

IS YOUR TRANSFER STATION READY FOR THE NEXT TEN YEARS?

Preparing for Higher Disposal Costs



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INTRODUCTION

The economics of solid waste management are changing in Maine for towns that use waste to energy facilities for disposal. Towns are facing higher tipping and disposal fees. Current estimates are that tipping fees for charter members of the PERC incinerator will increase from \$51 a ton in 2013 to \$67 a ton in 2018 when the current operating contract ends. While it is premature to project costs after 2018, further increases are likely.

This report focuses on how higher disposal costs might affect your solid waste management policies and has general suggestions on adjusting your facility's design and operations. Any changes in your transfer station operation procedure and site layout require DEP approval. They must be consistent with chapter 402 of Maine DEP solid waste rules.

Hancock County Planning Commission (HCPC) staff is available to discuss specific needs of your community. These may include, but are not limited to, composting, CDD (Construction and Demolition Debris) management, recycling, and joint efforts with other communities. We can present general ideas on site layout and policies. The actual site plan should be drafted by a licensed design professional. Here are some steps to consider:

1. Estimate the future volume of waste delivered to your facility and its disposal costs.

According to a 2009 study commissioned by the Maine State Planning Office, Maine residents generate an average of 7.5 pounds per person of solid waste per day. This does not include CDD or other forms of bulky waste. This figure can be multiplied by the projected year-round and seasonal population of your town to estimate future volumes. HCPC can help you determine the appropriate population projections to use. If your community has a substantial commercial sector, you will want to estimate future rates of commercial waste.

Your total disposal costs can be estimated by multiplying the volume of waste by the projected PERC tipping fee. Projected hauling costs should also be estimated. These combined costs can help you determine your future disposal costs. These costs can be compared to potential savings from investing in recycling and other solid waste diversion techniques.

The next step is to estimate the projected future recycling rate. According to the Waste Generation and Disposal Capacity Report For 2011, the DEP estimated the average statewide recycling rate at 39.6 percent, which was short of the state goal of 50 percent. The US EPA has estimated that as much as 75 percent of the municipal solid waste stream could be recycled or composted. Recycling rates vary due to prices paid for recycled materials and the capacity of the local solid waste management unit (such as a transfer station) to separate and stockpile materials. Higher disposal fees may make new forms of recycling more attractive. *Transfer stations with relatively little room to store recyclables may want to consider increasing their space or arranging with another solid waste handler to store materials.*

In addition to recycling, material diversion measures such as organics composting can affect waste generation rates. According to an analysis by the University of Maine, food residuals account for about 28 percent of the municipal solid waste stream and yard and leaf waste for another 2 percent (see: <http://umaine.edu/wcs/>) As we have discussed in other publications, (see: www.hcpcme.org/environment) there are simplified permitting procedures for farm-based composting. There are also commercial entrepreneurs considering expanded compost facilities. *If your town is not presently exploring composting options, you may want to do so.*

Changes in consumer product packaging can also affect generation rates. More manufacturers are engaging in product stewardship practices. These involve employing “greener” manufacturing techniques and greater use of materials that can be recycled. In 2013 the Maine Legislature enacted a paint stewardship law that requires that paint vendors provide for the return of certain unused paint products. *HCPC will keep towns informed on how the paint stewardship law will affect solid waste management.*

2. Determine what new facilities and services are feasible

You should distinguish between changes planned at the transfer station and those at facilities than handle other portions of the solid waste stream. For example, a compost facility may be operated by a private entrepreneur at a separate location from the transfer station. Similarly, towns may choose not to have a Universal Waste staging area and rely instead on a facility in another town. Those towns contemplating a shift to single-stream recycling may not presently need an expanded facility. This could change if single-stream recycling costs increase.

Facility design must reflect both overall waste generation rate (the average daily volume throughout the year) and peak demand. For example, a summer weekend may generate a higher rate of waste generation than a winter weekday. It is important to avoid customer bottlenecks during periods of peak use. Some suggested features to promote recycling are discussed below. The economics of each town or solid waste management unit will determine which ones are feasible for a given facility. *Due to the many uncertainties in recycling and waste diversion, there are no set formulas to determine what your savings will be.*

a. Swap Shop

A swap shop is a place/building/location at a transfer station or recycling center, where residents can drop off useable items such as clothes, book, equipment, furniture, and construction materials. While some towns have a facility at their transfer station, others have a virtual facility on-line. Biddeford, Saco, and Scarborough share an on-line operation. For more information, see: www.biddefordmaine.org/index.

Each facility needs to develop its own acceptance policies. For example, some do not accept clothes if there is a thrift shop in town. The policies should be posted prominently on the site. Since swap shops tend to attract browsers, they should be located away from the main waste disposal and recyclable materials drop-off sites. This reduces the risk of traffic conflicts with short-term transfer station users.

b. Staging Areas for Recyclable Materials

Recycled materials are used by manufacturers, and as such, the markets for these products are cyclical and prices vary. For example, Maine Resource Recovery Association data show newsprint commanded a price of around \$200 a ton in 1995 but was around \$100 a ton in early 2013. Steel cans were valued at approximately \$300 a ton in 2008 but were worth less than \$25 a ton the following year. Markets for type 1 and 2 plastics are relatively strong, but other forms of plastics are harder to sell. This means that transfer stations must either have room to store materials or make arrangements with a broker to stockpile certain items when prices are low. The site design should promote the easy drop off of various materials by customers. Long lines or narrow, crowded corridors in a recycling center may discourage customers from taking the time to separate materials.

c. Compaction equipment and operator training

If a facility is to handle a greater volume of recycled material, it must be assured that its compactors and vehicles have sufficient capacity. This means reviewing capital equipment needs and costs. These costs include equipment operator training. These costs need to be determined as part of the overall cost of recycling.

3. Site Design Considerations

The facility should be designed to assure the smooth flow of residential and commercial traffic. This can involve arranging buildings and roads on the site to eliminate or minimize intersections, the need to back up vehicles, and sharp turns. There needs to be space for vehicles to queue when the incoming traffic flow is greater than the facility's disposal areas can accommodate. Well marked, color-coded traffic routes can help minimize contact between commercial and public vehicles. There should also be a bypass lane reserved for emergency vehicle access.

The transfer station experience should be as "user friendly" as possible. Good signage is helpful as are clear pavement markings, and directions from transfer station staff to indicate proper traffic flow. Signage should also indicate what materials are not accepted. Fact sheets should be available for customers that indicate where and when unacceptable items can be taken.

Self-haulers should have a separate unloading area from large trucks and, if possible, a separate entry lane into the facility. Typically, self-haulers must manually unload the back of a pickup truck, car, or trailer. This process takes longer than the automated dumping of commercial waste collection vehicles and could cause conflicts between small and large vehicles.

While there is no set transfer station building design, there are some EPA-recommended guidelines. For example, an open-sided building is preferred because it saves roll-up door costs and keeps trucks from backing into doorways. Also, a building's open side can include clear spans of up to 200 feet, with depths ranging from 75 feet to 125 feet. Inside the building, the tipping floor is level. Load-out tunnels are below the floor and located outside the building along

the opposite wall from the open side. Push walls are 12 to 14-feet high, and line the three sides and the load-out chutes.

4. Policy Considerations

Changes in solid waste management procedures typically require revisions to solid waste and recycling ordinances. Some towns have enacted mandatory recycling ordinances. Others restrict certain materials from disposal. HCPC has samples of ordinances and can assist in drafting an ordinance appropriate for your community's needs.

Policies frequently need to be supplemented by changes in services. For example, towns that do not normally sponsor bulky waste collection days may want to do so. HCPC has found that periodic bulk sale of backyard compost bins facilitate composting.

5. Public Relations

Public relations occur on several levels. First, there needs to be outreach to the community about proposed changes to solid waste policy. This involves meetings, web postings, and mailings explaining the rationale for the changes and soliciting citizen input. The solid waste committee is a good group to direct this effort.

If a town is in the process of updating its comprehensive plan, it should be sure that solid waste issues are addressed thoroughly. Questions on solid waste could be included in the public opinion survey. Transfer station needs should be included in the capital investment plan.

Second, once the new policies are enacted, information should be distributed to the community that describes the changes. There should be signs prominently displayed at the transfer station and municipal offices. It is helpful to have a transition period of several months before the new policies take effect. Press releases and announcements via social media are also important.

Third, the transfer station personnel need to be able to explain the changes. This will probably involve tactful handling of a few angry customers. If the customer is greeted by a well-run facility and faces minimal delays, fewer complaints are likely.

WHOM DO WE CONTACT FOR MORE INFORMATION?

Feel free to contact Hancock County Planning Commission, 395 State Street, Ellsworth, ME 04605. Telephone: 207-667-7131 e-mail: hpc@hpcme.org www.hpcme.org

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