

COLLECTION ELEMENT

The collection and hauling of waste in Hall County ranges from the County and municipalities to private firms and private individuals self-hauling their solid waste to the County landfill, other landfills or compactor sites. Additionally, there is a wide variety of vehicles utilized for collection of solid wastes. A description of solid waste collection vehicles can be found in Appendix C.

INVENTORY AND ASSESSMENT

Unit Pricing

Unit pricing, pay as you throw (PAYT) or variable rate pricing, is a system under which residents pay for waste management services per unit of waste collected rather than through a fixed fee. It treats waste services like any other utility where charges are determined by rate of usage.

Unit pricing is nothing new. It's a familiar concept for businesses. For years, many companies have been paying for waste removal services based on the size of their dumpsters and/or frequency of collections.

Potential Benefits of PAYT

Communities that have adopted PAYT programs have reported a number of benefits, ranging from reduction in waste generation to greater public awareness of environmental issues.

Waste Reduction

Unit pricing can help substantially reduce the amount of waste disposed of in a community. Some communities with unit pricing programs report that unit pricing helped their municipality achieve reductions of 25 to 45 percent in the amount of waste shipped to disposal facilities.

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Reduced Waste Disposal Costs

When the amount of waste is reduced, communities often find their overall solid waste management costs have declined as well. A portion of the revenues previously spent on waste disposal, however, may need to be dedicated to recycling, composting, or other diversion activities.

Increased Waste Prevention

To take advantage of the potential savings that unit pricing offers, residents typically modify their traditional purchasing and consumption patterns to reduce the amount of waste they generate. These behavioral changes have beneficial environmental effects beyond reduced waste generation, often including reduced energy usage, pollution reduction and resource conservation.

Increased Participation in Composting and Recycling Programs

Under unit pricing, new or existing recycling and yard waste composting programs become opportunities for residents to divert waste for which they would otherwise pay. Experience has shown that these programs are the perfect complement for unit pricing. Analysis of existing unit pricing systems shows that composting and recycling programs divert 8 to 13 percent more waste by weight when used in conjunction with a unit pricing program.

Support of the Waste Management Hierarchy

By creating an incentive to reduce as much waste as possible using source reduction and to recycle and/or compost the waste that cannot be prevented, unit pricing supports the hierarchy of waste management techniques defined by EPA.

More Equitable Waste Management Fee Structure

Traditional waste management fees, in effect, require residents who generate a small amount of waste to subsidize the greater generation rates of their neighbors. Under unit pricing, waste removal charges are based on the level of service the municipality provides to collect and dispose of the waste, similar to the way residents are charged for phone service or electricity. Because the customer is charged only for the level of service

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required, residents have more control over the amount of money they pay for waste management.

Increased Understanding of Environmental Issues in General

Through unit pricing, communities have the opportunity to explain the hidden costs of waste management. Traditional waste management systems often obscure the actual economic and environmental costs associated with waste generation and disposal. Once individuals understand their impact on the environment, they can choose to take steps to minimize it.

POTENTIAL BARRIERS TO PAYT

While there are clearly benefits associated with unit pricing programs, there also are potential barriers. Communities considering unit pricing should be aware of the costs and possible community relation implications associated with the following issues.

Illegal Dumping

Some residents have strong reservations about unit pricing, believing it will encourage illegal dumping or burning of waste in their area. Communities can counter this fear with an effective public education program. Since most communities with unit pricing programs have reported that illegal dumping proved to be less of a concern than anticipated, providing residents with this information can help allay their concerns over illegal dumping.

Inadequate Reduction Options

PAYT works best in communities where there exists adequate waste reduction infrastructure and opportunities. One should be coupled with the other. Failure to do this may result in an increase in illegal dumping or other unintended consequences such as increased burning or unauthorized use of commercial waste containers. Adequate waste reduction opportunities can help circumvent such abuses and allow generators to exercise

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control of their waste collection expenses, assuming there is no or little charge for reduction options.

Recovering Expenses

Since unit pricing offers a variable rate to residents, the potential exists for uneven cash flow that could make it harder to operate a unit pricing program. To address this, communities must be sure to set prices at the appropriate level to ensure that, on average, sufficient funds are raised to pay for waste collection, complementary programs, and special services.

Administrative Costs

Effectively establishing rates, billing residents, and collecting payments under a unit pricing program will likely increase a waste management agency's administrative costs. Communities need to set waste collection prices at a level that can cover these costs.

Perception of Increased Costs to Residents

While a unit pricing program offers residents greater control over the cost of collecting their waste, it could initially be seen as a rate increase. An effective public outreach campaign that clearly demonstrates the current costs of waste management and the potential reductions offered by unit pricing will help to address this perception.

Multi-family Housing

Extending direct waste reduction incentives to residents of multi-family housing can present a challenge. Since waste generated by these residents typically is combined in a central location to await collection, identifying the amounts of waste generated by individual residents in order to charge accordingly can be difficult. Communities must experiment with rate structures and collection systems to encourage residents of multi-family housing to reduce waste.

Building Public Consensus

Perhaps the greatest barrier to realizing a unit pricing program is overcoming resistance to change, both among citizens and elected officials. Informing residents about the

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environmental and economic costs of current waste generation patterns can help overcome this resistance and build support for unit pricing.

Careful planning and design of a unit pricing program to meet specific community needs is the best solution to these potential difficulties. In particular, an effective public education program designed to communicate the need for unit pricing and address the potential concerns of residents will help meet these challenges.

TYPES OF COMMUNITIES THAT CAN BENEFIT FROM UNIT PRICING

Unit pricing programs work best when tailored to local needs. All types of communities can design unit pricing programs that will help achieve the goals of reducing waste generation and easing waste management difficulties. Large, medium-sized, and small communities in every region of the country have realized these benefits. Local officials indicate that unit pricing programs also work well whether solid waste services are carried out by municipal or by private haulers. As a result, unit pricing has grown significantly over the last few years. In the 1980s, only a handful of communities in the United States operated unit pricing programs. As of January 1994, over 1,800 programs are scheduled to be in operation. In addition, laws in many states currently mandate or encourage unit pricing programs. Georgia encourages such programs.

Winning community support for unit pricing often hinges on explaining how the program can achieve certain critical objectives. Discussions at EPA's Unit Pricing Roundtable revealed that residents tended to support unit pricing if the program achieved the waste management principles about which they cared the most. Residents often develop a sense of civic pride in programs that meet these objectives. Roundtable panelists strongly recommended that solid waste officials devote a significant amount of attention to communicating basic principles.

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Georgia's Experience

Reported use of PAYT in Georgia fell from 47 in 2000 to 42 in 2001, but some of these reported programs may not fit the true definition of a PAYT system. There are 28 communities in Georgia with financial incentive PAYT programs. These programs have many different designs. Most counties operate PAYT systems at convenience centers while most cities integrate their program into a curbside or backdoor collection system. In some programs, residents are charged based on the volume of waste they dispose, while in others, residents are charged based on the weight of the waste they dispose.

Some PAYT programs operate on a subscription basis, where residents pay a flat fee to dispose a predetermined amount of waste and are assessed an additional fee if they dispose of more waste. Others operate on a variable basis, where residents purchase bags for a fee that covers the collection, disposal, and the costs of the bags used to manage the waste.

As different as the PAYT programs are, they provide some common lessons, especially when it comes to how the public responds to the programs. Almost all communities report that public education can make or break a program. Many communities also claim that despite their initial concerns, illegal disposal did not significantly increase when a PAYT program was implemented, especially if ordinances were in place and enforced to minimize illegal dumping. Finally, the way in which solid waste management costs were covered before the PAYT program began can strongly influence public reaction to the program; whether it is seen as an added tax or a way to gain control over individual disposal costs.

Equity

The program should be structured so that people who generate more waste pay more, while residents who prevent waste, recycle, and compost are charged less.

Waste Reduction

The program must significantly reduce the community's generation of waste, increase the rate of recycling, and, therefore, reduce the amount of waste requiring disposal.

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Reductions in Waste Management Costs

By helping to alter household waste generation patterns, the program should help reduce the cost of collecting and disposing of the community's solid waste.

Community Improvement

The program should contribute to improvements in the quality of life in the community, such as resource conservation and land preservation.

EDUCATION AND PUBLIC INVOLVEMENT

In addition to deciding what information needs to be communicated, solid waste officials also should consider how best to reach residents in the community. Specifics need to be communicated. An unspecified change in waste management services scheduled to occur at some future date is not likely to capture a community's attention. Following are some activities that represent some of the ways in which officials can explain the benefits of unit pricing.

Public Meetings

Interactive public meetings offer solid waste officials the opportunity to present the case for unit pricing. Such meetings also give citizens the sense that their concerns are being heard and addressed in the final program design.

Briefing Papers for Elected Officials

As both shapers and followers of public opinion, elected officials tend to be at the center of public policy debates. Because well-informed leadership can raise issues in such a way as to attract residents' interest, solid waste officials might want to provide elected officials with brief summaries of the issues associated with solid waste management and the likely benefits of a unit pricing program.

Press Releases

Press coverage of a change in the way that a community pays for its solid waste collection services is inevitable. Keeping key radio, television, and newspaper outlets well informed of the reasoning behind the move to unit pricing can make the press a

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valuable participant in the decision-making process and prepare the community for an upcoming change.

Town of Clermont

Solid Waste Collection

The Town of Clermont offers uniform solid waste services to all its residents. Collection is done from 250 residences once per week on Mondays. The Town provides no commercial or business service. A Town ordinance requires that waste be contained in plastic or paper bags and placed in cans or carts and placed at curbside. Exceptions are made for occupants of premises who request special consideration due to age or disability. In cases of holidays recognized by the Town occurring on Mondays, waste is collected the next day. The Town requires any person, firm or corporation collecting and transporting waste over the streets of the Town for monetary consideration to first obtain written permission from the Town of Clermont to do so. Only bagged MSW is collected by the Town. Town officials speculate that very few residents haul their own bagged refuse to the County's compactor sites.

According to Town officials, waste collection averages 5,000 – 6,000 lbs. per week. The amount has increased notably in the last two years, roughly doubling due to additional subdivision areas being annexed into the Town. Waste collection charges are currently \$5 per month or \$60 annually. Charges are billed and collected quarterly (in advance).

Waste items **not** accepted include:

- Yard trimmings
- Leaves
- Sticks
- Paint or solvent cans

The Town does not collect commercial waste nor does it collect outside the Town limits. The vast majority of commercial waste is collected by Waste Management.

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Recyclable and Yard Trimmings Collection

As with waste collection, if growth continues at the current rate, recycling collection also would likely go to two days per week. Recycling pick up is the same day as garbage collection. The Town provides blue boxes to residents and collection on Mondays. Recyclables are collected by municipal employees using a specially designed trailer towed by a pick up truck. Collected recyclables are delivered to the Hall County Recycling Center.

Set out requirements:

- Items must be placed in containers at curbside by 8:00 a.m.
- The Town of Clermont provides recycling containers

Items collected include:

- Newspapers
- Aluminum cans/foils
- Tin cans
- Plastic bottles – PETE #1, HDPE #2
- Glass
 - Clear
 - Green
 - Blue
 - Brown

Clermont does not offer collection of yard trimmings. Residents must self-manage. Town officials suspect most residents burn yard trimmings in the fall. Grass clippings are not an issue. There have not been notable complaints on burning. It should be noted that permits are required from Hall County Fire Services any time burning is done. No permits are issued during a burn ban. There have been no expressed feelings among residents to indicate burning as a problem. Most homes are on one-acre lots, as now required by the Town. Most subdivisions don't have a lot of trees to create leaves. Therefore, at present, this helps to reduce service demands for yard trimmings.

Other Collections

A lack of personnel and manpower prevents Clermont from collecting large items such as furniture and white goods. Such items must be hauled by residents or by a private hauler

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to the County Landfill. City residents may also take advantage of the county's furniture and appliance pick up.

Solid waste collection costs are currently funded from the City's General Fund.

Adequacy of Collection Program

Clermont's collection program seems adequate for the planning period. The notable exception would be collection of bulky items. However, city residents may avail themselves of this service provided through the County each spring.

Needs/Goals

Table 10 shows that from 2002 to 2013, Clermont's annual waste tonnage is projected to increase by 100 tons or approximately 60%.

In the next 10 years, if growth continues, Clermont may have to go to 2-days/week waste collection, servicing half the town each day. Added cost to the City would be in taking existing staff off other duties and added O & M on their collection vehicle. As long as the equipment is up to the task, the feeling is the Town should keep collection services in house.

The 250 stops being served as of 2003 are projected by Town officials to increase an additional 100 to 150 stops in the next ten years. The population is expected to, keeping pace with projected increase in waste, increase by nearly 60% in ten years. The official population is 658 (2002). There have been 25 annexations in last two years. Continued annexations will certainly be a major factor in this anticipated growth. Privatizing waste collection might be an option for Clermont to consider. The need for yard trimmings collection should be investigated.

City of Flowery Branch Solid Waste Collection

Collection

The City of Flowery Branch provides once weekly waste collection services each Monday to all city residents. No service is provided outside of City limits. Waste must be placed at the curb in closed garbage bags placed inside the provided hinged-lid trash container by 6:00 a.m. Loose waste is not picked up under any circumstances.

Collection of bagged residential waste and recyclables has been privatized in Flowery Branch since 1997. Residents provide their own bags. Cost is \$11/mo. for residential collection. The hauler actually charges the city \$8/mo. The extra \$3 helps to offset the cost of yard waste collection, which is handled in-house. Due to the need to re-bid collection services, the contractor could change from year to year. Flowery Branch has employed four different contractors thus far. The current contractor (2003) is Red Oak Sanitation.

Waste items not accepted in regular collection include:

- Corrugated cardboard
- Bulky items
- Paint
- Tires
- Construction materials

Commercial waste is collected by private contractors via individual subscription.

Recyclable and Yard Trimmings Collection

Recycling collection is provided through the city's private contractor once weekly on Monday, the same day as waste collection. Recyclable materials must be placed in 18 gallon bins and set at the curb adjacent to the trash receptacle no later than 6:00 a.m.

Items accepted include:

- Clear plastic – PETE #1
- Newspapers
- Magazines
- All glass containers
- Cardboard (must be broken down flat)
- Aluminum and tin cans

Items not accepted include petroleum products.

Collection

Yard trimmings collection is done by city workers once weekly on Monday.

Yard trimmings must be placed at curbside no later than 6:00 a.m. Leaves or grass clippings must be placed in clear bags or bags marked as yard waste. Yard waste must not exceed 20 gallons per bag. Brush and/or limbs must not exceed 4 feet in length and 6 inches in diameter. No household trash should be placed in yard waste bags.

The city still collects yard trimmings in-house using a chipper and dump truck. Mulch is made available to residents at the wastewater treatment plant. The city also uses it internally. Dump trucks are customized to allow mulch to be blown in back. Also residents can call and make an appointment to accept mulch from the city. The only requirement is that it be scheduled in advance.

Other Collections

Since 2000, the contractor has also collected bulky wastes (white goods, furniture, etc.) and C&D (up to 4 cubic yards). If the bulky wastes are less than 4 cubic yards, it is included in the \$11/mo. cost. An additional charge for removal of bulky waste in excess of 4 cubic yards is a minimum charge of \$25.00 and must be paid prior to placement at the curb. Bulky items are collected every second Tuesday of each month. Items must be set out at the curb by 6:00 a.m. and no sooner than 2 days prior to pickup

Construction debris is not accepted. These services are provided by private vendors via individual subscription.

Adequacy of Collection Program

Needs/Goals

Table 11 shows that from 2002 to 2013 Flowery Branch's annual waste tonnage is projected to increase from 830 to 3,707 or approximately 447%. This may offer improved economies and bargaining power. Additional demands this might place upon the city would be limited due to solid waste services being provided under contract with private service provider. Increased demands on city resources might come in the form of

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additional customer service related calls and perhaps additional billings, if not already outsourced.

City of Gainesville

Solid Waste Collection

The City of Gainesville provides waste collection services directly utilizing a fleet consisting of rear loaders, scooters with 3 cu. yd. capacity (provide better capability for back-yard collection) and flatbed dump trucks for collecting bulky items and yard waste at the curb. Additionally, vacuum-type leaf machines and chippers are utilized to collect and process leaves and limbs. Both the vacuum leaf machines and chipper are attached to flatbed trucks to which an enclosed body is attached. The City of Gainesville provides backdoor (more specifically, back yard) solid waste collection for single-family units, duplex units, triplex units, and quadraplex units. Backdoor collection entails city collection crews collecting wastes from locations such as backdoors, garages, carports, and recognized locations on the resident's lot. All collection locations are required to be at ground level. Backdoor pick-up is acknowledged to have negatives, but it has become an accustomed service that is a source of pride for the city. It has, however, contributed to increased exposure to worker injury and collection inefficiencies.

The City requires waste to be in plastic bags and stored in rust proof, moisture-proof containers equipped with handles and tight fitting covers. The containers must have a maximum capacity of 35 gallons and be maintained in a sanitary condition free from odor. Residents must provide their own bags, cans or carts.

Residential collection fees, as of 2003, are \$13 + \$3.35 surcharge for landfill tip fees + \$3.30 for recycling for a total monthly charge of \$19.65. This includes up to 1 cu. yd. /wk. total waste collection. There are some indications that these fees may increase in order to more closely reflect the actual cost. Backdoor service is provided twice per week for each customer with collection days varying by route.

Gainesville no longer provides commercial collection to businesses, apartment complexes and industrial accounts. As recommended in the previous plan, Gainesville ceased

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servicing commercial container accounts in 1995. When commercial waste service ceased, there were approximately 800 to 900 accounts. Gainesville implemented a non-exclusive franchise on March 21, 1995. Private haulers were given the total commercial and industrial sector within the city. However, the non-exclusive franchise was implemented as a means to retain some control over this sector. This non-exclusive franchise allows an approved hauler to operate within the city according to its ability to gain market share under open competition within the commercial/industrial sector.

The non-exclusive franchise has the following features:

- Haulers must be deemed consistent with the prevailing Comprehensive Solid Waste Management Plan.
- Haulers pay the city a franchise fee of \$35 per quarter and 5 percent of gross income to operate in the city.

Recyclable and Yard Trimmings Collection

As was recommended in the 1993 Comprehensive Solid Waste Management Plan, Gainesville provides once per week curbside recyclables collection via a private contractor. Items must be placed at curbside in recycle containers supplied by the contractor.

Items accepted include:

- Newspapers
- Aluminum cans/foil
- Steel cans
- Glass (clear and brown only)
- Soda bottles PETE #1
- Colored plastics HDPE#2
- Plastic milk jugs HDPE#2
- Junk mail
- Magazines
- Catalogs
- Phone books
- Office paper

The City provides all customers with curbside leaf collection. This is on a seasonal basis beginning around November and ending around the first of February. Leaves are not

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landfilled, but are stockpiled on City property. They are allowed to decompose on their own.

Other Collections

Flatbed truck service is provided at the curbside only, except perhaps in the case of the elderly or infirm. Flat-bed trucks collect yard waste and bulky items (furniture, etc.). Such mixed loads are taken to the County landfill or to RTS Landfill. To keep things separate would require more trips or more vehicles traveling the same route to avoid calls from residents that only some of their things were picked up.

The only limitations on these items is a City ordinance requiring items hauled by flat-bed truck be less than five feet in length and less than 50 pounds. White goods are also collected and sold to a local scrap metal dealer. Gainesville charges \$18 for each Freon containing appliance and \$12 each for other appliances. Residents are required to call for pick up of these, but many times they do not call. Whenever the collection crews see materials that are out on the curb, they make a note of these cases and report it to the Sanitation Superintendent. There have been cases where residents have been billed for their removal, but they can claim they never authorized the pick up and are not going to pay the bill. Consequently, as a matter of course, these are often referred to Code Enforcement as a pre-emptive measure. This charge is included on water bills. All billing is done through the water department.

Illegal dumping is very sporadic and not much of a problem. When discovered, it is forwarded to Code Enforcement.

Waste items **not** picked up by Gainesville include:

- Tires
- Acids
- Explosive materials
- Pallets
- Batteries
- Liquids
- Paint and paint thinners
- Building materials
- Dangerous or corrosive materials of any kind

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Adequacy of Collection Program

Needs/Goals

The City feels municipal service of residences should continue and not be privatized. The feeling is that illegal dumping would likely increase with privatization as would an adverse impact on aesthetics from increased “trashiness”. There are concerns regarding some problems on waste collection that are possibly due to cultural differences in the Hispanic community. More effective communication methods may be helpful. It is difficult to enforce trash container requirements among all community sectors.

Table 12 shows that from 2002 to 2013 Gainesville’s annual waste tonnage is projected to increase from 7,703 to 10,916 or approximately 42%. Gainesville seems to have adequate collection capabilities for the near future. The most severe test comes from the demands placed on staff and machines to maintain the current level of service. If the need and will to make changes were to come about, the city would always have the option of increasing collection efficiency through going to once per week backdoor or mandatory curbside on a twice per week or once per week basis. While perhaps having the perception of lessening the level of service, it would allow the city to free up existing resources to continue doing the job, likely with no to little manpower or funding increases. This could offer an important option and would provide a possible course of action to maintain an acceptable level of service in times of fiscal constraint.

As to curbside recyclables collection, the current contractual arrangement seems to be working fine from the standpoint of the mechanics of collection being adequate. The weakness might be in the education and program reinforcement (see Education and Public Involvement).

The City feels it would be helpful to have a coordinating committee or group composed of sanitation, streets department, water department (billing) and private contractor (curbside recycling). This group could meet once per quarter to go over solid waste

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coordinating issues. The purpose would be to review and define responsibilities and protocol. The expected result would be communication and coordination improvements.

City of Gillsville

Solid Waste Collection

The City of Gillsville has no collection equipment or staff. Instead, collection services are provided by a private contractor. Cooks Sanitation provides residential waste collection once per week on Monday. The City pays \$12/mo./per stop (2003). Waste is collected at any reasonable location near driveways; however, back door collection is provided as established by the needs of individual residents. Waste must be bagged, and there is a five bag limit (any size). Residents must provide their own bags, cans or carts. Only household garbage is accepted. Although Gillsville is split between Hall and Banks Counties, all city residents receive the same level of service. A small number of businesses subscribe for services from various waste management companies.

There is limited illegal dumping. One isolated street has some problems on the Banks County side. There are no formal plans to address this. Hall County provides code enforcement services.

Recyclable and Yard Trimmings Collection

Recyclables collection is not provided. Recycling has been discussed, but it would not be easy to put in place. Residents self-manage their yard trimmings. It is either burned or mulched.

Recycling may be offered to commercial establishments, but local officials are not aware of any being done.

Other Collections

Gillsville does not, itself, provide other collections. Bulky items are collected annually during Hall County's Appliance and Furniture Pick Up. See "Hall County" section for more information.

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Adequacy of Collection Program

Needs/Goals

Table 13 shows that from 2002 to 2013, Gillsville may anticipate an annual waste tonnage increase from 67 to 74 tons or approximately 10%. Gillsville's privately provided waste collection service should be adequate during the planning period. Gillsville is really not large enough to make curbside recyclables collection feasible, with the possible exception of perhaps co-collection. A drop off based program would be a plausible alternative, given the small, compact size of the community and few main travel thoroughfares. A site could be located that would be convenient to the frequent travel routes of most or all city residents.

City of Lula

Solid Waste Collection

The City of Lula offers municipal solid waste collection once per week on Friday. Waste must be bagged. At this time there is no limit on size or number of bags. All residents have the same level of service. Residents are billed \$5/month with their water bill. All waste is hauled to the Hall County Candler Road Landfill. Two rear loaders are used. One is of six cubic yards capacity; the other is believed to be 12 cubic yards. Because high growth is predicted, the City may go to two days per week services.

Lula services a few small businesses once per week. More than once per week collection is not provided. Larger businesses are serviced by private haulers. There is no licensing of private haulers. Lula will not likely get into licensing or franchising in next 10 years, as there is not believed to be enough revenues to cover administrative cost.

Lula may be getting out of commercial waste collection altogether, depending on commercial growth that is expected to take place along Route 365.

Waste items **not** accepted include:

- Motor oil
- Hazardous waste
- Bagged yard waste

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Recyclable and Yard Trimmings Collection

Recyclables collection is not provided; however, the city may start doing so. Until then, residents can use the nearby Lula compactor.

Lula does not provide leaf collection, and no bagged yard waste is accepted. However, curbside collection of limbs up to 12 inches in diameter is provided once per month. The goal is to collect every two weeks. A flatbed dump truck is used to collect yard trimmings. The woody yard trimmings are chipped into mulch. The mulch is made available to all residents at no charge. The City will also direct haul mulch to residents at no charge. It is also used internally on City properties.

Illegal dumping has not been an issue.

Other Collections

Lula does not provide other collections. Bulky items are collected annually during Hall County's Appliance and Furniture Pick Up. See "Hall County" section for more information.

Adequacy of Collection Program

Needs/Goals

Table 14 shows that from 2002 to 2013 an annual waste tonnage increase from 378 to 625 tons or approximately 65% is estimated. Growth is coming. Lula may have to go to twice weekly services. On Mondays collection crews may cover half the city and on Tuesdays, the other. The city plans to remain in the collection business for the planning period.

City of Oakwood

Solid Waste Collection

The City of Oakwood provides residential collection of municipal solid waste to 610 households as of 2002. Waste is picked up once weekly on Mondays or the following day in the event of inclement weather or holiday. Curbside service is mandatory with the exception of the handicapped, infirm and elderly. Waste must be placed in closed plastic

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bags and placed in a suitable, covered container at the curbside no later than 8 a.m. Residents must provide their own bags, cans or carts. All residents have the same level of service. Private haulers service apartment complexes and private gated communities. Private haulers also service some new housing developments. The City of Oakwood does not collect from businesses.

Illegal dumping has been a problem in the more secluded, undeveloped areas of the Oakwood Industrial Park. Oakwood police do patrol the area and have caught some perpetrators. There is only one way in and out of the property.

There is no separate charge for waste collection or recycling. It is included in the general fund.

Waste items **NOT** picked up include:

- Tires
- Acids
- Explosive materials
- Building materials
- Dangerous or corrosive materials of any kind

Recyclable and Yard Trimmings Collection

Oakwood offers mandatory curbside recycling once a week on Tuesday.

Set out requirements:

- Items must be placed at curbside no later than 8 a.m.
- The City provides containers to property owners.
- Renting residents pay a \$15 deposit for recycle containers

Items **NOT** accepted include:

- Corrugated cardboard

Items accepted include:

- Newspapers
- Glass
- Magazines
- Aluminum Cans/Foil
- Tin (steel) cans
- Plastic Bottles – PETE (#1) and HDPE (#2)

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Oakwood does not provide leaf collection. Limbs no larger than 6” in diameter and not less than 3’ in length are collected once monthly on the last Friday. Oakwood allows limbs to be placed curbside no more than 2 days prior to pickup, and residents must remove all limbs not collected within 24 hours. Oakwood also has mulch available from yard trimmings. Residents must load and self-haul. The city does not collect grass clippings, shrubbery trimmings, pine needles and the like. Rather, the city urges these items be composted.

Other Collections

Oakwood does not provide other collections. Bulky items are collected annually during Hall County’s Appliance and Furniture Pick Up. See “Hall County” section for more information.

Adequacy of Collection Program

Needs/Goals

Table 15 shows that from 2002 to 2013 an annual waste tonnage increase from 397 to 584 tons or approximately 47 % is estimated. Oakwood is benefited by the trend in housing developments employing private waste haulers. The result is decreased demands on Oakwood’s resources than would otherwise occur. Oakwood should look at franchising as a way to ensure a measure of control and quality of services provided by the private firms offering collection services to residential, commercial and industrial sectors in the city.

Oakwood should investigate the possibility of converting waste management functions into an enterprise fund. Any franchise fees should go into this dedicated fund.

Hall County

Solid Waste Collection

Hall County provides collection of solid waste from a system of 13 staffed convenience centers (compactor sites) located throughout the County. These sites, depending on

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topography, require between 1.5 to 2 acres. As the name implies, each site has a stationary compactor to compact waste into an enclosed roll off container. The compactor sites are serviced by trucks from the County's Solid Waste Division. Waste is delivered to the County's Candler Road Landfill.

In August 1987 East Crescent became the first site in Hall County's conversion from a collection system based on roadside green boxes to its current compactor site system. At the time this conversion began, the compactor site system was viewed as a temporary solution. This "temporary solution" has been in place since that time, with the last site having opened in 2000.

Formerly, the compactor sites were open seven days per week from 6 a.m. to 9 p.m. They are now open Monday-Saturday 7:00 a.m. - 9:00 p.m. and Sunday 8:00 a.m. - 7:00 p.m. They are only closed Christmas day. As required by county ordinance, only bagged refuse is accepted at the compactor sites. Waste that cannot be bagged must be taken to landfill.

Private contractors provide collection service via open competition throughout Hall County and in municipalities, mainly with respect to commercial/industrial waste. Private haulers provide residential, commercial and industrial waste collection. There is also a number of businesses that self-haul wastes. These businesses tend to be contractors, e.g., roofing contractors or owners of rental properties, although poultry processors also self-haul. A chart listing the private contractors and their services is in the Appendix as Table C-1 Hauler Survey of Services Offered. Hall County provides collection to an unknown number of households. The results of the Hall County Solid Waste Management Public Opinion Survey, which was conducted in 1991, indicate that a substantial number of residents living in the unincorporated area do not use the compactor sites. This suspicion is raised by the 28.3 percent reporting that they used "dumpsters" for disposal. It is presumed that "dumpsters" could be understood to mean one of two things: either dumpsters located at the McEver Road drop off area, which were in service at the time of this 1991 survey, or dumpsters at place of employment. Of residents of unincorporated

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areas, 52.5 percent responded they used compactor sites while 47.5 percent was the total of all other methods.

This considerable percentage apparently choosing not use compactor sites raises a question about what collection option residents use. Currently, possible options include private waste haulers, place of employment or even illegal dumping. It is difficult to imagine illegal dumping as an option of regularity, given Hall's enforcement efforts and lessening attractiveness of this option as population increases. It is difficult to try to estimate how many use place of employment as an option. In the source of waste survey that was done for the Waste Disposal Stream Analysis, quantities from this option would have been reported with commercial and industrial waste sources. That leaves collection via private waste haulers operating in unincorporated areas as the remaining obvious option.

How many users of the Hall County Compactor sites are there? This may be estimated by using the 1.7 lbs./person/day generation rate (see table 18 projections for waste to be collected at Hall county compactor sites).

Based on the 23,162 tons collected at compactors in 2000 and an estimated per capita generation rate of 1.7 lbs/day gives: $(23,162 \times 2000) \div 365 \div 1.7 = 74,656$ (estimated) users or approximately 27,650 households (2.7 persons/household). This method predicts a usage rate among residents of unincorporated Hall of approximately 70% (see Table 18). This amounts to an increase from 16,381 households in 1991 to 27,650 households in 2000 or an increase of 59%. Census figures for 1990 indicate 2.5 persons per household. This has grown to 2.7 as estimated by 2000 census.

With the possible exception of Clermont and Gillsville--the two least populous cities--the per capita generation rates have remained rather consistent with the passage of time. Also, looking at the per capita generation rates experienced by the cities in Hall, shows an average of 1.84 (including Oakwood's 0.73 lbs./capita) and 1.65, which excludes Oakwood's somewhat skewed number due to some housing developments being off

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limits to Oakwood's collection crew. This seems to provide verification of 1.7 lbs. per capita generation rate used in these calculations. The cites can be looked to as reliable gauges of per capita generation rates because of their having more of a "captive" audience with respect to known numbers of users (generators).

Recyclables and Yard Trimmings Collection

The county provides drop off collection only. Residents may drop off recyclables at any of the compactor sites, the recycling area at 711 Green Street (parking lot for the County Education Building), or the public drop off area at the Hall County Recycling Center in Gainesville. Recyclables must be separated by residents and placed into marked bins.

Recyclable items accepted include:

- Newspaper
- Glass
- Aluminum cans/foils
- Steel Cans
- Magazines
- Softbound books
- Phone books
- Hardbound books
- #1 and 2 plastic bottles (PETE, HDPE)
- Corrugated cardboard
- Used motor oil (recycling center only)
- Portable, rechargeable batteries (county recycling center at 1008 Chestnut St. or at Keep Hall Beautiful 604 Green Street, Suite 1)
- Grease (used cooking oil)

Recyclables are collected in custom-designed compartmentalized roll off containers and hauled to the Recycling Center by the Solid Waste Division. A fleet of 18' long trailers is used to collect corrugated cardboard. These trailers are serviced by the Resource Recovery Division. In addition, Resource Recovery provides collection of office and computer paper once per week from County and certain Gainesville City offices, under an informal cooperative program.

Collection

Residents must provide their own yard trimmings removal. Items may be managed on site or taken to RTS Landfill or Crystal Creek Landfill. Both are located on Monroe Drive in Gainesville.

Other Collections

White goods, bulky wastes, tires, yard wastes and other non-baggable refuse must be taken by residents to either the County Landfill or RTS Landfill. However, during the county's Furniture and Appliance Pick Up Week (formerly Operation Clean Sweep) held each spring, oversized items are collected. "Appliance and Furniture Pick Up Week" is an annual event scheduled each spring that allows county residents to arrange for collection of any large waste items, such as appliances and furniture. It is especially useful for citizens, such as seniors, the infirm, or citizens without transportation, who would otherwise not be able to haul these materials to a landfill. Interested citizens call to register indicating their address and items to be collected and submit it to the Hall County Road Maintenance Division or Gainesville Sanitation Department (if a Gainesville resident). Materials are picked up either by Hall County Road Maintenance Division or Gainesville Sanitation Department, depending on location. Also involved are the Hall County Solid Waste Division and Keep Hall Beautiful. Hall County Resource Recovery Division coordinates the program. At the County landfill property, areas have been established for depositing of white goods and other metals for recycling. Items such as furniture are disposed.

ADEQUACY OF COLLECTION PROGRAM

Table 31 shows projections for waste quantities to be collected at Hall County compactor sites over the planning period.

**Table 31 -- Projections for Waste to be Collected at
Hall County Compactor Sites**

| YEAR | POPULATION | | WASTE PER | TONS |
|------|---------------|-----------|-------------|-----------|
| | POPULATION(1) | SERVED(2) | CAP./DAY(3) | PROJECTED |
| 2000 | 107,152 | 74,656 | 1.70 | 23,162(4) |
| 2001 | 115,955 | 79,710 | 1.70 | 24,730(4) |
| 2002 | 118,578 | 82,002 | 1.70 | 25,441(4) |
| 2003 | 124,763 | 86,814 | 1.70 | 26,934(4) |
| 2004 | 130,591 | 88,878 | 1.70 | 27,574 |
| 2005 | 135,582 | 92,275 | 1.70 | 28,628 |
| 2006 | 140,777 | 95,811 | 1.70 | 29,725 |
| 2007 | 146,228 | 99,521 | 1.70 | 30,876 |
| 2008 | 151,942 | 103,409 | 1.70 | 32,083 |
| 2009 | 157,785 | 107,386 | 1.70 | 33,317 |
| 2010 | 163,932 | 111,570 | 1.70 | 34,614 |
| 2011 | 171,324 | 116,600 | 1.70 | 36,175 |
| 2012 | 182,962 | 124,521 | 1.70 | 38,633 |
| 2013 | 186,106 | 126,661 | 1.70 | 39,297 |

(1) Estimated, unincorporated area

(2) Estimated actual number of users assuming 1.7 lbs./capita/day generation rate.

(3) Includes current level of reduction

(4) Actual tonnage

County Compactors Traffic Count Discrepancy

Table 32 shows an increase of 124% in tons of waste collected from 1992 to 2002.

Consulting the traffic count data from the 2003 survey and comparing it with the first count done in 1991-1992 (see Appendix B), we find an increase of only 0.2%. How can the waste quantities collected at compactor sites increase 124% but not be shown in a notable increase in traffic through the sites? Had the rate of usage increased, it should be supported by an increase in traffic count. Yet, the traffic count data do not support this.

Table 32-- Increase in Waste Collected from Compactor Sites

WASTE COLLECTED

| SITE | 1992 TONS | 2002 TONS | % CHANGE |
|----------------|--------------|--------------|-------------|
| EAST CRESCENT | 1396 | 2662 | 91% |
| SARDIS | 1582 | 2585 | 63% |
| GAINESFERRY | 1039 | 1816 | 75% |
| MURRAYVILLE | 1188 | 2085 | 76% |
| TADMORE | 1008 | 2195 | 118% |
| LULA | 517 | 1061 | 105% |
| BLACKSHEAR | 2107 | 3109 | 48% |
| WAUKA MTN. | 1154 | 2090 | 81% |
| CANDLER | 598 | 1644 | 175% |
| BALUS | 761 * | 2330 | N/A |
| ALLEN CREEK | BUILT 1996 | 366 | N/A |
| GOULD | BUILT 1997 | 2201 | N/A |
| FLOWERY BRANCH | BUILT 2000 | 1297 | N/A |
| TOTALS | 11350 | 25441 | 124% |

*Balus was built in 1992 and represents a partial year.

There is a discrepancy between the increased rate of waste collection at the sites and rate of usage as evidenced by the traffic counts. It is difficult to believe there has been virtually no increase in number of users (as evidenced by traffic counts through the sites), given the population increase the county has experienced and the increase in waste collected from the sites. If the data are reasonably accurate, then a conclusion one could make is that the amount of waste delivered per vehicle per visit would have to increase more than two-fold. Could there have been a dramatic increase in waste generation rates? Could family sizes (persons per household) have increased dramatically? Are small businesses using the sites illegally? Are small waste haulers using the sites illegally? Are neighbors hauling neighbors' waste? These are some questions that may warrant further research.

Is it possible the traffic count data are faulty? While every attempt was made to survey the compactor sites during the same time of year, this was not possible for every site. In addition, usage rates can be affected by local weather conditions or perhaps other factors.

Collection

Further research may show that weather conditions or other factors could have impacted one or both surveys. The traffic count data could be further analyzed for reasonableness.

As discussed previously, the system of compactor sites that currently serves the County was intended to be a temporary solution. Indeed, this collection system has begun to show its limitations and weaknesses. There are several areas of concern. These include:

1. Sunday collection;
2. Monday backlog of waste from overloaded compactors at most sites that must be collected and hauled off before normal operations can resume;
3. The waste and recycling collection systems are at times overwhelmed;
4. Recycling collection is inadequate to meet the demands of a growing population; and
5. Roadside litter.

Sunday Operation

During the siting of the county's current landfill, an agreement was reached between Hall County and the Citizens' Facility Issues Negotiation Committee. This agreement prohibits Sunday operation of the landfill. The agreement was reached in 1995 during the local facility issues negotiation process provided by the State of Georgia in the siting and permitting of new waste handling facilities.

Since the compactor sites are fully operational on Sundays, waste collection must proceed as usual, yet the limitation of not having the landfill operational is telling. The ability to collect waste on Sundays is artificially limited to the number of empty compactor containers on hand. Once all available containers are full, the waste must be deposited (in bags) on the ground. This results in health and sanitation concerns from the standpoint of vermin and vectors being allowed access to the waste during the hours the waste sits on the ground. This situation could provide sufficient grounds for Hall County to be cited for a violation by state regulators.

Collection

Monday Backlog

Each Monday, there is a ripple effect due to Sunday's limitations. This takes the form of trash bags that must be collected off the ground before normal operations may resume. There is a backlog at roughly half the sites, on average, and it takes approximately the first half of Monday to return to normal operations. During this time, the Solid Waste Division is unable to haul any of the recycling roll-off containers, many of which are full to overflowing from a weekend worth of use. This represents a weakness in the current system.

Overwhelmed Collection Systems

There are times when the county's current collection system is overwhelmed with respect to both waste and recyclables collection. For the most part, this begins the day after Christmas and continues for two weeks thereafter. Involved during this holiday period are the Solid Waste, Resource Recovery, and Road Maintenance Divisions. Even with the resources and manpower of three divisions, there is no way to keep pace with demand. One major cause of this is the fact that the collection sites remain open, depending on the day of the week, until 8 or 9 p.m., but the collection effort only continues until dusk at the latest. It is simply unsafe to continue the collection effort after dark. At that time of year, sunset occurs at roughly 5:30 to 5:40 p.m., leaving several hours for a backlog of waste and recyclables to develop. Recycling is especially hard hit. It is not uncommon for the collection schedule of recycling roll-offs at some sites to go one or two weeks behind schedule. The amount of waste received creates a situation where keeping up with demand for its collection takes precedence. The system is simply overwhelmed and something has to be compromised. This does little to comfort the citizens that have separated their recyclables only to find the recycling containers full, leaving them with the decision to take them back home and try again or dump them into the trash. This situation also causes much consternation among compactor site attendants as they face the brunt of residents' complaints.

Collection

Recycling Collection

Day to day recycling collection appears inadequate to meet current needs. This is supported by calls from compactor site attendants reporting full containers and residents' complaints. Also note Figures 2-4 (below and compactor site surveys), which show a disparity between waste growth and recycling growth and between cardboard collections growth and that collected in roll-offs. Also, the results from compactor surveys (see Appendix B), although a small sampling, points to areas of concern.

Figure 2—Annual Compactor Waste Totals

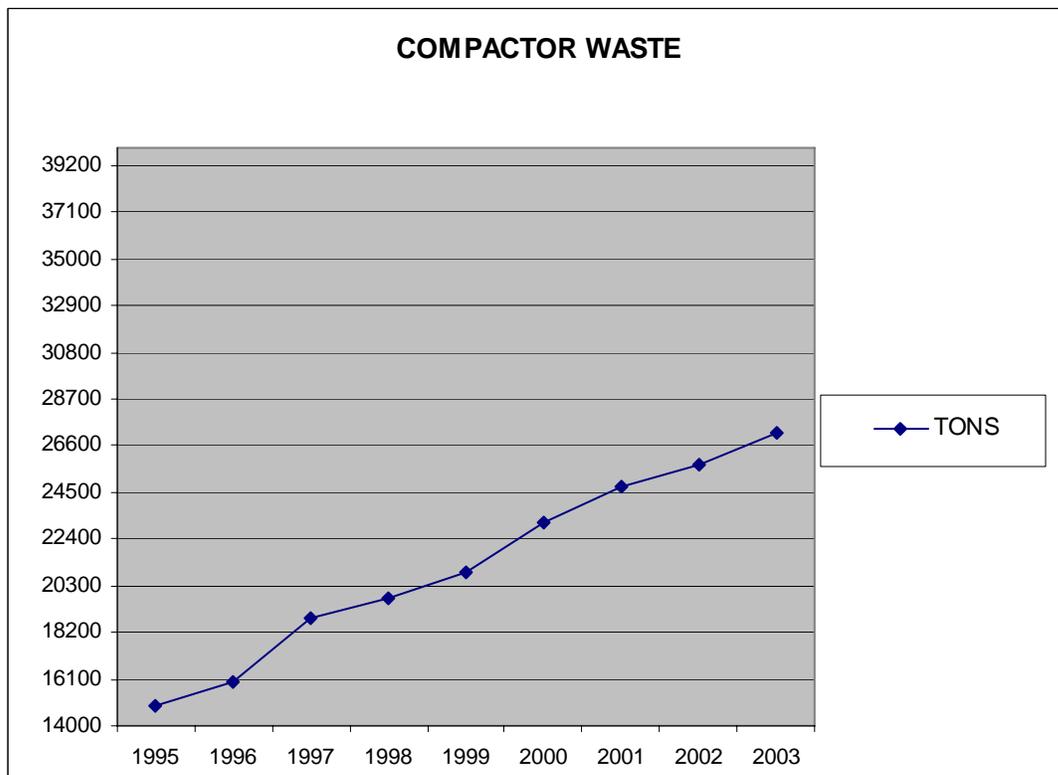


Figure 3—Annual Compactor Cardboard Totals

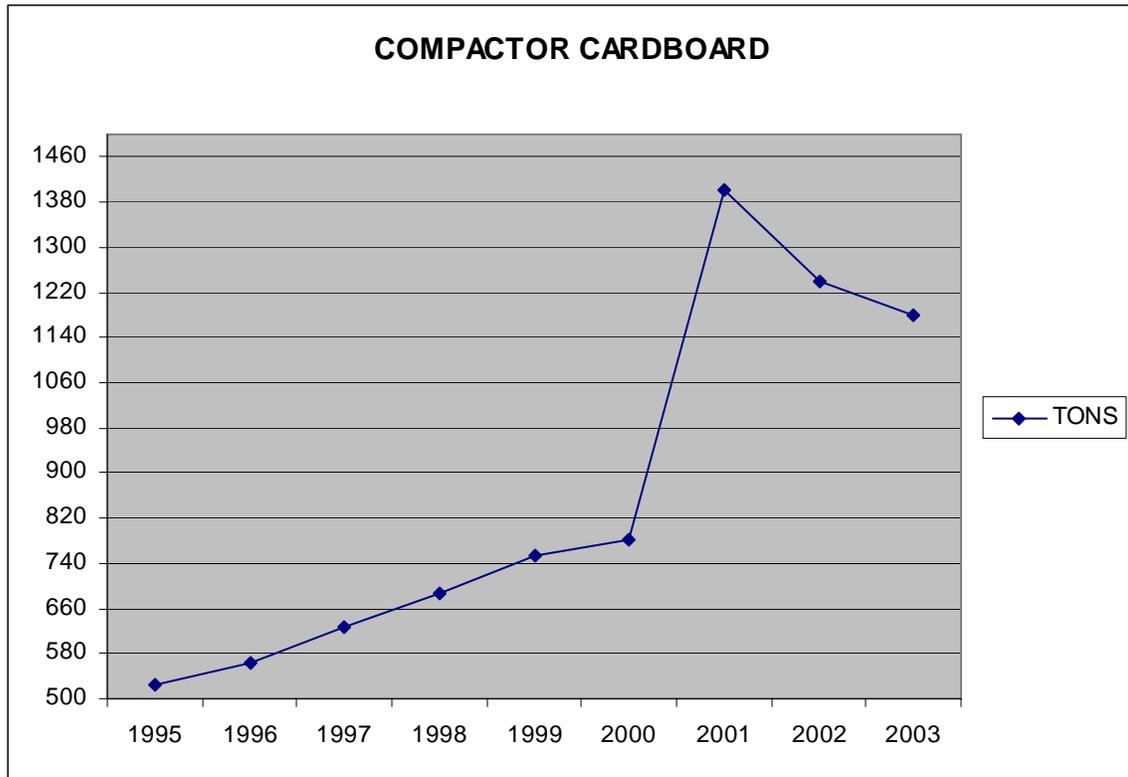
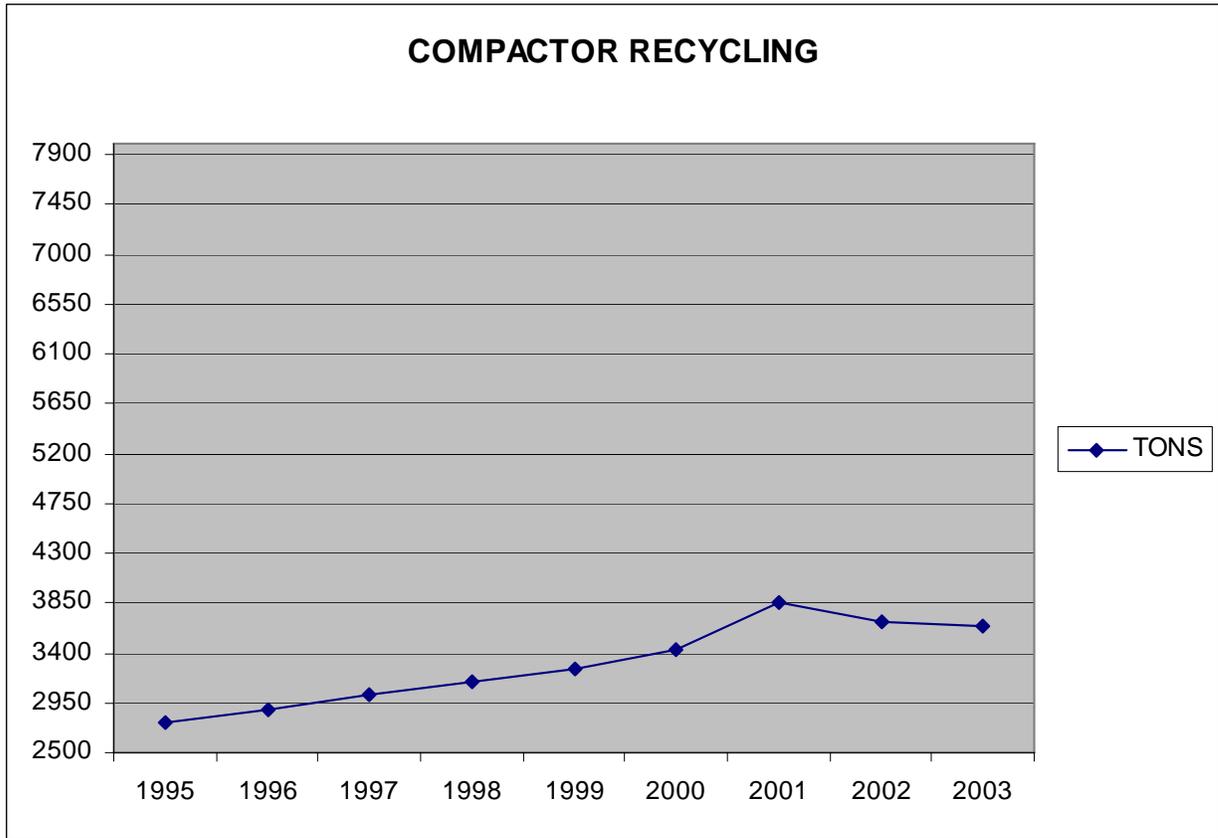


Figure 4—Annual Compactor Recyclables Totals



From the preceding figures, some observations can be noted. First, Figures 3 and 4, and to a much lesser extent Figure 2, show the impact of the economic downturn exacerbated by the horrific events of September 11, 2001. Second, the rate of recycling of corrugated cardboard roughly tracked with compactor waste growth to 2000, then increased rapidly for unknown reasons before decreasing as a result of the 2001 economic downturn. Third, the rate of overall recycling at compactors has lagged behind, possibly due to national or local trend, but presumably, due to lower overall rates of recycling and negative feedback provided by users encountering full recycling containers. Unlike bagged waste or corrugated cardboard, residents cannot leave miscellaneous recyclables on the ground. They can be easily dispersed by wind and foot traffic. They can also be dangerous, e.g., broken glass. Consequently, full containers have much more detrimental impact. The result of inadequate collection frequency is that the recycling rate may be kept artificially low.

Collection

Roadside Litter

With thousands of waste haulers, in the form of residents hauling their waste to the various compactor sites, there is an increased probability of bagged waste or loose waste blowing out of vehicles and winding up as roadside litter. Although State DOT regulations require loads to be secured, as does the “Official Code of Hall County Georgia”, many times they may not be properly secured. The results can be seen via casual observation and is also supported by conversations with Hall County Enforcement personnel.

UNINCORPORATED HALL COUNTY

Alternatives for Hall County’s Collection System

There has been some thought given the possibility of changing the current collection system employed by Hall County. Any change(s) should result in improvements to current system shortcomings, expressed previously or, logically, ought not be made.

In making any change, one should look at the various options for providing improvements over the current system and dealing with projected future system demands.

Potential Short Term Collection Changes

There are several changes that might result in improvements to the current convenience center system. Sunday operation of the sites could be discontinued or operating hours shortened. This would recognize the operational constraints and be consistent with the agreement reached with the Citizens’ Facility Issues Negotiating Committee, which requires the county’s landfill not be operated on Sundays, and a prior recommendation of the Hall County Solid Waste Plan Implementation Committee. The resultant Monday backlog would also be eliminated by this change, as would the possibility of environmental citations. Eliminating Sunday operations could save an estimated \$74,500 annually in regular and overtime pay.

Collection

Hall County should investigate ways to increase recyclables collections from compactor sites. Doing so would provide a level of service in keeping with public expectations. Also increased throughput would further offset processing costs and make use of unused capacity. An additional fee could be added to the existing \$50 solid waste assessment, which finances the cost of operation of the county compactor sites, to self-fund recycling. There is currently no self-funding mechanism for the recycling system, as there is for waste collection. Shortfalls are made up in county landfill tip fees.

Potential Long Term Collection Changes

For any options that might involve increased privatization in providing collection services, due consideration should be given to maintaining management controls over such a system.

Controls

Nearby Gwinnett County offers an excellent, long-term working model using the private sector to provide all collection services but with controls in place. For example, haulers must go through a process to pre-qualify before approval by the County Commissioners. This process requires:

- ◆ Insurance
- ◆ 10-year disposal capacity assurance letter from landfill they use
- ◆ Certain minimum services – once/week curbside trash
- ◆ Once/week curbside recycling (a single charge item for trash/recycling)
- ◆ Offer yard waste collection (allows additional fee)
- ◆ Special service for additional items (can charge for CFC containing appliances only, furniture, etc is free).

Gwinnett has a step-by-step progressive complaint and disciplinary mechanism in place and set forth in its local solid waste ordinance. Citizens contract with the hauler (service provider), but when they don't get the service they feel they should, citizens can lodge

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complaints with the county. Unresolved complaints may lead up to a public hearing held by the county. Penalties may include fines, restraint from operating as a service provider, and civil action.

ANALYSIS OF ALTERNATIVES FOR HALL COUNTY'S COLLECTION SYSTEM

Feasibility of Curbside Collection

An analysis of collection alternatives must include feasibility of curbside collection, as this stands as a cornerstone of this issue. Indicators can be examined to determine if curbside collection is feasible. There are a number of indicators or measures that might be identified for this purpose.

Possible Measures:

1. Is curbside collection occurring in unincorporated areas of Hall County now? If so, is it limited to certain areas?
2. Is curbside collection occurring in comparable communities?

Current State Of Curbside Collection In Hall

Curbside collection is currently being offered at this time throughout unincorporated Hall County by private waste haulers. This fact can be confirmed via casual observation. Traveling around unincorporated Hall County it's possible to see the waste carts provided by various private waste haulers. Private haulers have developed customer bases, not only in the more densely populated areas, but those that are among the most sparsely populated areas as well.

Also, viewing Table C-1 (see Appendix), it is possible to confirm that some haulers do offer curbside residential waste collection services in unincorporated Hall County and the specific areas where they offer such services. Three of the nine haulers surveyed stated they provided regular weekly service to various areas of unincorporated Hall County. It should be noted these three hauling companies are local or regional firms. The national companies, such as Waste Management and Browning Ferris Industries, do not provide

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residential waste services, choosing to focus instead on commercial and industrial accounts. This might be indicative of enhanced profitability provided by these larger accounts as compared to residential accounts. There is likely less operational cost and increased profitability inherent in servicing a few, larger, core accounts than numerous, small, diffuse accounts.

Although apparently offering less attractive profitability, it appears it is feasible to collect waste from residential accounts in various areas of Hall County. If it were not, it follows that these for-profit private companies would not be providing residential service. By this measure, curbside residential service seems feasible under current conditions.

Curbside Collection In Comparable Communities

By examining what comparable communities are doing, it is hoped that information gained might be transferable to Hall in guiding its decision making and providing another measure of feasibility. Hall could look to nearby Athens/Clarke County as a case study for countywide curbside collection. Appendix Table C-3 provides additional community comparisons

NEEDS/GOALS

There are many issues that require thoughtful consideration with respect to making any major changes to the current collection system in Hall County. More thorough analysis is required than can be done here. It is recommended that the Solid Waste Plan Implementation Committee (PIC) be given the task of looking into the many issues, serving as a conduit for public input and developing recommendations, which may include identification of further information needs and options for further study. This committee could possibly recommend the hiring of a consulting firm to undertake a thorough study.

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ANALYSIS OF ALTERNATIVES FOR HALL COUNTY'S COLLECTION SYSTEM

Some Parameters to Guide this process for the PIC could include:

1. Encourage and request public input
2. Identify potentially interested/affected parties
3. Preliminary identification of possible options
4. Develop list of issues and possible impacts
5. Develop information needs for further research
6. Make recommendations for obtaining information (possibly involving development of RFP and hiring of consultant)
7. Identify possible information sources
8. Determine recommended method for obtaining information
9. Develop possible funding options for any study

RECOMMENDATIONS SUMMARY

Cities

1. Cities should review the need of a Pay As You Throw (PAYT) system as a viable means of financing collection, disposal and enhancing waste reduction.
2. Franchising could be considered by the faster growing and more commercialized cities such as Flowery Branch and Oakwood.
3. Privatizing waste collection might be an option for Clermont to consider.
4. Gainesville should develop a coordinating committee or group composed of sanitation, streets dept, water dept. (billing), enforcement and private contractor (curbside recycling). This group could meet periodically to go over solid waste management coordinating issues.
5. For those cities not offering yard trimmings collection, such as Clermont (yard trimmings) and Oakwood (leaves), review the need to provide service.

County

Maintain compactor site system, making changes as described earlier in Potential Short Term Collection Changes.

Collection

1. Hall County should review the need of a Pay As You Throw (PAYT) system as a viable means of financing collection, disposal and enhancing waste reduction. A shift toward PAYT should occur at the same time other changes are made. At least one year lead time should be allotted to implement such changes.
2. Give the Solid Waste Plan Implementation Committee the task of overseeing an analysis of alternatives for Hall County's collection system.

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