

APPENDIX

APPENDIX A

WASTESTREAM

**Table A-1.--Standard Conversion of Volume to Weight
for Recyclable Materials**

Glass:

Loose, whole bottles: 1 cubic yard = 600 lbs., 1 - 55 gallon drum = 150 lbs.
Semi-crushed (manually broken): 1 cubic yard = 1000 lbs., 1 - 55 gallon drum = 300 lbs.
Crushed, maximum size 1-1/2" (mechanically broken): 1 cubic yard = 1800 lbs., 1 - 55
gallon drum = 550 lbs.

Newspaper:

Neatly stacked: 1 cubic yard = 600 lbs., 1 - 12" stack = 35 lbs.

Computer Paper:

1 cubic yard = 500 lbs.
Mixed Office Paper: 1 cubic yard = 150 to 300 lbs.
Other Paper: 1 cubic yard = 75 to 150 lbs.

Aluminum Cans:

Whole: 1 cubic yard = 74 lbs., 1 grocery bag = 1.5 lbs.
Flattened: 1 cubic yard = 250 lbs.

Ferrous Cans:

Whole: 1 cubic yard = 150 lbs.
Flattened: 1 cubic yard = 850 lbs.

PET Plastic (soft drink containers only):

Whole: 1 cubic yard = 30 lbs.
Flattened: 1 cubic yard = 60 to 90 lbs.

HDPE Plastic (milk jugs only):

Whole: 1 cubic yard = 25 lbs.
Flattened: 1 cubic yard = 50 to 75 lbs.

Leaves (uncomposted):

Uncompacted: 1 cubic yard = 250 lbs.
Compacted: 1 cubic yard = 450 lbs.
Vacuumed: 1 cubic yard = 350 lbs.

Used Motor Oil:

1 gallon = 7 lbs., 285.7 gallons = 1 ton

Appendix

Table A-1 (cont.)

Tires:

Passenger: 1 tire = 12 lbs., 166.6 tires = 1 ton

Truck: 1 tire = 60 lbs., 33.3 tires = 1 ton

Wood Chips: 1 cubic yard = 500 lbs.

Scrap Wood: 1 cubic yard = 100 to 800 lbs.

Wood Pallets: 1 cubic yard = 50 to 75 lbs.

Municipal Solid Waste:

Loose: 1 cubic yard = 200 lbs.

Compacted: 1 cubic yard = 600 to 800 lbs.

Corrugated Cardboard:

Loose: 1 cubic yard = 75 to 200 lbs.

Compacted: 1 cubic yard = 200 to 400 lbs.

Scrap Metal: 1 cubic yard = 500 to 1500 lbs.

Light Metal: 1 cubic yard = 500 to 1500 lbs.

Wire Banding: 1 cubic yard = 500 to 2000 lbs.

Commercial/Institutional Food Waste: 1 cubic yard = 750 to 1000 lbs.

Employee Food Waste: 1 cubic yard = 200 to 600 lbs.

Floor Sweepings: 1 cubic yard = 200 to 600 lbs.

Rock:

Gypsum: 1 cubic yard = 3800 lbs.

Granite: 1 cubic yard = 2950 lbs.

Marble: 1 cubic yard = 2650 lbs.

Slate: 1 cubic yard = 5000 lbs.

APPENDIX B

WASTE REDUCTION

Table B-1.--Recycling Opportunities in Hall County

Newspapers, glass (clear, green, brown) aluminum cans, aluminum foil, tin cans, corrugated cardboard, magazines, bound books, plastics (HDPE #2, PETE #1) and used motor oil are accepted at the following sites:

- 1) Allen Creek Compactor
- 2) East Crescent Dr. Compactor
- 3) Gaines Ferry Compactor
- 4) Sardis Road Compactor
- 5) Murrayville Compactor
- 6) Tadmore Compactor
- 7) Lula Compactor
- 8) Blackshear Place Compactor
- 9) Wauka Mountain Compactor
- 10) Candler Compactor
- 11) Balus Creek Compactor
- 12) Flowery Branch Compactor
- 13) Gould Lane Compactor

Newspapers, glass (clear, green, brown) aluminum cans, aluminum foil, tin cans, corrugated cardboard, plastics (HDPE #2, PETE #1) are accepted at the drop off area at:

- 14) Hall County Government/Education Bldg. - 711 Green St. (Collection containers are located in the parking lot)

In addition to those materials listed above, mixed paper, rechargeable portable batteries and used cooking grease are accepted at the Recycling Center.

- 15) Hall County Recycling Center, 1008 Chestnut St.

Newspapers only are accepted at the following site:

- 16) Clermont – Clermont Library at King Street.

Appendix

Table B-2.--Hall County Scrap Metal Recyclers

<u>Recycler</u>	<u>Materials Purchased by Recycler</u>
Regional Recycling	most metals, aluminum cans, appliances (compressor must be removed)
Gainesville Scrap Iron & Metal	most metals, aluminum cans, appliances (Freon must be removed)

Source: Hall County Resource Recovery Division

APPENDIX C

COLLECTION

MUNICIPAL SOLID WASTE COLLECTION VEHICLES

Front Loaders:

These trucks feature forklift type projections at the front of the vehicle, which fit into sleeves on either side of the refuse container. The container is hydraulically lifted overhead. Open doors at the top of the truck body allows refuse to fall into the truck. A hydraulic ram compacts the refuse.

Advantages:

- ◆ Labor efficient (one man operation)
- ◆ Speed and ease of loading
- ◆ Carrying capacity (35-44 cu. yds.)

Disadvantages:

- ◆ Difficult to back safely
- ◆ Vehicle weight can damage pavement
- ◆ Requires highly skilled operator
- ◆ High maintenance costs
- ◆ Services commercial containers only

Rear Loaders:

These have an opening in the rear of the truck body and must be backed to the container to be serviced. Rear loader containers have two pegs attached to either side near the top. The pegs fit into corresponding hooks on the truck body. An overhead winch with a hook on the end is used to hook into a loop at the top edge of the container farthest from the truck. The winched cable lifts the container. The pegs pivot in the hooks on the truck body and the waste falls into the rear hopper. A hydraulic ram compacts the waste into the truck.

Advantages:

- ◆ Can be used on residential and commercial (container) routes
- ◆ Can be used for residential curbside collection
- ◆ Can access places front loaders cannot
- ◆ Safety in numbers (2-3 man operation, extra man is available to direct backing of vehicle)

Disadvantages:

- ◆ High rate of workmen's compensation on rear loading vehicles

Appendix

MUNICIPAL SOLID WASTE COLLECTION VEHICLES (cont.)

Side Loaders:

These trucks have an opening at the side of the truck body. Bagged waste is thrown into the opening and then compacted. They are most conducive for residential curbside pick up.

Advantages:

- ◆ Workers can work from the curb without exposure to vehicular traffic

Disadvantages:

- ◆ Primarily for residential operation only
- ◆ Not suited for container service

Roll-Off Trucks and Trailers:

Roll-off trucks feature a truck bed, which accepts roll off containers. A hydraulic hoist inclines the bed for both loading/unloading and dumping containers. A winch is used to pull the container onto the truck bed. Roll off trucks are used to service container routes only, such as transfer stations or construction/demolition projects. They are also used to service specially designed recycling containers. A pull behind trailer may be used to double the payload for long hauls.

Advantages:

- ◆ Can handle wide variety of materials
- ◆ Containers are easily adapted to stationary compactor
- ◆ Most wear and tear is on the container and not the vehicle
- ◆ Labor efficient (one man operation)

Disadvantages:

- ◆ Containers are expensive

Scooter Trucks:

Scooters have a 1/2-ton truck chassis with a small dump bin, which mimics a rear loader container in function. Scooters are used to collect refuse from short, dead end or narrow streets, which are not conducive to the use of larger trucks. Scooters collect refuse from such areas and then dump the refuse into the hopper of rear loader trucks, commonly called the “mother truck”.

Advantages:

- ◆ Maneuverable (well suited for long driveways, narrow streets, dead end streets)
- ◆ Requires little training to operate
- ◆ Inexpensive to purchase and operate

Disadvantages:

- ◆ Limited hauling capacity

Appendix

MUNICIPAL SOLID WASTE COLLECTION VEHICLES (cont.)

Pick-Ups, Stake Body Trucks and Flatbed Trucks:

Both modified and unmodified pick-ups and stake body trucks may be used to collect residential refuse. Such trucks are most often used by small, independent haulers and lack compaction capability. They may or may not have a dump body.

Advantages:

- ◆ Handles wide variety of items
- ◆ Inexpensive to purchase and operate
- ◆ Handles wide variety of lengths of materials

Disadvantages:

- ◆ No compaction, leaving voids in loads carried
- ◆ May be difficult to unload unless equipped with dump body

Vacuum Truck:

Vacuum trucks have a motorized, housed impeller, which creates a vacuum that can be used to pick up leaves, and other small debris. The unit may be self-contained or placed on a trailer and pulled behind an enclosed body vehicle.

Advantages:

- ◆ Best way to handle small debris items such as leaves and limbs
- ◆ Very fast

Disadvantages:

- ◆ Limited use vehicle

Chipper Truck:

These are enclosed body trucks behind which is pulled a trailer. Mounted on the trailer is a chipping unit having motorized, rotating cutting knives with hydraulic in-feed system that will process limbs and other woody materials into usable mulch and ground cover material.

Advantages:

- ◆ Densifies items on site
- ◆ Makes best use of labor, shuttle time to and from landfill is minimized
- ◆ Produces usable product
- ◆ Personnel work at waist height

Disadvantages:

- ◆ Care must be taken in separating out non-chippable items
- ◆ Limited to limbs 12" in diameter or smaller

Transfer Trailers:

Transfer trailers are the workhorses of the long distance refuse transportation business. They are available in two forms-- open top and enclosed. Open top trailers are loaded from an elevated

Appendix

MUNICIPAL SOLID WASTE COLLECTION VEHICLES (cont.)

ramp, with the refuse being pushed off the ramp into the trailer below. Various mechanisms are used for unloading the refuse. The most efficient for the small to medium volume transfer operation is the “live bottom” trailer. The floors of these trailers are basically conveyors that can unload the trailer in three to five minutes.

The enclosed trailer is the predominant transfer system in use today. A transfer trailer is backed into position and locked to a stationary compactor that is firmly anchored in a concrete foundation. Refuse is loaded into the compactor from above and the ram of the compactor forces the refuse into the trailer through the door opening. At the disposal site, the rear section is opened, and the waste is pushed out by an ejection ram.

Open Top

Advantages:

- ◆ Less expensive purchase price
- ◆ Requires less maintenance

Disadvantages:

- ◆ High haul cost due to low density achieved in direct dump operations
- ◆ Trailer covers must be handled with each loading and unloading

Enclosed

Advantages:

- ◆ Low transportation costs due to high density achieved through compaction
- ◆ Trailer covers do not have to be handled

Disadvantages:

- ◆ More expensive purchase price
- ◆ Should the compactor fail, there is no other way to load the trailer

Appendix

Table C-2.--Compactor Site Locations in Hall County

SITE	ADDRESS/LOCATION
Allen Creek Road	2684 Allen Creek Road - located approximately 1 mi. from intersection of Monroe Drive and Hwy. 129 South.
Balus Creek	3845 Old Flowery Branch Road - (south side of Mundy Mill Road) approximately 0.2 mi. from Mundy Mill/McEver intersection.
Blackshear Place	2931 Atlanta Highway - Atlanta Hwy. approximately 1/4 mi. south of I-985, behind South Hall Library.
Candler	5064 Poplar Springs Road - South side of S.R. 332, 10 mi. west of S.R. 60 near Candler, next to Hopewell to Hopewell Baptist Church.
East Crescent Drive	734 East Crescent Drive - just off Jesse Jewell across from Fire Station Headquarters and next to the Farmers Market.
Flowery Branch	4395 Atlanta Highway - approximately 1/4 mi. south of intersection with Hog Mountain Road.
Gaines Ferry	6173 Gaines Ferry Road - between Atlanta Highway and McEver Road behind County Fire Station #8.
Gould Lane	2216 Gould Lane - between McEver Road Extension and Spring Road.
Lula	6174 Lula Road - 1/2 mi. north of intersection with Hwy. 365.
Murrayville	5113 Thompson Bridge Road - Hwy. 60 next to Fieldale, just inside Murrayville Corporation limits.
Sardis	2801 Sardis Road - on Sardis Road west of Sardis Elementary School.
Tadmire	3320 Holly Springs Road - Hwy. 82 just east of Tadmire Elementary and 1/4 mile from the intersection with Highway 323.
Wauka Mountain	5800 Brookton-Lula Road (Hwy. 52) - approximately 1/2 mile east of Quillians Corner.

Source: Hall County Resource Recovery Division

Table C-3.-- Additional Comparisons of Communities with County-Wide Curbside Collection

	Glynn County	Crawford County
Population	67,568	12,495
Size: Square Miles	422.37	325.01
Density: People/Square Mile	160.0	38.4
Housing Units	32,636	4,872
Housing Units/Square Mile	77.3	15.0
People Per Housing Unit	2.4	2.8

Sources: 2000 Census, U.S. Census Bureau
 Georgia Department of Community Affairs

Appendix

ADDITIONAL COMMUNITY COMPARISONS

Brief Glynn County Facts:

- ◆ Countywide curbside waste collection available (if user chooses it)
- ◆ Countywide curbside yard trimmings and recyclables (added charge)
- ◆ Contracted service via single hauler
- ◆ Costs: Waste is \$172/yr; recycling is \$34/yr both collected weekly
- ◆ Fees currently collected via county billing
- ◆ Mulling possible conversion from billing to funding via General Fund

Brief Crawford County Facts:

- ◆ Countywide curbside waste collection
- ◆ Utilizes roll-carts and a single contracted hauler
- ◆ Private hauler to offer bulky item pick up once/mo.
- ◆ Cost: \$90/yr./cart for weekly collection
- ◆ Fees included on tax bill (General Fund)
- ◆ Recycling is drop off based at central recycling center

Sources: Keep Brunswick/Golden Isles Beautiful
Keep Roberta/Crawford Beautiful

HALL COUNTY COMPACTOR SITE USERS' SURVEY 2004

A survey was conducted to gather information from Hall County compactor site users that could be used by County officials to help determine residential collection needs. In partial fulfillment of community service project requirements, Cooperative Extension 4-H youths administered the survey to residents using County compactor sites. A total of 69 completed surveys were obtained. 25 from Blackshear Place, 21 from Balus Creek, 16 from Flowery Branch, 6 from East Crescent, and 1 from Wauka Mountain.

The number of surveys completed is small compared to the actual number of compactor site users. This is because of the limited time frame the volunteers had to survey (one-half day) and the fact that the volunteers were asked by the attendants at some of the sites to leave. The reasons for this are not known. The study is also limited because not all compactor sites were surveyed. For these reasons, the findings of this study cannot be construed to represent the entire user base. Nonetheless, this information will help government officials begin to learn what they can do to improve solid waste management services in the planning area.

Appendix

HALL COUNTY COMPACTOR SITE USERS' SURVEY 2004 (cont.)

Findings:

Out of 69 surveys there were 68 responses. Of the 68 responses, none used the compactor site for recycling only; 26% used the sites for trash only and 74% used the compactor sites for both trash and recycling.

Out of 69 people surveyed, 30% of those used the compactor site most often while making a trip solely to use the compactor site, 17% used the compactor site while on their way to work, 4% while on their way to school, and 19% while on their way to do shopping. Nineteen percent reported a combination of several practices, and 10% reported some "other" practice.

It is interesting to note that the 1992 survey reported similar results:

"It is most common for those surveyed (42%) to return home after using the site. On the other hand, 21% use the site on their way to do shopping and 15% use it on their way to work or school. Thirteen percent reported a combination of the three practices, and 4% reported some other practice."

As to estimated time and distance required for one-way travel to the most commonly used compactor site, out of 66 responses, 68% of those surveyed drove fewer than 5 minutes and 27% drove 5-10 minutes. The remaining 5% drove longer than 10 minutes. In correlation with the reported distance traveled, 49% of those surveyed drove fewer than 2.0 miles and 43% drove 2-5 miles. The remaining 8% reported driving 5 or more miles.

Out of 69 surveys, 56 people responded on the frequency of the site(s) being used. Three people or 5% of those responding used the site less frequently than once/week.

20 people or 36% used the site once per week.

23 people or 41% used the site twice per week.

10 people or 18% used the site more than twice per week.

Out of 69 surveys, 52 people responded to the question regarding whether they have ever had to throw recyclables away due to the recycling container being full. Thirty-six people or 69% of those who responded had never thrown recyclables away because of the container being full. However, 31% reported they have had to throw their recyclables

Appendix

HALL COUNTY COMPACTOR SITE USERS' SURVEY 2004 (cont.)

away. Of those reporting they had experienced full recycling bins, they estimated this occurred 27% of the time.

Similarly, out of 69 surveys, 53 people responded to the question as to whether they have ever had to put trash on the ground because the compactor was full. 42% of those responding reported never having to place their garbage on the ground. However, 31 people or 58% had placed their garbage on the ground. Of those reporting they had experienced having to place their garbage on the ground, they estimated this occurred 4% of the time.

Out of 69 surveys, there were 50 responses on curbside waste collection. When asked whether they would support a plan requiring curbside waste collection, which would offer increased convenience but at a cost, 66% responded they would not support a plan requiring curbside, while 24% would support a curbside program. Of those 12 that would support a curbside program 80% of those only supported it at a cost of \$10/week. The remaining 10% were undecided.

Conclusions:

A finding that would help in planning the administration of future surveys was that people were more willing to participate in the survey when the 4-H surveyors indicated the survey was a 4-H community service project rather than a government project. The information obtained through this survey is valuable to County officials involved in solid waste management planning. More valuable information could be obtained by administering this survey to more users at all of the compactor sites, and especially those not represented in this survey.

Table C-4.-- 2003 Hall County Compactor Site Traffic Counts

Allen Creek Compactor Site

Date: 6/16/2003

Interval Begin	Mon 6/16	Tue 6/17	Wed 6/18	Thu 6/19	Fri 6/20	Sat 6/21	Sun 6/22	Daily Avg.
6AM	0	1	0	2	2	3	0	
7	4	2	4	0	1	2	7	
8	4	1	8	0	14	17	3	
9	8	0	2	6	10	8	8	
10	6	8	3	2	6	8	5	
11	2	2	3	2	2	12	7	
12PM	2	3	4	5	8	8	5	
1	12	4	8	2	10	12	3	
2	2	2	10	3	2	10	7	
3	3	8	4	4	2	5	13	
4	3	5	13	10	4	11	11	
5	6	10	10	4	10	8	6	
6	7	10	14	0	6	2	5	
7	4	2	10	8	6	3	0	
8	7	6	4	5	7	7	0	
TOTALS	70	64	97	53	90	116	80	81

Source: Hall County Traffic Engineering Division

Table C-4. (cont.)

Balus Creek Compactor Site

Date: 6/30/2003

Interval Begin	Mon 6/30	Tue 7/1	Wed 7/2	Thu 7/3	Fri 7/4	Sat 7/5	Sun 7/6	Daily Avg.
6AM	7	9	11	7	1	6	0	
7	52	16	38	52	16	18	4	
8	57	14	38	50	38	49	24	
9	53	19	55	74	48	52	38	
10	50	26	55	50	56	92	42	
11	58	22	60	53	50	85	53	
12PM	35	21	49	40	55	78	63	
1	51	24	40	51	40	66	55	
2	49	12	50	44	52	53	75	
3	44	22	47	30	23	51	64	
4	43	16	46	50	32	56	49	
5	46	18	46	60	28	48	58	
6	64	15	55	46	23	40	60	
7	32	9	51	44	15	31	0	
8	22	8	31	30	15	22	0	
TOTALS	663	251	672	681	492	747	585	584

Source: Hall County Traffic Engineering Division

Table C-4. (cont.)

Blackshear Place Compactor
Site

Date: 6/30/2003

Interval Begin	Mon 6/30	Tue 7/1	Wed 7/2	Thu 7/3	Fri 7/4	Sat 7/5	Sun 7/6	Daily Avg.
6AM	12	4	10	10	3	2	0	
7	53	14	55	47	19	19	8	
8	56	16	50	45	37	62	23	
9	43	34	48	57	60	83	46	
10	60	26	62	48	70	95	52	
11	58	22	55	62	65	122	49	
12PM	50	20	58	46	50	87	54	
1	63	16	68	63	58	69	50	
2	45	13	56	48	46	75	70	
3	44	17	48	50	36	64	47	
4	49	23	47	48	28	61	63	
5	50	23	54	41	28	56	40	
6	37	14	65	50	22	36	44	
7	38	10	44	32	14	24	4	
8	25	3	35	32	10	18	0	
TOTALS	683	255	755	679	546	873	550	620

Source: Hall County Traffic Engineering Division

Table C-4. (cont.)

Candler Compactor Site

Date: 7/21/2003

Interval Begin	Mon 7/21	Tue 7/22	Wed 7/23	Thu 7/24	Fri 7/25	Sat 7/26	Sun 7/27	Daily Avg.
6AM	8	1	8	7	7	5	0	
7	30	26	21	20	28	12	10	
8	43	28	22	24	22	27	28	
9	23	14	10	23	22	41	32	
10	14	20	20	10	22	38	28	
11	16	17	20	22	16	38	46	
12PM	14	12	23	17	18	35	30	
1	30	18	20	19	31	32	34	
2	24	16	25	11	16	28	28	
3	18	10	23	14	22	28	26	
4	22	20	22	30	22	30	27	
5	31	33	20	24	21	32	40	
6	35	38	44	22	27	26	42	
7	36	29	33	38	18	19	0	
8	26	12	17	22	17	6	0	
TOTALS	370	294	328	303	309	397	371	339

Source: Hall County Traffic Engineering Division

Table C-4. (cont.)

East Crescent Compactor Site

Date: 6/16/2003

Interval Begin	Mon 6/16	Tue 6/17	Wed 6/18	Thu 6/19	Fri 6/20	Sat 6/21	Sun 6/22	Daily Avg.
6AM	13	5	9	12	11	8	0	
7	60	28	34	31	40	22	10	
8	67	41	28	39	37	56	32	
9	50	37	18	46	45	74	33	
10	58	39	18	56	40	69	38	
11	52	39	22	38	39	71	49	
12PM	41	33	21	38	37	60	54	
1	49	42	30	44	42	47	51	
2	40	40	30	32	27	47	38	
3	43	27	36	32	35	48	38	
4	31	32	30	33	41	35	43	
5	35	53	46	30	37	38	50	
6	50	38	44	42	24	41	44	
7	43	24	19	34	34	27	0	
8	13	16	10	22	16	17	0	
TOTALS	645	494	395	529	505	660	480	530

Source: Hall County Traffic Engineering Division

Table C-4. (cont.)

Flowery Branch Compactor
Site

Date: 6/30/2003

Interval Begin	Mon 6/30	Tue 7/1	Wed 7/2	Thu 7/3	Fri 7/4	Sat 7/5	Sun 7/6	Daily Avg.
6AM	9	2	4	8	3	1	0	
7	38	7	20	32	8	10	2	
8	22	10	18	34	18	36	12	
9	26	11	30	30	30	30	20	
10	38	18	20	25	50	56	32	
11	24	18	28	18	30	54	36	
12PM	25	20	33	20	28	44	32	
1	28	10	20	28	28	25	36	
2	20	6	28	26	18	42	34	
3	30	12	26	26	16	30	40	
4	35	19	25	27	23	18	30	
5	36	12	24	18	22	27	38	
6	30	8	30	38	6	31	36	
7	18	8	40	38	6	22	0	
8	10	11	11	13	2	14	0	
TOTALS	389	172	357	381	288	440	348	339

Source: Hall County Traffic Engineering Division

Table C-4. (cont.)

Gaines Ferry Compactor Site

Date: 7/14/2003

Interval Begin	Mon 7/14	Tue 7/15	Wed 7/16	Thu 7/17	Fri 7/18	Sat 7/19	Sun 7/20	Daily Avg.
6AM	12	11	12	11	10	4	0	
7	49	34	32	35	45	30	12	
8	44	28	32	44	30	39	34	
9	38	37	36	40	31	60	36	
10	35	32	22	34	32	70	42	
11	34	28	30	24	26	60	48	
12PM	25	22	22	32	16	50	23	
1	18	20	31	24	28	40	57	
2	26	26	10	18	26	31	58	
3	26	18	27	15	24	29	36	
4	36	26	20	24	28	31	36	
5	28	29	20	32	28	32	49	
6	31	28	42	32	28	28	44	
7	38	36	32	36	25	18	0	
8	28	25	23	32	22	11	0	
TOTALS	468	400	391	433	399	533	475	447

Source: Hall County Traffic Engineering Division

Table C-4. (cont.)

Gould Compactor Site

Date: 7/21/2003

Interval Begin	Mon 7/21	Tue 7/22	Wed 7/23	Thu 7/24	Fri 7/25	Sat 7/26	Sun 7/27	Daily Avg.
6AM	2	3	1	2	2	2	0	
7	21	13	12	17	12	15	8	
8	33	20	14	30	26	26	18	
9	23	23	21	23	33	32	32	
10	25	28	33	32	18	36	57	
11	38	32	28	20	22	45	62	
12PM	36	32	28	18	24	56	43	
1	42	31	20	15	26	44	30	
2	20	28	22	14	34	42	32	
3	24	24	22	21	17	34	26	
4	30	29	25	28	23	40	32	
5	27	20	30	31	26	34	21	
6	40	38	39	23	36	23	27	
7	28	30	26	25	20	19	0	
8	29	20	12	19	28	10	0	
TOTALS	418	371	333	318	347	458	388	376

Source: Hall County Traffic Engineering Division

Appendix

Table C-4. (cont.)

Lula Compactor Site

Date: 6/16/2003

Interval Begin	Mon 6/16	Tue 6/17	Wed 6/18	Thu 6/19	Fri 6/20	Sat 6/21	Sun 6/22	Daily Avg.
12AM								
6AM	6	5	2	5	6	2	0	
7	26	22	20	10	15	13	4	
8	26	24	9	20	15	24	6	
9	22	15	10	18	17	24	15	
10	16	19	10	16	12	17	17	
11	16	12	6	18	20	24	10	
12PM	12	14	9	14	8	20	27	
1	19	10	17	13	16	20	24	
2	20	16	15	12	18	18	21	
3	12	12	11	11	17	20	16	
4	11	16	17	13	19	22	11	
5	21	18	20	12	19	11	16	
6	16	16	20	20	10	16	16	
7	18	17	9	11	14	14	0	
8	9	7	7	6	9	10	0	
TOTALS	250	223	182	199	215	255	183	215

Source: Hall County Traffic Engineering Division

Appendix

Table C-4. (cont.)

Murrayville Compactor Site

Date: 8/11/2003

Interval Begin	Mon 8/11	Tue 8/12	Wed 8/13	Thu 8/14	Fri 8/15	Sat 8/16	Sun 8/17	Daily Avg.
6AM	12	14	5	7	10	4		
7	48	41	32	21	23	18	8	
8	40	33	23	28	42	48	20	
9	38	34	24	32	44	64	37	
10	42	29	26	29	20	55	52	
11	34	24	31	29	34	52	34	
12PM	39	28	22	25	25	62	58	
1	33	33	23	34	26	51	42	
2	30	21	24	24	25	47	42	
3	25	22	35	17	38	35	30	
4	26	27	30	22	28	41	34	
5	36	31	33	22	23	34	35	
6	48	30	29	27	26	13	40	
7	30	22	15	32	15	22	0	
8	19	11	11	14	4	17	0	
TOTALS	500	400	363	363	383	563	432	429

Source: Hall County Traffic Engineering Division

Appendix

Table C-4. (cont.)

Sardis Compactor Site

Date: 8/4/2003

Interval Begin	Mon 8/4	Tue 8/5	Wed 8/6	Thu 8/7	Fri 8/8	Sat 8/9	Sun 8/10	Daily Avg.
6AM	17	8	5	3	6	8	0	
7	54	53	68	57	64	55	16	
8	90	62	106	58	86	112	65	
9	102	84	56	106	95	120	112	
10	85	70	75	79	67	160	98	
11	100	57	94	78	56	113	112	
12PM	67	74	54	70	80	112	98	
1	58	76	58	50	90	96	98	
2	70	67	62	56	53	102	130	
3	68	77	49	67	78	108	83	
4	75	78	48	52	58	87	102	
5	93	82	62	68	56	70	115	
6	87	83	80	83	76	54	70	
7	90	76	60	78	39	51	0	
8	50	36	33	45	40	29	0	
TOTALS	1106	983	910	950	944	1277	1099	1038

Source: Hall County Traffic Engineering Division

Appendix

Table C-4. (cont.)

Tadmire Compactor Site

Date: 8/11/2003

Interval Begin	Mon 8/11	Tue 8/12	Wed 8/13	Thu 8/14	Fri 8/15	Sat 8/16	Sun 8/17	Daily Avg.
6AM	8	4	6	2	1	0	0	
7	27	32	26	23	28	16	6	
8	24	25	15	28	26	54	45	
9	28	20	15	20	26	38	56	
10	25	26	22	34	26	54	62	
11	31	28	30	30	33	41	54	
12PM	40	17	28	28	20	52	54	
1	34	34	19	32	17	55	50	
2	28	31	28	22	26	45	36	
3	20	20	23	38	30	50	43	
4	36	38	39	35	40	21	54	
5	41	42	36	48	44	28	58	
6	59	46	46	38	22	22	0	
7	48	58	25	20	14	9	0	
8	23	21	0	0	0	0	0	
TOTALS	472	442	358	398	353	485	518	432

Source: Hall County Traffic Engineering Division

Appendix

Table C-4. (cont.)

Wauka Mountain Compactor
Site

Date: 8/11/2003

Interval Begin	Mon 8/11	Tue 8/12	Wed 8/13	Thu 8/14	Fri 8/15	Sat 8/16	Sun 8/17	Daily Avg.
6AM	7	5	2	8	3	4	0	
7	40	42	34	19	20	19	6	
8	52	22	20	42	26	40	16	
9	37	36	27	34	44	58	30	
10	30	30	26	31	28	67	30	
11	38	23	30	31	27	52	34	
12PM	25	24	24	14	21	52	34	
1	30	18	30	28	24	54	38	
2	28	24	27	22	24	31	38	
3	18	18	26	14	25	48	31	
4	17	29	20	26	32	41	42	
5	41	29	29	28	30	34	44	
6	39	26	38	30	39	26	46	
7	36	16	25	24	23	14	0	
8	29	15	22	16	7	9	0	
TOTALS	467	357	380	367	373	549	389	412

Source: Hall County Traffic Engineering Division

Appendix

Table C-5.-- High and Low Weekly Traffic Count Comparisons at Hall County Compactor Sites 1991 to 2003

		1991	2003
Allen Creek	Low	N/A	53
	High	N/A	116
	Ave.	N/A	84.5
Balus Creek	Low	566	251
	Ave.	1174	747
	High	870	499
Blackshear	Low	761	255
	High	1322	873
	Ave.	1041.5	564
Candler	Low	121	293
	Ave.	233	397
	High	177	345
East Crescent	Low	468	395
	High	998	660
	Ave.	733	527.5
Flowery Br.	Low	N/A	172
	Ave.	N/A	440
	High	N/A	306
Gaines Ferry	Low	394	391
	High	570	533
	Ave.	482	462
Gould	Low	N/A	318
	Ave.	N/A	458
	High	N/A	388
Lula	Low	120	182
	Ave.	256	255
	High	188	218.5
Murrayville	Low	377	363
	High	647	563
	Ave.	512	463

Appendix

Table C-5. (Cont.)

		1991	2003
Sardis	Low	729	910
	Ave.	1107	1277
	High	918	1093.5
Tadmore	Low	315	353
	High	475	518
	Ave.	395	435.5
Wauka Mtn.	Low	315	357
	Ave.	707	549
	High	511	453
TOTALS High/Low		11655	11679

Source: Hall County Traffic Engineering Division

Appendix

APPENDIX D

DISPOSAL

Disposal Capacity Assurance Letter

APPENDIX E

EDUCATION AND PUBLIC INVOLVEMENT

PUBLIC INFORMATION EMERGENCY SUPPORT FUNCTION (ESF) - 17

I. INTRODUCTION

The emergency support function of public information involves direction and coordination, operations, and follow through during an emergency or disaster.

II. PURPOSE

The purpose is to provide public information through pre-planning, collecting, and disseminating facts and updates about a potential or actual emergency or disaster to the public.

III. CONCEPT OF OPERATIONS

Standard Operating Procedures (SOPs) will be developed and maintained by the agency or organization that has primary functional responsibility for this ESF, in cooperation with the EMA. This function will be coordinated with and involve other support agencies and organizations.

The public information services function is the primary responsibility of the Hall County Emergency Management Agency and secondary support for this function is the responsibility of the Hall County Board of Commissioners and includes, but is not limited to, the following:

A. Mitigation/Preparedness

- Assist agencies and organizations with ESF responsibilities in development of uniform procedures for media releases (*refer to Appendix J-1, Public Information Procedures*);
- Maintain a media directory (*refer to Appendix J-2, Media Contact and Resource List*);
- Support disaster public awareness initiatives through dissemination of information, news articles, PSAs, and presentation of audio-visual materials;
- Establish communication resources to provide people with sensory disabilities (e.g., visual and hearing impaired) and non-English speaking persons with emergency management information regarding emergencies or disasters;

Appendix

ESF –17 (cont.)

- Educate the public on alert messages such as watches and warnings through media such as radio, television, and newspaper;
- Inform the news media that the Hall County Emergency Agency is the point of contact for emergency public information (EPI);
- Coordinate agreements for the dissemination of EPI; and
- Participate in drills and exercises to evaluate public information capability.

B. Response/Recovery

- Define public notification timeframe regarding an emergency or disaster and disseminate information to the media;
- Maintain a system to ensure accurate dissemination of emergency information such as location, type of hazard, extent of damage, casualties, shelters open, evacuation routes, and other protective actions;
- Provide a designated area for media briefings and/or press conferences and conduct briefings in a timely manner;
- Provide updates (*e.g., response to inquiries about missing relatives, restricted areas of access and re-entry*) regarding the emergency or disaster;
- Continue provision of public safety and other necessary assistance information throughout the recovery phase;
- Provide advanced media releases to the GEMA-SOC:
- Work with areas and counties surrounding the county which have no emergency public information capability;
- Maintain records of expenditures and document resources utilized during recovery.

IV RESPONSIBILITY

- A. The Hall County Emergency Management Director, under the direction of the local governing officials, is responsible for the overall Emergency Management Public Information effort in Hall County.
- B. The Hall County Public Information Officer, under the direction of the EMA Director, will carry out the Emergency Public Information Program.

Appendix

ESF –17 (cont.)

C. The Hall County Public Information Officer will supplement the information staff by utilizing the following supporting departments/agencies:

- Department/agencies designee
- Selected personnel from all local news media within Hall County

V DIRECTION AND CONTROL

A. Operational direction and control of the Hall County Emergency Public Information function will be carried out by the EMA Director through the Public Information Officer.

B. Pertinent information may also be released by the governing officials as the situation dictates.

Source: “Hall County Emergency Management Agency Emergency Operations Plan”,
June 2002.

**VOLUNTEER SERVICES
EMERGENCY SUPPORT FUNCTION (ESF) - 18**

I. INTRODUCTION

This ESF outlines the concept of operations, responsibility, direction and control necessary for the performance of volunteer services during an emergency.

II. PURPOSE

The purpose of this ESF is to outline policies and procedures for the coordination of governmental, private and volunteer organizations and individuals that provide and deliver the broad array of volunteer services required by the victims of disaster.

III. CONCEPT OF OPERATIONS

Standard Operating Procedures (SOPs) will be developed and maintained by the agency or organization that has primary functional responsibility for this ESF, in cooperation with the EMA. This function will be coordinated with and involve other support agencies and organizations.

The volunteer services function is the primary responsibility of the Hall County Emergency Management Agency and secondary support is the responsibility of the Hall County Chapter of the Red Cross and includes, but is not limited to, the following:

A. Mitigation and Preparedness

1. Maintain a list of volunteers and private relief organizations, local business and individuals available to support volunteer services during an emergency;
2. Execute, as necessary, MOU's between local government and supporting organizations;
3. Develop procedures for augmenting emergency response forces;
4. Identify population groups requiring special attention in disaster situations and develop procedures to ensure that the appropriate care is provided; and
5. Use training offered by the Georgia Emergency Management Agency and private relief organizations to train emergency management personnel and supporting organizations.

Appendix

ESF – 18 (cont.)

B. Response/Recovery

1. Notify relief and volunteer organizations when an emergency or disaster is threatening or underway. Describe the nature of the emergency and the anticipated response requirements. Request assistance, or standby alert, as appropriate;
2. Coordinate the delivery of volunteer services to the victims and keep the Emergency Operations Center (EOC) informed of participants and activities;
3. Ensure that the physical and emotional needs of the emergency workers are met particularly during extended operations;
4. Maintain accurate records of expenditures related to the delivery of volunteer services during emergency operations;
5. Assess continuing volunteer services needs for the disaster victims;
6. Provide staff support to disaster application centers if requested;
7. Evaluate human services operations for effectiveness and revise plans and SOPs to eliminate deficiencies; and
8. Give recognition for services rendered by private relief organizations, volunteer groups and individuals through Public Information Center.

I. DIRECTION AND CONTROL

- A. The Hall County Chapter of the Red Cross is responsible for Direction and Control of the Volunteer Services coordination with cooperation through the Hall County Emergency Management Agency;
- B. Supporting departments/agencies include but are not limited to the Health Department, DFACS, and the County Administrator.
- C. This ESF will be implemented upon the direction of the County/City Chief Executive(s) or the Emergency Management Director acting in their behalf.

Source: "Hall County Emergency Management Agency Emergency Operations Plan",
June 2002.

Appendix

APPENDIX F

ADOPTION RESOLUTIONS