Isn't PAYT / VR Unfair for Low-income Customers and Large Families?*

Concerns are often raised that PAYT / VR programs might be unfair to large families. It is important to separate concerns about large families from concerns about low-income households. Addressing just the large family issue, consider turning the argument around. Has it been fair all these years for small disposers to be subsidizing large disposers all these years under fixed bill (or nearly fixed bill) systems?

Opportunities to reduce waste are available to all households (recycling, etc.) and those who limit their waste can get control over a bill they previously could not reduce. Although there is some relationship between family size and amount disposed, all households have opportunities to reduce. In most communities, large households do not generally receive discounts on water service, groceries, or other services that might also vary by family size. Subsidies for large families for garbage are not as easily justified as subsidies for low-income families.

One place this concern may be more important is the combined impact on large, low-income families. SERA conducted a specialized study of low-income strategies. We found that low income or elderly discounts are provided in less than 10% of communities with PAYT / VR (Skumatz, "How Can Low Income Programs Work...", 1995). The report also details certification issues, and methods for administering the program. (The report is available on SERA's web site – see [www.serainc.com](http://www.serainc.com) / publications).

### *What Do We Do About Multifamily Buildings?*

When PAYT / VR systems are implemented, they commonly include various combinations of garden apartments, town houses, condominiums, and apartments of about 6 or fewer attached units. These buildings can usually be signed up and treated similarly to single family dwellings.

Although the PAYT/VR systems have not historically been available for large apartment buildings with shared "chutes", recall that these larger multifamily buildings are already receiving a volume-based signal (although at the building and not tenant level) through dumpster charges, which are charged based on cubic yards of service. However, new hardware has become available that provides a workable PAYT / VR system for large multifamily buildings with combined garbage chutes. Tenants push a button for garbage or recycling (up to 6 different streams). This makes recycling and garbage collection equally convenient; increases in recycling are 30%-300%, and payback is on the order of 3 years. More than 200 have been installed in new and retrofit to date, mostly in FL and NY, (Skumatz, *Resource Recycling*, 10/99) and have led to significant increases in recycling and decreases in disposal. In addition, suggestions for variation on PAYT / VR incentives that encourage recycling are being tried in communities across the nation (Skumatz, *Resource Recycling*, 10/99). These recent developments show promise for removing a barrier to economic incentives for multifamily residents.

### *Won't it increase Workload and Costs?*

Of course, this answer varies town to town, based on the specific solid waste system that the City starts with, and the changes required by the system the town implements. However, some evidence was provided by surveys conducted by two states – Iowa and Wisconsin. These states asked PAYT /

VR communities whether the workloads increased, decreased, or stayed the same after implementing PAYT. They found that roughly 55-65% said their workloads stayed the same or decreased; and nearly 2/3 stated that costs stayed the same or decreased. And the program discourages overuse of solid waste services, so in the long run, communities should have lower costs than if solid waste behaviors had continued unabated (Skumatz, manuals, 1994-).

### *!m worried about revenue shortfalls – what’s the story?*

Traditionally, solid waste revenues are based on fixed bills or tax payments – fairly reliable revenue sources. PAYT / VR programs, because they depend on customer behavior choices, will inherently lead to more volatile revenue streams than systems with fixed bills. This is very commonly a concern both for haulers and for municipalities. Revenues are no longer based on a stable number like households, but rather on the number of individual *bags* or *cans* of waste sold/disposed. The number of bags disposed can vary month-to-month and week-to-week, based on diversion program availability, seasonal factors, advertisements and promotions, and many other factors, and this can cause revenue headaches.

However, several strategies can help reduce the potential volatility:

- **Up-front research:** Use the numbers from the research on disposal and program impacts listed above.
- **Pick a less volatile PAYT/VR system:** There are differences in the relative revenue volatility associated with different PAYT/VR programs. If revenue uncertainty is a primary concern, systems with less revenue volatility include variable can or hybrid programs, or bag/tag programs that include a customer charge. In these programs, every customer is at least paying some amount every month – whether for a minimal container or customer charge – helping provide a reliable base set of funding to support the program.
- **Reduce the aggressiveness of the “rate incentives” for recycling:** If the reliable size of the difference in rates between service increments – that is, the cost of an extra can or an extra bag of garbage – is set low, then revenue variations based on number of garbage set outs will have a smaller effect on revenues. Thus, revenue variations would be low. Under this system, the “first can” rate, or the “customer charge” would tend to be higher. However, adopting a rate system with very low incremental rates for more service will 1) not provide much incentive for reducing garbage, and 2) will resemble a flat fee, so it may not be worth the administrative hassle of implementing the change! A balance between revenue volatility and incentives must be found to make the PAYT / VR system most successful. SERA’s research shows that recycling impact are strong even if the difference between can fees are only 80% more for twice the service – so an incentive can be provide, but revenue risk reduced over “can is a can” pricing (Skumatz, *Resource Recycling*, 6/2001)

### *Is variable rate waste disposal pricing difficult to administer?*

Anecdotal evidence from SERA interviews with hundreds of PAYT / VR communities indicates that in most cases, after initial efforts to educate customers about PAYT / VR, the programs “run themselves”. However, as with most programs, there can be certain administrative challenges that need to be addressed depending on the community. However, statewide surveys in Iowa and Wisconsin found that nearly 2/3 of the PAYT / VR communities reported no additional workload or cost from implementing the PAYT program. This indicates that: 1) PAYT/VR programs don’t have to be expensive or troublesome to implement, and 2) the programs are flexible enough that communities

can make intelligent choices that help minimize disruption from PAYT / VR programs. Communities can reduce the administrative load by picking a program that:

- **Blends well with the current (or planned) collection system:** if customers are currently using cans, with manual collection, selecting variable can or hybrid programs may cause minimal disruptions. If bags are common, incorporate a bag, tag, or hybrid program. If you are moving toward automation, a variable can (or weight-based) program will be much more suitable than other choices.
- **Blends well with the current billing system:** If the community does not currently have a mechanism to bill different rate levels, opt for a hybrid, bag, or tag program. Then the community can bill a fixed amount (or no bill), and the extra bags or tags are pre-paid – no bills are needed. Alternatively, the community can have grocery or convenience stores sell the bags or tags, and then the community only needs to invoice these stores for the bags – no “billing” for customers is needed.

### *Won't citizens resist – won't they see PAYT / VR as less service for more money?*

Certainly, any change always leads to confusion and resistance to change. Even though there is generally resistance to change prior to implementation, numerous surveys have indicated that these programs are perceived as fair and are very popular after they have been implemented – upwards of 90% of residents are happy and prefer the system to past payment methods. SERA finds customers routinely view the programs as fair, and they end up being very popular with residents after the fact.

Getting customers to accept the change in the first place is the tricky part. Equity is a big part of the effort to “sell” the PAYT / VR program. Public education is strongly emphasized by all communities to improve success of the PAYT / VR program. All systems also establish weight limits for the cans and containers, to address both safety and equity concerns.

However, the perception that the new program results in higher rates and provides less service for more money is something that some residents (and potentially the press) may latch onto. Several points are worth mentioning. First, recall that “rates” are not the crucial element. Rather, “bills” are what customers pay, and customers now have some level of control over their bills – control they did not have under fixed bill or tax-based systems. Bills are based on rates AND customer choices about the level of service they choose to use. Those willing to recycle and reduce can now save money and lower their bills. Second, make sure they understand that the rates provide them with multiple services (if it is true!) – including garbage, recycling, and yard waste programs. The toughest part of the “sell” is getting customers to recognize that they aren't paying more (on average) than they were before. This is especially difficult if the charges were previously embedded in the tax bill and they didn't know what they were paying. Some communities recommend “line-iteming” the tax bill for a year before the change to point out the cost of solid waste management. PAYT/VR can help reduce current and future solid waste management costs; getting that message across to residents is an important part of the education program. To improve acceptance, education needs to emphasize:

- Why the community is making the change, and what you are trying to accomplish
- Options available to residents to reduce and recycle
- Previous bills and costs, and new bills and rates
- How customers can work with the system to reduce their costs
- Special collections, programs, etc.

### *Won't haulers resist this change?*

Haulers (large and small) across the US offer these programs. In some cases, the haulers are under contracts with municipalities; in other cases the haulers offer the program community-wide, provide service through private contracts to citizens, or offer PAYT / VR as an optional alternative to unlimited collection. In truth, haulers are very familiar with these programs. PAYT / VR has been well publicized, and exists in thousands of communities nationwide. If concerns like revenue risk, workload, and education can be overcome, haulers basically will offer whatever citizens or communities want. Involving haulers in the program design, and providing a level playing field – requiring all haulers to offer the program – will help haulers make sure the program is well-suited to your residents and their waste behaviors. However, make certain that the concerns about revenue risk do not lead the haulers to offer rates that vary too little with increases in service – limiting the incentive for customers to recycle (see discussion of revenue risk above).

### *Can PAYT / VR work in areas with Multiple Haulers?*

Many communities with multiple haulers have successfully implemented PAYT / VR. SERA nationwide surveys find that more than 10% of the surveyed communities with PAYT / VR had multiple haulers operating in the area under the program. We find that if one hauler introduces PAYT / VR, the other haulers end up also offering the program. Haulers in the area know and bill their own customers under the can-based system – no special considerations are needed. In areas that use bag or sticker programs, customers just purchase the color of sticker or bag associated with their particular hauler.

Haulers are usually concerned about revenues, and the revenue tips above can be helpful. Haulers are familiar with the system, and working with them can speed implementation. The fastest implementation of PAYT / VR that SERA has encountered was in a county with multiple haulers. The County sat around the table with the haulers, refined the design of the sticker system, and implemented the program in 3 months. The system has been running successfully for more than 8 years.

### *Can PAYT / VR work in areas without mandatory garbage service?*

A significant number of communities with PAYT/VR do not require mandatory refuse collection by residents. This has not generally been found to be a problem. Revenues and rate setting are slightly more complicated in this case, but not significantly so. However, if collection is not mandatory in surrounding areas (like the County surrounding a town) and there has been a history of County residents avoiding collection by bringing waste into town, the new charges may cause some initial problems regarding ownership of waste and complaints about paying for more service than the bill payer actually disposes. This has not been a significant problem in other communities. Non-mandatory collection has not been a barrier to PAYT / VR elsewhere.

### *Can PAYT / VR work with automated collection?*

Automated collection is efficient, and can lead to significant labor and routing savings. However, automated collection has two features that complicate PAYT / VR:

- It requires specialized carts that are generally available only in limited sizes and
- “Extras” in bags outside the specialized carts cannot be accommodated efficiently with automated collection.

PAYT / VR programs provide financial incentives to customers to reduce the amount of garbage that they dispose by charging less for smaller containers. If “small” containers are not available, the incentive for recycling is limited, and the program may not be effective in significantly reducing disposal and increasing recycling. Therefore, the can-based program should provide options for small containers (30 gallon containers, or “inserts” that reduce the usable size of larger containers). 90 gallons as the smallest size is too large to provide incentives for customers to reduce their disposal and increase their recycling.

*We're putting out an RFP for service – are there issues we should cover or sample language to help me change to PAYT/VR?*

SERA has collected solid waste ordinances, tips for the procurement process, and samples of language for penalties for poor performance, language for separation (ending the contract), and other language and tips from communities around the country.

*How long does it take to implement PAYT/VR?*

The amount of time it takes to implement PAYT / VR programs varies from as little as 3 months to communities that are still studying the system after several years. Frankly, although billing system delays or technical issues are sometimes a factor, technical issues are seldom the problem in implementing PAYT / VR. PAYT / VR programs have tremendous flexibility in their design and can usually be tailored to accommodate most concerns. Instead, political will is usually the largest stumbling block and source of delay for implementing PAYT / VR programs. There are many manuals available that provide steps for implementing PAYT, and provide timelines (Skumatz, manuals, 1990 on).

*Any Tips for Success?*

Based on interviews with hundreds of communities nationwide that have implemented PAYT / VR, SERA has assembled the following tips (Skumatz, *Resource Recycling*, 8/97; manuals, 1990 on).

- **Pilot test:** Consider implementing the program in one area of the city first, and then spread to other areas. Learning lessons about subscriptions, set outs, containers, and other problems in ¼ of your town are much less expensive than making a mistake citywide.
- **Billing:** billing jointly with water service, if possible, can provide strong advantages. If the ordinance is arranged so that partial payments are assigned to solid waste first, then non-payments can lead to shutoffs of water service, a strong payment incentive. Bad debt is quite low under these systems.
- **Involve others in design:** Assembling a citizen or stakeholder committee to help assess and design the program can help sell the program to elected officials, and can make sure that the program addresses concerns of major stakeholders. Although this process may appear to slow down the decision-making, it can often speed it in later steps and can bring support for the program when it most needs it. Don't forget to meet with related city departments, including financial, billing, enforcement, customer service, police, and others that may be affected by PAYT / VR changes.
- **Don't pile on other costs:** If you are just implementing PAYT / VR, try not to pick that year to do a major renovation to transfer stations or other upgrades that are not visible to residents. The

increased costs, whether or not they are due to PAYT / VR will be blamed on PAYT / VR and will undermine the buy-in for the program.

- **Determine whether to make changes at once or more slowly and design education accordingly:** Some communities argue that implementing many changes at one time confuses citizens and makes the education process difficult. Others argue that customers don't want to have to make decisions about solid waste in a piecemeal manner, and want to "deal with it once".
- **Education and outreach:** No town SERA interviewed wished they had done less education. This is a crucial component of a successful PAYT / VR program.
- **Keep constant for one year:** If at all possible, keep the system and rates constant for at least one year to help build confidence in the program. Then the rates and program can be refined to account for unexpected outcomes.
- **Tracking / revising:** It is very important to track key indicators related to the program and its performance to assure that the PAYT / VR program is achieving its objectives and that the program is sustainable. Items to track include container subscriptions or sales of bags / tags; enforcement issues; revenues; costs; time spent by various staff; tonnage changes by programs, etc. Use this information to gauge program progress, cost-effectiveness, and to provide a head's up for needed changes.
- **Keep key groups informed:** Use the monitoring information to provide feedback to program staff, elected officials, and others to keep them informed about program momentum and successes. Be sure to note problems and timely corrections as well, to make it clear you have a handle on the program and are making sure it is on track and as efficient and effective as possible.

### Where can we get more information on these systems?

SERA has published many journal articles, research papers, and manuals on PAYT / VR systems. A list of publications and reports is included on SERA's web site ([www.serainc.com](http://www.serainc.com)), as well as order forms for related reports. Manuals prepared for several states are also available. SERA can be contacted at 303/494-1178 or by email at [skumatz@serainc.com](mailto:skumatz@serainc.com).

### Is PAYT / VR the right answer for all communities?

Simply put, no. A number of factors affect the feasibility of these programs in a community, including: collection system type; availability and relative cost of recycling and diversion programs; recycling markets; disposal costs and lifetimes; acceptability / support; and "fit" with the community's short- and long-term goals. The programs might not be feasible because of timing issues, economics, local factors, or other considerations.

However, these programs are uniquely suited to increasing recycling, yard waste diversion AND waste prevention. They help reduce system costs, and improve equity, and most communities should at least examine these systems to see if they make sense. And the potential of the programs should be re-examined every few years as conditions, priorities, and options change. These programs can be an important part of an integrated, cost-effective solid waste system.

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