To make a decision by a governmental agency to self-perform versus outsourcing (privatizing) solid waste services is complex and should consider costs, as well as the following six major factors:

1. **Continued level of service and rate control**
2. **Impacts to public employment**
3. **Impacts to waste reduction and recycling goals**
4. **Community pride and public perceptions**
5. **Organizational values.**
6. **Ability to respond to technological, regulatory, and socioeconomic changes.**

Evaluating the changes to an agency’s cost structure from outsourcing or eliminating certain services (e.g., landfill or drop-off station operation) is relatively straightforward. However, the intangible factors can be just as important as the cost factors in making a decision to outsource services or not. Several factors that could affect the agency’s decision to outsource solid waste services are discussed below:

- **Level of service and control.** Solid waste facilities are particularly vulnerable to public scrutiny regarding “environmental concerns,” and some public officials prefer to have more extensive control over the operation of a project than is afforded by private ownership or operation in order to satisfy these public concerns. With public ownership, the agency has control over all aspects of system operation and levels of public services. Some public officials prefer to distance themselves from public involvement in such projects and prefer private ownership or operation. Normally, however, the community has only limited control over operation of a privately owned, solid waste system. This typically includes only the rights to inspect the facility and requiring periodic tests to demonstrate guaranteed performance levels. The decision to retain ownership of all or part of a system can be subjective as it relates to considering the public’s reaction to and rate control when making the ownership decision. Long-term rate control concerns can be mitigated through contract clauses such as consumer price index (CPI) adjustments, set contract periods, and termination provisions.

- **Impacts to public employees.** Outsourcing of solid waste services may result in a reduction in an agency’s work force (salary and benefits). When implementing outsourcing, some positions could be transferred to a private contractor or reassigned within the agency. However, it is unlikely that all the positions would transfer to a private company, nor would the benefits provided to the agency’s staff necessarily be comparable to the pay and benefits currently provided by the agency. These impacts need to be taken into consideration when considering privatizing the operation of the system. Use of public employees can be included in the conditions of contracting for the operation of a public system.

- **Impacts to waste reduction and recycling goals.** Local government generally is responsible for providing the infrastructure and services to meet state and local diversion goals. Under an agency-operated program, the Agency has direct control over its progress towards these goals and its cost effectiveness. However, under an outsourced solid waste program, a contractor may have incentives that conflict with these waste reduction goals. The contract can be structured to incorporate diversion goals and performance incentives that drive diversion.

- **Community pride and public perceptions.** Community pride and public perception are difficult to gauge with respect to solid waste services, except when there are complaints pertaining to problems with the services being provided or inconsistencies or changes in the level of service. Agency staff typically take pride in the services they provide in dealing with special circumstances such as deferring some landfill disposal costs for non-profit organizations or special community events (“free disposal”), or accepting non-hazardous, special wastes from other governmental entities (e.g., public works, agency offices, etc.). Although private companies also take pride in the quality of the services they provide as well, outsourcing solid waste services could change public perceptions, the Agency and private service provider should work together to maintain community involvement and support of the system.

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**Exhibit I. Economies of Scale in Landfills**

Source: USEPA 1997
• Ability to respond to technological, regulatory, and socio-economic changes. Private companies tend to respond quicker than government agencies to changes in technology (e.g., LFG-to-energy), regulatory initiatives (e.g., disposal bans), and socio-economic changes (e.g., downturn in the economy). When change requires capital investment (e.g., new landfill disposal equipment, drop-off station improvements, etc.), the private sector is typically able to more quickly respond to financial impacts through more readily available access to private capital. Due to its nature, use of public capital is subject to careful budgeting, planning, and the political process. Public agency operations also have the added step of gaining consensus and approval of the political decision-makers before implementing major program changes. The political process can affect the speed of change.

Management Options: A Case Study
A recent review of the Santa Cruz County, AZ’s solid waste operations by SCS Engineers (SCS) identified the following four long-term waste management options for the County decision-maker consideration:

• optimize current solid waste system operations
• revenue enhancement
• sale of agency assets (Privatization)
• agency ownership but private operation

Each option is discussed below, along with the advantages and disadvantages of each. These are illustrative of similar issues with other agencies across the country.

Optimize Current Operations
At the outset of the assignment, we reviewed the County’s current operations and levels of service. Based on SCS’s knowledge of the solid waste industry and similarly sized communities in the Southwest, we were of the opinion that the County appeared to be “right sized” in its staffing and equipment deployment for its major landfill, the Rio Rico Landfill (RRLF). Staffing appeared similar to smaller-sized landfills (daily tonnage less than 250 tons) represented in a Solid Waste Association of America (SWANA) Landfill Benchmarking Study, which was conducted several years ago. Our opinion was that current staffing could allow the Agency to process more than 500 tons per day at RRLF, if available.

However, given the low daily tonnage and numbers of customer visits, the level of service (hours of operation) for the County’s other solid waste facilities (drop off stations and small C&D landfill) appeared somewhat excessive (ranging $150–175 per ton). Many small communities find it difficult to achieve economies of scale operating small landfills and drop off stations. These communities have tried to minimize costs by reducing hours and days of operation. The drawback to these changes is a potential increase in illegal dumping along public right-of-ways and private property.

As a result, we recommended that the County explore the option of reducing the number of days these facilities are open, preferably those days with the highest customer peak use. This change would reduce the operating cost of these facilities and save limited County financial resources.

Revenue Enhancement
Under this management alternative, the County would pursue MSW and other waste streams to help boost the incoming flow into the Rio Rico Landfill. Currently, the RRLF is receiving an average of 121 tons of MSW and sludge per day. “Revenue enhancement” through an increased wastestream would help improve the economies of scale for the system.

Typically, landfills of the size of the RRLF could effectively manage 500 tons of MSW per day without significantly increasing personnel or equipment costs. Exhibit 1 illustrates the advantages of economies of scale, where tipping fees can be significantly lower on a per-ton basis at larger landfills.

The largest potential MSW generator in the watershed is the city of Nogales. Until 2009, the city disposed of its waste at RRLF. At that time, the city contracted with a private hauler/landfill owner/operator to provide disposal services. The cost to transport the city’s waste stream to this remote landfill in Tucson (Marana Regional Landfill) is substantial. One suggestion was for the agency to approach this hauler with a long-term proposal to accept the city’s MSW stream from the city’s transfer station at the RRLF for a negotiated tipping fee (less than a reported gate rate of $27 per ton). This additional wastestream would enhance the Agency’s solid waste revenues and improve the RRLF’s economies of scale. Obviously, the downside to this potential increase in MSW tonnage to RRLF would be the reduction in landfill life and the need for new System capacity earlier than anticipated.

Other possible options for the County considered included the implementation of landfill design modifications (substitution of alternative daily covers in lieu of soil for RRLF to save landfill capacity) and the use of global positioning system (GPS) technology in its landfill compactors to more accurately place and compact MSW and cover soil. SCS clients have significantly reduced the amount of time, labor, and expense associated with such landfill surveying and cover soil.

Privatization
The practice of privatization—delegating governmental functions and the fulfillment of public needs to private vendors—is not new. Throughout the nation’s history, federal, state, and local governments have often hired outside contractors to perform essential public functions. States have privatized a great number of governmental functions such as public works, health care, prisons, building security, and public works. Virtually every function of local government has been delegated to the private sector at some time across the US.

While privatization has been implemented in different ways by various public agencies, a structured approach consisting of the following three basic steps tends to improve the chances of successful privatization:

• A performance-oriented Statement of Work is prepared describing solid waste service requirements and work to be performed.
• The agency performs a comparison study of in-house versus contractor costs.
• A thorough contract monitoring system is developed.

Exhibit 2 lists some of the advantages and disadvantages touted by proponents and critics of privatization.

Agency Ownership and Private Operation
Across the US, local governments use contracting for a variety of solid waste services. Currently, about 60% of publicly owned landfills
are managed or operated by private firms. Locally, Pima Agency outsources the operation of its remaining landfills to a private operator, but retained ownership of the asset and compliance costs. Exhibit 3 shows a comparison of general advantages and disadvantages to this arrangement.

For landfills, many local governments have entered into long-term agreements ("end-of-life agreements"), which in essence specifies that the new landfill operator is responsible to meet operating/regulatory conditions.

**Asset Sale**

If the County considered sale of its assets, it would need to issue a Request for Proposal (RFP) requesting proposals/bids from private companies for the operation and ownership of all the Agency’s solid waste assets, including closure and post-closure care of all landfill areas. Once the business arrangement is completed, the private company would then have full responsibility to the State of Arizona for the landfills. Some items that the County could possibly negotiate for under this option include the following:

- guaranteed disposal for all solid waste
- long-term preferred rate (tipping fee) for the disposal of solid waste generated in Santa Cruz County
- set limits on the amount of solid waste that the private company can bring in from outside the County
- host fees for out-of-agency solid waste delivered to landfills

If a county wishes to consider outsourcing of its solid waste system, we typically consider the following:

- Develop a document that provides a comprehensive description of the types and level of service it provides, and clearly articulate the expectations it would have of a contractor were it to outsource all or part of the services it currently provides. This document could serve as the framework for a bid specification.
- Generally, an entity acquiring a landfill asset does not want to accept liability for potential risks (e.g., contamination) that exists on a site because of prior events and activities. The typically approach is to do a "baseline" study to define the existing conditions and then provide this in either the procurement document or contract that the asset purchaser has no liability for pre-existing conditions. Another option is to sell the sites "as is." We generally do not recommend this approach for maximizing the sale price.

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**Exhibit 3. Public Ownership and Private Operation of Landfills**

<table>
<thead>
<tr>
<th>Potential Advantages</th>
<th>Potential Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintains all assets</td>
<td>Government may have maintain some liabilities</td>
</tr>
<tr>
<td>Maintain complete oversight of the system</td>
<td>Remain responsible for capital needs</td>
</tr>
<tr>
<td>Maintain or enforce regulatory authority</td>
<td>May face difficulties maintaining operating expertise</td>
</tr>
<tr>
<td>Create a context for running facilities like a business</td>
<td>Monitoring costs for the agreement</td>
</tr>
<tr>
<td>Tap into a breadth of public sector experience and knowledge</td>
<td>Potential lengthy contract negotiations</td>
</tr>
<tr>
<td>Preserve contract controls on their solid waste stream and prices charged</td>
<td></td>
</tr>
<tr>
<td>Benefit from innovative techniques without going through government bureaucracy</td>
<td></td>
</tr>
<tr>
<td>Takes advantage of competitive opportunities to save money</td>
<td></td>
</tr>
</tbody>
</table>

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Exhibit 2. Advantages and Disadvantages of Privatization

Source: Rosen 1997

<table>
<thead>
<tr>
<th>Potential Advantages</th>
<th>Potential Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost saving measure</td>
<td>Reduced service quality</td>
</tr>
<tr>
<td>Greater flexibility</td>
<td>Higher costs</td>
</tr>
<tr>
<td>Greater choice of providers</td>
<td>Illusory cost savings</td>
</tr>
<tr>
<td>Greater efficiency</td>
<td>Increased service interruptions</td>
</tr>
<tr>
<td>Greater productivity</td>
<td>Loss of flexibility</td>
</tr>
<tr>
<td>Lower initial costs</td>
<td>Loss of capital</td>
</tr>
<tr>
<td>Lower unit costs</td>
<td>Less accountability</td>
</tr>
<tr>
<td>Greater risk sharing</td>
<td>Less control</td>
</tr>
<tr>
<td>Increased services</td>
<td>Dual system</td>
</tr>
<tr>
<td>Specialized skills</td>
<td>Potential corruption</td>
</tr>
<tr>
<td>Greater quality at lower prices</td>
<td>Potential discrimination</td>
</tr>
<tr>
<td>More jobs</td>
<td>Displaces public employees</td>
</tr>
<tr>
<td>Less red tape</td>
<td>Necessity for competition</td>
</tr>
<tr>
<td>Increased tax revenues</td>
<td>Weakened policies and values</td>
</tr>
<tr>
<td>Competitive pressure</td>
<td></td>
</tr>
<tr>
<td>Reduces size of government</td>
<td></td>
</tr>
</tbody>
</table>

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Source: Segal, et al. 2000
Indeed, we would expect the purchase price to be significantly reduced in cases where the contamination is bad, or not well defined, or subject to major uncertainties affecting the cost of cleanup.

- Get input from the community and the private sector regarding the service level descriptions and expectations.
- Develop and issue a RFP and allow the County the flexibility to award or not award a contract depending on the results of the bids.
- Evaluate bids based on costs, level of services, track record, and the intangible factors described above.

Conclusions
In the end, there are no clear-cut answers to the issue of privatization. “Cookie-cutter” type solutions often do not make sense in most situations. Clearly, situations arise where privatization of solid waste services makes economic and practical sense for the community. However, at the same time, many public agencies have demonstrated that with good leadership, management support, and the reduction of “red tape”, they can provide cost-effective solutions for its ratepayers. The decision whether to privatize needs to be answered using a non-emotional, methodical approach balancing all of the risks and rewards.

References

Karl Moyers is solid waste director in Santa Cruz County, AZ; Marc J. Rogoff is a project director; Michelle Leonard is a Vice President; and Robert Gardner is a Senior Vice President—all with SCS Engineers.