# **CURRENT FACILITY OPERATIONS AND PROCEDURES**

### STONEY MOUNTAIN ROAD LANDFILL FACILITY

On Tuesday, December 2<sup>nd</sup> and Wednesday, December 3<sup>rd</sup>, 2008, McGill Associates visited the Stoney Mountain Road Landfill/Transfer Station facility to visually observe the ongoing operations and tour the various facilities presently in use. Emphasis was focused on the staffing, overall operations and the capability of the service to meet the present needs of the County. Emphasis was placed on the ingress and egress traffic patterns associated with the various services. A brief review was also conducted relative to the Henderson County School Bus Shop and the Parks and Recreation Department's Stoney Mountain Activity Center located within the general confines of the facility's property.

## Yard Trash and Wood Waste Processing Area:

The yard trash and wood waste processing operation is located in the northeast corner of the facility property over the top of an old MSW disposal cell. This operation occupies approximately 1.67 acres in area. The site is accessed through the main entrance off Stoney Mountain Road with vehicles passing in front of the transfer station operation then looping back to the left, following a gravel access road around the southern, western and northern side slopes of the closed MSW landfill. The gravel road is sufficiently wide enough to allow two-way traffic and is well maintained. This gravel surface provides reasonable all weather access around the side of the old landfill. However, as customers near the disposal site, the gravel surfacing ends and the road surface changes to a soil material. During periods of inclement weather this portion of the access road becomes relatively impassable thereby limiting access to the yard trash and wood waste disposal areas. As for the disposal area itself, the surface is comprised of a relatively thick mixture of soil and mulch material. This surface is uneven, has poor drainage and the mulch material tends to retain large amounts of moisture. Access to and the ability to maneuver within the disposal area is difficult even under the best of conditions. Because of this, customers have a tendency to dump their waste material at or near the entrance to the site. This inhibits subsequent customers from gaining access to the inner areas of the site. As a result, the facility staff must continually separate and consolidate the material into specific piles and rework the site access.

Yard trash and leaves, which are placed in separate piles, are periodically processed into mulch by a subcontractor to the County. The area appears to be adequate in size for the present operations so long as the material is processed and stacked in a timely manner and subsequently removed from the site. On average, this operation receives ten (10) vehicles per day with five (5) vehicles being weighed loads and five (5) loads falling under the flat-fee classification.

Monitoring of the disposal of material at this site can be a problem due to the distance from the main facility operations area. Since this disposal area is not staffed on a full time basis, landfill personnel must make periodic trips to the site to ensure the site remains accessible and waste material is properly separated and consolidated by material type. Staff must also remove

any contaminates that may have been inadvertently left by a customer. The length of the gravel portion of the access road also presents maintenance problems for the landfill staff as it must be periodically graded to restore the driving surface.

# White Goods and Scrap Metal Disposal Area:

The white goods and scrap metal storage and disposal area is also located in the northeast corner of the facility just east of the yard trash and wood waste disposal area. This area occupies approximately 0.75 acre and provides an area for the disposal of scrap metal as well as those white goods containing some type of refrigerant (refrigerators, air-conditioners, etc.). At the present time the County accepts and/or processes approximately one hundred and six tons (106 tons) of white goods and scrap metal per month. The area appears to be adequate for the collection and processing of white goods and scrap metal presently received by the County. Traffic counts for vehicles utilizing this facility were not available.

Monitoring of the disposal of the scrap metal and white goods can be a problem due to the distance from the main facility operations area. Landfill staff must make periodic trips to the site to ensure the site remains accessible and waste material is properly separated and any white goods containing refrigerant are neatly stacked in their normal upright position until such time as the refrigerant has been properly removed. White goods are generally stacked along the western edge of the site. Once the refrigerant is removed the appliances can be moved to the scrap metal pile or crushed and removed from the site by a subcontractor to the County. The staff must also remove any contaminates that may have been inadvertently left by a customer. Periodically equipment must be sent to the area to consolidate the scrap metal pile until such time as it is removed from the site by the subcontractor.

Access to the site is also along the gravel road traversing the southern, western and northern slopes of the large closed MSW landfill area. There is a section of access road beginning near the yard trash/wood waste disposal area that is soil material. During inclement weather this can be a problem relative to accessing the white goods and scrap metal disposal area. However, the actual white goods/scrap metal disposal area has a relatively hard packed earthen surfaced area that provides reasonable all weather access. Like the yard trash/wood waste processing area, the lengthy gravel access road around the closed MSW landfill presents maintenance problems as this road must be periodically graded to restore the gravel surface to an acceptable condition.

### Recycling / Citizen's Convenience Center:

The recycling/citizen's convenience center encompasses approximately one acre and is located just east of the transfer station and north of the recreation/day camp playground facilities. At the present time this operation collects and process approximately forty to sixty tons (40-60 tons) per month of recyclable container type material (i.e., plastics, etc.) in addition to ninety-five to one hundred fifteen tons (95-115 tons) per month of recyclable fiber/paper products in the collection boxes. The facility also collects for recycling approximately nine hundred to one thousand gallons (900-1000 gallons) per month of waste oil products. The waste oil is collected

by a subcontractor to the County. The waste tire collection area of the recycling center collects for processing approximately twelve to fifteen thousand (12,000-15,000) scrap tires per month, on average.

The general traffic pattern within the site has vehicles entering in the northwest corner, circling counter clockwise through the site and exiting through a drive leading out the northwest corner. While traffic generally follows the assumed traffic pattern through the site there were times when vehicles could be seen crossing or going against the flow pattern to access a particular unloading station. During busy times, the vehicles bucking the normal traffic pattern disrupt the traffic pattern thereby adding to the congestion. In addition, the trucks servicing the various roll-off boxes must interface with the citizen traffic each time a box must be pulled for emptying. This requires the citizen traffic to be temporarily stopped while the box is being pulled. Generally a spotter must be present to assist with traffic control when boxes are being pulled.

While the recycling collection facility provides a valuable service to the citizens, the area is inadequate to efficiently handle the present recycling patterns of the County. There are times when this facility becomes overloaded due to the logistics associated with servicing the collection boxes when they reach capacity. Any increase in the collection rate of the presently collected materials or the collection of additional recyclable items would overload the capacity of this facility. Basically, the size, layout and availability of collection boxes severely limit the County's ability to increase the overall recycling rate in the County. Additional space for expansion of the site is generally not readily available. In addition, the relatively large volume of traffic (approximately 430+ vehicles per day) accessing this area causes undue congestion in and around the transfer station facility and adds to the traffic problems existing at the entrance/scale house facility and Stoney Mountain Road. This high volume of citizen traffic maneuvering within the site also posses a definite safety hazard to the commercial vehicles accessing the transfer station.

The center has a reasonable gravel surface for access during inclement weather conditions; however, there are times when wet conditions limit access to the site. Periodic maintenance of the surface is required to keep holes from developing. The recycle boxes are generally located in the center of the site adjacent to the waste oil/antifreeze collection station. The recycle boxes are labeled relative to the acceptable material for each box. Site supervision may be necessary at times, especially during periods of heavy use, to ensure proper placement of recyclable materials as well as direct traffic into and out of the site.

The waste oil/antifreeze collection station is located on the left as the vehicles enter the recycling area. This facility consists of a small pole type shelter over the waste oil collection tank. Secondary containment is provided by an above ground concrete vault. The filling station is on the north end and basically consists of a large funnel in the end of the tank. Signage is in place to instruct the citizens on the proper use of the waste oil recycling facility as well as what products are acceptable for disposal. Citizens are allowed to pour their own waste oil into the tank. The used antifreeze collection system consists of two plastic drums located outside the shelter on the south end of the waste oil collection facility. These drums are sitting on wooden

pallets and do not have any form of secondary containment. Signage is in place noting that only waste antifreeze is allowed to be disposed of in the drums.

The waste tire disposal area (van semi-trailers) is located in the northeast corner of the center. Citizens and businesses drop their scrap tires off at the site where an employee of the scrap tire recycling company (a subcontractor to the County) actually places the tires in the trailer. The use of closed van type trailers keeps rainwater from collecting in the tires thereby reducing the breeding of insects.

There are generally two (2) open top roll-off boxes located below a retaining wall in the southeast corner for those customers bring small loads of household waste to the site in conjunction with their recyclable material. These containers are periodically removed, weighed and the material disposed of through the transfer station operation. The general policy of the County has been to allow free disposal of one bag of household waste for each bag of recyclable material brought to the recycling/convenience center.

# **Recycling Transfer Area:**

Once the recycling boxes located at the recycling/convenience center are full, they are transferred to the recycling transfer area for loading into an open top transfer trailer and ultimately hauled off-site to a recycler. The County presently processes approximately forty to sixty tons (40-60 tons) per month of recyclable container material in addition to ninety-five to one hundred fifteen tons (95-115 tons) per month of recyclable fiber/paper products through this facility. There is space for only one transfer trailer to be loaded at a time. The general practice of keeping like materials in a single trailer can cause problems at the recycling center as full containers of other materials can not be dumped until such time as trailer space becomes available. This facility is presently meeting the County's needs; however, numerous improvements would facilitate the operation. Additional transfer trailer loading space would be required to process additional recyclable materials.

The recycling transfer area generally consists of an old retaining wall system located south of the yard trash/wood waste and white goods/scrap metal disposal area or just northwest of the now closed C&D Landfill. This area is off limits to the general public as there are no protective measures in place to ensure their safety. There is a relatively small concrete pad at the top of the retaining wall. The outer edge of this wall is broken and chipped with rebar exposed along most of the edge. Maneuvering room for the roll-off trucks hauling the recycling containers from the recycling/convenience center is at a minimum. There appears to be only a soil landing area at the base of the wall for the placement of the transfer trailers. This area has poor drainage and tends to be and remain very muddy. The general practice is to attempt to dump the recycle containers directly into the transfer trailer from the top pad. Once sufficient like material is placed in the trailer, it is tamped in place in with a loader mounted tamp in order to maximize the load weight. Additional loads of like material are then added and tamped in place until the trailer is fully loaded. The trailer is then weighed and hauled off-site for processing. There is no backstop or other load directing structures in place over the top of the trailer to direct recyclable material into the trailer. This results in a general spillage of recyclable material over the side of the trailer and onto the ground. Wind blown litter from the dumping of the recyclable material is also a problem. The generally muddy site conditions due to poor drainage make the cleanup of spilled material a problem as it easily becomes contaminated with soil. Basically the area needs to be serviceable with available equipment so that any material spilled during the loading process does not become contaminated and can be easily collected and placed back in the transfer trailer.

### **Transfer Station:**

The transfer station operation collects and processes for disposal off-site all waste material not handled through one of the other operations. In general, the facility accepts commercially collected municipal waste, household waste brought in by citizens, miscellaneous waste products and construction and demolition debris now that the C&D Landfill has been closed. On average, for four (4) selected weeks during calendar year 2008, the facility received and processed for disposal between two hundred and three hundred and thirteen tons (200-313 tons) of waste per day. Transfer trailers loaded for transport off-site averaged between eleven and sixteen (11-16) trailers per day. On average, approximately two hundred and sixty-two vehicles (262± vehicles) bringing waste for disposal are processed through the transfer stations per day during an eight and one-half hour (8 ½ hours) shift. The traffic includes weighed loads of municipal waste, flat fee loads of household waste brought in by citizens, and demolition debris. On average, approximately eighty-one (81+) loads of weighed municipal type waste are brought to the facility on a daily basis. Approximately one hundred and twenty-three (123±) flat fee loads of household waste are brought to the site on a daily basis by citizens. Demolition debris accounts for approximately fifty-eight (58±) loads per day. The facility as it is presently operated is more than capable of handling the present waste disposal requirements of the County. The major problem presently affecting the operation of the facility is the volume of traffic passing by the facility in route to the citizen's convenience/recycling center (430± vehicles per day) and the citizens (123± per day) bringing flat fee loads (1 to a few bags) for disposal. This excess traffic creates an inordinate amount of congestion around an operation that should generally be limited to commercial haulers and weighed load type traffic only.

The transfer station operation is generally located in the center of the main facility operation's area and consists of two separate buildings constructed adjacent to each other. The buildings are orientated in a general northwest to southeast orientation with the hauler entrance on the northwest. The buildings are metal frame buildings with an open front and are of sufficient height to allow internal dumping of roll-off containers and/or tipping of front loader type collection vehicles. Each structure consists of a concrete tipping floor with a floor opening against the back wall for direct top loading of the transfer trailers located below the tipping floor. Entrance drains are in place across the front of the buildings to help prevent run-off from draining from the site and into the storm water run-off system. Access to the site from the main facility entrance is asphalt paved providing all weather access. Concrete retaining walls are constructed along and just inside the outer side and back walls of the buildings. These walls are used to contain the waste and prevent damage to the building structure. The back wall also serves as a stop for directing the waste, as it is being pushed by the loader into the transfer trailer located below. The fronts of the buildings are generally in line with each other while the back of the buildings are staggered to allow access to either transfer station independently of the other.

The newer building (located west of the original building) was constructed with a drive through tunnel system to allow access to the floor opening in the older building. The landing area for the transfer trailers is concrete with floor drains to capture any contaminated liquids that escape from the trailers during loading operations. The back walls of the transfer stations are covered to the ground level generally providing for a fully enclosed loading area.

Transfer trailers are maneuvered on site with a small specialized truck known as a "yard tractor". The trailers generally enter the lower reaches of the building from the southwest and are positioned below the openings in the tipping floor. Side clearance in the trailer loading area is adequate with a curb system to help ensure proper alignment. However, the vertical clearance between the trailer and the ceiling is minimal and care must be taken when staging a trailer to ensure that it does not damage the ceiling or become damaged in the process. Trailers with roll-up or automatic type tarping systems can not generally be used in the transfer station operation as the tarping systems extend above the trailer side walls and will not clear the ceiling. Trailers must be manually tarped prior to leaving the site. Gravel access is provided to and from the trailer landing area. The radius of gravel drive to the northeast of the transfer station is adequate for the removal of trailers; however, it is not sufficient to allow trailers to be staged in the older transfer station from the northeastern side.

Under the present operation of the facility, a full trailer is pulled by the yard tractor out from under the transfer station and carried to the entrance scale for weighing. If the trailer meets the minimum load weight requirement per the contract with the off-site disposal company and is not over the legal load weight it is then parked in a staging area to await removal from the site. The staging area is generally a gravel parking area west of the paved entrance road just north of the scale house area. The general slope and surfacing of the staging area creates problems once the loaded transfer trailers are staged. The trailer's landing jacks, due to the weight of the trailer and the slope of the surface, have a tendency to become buried in the gravel. Some trailers have sustained damage to the landing jack system due to the stresses placed on the system as a result of the settlement. At times, the transfer trucks have difficulty connecting to the loaded trailers due to the settlement of the front end of the trailer. When this area reaches its capacity for staging loaded trailers, other areas on site may be used for trailer staging.

Should a trailer not contain sufficient weight to meet the minimum contract amount then it is repositioned under the transfer station and additional waste added until the required load weight is achieved or the trailer is completely full. If a trailer exceeds the legal load weight, then waste must be removed until the trailer meets the legal load limit. Overweight trailers are hauled to a small retaining wall just northwest of the transfer station buildings and partially unloaded by a track backhoe operating over the top of the trailer. The trailers are reweighed and the process repeated until such time as the trailer meets the legal load limit. The removed waste is placed in a roll-off box and later dumped back on the tipping floor. While the use of the track backhoe, equipped only with a bucket, works for this process, it is not designed for this type of material removal and generally results in waste material being spilled over the side of the trailer and in the space between the trailer and roll-off box. The scattered material must then be cleaned up by hand by the County's staff.

Within the transfer station tipping floor area, the County utilizes a medium size rubber tired loader (Caterpillar 930 or IT28F) to push the waste from the tipping floor to the floor opening. This loader is equipped with an integrated quick connect adapter to allow interchanging of various implements. The main implement consists of a general loader bucket with a rubber cutting edge to limit damage to the concrete floor. This implement is used to push waste within the transfer station to the floor opening for top loading the transfer trailers. The other implement is a site specific fabricated tamping device for positioning and compacting the waste once it is pushed into the trailer. Signage is in place to control the area in which vehicles are allowed to dump. Citizens and other vehicle drivers are prohibited from approaching too close to the floor opening located against the back wall of the transfer station. Supervision is in place to ensure this policy is adhered to. The loader operator is responsible for uniformly loading the trailers as well as adequately tamping the loads in the trailers. Based on McGill Associates' observations the operator does an excellent job without unduly damaging the trailers or existing building structure.

The commercial haulers and larger loads of other materials or construction/demolition debris loaded on a trailer or truck with tipping capability generally utilize the newer and larger transfer station building. This allows them to deposit their load and exit the facility in a more timely fashion. The citizens bringing their personal household waste and smaller commercial loads that require unloading by hand generally utilize the older, smaller transfer station building. The drive area between the two buildings is separated by a movable concrete barrier to keep cross traffic at a minimum.

In general, the transfer stations appear to be in good condition and are operated in a professional manner given the amount of waste/traffic that is run through them on a daily basis. However, the concrete tipping floor in each building is beginning to show some deterioration and may need repair and/or resurfacing in the near future. Also the edges of the floor opening are beginning to show the effects of age as they are becoming rounded by the abrasion of the waste being pushed by the loader. This should be repaired before the rebar becomes exposed, corrodes and causes further deterioration. The back retaining wall in the older transfer station is a concrete wall has taken some abuse over the years and has become ragged along the lower edge. Some gaps are forming that could allow waste to miss the trailer and fall onto the trailer staging lane area. This area should be monitored carefully and repairs made as necessary to prevent further deterioration of the back push wall. The trench grate drains at the entrance to the transfer stations appear to become periodically clogged with waste thereby not allowing collected liquid to properly drain to the designated collection area for proper handling. This situation should be monitored carefully and cleaned out on a routine basis to keep the system functioning as intended. Repairs and/or modifications may be required to upgrade the trench drain system to keep it functioning properly. As for the general operations, the staff should instruct the vehicle drivers, especially those operating vehicles with tipping capability, to discharge their load in as small an area as possible. There is a tendency at times to tip the truck body or trailer, start and stop the vehicle in a jerking motion and then drive out of the transfer station tipping floor area while lowering the body thinking the entire load has been discharged. This practice has a tendency to scatter waste material outside the tipping floor area and onto the asphalt approaches. This scattered waste must then be immediately cleaned up by County staff.

## **Entrance Facility/Scale House:**

The primary access for all customers and citizens utilizing the disposal and recycling facilities at the Stoney Mountain Road Landfill and Transfer Station is through a main gate and scale house area located approximately two-hundred feet (200') north of Stoney Mountain Road. The present setup is not adequate to handle the traffic volume presently accessing the disposal and recycling facility on a daily basis. Approximately six hundred and ninety to seven hundred (690-700) vehicles enter the site on a daily basis. Of this volume approximately two hundred and seventy (270) vehicles per day must be processed across the scales during an eight and onehalf (8 ½) hour shift. These vehicles include the weighed loads of waste (140+ loads) and the flat fee loads (130+) brought in by citizens. The remaining four hundred and thirty (430+) vehicles bypass the scales in route to the recycling center. Due to the close proximity of the scale house area to Stoney Mountain Road, the high volume of daily traffic that enters the facility and the time associated with weighing/processing incoming traffic and reweighing some outbound traffic, it is not unusual for traffic to be backed up both east and west on Stoney Mountain Road. This scenario is especially true during heavy operating periods. Basically, the queuing area for incoming traffic is not sufficient to handle the high volume of traffic desiring to enter the facility.

The entrance area itself has asphalt paving and it appears to be in a relatively good condition. Asphalt paving extends up to and in front of the transfer station area whereupon it changes to a gravel surface throughout the remainder of the site. The scale house area itself consists of a small manned guard house located at the entrance gate, a scale house structure and a single scale basically set up as an in-bound scale. There is no separate scale for weighing outbound traffic. The paved employee parking lot is located just west of the scale house. The entrance road is at an approximate one hundred and forty five degree (145°) skew to the west and is located just west of the apex of a curve in Stoney Mountain Road. There is no designated turn lane for customers approaching the site from the east and only a short left turn lane for those customers approaching from the west. Sight distance under normal conditions is adequate for the speed limit set on Stoney Mountain Road. However, during periods of heavy congestion and backed up traffic, the ability for exiting vehicles to make a left turn out of the site and adequately see to the west (right) could be a problem depending on the size of the vehicles waiting in line to make a left hand turn into the facility off Stoney Mountain Road.

### Traffic Pattern:

Once off Stoney Mountain Road all vehicles generally should stop at a manned guard house whereupon they are either directed to cross the scales for processing or allowed to pull out of the traffic line and by-pass the scales to the right and go directly to the recycling/convenience center for disposal of their recyclable materials. The vehicles crossing the scales must stop clear of the scale platform until such time as the vehicle in front has been cleared for entrance into the

facility. Upon leaving the scales the vehicles must merge into a single lane with those vehicles by-passing the scales. With the by-pass lane on the right side of the scale, visibility for those vehicles leaving the scale can be a problem, especially for the larger vehicles that must rely solely on mirrors to monitor traffic approaching on the right hand side of the vehicle. All traffic then proceeds to or through the transfer station area where those vehicles utilizing that facility pull out of traffic and maneuver for a spot to begin discharging their loads. The remaining traffic proceeds further into the site and disperses to the various disposal and/or recycling areas depending on their loads.

The area in front of the two transfer station buildings is an area of concern relative to high volume of traffic in this area and the general lack of an overall uniform traffic pattern. Commercial traffic, which generally uses the western or the larger of the two transfer stations, must pull out of the traffic flow and attempt to position themselves in order to back into the station once a spot is available. Other commercial traffic must wait in the inbound traffic lane until space is available for them to pull out of the travel lane and begin maneuvering for a spot to discharge their load. When this occurs, traffic attempting to access the other transfer station building or other available services (citizen's convenience/recycling center, yard waste area, etc.) has a tendency to pull out of traffic flow and proceed through the general area with little regard for other traffic operating in the area. This creates an unsafe condition as these vehicles, generally personal cars and pickup trucks, cut through the transfer station maneuvering/staging area where the larger commercial traffic, with limited rear and side visibility, is attempting to maneuver into position to discharge their load of waste. The general speed of the citizen traffic through this area also appears to be a problem. The traffic congestion problem is compounded when loaded transfer trailers must be pulled from the landing area below the transfer station. In order to exit the facility, all traffic must generally merge back together in the general area in front of the transfer stations. Traffic exiting the transfer stations must cross the inbound traffic pattern in order to enter the outbound traffic flow. Again, the general randomness of the traffic patterns in this area is an area of major safety concern for all traffic as well as the County's employees.

Once in the traffic lane to exit the facility, those vehicles requiring reweighing must now utilize the only scale located at the scale house area. This requires the incoming traffic to stop while the particular vehicle crosses the scale in the outbound pattern. The driver must exit the vehicle to complete the transaction as the scale window is set up to accommodate only inbound traffic. This causes an undue traffic delay for vehicles trying to enter the site. Once off the scale, the reweighed vehicle must reenter the exiting traffic to reach the exit onto Stoney Mountain Road. Vehicles leaving the site, that do not require re-weighing, by-pass the scales and scale house and proceed directly to the intersection with Stoney Mountain Road.

At the intersection with Stoney Mountain Road, those vehicles desiring to make a left turn, especially the larger vehicles without visibility out the back right hand corner of the cab, must position themselves accordingly so as to see the oncoming traffic from the west. Exiting the facility to the left (east) is especially difficult during periods of heavy use as vehicles may be stacked in the left turn lane trying to merge into the incoming traffic line from the east. Regular traffic utilizing Stoney Mountain Road is passing to the right of the left turn lane continuing their

travel to the east. Visibility to the west can be a major problem depending on the amount and size of vehicles waiting to enter the site from the west.

In addition to the regular traffic attempting to enter the site, the transfer trailers pulled from the transfer station must merge into the exiting traffic at the transfer station and proceed to the scale house area for weighing. These vehicles generally pull out the exit gate and make a uturn in order to approach the scales in an in-bound traffic pattern. The transfer trailers receive priority over all other incoming traffic due to the need to get these trailers promptly weighed and an empty trailer back under the transfer station. Once the transfer trailer is weighed it is either placed in the loaded trailer staging area or taken back to the transfer station for additional waste or the off-loading station for removal of excess weight.

In general, the high volume of vehicles operating within the facility on a daily basis creates an inordinate amount of congestion and inhibits the overall efficiency of the operation. This is in addition to the safety concerns brought on by the large volume of citizen traffic operating in conjunction with the County's heavy equipment (loaders, trucks, etc.) and the commercial haulers and customers disposing of their waste loads at the transfer station facilities.

## Staffing:

The landfill operation is under the general direction of the County Engineering Department and has a staff of approximately eleven (11) employees. The staff classifications basically include the Solid Waste Manager who is in charge of and responsible for all phases of the County's solid waste operations and supervises the solid waste staff. Operating under the supervision of the Solid Waste Manager is the: Environmental Programs Coordinator, Administrative staff, Solid Waste Enforcement Officer/Gate Attendant, Equipment Operators and Laborers. The County also has a Code Enforcement Officer for solid waste, operating through a different department, who enforces the County's Solid Waste Code throughout all areas of the County. The administrative staff classification covers the secretarial personnel and the scale operations and performs general clerical and administrative duties. The Equipment Operators are responsible for the operation of the motorized heavy equipment and trucks used in the daily operations to dispose of waste material and perform general site maintenance. Laborers are responsible for the routine maintenance and care of the facility and perform such duties as grounds maintenance, litter collection, etc.

In general, the present staff level appears to be adequate for the normal daily operations being performed at the facility. Field employees are generally proficient in operating various types of heavy equipment and perform various duties throughout the day as the need arises. In addition to the laborer, there are times when additional temporary or part time staff could be utilized by the facility for various maintenance tasks (cleanup of wind blown and scattered debris, etc.). However, this would only be on a temporary or as needed basis and would not justify the hiring of additional full time staff.

An Organizational Chart outlining the present staff and staff descriptions is included in Appendix D.

### **Summary:**

The yard trash/wood waste processing area and the white goods/scrap metal disposal area appear to meet the County's needs as they are presently set up. However, some enhancement to the last section of access road would facilitate access to the service areas especially during inclement weather. The construction of a paved (concrete and/or asphalt) maneuvering/staging area at both the yard trash/wood waste area and the white goods/scrap metal area should be considered. The disadvantage to the present location is the distance from the facilities main operation's area. Landfill staff must make periodic trips to the area to ensure compliance with the disposal requirements. The County must also maintain a lengthy gravel access road around the lower edge of the closed MSW landfill.

The recycling/citizen's convenience center is not adequate for the present recycling activity undertaken by the citizens in the County. The logistics associated with accessing and servicing this facility contributes to the congestion of the site and hampers the County's ability to collect and process the material for delivery off-site. Basically, this site is not capable of handling an increase in the County's present recycling rate without substantial facility upgrades. The needed upgrades to this facility are generally not feasible due to present site constraints. The other main disadvantage to upgrading this site pertains to the high volume of traffic attempting to utilize this facility on a daily basis. This traffic must enter through the same entrance off Stoney Mountain Road as the traffic utilizing the other disposal services and cross through the transfer station access area. This high volume of daily traffic causes undue congestion and safety hazards in and around the transfer station operations.

The transfer station operation is more than adequate to handle the County's present disposal needs. Traffic congestion in and around this area is the major hindrance to a more efficient operation. The excess traffic, especially from the citizens bring small loads of household waste creates an unnecessary safety hazard for the customers as well as the county's staff. This operation should be more or less limited to commercial haulers and those customers with waste loads large enough to require weight tickets.

The entrance facility/scale house area is inadequate for the present operations given the volume of traffic that passes through the area on a daily basis. On numerous occasions traffic is backed up on Stoney Mountain Road thereby creating an unsafe condition for the customers attempting to enter the facility as well as the general public traveling that route. The congestion also creates a hindrance as well as safety concerns for customers attempting to exit the facility. The facility presently has only one scale that must be used to weigh both inbound and outbound traffic. Attempting to weigh outbound traffic contributes to the delay associated with processing the inbound traffic as the inbound traffic must be stopped until the customer is processed and reenters the exiting traffic pattern. The installation of an outbound scale system would enhance the efficiency of the operation; however, it would not reduce the overall volume of traffic attempting to enter the facility.

#### HENDERSON COUNTY OWNED/OPERATED FACILITIES

### **Stoney Mountain Activity Center:**

The Henderson County Parks and Recreation Department presently operates an activity center at 800 Stoney Mountain Road. The facility fronts Stoney Mountain Road and is more specifically located just east of the main entrance to the waste disposal facility, south of the transfer station buildings and southwest of the recycling/convenience center. The property on which the building is located is separated from the landfill operations by fencing. The ingress and egress to the facility is also separate from the landfill and consists of a gravel drive circling the building. Additional gravel areas have been added to facilitate parking for the various activities conducted at the facility. There is an access to the landfill operations through a gated access adjacent to the old Solid Waste Division office located immediately north of the main building. According to County staff, the building's electrical system has been recently upgraded and the window structures have been replaced with more energy efficient models. The building consists of basically three wings with the center and northern wing utilized exclusively by the County Parks and Recreation Department. The Solid Waste Division utilizes a portion of the southern wing for its administrative operations. At the present time this facility is an integral part of the Parks and Recreation Department's park and activity system. Activities presently conducted at the facility include adult fitness programs; various dance classes; martial arts training; arts and crafts; and a summer day camp for children. There is also outdoor recreation space to the southeast of the building that includes open space, ball fields and a play ground. Based on discussions with the Parks and Recreation Department staff, it would be advantageous to their operations and the services they provide to the County for this facility to remain within their program until such time as suitable facilities could be acquired within the general geographic area.

### **School Bus Maintenance Shop:**

This facility consists of approximately 3.0± acres and fronts Stoney Mountain Road. The property is located immediately west of the main landfill entrance road. The facility is owned by the Henderson County School Board and is used for the maintenance and upkeep of the County's school bus fleet. The building and bus parking areas sit approximately 30 vertical feet higher than the elevation of Stoney Mountain Road with ingress and egress to the site consisting of a single entrance approximately five hundred feet (500') west of the main entrance to the landfill. The present entrance drive to the facility is relatively steep with an approximate slope of 11-12%. The main building is approximately 8,000± square feet and is a single story building with a general maintenance shop layout. There are two other smaller out buildings also located on the site. Presently there are no plans by the School Board to abandon or relocate the facility.

As for the main building, it is old and its configuration and available square footage  $(\pm 50\text{'x}\pm 160\text{'})$  are not conducive for conversion to other service type activities. The facility has a relatively low ceiling height and appears to lack adequate insulation and heating and air-conditioning systems. The concrete floor appears to have a relatively high degree of fuel/oil contamination as is characteristic of an older maintenance shop operation. A general review of the site revealed some areas of possible fuel/oil contamination due to possible spillage and/or runoff. Care should also be taken to review other sources of possible contamination such as buried fuel/oil tanks, etc. As for the site itself, approximately two (2) acres (with the buildings removed) are level enough for use as another type of operation with some regrading and/or rearrangement of the existing point of access.